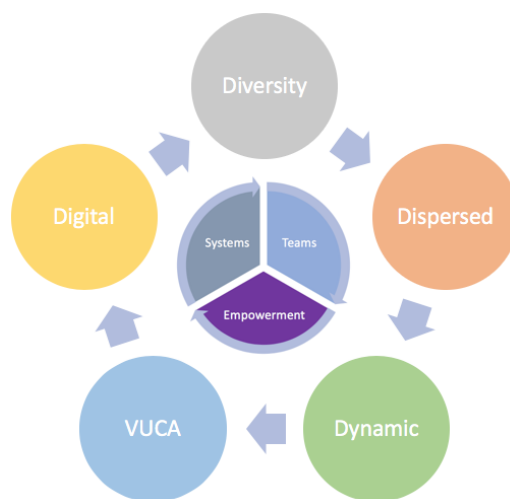


Systems for Team Empowerment Research on Practice 2018



Editorial

Welcome to this collection of research papers on Systems for Team Empowerment. Achieving empowerment in teams is complex. Not only do team leaders need to understand the complex and nebulous interplays between systems, teams and empowerment, they must do so in the context of contemporary issues and trends. Such trends include the volatile, uncertain, complex and ambiguous (VUCA) characteristic of the modern workplace. Indeed the interplay of systems, teams and empowerment is itself both antecedent and consequent to VUCA. Many teams are increasingly incorporating geographically dispersed individuals as team members and all teams, it seems, are under increasing pressure to achieve an increasingly dynamic response. Additionally, the very fabric of business and industry is continuing its march towards digitisation and to what some have called the 4th Industrial Revolution. Finally, diversity of team membership is now generally embraced and regarded as a value enhancement. It's interesting to compare photographs of business teams from the 1960's and 70's with today. Even with such a casual analysis, there is little doubt but that conformity has given way to diversity.



In the MBA lecture series and industry seminar that preceded the conduct of these research efforts, the two trends of digitisation/the 4th industrial revolution and team diversity formed a significantly greater part of the conversation than VUCA, disperse location and dynamic responses. Accordingly, many of the research papers which follow directly address specific issues in these trends. However, as previously stated, the domain of systems for team empowerment is incredibly complex and the diversity of the research papers which follow reflects this reality. These research papers, are studies of the contemporary practice of systems enabled and systematic team empowerment and have been conducted by teams of MBA participants at NUI Galway. The contexts examined are the workplaces of contemporary practice. This alone makes the cases of interest. However, the investigating teams' rigour in emulating good academic research practice adds validity and confidence to the findings and conclusions. The papers that follow investigate issues around systems artefacts, multigenerational composition and human preferences and biases. Their findings and conclusions will be of interest to researchers, practitioners and especially to team leaders.

In chapter one, Ryan, McManamon and Flaherty investigate the degree to which communications tools are used effectively within multi-generational teams. The authors highlight that collaboration tools have become part of the ecosystems of teams but also highlight the accelerating rate of change in such eco systems. They investigate the impact on encouragement of open dialogue and inclusivity, the challenges of aligning to organisational goals, team vision and on individual growth, development and empowerment in multi-generational team contexts.

In chapter two,

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Table of Contents

Chapter 1 Communications Tools	8
1.1 Introduction	8
1.2 Background and motivation for the research	8
1.3 Research objective and research questions	9
1.4 Structure of paper	10
1.5 Literature Review	11
1.5.1 Introduction	11
1.5.2 Shared Vision	11
1.5.3 Dialogue	12
1.5.4 Personal Mastery	13
1.5.5 Leadership in the context of Generation x,y,z	14
1.5.6 Summary	14
1.6 Research Methodology	15
1.6.1 Introduction	15
1.6.2 Research paradigms.....	16
1.6.3 Qualitative and quantitative research	16
1.6.4 Profile of interviewees	17
1.6.5 Conducting interview / focus groups	18
1.6.6 Data collection and analysis.....	18
1.6.7 Chapter summary	19
1.7 Findings and Analysis	19
1.7.1 Introduction	19
1.7.2 Research Question 1	19
1.7.3 Research Question 2	22
1.7.4 Research Question 3	23
1.7.5 Research Question 4	24
1.7.6 Research Question 5	25
1.7.7 Research Question 6	26
1.7.8 Summary	27
1.8 Discussion and Conclusion	28
1.8.1 Introduction	28
1.8.2 Summary of findings	28
1.8.3 Limitations of the study	29
1.8.4 Recommendations for future research.....	29
1.8.5 Summary and conclusions	30
1.9 References	32
1.10 Acknowledgements	34

Chapter 2 Empowerment Comparison.....	35
2.1 Introduction	35
2.2 research methodology.....	36
2.2.1 Research limitations:	37
2.2.2 Interviews:	37
2.3 literature review.....	37
2.3.1 Mental Models.....	38
2.3.2 Personal Mastery.....	39
2.4 findings & analysis.....	39
2.4.1 Surveys.....	39
2.4.2 Interviews	42
2.5 Analysis	49
2.5.1 Comparisons	49
2.5.2 Technology as a tool for team empowerment	51
2.5.3 Generational Trends	53
2.6 Findings.....	54
2.7 Recommendations.....	55
2.8 Discussion	56
2.9 Conclusion.....	57
2.10 References.....	58
2.11 Acknowledgments	58
Chapter 3 The Next Generation.....	60
3.1 Introduction	60
3.1.1 Research Objective and Research Questions.....	61
3.1.2 Structure of Report.....	61
3.2 Literature Review	62
3.2.1 Introduction	62
3.2.2 The Five disciplines	62
3.2.3 Regulated Workplace Factors	65
3.3 Research Methodology.....	66
3.3.1 Research Paradigms.....	66
3.3.2 Methodology	66
3.3.3 Profile of Interviewees.....	67
3.3.4 Data Collection and Analysis.....	67
3.4 Findings and Analysis.....	68
3.4.1 Introduction	68
3.4.2 Senior Management Interviews.....	68
3.4.3 Survey Results.....	73
3.5 Discussion and Conclusion	79

3.5.1 Discussion of Research Questions	79
3.5.2 Implications for Practice	81
3.5.3 Limitations of the Study	82
3.5.4 Recommendations for Future Research	83
3.5.5 Conclusion.....	83
3.6 References	84
3.7 Acknowledgments	85
Chapter 4 Multi-Generational Teams	86
4.1 Introduction	86
4.2 Literature Review	87
4.3 Research Methodology.....	92
4.3.1 Research paradigms.....	92
4.3.2 Qualitative and quantitative research	92
4.3.3 Desk Research.....	93
4.3.4 Reliability, validity and triangulation	93
4.3.5 Background to the cases studied:.....	94
4.3.6 Conducting Interviews / focus groups:	94
4.3.7 Profile of interviewees.....	95
4.3.8 Data collection and analysis.....	96
4.4 Findings And Analysis	97
4.4.1 Personal Mastery.....	97
4.4.2 Mental Models.....	98
4.4.3 Shared Vision	100
4.4.4 Team Learning	102
4.4.5 Systems Thinking	104
4.4.6 Summary.....	110
4.5 Discussion and Conclusion	111
4.5.1 Summary of findings	111
4.5.2 Implications for practice	112
4.5.3 Limitations of the study	113
4.5.4 Recommendations for future research.....	113
4.6 Summary and conclusion	114
4.7 References	114
4.8 Acknowledgements	116
Chapter 5 Unconscious Bias	117
5.1 Introduction	117
5.1.1 Overview.....	117
5.1.2 Ingrained systems of thinking - overview	117
5.1.3 Stereotypical perceptions	118
5.1.4 Background and motivation for the research.....	119
5.1.5 Research objective and research questions	119
5.2 Literature Review	120

5.2.1 Background	120
5.2.2 Types of unconscious bias	120
5.2.3 Knowledge transfer and trust	122
5.2.4 Unconscious Bias and Team Empowerment.....	122
5.2.5 Unconscious bias – the legal & regulatory framework	122
5.2.6 Dealing with unconscious bias in the workplace	123
5.2.7 Leadership in context of Generation x,y,z	123
5.3 Case Study Research Methodology	123
5.3.1 Introduction	123
5.3.2 Methodology	124
5.3.3 Profile of Participants	124
5.4 Findings and Analysis.....	125
5.4.1 Findings of Implicit Association Test.....	125
5.4.2 RQ1 – Does unconscious bias exist within multigenerational teams?.....	125
5.4.3 RQ2 – If it exists, how does it manifest itself within the area of team empowerment?	125
5.4.4 RQ3 – What should businesses do to combat unconscious and does such an approach have value?	126
5.5 Discussion and Conclusion	126
5.5.1 Implications for practice	126
5.5.2 Limitations of the study	127
5.5.3 Parallels with Lean / Six Sigma.....	127
5.5.4 Recommended Further Research	128
5.6 References:	129
Chapter 6 Dialogue Preferences	131
6.1 Overview	131
6.1.1 Introduction	131
6.1.2 Background and motivation for the research.....	131
6.1.3 Research objective and research questions	131
6.1.4 Structure of Paper.....	132
6.1.5 Summary.....	132
6.2 Literature Review	132
6.2.1 Introduction	132
6.2.2 Virtual Teams	132
6.2.3 Summary.....	135
6.3 Research Methodology.....	135
6.3.1 Introduction	135
6.3.2 Research paradigms.....	135
6.3.3 Qualitative and quantitative research	135
6.3.4 Reliability, validity and triangulation	136
6.3.5 Case study research	136
6.3.6 Conducting interviews/focus groups	136
6.3.7 Data collection and analysis.....	136
6.3.8 Summary.....	136
6.4 Findings and Analysis.....	137

6.4.1 Introduction	137
6.4.2 RQ 1: Determine the current tools of communication used?.....	137
6.4.3 RQ 2: Obtain their opinions on the effectiveness of these tools	137
6.4.4 RQ3: Establish their preferred tools for delivering and receiving communication to determine if there is a trend between the different generations?	138
6.4.5 Summary.....	139
6.5 Discussion and Conclusion	140
6.5.1 Introduction	140
6.5.2 Summary of findings	140
6.5.3 Implications for practice	142
6.5.4 Limitations of the study	143
6.5.5 Recommendations for future research.....	143
6.5.6 Summary and conclusion	144
6.6 References	144

Chapter 1 Communications Tools

Investigation into the degree to which communications tools are used effectively within multigenerational teams

Damien Ryan, Bernie McManamon, Joe Flaherty

Edited – Michael Campion & Martin Hughes

1.1 Introduction

The purpose of this research was to investigate the degree to which communications tools are used effectively within multi-generational teams. The objective of this report was to investigate the known theory and academic research surrounding this area within the larger construct of Systems for Team Empowerment. These findings were then compared to the actual practices of teams within a large multinational organisation. The organisation chosen to conduct the primary research for this report was Avaya (www.avaya.com) a global leader in the supply of products and services surrounding digital communications.

With the dawn of the 4th Industrial Revolution, disruptive advances in technology are occurring at an unprecedented and exponential rate (Schwab, 2016). These disruptive technologies which include Artificial intelligence (AI), Virtual Reality (VR), and the Internet of Things (IoT) among others are dramatically changing how people live, work and communicate. As Avaya operates within the digital sphere it is perfectly positioned to be exposed to the dynamic shifts which are occurring as a result of these rapid advances in technology. The backdrop to this research is to investigate how multi-generational teams operate and communicate within this rapidly evolving and dynamic environment.

1.2 Background and motivation for the research

'Previous research indicates that different generational cohorts should be treated differently because of factors that influence their thoughts, behaviour and work ethics' (Wen et al., 2010), pg. 1. A discussion commenced around why different generations would have a requirement to be treated differently in a team environment using common collaboration platforms? Is age a differentiator when working towards a common goal? Is wisdom no longer gained through experiences or do we now attribute wisdom and knowledge with the skill to search the internet and return someone else's view in the shortest time possible? Sophisticated communications technology can enhance the ability of teams to collaborate but will not substitute for team maturity (Cianni and Wnuck, 1997).

The motivation for this research stemmed from these discussions and subsequently from a paper written by Judith Holton titled 'Building trust and collaboration in a virtual team'. This paper identifies

the challenges organisations face with team building in a virtual environment. A core competency for a learning organisation is to be able to work collaboratively. To do this teams need adequate time to devote to conversations. The paper further identifies that trust within teams is also a vital component of learning organisations. It is developed through frequent and meaningful interactions and allows for open dialogue where ideas and concerns can be challenged without fear of repercussion (Judith A. Holton, 2001).

Large multinationals face complexities when trying to establish adequate levels of dialogue amongst teams, particularly those that are globally dispersed, which is necessary to sustain shared vision and foster a learning environment. Some complexities that teams face in organisations include age differentials, cultural diversity, multiple geographic locations and different time zones. The company's mission statement on its website acknowledges that its environment is 'full of ambiguity and change, where leaders face unfamiliar problems and shifting conditions every day'. The company views its agility and ability to adapt as a competitive advantage. It also identifies the team work of its employees or 'Future makers' as being a key constituent of its culture.

The primary motive for the research completed was to gain practical insights into how Avaya performs in areas such as group communication, knowledge dissemination and team building. An additional driver for the research was also to gain a granular understanding of the daily interactions of the different age demographics within Avaya, i.e. Generation X (1965 - 1976), Generation Y (1977 – 1994) and Generation Z (1995 – 2012). According to Senge, 'when teams become more aligned a commonality of direction emerges' (Senge, 2006) pg. 217. The authors of this document were keen to explore the complexities and challenges managers within Avaya faced in aligning teams with broad age gaps and how this impacted on workplace practices. Also, to get a better understanding on the rate of adoption and personal mastery of communication tools within these sub groups was of interest.

1.3 Research objective and research questions

Qualitative research was completed by conducting interviews with senior managers within Avaya at their Galway office. The key objectives which drove this data gathering research were as follows:

- **Shared vision:** Building a shared vision across a large organisation is essential to focus energies and create a common identity. The practices the organisation used to communicate its shared vision among its multi-generational teams were examined. According to Senge, 'a group of people truly committed to a common vision is an awesome force'. (Senge, 2006) pg. 205. The authors were keen to explore how Avaya empowered individuals and teams to be committed rather than compliant with the overall shared vision of the company.
- **Dialogue:** The research explored how multi-generational teams in Avaya interact and communicate both inter-departmentally and cross departmentally. The authors were interested in examining if the teams within the organisation were transparent and data driven or if any negative impediments to open dialogue were apparent.
- **Personal Mastery:** A further objective of the research was to examine how technology is used by the company to communicate within and across teams. Again, the authors considered on the different age demographics within Avaya and explored how these tools were adopted and

integrated. The authors were keen to explore if there was any evidence of slower adoption rates among older employees and if so did this generate any creative tensions.

These three objectives were distilled down into six research questions which were e-mailed to the Avaya interview candidates one day in advance of the planned face to face interviews. The questions e-mailed were as follows:

1. The rate of change with digital transformation is accelerating as we enter the 4th industrial revolution. Has this added complexity or simplification to Avaya's communication methods and tools for collaboration with respect to creating trust and knowledge sharing in the interactions between team members?
2. How do you facilitate and encourage open dialog and inclusivity within the team?
3. Can you share insight into the challenges posed in aligning the team objective with company strategy?
4. What would you like to see your team / organisation become and how would you achieve it?
5. Can you provide any insight into how Avaya has fostered and sustained a commitment to the growth and development of your employees in a dynamically changing work environment?
6. Avaya states on its website that its environment is 'full of ambiguity and change, where leaders face unfamiliar problems and shifting conditions every day'. Describe how you empower teams to meet their objectives in this dynamically changing environment.

In summary, this document effectively looked for evidence of a learning organisation, particularly focussing on three of the five disciplines defined by Peter Senge. The analysis was conducted by gathering primary data through interviews, analysing it and comparing it to peer review academic literature. Web articles from reputable sources were also used as part of the desktop research completed by the authors.

This comparative study was done with the overall aim of identifying potential new avenues for future research pending the findings of the group.

1.4 Structure of paper

A detailed literature review of the key research objectives outlined in section 1.3 is presented in section 1.5. This review helped to provide a firm foundation of knowledge for the research group regarding the known learning and theories in the areas under investigation. Establishing this baseline helped the group to attempt to uncover potential new areas of interest with the primary research conducted. Section 1.6 gives further details regarding the research methodology used to gather and analyse the data. Also, the role of the interviewees and their respective departments is included. Section 1.7 outlines a summary of the findings from the primary research conducted and the subsequent analysis performed. Finally, Section 1.8 details a discussion and conclusion from the findings of the research group.

Section 1.1 gives a broad overview of the research topic chosen by the group, i.e. the use of communication tools and how their technological advancement impacts on the efficiency of multi-generational teams. A snapshot of the background and motives for the research undertaken is provided. Also, the reasons for the choice of company to facilitate the research objectives are given. In summary, the authors felt that conducting the research in collaboration with Avaya was an obvious

choice in that their size, structure and industry type were in strong alignment with the objectives the authors were motivated to explore.

1.5 Literature Review

1.5.1 Introduction

The starting point and primary source of content used by the authors was the text book by Peter M. Senge 'The Fifth Discipline'. Branching out from this the authors performed a search and evaluation of the literature available in the specific areas of research chosen. The general purpose of this literature review was:

- To survey the relevant academic theories in the areas chosen.
- To summarise the main findings and discussion points from the relevant published research.
- To critically analyse the findings from the desktop research in an attempt to identify potential gaps in current knowledge.

This process helped to give the authors a better understanding for how their research would add to the existing body of knowledge in available literature. The literature review was broken down into the three primary areas of interest with respect to systems for team empowerment, i.e. shared vision, dialogue and personal mastery. These three topics were researched within a broader framework of how they are impacted by multi-generational teams and technology. A breakdown of the literature review for these topics is provided in the following sections.

1.5.2 Shared Vision

Kouzes et al completed a Harvard Business Review survey on tens of thousands of working people around the world which asked the question 'What do you look for and admire in a leader?' The top two ranked responses were honesty and an ability of the leader to be forward looking. The article identifies that 'constituents want visions of the future that reflect their own aspirations'. It also identifies that the 'only visions that will take hold are shared visions' (Kouzes and Posner, 2009) pg. 21.

Baruch and Lin identified that a key driver for team outcomes is social capital. Their study underscored the three factors that comprise social capital as being 1) Trust, 2) Social Interaction and 3) Shared Vision. By their definition, shared vision represents the overarching objective of team members. They have identified that a shared vision represents 'a photograph of the team's future among team members'. They also outline that a shared vision is critical for team cooperation, it promotes harmony and decreases competition (Baruch and Lin, 2012) pg. 1158.

Shared vision influences knowledge acquisition and knowledge dissemination activities. It also gives guidance on what is relevant and what is not. This is particularly relevant to fast changing environments where employees need to rapidly identify and filter the key actions which require attention. (Loon Hoe, 2007) pg. 12. An organisations ability to innovate is positively impacted by organisational learning which in turn is influenced by the overarching shared vision (Calantone, R.J., Cavusgil S.T. and Zhao, 2002) pg. 516. Additionally, if an organisation lacks common focus it can lead to diverse interests which can result in great ideas being missed. Thinking as a team fosters a genuine

vision, whereby each member has input with creating, developing and implementing actions (Hult, 1998) pg. 196. Senge reinforces this point by signalling the importance of individuals' visions becoming shared among people at all levels of an organisation. In the post-industrial era, the success of a corporation lies more in its intellectual and systems capabilities than in its physical assets (Quinn, Anderson and Sydney, 1996). This focuses energies and helps to create a common identity. Senge also points out that the process of learning can be a difficult at times especially when goals are lofty. Having a shared vision helps to keep projects on course when stresses develop (Senge, 2006) pg. 193, 195. Encouraging shared interests, common values and mutually satisfying solutions are essential to leveraging the potential of knowledge workers (Quinn, Anderson and Sydney, 1996).

As the 4th industrial revolution enters the picture billions of connected devices are set to transform business models and customer expectations. How this impacts the shared visions of leaders and companies remains to be seen as deeply ingrained mental models could be overturned. Major breakthroughs at the intersection between the physical and digital worlds are expected to reach their tipping point within the next 10 years. Collaboration with the next generation is seen as essential to creating a shared vision for the future (Howell and Buckup, 2016). How companies perceive themselves and position themselves relative to their competition will also be impacted by the scale and rate of change currently underway.

The sharing of data should strengthen collaborative efforts in the IOT, open source software, and creation of new business platforms. However, the sheer volume of data that will grow exponentially in the coming years will provide challenges in addition to enabling disruption across all industries. "A world of customer experiences, data-based services, and asset performance through analytics, meanwhile, requires new forms of collaboration, particularly given the speed at which innovation and disruption are taking place" (Schwab, 2016). It is our assertion, in support of Klaus Schwab (Schwab, 2016), that collaboration platforms enabled in enterprise today will continuously evolve into global open platforms effectively opening up traditional competitors to greater information sharing opportunities and potential collaboration as skilled employees migrate from one company to the next.

1.5.3 Dialogue

By Avaya's own admission theirs is a VUCA industry, i.e. Volatile, Uncertain, Complex and Ambiguous. Given the interconnectedness of today's working environment human beings everywhere are forced to develop their capacity to think together (Isaacs, 1993) pg. 24. A knock on effect is that almost all important decisions are made in teams.(Senge, 2006) pg. 219. This underlines the importance of team learning which involves mastering the practice of dialogue. The discipline of team learning starts with dialogue (Senge, 2006) pg. 10.

It is clear that the team members need to have the ability to suspend their own assumptions and create a culture where the team is honestly thinking together (Senge, 2006) p10. This will allow the team to create new ideas which would not be achieved individually. The team will contribute via a pool of common meaning which in turn will be capable of continual development and change (Senge, 2006) p224.

According to Garvin et al learning organisations are skilled at five key activities, these are: problem solving, experimentation with new approaches, learning from past experience, learning from other companies / customers and transferring knowledge (Garvin, Edmondson and Gino Francesca, 2008)

pg. 4. Each of these building blocks demonstrates the importance and interconnectedness of dialogue. Dialogue should embrace reflection and enquiry skills to be trustworthy and less reliant on facts of circumstances, such as the chemistry among team members (Senge, 2006) pg. 232. Team members should see each other as equals with different opinions where 'the nature of dialogue is playful' (Kain, 1995).

Dialogue empowers teams to be open with one another on potentially difficult complex issues. An environment that supports open dialogue needs to support asking questions, making suggestions, encouraging others, looking for feedback and identify areas of agreement (Arnold, 2013). Dialogue creates a 'sea of talk' that enhances professional growth and learning (Kain, 1995).

1.5.4 Personal Mastery

According to Senge, personal mastery is in effect the ability to learn how to generate and sustain creative tension in our lives (Senge, 2006) pg. 132. This means individuals and organisations need to clearly understand their current reality and commit to achieving their shared vision for the future providing clarity on what is and is not important.

As stated by Senge, personal mastery is an essential cornerstone of the learning organisation and is seen as the foundation to a learning organisation. It has been described as 'the lifelong process of continually clarifying and deepening personal vision' (Coldwell and Fried, 2012) pg. 103. To build a learning organisation it is critical to generate and sustain an environment that is supportive to the development of personal mastery among employees (Alavi and McCormick, 2003).

'Personal mastery is the discipline of continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively' (Senge, 2006). Employees who have embraced their own motivation to continually learn see how their own actions affect the world are able to understand the results that matter to them most. Organisations that have connected personal learning and organisational learnings will see growth and development in their employees and teams.

Organisations should build environments where it is safe to have creative tension. This will create teams that will have better ideas, innovations and outcomes. Career development is the responsibility of the individual, team and the organisation. The individual needs to be motivated with career goals and driven to continually develop. Through the team, feedback, coaching and mentoring are continually provided to develop new skills and knowledge. The organisation needs to provide an environment where growth and development is valued. Organisations can achieve this with performance reviews of teams and/or individuals, ongoing skills assessment, team building and peer feedback.

Teams will learn from each other through deep learning cycles and broaden their knowledge, creating trustworthy relationships, and developing new skills and capabilities. This will create job satisfaction by facilitating the team members to assume numerous roles (Cianni and Wnuck, 1997).

Garvin's HBR article on 'Building a Learning Organisation' discusses how rapidly changing businesses such as semiconductors and consumer electronics are striving to create "knowledge companies" and "learning organisations" (Garvin, 1993). To achieve this organisations need to show and demonstrate

commitment to the growth of their employees. In return employees will become more committed and take more initiatives in their work (Senge, 2006) pg. 133.

'Salesforce' a world leader in CRM (customer relationship management) software solutions interviewed a number of CEO's at Davos in 2018 (Johnson, 2018) regarding the impact of the 4th industrial revolution. Some of the key findings from the interview sessions included:

- Organisational capabilities need to be tailored so that their people can utilise the new technologies available to them.
- Bringing diverse teams together to solve problems will become more important in the future.
- To thrive in the 4th industrial revolution companies need to foster employees, instil curiosity and cultivate team collaboration.

How businesses operate will radically change with the onset of the 4th Industrial Revolution. A Boston Consulting Group report has identified three ways that companies can look to survive and compete.

1. Business models will change rapidly. Companies must be willing to be innovative and continually explore new business models.
2. Companies will experience constant waves of disruption. Leaders must avoid complacency and embrace 'creative disruption'.
3. Foster diversity. People with varied backgrounds can help to buffer change within an organisation and can also help drive innovation via differing mind-sets and approaches. (Tsusaka, 2016).

These opinions from industry leaders and consultant groups help show how personal mastery and learning environments will grow in importance as companies look to survive and thrive in the 4th industrial revolution.

1.5.5 Leadership in the context of Generation x,y,z

Generation X and Generation Y prefer a leadership style built upon open communication and continuous feedback. Generation Z, now entering the workforce, wants their leaders to be positive (Bresman and Rao, 2017). The Bresman and Rao article indicate that the ever increasing speed of technological change is having an impact on multigenerational organisations by increasing the chasm of expectations of both the Generation Z and their leaders with respect to career path and leadership expectations. The article goes on to say 'The mix of aspirations and demands from the different generations presents challenges that will have to be carefully managed.'

The digital natives of Generation Z, according to TIME magazine, observe the world through their smartphones, collaborating and socializing in chat rooms, rather than in the open spaces set up by millennials. Members of Generation Z may not have the formal writing skills or emotional intelligence of baby boomers, they'll be able to teach older co-workers how to learn new tools and skills on the fly—the same way they have all their lives (Katy Steinmetz, 2017).

1.5.6 Summary

Section 1.5 details the relevant academic theories of the three chosen disciplines of Shared vision, Dialogue and Personal Mastery for Systems for Team Empowerment within multigenerational teams.

Shared Vision represents the principal objective of team members providing guidance to teams on the future destination of the organisation. A shared vision keeps projects on course which are aligned with the organisational objectives. The importance of learning activities will become a more dominant factor as companies enter the 4th industrial revolution. This will require employees to become more agile and adaptable when acquiring new skills and knowledge.

Dialogue is vital for team learning especially in a VUCA environment. There is a requirement on teams to become more collaborative in their interactions to address the higher levels of problem complexity that will arise.

Personal Mastery is a core discipline of a learning organisation. Organisations can achieve this by committing to the development and growth of its employees and connecting personal learnings with organisational learning. Creating a safe trusting environment will facilitate opportunities for innovation and idea generation within teams.

1.6 Research Methodology

1.6.1 Introduction

The primary research conducted by the authors post the literature review involved interview sessions with six different individuals in three business units within the Avaya organisation. The purpose was to have a senior manager interviewed and one of their reporting managers who themselves had teams of direct reports in the same hierarchy. Although not mandatory for this research, the requirement was satisfied within two of the teams (four interviewees). Two other interviewees managing sizeable teams represented two functions in the same organisation that operate a flatter hierarchical structure. Interviewing their senior leadership was not possible in the time frame the group allocated. A summary of the titles and departments of each person interviewed is detailed in Table 1 below. For company sensitivity reasons the names of the interviewees have not been disclosed in this report.

Interviewees	Male / Female	Title	Department
1	Male	Senior Manager	Customer Operations
2	Male	Manager	Inside Sales Renewals
3	Male	Director	Finance
4	Female	Manager	Customer Operations
5	Male	Manager	Inside Sales Renewals
6	Female	Manager	Finance

Table 1: General overview of the people interviewed

Thirty three percent of interviewees were female which is representative of the population of the enterprise globally and is also in line with the technology industry.

1.6.2 Research paradigms

The research paradigm employed is that of constructivism where the team, through research, review and discussion constructed a reality in which three of the five disciplines described by Senge were interpreted into a form of six interview questions believed to form the basis of a reality in the company. Leveraging the Guba (1990) paradigm of Ontology, Epistemology and methodology, the characteristics of the paradigm were constructed and characterised as follows:

1. Ontology - The cultural indicators in multinational companies would indicate there are challenges in the identification and application of a number of the five disciplines, where Shared Vision and Dialogue were secondary principles to that of a distanced view of employees being part of a system without an external view – 'I Am My Position' (Senge, 2006). Our research goal was to go beyond the water cooler or corridor conversation to obtain a clearer insight into guiding operating principles of multigenerational teams.
2. Through epistemology the desk research and face to face interaction with the interviewees was framed around an expectation that technology adoption amongst different generations was a challenge. An expected outcome was that managing employees in a multigenerational team would face challenges in daily interactions, particularly for virtual teams as a direct consequence of the requirement to leverage technology communication and collaborative platforms. It was critically important, having one of the authors employed by the company, to ensure that bias was eliminated from the research. This was achieved by interviewing candidates from departments unrelated to the interviewer's day to day interactions.
3. The methodology used to collect the information was face to face interview. Through desk research six core questions, two per focus area for Shared Vision, Dialogue and Personal Mastery were derived for use in the interview. The interviews were time bound, therefore there was little to no opportunity to stray outside the boundaries of the interview questions or coach the participants to provide a preferred response. The format of the interview is discussed in section 3.5.

1.6.3 Qualitative and quantitative research

An intensive review of academic papers and published literature with the keywords multigenerational team, communications tools, Personal Mastery, Shared Vision, Open Dialogue. Generation Y, Millennial, Generation Z, collaboration systems, virtual team, resulted in a series of discussions to determine a set of open-ended questions investigating the implementation of three of the five disciplines proposed by Peter Senge. The primary research conducted was solely qualitative, and was structured to gain an understanding of the opinions, motivations and underlying operations of multigenerational team's usage of collaboration technology. A secondary objective was to glean insights into problems encountered or unconsidered that would generate ideas for future potential quantitative research.

Once the interview questions were defined, a group e-mail was sent to each interviewee one day in advance of the scheduled sessions. The purpose of exposing the questions in advance was to enable

the maximum discussion time in preference to a discussion and explanation on each question with the interviewee at first exposure. When asking the question face to face, very little explanation or interpretation was provided so as not to guide the respondents answer.

1.6.4 Profile of interviewees

A high level view of the interview participants in the focus group is provided in Table 2 so the reader can grasp the breadth of the organisations participating in the research.

Interview	Title	Years of service	Location	Team core activities	Team size & demographic	Team Location
1	Senior Manager Customer Operations	10	Galway	Customer Operations. Responsibility for Supply Chain business reporting, Customer Master Data, OneSource Support (Order Tool), Global project Management.	9 Gen X Gen Y	Global presence – Galway, India, Poland & US
2	Manager – Inside Sales Renewals UK, Ireland, Nordics, Baltics, Benelux and Germany	25	Galway	Renewals department with responsibility for service and maintenance contract renewals.	9 Gen Y Gen Z	New team, recently formed, all located in Galway
3	Finance Director	20	Galway	Finance department with responsibility for all matters related to profit/loss accounting, taxation, auditing and corporate governance for more than 70 EMEA entities within the group.	4 direct (20 in Galway) Baby Boomer Gen X Gen Y	Mainly Galway, teams located across EMEA & USA regions.
4	Manager Customer Operations	21	Durham, North	Customer Operations team have	Recent Customer Operations	Onsite (USA) today. Previous role

Interview	Title	Years of service	Location	Team core activities	Team size & demographic	Team Location
			Carolina, USA.	responsibility for Supply Chain business reporting, Customer master data Global project Management.	move - no reports at present. Previous role had 17 direct reports.	had onsite reports in USA plus teams in Oklahoma City (USA) and Pune (India)
5	Manager Inside Sales Renewals EMEA (Southern and Eastern Europe), Switzerland and Austria, Turkey, Africa and Middle East	0.5	Galway	Renewals department with responsibility for service and maintenance contract renewals.	9 Gen Y Gen Z	New team, recently formed, all located in Galway
6	Manager – Compliance	18	Galway	Compliance team has responsibility for supporting the local & wider EMEA Finance teams.	2 Gen X Gen Y	Galway

Table 2: Interviewee Profile

1.6.5 Conducting interview / focus groups

Interviews were conducted on the company premises on one single day (1st May 2018). One of the six interviewees based in USA was interviewed via video conference call, with the remaining five conducted through face to face sessions. Each interview was allocated thirty minutes and the interviews ran sequentially. Interview slots were allocated to deliberately avoid two interviewees from the same organisation being interviewed in sequence. This ensured the interviewers did not form bias or shortcut interviewee answers in the event of repetition. Despite busy schedules, every interview commenced on time as scheduled and interviewees generously gave their time to the process. Two of the research authors were on site for the sessions and the third participated via audio conference call for the six sessions.

1.6.6 Data collection and analysis

Upon conclusion, all collected responses were collated and analysed to satisfy the purpose of the research. Initially, it was expected that evidence would emerge to support our hypothesis that large multinational corporations, with multigenerational teams collaborating through the multitude of available collaboration platforms would experience the following:

- Lack of strategy execution against shared vision
- Examples of disability learning
- Examples of positive / negative Integration of multigenerational teams

The findings from the interviews and the analysis of each response to the questions are detailed in Section 1.7.

Notes were recorded for each interview and documented in separate workbooks.

1.6.7 Chapter summary

After conducting extensive desk research into the effects collaboration systems have on multigenerational teams, a set of six questions was produced to be used in an interview scenario. The research paradigm formed in alignment with the Guba model of constructivism.

Interview candidates were approached from three different organisations in an effort to understand how Shared Vision, Dialogue and Personal Mastery were evident with this organisation. The detail findings are laid out in chapter 4.

1.7 Findings and Analysis

1.7.1 Introduction

With the proliferation of new technologies across organisations, coupled with the blending of enterprise social media tools (Intranets, wiki's, blog posts) with similar user experience to personal tools (WhatsApp, Facebook, Twitter), it is accepted and almost expected that companies maintain a presence on these social media sites, blurring the internal/external divide. It is important 'that we develop an understanding of how they constrain the communicative activities through which work is accomplished' (Leonardi, Huysman and Steinfield, 2013).

Although a number of collaboration tools are identified throughout this document, the authors deliberately stayed away from discussion about content management systems that enable business process in most teams in enterprises today, so that the focus would remain exclusively on the set of tools utilised within the teams that participated in the interviews. It is appreciated by the authors that enterprises today utilise a significant number of tools that may be moderated by a small team, but do not have enterprise wide appeal due to the specifics of usage in particular cases.

1.7.2 Research Question 1

The rate of change with digital transformation is accelerating as we enter the 4th industrial revolution. Has this added complexity or simplification to Avaya's communication methods and tools for collaboration with respect to creating trust and knowledge sharing in the interactions between team members?

1.7.2.1 Main findings from research question 1

During the course of the interviews, it was clarified that the following tools are heavily used within the teams in Avaya.

Tool	Description/Comment
Video (Scopia)	Vast majority of employees have their own virtual meeting room to host video meetings. All employees can be invited into meeting rooms. Company quarterly updates, partner discussions, process meetings, weekly and face to face meetings are delivered through the Scopia video platform.
Telephone	Still a primary communication device.
Email	Still the main communication channel.
Social Media	One team used this platform but the team wasn't comfortable using it and was abandoned.
Oracle ECM	Documentation archiving facility. Greater capacity than SharePoint but poorer user experience.
SharePoint	Primary documentation repository and training library
Avaya app (Avaya CX)	Mobile-first communications hub for employees, customers, partners and events attendees, available on Google Play and Apple App Store.
Equinox	A mobile telecommunications tool used to create a collaborative environment. One touch access to calling, messaging, audio/video conferencing and web collaboration.
Twitter	Connect with new and existing customers on your products and new developments.
Skype for Business	Employees use this tool for day to day business with colleagues, clients and customers
Face to face communication and engagement	Still the vast majority use face to face engagement for performance reviews especially for local based teams
Whiteboards	Enables open dialogue

Table 3: Overview of communication tools used within Avaya

The business usage stated for these communication tools were meetings, face to face discussions, real-time sharing of information and employee engagement.

The consensus from the interviewees is that communication tools act as a great enabler for teams facilitating group open discussions, team collaboration and knowledge sharing. Advances in communication technology facilitate real time engagement between team members. This has helped to maintain and drive efficiency whether employees are onsite, offsite or travelling between facilities. Although there are many advantages, it was noted that business delays can be created through the high volume of communications tools used to collaborate. The introduction and adoption of new technologies has an overhead cost as employees are trained. Cost and maintenance of these tools has at times impacted on planning processes and caused some frustration among employees especially if some of these tools are dropped after a short period of time.

1.7.2.2 Analysis

Having an enterprise wide mobile application (Avaya CX) for employees is bringing a sense of community to the organisations. It allows people to feel connected in a global organisation. From our research 'Supporting a strong sense of community' was seen as one of the ways to build a collaborative team (Gratton and Erickson, 2007).

Web based video conferencing was prevalent throughout the teams and the company as a whole. The simplicity of the tools usability features (video, application sharing and integrated chat capability) enabled the quick adoption of this collaboration platform thus provisioning it as a virtual decision making tool. Familiarity over time resulted in user inhibitions being lowered to the point where lunchtime meetings in one time zone would see participants consuming their lunches, at other times participants would walk about their offices, or even participate whilst traveling on public transport. This research did not investigate the impact these tools have on time management or work/life balance, but the authors noted diminishing of the global divide, cost savings by reducing travel requirements and strengthening of professional relationships through video collaboration.

Video conference is the preferred method amongst the interviewed teams next to face to face for meeting situations. One to one manager and subordinate discussions now default to video where enabled for virtual team member interaction. Desk research into virtual team interactions from 1990's papers had indicated that reaching consensus takes longer in teams using computer-based communications than it does with those teams using face to face discussion (Kling and Jewett, 1994). Evidence of this research was recognised in the interview responses.

As stated by Holton (Judith A Holton, 2001) pg. 42, email communication was identified as having limitations and drawbacks. There can be miscommunication and misunderstanding relying on the written word (Judith A Holton, 2001). Timing, tone and choice of words can result in the need to follow up and clarify statements almost in a defensive way as a result of misinterpretation. Personal interactions experienced by one of the interviewees with one remote based colleague has resulted in a number of follow ups as a result of tone in email versus face to face conversation by phone or video conference where the interactions, sometimes on the same or similar point of information could be perceived differently.

It was unexpected that the emphasis on multigenerational teams did not come through the interviews as strongly as anticipated. In all but one case, technology adoption across the age demographic was relatively seamless to the point where it was very clear that adoption of new technologies hinged more on the systems integration rather than age profile of the user.

The technology is being embraced and applications are changing frequently within the enterprise. There have been some challenges getting the tools setup due to their complexity. There needs to be time and energy devoted to successful deployments which is not always available. There is a high upfront energy cost in training people on these tools that must be recognised by management and the IT functions enabling the tools.

The most effective collaborate teams are in near constant communication (Miles and Watkins, 2007) and the fourth industrial revolution is helping to ensure there are tools available to achieve this. It is evident from the interviews that a broad spectrum of communication tools are being used in this organisation and that communication is essential for helping teams to meet their objectives.

1.7.3 Research Question 2

How do you facilitate and encourage open dialog and inclusivity within the team?

1.7.3.1 Main findings from research question 2

The interviewees encourage open dialog and inclusivity within their teams aided by communication tools. One interviewee stated that the team dynamic is created by humans. All interviewees held weekly team meetings and face to face meetings to encourage collaboration if individuals needed support. There are formal meeting structures which start with informalities, a general overview and identification of goals for the week which factor in individual and team performance. Nearing the quarter end the frequency of ad hoc meetings would increase to ensure the objectives were met.

Managers have an expectation that their teams are encouraged to be open and transparent when delivering and receiving information within the team. The value of holding face to face meetings gives managers the opportunity to identify issues and impediments that might not surface during team meetings. This awareness gives the opportunity for other team members with knowledge to provide guidance and coaching to their peers. This can be facilitated by the manager in a discrete way thereby enabling collaboration and knowledge sharing.

One interviewee noted the company has a collaborative office environment with open plan layouts and easy access to whiteboards supporting the open dialogue approach.

1.7.3.2 Analysis

Each interviewee demonstrated that they build an environment that supports dialogue. Dialogue is encouraged by each manager in weekly team meeting, face to face and quarterly calls. One interviewee mentioned how he facilitates the meeting to allow the team to create new ideas, share information and collaborate which would not be achieved individually.

Some of the interviewees took some time at the start of the meeting for informal chats. This allows the team members to get to know each other. A team that understands each members alignment functions more effectively than a team that doesn't (Kain, 1995). Jos de Blok made a very valid point in a speech for his RSA award to use time with employees or teams to solve problems (RSA, 2014). Ensure time is used productively to exchange experience and ideas among teams. Even though Jos states he doesn't have meetings, it was evident these information exchanges are types of meetings held regularly at Avaya. Technology is used to document problem solutions and serves as a learning repository for other team members in the company. This is seen as a method of knowledge sharing within teams in the organisation. It must be noted that sometimes too much information/communications tools can hinder progress, however, with all these tools, meetings can be setup with multiple people in a very short time.

'The average manager has less than 6½ hours per week of uninterrupted time to get work done.' (Mankins, 2016). An area for further research could be to determine how much time is productively used at meetings? How much time is allocated to get work done to achieve objectives? And what are the real affects the communication tools emerging as part of the 4th industrial revolution are having on a business?

How many people do we have to collaborate with to get work done? 'A recent CEB study found that 60% of employees must now consult with at least 10 colleagues each day just to get their jobs done, while 30% must engage 20 or more' (Mankins, 2016).

1.7.4 Research Question 3

Can you share insight into the challenges posed in aligning the team objective(s) with company strategy?

1.7.4.1 Main findings from research question 3

The finding demonstrated the organisation uses a human resource system called Talentmaker to align the team objectives. The organisational goals are cascaded down from Vice President. The team adds their personal goals which are linked to the team and organisational objectives. These are measureable with key performance indicators for each employee. All interviewees identified the system as a much easier process which encourages growth both individually and within teams. One interviewee commented 'You get what you put in (to Talentmaker)' but the tool is beneficial. The company strategy is to improve the customer experience. The challenge of complexity, operational efficiency, outsourcing and competitor competition were evident from the interviews. One interviewee spoke about the difficulty to plan or reflect in the current environment due to having to deal with chapter 11 bankruptcy protection which the company emerged from towards the end of 2017.

1.7.4.2 Analysis

The use of the Talentmaker to capture personal and organisational objectives in addition to training requests in the personal development plan shows the human resources department are ensuring employees are building relationships for team collaboration. Continued professional development is evident with interviewees speaking about professional accreditation, weekly training session, guest speakers and subject matter experts' sessions happening in the organisation.

'Modelling collaborative behaviour', creating a 'gift culture', ensuring the requisite skills, supporting a strong sense of community' as identified by Gratton and Erickson are clearly evident in the interview responses for this organisation (Gratton and Erickson, 2007).

'Creating a shared vision within an organisation involves the skills of unearthing shared pictures of the future that foster genuine commitment and enrolment rather than compliance' (Senge, 2006). Looking for evidence of Shared Vision, it is clear from the interviews this discipline is apparent amongst the teams in this company.

'A strong powerful team is one that is aligned with each other and work towards the shared vision' (Lambert, 2002). The organisation goals flow down through the organisation to the team and individuals. All teams set their objectives that work towards the vision. It was evident from all the interviews that the common goal is well understood. All goals and objectives are strategic, specific and measurable through KPI achievements.

Mission and vision statements were not found on the company website which was noted by one of the interviewees but it became evident during the discussion that the vision doesn't need to be on the wall or website as long as it's understood by the employees and realised through the employee objectives.

1.7.5 Research Question 4

What would you like to see your team/organisation become and how would you achieve it?

1.7.5.1 Main findings from research question 4

The interviewees want the organisation to:

- become a supportive environment which empowers employees
- demonstrate a clear vision which is understandable by all employees
- foster an honest and transparent culture
- operate with standardised global processes
- become best in class with teams that grow and develop
- invest in new technology such as Artificial Intelligence to drive efficiency and productivity through automation
- enable creativity and innovation in a learning environment

1.7.5.2 Analysis

The organisations shared vision results in program coherence (Lambert, 2002). The employees reflect, update and commit to their core values which are intertwined with the values of the shared vision.

The analysis clearly indicates that Avaya is a complex company, which may be attributable to multiple acquisitions over the years. Interviewees indicated a need for simplicity to deliver efficiency and more specialisation in their respective organisations.

The overriding sentiment from all interviewees is to coach their teams to be best in class for their discipline. Sourcing the right people with the required skills and capabilities to achieve the ambitious improvements is paramount to realisation of these visions.

A clear framework to achieve the management ambition is available from Thompson in the paper titled 'Steps to Creating a Shared Vision that Will Energize Your Team' (Thompson, 2017). The four steps to creating a shared vision are:

- The vision is clear to all teams and they understand the future destination for their teams to offer the best in class services.
- Dream big and challenge the workforce using the best of themselves to achieve empowered teams.
- Communicate a Strong Purpose to foster team commitment and ownership.
- Set strategic goals to ensure team objectives are aligned towards the vision.

All interviewees demonstrated focus to the common goals in line with the organisation's shared vision. The development of energized teams is critical to achieving this goal.

1.7.6 Research Question 5

Can you provide any insight into how Avaya has fostered and sustained a commitment to the growth and development of your employees in a dynamically changing work environment?

1.7.6.1 Main findings from research question 5

During the course of the interviews, it was explained that the following ways are used within in Avaya to foster sustaining growth and development of employees in this changing work environment.

Employee	Growth and Development Strategy
New starter	<ul style="list-style-type: none">• Extensive recruitment process to build the team• Extensive training course specific to the role• Shadowing experts as part of learning• On the job experience and coaching• Weekly targets with performance goals
Individual	<ul style="list-style-type: none">• Developing new opportunities for people• Actively encourage employees to upskill in current/alternative roles• Team members encouraged to participate in initiatives• Become members of an audited team to gain learnings.• Recognition and responsibility
Teams	<ul style="list-style-type: none">• Share knowledge in team meetings

Employee	Growth and Development Strategy
	<ul style="list-style-type: none"> • Continually foster stronger collaboration • Empower new employees in a team setting • Create new responsibilities • Rotating roles to encourage personal development • Mentoring program (Buddy system) • Create networks outside of the team • Implement effective communication and collaboration tools
Continuous Professional Development	<ul style="list-style-type: none"> • Further Education and professional accreditation (ACCA) • On the job training / weekly training sessions • Regular guest subject matter expert speakers

Table 4: Summary finding of growth and development strategies in Avaya

1.7.6.2 Analysis

Personal mastery was very evident and in line with personal and organisational goals. This organisation demonstrates ways in which it promotes and encourages growth and development for the teams and its members. Evidence of personal growth and development was seen as each interviewee actively encouraged people to upskill and motivated them to want to achieve successes within the company. One interviewee noted that understanding employee behaviour and ambition is important to actively encourage team members to make space for personal development. Job rotation is being proposed by Avaya leadership which is expected to present opportunities locally and geographically while challenging employees to step outside their comfort zones. Assuming new, and in some cases multiple roles, creates job satisfaction and encourages loyalty which results in increased employee retention (Cianni and Wnuck, 1997).

The organisation provides job-related training and an environment which values growth and development through the TalentManager human resources system. There was immense pride having two individuals achieve professional ACCA accreditation, coming top of their class in Ireland and 3rd and 7th globally in two other disciplines. This clearly displays evidence of supporting the Personal Mastery discipline in the organisation.

1.7.7 Research Question 6

Avaya states on its website that its environment is 'full of ambiguity and change, where leaders face unfamiliar problems and shifting conditions every day'. Describe how you empower teams to meet their objectives in this dynamically changing environment.

1.7.7.1 Main findings from research question 6

The teams at AVAYA are being empowered to meet their objectives by:

- Fostering commitment to meet team goals via collaboration.
- Foster creativity in teams in line with the company objectives.
- Ensure team members personal and organisation objectives are aligned to company goals.
- Training individuals and utilising new technology.
- Mentoring system to bridge the knowledge gap between generations.
- Transparent, genuine and honest communication.
- Fostering trust amongst teams.

1.7.7.2 Analysis

As stated in HBR article 'Eight Ways to Build Collaborative Teams' (Gratton and Erickson, 2007), the right team leaders are both task and relationship oriented. From the interviews it was clear that the managers were cognisant of both types of relationships. The focus on one over the other is dependent on the maturity and longevity of the team. In one case, there was clear evidence of task focus over relationship as a new team was being operationalised. This mode of operation aligns clearly with the article which states that in the early stages of building a team, the manager must set clear goals and clarify responsibilities to build a collaborative team.

The importance of trust was very evident throughout each interview. There are four pillars of alignment, shared vision, rewards for achieving common goals, constant communication, and trust (Miles and Watkins, 2007), to ensure each team member is striving to achieve the best for the team. The most important pillar for team's reliability is trust. This was clearly revealed by all interviewees. There is no value added to the team if members can't be relied upon to act in a manner to further the best interests of the team (Miles and Watkins, 2007). Teams are much more effective if they have built a high level of mutual trust and can rely on each other especially in a crisis.

1.7.8 Summary

Collaboration tools were clearly identified as productivity enablers for the company fostering & encouraging team engagement. Interviewees noted that over the last ten years the introduction of the collaboration tools has provided greater opportunity for real time information sharing and such channels as email and telephone are no longer the main tools used for business.

With the increased range of tools available and the accelerated introduction of different tools, it was evident from the research that the rate of adoption is unrelated to the age demographic of the users. Interviewees acknowledged that the tools are only as good as the skill and competency of the user.

A hypothesis was that in large multinational companies there would be difficulty finding evidence of these disciplines, however, through the interview process it became evident that teams align personal objectives and team objectives to deliver on the company objectives, thus portraying shared vision.

Learning disabilities were expected to be clear from the outset, however, again it was evident that learning and development plans are enabled through the personal records in the Human Resource system and opportunities facilitated by the company to enable personal mastery.

Regular meetings ensure teams are delivering to objectives and these opportunities facilitate open dialogue. Regular face to face meetings in addition to the team environment ensure employees have the opportunity to address any impediments through open dialogue.

Trust was a key element that was intertwined in many of the question responses. This was in relation to both people and systems. Insights gleaned from this study have opened up our thinking into the state of mind and level of trust required within teams and organisations to fully exploit the emerging technologies to enable higher levels of productivity, collaboration, open dialogue and seamless integrations of the different generations participating in the workforce today. There is a strong desire to coach teams to be best in class with the right skills and capabilities that fosters an open transparent culture built on trust. In summary the company understands the importance of personal development to sustain a learning environment.

Interviewees indicated a need for simplicity to deliver efficiency and more specialisation in their respective organisations, recognising that the company structure is complex.

It is clearly evident that collaboration tools are embraced within the company and employees are utilising them effectively while being receptive to the continuous changing environment. This is in alignment with research regarding the communications tools being used by teams entering the 4th Industrial Revolution.

1.8 Discussion and Conclusion

1.8.1 Introduction

The timeframe within which this research was conducted and our knowledge around the psychology of interacting with collaboration tools is not at a level to derive any specific researchable hypothesis. The findings of the research, summarised below, demonstrated lineage to the research theory and aligned with the challenges of evolving communications tools and platforms in large enterprises.

1.8.2 Summary of findings

1. All teams shared the company vision through the cascading of business unit, organisation, team and personal objectives. This indicated evidence of Shared Vision.
2. Every interviewee referred to using new company technology for collaboration in addition to other specific tools used in the different teams.
3. SharePoint, Equinox soft phone, Scopia video and collaboration, Email and Telephone.
4. Generational issues amongst the teams was not evident, although take up of technology changes and advancements by older team members had a reference to challenges in one team.

5. Personal development is part of the employee performance record. Although opportunity to create space through daily demands is limited, active learning is encouraged and supported in all teams. Evidence of Personal Mastery was identified and verified with two employees in the Finance discipline being ranked in the number one position in ACCA exams in Ireland on two occasions. Both of these employees went on to take number three globally in the auditing discipline with the other taking number seven position globally in the Taxation discipline.
6. All teams conduct team meetings, majority are face to face in a meeting room setting. Video conference is used by all but one team and is the norm now across all participating generations. Active participation and open dialog is encouraged and fostered in all teams.
7. Trust was a key element that emerged from the interviews and it was clear that this is foundational to all three disciplines of Dialogue, Shared Vision and Personal Mastery. Trust was portrayed not only with respect to people, but also included the communication tools in use.

1.8.3 Limitations of the study

The interviews were completed with the participation of three distinct functions – Finance, Customer operations and Inside Sales. The sample size of the interviewees was small and specific due to time constraints of this study, however, this was not a concern for the authors as statistical analysis was not planned to be performed.

The focus groups interviewed represented middle management, there wasn't scope within the timeframe to interview representation from lower level employees to gather alternate viewpoints. An online anonymous survey of all team members may have yielded more accurate results for the research aim as the topic is sensitive and private to individuals. The authors did not have exposure to Generation Z employees as the management in the teams selected for interview are primarily of Generation X demographic.

The time allocated to each interview was limited to thirty minutes which only allowed for six questions to be queried. Additional time could have been assigned to collect the views of the interviewees, however, to ensure the interviews remained focussed it was decided in advance that further probing of each response would not be conducted during the allotted interview time.

The method selected to use a scheduled interview due to time constraints, deliberately excluded other options such as online survey, questionnaire and ethnographic research. This decision was taken to ensure interviewers and respondents did not wander off topic which may have provided irrelevant and unrelated information. Interviewing every member of a single team may have yielded alternative results, however, the decision was taken to focus on middle management as they are the gateway to the upper (senior leadership) and lower levels (employees) of the company. This group represents a combined 96 years of service to Avaya with an average tenure of 16 years.

1.8.4 Recommendations for future research

A number of research topics emerged during the course of our research. These include:

1. Focus on Generation Z employees to gather different viewpoints to the interview questions used in this research to determine the understanding of the key elements of a learning organisation.
2. 'The average manager has less than 6½ hours per week of uninterrupted time to get work done.' (Mankins, 2016). An area for further research could be to determine how much time is productively used at meetings? How much time is allocated to get work done to achieve objectives? And what are the real affects the communication tools emerging as part of the 4th industrial revolution are having on a business?
3. Trust is important in all teams and this was clearly evident from the interviews. As stated by Ross 'While trust is a critical element in any team or operation, it's particularly important when you are managing teams or operations that are geographically and culturally dispersed' (Ross, 2008). Team members who haven't built a cognitive trust among them will be unwilling to input additional effort to coordinate their actions for performing a given task (Chou et al., 2013). Further research is required to compare trust building techniques used by virtual and local teams.

1.8.5 Summary and conclusions

This research concludes that the three disciplines this research focussed on are evident and active in the company.

Collaboration tools are a living part of team's ecosystems in companies today which aligns with the conclusions of Holton where she stated from a team perspective 'standard team building tools can be used to enhance collaboration and trust in a virtual team'. Although we have close alignment in our conclusions, one key point in our findings is that trust underlies the success or failure of the team's collaboration efforts. Trust within teams is a vital component in learning organisations to develop team collaboration. Collaboration tools are complementary to the efforts of the management teams to enable employees embody the disciplines of Shared Vision, Dialogue and Personal Mastery.

'Through deep dialogue, a team can continue to cultivate a culture and a set of shared values conducive to virtual teaming' (Judith A. Holton, 2001). Our research has indicated that through deep dialog teams can achieve the shared vision through personal and team objectives that align to the overall company strategy. Deep dialog is achieved in many ways and considering Generation Y and Generation Z's assimilation with technology, one of the challenges for managers today is to identify the most effective channel in which to coach, mentor and empower individuals and teams collectively to achieve their objectives and career ambitions. Our findings demonstrate that management in Avaya are acutely aware of the requirement for inclusivity of multigenerational teams to achieve a singular alignment with organisational goals.

Pride in Personal Mastery was clearly evident through the use of the Human Resource system to facilitate the development of employee's skillsets to achieve career goals and future aspirations, in addition to its partnership with ACCA, ITAG and other professional bodies.

The company is innovative in its adoption of new technological trends that will embrace Artificial Intelligence and Machine Learning as examples of how business process improvement and efficiencies will be achieved.

As we reflected on the interview analysis we were considering how to rate Avaya in comparison to other multinational companies. Expanding the scope of our research to encompass a broader base in Avaya and conducting similar interviews at different levels in competitor organisations, if completed, would have provided data to produce a benchmark comparison. Considering the recent Chapter 11 bankruptcy protection proceedings and the subsequent emergence as a publicly quoted company, Avaya is currently undergoing a transformation that's influencing its structures, practices, processes and cultures. This immediately brought the work of Frederic Laloux to mind and his rating systems discussed in 'Reinventing Organisations' (Laloux, 2014). Laloux explains how every time humanity has shifted to a new stage of consciousness, it has also invented a radically more productive organisational model.

What conditions must be created for Avaya to thrive as a new organisation? Is it possible to transform existing organisations? What results can you expect at the end of the day? These are just a sample of the questions posed by Laloux.

Considering the characteristics of organisations in the Laloux scale, we determine Avaya is currently operating in the Orange (Achiever) organisation framework with strong indicators that it is about to transition to a Green (Pluralistic) organisation. This determination is based on the following interpretation:

1. Avaya has evolved beyond the Red impulsive organisation where the company was highly reactive with short term focus and existed in a chaotic environment prior to and during the bankruptcy protection period.
2. The evidence of the Green "goal and task" oriented leadership style was captured in the interviews, where the objective is to beat the competition to achieve profit and growth. Management by Objectives as proposed by Peter Drucker can be clearly measured in this environment (Drucker, 1955). Innovation is coming to the fore as a competitive advantage to be seized at every opportunity.
3. The key characteristics of a Green (Pluralistic) organisation focus on culture and empowerment to achieve extraordinary motivation. Every interviewee indicated the efforts the management teams are expending on inclusivity, consensus oriented decision making and fully participative teams indicating that Avaya, within these teams, is evolving to become a culture driven organisation.
4. The final stage of evolution in the Laloux scale is Teal. The key characteristics in this organisation is the evidence that self-management replaces the hierarchical pyramid with a distributed leadership style where wholeness and purpose are the primary motivators. There is not enough evidence in this research to suggest Avaya is a TEAL organisation but with the efforts underway, there is a strong possibility that some teams may evolve to this level of maturity.

It is clearly evident that collaboration tools are embraced within the company and the multigenerational teams are utilising them effectively while being receptive to the continuous changing environment. This demonstrates lineage to the research theory and aligns with the challenges of evolving communications tools and platforms that teams entering the 4th Industrial Revolution will face.

1.9 References

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Chapter 2 Empowerment Comparison

Comparison of Systems for Team Empowerment

Non-profit vs Private Company

Yvonne Comer, Keith Doyle, Emer Leinung

Edited Dr. Denis Dennehy and Martin Hughes

2.1 Introduction

"The complexity of the learning organization necessitates gradual evolution. The successful integration of the characteristics of post-bureaucratic firms – empowerment, teamwork, trust, communication, commitment, and flexibility – coupled with an emergent systems perspective can provide improved understanding of how the learning organization disciplines may actually materialize."

This study focuses on 3 of the 5 disciplines of the learning organisation as defined by Peter Senge (Senge, 1992) in his book *The Fifth Discipline: shared vision, mental models and personal mastery*.

The purpose of the study is to examine and compare whether those 3 elements of team empowerment are present and effective in both a non-profit and a for-profit environment in two Irish organisations, and what impact, if any, working in a multi-generational team has on its empowerment. It also focused on team's use of technology as a potential enabler of empowerment and analysed whether a generational digital divide was evident.

In this volatile, uncertain, complex and ambiguous business world, continuous adaption and growth is required to succeed and this depends on 'institutional' learning which Senge (2006) describes as the process where management teams "change their shared mental models of the company, their markets and their competitors." Insights into new markets are missed, or outdated organisational practices can continue, because they can conflict with powerful, tacit mental models which can be a dysfunction of traditional management systems that keep many organisations in constant fire-fighting mode with little time or energy for innovation. For teams to become great they need something larger than themselves and move from 'survival' or 'adaptive' learning to 'generative learning.'

Under the lens of each of the 3 disciplines the researchers set out to test a set of hypotheses designed to illuminate the generational and digital dimensions of systems for team empowerment. The findings show that shared vision is positively related to team empowerment, open communication, trust and collective efficacy. Along with those factors, team cohesion is also required to develop effective mental models, but it's important to ensure that these models are accurate to enhance team performance and learning. Personal mastery is highly rated by employees in both organisations, who displayed an eagerness to learn regardless of whether formal processes support that.

While staff in the non-profit organisation felt that working for a values-based organisation increased the potential for shared visioning as people already shared a common ethos, we found that shared vision was not as strongly aligned in the non-profit organisation.

2.2 research methodology

A review of the literature relating to systems for team empowerment through the disciplines of building shared vision, mental models and personal mastery was undertaken. The Fifth Discipline by Peter Senge (Senge, 1992) was one of the main sources of literature, along with various scholarly articles which have built on his learnings in the time since it was published.

For the purposes of this research we also analysed the internal policies of both organisations to measure the validity of the responses relating to organisational support for systems for team empowerment. Oxfam Ireland has a policy for learning and development. However no specific budget is set for learning and development and requests are considered on a case by case basis.

There is no formalised learning and development policy in CEC, nor set budget set aside, with cases also being considered on a case by case basis. Relative to shared vision, there is a formalised induction process which is part of the onboarding process for all new staff.

Information about the three named focus areas within systems for team empowerment in a non-profit organisation was gathered from 19 employees in one team. The same survey was administered in a for-profit organisation among 13 employees in one team. All responses were anonymised to ensure respondents answers were unbiased given that the researchers were also employees of the companies involved.

Data were collected through quantitative and qualitative methods and through direct observation and participation in the teams surveyed. The two samples of 32 employees took part in an online survey based on a 7-item rating system designed to measure the degree to which respondents agreed or disagreed with statements put to them. The second sample consisted of three face-to-face interviews in each team. Thirdly, the researchers added direct observations about their views of the effectiveness of systems for team empowerment in each group.

The employees in the non-profit organisation covered four age demographics which can be condensed into the following categories: Generation X and Generation Y. Respondents work in one team but within five different functional areas. They are asked to deliver on functional and individual goals, and collective team and departmental goals.

In the for-profit organisation, employees covered fell into the same four age demographics, when condensed they represented: Generation Y; and Generation X. Respondents worked across multiple departments that combined make up a larger team, imbedded on a client site. They are asked to deliver on a mixture of team based and individual goals daily. We asked respondents to answer questions in sections dealing with three specific areas of team empowerment: shared vision, mental models and personal mastery.

Once the surveys were complete we aggregated the organisational-level responses and the team-level responses to allow stronger analysis based on the 7-point Likert scale outlining the extent to which each item was true of the organisation/team. We compared the findings in the non-profit and the for-

profit organisation and, based on a review of the responses and an analysis of the organisational policies, set out our conclusions in Section 7.

2.2.1 Research limitations:

Team members' responses can be influenced by variables such as length of tenure, role, reward structure and general satisfaction levels. Their perceptions of team effectiveness and team dynamics could be verified by members of the organisation independent of the teams, or through performance management records held by management and HR Department. Perceptual measures are often inflated and subject to socially desirable responding. (Paulhus, 1984)

2.2.2 Interviews:

The qualitative element contained additional questions designed to ask employees about the impact of a non-profit organisation on shared vision; the impact of working in a multi-generational team and how the use of technology affected their ability to do their job.

The three in the non-profit team were selected to represent two different age cohorts: one Generation Y and one Generation X. In the for-profit organisation, the qualitative interviews were conducted with three age cohorts. One Generation X, one Generation Y, & one Baby Boomer. Interviews were edited for clarity and length.

As the researchers work for the companies where the surveys were carried out, personal observation of the three areas of study was overlaid on the findings to deepen context and understanding where relevant.

2.3 literature review

The Fifth Discipline, written by Peter Senge, advocates for a new approach to managing organisations, one which moves away from more autocratic methods of control to become what he describes as a 'learning organisation'. Senge defines a learning organisation as a place where people continually expand their capacity to create results, where new and expansive patterns of thinking are nurtured, collective aspiration is set free, and people strive toward learning together (Senge, 2006). The practice of shared vision involves the skills of unearthing shared 'pictures of the future' that foster genuine commitment and enrollment rather than compliance. A review of the literature shows that shared vision is described a lot through commitment to the organisation, or through building learning organisations, rather than focusing on personal and organisational vision.

Peter Senge described a learning organisation as one where people continually expand their capacity to create the results they truly desire; where new and expansive patterns of thinking are nurtured; where collective aspiration is set free and where people are continually learning how to learn together (Senge, 2006). However, that's one of 5 descriptions which are seen in David A. Garvin's article, 'Building a Learning Organisation,' which posits that without change in the way works gets done only the potential for improvement exists. This implies that shared vision on its own, is not enough to drive team learning. Systems, processes and measurements are required to embed the vision and the subsequent learning (Garvin, 1993)

The CEO should promote shared vision. In intelligent firms, CEOs are beginning to stop focusing on their own visions and to recognize that their personal vision forms part of a larger whole influenced by the visions of others, thereby creating a shared vision that provides a vehicle through which the firm's members commit themselves to the firm. In theory, it is easier to consider all visions in SMEs than in large firms, where there are many individuals and stakeholders to consider (Senge et al., 1994). Independent of size, CEOs should act from a conviction that their efforts will produce more productive firms capable of achieving greater personal satisfaction and levels of organizational success higher than traditional ones (Kofman and Senge, 1993).

2.3.1 Mental Models

Mental models are deeply ingrained assumptions, generalisations, or even pictures or images that influence how we understand the world and how we act.

To find shortcomings in our present way of seeing the world, mental models need to focus on openness. The discussions that take place need to balance inquiry and advocacy so that people feel safe to express their ideas and make their thinking open to the influence of others (Senge, 2006).

Research from a sporting context, that can be applied in addressing different working groups also, shows that cohesion, team mental modes (TMM) and collective efficacy are drivers of team performance (Figure 1). Team cohesion, which includes both social and task cohesion, is essential to the development of TMM. These shared goals, or vision, a sense of social support and accountability are required prior to being able to develop a learning organisation (Filho, Tenenbaum and Yang, 2014).

TMMs provide a 'rule of thumb' composed of declarative, procedural and strategic information where teams should combine task and team-relevant knowledge to accelerate work coordination and optimise team decision making. This shared understanding about work objectives and duties, the shared understanding of interpersonal interaction and team members' skills are required to facilitate performance. Without first having cohesion, mental models cannot be changed and these TMMs are very important to develop for team confidence and performance (Filho, Tenenbaum and Yang, 2014). However, it is also important that these mental models are accurate, rather than similar, for teams to be able to engage in learning behaviours, which increases team adaption and performance. TMMs play an important role in the development of complex skills and achieving high performance and it's the accuracy of this mental model that is a stronger predictor of performance and can mediate for team ability (Edwards et al, 2006). If TMMs are similar, when a deadline is approaching, teams may not communicate as they should, trusting in other's work and ability to accomplish a task, so information is not analysed to find solutions for problems or new ways to perform a task as 'that's the way it's always been done.'

This can also mean that team members don't share errors or ask questions to avoid disruptive conflicts or this overlapping TMM can lead to closed minds if the knowledge they hold is incorrect so ideas and suggestions that challenge the way they think is ignored. Team members should maintain their diversity of perspectives to stimulate discussion even ensuring that someone always plays 'devil's advocate' to test team ideas and assumptions to help drive learning. Once learning is embedded within a team they can adapt more effectively to changing situations and achieve high levels of performance to accomplish team goals (Santos, Passos and Uitdewilligen, 2016). TMMs play an

important role in the development of complex skills and achieving high performance and it's the accuracy of this mental model that is a stronger predictor of performance.

2.3.2 Personal Mastery

Personal mastery is described as the capability of an individual to learn and develop themselves both personally and professionally. While it is not something which can be forced, it can be encouraged (Senge et al., 1994). People with a high level of personal mastery are committed to their own lifelong learning. As the learning capacity of an organisation is said to be the sum of the learning capacity of its employees combined, for this reason organisational learning and personal mastery are inextricably linked (Fiol and Lyles, 1985).

Organisations are coming to realise that personal mastery is also directly linked to performance (Dibella, Nevis and Gould, 1996), and that encouraging ones members to develop both personally and professionally has advantages for both the individual and the firm (Senge et al., 1994). Emphasis on growing personal mastery within an organisation is also said to positively impact innovation and creativity, with people bringing new ideas and opportunities to the fore (Damanpour, 1991).

Studies show that developing personal mastery must be driven from the top down regardless of whether it is in a non-profit or private company. Management must be committed to creating an environment where personal mastery is valued (Larsen et al., 2002).

2.4 findings & analysis

2.4.1 Surveys

2.4.1.1 Oxfam Ireland

A total of 19 responses were received from a team of 32 people across four age groups: 18-24; 25-34; 35-44 and 45-54. Most respondents (9) are aged between 35-44, with 7 aged between 25-34, 2 between 18-24 and 1 between 45-54.

Respondents were asked a series of questions relating to three areas from The Fifth Discipline: Shared Vision, Mental Models and Personal Mastery (Senge, 1992). The use of technology as a potential enabler or a hindrance to carrying out their work was also surveyed.

The findings show a positive response to questions around shared vision. When asked whether the team is aligned around common, co-created goals based on a shared vision, 68.4%, or 13 respondents, agreed or strongly agreed, while 15.8% (3 respondents) were neutral and the same number again disagreed.

Asked whether regular discussions were had about how the team vision aligned to the organisational goals, 57% agreed, or 11 respondents, while 2 (10.5%) were neutral and the remaining 6 respondents disagreed.

Asked whether they believed their team was healthy and thriving, based on openness and trust, 73.7% of respondents (14 people) agreed or strongly agreed; while 10.5% (5 people) were neutral, and 15.8% (3 people) strongly disagreed.

A total of 73.7% of respondents agreed that their standpoints and ideas are adjusted based on consultation with colleagues and experts. 14 people responded positively to this statement, while 3 replied negatively (15.8%) and 2 were neutral (10.5%).

When asked whether they felt that different perspectives and ideas were encouraged and discussed as part of a reflection process, 68.5% responded positively, with 10 people agreeing or strongly agreeing, a rate of 53.7%. However, 4 respondents (21.1%) disagreed or strongly disagreed with this statement, and 1 respondent remained neutral.

A strong majority of respondents agreed that personal mastery is a crucial factor in team results. When asked whether professional knowledge and expertise was essential for the achievement of good results, 16 agreed or strongly agreed (84.2%), while 2 respondents disagreed (10.5%) and 1 was neutral (5.3%).

There was less agreement on whether the team was empowered to deliver results through constructive communication and interaction. While 13 respondents agreed (68.5%), 4 respondents or 21.1%, disagreed, strongly disagreed or indicated a negative response.

"While my team works extremely well together, poor relationships and a lack of communication in other teams can have a negative impact on the overall office environment," commented one respondent.

Direct observation of the team, which is spread across two geographical locations, with one cohort distanced from line management and other colleagues, leads to the conclusion that inter-office communication and interaction is a potential factor in the negative response and should be further explored.

"Better communications between SMT and staff would be appreciated, e.g. it would be nice to have CEO and SMT present the collective and department strategies for the coming years," one commented.

Respondents were also broadly in agreement with the statement that they engage in continuous learning and reflection to achieve personal growth. A total of 10 respondents, or 52.7%, responded positively, while 31.6% (6 respondents) answered negatively and 15.8% (3 respondents) were neutral.

"There isn't much time scheduled in the work day, outside of doing the job I'm paid to do, to achieve the results Oxfam Ireland needs, in order to engage in some of the discussion/reflection which might help us do it better," said one respondent.

Just over half of all respondents, 57.8% (11 people) felt employee growth, both personal and professional, was truly valued in the organisation, while 36.9% of respondents (7 people) disagreed and 1 person was neutral.

"It would be great if HR could communicate the opportunities for staff development more. e.g. if there is a training budget available, what the policy is on study leave. Staff development feels a bit dependent on your line manager and not really an organisational priority," one remarked.

When asked whether learning and change happened often as a result of customer feedback, helping shape the team's mental models, 68.4% felt it did (13 respondents), while 21.1% (4 respondents) remained neutral and 10.6% or 2 respondents disagreed. This could reflect the fact that not everyone on the team has a customer-facing role; however, a customer-centric approach would ensure all learnings were shared.

Finally, respondents were asked whether technology helped them to do their job better. 68.4% agreed (13 respondents); 10.6% (2 respondents) disagreed and 21.1% (4 respondents) were neutral. Given that all members of the team use technology this finding should be further explored.

When respondents were mapped by age on the results to this question, it emerged that those who were neutral appeared in all four age cohorts. 5 of 7 respondents in the 25-34 age bracket responded positively while 1 was negative; 1 person in the 18-24 age bracket agreed and 7 of 9 respondents in the 35-44 age group agreed. Of the total respondents, one third does not find technology to be an enabler in their job.

2.4.1.2 CEC

The survey conducted on the team in CEC received 13 responses in total and consisted of 4 age demographics; 18-24; 25-34; 35-44; 45-54. The bulk of the responses came from the 25-34 (5) & 35-44 (6) demographics, with only one response each in the 18-24 and 45-54 bracket.

The majority of the team responded positively that their teams were aligned around common, co-created goals based on shared vision, with varying degrees of alignment; 23.1% rated 5/7; 38.5% rated 6/7; and 15.4% rated 7/7. However, 23.1% were neutral rating 4/7.

When asked if regular discussions were had on whether decisions and objectives were aligned to the overall company vision, there were mixed results with most responding positively; 53.8% rated 5/7; 15.4% rated 6/7; and 7.7% rated 7/7. One participant was neutral at 4/7; however, one rated only 3/7 in this regard.

The next question asked was whether participants felt their team was healthy and thriving based on openness and trust. Most were positive; 46.2% rated 5/7; 15.4% rated 6/7; and 15.4% rated 7/7. One individual was neutral at 4/7; however, two individuals rated only 2/7 on this question.

In relation to whether participants felt their standpoints and ideas were adjusted based on consultation with colleagues and experts, the majority answered positively with 69.2% rating 5/7 and 23.1% rating 6/7. One individual was neutral and one rated only 3/7 in this area.

When asked whether different perspectives and ideas were encouraged and discussed as part of a reflection process it generated mixed results, although the majority were positive. 30.8% rated 5/7; 15.4% rated 6/7; and 38.5% rated 7/7. One participant was neutral and one rated only 3/7 in this regard.

The next question was whether participants felt their professional knowledge and expertise was essential for achieving good results. The outcome was mostly positive with 38.5% rating 4/5; 46.2% also rated 5/5. 15.4% were neutral in this area.

Participants were next asked whether their teams were empowered to deliver results through constructive communication and interaction. Again, results were mixed, however weighted positively. 30.8% rated 5/7; 38.5% rated 6/7; and 7.7% rated 7/7. There were two neutral votes equating to 15.4% and one vote at 3/7 or 7.7%.

In relation to whether participants engaged in continuous learning and reflection activities to achieve personal growth, the results were more varied than usual. 9 people surveyed positively; 30.8% at 5/7;

23.1% at 6/7; and 15.4% at 7/7. There was one neutral vote and three negatives; 7.7% at 2/7; and 15.4% at 3/7.

When asked whether they felt personal and professional employee growth was valued in the organisation there were 8 positive results and 5 neutral at 38.5%.

The second last question was whether learning and change happened often as a result of customer feedback. 11/13 participants reacted positively; 38.5% at 5/7; 23.1% at 6/7; and 23.1% at 7/7. One participant was neutral, and one rated negatively at 3/7.

The final question was in relation to whether participants felt technology helped them to better achieve results in their daily roles. All participants reacted positively to this question.

2.4.2 Interviews

2.4.2.1 Oxfam Ireland

Shared Vision

Interviewee 1: Generation Y

This interviewee believes the team is aligned around common, co-created goals based on a shared vision. "I think my team is – we all know what we want to do. We're getting a lot better as our department in the past hasn't been as cohesive as could be."

The team set up a new cross-functional, multi-disciplinary working group to facilitate sharing of objectives and building shared vision. "Different objectives become clear in the working group – I feel a lot of the time we have to show others why we need to move fast. There was a lack of understanding in terms of how all teams in the department work together."

The team is empowered through constructive communication and interaction and is working to build on recent successes around shared vision, the interviewee said.

She was asked to consider whether regular discussions are had on whether decisions and objectives are aligned to the overall company vision - as a way of socialising shared vision and ensuring it's embedded in the team.

She joined the organisation a year ago and has not experienced this type of discussion personally except when it related to an organisational crisis – when people were "forced" to come together. "It would be good to do that in normal times for planning," she said.

Interviewee 2: Generation Y

Interviewee 2 is in the organisation for 6 years. He has experienced greater team alignment around common, co-created goals based on a shared vision over the past 2 years. "I feel strongly it's true – in the last 2 years our team strategy based on shared goals."

Previously people worked on their own goals without accountability to the collective deliverables - however ensuring accountability through the team was key in "joining people up."

The team's strong vision does not align to the overall company vision in his view.

"We have broken down silos at department level but are still missing the bigger picture. How all our team goals add up to the business objectives is less clear. We need a regular structured way to see how it links to the overall plan."

The interviewee feels part of a healthy and thriving team, operating based on openness and trust, particularly in his office location. The organisation operates in two jurisdictions which adds complexity, in his view. "It's difficult to measure over two jurisdictions – within the team there is openness and trust and respect is there for professional abilities. The two jurisdictions are an issue."

Interviewee 2 encourages communication and positive interaction in the team. "The benefit is happier people with more trust, flexibility and sharing ideas, taking initiative. People feel more valued and take pride in results more."

Interviewee 3: Generation X

Interviewee 3 has been with the organisation for 2.5 years in a variety of roles within the team. She feels while people are aligned around common co-created goals everyone also has sub-objectives that are not shared enough. "They (goals) are common and communicated but each functional objective can take priority and impede on the overall goal as people focus on their own area. There is not enough around bringing the team together to share, own and explore and show each subset is part of the same jigsaw."

Unlike her two colleagues, she does not believe the organisational structure helps to drive shared vision. "It feels quite siloed. There's a lot of time spent on politicking, persuading, negotiating and informing and then people going off and looking after their own bit anyway. It's frustrating, not motivating and not effective."

Recent changes in the staffing in the team means a constant cycle of trying to keep up and stops shared ownership bedding in, she feels. "The bedrock is there but when push comes to shove, it's shove."

The organisation could do more to ensure alignment of team goals to the overall company vision, interviewee 3 believes. More face to face communications would support this. "There's too much reliance on email which people don't read or interpret differently. Two-way discussion is required."

She feels she is part of a healthy and thriving team, based on openness and trust. "I strongly agree, I think there is an openness and people talk to each other and tell each other where they have issues or things need to be shared or addressed. There's a good level of trust".

When it comes to shared vision and values, Interviewee 3 finds a definite difference in a non-profit organisation. Having worked in the private sector previously, she "really enjoyed the transition because it's values-based."

Direct observation

The team is strong at co-creating goals and agreeing its collective vision. When the pressure increases however members can default to individual or functional goals instead of working towards the collective. There is a gap in linking organizational vision to the team goals. Ongoing staff turnover negatively affects the ability to embed vision.

Mental Models

Interviewee 1: Generation Y

Constructive communication and interaction means people are more supportive of and listen to each other – which leads to standpoints and ideas being adjusted based on consultation with colleagues and experts, according to Interviewee 1.

"I have adjusted what I would expect of others through this, working more closely with (others) I learned other perspectives and saw challenges we faced working towards the same goals."

She feels there is not enough time to reflect on different perspectives and ideas because of constant 'busyness.' The team is adaptive in terms of responding to customer feedback, the interviewee believes.

Interviewee 2: Generation Y

Interviewee 2 believes team structure and ways of working encourage cross-pollination of ideas and consultation with colleagues; however, whether that to team members adjusting their standpoints and ideas depends mainly on the strength of the personal relationship as well.

"As a team much has been done to ensure that's the case through a structure that has made relationships between functions much stronger, but it still helps to have a personal relationship. I try to be open and have improved personally, not to shoot things down, but some want, and value input and others don't. I try not to block. People get protective with areas and with targets – personalities don't help sometimes."

Despite this belief he feels there is a huge openness for new ideas from the top of the organisation – what he described as "almost an expectation to come with ideas – the culture throughout is an openness to new ideas. To listening, and that's a good thing. In my team I encourage other experts to come with suggestions, it carries through."

Interviewee 3: Generation X

Interviewee 3 believes consultation is strong across the team. "There is a consultative bedrock in the team – people aren't afraid to put forward different ideas or to challenge. People take account of other people's views and ideas. It doesn't mean things always change but there's a good level of consultation across, upwards and downwards. It can slow down decision-making, if everyone has chats about doing things and no one ends up doing anything!"

Direct Observation - Members are generally open to challenging and adapting their own mental models – this is strengthened when there is a strong respect for others' personal mastery and a strong personal relationship. Collaboration is strong, and members are willing to take on many roles and support colleagues when required to get projects completed. Team members are situated in two locations and this presents a challenge in terms of communication and interaction.

Direct observation

Team members respect others' views but there's a strong sense that while consultation is required personal mastery should dictate direction in an area.

Personal Mastery

Interviewee 1: Generation Y

Interviewee 1 feels her personal mastery is essential for the achievement of good results in the team. "I would say 100%. I've been given a lot of opportunity to develop my skills and that's amazing. In fact, I've moved up and grown within the organisation because I was given the opportunity to learn on the job." Continuous growth and learning is part of everyday work. "We are in hectic roles and our team is large – but that enables continuous learning, always having to adapt to new situations. Having the time to reflect on what you've actually learned would be useful."

The organisation should place more value on employee growth, the interviewee stated. Growth does not have to be defined by job titles or promotion, but through different learnings, new opportunities for exposure to different part of the business, broadening a new aspect of your role. "I took on training and coaching in my role and even though it wasn't career progressive, it felt like massive progression for me personally. Everyone should have a personal development plan."

Interviewee 2: Generation Y

Interviewee 2 believes that personal mastery and professional expertise is essential for the achievement of good results. However, he adds that it's important not to build a team around the leader's personal expertise: "There's always someone that knows more and getting them into your team frees you up to do other things. You can have strategic oversight and the ability to pull together a team to deliver the whole. You can't be the heart and soul of everything."

As a member of a public-facing department, interviewee 2 feels the team responds to customer feedback and acts on it – changing and adapting the approach as a result. "We accommodate people – we take requests seriously. In digital we respond to analytics and A B testing, it's very customer focused – and our content market strategy is very user centric."

His role used to allow him the flexibility to engage in continuous learning and reflection to achieve personal growth – however this has recently changed.

"I kept a balance between busyness and learning new stuff, but busyness has taken over a little. Now I'm leading on digital innovation and digital marketing (out of necessity) so except for attending the web summit and agile training, it's not been very structured. I read a lot but need to be more disciplined."

He believes the organisation needs to do more to develop its people. "It doesn't get enough attention. It's hard in a non-profit because of resources, but we could do more work as an organisation to focus on staff retention. I don't think we even have a staff retention policy."

Interviewee 3: Generation X

Interviewee 3 feels her professional knowledge and expertise is essential for the achievement of good results. "Professional expertise is important – to be seen to be putting theory into practice." However,

she feels while she needs to know and understand what people in the team are doing to achieve results "you don't need to be an expert in everything to get results."

She also agrees with her colleagues that while learning is continuous through the range of new activities and areas of work, there is little time for reflection.

"Learning has been continuous, it's been a whirlwind couple of years, but I would like more time for reflection. Anybody who wants to learn here can, anyone who doesn't, needs to look at themselves."

Despite this view she disagrees that the organisation truly values employee growth, both personal and professional.

"I don't think the organisational culture is there. This is an area for improvement. I feel we've lost good people that, if we'd valued their input, they would have felt that value through training, monetary reward and development, and there was a place for them to go in those areas."

Learning is also supported through customer feedback, and that results in changes to how work is delivered. "When a customer speaks to us we take notice and respond. Over the last 12 months we've made more of an attempt to understand customers, segment them, and use our research to inform that. We're moving in the right direction and we do try to embrace it. We look to the external environment and see how to tailor our communications. Customer surveys happen too," she said.

Direct observation

The team is incredibly adaptable, flexible and resourceful – the environment requires thinking in your feet and resolving problems as they arise. An organizational development plan would support and embed personal and professional learning.

2.4.2.2 CEC

Shared Vision

Interviewee 1: Generation Y

Interviewee 1 from CEC is a 28-year-old gentleman. He has been with the company for 3 years, manages a team of 4 people and is part of the on-site management team. He was quite enthusiastic when speaking about his team's goals and about the company vision, and it certainly came across as though he was aligned.

His team was quite newly formed and they all appeared to get on well with no issues regarding openness and trust, with regular discussions on whether decisions aligned to the overall company goals.

It must be noted however that this may be largely due to the nature of his role and team, who worked on short to medium-term technical projects such as software development. This type of work, he explained, required daily meetings and constant contact with his team members for projects to be successful.

Interviewee 2: Generation X

Interviewee 2 from CEC has been with the company for 11 years and is a member of generation X. She is a supervisor over several general operatives.

When asked about shared vision and co-created goals she said that while this was the ideal scenario, she appeared somewhat sceptical as to whether it could be achieved, mentioning that some people may not want to align to company goals regardless of what is done. Also, she advised that it is difficult when you are managing people with different skill sets, age brackets and experience levels. However, regarding discussing the alignment of decisions and objectives to the overall company vision, she regularly does so.

She appeared to be aware of and aligned to the vision of the organisation, mentioning the importance of aiming to be best in class vs competitors. Questions could be asked on whether the goals and objectives at her team level were being co-created however or set solely by her.

Interviewee 3: Baby Boomer

Interviewee 3 from CEC belongs to the baby boomer generation and had been with the organisation for 22 years. She held several managerial roles in other divisions before moving into the on-site team 3 years ago. She currently manages one of the on-site projects and a team of 3.

She was confident when asked about the vision and goals of the organisation that her team was aligned. She explained that short term goals were created in conjunction with the customer. In addition, they had created a charter to capture the over-arching aims of the project.

As her team was quite experienced and had worked together for several years, she felt the dynamic was quite healthy and they trusted each other fully. She was very passionate around delivering a high level of customer service always, displaying alignment with the company goals.

Mental Models

Interviewee 1: Generation Y

Interviewee 1 did not appear to have any blocks in terms of mental models and advised he was open to other perspectives, regularly consulting with outside parties. Due to the nature of their role in technical projects, and the pace at which technology is developing, he advised that this is an area he regularly monitored to ensure complacency or over-confidence does not set in and his skill set did not become outdated.

He advised that his team had been formed to complement each other, with each member having their own area of expertise. As a result, they regularly consulted with each other, and consulted with experts both externally and internally depending on the requirement. He was also quite confident that his team communicated well stating that there was a "good dynamic."

Interviewee 2: Generation X

Interviewee 2 consulted regularly with other team members and experts as she explained "you're not an expert in every field."

In relation to whether her team was healthy and thriving based on openness and trust, she told me that this had been a weak area previously, however they now held regular team meetings where changes were articulated to the team. Ideas and opinions are now also discussed which has resulted in improved morale.

There were also signs of some mental models present, as she was strongly of the opinion that aligning everyone to co-created goals and shared vision was idealistic.

Interviewee 3: Baby Boomer

She regularly looked for outside consultation and help where needed, engaging regularly with the management team onsite. When it came to different perspectives and ideas she also felt that this was encouraged.

In terms of mental models, while she advised she was receptive to change, from the conversation it was noted that she had her own ideas and methods of doing things which had formed over time.

Lastly, regarding learning and change arising from customer feedback, in her type of role this was a daily occurrence. She also had fortnightly meetings with the customer which regularly resulted in change.

Personal Mastery

Interviewee 1: Generation Y

Interviewee 1, when asked about continuous learning and reflection, advised that he regularly read articles to ensure his knowledge was still current, he is also undertaking a Prince2 course covered by the company.

About whether employee growth was valued in the organisation, from his perspective he felt it was, and he had seen others who had upskilled climb the ladder, however he said this may not be the case for all. In his own case however, he had showcased that he was eager to develop himself and, in his case, that the company was providing him with the means to do so.

Interviewee 2: Generation X

Regarding continuous learning interviewee 2 advised that it is encouraged and that there are opportunities for growth within the company as is demonstrated by the fact a large percentage of the current senior management team within the on-site team, and the wider organisation, have been organically grown.

About the learning and development of the organisation she felt that while they learn and change regularly because of customer feedback, this did still not happen regularly enough. She advised she would prefer to see the company do a deeper dive at times into some areas of customer feedback, however that she was aware resources did not always allow for this.

The extent by which she was achieving personal and professional growth herself was by reading articles to stay up to date.

Interviewee 3: Baby Boomer

When asked about the importance of her professional knowledge and expertise, she explained that her previous people management experience and knowledge of stock control had been vital to her being able to achieve success in her role. She was not engaging in any continuous learning however, outside of training courses organised via work, when asked this was due to two small kids and lack of time.

She did feel that the organisation valued growth, citing several examples where people had climbed the ladder as a result, however mentioned that personal growth may not get the same focus as professional growth does, potentially down to lack of understanding.

Finally, she advised that there wasn't much capacity for further personal mastery due to family commitments, outside of whatever learnings which could be achieved at work.

2.5 Analysis

2.5.1 Comparisons

2.5.1.1 Personal Mastery

From comparing the two organisations in terms of personal mastery there were two differing issues present which we will detail below.

In Oxfam Ireland, of the three candidates interviewed, all advised that they were eager to learn, signifying that the desire for personal mastery is present within the team. Only the generation Y interviewee felt however that they were receiving adequate opportunities to develop. The other two employees alluded to the fact that the organisation wasn't doing enough to facilitate this. They also drew attention to a correlation between performance, retention and personal mastery.

In CEC the results were quite different, with all three interviewees advising that they recognised the opportunity for personal growth was present. In the case of the generation Y interviewee he was currently engaged in a course sponsored by the company and quite happy he was being given the opportunity to develop. In the case of the other two interviewees the requirement for personal development didn't appear to be as strong, with one quite happy developing themselves by reading articles and the baby boomer advising that they did not have the time with work and family commitments.

Questions could be asked as to whether the same urgency and importance is attached to personal mastery in the non-profit sector. In the private sector company, the learning and development of its employees and ultimately the organisation is essential for company survival and may mean the difference between winning and losing contracts or staying in business vs. going bust. In the non-profit sector, while personal development is certainly valued, it could be argued the same level of urgency is not present as the study showed personal mastery did not receive the same level of facilitation, possibly correlating to this hypothesis.

Oxfam Ireland	Employee Interest	Company facilitation
Interviewee 1	Yes	Yes
Interviewee 2	Yes	No
Interviewee 3	Yes	No
CEC	Employee Interest	Company facilitation
Interviewee 1	Yes	Yes
Interviewee 2	Maybe	Yes
Interviewee 3	No	Yes

2.5.1.2 Mental Models

Comparing the two organisations from a mental model perspective shows little difference between them.

In Oxfam Ireland the team structure has been set up in such a way to encourage consultation with colleagues and this is reflected in the mental models where people feel confident that they can put forward their ideas and take on board the opinion of others. It's acknowledged that personal relationships are an important factor in relation to adjusting mental models, which is supported by the literature and reflects the fact that social cohesion has a positive effect, increases communication and drives the development of effective TMM and therefore performance. This is also strengthened within Oxfam Ireland by having a common vision and task orientation which aids in the openness and consultation with others (Filho, Tenenbaum and Yang, 2015)

However, a transition period seems to be happening now as the interviewees mentioned that they are currently trying to be more aligned and collaborative and that a "consultative bedrock" exists, but that personality issues and turnover of staff has caused problems and that some people don't value input from others. Time for reflection seems to be a challenge, so this is an area that needs to be improved upon or learning will remain adaptive rather than generative and the opportunity for double and triple loop learning and developing successful TMMs will be missed.

CEC also described openness and consultation as having previously been an area of weakness but seems to have made more progress in developing its TMM than Oxfam Ireland. Similarly, having a shared vision was a strong driver in developing TMM and this has improved team performance overall. However, there is still some work to be done in this area, as TMM is perceived to have to be similar and therefore unattainable, when the research shows that it's accuracy which is a more important factor to drive performance (Edwards et al, 2006).

The older generations in both organisations seem slightly more negatively inclined in relation to TMM and change but were more open to customer feedback and driving change based on that. Given that mental models are representative of knowledge in a given domain, it's not surprising to find that those who have more experience may be more resistant to change, so raising awareness of this and the effects that it has on behaviour would be beneficial for the teams.

2.5.1.3 Shared Vision

Shared vision and alignment is strong in the Oxfam Ireland team, but a shortcoming was identified in the fact that team vision was not necessarily aligned to the overall organisational vision. The team operates in an environment of trust and openness and is willing to co-create goals but needs to see how its work helps deliver the overall organisational objectives more clearly. The high-level strategy may be understood but not actual deliverables to achieve it. This leads to a tendency for some people to focus on personal goals rather than team or organisational goals.

There was a strong suggestion that working for a values-based or mission-led non-profit organisation created a common ethos that in turn led to an openness to shared organisational vision to drive results.

At CEC, the sense of shared vision was stronger among the team, with almost 8 in 10 respondents agreeing they were aligned on vision, compared to 7 in 10 at Oxfam Ireland. This would seem to conflict with the hypotheses above. Almost 8 in 10 team members at CEC also felt they had regular discussions about whether their vision was aligned to the business vision; compared to Oxfam Ireland, where just over 5 in 10 agreed. An environment of openness and trust was evident in CEC, facilitating building shared vision, but team members had a different approach towards co-creating goals and communicating shared vision in their teams. Overall there was greater internal team clarity on overall business objectives in CEC.

2.5.2 Technology as a tool for team empowerment

2.5.2.1 Oxfam Ireland

Technology is a key enabler for interviewee 1., the Millennial. "I'm used to working with technology, so it wasn't something I had to learn coming in. I feel fluent in using technology. There is an age dimension. Older people struggle more. It's overwhelming when you come into (Oxfam Ireland) – if I had to learn computer skills as well it would have been awful.

"Basic computer problems I can fix, others ring IT – I can think on my feet in terms of technology. We don't utilize technology as much as we could. We haven't considered how we can enhance performance by better technology. I have many friends in start-ups – internal messaging systems for instance can be useful for fast messaging – What's App requires a fast response whereas email sits for 2 days!"

Interviewee 2 of Generation Y believes that technology is both a hindrance and an enabler, as he works in a digital team. "In the digital team it's been embraced, and people want to use more. But we are not maximizing the use of technology internally. We are starting to look at digital innovation in our work and the appetite is there. There's a recognition it's important but it needs a structure and vision.

"Using smart tech would help empower the team to do the job better. It would be the goal to make things more efficient and easier and enjoyable."

Interviewee 2 is challenged by the internal notion that the organisation is cutting edge, open to digital innovation, while the team is forced to use old equipment that doesn't help productivity. In terms of collaboration tools, Trello is the preferred option for internal groups, virtual groups and external web developers. The organisation also uses Facebook at Work. "We don't need a suite of expensive tools to facilitate better collaboration," he said.

Interviewee 3 of Generation X believes technology is not used enough. "We don't have the equipment or in some cases the basic skills. We need mobile tech to work remotely, all the people who are front-facing, out and about, need equipment that's connected and light.

Systems in use include Trello and Facebook at Work, alongside e-mail. "Trello is good for collaboration, Facebook at Work is just more clutter and email...notifications just fill up inbox! E-mail is totally over-used." She believes there is a generational aspect to the use of e-mail. "The younger generation copy everyone on everything like they will never meet you face to face because they want you to know they are busy. I don't need that! They don't pick up the phone or talk face to face. Short, sharp messaging works for them. Tech is an enabler but can be a hindrance when it's slow, lumbering or the network goes down. If data drives are not up to date...people save things on excel or hard drive, so they have access. As an organisation we're not great at promoting it."

To summarise, technology is under-utilised in the organisation and, while two-thirds of respondents believe it enables better working, the internal vision of being a digital leader is not yet evidenced in structure and practice. The use of old equipment does not facilitate efficient mobile working. Collaboration tools can help build better communication and interaction, and a suite of expensive tech tools is not necessary to accomplish this.

2.5.2.2 CEC

Interviewee 1 believed technology was a huge enabler. He works as the manager of all technical projects on-site and is very technically savvy. The biggest issues he faced was trying to bring others along who were not as technically proficient as himself. He advised that this usually occurred when trying to implement new systems, practices and processes, however it was largely confined to the general operatives who may not be as up to speed on computers and occurred most regularly with the older generations. When asked about whether the company was utilizing technology to the maximum he advised we were only scratching the surface and need to continue to drive efficiencies via smart systems.

Interviewee 2 was aligned with the importance of technology. She was currently using email and WhatsApp for instant messaging, along with various software packages such as SAP, a task manager program, a software system for audit and inspection, RFID scanning software, smart vending software, along with various other packages. She advised that even using WhatsApp had greatly improved the speed of her communication with her team. She also mentioned however that while technology is great, you can build an over dependence on systems to carry out certain functions. If these systems fail, there needs to be a plan B.

Interviewee 3 was from the baby boomer era and admitted that while they were using systems such as SAP etc. they felt they were slower to take them up and sometimes struggled with the more complex functions on excel and other programs. They were aligned however that technology was an enabler, however mentioned that it was important to get it right from the start, as when a system hasn't been properly implemented it can cause havoc in a team environment.

To summarise, all participants interviewed and surveyed within CEC were aligned that technology enabled them to better achieve their organisational goals on a today to day basis. The generation Y candidate interviewed was by far the most IT savvy, followed by the generation X interviewee, and lastly the baby boomer interviewee. It is worth noting however that the roles of the candidates interviewed would have impacted the results with interviewee 1 from generation Y working in an IT department, whereas the other interviewees did not.

Comparison: Just two-thirds of Oxfam Ireland respondents felt technology enabled them to do their jobs better, compared to a positive response from all CEC team members surveyed. Oxfam Ireland employees felt the organisation could improve its use of technology and equipment and a clear structure and strategy for digital and technological development was required. This is in fact in development.

At CEC, staff embraced technology and even the older demographic was prepared to adapt to new systems. This is influenced potentially by the fact CEC is seen as a technical solutions provider on-site. The study did highlight that there was potentially a need to conduct more training with the older generations, who were slower to pick up system knowledge, yet still eager to learn.

2.5.3 Generational Trends

2.5.3.1 Oxfam Ireland

There is an age dimension to the understanding of and use of technology in the team, with Generation Y more comfortable with use of communications applications such as WhatsApp compared to email. Generation X prefers face to face and phone communication to email or apps. Overall, one third of respondents in the survey did not agree that technology enabled them to do their jobs better. This was evidence across all age cohorts.

Some issues experienced by the younger generations include preconceived assumptions as to their role and capabilities due to their age and appearance. Overall however, the findings suggested that there were no standout generational issues when working in teams in Oxfam Ireland, and that everyone was united around the organisational vision. In interviews, two respondents believed that having a multi-generational team was not an issue as they were aligned to common values and a 'common ethos.'

2.5.3.2 CEC

In CEC according to the research conducted the younger generations were clearly more eager and ambitious, requiring a constant flow of new challenges. Generations Y and Z were more suited and easier to manage when their roles involved short-term projects and deliverables, but not easy to manage across all positions. The younger generations require more effort and input than the older

generations to manage effectively. This correlates with information gleaned through an interview with Thor Tielemans in Mercedes CAC, who also found that the younger generations were more difficult to hold onto, in comparison to generation X and , whom he described as more focused.

Adaptability toward technology in older generations is an area for note. While all parties surveyed and interviewed were aligned on its importance and value, the younger generations came across as more technically proficient, with older generations admitting they are finding it more difficult to pick it up and adapt.

2.6 Findings

	Hypothesis	Reality
Shared Vision	Easier to align multi-generational teams to organisation vision in the non-profit sector because of the common ethos inherent in working for a values-based organisation.	This is not evident in the research and further research would be required to explore it more fully.
	Greater difficulty ingraining organisational vision in the for-profit sector.	Not proven. Strong sense of purpose in the private organisation. Although, while all three people interviewed in the private sector gave elements of the company vision, none were fully correct or aligned.
Mental Models	The younger generation is more prepared to challenge existing mental models.	The hypothesis is upheld through survey responses and direct participation and observation in both organisations.
	Change to mental models is potentially held back by older generations.	No evidence to support this in the non-profit organisation. Some evidence to this effect in the private organisation, with older members having more evident mental models which could be harder to change.
Personal Mastery	A formalised process for learning and development in the non-profit exists but it not fully delivered due to lack of resources.	The research validates this but shows employees do not feel the organisation values personal and professional growth and that continuous learning takes place on the job despite this because of the onus on people to adapt and get the job done across a range of activities.

	Learning and development occurs in the private sector organisation despite having no formal process.	The hypothesis is not upheld. While the current system is working for some, including all 3 interviewees, it does not appear to be working for all parties, with 5/13 people surveyed responding neutrally or negatively about their perception of whether the company valued personal and professional development. The lack of a formalised learning and development process may in fact be impacting awareness around available support in this regard.
Digital Divide	There is a digital divide between the generations.	The hypothesis is upheld through qualitative research outlining preferences and practice in both organisations.

2.7 Recommendations

	Oxfam Ireland	CEC
Shared vision	<p>Align shared vision in the team with organizational shared vision.</p> <p>Ensure single-loop learning does not become the norm because team operates in two jurisdictions</p> <p>Use structured implementation of induction to embed cultures, values and vision.</p> <p>Broaden performance management to focus on behaviors, culture and personal development.</p>	<p>Ensure shared vision in teams is co-created, not set solely by managers.</p> <p>Clarify whether the team should align to the vision for the organisation or the clients.</p>
Mental models	<p>A culture of openness to new ideas can support mental models – a "consultative bedrock" exists.</p> <p>Support development of mental models and double-loop learning through increased collaboration</p>	<p>Changing the mental models prevalent in the older generations will be more difficult achieve due to length of service and prior experiences. Ensure a plan is in place to drive collaboration and new ways of doing things.</p>

	and inculcating a customer-centric approach.	
Personal mastery	<p>Extreme 'busyness' hampers ongoing reflection and structured learning.</p> <p>Learning and development needs to be inculcated into each person's personal development plan.</p> <p>Organisation should have stand-alone budget for learning and development.</p> <p>Ensure people are aware organizational growth is valued.</p>	<p>Ensure staff understand the opportunities for learning and development and are encouraged to take them up.</p> <p>Ensure people are aware personal growth is valued.</p> <p>Build learning and growth into personal development plans.</p>
Technology	<p>Ensure technology becomes an enabler across the team and the business.</p> <p>Develop a structure and strategy to realise the vision of being a digital leader.</p> <p>Encourage the use of collaboration tools for better communication and interaction.</p>	<p>Ensure technology becomes an enabler across the team and the business.</p> <p>Ensure that digital training is provided on all systems.</p>

2.8 Discussion

According to Senge (2006) in a not-for-profit organisation the understanding of the systematic causes of problems, such as poverty, is crucial, and in these settings "openness, reflection, deeper conversations, personal mastery and shared vision" can uniquely energise change in a way that perhaps is lacking in the private sector. The findings may identify a gap in the current literature on whether shared vision in a non-profit a lever for organisational learning and team effectiveness is based on a pre-existing set of common values and a common ethos among team members.

The findings on a practical level can help the two organisations understand the learning phenomenon happening in each instance and to create initiatives and interventions to improve employee motivation through enhancing vision and culture. The findings are reflective of the previous studies on TMMs that show a strong correlation between task and social cohesion being necessary to develop effective mental models and drive team performance. Organisations need to ensure that they embed learning and development to create accuracy of these mental models and dissipate the illusion that

they need to be similar. Management first needs to engage in triple loop learning before they can develop "institutional learning" and the five disciplines as systems thinking, including creating the openness within the organisation that is necessary for existing mental models to be challenged (Senge, 2006). Having diversity within teams who can also effectively communicate and collaborate with open minds will help drive performance.

The findings provide a strong link between the organisations' approach to learning and performance. Two employees in the not-for-profit organisation advised there was a direct correlation. In both organisations, those engaged in personal development were satisfied and performing at a high level. There was also a direct link made between personal mastery and retention.

This aligns with research from literature which also states personal mastery generates improved performance within a firm. "It originates in the internal motivation of each member of the entity to develop personally and professionally, for both his or her own good and that of the firm. No one can increase the personal mastery of another person; to force someone's personal growth is counterproductive." (Senge et al., 1994).

2.9 Conclusion

To conclude, the main purpose of the study was to examine and compare whether shared vision, mental models and personal mastery are present and effective in both a non-profit and a for-profit environment. As part of our research, we reviewed whether working in a multi-generational team impacted empowerment, and how the use of technology enabled effective team working. To do so, we conducted our research in two similarly-sized Irish organisations.

We discovered that teams in both organisations believed strongly in the need for a shared vision but needed organisational support to ensure alignment from business objectives to team objectives. We noted there was more organisational support for personal mastery in the private organisation than in the not-for-profit, potentially down to a greater urgency being present in private organisations due to the higher risk levels associated. Personal mastery is a source of great pride but needs to be supported through formal learning and development opportunities.

Our research has also uncovered a potential gap in the literature when it comes to understanding the power of mission to leverage shared vision for greater results in a non-profit. Our original hypothesis was that shared vision would be stronger in the non-profit; however, this did not prove to be the case.

As predicted we noted that there was a greater presence of mental models in the older generations, which may cause difficulty when driving change. There is a multi-generational aspect to team's mental models, with older generations more likely to have fixed views, potentially because of greater professional experience. However, interestingly, all parties surveyed and interviewed were willing to change based on customer feedback - this would warrant further investigation.

There is also a multi-generational element to the use of and views of technology as an enabler of performance. However, operating in a multi-generational team does not have a negative correlation on any of the three disciplines of team empowerment.

Finally, another finding was that an over-focus on philanthropy in the non-profit environment was potentially stifling the enablement of workers via technology, with workers not feeling they were getting the relevant support in this regard. In the private sector this was not the case, with all people

interviewed and surveyed aligned that technology was enabling them to do their jobs more effectively. Overall the research uncovered some very interesting results, which would benefit from further exploration using a larger sample size. To conclude, both organisations are in a strong position to ensure that existing systems for team empowerment are improved and embedded further to ensure better performance, better results, and more productive and happy teams.

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Chapter 3 The Next Generation

A study of Team Empowerment and Management

Systems: Ready for the Next Generation?

Peter Kehoe, Seán Naughton and Mary Ryan

Edited Michael Campion and Martin Hughes

3.1 Introduction

Team empowerment is important in every industry and there are many documented methods for empowering your teams to reach their full potential. Peter Senge, in his book 'The Fifth Discipline' highlights 4 major disciplines or learning capabilities necessary for an empowered team. These are personal mastery, dialogue, mental models and shared vision. The belief is that if teams are given the capabilities to develop under each of these headings, it will create the conditions necessary for the fifth discipline of team empowerment which is systems thinking (Senge, 2006). "Great things in business are never done by one person. They're done by a team of people." Steve Jobs (Horn, 2013)

System thinking is the opposite of 'analysis', which involves studying a problem by breaking it down into its' constituent parts to determine a root cause. Instead of isolating smaller and smaller elements of the system, in systems thinking the view is expanded to look at larger and larger interactions throughout the system – how everything works holistically. For a team to obtain a systems-thinking outlook, to Senge, is true team empowerment.

Quality Management Systems (QMS) are defined as a collection of business processes focused on continually meeting customer or service user requirements and enhancing their satisfaction. The system is aligned with the company's overall strategic vision and goals and provides the framework necessary to achieve the required accreditation for which the company trades or provides a service. Many industries work under such regulatory or quality controlled conditions which claim to provide a 'systems thinking' overview of the work processes. Management systems such as those produced by the International Standards Organisation (ISO), regulatory quality systems required by national and European authorities and financial regulatory systems all aim to provide the tools with which to direct and control an organisation (ISO, 2008).

In this work we endeavour to investigate if a team's access to this systems thinking, via the management system, is leading to truly empowered teams. To answer this question we will be researching and gathering data regarding team empowerment, and the associated learning capabilities that Senge references. We will focus on both senior management and team members across three regulated sectors. This will be conducted via one on one interviews, anonymous online surveys and complemented with our own observations of within these sectors.

3.1.1 Research Objective and Research Questions

Our main research questions in this study are:

1. Do management systems that claim to provide systems thinking empower teams?

Our hypothesis here is that systems thinking provided by the four learning capabilities is not the same, and does not have the same effects as the systems thinking provided by management systems. We expect to uncover evidential proof of the underlying differences that may lead to a clearer definition of systems thinking in both management systems and team empowerment.

2. Is this approach to systems thinking comparable to the approach advocated by Peter Senge?

We aim to look at where the approaches align and where they diverge and what organisations working in these regulated sectors can do to improve the effectiveness of their teams.

3. What specific changes, if any, are needed to empower multi-generational teams in the regulated sector and if there are mitigating technological factors?

Today we are approaching the beginning of a new paradigm in the area of team empowerment. The catalyst for this is the advent of a new generation of young people entering the workforce. This younger generation is changing the composition of teams and necessitating a strong focus on the multigenerational aspect of team empowerment. This change is exacerbated by the quickening pace of technological change. Many articles explore how companies can react to this 4th Industrial Revolution as it is called (Schwab, 2016). The new generation are true 'digital natives', and companies are keen to harness the new competencies they will bring with them and integrate these into their teams and systems. Regulated sectors can be thought of as slow to change but also more crucially do not conduct enough post evaluation of the actual regulation and policy (Coglianese, 2012). We will explore if companies are positioned and ready to empower their teams and embrace this disruption in order to attract and retain the right talent and to encourage the empowerment of their new multigenerational teams.

3.1.2 Structure of Report

In Section 3.2 of the report we outline our review of prior and relevant literature focused on the five disciplines outlined by Peter Senge in "The Fifth Discipline". Next we will explain the case study research methodology that was used to conduct interviews and surveys with individuals and teams in three different sectors. The data that is gathered will be analysed and findings will be explained. These findings will form the basis to explore in more detail our three main research questions outlined in Section 3.1. Finally we will discuss implications for practice and recommendation for future research on this topic.

3.2 Literature Review

This chapter is a review of literature focused on team empowerment, systems thinking, the learning capabilities as defined by Peter Senge (Senge, 2006). The research will aim to review these factors related to regulated workplace factors.

3.2.1 Introduction

Teams are the leading approach organisations use for two or more people to work interdependently towards a common goal. They are characterized as having joint and integrative accountability, processes, and reward structures in accomplishing tasks (Solansky, 2011). Others define teams as 'collectives who exist to perform organizationally relevant tasks, share one or more common goals, interact socially, exhibit task interdependencies, maintain and manage boundaries, and are embedded in an organizational context that sets boundaries, constrains the team, and influences exchanges with other units in the broader entity.' (Mathieu et al., 2008). The benefits of teams include increasing productivity in the workplace, improved quality, a smaller management structure, lowered levels of absenteeism, reduced employee turnover, and increased industrial harmony (Bektas and Sohrabifard, 2013).

Personnel empowerment in organizations is the perception by members that they have the opportunity to help determine work roles, accomplish meaningful work, and influence important decisions (Bektas and Sohrabifard, 2013). The benefits flowing from empowering personnel include increased employee commitment, improved quality, more innovation, increased job satisfaction and productivity (Bektas and Sohrabifard, 2013). Empowered personnel results in empowered teams and increases overall team and organisational effectiveness (Mathieu et al., 2008; Bektas and Sohrabifard, 2013).

However, in Peter Senge's own words: "To empower people in an unaligned organization can be counterproductive. If people do not share a common vision, and do not share common mental models about the business reality within which they operate, empowering people will only increase organizational stress and the burden of management to maintain coherence and direction." (Senge, 2006). What Senge is referring to here is the multifaceted approach required for true team empowerment and is discussed in further depth in Chapter 2.2.

3.2.2 The Five disciplines

3.2.2.1 Personal Mastery

Peter Senge tells us that Personal mastery is a key discipline, as the organisation learns only through individuals who learn. The organisation is the sum of the individuals. To achieve this, both the organisation has to create a learning environment but also the individual has to be committed to their own lifelong learning. It's the discipline of continually focusing and refocusing on what one truly wants. This aspiration to achieve ones learning will create positive energy or creative tension to constantly close the gap between the current reality and the person's vision. This vision for one's own self has to be aligned with the organisation vision and values (Senge, 2006). "Personal mastery is the discipline

of continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively.”(Senge, 2006).

Many organisations say that “people are our most important asset” but then do not foster innovative thinking or want the system to be challenged. Personal mastery is best obtained by creating a climate conducive to inquiry, truth and challenge where management leads by example (Senge, 2006). In a regulated environment it is critical that the organisation performs within the laws and regulations, but this does not have to be at the expense of personal mastery. This research will explore if personal mastery is achieved if the company has legally compliant. Is it enough that this is achieved or should the teams and individuals involved strive to not only stay within the regulated rules but also challenge the system for improved ways of working?

The size of the company is considered a factor in how individuals and teams develop their mastery (Garcia-Morales, Llorens-Montes and Verdu-Jover, 2007). This article highlights that teams feel more empowered in smaller companies as they are more closely aligned with the vision and therefore feel greater responsibility to innovate and deliver value. Many companies try to retain their entrepreneurial spirit as they grow and this links closely to the personal mastery discipline of the individual and teams desire for positive energy and creative tension referred to earlier.

3.2.2.2 Shared Vision

Companies need goals, visions and a mission to be deeply shared throughout the organisation. A shared vision is what binds people together around a common identity and sense of destiny. It is truly a shared vision when each person cares deeply about it (because it is aligned with their personal vision). Organisations use the energy of a shared vision to drive learning, create long-term aspirations and imbue work with a sense of greater purpose (Senge, 2006). We note from our research that many middle management express a desire that there is a common shared vision (Hodgkinson, 2002). This would help to get everyone on the same page and work towards the same goals. However, in many cases the “shared” vision is delivered from the top of the organisation and relies upon the various management levels to cascade the message out to all workers (Reese, 2014). Therefore our report will explore if companies really want all their staff to be part of the vision process and particularly so in a regulated environment does this pose even further problems. If this is the case then are companies missing a huge opportunity to empower their workers and leverage their desire to be part of a shared goal? Commitment levels also vary by generation and different approaches need to be taken by companies to ensure the shared vision is paramount in everyone’s actions and thinking. Teams need to have a compelling direction as an enabling condition in order to avoid an “us versus them” thinking (Haas and Mortensen, 2016). This mentality is evident later in our interviews and findings.

3.2.2.3 Mental Models

Mental models refers to how two individuals can have different mental models and experience the same event, but see different details or have different interpretations. There are no correct or incorrect mental models, but a problem can arise when these assumptions we make become inherent in us and we are blinded to them influencing our thinking and actions (Senge, 2006). This prevents us from examining, changing or improving elements that are influenced by these assumptions and requires inward reflection and outward awareness of the mental models of others.

Reference HBR article by Chris Argyris (Argyris, 1994). He speaks about how people learn and how companies do not encourage enough reflection time or double loop learning as he called it at the time. The nature of the regulated environment and practitioners within it generally focus on the facts on the problem in the lens of the documented process. This analysis does not prompt the individuals involved to question their own motives and actions in the problem that may have happened. Therefore there is no learning. Argyris, in further research, went on to develop triple loop learning which vertical learning (Petrie, 2014). The Lego Serious Play (LEGO, 2018) methodology is also another method for individuals and teams to share their mental models. This process allows meaningful reflection and feeds into the other disciplines of dialogue between the teams mental models.

We read in Senge's book how "the discipline of managing mental models - promises to be a major breakthrough for building learning organisations." We know from our own experiences that there are many challenges faced when managing multi-generational teams and according to Forbes "when you have the right people, it's rocket fuel for the business". As we are unique in our thoughts, values and motivators we are each an individual team member and by ensuring we identify each of our strengths and weak spots will help us bring out the best in our people, in our teams.

3.2.2.4 Team Learning / Dialogue

Team learning results in alignment and capacity to develop a team as a whole, building on individual strengths to achieve as a team, what is not possible alone. Key dimensions of team learning include the potential for many minds to be more intelligent than one mind, co-ordinated interdependence, where team members can trust each other in operational tasks and learning across teams, allowing learning from successes and failures to be spread by interacting with other teams (Senge, 2006).

Communication and dialogue are key components to develop team learning. How teams communicate is seen as one of the most important elements in determining team's success (Pentland, 2012).

Working with the various generations in our diverse work cultures we need be mindful of areas of potential conflict and misunderstandings e.g. dress code, work style, hours of work and especially how we communicate i.e. the dialogue we use. How different generations compare and make assumptions against each other e.g. technology and how quickly or slowly it is adopted or resisted (GenZ vs Baby Boomers). Therefore it is important to have a clear and open dialogue preventing misunderstandings and educating teams by embracing diversity and willingness to change resulting in open doors to greater understanding and better decisions/choices being made.

3.2.2.5 System Thinking

This is the 'Fifth Discipline' according to Senge and is seen as the cornerstone of the learning organisation. Senge believes that system thinking within teams is only possible when the other four learning capabilities are embedded in the organisation. It is about empowering teams to learn to think and see systemic structures that underlie the organisation as a whole. It requires a mind shift away from linear thinking. Linear thinking is where you may see individual parts of a system, see snapshots of a system in time, search and use visible / obvious solutions closest to you and see linear cause and effect relationships. A move to systems thinking allows you to see whole systems, identify interlinkages / causality, see change processes over time and identify true systemic causation (Senge,

2006). In practice, Senge states that you will be able to identify system archetypes (which make explicit what is otherwise management judgement or the patterns that control events), identify points of leverage where the biggest and most sustainable improvements can be made with relatively small action, and see different forces at play within the system:

- Reinforcing feedback, which can give rise to virtuous or vicious cycles
- Balancing feedback, where the system has self-correction or balancing processes
- Delays, insight into how the system incorporates time-lags between specific actions and outcomes.(Senge, 2006)

Regulatory and management systems also claim to provide systems thinking through use of a management template. Often this is in the guise of a quality and/or external reporting system that ensures all business activity and operations flow through the system. Some studies have shown that these management system platforms improve employee system thinking (Karapetrovic and Casadesús, 2009). However, the majority of the literature focuses on the challenges of implementing such management systems rather than their maintenance and sustainability over time in terms of empowerment and systems thinking within teams (Mosadeghrad, 2014; Gozukara, Colakoglu and Simsek, 2018).

The air defence network called the “Dowding system” developed by RAF Commander-in-Chief Hugh Dowding was an example of systems thinking at its best. It incorporated all the disciplines discussed in earlier sections, innovative use of technology and multi-generational and diverse teams. Dowding had the overall vision. He showed that by thinking innovatively, creating the right conditions and empowering his teams, it is possible and there are huge benefits for teams to develop systems thinking.

3.2.3 Regulated Workplace Factors

Many forms of mandatory regulation (e.g. food production, human medicines, financial sector regulation) and voluntary regulation or standards (ISO standards) provide an integrated management system template that brings benefits to the business, the industry sector and the consumer or service user. Society benefits from safer, more reliable and quality-assured goods and services. There are many documented business benefits such as improved customer satisfaction, efficiency, profitability, market share and improved employee results (Bernardo et al., 2015). However, there are a considerable number of people, including senior management, who see these processes as a burden, imposed on their business or industry sector by external bodies or by societal pressure. They fail to see the potential benefits and only the costs of this perceived imposition with consequent loss of management commitment to the process (Cheng, Lyu and Lin, 2004). Today, regulation bodies are on the back foot as the current Trump Administration in the United States favours a move towards de-regulation in almost all sectors. In this climate, it is imperative that the governance regimes of various regulation and management systems listen to these managers and figure out new ways to reach them and therefore continuously improve their offering for the benefit of both the consumer and service provider. Critical success factors have been identified in order to ensure a sustainable management system and these include continuous improvement of process, people and the system itself (Ab Wahid and Corner, 2009).

Most studies on the effect of such management systems on the empowerment of teams concentrate on their initial introduction and implementation. Studies that focus on failed implementation often cite a lack of employee involvement, lack of management commitment, cultural issues, poor communication and lack of an effective change management plan (Mosadeghrad, 2014). A recurring finding in these studies is that the commitment of top management to a successful management system is predictive of employee empowerment (Gozukara, Colakoglu and Simsek, 2018). However, for sustainable management systems, continued employee involvement and empowerment appears key and can often be lost after the initial big push to obtain external approval or accreditation for the system (Welikala and Sohal, 2008)(Wilkinson et al., 1992).

3.3 Research Methodology

3.3.1 Research Paradigms

Each of the authors works in a different regulated sector and utilises a management system that claims to provide a systems thinking view of the workplace. These are in the healthcare setting, food manufacturing and the financial services sector. The research will look at the three sectors in combination, highlighting commonalities in team effectiveness, or otherwise, in the regulated setting. The aspect under investigation here is if the systems thinking provided by the management system is resulting in empowered and effective teams. The perception of both senior management and employees will be analysed. The analysis is through the theoretical lens of the five disciplines espoused by Peter Senge. Additional factors which will be analysed include managerial attitudes to the challenges of empowering multigenerational teams and if these managers are ready for increased digitisation and the Fourth Industrial Revolution.

In each organisation, the management system is well embedded and has been in use for over 10 years. This is an important point to note so that the challenges of implementing such a system, a common subject within the literature, will not be a mitigating factor in our research and findings.

3.3.2 Methodology

The research comprises two main components: interviews with senior management and a survey of non-management employees in the Quality/Compliance departments of each of the three sectors.

3.3.2.1 Senior Management Interviews

Interview questions were formulated following a review of the literature concerning team empowerment and 'The Fifth Discipline'. Questions were intended to cover each of the five disciplines. More focus was placed on systems thinking and where applicable, interviewees were asked to elaborate on the challenges and opportunities that arise within multigenerational teams. The questions were tailored to suit the regulated sector and each interviewer was provided with a set of prompts and instructions to ensure the question asked was answered and not misunderstood. This was important as the terminology of the five disciplines is not universally known. Therefore it was important to frame the questions in a language that allowed the interviewee express their thoughts and insights and not feel intimidated. Eight senior management personnel were interviewed across

the three sectors and asked the same set of 14 questions. Three interviewees were in the financial services sector, four in the healthcare sector and one in the food manufacturing sector. The purpose of posing the same questions to each sector was to determine common findings related to the regulated system as opposed to the findings being biased due to the specific sector.

3.3.2.2 Employee Surveys

A complementary survey of employees (non-management level) was designed using Microsoft Forms. The questions were tailored to act as a proxy measure for each of the learning capabilities and also took note of the age of the respondent so that generational differences could be identified. The same survey was completed by staff in all three sectors for the same reason as the interviews to eliminate particular sector bias. The survey was distributed by email to specified staff members and all returns were anonymous in order to encourage honesty.

3.3.3 Profile of Interviewees

Health Sector:

All four interviewees are in senior management positions and responsible for teams in their specific area. All are educated to Masters Level and have more than 10 years' experience of the management system and a minimum of two years at senior management level.

Manufacturing Sector:

The interviewee is the senior Quality manager on site responsible for a team of 15 highly trained quality staff. The individual has worked for the company for 2 years and has 20 years experience in similar senior roles in other companies.

Financial Services Sector:

Each interviewee has a management role with multiple years' experience of working with and responsible for teams within their organisations. One manager is from an Information Technology company, one from a Life Insurance/Assurance company and one from a Financial Services (non profit) organisation.

3.3.4 Data Collection and Analysis

Senior Management Interviews

Notes from each interview were recorded and placed on a Microsoft Excel file, with a different worksheet for each question. Each of the eight answers for each question were qualitatively analysed for references to the Senge's disciplines, commonalities and divergences. A single, summarised analysis for each question was prepared, complemented, where appropriate, by the authors' own observations of that sector.

Employee Surveys

The responses were exported via csv file to Microsoft Excel. Charts and tables of results were created using the pivot table functionality.

Overall Analysis

Both the senior management interviews and the employee survey results were qualitatively analysed in light of the initial research questions posed. They were also qualitatively analysed for other findings in relation to the five disciplines and compared to each other to search for similarities and disparities. The findings of the interviews and surveys are discussed and analysed in Chapter 4.

3.4 Findings and Analysis

3.4.1 Introduction

This chapter lists out the 14 senior management interview questions and provides an analysis of the findings under each question. The findings from the employee survey are then presented using graphical charts and analysis.

3.4.2 Senior Management Interviews

Eight senior management personnel were interviewed across the three sectors and all the answers were collectively summarised as below. Note that when an interviewee identified problems or successes in a particular question, the interviewer would ask them to further expand on the reasons for success, failure or what they believe could be done differently. Where possible, the summarised answers were aligned with the learning capabilities referred to by Senge (Senge, 2006) and complemented, where appropriate, by the author's observations of the sector.

Q1. What approaches are used for empowering teams in your workplace?

When asked about how they empower their teams, each interviewee had answers that touched on one, perhaps two of the disciplines. Generally, Personal Mastery featured most heavily. Most answered in terms of training, mentoring, and experience and giving people the tools and encouragement to optimise this. This is an expected finding in regulated sectors, where the nature of having defined systems, policies, work practices, requires individuals to train on how the system works and be trained and remain competent in their specific roles. Team Learning (Dialogue) and Shared Vision were mentioned also in terms of team building and communicating the purpose of the role / business. Managers also expressed a need to develop trust within their teams as they appreciate their own vulnerabilities to manage all that is required of them. This growth of trust feeds into the teams Personal Mastery as they feel more empowered to act on their own initiative without feeling constant control from above.

Q2. How are younger generations integrating into teams?

The challenge of integrating younger generations can be seen as a culture clash. However it is felt that it can be overcome by effective team learning initiatives that are also cognisant of differing mental models. While inter-generational differences are highlighted, individual attitude and capability is seen as a significantly better indicator of how well someone can integrate into a team. A universal finding was that the younger generation often lack initiative and seem more detached, or care less about their

work. This can be a reason for a perceived generational difference, but it may also be related to a lack of experience that translates as a lack of confidence. Regulated sectors can appear daunting at first, with strict rules and criteria governing your actions and duties and it may be a source of this detachment. As experience grows, it is predicted that confidence will improve and greater team integration will occur and it is hoped that this would induce the initiative required to bridge the perceived generational gap. This is an organic, slow solution and that could be made faster. To combat this, these sectors should apply new approaches to training and team integration that can entice and retain employees and spur initiative. From our research, these approaches should be based on team learning and be cognisant of the different generational experience (mental model).

Q3. What are the challenges and opportunities of multi-generational teams?

The challenges definitely relate to a poor understanding of different mental models, not just within the different generations, but also of management and their understanding of the younger generation in particular. Because something worked well in the past, does not mean that circumstances do not change or there are not better ways of doing things. These changing factors should also apply to the methods of integrating and building teams, especially those with a multi-generational aspect. Without teams being prepared to understand each other's perspectives and backgrounds, team learning and dialogue can become poisonous, as evidenced through recurring themes of resentment and perceived lack of respect. This is an especially important lesson for the regulated sectors that often have just one standardised method of communication. We also found that the younger generation are more digitally and technology savvy and can adapt up new tools quicker. This is an opportunity for the team to learn from each other.

Q4. Increasing digitalisation coming – how are you preparing your workforce/teams?

Most are looking for their staff to up skill but the staff must want to improve their own levels of personal mastery and this is very much dependent on their personality. Manager are hiring based on the right attitude more so than particular skillsets. This sector needs individuals with a set of traits (mental models) such as good attitude and openness to change. Teams with greater openness to change will be better prepared for industry 4.0. There is also some apathy evident in the regulated sector which could be driven by individual manager capabilities. IT and digitalisation is often still seen as a separate discipline and some managers are not actively preparing for it. This is true in every sector, but the regulated sector can lag further behind due to the dependence on procedure for routine work and the heavy workload involved in validating software to ensure compliance. Work is required to change the culture and mindset to ensure the managers and teams in this sector are prepared for inevitable disruption that is coming.

Q5. How does individual training and development help to improve teams? Are these aligned with your company goals and interests?

Overall there is consensus across the sectors that individual training and development does help to improve the team. The view of the manager is that this development of Personal Mastery and Team Learning are aligned with the company goals. The company is reliant on its Quality or Compliance

department to ensure it stays within clear laws and regulations and to maintain and grow business. The work of the team is seen as important and a pillar of the governance structures. Efforts are being made to broaden the view of the individual and teams to take a more holistic view of the Quality culture instead of just focusing on specific processes and procedures. This is a positive step to encourage innovation. Individual and team training programmes are provided to ensure the company remains compliant with changing regulations. From the start there is awareness and expectation in the individual of what is required to work in such a role and environment. It is noted that the individual needs to have the desire and interest to improve and that this may vary depending on level of experience in the role or company. However, this awareness and understanding is different for each individual and therefore there are also opportunities to explore the Mental Models discipline. There is evidence to suggest that these individual Mental Models are limiting the scale of team improvements and that companies need to improve how they communicate the training opportunities to all staff members.

Q6. Does the regulated environment encourage or inspire you team to innovate/think outside the box?

All sectors believe that the regulated environment does not encourage innovation in their teams. The agreed process or system is seen as something that should be followed without any questioning. There were no evident generational differences. Mainly this was explained by a lack of experience by individuals in the role or the company. Generally the system itself was seen as a means to be able to avoid blame for the individual or team. If the process is followed and something goes wrong then at least nobody can be blamed for trying to step outside or bend the rules. These points to the Mental Model discipline and lack of teamwork towards a shared Vision. Companies have to foster a culture of innovation and creativity and allow individuals and teams make mistakes on the journey to the shared vision. The teams also need to have a say in creating the processes and not feel that these are not dictated from the top of the organisation. The managers need to reflect on their own Mental Models and long term priorities in order to inspire the team to innovate. Managers also need to know their own team dynamics and use individuals strengths and weaknesses for the benefit of the team. Open Dialogue is necessary in order to create a space for the team to brainstorm and share ideas. There is a lack of process for the team to openly discuss innovative ideas. It is incumbent on the organisation to provide the necessary process, structures and communications tools for an innovate culture. Overall the view is that the innovation within the team is reliant on the manager's passion, commitment and ability to develop their team.

Q7. What approaches do you use to get teams to commit to the company vision?

Team Learning is the main method for developing a shared vision within teams. This is driven by the actions and culture of the local management team and from the top of the organisation. Communication from the top is noted as important to continually reinforce the goals of the company and to keep people informed of the latest developments within the company. Providing a sense of purpose to the individual and teams role was noted as important. However there appears to be more work required to align the individual Personal Mastery to that of the company vision. This gap could be improved by making the work more personal and asking the individual and team to think about the

end consumer or customer. More regular face to face meetings and personalised feedback would help in this regard. There was very little evidence given for how new technologies are being used to improve communications and how this could be personalised. While there was also no evidence in these interviews of differences across generations, our literature research would indicate the need to align the younger generation's vision to that of the company. This would help to ensure the individual commits to the company for a longer duration.

Q8. Does your team improve from collectively sharing successes and failures?

There are mixed responses to this question but overall it is believed that there is not a true Team Learning in the regulated sector. The nature of the role and processes means that more focus is given to highlight and document failures or non conformances. There is little evidence to suggest that the team or company are learning from these failures. The information is captured as part of the process but no time is given to openly discuss or share the findings or how to make changes for future improvements. It's perceived as a tick box exercise where time is of the essence. Similar to other answers, time pressures on the individual and team are given as reasons for not taking the time to share and learn from the failures. This is a big failing on the managers and companies involved and they need to make an effort to create time for critical reflection. Individual Mental Models are also important so that outcomes and processes are questioned. This will help the team to learn. Managers indicate that successes are celebrated and praise given to individuals and teams. While this will create a positive atmosphere within the team, it is not clear how this vital information is being recorded for future learning. There is a view that the younger generations could be assigned to more interesting or important projects, which can create negative tension and resentment within teams. There is no evidence of the use of new technology to help managers or teams gain insights from these successes and failures.

Q9. Quality Management Systems and regulatory Systems aim to provide a 'systems thinking overview' of a particular workplace. Do you agree with this statement?

Overall, yes management would agree that these systems provide a 'systems thinking' overview of the workplace, its processes and interactions.

Q10. In your experience, who gets to view this regulatory 'systems thinking overview' in your team?

Only senior management and those with broad experience get a systems thinking overview from the regulatory system. There is unanimous agreement that this is not visible or evident within their staff and teams. Typically, it appears that there are two reasons for this. First is the poor dissemination of information that is freely available from the system to management. This is not given to the teams and can be considered a lack of Team Learning / Dialogue. Secondly, the mental models that management work to seem to give rise to a focus on compliance and audit, rather than the wider benefits that could be brought to the organisation if the information was given to all the staff. This is limiting the potential of their teams. Additionally, one manager claims not to have Systems Thinking either but also seems quite resentful of the burden of regulation. This Mental Model block to the benefits of team empowerment is also likely to be common in the wider regulated sectors where

change and compliance is often enforced from what are viewed as external or interfering sources. Some team members with sufficient experience seem to have a capacity to develop Systems Thinking organically over time, but again, this is not all team members and this could be improved if the information from the regulatory system was widely shared in a manner that supported Team Learning and was cognisant of differing learning methodologies (Mental Models). This is a great benefit for regulated industries that is not necessarily present in other sectors and it is currently not been taken advantage of.

Q11. Are you satisfied with the level of 'systems thinking' amongst your team? And why?

Generally, management are dissatisfied with the level of systems thinking in their teams. Of the systems and regulations themselves, the younger generations are more accepting of the regulatory environment but show little interest in the bigger picture (Shared Vision). Management need to link the attainment of systems thinking to the other four learning capabilities in a more cohesive and transparent manner. This includes awareness and nurturing of different mental models, not just in staff but in management too. Managers must see the value of empowering their teams in this manner, as they must set the tone at the top. One manager showed particularly defensive reasoning in arguing against systems thinking among his/her own staff ("If I do not see it, why should they?"). Where managers are supportive, they too admit that they are not doing all they can to reach all staff. Only certain staff thrives in the current setup. Mental Models appears to be one of the most neglected disciplines in the regulated sector due to the standardised methods of on the job training and work processes. This is having knocked on effects on team member's ability to further develop personal mastery and to visualise and hold a shared vision.

12. What approaches do you feel contribute to achieving a systems thinking overview in teams?

Managers suggest that a lot of emphasis should be placed on the organisations Shared Vision and on an individuals' Personal Mastery in order to help achieve systems thinking in their teams. Experience, training and education coupled with a reminder of the purpose of their roles / the service provided. Team Learning is also mentioned by means of learning from previous mistakes and encouraging an open dialogue. Conspicuously absent is mention of mental models and facing up to complex systems that require leaps of abstraction and recognition of differences. This is a recurring theme throughout the interviews.

Q13. Are different approaches required in achieving a systems thinking overview in multi-generational teams?

There was a mix of answers to this question. Older generations react and learn better from face to face and 1 on 1 situations. Younger generations typically prefer more technology-orientated and visual approaches. Management's own mental models can prevent employee and team progress - e.g. 'we only need to be compliant', 'we do not have time or resources to invest in this'. This indicates a lack of value being placed on the benefits widespread system thinking could bring to the organisation as a whole. Of the managers who disagreed with the need for different approaches, they cited that what was crucial was an individual's desire or aspiration to learn and develop further (Personal Mastery).

Team Learning is barely referred to. Overall, what is beginning to come through from these interviews is that even though these managers claim to have Systems Thinking, it derives from their regulated system rather than evolving from a system for team empowerment. This Systems Thinking may be nothing more than a shortcut for management.

Q14. Other than those aspects of the regulated system that you work within, what other factors in your workplace do you feel does or would contribute to greater and more widespread 'systems thinking'?

Managers show a generally good understanding of different elements that could help improve Systems Thinking overall. Different sectors seem to place an emphasis on different capabilities, which is to be expected given they are regulated differently. All mention Team Learning as an area for improvement. New forums for communication and improving mutual understanding (mental models) are only mentioned by one of the eight managers. Another manager listed several approaches in line with improving the learning capabilities of staff as per Peter Senge's theory, and then dismissed the exercise as a 'typically academic project, irrelevant to the workplace'. As mentioned earlier, in the current push for de-regulation, it is imperative that the governance regimes of various regulation and management systems listen to these managers and figure out new ways to reach them. They need to continuously improve their offering for the benefit of both the organisation, its' employees and service users.

3.4.3 Survey Results

A short, online and anonymous survey was sent to junior staff members across all of the three selected organisations. The survey was designed to give a short snapshot of how junior staff (of all generations) felt with respect to team empowerment and Senge's learning capabilities. A total of 32 responses were received and the main results are summarised below. Under each graph we will provide a brief insight on our findings.

It is worth noting that there was no Gen Z in our survey results.

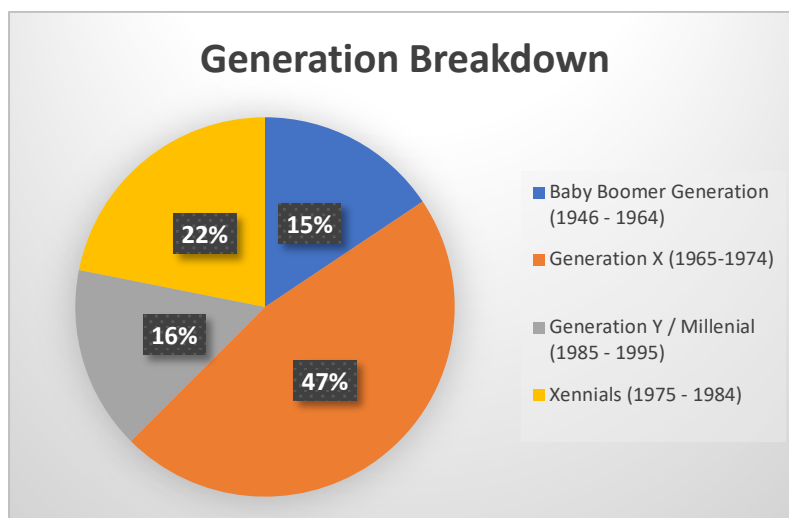


Figure 1: Generational background

Findings– Majority of teams (62%) consist of Gen X and Baby Boomers. 16% of teams consist of Gen Y/Millennial

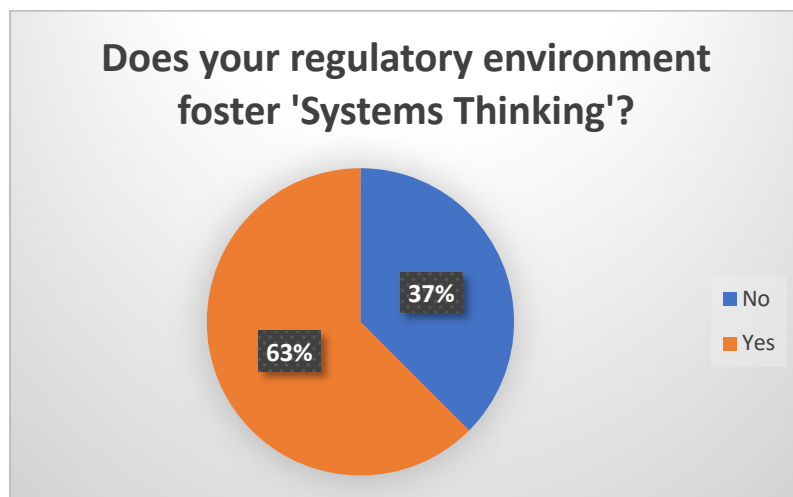


Figure 2: Does the regulatory environment foster System Thinking

Findings- 63% of all respondents agreed that the regulatory environment and management system they work under fosters systems thinking. An explanation of systems thinking as per Senge was provided in the preamble to the question.

Count of I was born in: Column Labels					
Row Labels	Baby Boomer Generation (1946 - 1964)	Generation X (1965-1974)	Generation Y / Millennial (1985 - 1995)	Xennials (1975 - 1984)	Grand Total
No	3	3		2	4
Yes	2	12		3	3
Grand Total	5	15		5	7
% Agree	40%	80%		60%	43%

Figure 3: Table of level of agreement that the regulatory environment and management system they work under fosters systems thinking by generation.

Findings- Staff were asked to state whether they agree or disagree to the following statements. Each statement was intended to act as a proxy measure for each of the learning capabilities that Senge described. Respondents used a likert scale to answer the how they felt to each of the statements and results collated as below.

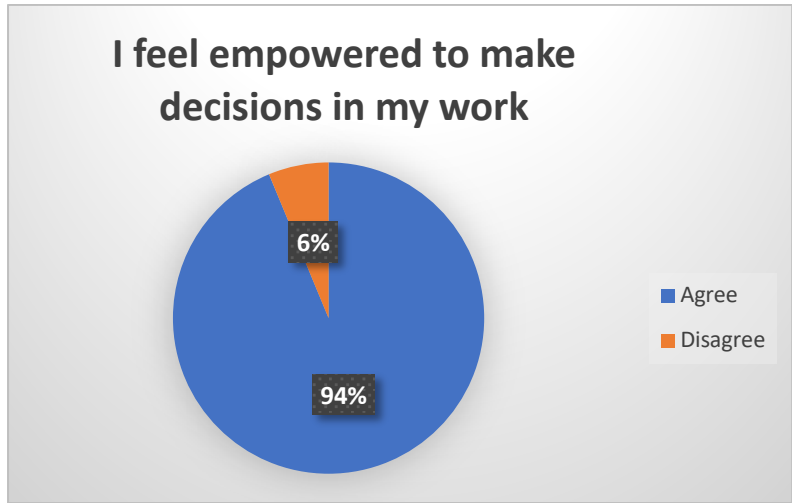


Figure 4: Individual opinion of empowerment in workplace

Findings- 94% of respondents feel empowered to make decisions in their work.



Figure 5: Team members learning collectively

Findings- 97% of respondents feel that they as a team learn from successes and failures (Team Learning / Dialogue).



Figure 6: Members can share methods and point of view

Findings- 76% of respondents agreed with the above statement (Mental models).



Figure 7: Training and development opportunities

Findings- 91% agreed with both of the above statements (Personal mastery).



Figure 8: Team working towards shared vision

Findings- 87% agreed that their team works towards a higher, shared vision for the organisation

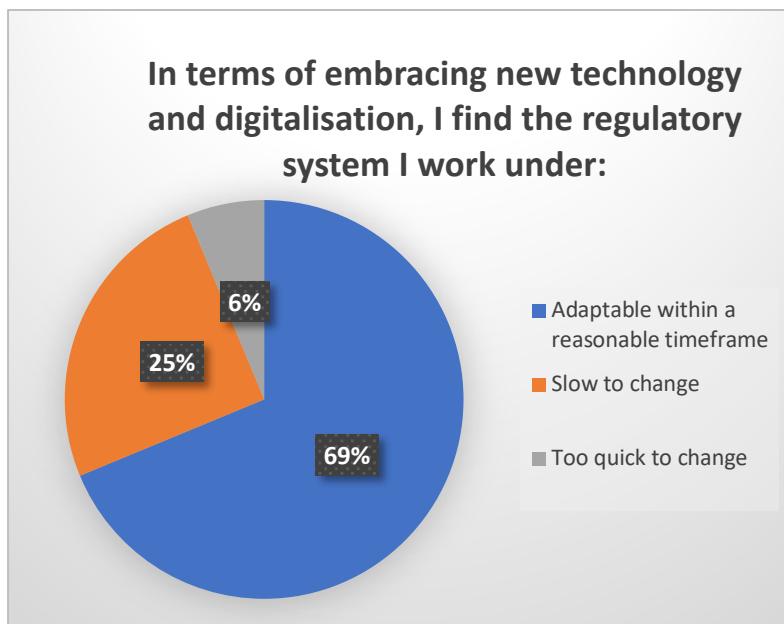


Figure 9: Team embracing new technology

Findings- 69% believe the regulatory system they work under is adaptable to embracing new technology and digitalisation within a reasonable timeframe. 25% believe it is too slow to change, while 6% felt that change occurred too quickly.

Count of I was born in:	Column Labels					
Row Labels	Baby Boomer Generation (1946 - 1964)	Generation X (1965-1974)	Generation Y / Millennial (1985 - 1995)	Xennials (1975 - 1984)	Grand Total	
Adaptable within a reasonable timeframe	1	14		3	4	22
Slow to change	3	1		1	3	8
Too quick to change	1			1		2
Grand Total	5	15		5	7	32
Adaptable within a reasonable timeframe %	20%	93%		60%	57%	69%
Slow to change %	60%	7%		20%	43%	25%
Too quick to change %	20%			20%		6%

Figure 10: Table, by generation, of how employees feel about the pace at which their regulatory system embraces new technology and digitalisation

Findings- Figure 9 showed that overall 69% are happy. However it's notable that 93% of Gen X believes the regulated system is adapting within a reasonable timeframe. This Gen is also has the highest number of contributors so is more significant to the analysis. Interestingly as the generations get younger there is less satisfaction with the pace at which regulated system is adapting. There are mixed views that the pace was either too slow or fast with more believing the pace was too slow. This is an expected outcome and incumbent on organisations to act quickly to address the concerns of their new digital native workforce.

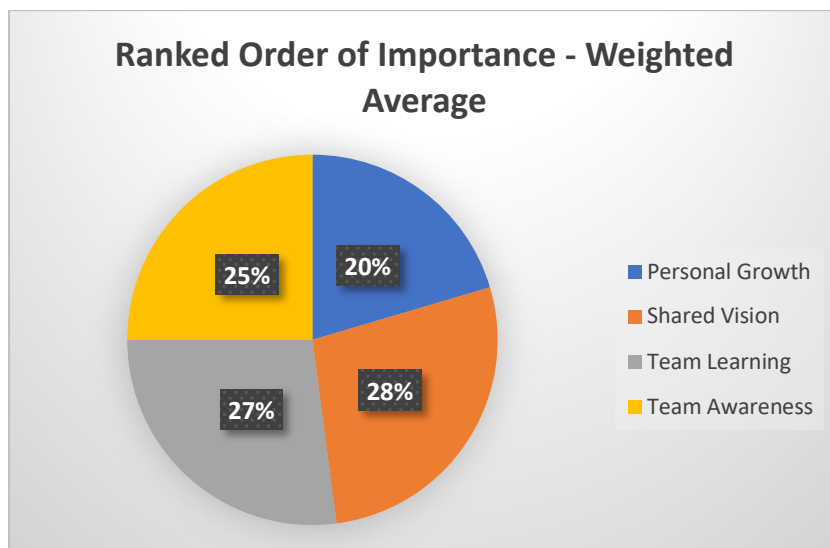


Figure 11: Ranked order of importance of factors most lacking in their current workplace

Findings- Employees were asked to rank in order of importance, which factors they felt were most lacking in their current workplace. A description of each factor, in accordance with Senge's understanding, was provided for each. Each answer was given a weighting depending on where it was ranked and results collated. No significant differences were observed when responses were broken down by the generational background of the respondents. The significance we can see from this is the importance and necessity to develop all four of the disciplines outlined by Senge in order to achieve systems thinking. These backs up the theory that there is no one discipline that individuals feel they need to focus on. All the disciplines are important in relatively equal measures in workplaces.

3.5 Discussion and Conclusion

3.5.1 Discussion of Research Questions

We examine the findings from the interviews and surveys in chapter 4 in relation to the initial research questions posed.

Research Question 1:

Do management systems that claim to provide systems thinking empower teams?

Senior management unanimously agrees that while the management systems provide a systems thinking overview, only those in management, or some employees with sufficient experience, can see this benefit (Q.9). From the analysis in chapter 4, it is clear that teams in the regulated sector are not empowered by the management system, and senior management are not satisfied on the whole with the level of systems thinking in their respective teams. This is in stark contrast to the response of employees, with 63% claiming that the management system fosters systems thinking, and the high self-reported levels of empowerment (94%), team learning (97%), personal mastery (91%), shared vision (87%) and awareness of differing mental models and assumptions (76%). The above does not tally well with what managers reported (Q.10). The regulatory system overall seems to provide a disconnect between the expectations of managers and teams and indeed reality. The strong feelings of empowerment across the board in team members' work may be due to the use of defined work practices. There is a sense that this is giving the team members a false sense of initiative, competence and personal mastery. This appears to be borne out in the managers' interviews where they reported a lack of initiative, innovation and out of the box thinking (Q.11). It seems that employees may be living in a comfortable, regulatory bubble and managers are not acting to identify or rectify the problem. Sometimes the answer can be so obvious as to be invisible.

In fact, it is believed that the management systems are partly to blame for this disconnect between management and staff. The management systems are set up in standardised ways to collect inputs and report outputs. Throughout the interview there is evidence of this standardised approach preventing an appreciation or understanding of different mental models, modes of work and underlying assumptions of staff. Some staff will thrive in this environment and progress in their career. Others will become disillusioned, detached and show less initiative as the single, standardised approach to communication, feedback and reporting is preventing their personal and professional growth. It seems that this standardised approach by the management system (or the systems' own mental model) has created an ecosystem that on the one hand appears fair to all employees (hence, the support evidenced in the surveys), yet subtly represses a proportion of employees who may require a different approach to empowerment (Q.14). In Peter Senge's own words, "By the time they are 30, a few are on the fast track and the rest 'put in their time' to do what matters to them on the weekend. They lose the commitment, the sense of mission, and the excitement with which they started their careers. We get damn little of their energy and almost none of their spirit." (Senge, 2006). This is of particular concern as Gen Z enters the workforce and the disruption this will bring to workplaces (Steinmetz, 2017). Organisations need to be ready to harness the opportunities this generation will bring and their ability to look at the systems with a fresh viewpoint and through a digital lens. This research indicates that the regulated system itself is not allowing innovative thinking to surface which in turn is not empowering teams. Senior management are the individuals who have thrived in the current system and progressed in their careers. They may feel the 'fair' system that

worked to their natural advantage is one that should work for all. The mental models and assumptions of these individuals help to keep the current system in a self-preserving manner.

Research Question 2:

Is this approach to systems thinking comparable to the approach advocated by Peter Senge?

No, they are two sides of two different coins. Systems thinking as espoused by regulatory management systems are essentially management tools to ensure regulatory compliance. The approach advocated by Senge is focused on getting teams to understand and appreciate the complexity of the entire system in their approach to their work. What is evident however is that regulated sectors have an advantage in having this defined 'systems overview'. However companies are currently not utilising this advantage by ensuring it is visible to all their staff. In doing so, they could greatly increase the level and pace of team empowerment. The recurring finding from the interviews, analysis of the management systems and the survey results is that differing employee, management, and system mental models are not being considered and this is having knock on effects on the other learning capabilities (Q.8).

While Senge's approach is evaluated in chapter 4 through specific and targeted questions, what is clear is that each of the learning capabilities is also dependent on each other for true team empowerment. For example, encouraging employees to develop and achieve personal mastery may be a particular focus for an organisation. This can only ever reach a proportion of staff in the current setup of the management system. It does not allow for appreciation of differing modes of learning, development and communication (Q.5 and Q.6). This is equally true with regards to shared vision, where the role of different assumptions (mental models) is also not adequately catered for (Q.7). Team Learning also falls short in the regulated system as managers state that while they recognise the need for reflection and dialogue, they utilise only a single, standardised method of doing so (only one method is required by the management system). Managers claim to not have the time or resources to invest or develop others. Again, this is a mental model block on their part, somewhat blinded by the system they are working within, to see the downstream benefits for their teams and organisation. The benefits flowing from empowering personnel include increased employee commitment, improved quality, more innovation, increased job satisfaction and productivity (Bektas and Sohrabifard, 2013). This lack of time also points to the fact that the managers need help from their company to create the appropriate culture and environment for systems thinking and open innovation.

Research Question 3:

What specific changes, if any, are needed to empower multi-generational teams in the regulated sector and if there are mitigating technological factors?

Most interviewees felt that effective team learning initiatives and highlighting that different mental models are possible (and harnessing these), could effectively overcome the challenges of multi-generational teams (Q.13) and spur opportunities. An interesting finding is that most interviewees highlighted individual attitude, capability and openness to change as far bigger predictors of successful inter-generational teams (Q.2). This is despite previous research advocating that different generational cohorts be treated differently (Wen, 2010). As highlighted throughout the interview

process, the management systems as currently implemented, do not cater for differing mental models and as a result, the challenge for the regulated organisations here is not just empowerment of multi-generational teams, but empowerment of teams, full stop (Q.3). Another consistent message was the burden and cost of regulation, and that this did not allow further time or resources to be spent on developing mental model-inclusive pathways of communication, learning and growth (Q.4). This is the assumption that must be challenged. Senge refers to this as reflective openness where the individual looks inward and listens to all points of view to understand and learn from each other (Senge, 2006).

When employees were asked which of the four learning capabilities they believed were currently lacking in their organisation, there was no clear cut winner, and nor was there a statistically significant difference in responses when looked at by generation. This appears to further support the theory that there is a lack of current emphasis on any of the learning capabilities and that these require the individual to develop their own Personal Mastery over time.

The interviews also evidenced apathy among managers in terms of preparing for increased digitalisation and increasingly complex systems, with IT still siloed in separate departments (Q.4). 33% of those born after 1975 stated that they believe the regulated sector is too slow to change in the face of technological advances. This point was also discussed in Figure 10 of the survey and highlighted that the younger generations are less content with the how their regulatory environment is adopting to new technologies. If these sectors are to be competitive in recruiting and retaining staff of all generations in the current tightening and globalised labour market, they will need to make moves to address the challenges observed. In a recent Irish Times article it was stated that the “average attention span of Gen Z-er is eight seconds; down from 12 seconds for their millennial counterparts” (O’Brien, 2018). The communication tools and visual aids in the workplace have to adapt rapidly to ensure all generational factors are accommodated. The entrepreneurial spirit of the Gen Z has to be balanced with the experience that the Gen X and others have of the regulatory frameworks. It’s also critical that the experience developed in companies is not lost, as the “job for life “ mentality is not something which Gen Z are embracing. Therefore companies and managers can empower their teams by utilising the positive attributes of the different generations, discussed above. This will allow each of the four disciplines to develop towards the team system thinking.

3.5.2 Implications for Practice

Regulated sectors working under a strict management system appear to have long presumed themselves to be exempt from the need to implement ‘softer’ measures concerning empowerment of teams. Yet, the problems that management are encountering are those that these softer measures aim to correct. There are several examples that could be aligned with the ‘Seven Learning Disabilities’ detailed in The Fifth Discipline, particularly ‘The enemy is out there’ (external regulators), ‘Fixation on events’ (focus on audits and inspections), and ‘The parable of the boiled frog’ (unwillingness to notice the consequent threats to organisational efficiency and employee recruitment and retention) (Senge, 2006). Some of this may also stem from the seemingly content employees, who have an illusion of empowerment through using clearly defined work procedures and practices. The interviews actually highlight a trend of employees asking for even further clarity in the procedures. The system is acting as a safety blanket, snuffing out innovation, initiative and personal growth. Employees are embracing this. This study highlights the need for managers to account for differing mental models and to do so

within the management system structure and to recognise the ill-effects of not doing so. This point is also discussed in Research Question 3.

Some team members with sufficient experience seem to have a capacity to develop systems thinking organically over time. This is not true for all team members. This could be improved if the information from the regulatory system, that currently provides a systems thinking overview to management only, was widely shared in a manner that supported team learning and was cognisant of differing learning methodologies. This is a potentially great advantage for regulated industries that is not necessarily present in other sectors and it is currently not been taken advantage of. “The only visions that will take hold, are shared visions” (Kouzes and Posner, 2009).

While management systems do require procedures for training, work processes, successes and failures, they do not dictate that it must be done in one single manner. While the issues regarding multi-generational team empowerment affect all industries, those in the regulated sector are already behind the curve with team empowerment. Organisations, their managers and the external governance bodies of management systems should look to encouraging complementary, softer avenues to promote team empowerment within the existing frameworks of regulation. This is an important point for the governance bodies (whether voluntary or statutory), as they also face competitors, whether it be in competing quality management systems or different regulatory or legislative jurisdictions. If they were to do so, they would be potentially unlocking a future of empowered teams in the organisations they serve, that would help to preserve their own relevance in a world where the advent of the fourth industrial revolution and Generation Z entering in the workforce are changing the parameters.

The capability is there for organisations in the regulated sector to also adapt to technological changes. This point was also demonstrated in a case study from Senge’s book. A senior manager from Ford advised that companies do not just need a better IT system but “it requires collaboration and systems thinking in the context of pervasive computing and real-time systems” (Senge, 2006). This shows how, when the shared vision or need is there for companies and that there is a way to achieve it. Bounded creativity is a term that describes increased innovation when options are more limited, and this worked greatly to LEGO’s advantage when it was bringing itself back from the brink of ruin (Crawford and Robertson, 2008). If organisations in these sectors were able to empower their teams in accordance with Senge’s five disciplines, managers would see an increase in innovative, out of the box thinking and commitment to overcoming and embracing the technological challenges ahead.

3.5.3 Limitations of the Study

- Sample size: This is a small scale study of three organisations in the west of Ireland with eight interviewees. There were 32 respondents to the online survey.
- The teams themselves were limited in terms of multigenerational diversity and therefore the opinions of small sample size could skew the findings.
- There were no Gen Z employees in our surveys.
- Impartiality: Each of the authors works in one of these companies and therefore cannot claim to be completely free of bias. The interviewers personally knew each of the interviewees.
- Self-Reported Data: For interview answers and for respondents in the online survey.

- Experience of the interviewer in conducting interviews and their skills to know when to probe deeper on certain interviewee answers.

3.5.4 Recommendations for Future Research

- Employee satisfaction, recruitment and retention in these sectors, with a generational breakdown. The disconnect evidenced between management and employees was not anticipated and is worth exploring in further detail.
- Methods of incorporating Senge's five disciplines into a management system. A pilot case study would be an interesting starting point using pre and post study management interviews and employee surveys.
- Due to the sample size limitations, it would be interesting to validate and build upon these findings by carrying out a larger scale online survey for management and staff within a particular sector, with a question format adapted and refined from this study.
- To truly understand team interactions it would benefit to observe or sit in on team meetings or shadow individuals for a period of time
- Conduct similar interviews and survey across different geographies to determine if the findings of this research are culturally based or common to all regulated systems.

3.5.5 Conclusion

The report investigates how multigenerational teams are affected in a regulated environment. We focused on three main research questions, which were to understand if the regulated system itself empowers teams, if the approach of regulated system is similar to The Fifth Discipline approach and what changes are needed to empower multigenerational teams due to advances in technology.

Our findings show that there are disconnects between the manager and the teams. We explore why that may be the case and offer some suggestions to improve this.

Through our research it's evident that all four of the disciplines are necessary to achieve true systems thinking. We highlight the limitations in a regulated environment and that some important questions remain open that require further research. If explored these would benefit these organisations to better understand how to empower their teams and develop system thinking.

Our research did not explore if organisations really want their Quality or Compliance functions to achieve a systems thinking mindset. A question remains open if companies just want to remain compliant and innovation for them is controlling or reducing costs and budgets in this area. The research did not highlight any company that was being technological or digitally innovative in this field.

The research shows that our managers are busy balancing their workloads and managing their teams. The IT functions need to become part of the business unit teams to provide innovative communication tools and solutions, especially as more of the Gen Z workforce arrive. We found that currently, the ability of the manager is a main driving force to enable the conditions to empower their teams and not the regulatory systems. In the absence of management system or regulatory changes to encourage team empowerment, organisations need to help their managers to create the right culture for team empowerment and also to prepare for the vast technological changes.

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3.7 Acknowledgments

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Chapter 4 Multi-Generational Teams

The impact of induction training on team empowerment, with a focus on multi-generational differences and digital communication trends

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4.1 Introduction

Empowerment”, and as such, is a capstone deliverable for that module. The module itself provided an immersive (practical and theoretical) learning experience, with this report forming the written, academic portion of the engagement. Having obtained the practical and theoretical understanding of the concept of “Systems For Team Empowerment”, our motivation towards the research topic was founded on the basis that two of the group members are employed for large multinational organizations (SAP and Wayfair), both of whom regularly intake and empower new hires, in a corporate backdrop where many similarities and differences exist (industry setting, composition of teams, different induction techniques, different staff skillsets, etc.). Further, the group had access to various employee segments within both organizations, in which to carry out primary research. The research group, with valuable consultation and input from academic mentors, felt that the setting (large multinationals) and the subject matter (team empowerment, induction, technology, multi-generation teams) along with strong academic materials in the form of Peter Senge's seminal “Fifth Discipline”, could bring valuable insights to the fore.

The collective research objective of this thesis is to identify and evaluate the impact of the induction processes of two organizations in the context of their efficacy in empowering early start teams, furthered by identification and analysis of the impact of inter-generational teams and communication technology on team empowerment. To realize this objective, three research questions were formed.

1. The first research question, "What, if any, role does the induction process play in moving early stage teams towards empowerment?" seeks to investigate if and/or how the methods, format and tools used during the induction period for new hires in both organisations contribute towards the empowerment of the team. This question is examined in the context of the five disciplines of Senge's theory.
2. The second research question, “Do intergenerational differences have an impact on team empowerment?”, seeks to analyse whether generational differences influence the process of empowering teams. More specifically, the question is analysed through the medium of the induction processes at SAP and Wayfair as well as relevant literature.
3. The third, “Do the communication technologies used within a team impact empowerment?” seeks to establish the impact of DCT (Digital Communication Technology), using the academic lenses of Senge’s Five Disciplines and referring to Gershon’s Empowerment model, based on the group's research into of the use of DCT within both organizations.

4.2 Literature Review

The main theory of team empowerment that was studied in conjunction with this research is that of Peter Senge, as described in his seminal work "The Fifth Discipline" (Senge, 2010). The book outlines the five practices that, when engaged in together, create the necessary conditions to ensure teams are empowered within an effective learning organisation, namely personal mastery, mental models, shared vision, team learning and systems thinking.

The first discipline, namely "Personal Mastery", involves "continually clarifying and deepening our personal vision, focusing our energies, developing patience and of seeing reality objectively" (Senge, 2010, p. 7). It is the basic foundation upon which the other disciplines must be built. It relates to our own practice of honest reflection and evaluation that identifies both personal and organisational needs that contribute to personal and organisational goals, as well as personal and professional development. Personal mastery focuses on the important aspects of continually clarifying what is important and moving towards a desired destination. An individual must develop a personal vision, regularly compare it to current reality, and become comfortable with the "creative tension" that exists between the two. One must also develop strategies to help overcome any obstacle, or "structural conflict" that can prevent them from closing that gap. (Senge, 2010, p. 147).

In Rebecca Knight's HBR article titled "Managing People from 5 Generations" (Knight, 2014), Jeanne Meister highlights the importance of studying the demographics of your current and future workforce to gain a better understanding of the primary motivators (Branham, 1997) (Covey, 1989) for each generation. Fully understanding the dominant inherent motivations of different generations can provide a platform to facilitate teams to better develop from a personal mastery perspective.

Another important element of this discipline is the connection between the conscious and subconscious minds, and the ability to build habit. Senge stresses that it is of particular importance to examine the way in which personal learning and organisational learning interface. People with high levels of personal mastery "are more committed...take more initiative...have a broader and deeper sense of responsibility in their work and ... learn faster" (Senge, 2010, p. 133). Those exhibiting high levels of personal mastery are those who continually expand their ability to "create the results in life they truly seek", with this spirit of continual learning forming the "spirit of the learning organization". Organisations must avoid forcing its employees to pursue personal mastery via mandatory development trainings, etc. Instead, the most effective way to foster this for leaders to act as role models and to work towards implementing all five disciplines in harmony (Senge, 2010, p. 162).

The 1997 article by Linette Branham (Branham, 1997) applies Stephen Covey's "The 7 habits of highly effective people" to a team scenario. This amalgamation of individual and team environments aligns with the personal and organisational learning interface to which Senge refers. The seven proposed habits resonate strongly with the concept of personal mastery and organisational learning. Covey's article describes seven 'habits' which he considers to be the most important for people to develop to their fullest potential, be it in their personal or professional lives.

- Habit One: Be proactive. "Proactive people take the initiative and responsibility to make things happen" writes Branham. Focusing on elements within our 'circle of influence' rather than our 'circle of concern' enhances 'response-ability'- our ability to respond to life experiences effectively.

- Habit Two: Begin with the end in mind. Establishing a clear picture of the end goal from the beginning helps train a focus on what is to be accomplished.
- Habit Three: Put first things first. Distilling lists of things deemed 'important' into a list of truly important priorities from a big picture perspective is the third habit cited by Covey.
- Habit Four: Think win/win. The central principle of habit four is that success need not be at the expense of another. Fostering a 'win/win' mentality develops a good feeling around the decision-making process and an inherent commitment to follow through on agreed plans.
- Habit Five: Seek first to understand then to be understood. Branham states "the effective... team sets understanding the other person as a priority". Covey highlights the importance of differentiating between "active" and "empathetic" listening as a crucial aspect of mastering the fifth habit.
- Habit Six: Synergize. The sixth habit is centred around the understanding that the whole is greater than the sum of its parts. To achieve the more effective whole, teams must "value differences, build on strengths, and compensate for weaknesses".
- Habit Seven: Sharpen the saw. Habit seven relates to encouraging a healthy focus on our physical, spiritual, mental and social/emotional wellbeing both individually and as a team.

Bramham's insights provide material for meaningful reflection on Covey's seven "habits" in the team context and directly align with Senge's concept of personal mastery and the learning organisation.

"Mental Models", the second of the five disciplines, are "deeply ingrained assumptions, generalizations or even pictures or images that influence how we understand the world and how we take action" (Senge, 2010, p. 8). Senge states that mental models "focus on the openness needed to unearth shortcomings in our present ways of seeing the world", and further, "how we take action", based on this understanding. Mental models may be both simple generalizations or can be complex theories – all sharing the commonality of being "active" and shaping how we act, along with also being simplifications of reality. They affect what we see and have high degrees of subjectivity, even when comparing the opinion of two people, casting attention on the same scenario.

People are often unaware of the existence of their own mental models, and how these can influence decision making. Having awareness of our own biases and assumptions helps us to be more honest in identifying what we are experiencing and more accurate in identifying underlying issues. For this reason, Senge believes it is vital to challenge these, particularly as this is necessary to allow people to "expose their own thinking effectively and make that thinking open to the influence of others" (Senge, 2010, p. 9). However, he stresses that it shouldn't be seen as a means to an end in achieving organisational success.

Stein and Christiansen argue the virtues and strategic importance of well-designed and executed onboarding / induction processes, with respect to mental models, in "...all of these experiences – and non-experiences – shape new hires' perception of employment and thus influence their engagement and ultimately their long-term interest in the position and the company" (Stein & Christiansen, 2010). Well-designed onboarding & induction processes, they argue, are critical in terms of laying a positive mental perception and focus for the employee in his or her new environment, which pays significant dividend over time.

Knight's (2014) HBR article, referenced above, also offers some insight into how best to manage multi-generational teams (Duhigg, 2016) and in doing so, indirectly explores the idea of varying 'mental models' among different generations. Management professor, Peter Cappelli, believes it's important not to dwell on perceived generational differences as quite often, "they are just not true." Cappelli champions the importance of getting to know each person individually, irrespective of generation. Building collaborative relationships can help overcome potential generational tension of having a younger manager or managing an older team member. Developing partnerships and encouraging healthy debate facilitates overcoming such challenges. Jeanne Meister acknowledges the value of creating opportunities for cross-generational mentoring as a means of integrating and building relationships between multi-generational teams. The article offers the following "dos and don'ts" with respect to multi-generational teams:

Do:

- Experiment with mixed-age teams and reverse mentoring programs that enable older, experienced workers to interact with and learn from younger hires
- Develop incentive plans that reflect where your employees are in their lives
- Conduct regular human resources surveys to get a pulse on your employees' demographics and needs

Don't:

- Bother with generation-based employee affinity groups — they generally reinforce stereotypes
- Act like a top-down manager — forge partnerships with employees of different ages and encourage them to share their opinions
- Assume you already know how to motivate employees who are older or younger — ask them what they want out of their professional lives (Knight, 2014).

Shared Vision refers to creating shared "pictures of the future" that "foster genuine commitment and enrolment rather than compliance" (Senge, 2010, p. 9). He provides a definition of "Shared Vision", at the simplest level, as being the answer to the question of "what are we trying to create?". This shared vision should not be prescribed or enforced and should not be focused on a particular person or moment in time. Having a common understanding of desired future is a powerful motivator for individuals, particularly when personal and organizational visions align.

The reason this is so important, according to Senge, is that it raises people's aspirations and the work becomes "part of pursuing a larger purpose embodied in the organisation's products or services" (Senge, 2010, p. 193). It turns the notion of "the company" into "our company". The basis of all successful shared visions is that the people sharing them must also have their own personal vision. In this sense, Senge concludes, "personal mastery is the bedrock for developing shared visions" (Senge, 2010, p. 197). The ideal scenario is when individuals can "hold" their personal vision, while still being genuinely committed to the shared vision, resulting in creative tension.

Charles Duhigg's New York Times article, "What Google Learned From Its Quest to Build the Perfect Team" (Duhigg, 2016), summarises the findings of Google's research into building the perfect team, or

'Project Aristotle' as it became known. In essence, it was shown that the best performing teams had established group norms comparable to Senge's idea of a 'shared vision'.

Team Learning is the practice of collaboration and support in developing capacity in everyone in the organisation. It allows for a scenario where the collective abilities and intellect of the team surpass those of the individuals. Individuals learn more quickly and effectively as a group than they would on their own. Team learning begins with dialogue, "the capacity of members of a team to suspend assumption and enter into a genuine thinking together" (Senge, 2010, p. 10). Dialogue, along with discussion, which tends to consist of parties working to have their view "win" over another, are the two main ways in which teams can interact effectively to facilitate team learning.

Senge articulates team learning as an attribute which "develops the skills of groups of people to look for the larger picture that lies beyond individual perspectives", within which three critical dimensions exist – thinking insightfully about complex issues, the need for innovative and coordinated action, along with the role of team members on other teams. As the name suggests, team learning is a "collective discipline" and a "team skill", but not, implicitly, a natural by-product of a group of highly talented individuals. Instead, "learning teams learn how to learn together". This suggests that the organization too has a large part to play in fostering an environment in which team learning can flourish. This discipline can be seen in practice within sports teams, where individuals can count on the other members to act in a certain way that will benefit the entire team. This is known as operational trust (Senge, 2010, p. 219). When team learning is not present, there is a lack of alignment between members of a team and this can result in the wasting of time and energy. This discipline is essential, because within organisations, teams are the fundamental learning units, not individuals. A learning organisation cannot exist without team learning (Senge, 2010, p. 10). Again, the Google study of high performing teams highlighted areas that can be compared to Senge's disciplines, in this case Team Learning. Having studied over 100 teams for over a year, researchers "concluded that understanding and influencing group norms were the keys to improving Google's teams" (Duhigg, 2016). However, establishing which norms were most important proved more challenging.

Two behaviours that successful teams tended to display were firstly, team members "spoke in roughly the same proportion" and secondly, they were adept at "intuiting how others felt based on their tone of voice, their expressions and other nonverbal cues" (Duhigg, 2016). This aligns with the concept of dialogue outlined by Senge, a pivotal part of the discipline of Team Learning. When lead researcher, Julia Rozovsky, and her colleagues considered the data through the concept of "psychological safety", everything seemed to make more sense. Whilst there were other factors which also proved to be important such as having clear goals and developing a culture of dependability, "Google's data indicated that psychological safety, more than anything else, was critical to making a team work" (Duhigg, 2016). Creating this environment, along with mitigating defensive routines, as outlined by Chris Argyris, are fundamental elements of an organization that fosters team learning (Argyris, 1986). The detailed, data driven study at Google presents fundamental findings, that "in the best teams, members listen to one another and show sensitivity to feelings and needs" (Duhigg, 2016).

Systems Thinking, also known as The Fifth Discipline, is the discipline of appreciating that individuals, policies, organisation, decisions, relationships etc. are all interconnected elements in a larger context. Senge puts forward the concept that Systems Thinking requires the other four disciplines to realise its potential, a conceptual cornerstone, which makes understandable the "subtlest aspect of the learning organization – the new way individuals perceive themselves and their world" (Rollag, et al., 2005).

Senge sees Systems Thinking as “a way of seeing wholes... for seeing interrelationships rather than things... patterns of change rather than static snapshots”. Systems thinking is vital, as otherwise there is neither “the incentive nor the means to integrate the learning disciplines once they have come into practice”. Senge speaks in detail about how each of the first four disciplines interact with this fifth discipline:

- He outlines how one can go about shifting their own thinking towards systems thinking. The systems thinking element of personal mastery relates to how we see our connectedness to the world, and the way in which we integrate reason and intuition (Senge, 2010, p. 156).
- Systems thinking without mental models loses much of its power. These disciplines complement each other naturally, because “one focuses on exposing hidden assumptions, and the other focuses on how to restructure assumptions to reveal causes of significant problems” (Senge, 2010, p. 189).
- Building a shared vision only works when done in conjunction with systems thinking; an organisation that becomes impatient when the results of the shared vision don’t materialise immediately can move to action too quickly. Without properly assessing the impact of their actions on all parts of the system, the shared vision will ultimately not be successful.
- Similarly, a team engaged in team learning must learn a “new language of systems thinking” that helps to describe system complexity (Senge, 2010, p. 252).

The literature review also encompassed more general research into the potential impact of the generational make-up of a team and how this can influence the team’s empowerment. Katy Steinmetz’s article highlights some of the disruptions Generation Z’s are bringing to the workplace (Steinmetz, 2017). The first is in relation to the education path. Having grown up during a period of mass disruption where many of their parents lost jobs, older siblings struggle with debt and watching one promising technology displace another, they inevitably have reservations around the status quo. Gen Z’ers are now entering adulthood with a willingness to experiment.

The author cites statistics indicating 78% of Gen Z-ers say getting a four-year degree no longer makes economic sense and alternatives are proving popular. Increasingly, the newest generation are doing some form of freelancing and 61% of Gen-Zers said they planned to start their own business or work independently within the next five years. For many, the concept of the workplace is changing as they become increasingly virtual, 9-5 expectations become archaic and the concept of failure is embraced as an opportunity for growth.

For those still pursuing more traditional environments, some of the early workplace influences of Gen Z’ers include opting for headphones at work, collaborating and socializing in chat rooms, rather than in the open spaces set up by millennials. The article also references promising research with respect to gender equality whereby young women are demanding and receiving equal pay more often than previous generations. The 2005 MIT Sloan article, Getting New Hires Up to Speed Quickly (Rollag, et al., 2005) outlines the perceived challenges and dispels some of the myths around the on boarding process. Rollag et al. considered the three primary challenges were jumpstarting productivity, tapping into creativity and retention.

The research showed that to help overcome these challenges, a ‘relational approach’ proved more effective than an ‘informational approach’ with regard to orienting new hires. For example, facilitating new hires to rapidly establish a broad network of relationships with co-workers that they could tap

for information was more effective than providing them with a thesis of information about company routines and technologies.

4.3 Research Methodology

4.3.1 Research paradigms

The research covered aspects of both the paradigm of constructivism, along with that of positivism. The paradigm of positivism involves observing direct experience as part of a “scientific experience carried out by way of the scientific method” (Crotty, 1998). It posits that there is a single truth or reality, and that this reality can be measured and analysed. This measurement often focuses on collective quantitative data. To this end, the authors asked some close-ended questions in the course of their interviews, with a view to gauging majority sentiments in a mathematically relevant way. Because the positivist approach is not reflective of a “real world” scenario and does not take into account the irregularities and inconsistencies that invariably arise, some of the research carried out falls into the category of the constructivist approach, wherein the authors seek to construct meanings based on the interpretation of the reality existing within the organisations of SAP and Wayfair. Within this paradigm, objectivity and subjectivity must be brought together and held indissolubly” (Crotty, 1998). The ontology of this approach is that there is no single truth or reality; reality is created by groups or individuals. In terms of epistemology, or “how can I know reality?”, the reality perceived and interpreted by the authors throughout the course of the research is used to uncover the underlying meaning of events or activities. In line with this, many of the questions asked were open-ended, ensuring that the interviewees were free to speak freely and give their opinions without limitation. The research also involved observations of the induction processes and tools used within the organisations.

4.3.2 Qualitative and quantitative research

The qualitative research employed in this report was carried out in two dimensions. Firstly, primary research, carried out with three employee segments, each, in SAP and Wayfair, delivered in the form of in-person, structured interviews. In the Wayfair case, these interviews were carried out over Skype (due to work travel commitments and time constraints). The other element of primary research was observations within the organisation, carried out by the authors directly. The second dimension was that of literary and case study research.

Through extrapolation of the inputs from both research methods, some quantitative data was evaluated and used to form the basis of trend exploration, specifically in the case of primary research.

Primary Research: The goal of this element of research was to elicit information, in a structured and comparable form, from the participants closest to the topic of the report, that being recently inducted new hires in each organization, their line managers, and the employees responsible for the design and delivery of the training programmes.

The method of primary research was that of in-person, structured interviews, with the interview questions formulated (and used consistently across both organizations) specifically so that each question related to three major themes, i.e. the five disciplines presented in “The Fifth Discipline”,

(Senge, 2010), “Industrial Revolution 4.0”, and finally, the various generations of employee who compose today’s modern teams.

The group made some significant, informed decisions in terms of the design and execution of the primary research: firstly in the context of ensuring that there was complete consistency in the question sets formulated across the organizations; secondly, in that the questions all had a sequenced, building block approach, with each somehow aligned to one of the themes mentioned above; thirdly, the interviews would consist of both qualitative and quantitative, structured questions, such that interviewee feedback could be both open, context rich, but also measurable. Finally, the interviews were conducted in person or via video link, as opposed to digitally distributed, to ensure the interviewer had the benefit of observing visual cues and nuances in the interviewees’ reactions to questions. Further, this method allowed the interviewer to re-articulate (where necessary) the questions to the interviewee. Online, digitally distributed interviews were originally considered, but the group, based on expert feedback and research, decided against this approach, instead favouring exclusively in-person interviews (for reasons of controlling seriousness, commitment, verity and misunderstanding (Petrick, 2009)).

The team further observed various elements to ensure ethical best practice (Driscoll, 2011) in conducting the interviews, with respect to observing voluntary participation from the interviewees, ensuring confidentiality and anonymity (no names were stored or expressed in either interview set), along with the reduction of the bias vector by interviewing employees within the organization with no management line ties to the interviewer.

4.3.3 Desk Research

The second dimension was that of literary and case study research. Both forms of research, when combined, provide the dataset backbone of the research questions and substance of this report.

4.3.4 Reliability, validity and triangulation

Taking on board Pierce’s definition of reliability as “the extent to which we can rely on the source of the data”, (Pierce, 2008) and Brink’s assertion of the “consistency, stability and repeatability of the informant’s accounts”, (Brink, 1993), this report asserts relatively high levels of reliability based on the fact that the interviewees all participated in the engagement voluntarily, no significant emotive or highly divisive themes were present in the interview questions, and the presumption that by virtue of the standardized and repeatable nature of the experience of the critical mass of the interviewees (a largely standardized training methodology), reliability factors would be relatively high. The group does understand that a limited sample size was observed (15 in total, across both organizations) in the course of this primary research.

With respect to validity, we follow some assertions from Miller-Cochran (Miller-Cochran & Rodrigo, 2013), in that by virtue of the how the primary research candidates were evaluated (context, age demographic etc), the uniformity of questions asked between panels across the two organizations, along with the rate of the reply, gives confidence of high validity indicators. To further augment the group’s assertion of reliability and validity, the group took assurance from Leininger’s assertion (basing on her extensive fieldwork), that researchers need to be trusted before they will be able to obtain

accurate, reliable or credible data, (Leininger, 2001). The interviewers were employees of the company, familiar to the interviewee set in both organizations, and attest that certain bias vectors were reduced by virtue of the interviewers not being direct line managers of the interviewee panel.

With respect to triangulation, we leverage the guidance of Jonker and Pennink, in that, by definition, we observed the "...application of two or more methods on the same research problem in order to increase the reliability of the results", (Jonker & Pennink, 2010), due to the nature of the structured interview approach, comparing the qualitative and quantitative outputs of the dataset, along with the advantage of a reflection between interviewers on the visual and interpersonal cues observed during the interviews to come to a conclusive analysis approach, allowing for data-triangulation, researchers-triangulation and methodological triangulation (Jonker & Pennink, 2010).

4.3.5 Background to the cases studied:

SAP is a global, multinational enterprise software company, headquartered in Walldorf, Germany. The company has approximately 84,000 employees working out of various regional offices across the globe. The company is traditionally known for its on premise ERP and CRM solutions – enterprise applications which, for many companies, is the technical nucleus of their environments. Since 2014 (SAP, 2014), SAP has made several strategic drives to focus on Cloud Computing, and pivot all of their products towards the cloud.

In Ireland (SAP, 2018), SAP has two locations – Dublin and Galway, comprising of approximately 1700 employees across 41 lines of business. The Dublin office's core activities are Service and Support, along with significant sales activity. The Galway office includes a service and support centre for SAP's SME and Multinational enterprise sectors, and has focused line of business teams in Cloud Services, IT Support, Knowledge Management, Auditing and Partner Services.

Wayfair is a US-based e-commerce company, founded in Boston in 2002. It is the largest online-only homeware retailer in North America and has offices across the US and Canada. It has had a presence in Europe since 2008, selling in the UK and German markets, with its European headquarters based in Galway, Ireland. There are 395 total employees in Galway, with 249 in the Sales & Service department.

Most of the Sales & Service teams for Europe are based in Galway. A Sales & Service Consultant undergoes one month of formal training when they join the organisation (two weeks of classroom training, two weeks of practical training), followed by two further months of "incubation" within their teams, led by the team manager. Their role involves dealing with customer sales queries and service complaints via phone and email, and liaising with suppliers, couriers and internal departments to always find the best possible resolution for the customer.

4.3.6 Conducting Interviews / focus groups:

From the research conducted within SAP, in total, eight in-person interviews were conducted – five interviews conducted with new employees of the organization, all of whom had recently onboarded with the organization and had undergone SAP training; two in-person interviews conducted with managers (one of whom is the direct manager of the five employees sampled) and the other manager having team members also observing the same induction and training program. The final SAP

interview was conducted in-person with the training coordinator, who designs the majority of the training plans which all others observe.

At Wayfair, a total of nine interviews were carried out; seven of these pertained to new hires who recently engaged in training and emerged to work together as a fully formed team of Sales & Service Consultants. The other two interviews were with this team's direct manager, and with the training and induction manager. All of the team interviews were carried out on a one-to-one basis, but over Skype for Business video call (due to the interviewer being located in Boston at the time). The remaining two were face-to-face interviews carried out in person.

4.3.7 Profile of interviewees

The primary interviews considered three segments of employees in each organization, of similar sample size. The first category was that of newly inducted employees, recently completing the corporate induction training. The second category were that of the direct line managers of these employees (and a peer manager also, in the SAP case). The third category was that of training course designers.

4.3.7.1 SAP Profiles

From the SAP perspective, the five newly inducted employees interviewed, all work in the same team, and were recent hires (joining the company in 2018). The training plan, for them, lasted three months in total. All sampled inducted employees assumed largely similar roles (all customer facing, all with a high level of expected technical activity in their role), that being technical presales experts. All newly inducted employees interviewed fall inside the Generation X and Generation Y categorization, with the Generation Y employees all having less than 5 years' employment history, and in one case, coming directly from academia, with no prior work experience.

In the context of the management interviewees, one manager (Generation Y categorization) was the direct line manager of the newly inducted employees, having some 3 years' tenure in the position, the second manager being a peer, (Generation X categorization), with a longer tenure in the position (~6 years), and also having employees having progressed through the induction process.

The training designer, in the SAP case, has a tenure of two years with the company with Generation Y categorization.

4.3.7.2 Wayfair Profiles

The seven new hires all joined Wayfair in January 2018, and so have recently completed the training program to become Sales & Service Consultants for the UK market. Their training consisted of two weeks' classroom-based training, two weeks' "nesting" (working side-by-side with direct supervision of a senior agent) and two month long "ramp up" period, whereby they receive extra training and coaching from their manager and the training department. The role requires some product knowledge but is largely dependent on strong problem solving and communication skills. All seven underwent training together and emerged from this training together to form a new team. The group make-up is comprised entirely of Generation Y, or Millennials (albeit a wide age-spread across all years of that

generation). All came from previous retail, customer service or hospitality backgrounds, with varying amounts of experience.

The team manager is also a Millennial and has been with the company for four years. The training manager, who falls into the Generation X category and has a large amount of experience in the training realm, is relatively new to the organisation, having joined in September 2017.

4.3.8 Data collection and analysis

Data collection was taken in the form of in-person interviews with the three employee segments (early stage teams, team managers and training plan designers / coordinators), in the two organizations, all of which in structured interview questions, wherein each question was mapped to a general lens or a lens within the context of Senge’s five disciplines. Post interview, the data for each segment was input into dedicated data analysis templates for each employee segment. For quick comparisons, the table below highlights the main similarities and contrasts between the interviewee sets:

Aspect:	SAP	Wayfair
Main function of team interviewed	Presales and Customer Engagement Presales and Customer Engagement	Sales & Service (Phone-based)
Team tenure within company	4 months	3.5 months
General age demographic of sampled inductees	Millennial, Gen Z	Millennial
General academic background of sampled inductees	College degree or higher. Largely software development, business background.	~50% college educated. Mostly unrelated to the role.
General work background of sampled inductees	Less than or equal to 6years.	1-10 years. Average is 3 years.
General age demographic of sampled managers	Gen X, Millennial	Millennial
General tenure demographics of sampled managers	Less than or equal to 6years – median = 3 years.	4 years.
General age demographic of sampled training designers	Millennial	Gen X
Data Collection Method	Interview w/questionnaire	Interview w/questionnaire

Table 1 - Interviewee Comparisons

4.4 Findings And Analysis

Research Question 1: What role, if any, does the induction process play in moving early stage teams towards empowerment?

4.4.1 Personal Mastery

Using Senge's theory as a guide, Personal Mastery to be understood to be a continual, lifelong discipline, which may not be exclusively confined to the temporal and time-delimited nature of the induction training, nor is it expected that induction training will output new hires, expertly proficient in the attributes of personal mastery, into the larger organization. However, we inspect based on what evidence exists to suggest that the induction program hinders or promotes moving early stage teams in the right direction.

4.4.1.1 SAP Perspective

Based on the feedback from newly inducted SAP team members, the interviewees felt in general that the induction program itself was challenging (54% agreeing with the sentiment), providing what may be argued as a valuable stimulus. This is backed by Stein, who claims that in his own studies that Gen Y and Z interviewees valued "challenging assignments" higher than monetary reward, (Stein & Christiansen, 2010). We further asked the team interviewees which aspects of the induction process helped them best acutely understand the main aspects of their role – all (100% coverage) citing collaborative training methods as being the most effective and having the highest subjective efficacy.

From the perspective of the managers, both cited contributory elements of personal mastery as being crucial in their estimations of what constituted an empowering induction programme. Both SAP managers sampled believed that the induction training did equip the team with the required knowledge to carry out their role – personal mastery on the most basic of levels.

The training coordinator advised that the induction program in and of itself did not significantly contribute towards personal mastery, instead indicating that this is something which people "find their own path on", long after induction has been completed. This provided the group with some good sentiment alignments back to Senge's explanation of personal mastery – one which is lifelong, ongoing, and a personal motivation. The training process may not output new hires with high degrees of personal mastery, but it should allow for this to evolve with experience.

4.4.1.2 Wayfair Perspective

The team interviews at Wayfair revealed that, overall, the induction period did contribute positively to developing personal mastery in each of the individuals. There was unanimous agreement across the seven interviewees that the training period adequately equipped them to carry out their roles effectively. The methods of training used at Wayfair are varied, much like at SAP. However, the training at Wayfair is very heavily based on in-person, classroom-based training to start with. This is supplemented with online trainings and exercises, peer-to-peer coaching, manager 1:1 sessions and coaching sessions.

All of the interviewees reported that the classroom-based training was the least enjoyable, and the least beneficial to their roles, due to the fact it was very long in duration and heavily based on theory. The research suggests that the most useful method of training was either a) the practical application of the theory, in the format of “nesting” where the team takes live calls, supported by tenured colleagues, or b) watching tenured colleagues carry out the role, while listening to live calls. The interview with the team manager confirmed that the team had all the necessary tools to carry out their roles successfully at the end of the training period. Although they still needed some extra support initially, she advised that this is to be expected with such low tenure.

The interviews also indicated that the training positively contributes to developing personal mastery beyond simply preparing the employees to carry out the specific tasks associated with the role. Some team members reported improved confidence inside and outside of the work environment, better communication skills, a higher patience tolerance and increased overall computer technical skills after the induction. The training manager said that she did not believe large emphasis should be placed on developmental training during induction, but that the learners should leave the training period with a good idea of how they could develop those skills over the subsequent 6-12 months.

4.4.1.3 Comparative Perspective

In both companies, the team members and the team managers felt that the induction contributed to their personal mastery, specifically in terms of equipping them with the necessary tools to fulfil their roles. While the training managers in both companies stressed that they believed induction should solely fulfil the purpose of teaching the basic necessary skills, both indicated that it should also provide a base from which personal mastery in its truest sense can flourish. Only the interviewees from the Wayfair team reported that they had found that the induction was directly instrumental in improving developmental skills beyond simply those required to do the job.

4.4.2 Mental Models

When we compare the composition of the interviewees (both teams, managers and training coordinators) in each organization, we reflect on the enormous depth of active mental models which might be employed by the interviewees – generational gaps, varying academic backgrounds, work experiences and tenure, all of which can contribute greatly towards the concept of varying mental models within the sample. We augmented into this evaluation the theories of Stein and Christiansen (Stein & Christiansen, 2010), namely that well-designed onboarding/induction processes, by their argument, are critical in terms of laying a positive mental perception and focus for the employee in his/her new environment – which pays significant dividend over time.

4.4.2.1 SAP Perspective

The interview focused on how the team’s perceptions and mental models around the role may have changed since starting with the organization and completing the onboarding process. In this regard, the interviewees had quite a mixed reaction; some believed the role definition which they applied for matched their experience with the organization, during and post induction, with the other interviewees believing that it did not match, along with some neutral sentiment. The casual responses

received which substantiated the opinion were also mixed – with sentiment generally veering towards an understanding that the role definition was not elaborate nor sharp enough.

When we evaluate the feedback from managers, we see split (50/50) sentiment – with one manager believing that the induction process encouraged the formation of mental models – with regards to how the newly onboarded team collectively felt about time recording and more administrative aspects of the role – in a negative context, downplaying the manager’s own sentiment and approach towards the topic.

With respect to feedback from the training coordinator, the sentiment with respect to mental models was that the induction process does allow the employees to bring their own individuality and opinion to the business. However, mental models (and the creation of positive mental models), although not articulated in the design, did seem to be a focus, especially in the “ground up” approach the training coordinator took with the design of the induction program. This ensures that all primary concepts within the organization are expressed and provided very early, in order to allow for new hires to learn about the company and their host teams right from the beginning.

Senge asserts that “people are more effective when they develop their own models”. An element of the SAP induction training aims to facilitate just that; “Role Specific Learning” is the process whereby the new hire is empowered to carry out self-conducted research and discovery in various aspects of the role. This may contribute to them “making their own mind up” on various topics – whether this mental model is either positively or negatively formed (from an efficacy perspective) is not conclusively proven. Further, when the training coordinator was asked what main contributory design factors influenced the design choices of the induction programme, the answer in itself alluded to a mental model; one which focused on past experiences of training plans that were successfully designed and delivered.

4.4.2.2 Wayfair Perspective

When the Wayfair team were asked about whether their perspectives or assumptions about the role and the organisation in general had changed after the training period, six of the seven interviewees said that they had, with the seventh producing a neutral response. Those that felt the training had changed their assumptions either reported that they had had no concrete idea of what to expect before joining the organisation, or that they had underestimated the complexity of the role and how much there would be to learn in the first few months. Two specifically advised that they had originally held the assumption that this was “just another customer service job”, but were shocked at how much more was involved, how much autonomy they would have and how challenging it could be.

Feedback regarding assumptions about the organisation in general was positive, in that interviewees advised they felt the company met the assumptions they held based on how the job was advertised and their interactions with the staff throughout the recruitment process.

The training manager spoke about how she always takes time on the very first day to address assumptions and align the new hires on what the training will entail. She asks them to speak about previous experiences (positive and negative) in training for previous roles they have had, in order to show how this experience would be different. The team manager did not feel that the team had any existing biases or assumptions that she needed to work to overcome after the training period.

4.4.2.3 Comparative Perspective

The Wayfair team were almost unanimous in their assertion that their mental model had been changed by the induction process, while the SAP team were more mixed in their responses in this area. Some members of the SAP team felt that the role they are currently performing matches the perception they had when they initially applied and interviewed to join the company. Again, the training managers from both companies aligned in this respect, with both reporting that the induction process should bring the varying mental models of the inductees together and challenge these, helping to overcome biases and realign assumptions.

Only the SAP induction program actively empowers the new hire to carry out their own journey of discovery into what the role entails, in order to build their own mental model.

The team manager at Wayfair and one of the SAP managers felt that the initial induction process set the team up in such a way that there were little to no biases or assumptions that needed to be overcome by the manager. The second SAP manager, however, felt that there were some mental models relating to timekeeping and administration that were either formed during, or not eradicated by, the induction period.

4.4.3 Shared Vision

Senge argues that organizations intent on building shared visions must continuously encourage members to develop their personal visions – otherwise, all that is possible is people will “sign up for someone else’s”. This indicates that Shared Vision is something which must be built by the employee, and facilitated by the organization over time. In our research, we sought to identify characteristics in both the SAP and Wayfair induction programmes, which may contribute to, or detract from, moving early stage teams towards empowerment in this discipline.

4.4.3.1 SAP Perspective

Based on the primary research carried out with the team members in SAP, we observed that all (100% coverage of) interviewees could articulate the shared vision of the team, and that of the organization. Primary research also indicated that the team of new hires expressed positive sentiment in that the heavy reliance on face to face training, with strong emphasis on the ability to ask questions of more senior mentors, was well received by the interviewees. Further, based on the feedback from the interviewees, the overwhelming sentiments (80% agreeing) recorded were strong preferences for face-to-face training methods, in which questions may be asked, opinions discussed, and real-time feedback realized. This may be seen as a both a contributory factor towards empowerment of shared vision, and also as a positive attribute of the interviewed team.

When we focused on the managers during our primary research, they were asked if they felt that the training contributed towards empowering employees to assemble a shared vision within the teams in which they work. The feedback was positive, with both SAP managers agreeing that the team were more empowered in terms of their stronger shared vision, with one manager indicating that this team vision is also supported, post training, by some of the development practices (Agile) leveraged by the

organization. Agile is a form of software development methodology which focuses on empowering the team, with elements of self-management and strong team work therein.

When the training coordinator was interviewed, the feedback was less conclusive, with the opinion shared that induction itself presents some mild form of empowerment in terms of shared vision, but this is a quality solidified far after the induction process completes, and indeed, only really forms once personal development plans are built with the individual employee and their manager.

Outside of this, when we examine the SAP training plan to seek evidence of contribution towards shared vision, we notice that in dimension 1 of the training (“Corporate Training”), we see strong emphasis on presenting relevant information about company strategy and company history to the inductees. This is augmented then, at a more local level (in dimension 2 of the training, “Local Orientation Training”), with strong emphasis on the setup of a Buddy / Mentor system, whereby the new hire is paired with a more experienced, tenured mentor, who will work in parallel with the new hire and can answer questions about all facets of the training. Further, social events are established early in the process, whereby the new hire will meet, interact and often socialize with the larger set of established team members (and fellow new hires). It may be argued that this activity is in place to help establish the new team members within their team, and to encourage shared thought and discussion. Finally, in dimension 3 (“Role Specific Training”), we see the concept of work shadowing and mentorship continued through to the final aspect of the induction lifecycle.

4.4.3.2 Wayfair Perspective

Six of the seven interviewees articulated a similar vision of what the purpose of their team was, and how they fit into the organisation. This shared vision is that of a team that comes together to offer the best possible customer support to our customers. This is in direct alignment with the goals of the department (customer satisfaction metrics, first contact resolution targets, reduction in “time to resolution”, etc.), as well as the primary core value of the company: “Above everything, our customers come first”.

The seventh member of the team focused on an “internal” version of the shared vision, i.e. what it means and feels like to be part of the team. She reported that vision as follows: “We are a group of young people who want to form our own little community. A family within the Wayfair family. We all look out for each other, while at the same time being people who are competitive and metrics driven. We like healthy competition”. This response aligns with two more of the Wayfair core values, “We Challenge to Ensure Excellence” and “We are one Wayfair”.

Multiple team members also spoke of how they view the company as a place where career and personal progression is not only possible, but actively encouraged and facilitated, and that the ongoing internal promotion within the company is highly visible, even to those just joining the company. On the first day of induction for new hires, several members of the senior management team will join them for a meet and greet and share their own stories of progression within the company. Most of the senior management team began their career at Wayfair in the same role as the SSCs. One of the interviewees stated: “The team knows that if they want to progress here, there are definitely opportunities”.

The manager was definite in her assertion that the team held a strong shared vision and motivated each other to work towards this. The training manager spoke about the fact that all new hires in our

department, regardless of level or role, go through the same initial training in order to reinforce the importance of the customer-facing role and the intricacies involved in it. She felt that this had a large part to play in the strong shared vision she perceived within the wider team.

4.4.3.3 Comparative Perspective

The responses from both sets of team members from the two companies show that the teams are aligned towards the stated goals of the company and their respective teams, including a mix of focus on external (company level) shared vision and internal (team level) shared vision. While the SAP team members referenced the contribution that peer mentorship programs make to creating the shared vision, this program type was not mentioned by the Wayfair group, despite the fact that the company does offer and facilitate such a program.

The managers in both companies were aligned on the assertion that the teams appeared to hold shared visions upon completion of the training period.

4.4.4 Team Learning

“A learning organisation cannot exist without team learning” (Senge, 2010, p. 10). In the following sections, we investigate the efficacy in empowerment of the discipline of team learning against the feedback and sentiment from primary research, along with our understanding of the induction processes in both organizations.

4.4.4.1 SAP Perspective

From the highest level, SAP will generally induct new hires in clusters, and start the induction program with at least five new hires each time – both, based on our primary research and understanding from the managers and designers to best leverage the bandwidth of mentors and trainers, but also to create small segments of new hires who may share knowledge and the emotional impact of starting in a new company together.

From the direct feedback of the team interviewed, the sentiment was that more individual learning approaches (such as computer based training) were found to be the least effective (60% of sentiment), with face-to-face and more team / engaging learning environments more effective and preferential. Further, the sentiment of the interviewees was that they felt a clear improvement would be to be immersed in team-based engagements – customer facing meetings and calls, such that learning, in a team environment, could take place.

When we interviewed the managers, we posed a question regarding how they believed the induction may have empowered the team to engage in open dialogue with other members of the team – with both interviewees agreeing that they felt that it did. One of the managers spoke about Agile methodologies (which the inductees would partake in during the SAP induction, and further, past the lifecycle of induction), and how they felt that team learning was accelerated by the design and core concepts of Agile: open, transparent dialogue, in very much a team managed environment. As Senge argues, team learning is very much a collaborative concept, driven by the team and not by any single individual – with the team needing to feel safe around each other, and in compliment with the other

4 disciplines. Therefore, we asked the manager how well they felt the training encouraged integration of the team in general, with both managers indicating that they felt the induction greatly accelerated integration.

We then analysed the feedback from the training coordinator, to dig deeper in evaluating if the seemingly positive reaction and sentiment towards team learning was created by design. The feedback was that she felt the induction program did contribute towards creation of an environment that facilitates open dialogue, provides decent integration and familiarity within the new team within which to ask questions, share and collaborate, but did not cite “team learning” as one of the primary drivers in the design methodology leveraged, instead “cover all bases” was the articulated feedback.

When we inspect the SAP induction plan, from a high level, we do see design attributes which attest to creating the environment and foundation for team learning to flourish – as Senge puts it – “the need to think insightfully about complex issues” may be enhanced by very new team members (even those still in induction) taking an active role in team planning and agile activities (such as Scrum stand-ups). Senge cites the need for innovative, coordinated action, which, it may be argued, is facilitated by a carefully executed and sequential training plan, innovative in that it brings in many types of learning techniques – self-guided, direct and collaborative. Finally, as Senge states, there is the “role of team members on other teams”, which may be argued is covered by the mentorship element of the induction process, along with early meeting and socialising offered with the new hires and their own, and other teams.

4.4.4.2 Wayfair Perspective

The Wayfair interviewees reacted with unanimous positivity when we asked about how well the training period had integrated them into their team, and also into the organisation in general. The usual method of inducting new hires in Wayfair involves training a group together for 4 weeks, and then splitting them up to join with existing teams, consisting of agents with various levels of tenure. However, in the case of the team that was interviewed, the seven members joined the company at the same time, were trained together, and emerged from training to form a team together.

They reported that the training facilitated a swift team bonding experience, and that the huge levels of support and encouragement from the training and management teams created a safe space for them to work in. They mentioned that they felt close to their team mates, and that they felt everyone was open and approachable. The mix of working with their team-mates in the open-plan office environment and socialising at monthly company-sponsored team events has encouraged integration at both the team and organisational level.

One interviewee did mention that, which the team itself felt comfortable and empowered, the fact that they stayed together in one group after training meant that she felt they didn’t get to meet as many new people as previous new hires would have when being split out to join their new teams.

The manager felt that the team was equipped to have open dialogue and discussion from the outset, because of the emphasis the training puts on getting the team to know one another and become comfortable. There are group discussion sessions and team meetings right from the beginning, and she said she could “feel how close they all are”, even at this early stage in their tenure within the organisation.

4.4.4.3 Comparative Perspective

Both companies have mechanisms in place to ensure an environment conducive to open dialogue and discussion is created, which is necessary to achieve team learning. The interviews with the training managers did not specifically uncover evidence that the focus was on team learning, there was a large emphasis on creating the correct setting for this to take place. While both companies focus on breaking down barriers within the team, and with other teams, SAP appears to do more in terms of accelerating team learning from early on. In SAP, the use of the Agile methodology means that there are more opportunities for very new people to learn from more tenured people at the beginning, and for this learning opportunity to be reciprocated.

4.4.5 Systems Thinking

Senge's theory states that, in being able to master systems thinking, the assumption that there must be a responsible individual must be banished, with "everyone (sharing) responsibility for problems generated by a system". In our research, we sought to identify evidence of the presence or absence of this sense of system awareness and responsibility within the two organisations.

4.4.5.1 SAP Perspective

When gauging the sentiment from the SAP team interviewees, our primary research engagement asked whether the team felt they now had a clear idea in how their actions influence other departments, with interviewees indicating that in general, they felt empowered in understanding their role, activities and contribution to the organization. We found this important as it aligns with Senge's concept of leverage (or at least, the early stages of the concept) whereby realizing systems thinking requires the organization's members to see where actions and changes in structures can lead to significant, enduring improvements. Our argument is that the basis for this is understanding the role and contribution of other teams and functions (along with their own), before deeper dependency and leverage concepts might be possible. Further, the team were keen and vocal in terms of being able to suggest improvements to the induction process which they were part of, which gives elements of confidence about the induction process potentially empowering the interviewees to be able to establish contributory and critical mindsets, when they look at functions outside of their own.

The managers, when interviewed, had neutral to negative sentiment in terms of how well the induction program empowered the new team in seeing how their actions impacted other teams and departments – the sentiment expressed being that this can only develop over time, which, aligns with Senge's arguments where systems thinking can only form once all other disciplines have matured / been mastered by the team.

The training coordinator shared this sentiment, indicating that neither the onboarding process nor its immediate outcomes empowered many of the qualities and virtues of the "Systems Thinking" discipline, instead, believing that this matures over time, long after induction has been completed.

4.4.5.2 Wayfair Perspective:

The team reported unanimously that they felt they have good knowledge of how they fit into the organisation, as well as how their actions influence other departments and areas of the business. They were particularly aware of how their omissions or mistakes can have a negative effect on others in the organisation. They said they learned this quickly, because they began to see how the mistakes of others had an impact on them personally.

Some reported that, although they were aware that certain actions or omissions on their side would indeed have an impact elsewhere in the organisation, they were not always certain of exactly what that impact was. However, they found that they were gradually learning this as they became more experienced, particularly as there is a regular, open feedback mechanism, whereby other departments flag any coaching pointers on tickets opened by the team to the manager, who in turn addressed these with the them individually or as a group.

One agent articulated it succinctly: “I thought I would just be sitting at a phone on my own, answering calls. Now I can see that it is so much more than that”.

The training manager spoke about how, when they teach out the core values of the company during induction, they ensure they do this within the context of how things work at Wayfair. For example, when speaking to the core value of “We value speed over perfection”, they will always give a real example from varying teams that highlights what this looks like in practice.

The manager felt that the team was given a strong basis in this area, but that there was still some room for improvement in terms of the team’s integration with other departments in the organisation. She felt that they had a broad understanding of how their roles fit within the organisation, but that this could be more nuanced. She mentioned that this was a potential drawback of the team being entirely composed of individuals with the same low tenure; they would likely have gotten these details faster had they joined a team with more tenured agents. This aligns with the views of one of the team, as previously described.

4.4.5.3 Comparative Perspective

Both teams felt as though they had a good understanding of their roles and the fact that their actions impacted others. There was also a feeling, although less emphatic, that they understood how their actions impacted others. However, the managers in both organisations were less certain of this, and reported that this element could be improved upon. The training managers in both organisations differed, however, with the SAP trainer stipulating that this was not a focus of the induction, and the Wayfair manager speaking about how the training team actively endeavours to foster systems thinking in the induction period.

Research Question 2: Do inter-generational differences have an impact on team empowerment?

Rebecca Knight highlights the challenges of managing people from 5 Generations in her 2014 HBR article (Knight, 2014). Our second research question explores the possibility of differences between

these generations having an impact on team empowerment, with a specific focus on the induction process.

In conducting our primary research, the participants were recorded anonymously. We did, however, record the specific generation of each of the team members, the team managers and the training & induction managers. As outlined above, there is much literary material that suggests that this can have an impact on how people learn and are empowered within teams.

At SAP, the overall sample contained recent inductees from generations Y and Z and management from generations X and Y. Analysis of the survey responses indicate no significant differences with respect to varying generational perceptions of the efficacy of the induction process. In addition, both management and team members displayed a strong preference for face-to-face and work shadowing forms of training citing the hands-on nature of the training as the main benefit, along with it being immersive. Conversely, the mode deemed the least beneficial was online courses due to the tedious, long and insular nature of delivery.

The SAP feedback appears to dispel a preconceived perception of the research group that digital native Gen Y & Z inductees would have a preference toward online induction content. Here it was found that almost all interviewees, including the Gen Z participant, considered the online courses to be the least beneficial or enjoyable.

At Wayfair, the sample surveyed were a homogenous Gen Y team. Although intergenerational differences could not be ascertained from the sample, there were some notable comparisons with the SAP outcomes. Firstly, 100% of the Wayfair sample considered the classroom, theory-intense element of the induction process least beneficial. The most beneficial form of training was considered to be the one-to-one coaching, on-floor support and side-by-side coaching.

The findings of the research appear to broadly align with the literature. (Rollag, et al., 2005) MIT Sloan article, "Getting New Hires Up to Speed Quickly", contrasts the efficacy of 'informational' and 'relational' approaches to on-boarding. The authors found that while "most firms tend to use an informational approach to orienting new hires, providing them with a smorgasbord of information about company routines and technologies", "organizations that were more successful at integrating newcomers tended to use a relational approach, helping new hires to rapidly establish a broad network of relationships with co-workers that they could tap to obtain the information they needed to become productive."

The sample of newcomers at SAP and Wayfair appear to support these findings through their preferences for more socially interactive and immersive forms of induction delivery as opposed to the perceived least beneficial, isolated information-laden approaches.

Klein and Weaver (Klein & Weaver, 2000) consider the period of "socialization of new hires" to be the duration when "employees are most susceptible to the organization's influence". By deduction, it is considered that newcomers at initial stages of the onboarding process are most receptive to the formation of 'group norms'- the group norms that 'Project Aristotle' at Google (Duhigg, 2016) determined to be the most important factor in their highest performing teams. Given the survey results from SAP and Wayfair indicate new hires are most receptive to 'relational' approaches, this provides the best opportunity to influence critical group norms at the earliest of stages in the employment process. From the research at Google, establishing and fostering "psychologically safe"

environments and “human bonds” ought to be a primary focus during the induction process if the pursuit of team empowerment is the ultimate objective.

Therefore, with respect to team empowerment, our findings indicate that the methods of induction adopted directly impact the effectiveness of team empowerment. However, the results also show consistency across generations with regard to the ‘relational’ approach to on-boarding as the unanimously most beneficial form of training. Therefore, in response to RQ2, we find that inter-generational differences do not appear to have an impact on team empowerment throughout the induction process.

Research Question 3: Do the communication technologies used within a team impact empowerment?

The topic of this study will be determining the evidence to indicate the impact (positively or negatively) of digital communication technologies on team empowerment.

The drivers behind this aspect of our study are multi-faceted; from the highest level, corporates are becoming ever more virtual, and as a result, are leveraging many forms of digital communication technology (DCT) in the workplace, coupled with significant advancements in corporate digital communication technology in the context of Industrial Revolution 4.0; overall, a trend that does not appear to be going away. Further, with context of our primary research, some interesting paradigms exist, such as the prevalence of digital natives within the two organizations sampled and high levels of reliance on DCT in both organizations (with one, SAP, being themselves a software company).

Rapidly advancing DCT trends, coupled with this reliance, may bring some interesting outcomes to the fore, within the context of how these trends are assisting or hindering team empowerment.

This research question will be divided into a number of sequenced areas; firstly, we set the backdrop, in the context of virtual teams, rising use and reliance on DCT in the workplace, along with advancements powered by Industrial Revolution 4.0. Next, we focus attention on how specifically both organizations are leveraging this technology in a general context.

With a backdrop established, we move into assessing evidence from primary research and understanding of induction programs - focusing on teams at two stages, firstly, the early stage teams, and evaluate what evidence we may ascertain which suggests the impact of DCT has on their empowerment as a team. After this, we focus on evaluating how the teams in both organizations are applying the use of DCT in their daily activities – as professional employees and as members of a team unit.

Lastly, we evaluate the findings of the above against the academic lens of Senge’s five disciplines and the Empowerment Model of Gershon, drawing on the primary research and academic research, to draw out some conclusions on the overall observed impact of DCT on empowerment.

Virtual teams, where members use technology to interact with one another across various boundaries (geographic, organizational) are becoming more commonplace in organizations – with various studies indicating that by 2020 more than half of all global employees will work in some form of a virtual team (Forbes, 2017). The rise of the virtual team concept, leveraged especially by multinationals, is driven by a number of perceived benefits; flexibility in which work is not tied into a certain place or time,

geographical dispersion allowing for full time zone coverage (especially in organizations which serve global market), larger talent pools in other regions where specific knowledge may be gained, and the potential for significant cost savings arising from various business process outsourcing strategies (Tormanen, 2017). Martins provides a succinct definition of “virtual teams” in “...teams whose members use technology to varying degrees in working across locational, temporal, and relational boundaries to accomplish an interdependent task”, (Martins, et al., 2004).

From the technology dimension, we understand that rapid advancement and adoption of communication systems allow virtual team composition not only to be facilitated, but to flourish. Today’s technology market is saturated with a multitude of vendors offering DCT systems, from the rudimentary to the complex, fitting the budget of practically every business. Aspects of the Industrial Revolution 4.0 (such as Cloud Computing and Mobile Device accessibility) are greatly enforcing the availability and subsequent adoption of DCT platforms and solutions.

When we place these dimensions together, we may come to the conclusion that the concept of virtual teams, supported by a number of valid operational and economic rationales, along with advancement and adoption of DCT technology is here to stay, bringing the modern organization and employee, along with it. However, a side effect has arisen from the concept of the virtual team and technology paradigm; team members, who may not be separated by geographic boundaries (i.e. those that share the same general, common, office space) are beginning to operate in the same fashion as a geographically separated virtual team. They leverage the multitude of available communication technologies with which to conduct (in some cases) the majority of their daily interactions and correspondence, whereby interpersonal interactions are carried out virtually / digitally. Voice conversations, once carried out in person or over standard telephone lines, are being carried out digitally, often by team members sitting in the next office or down the corridor. The simplicity and familiarity of digital communication channels (which many digital natives use in their own personal lives) is being mirrored and carried over into their professional engagements.

In the context of academic research, some consistent themes are presented in terms how DCT may empower teams. Kirkman indicates that in an investigation of 35 sales and service virtual teams, in high technology organizations (chosen in this discussion based on the similarity to the context of primary research), DCT was seen to contribute effectively towards process improvement and customer satisfaction. However, Kirkman’s research indicates that team empowerment overall was a stronger predictor for teams that met face-to-face (instead of virtual / digital means) more frequently, (Kirkman, et al., 2004). Maruping’s research indicates that the opportunity and empowerment potential of DCT varies depending on the team’s own development stage, indicating that teams at early stages of development (for example, during and post-induction), look to richer media for socialization and team development, whereby more mature and empowered teams utilize DCT less often. Maruping brings the illustration of the “Media Synchronicity” theory, whereby various methods of DCT (Email, Instant Messaging, Net Meeting, Video Conferencing and Telephone) are mapped against 5 domains of empowerment – “Immediacy of feedback, symbol variety, parallelism, reversibility and reprocess ability”, finding that early stage teams leverage the more “virtual” forms of communication technology (net meeting, instant messaging) than those direct forms (telephone and video conferencing), (Maruping & Agarwal, 2004).

When we consider the companies sampled in our primary research, SAP and Wayfair, we see some considerable uses of various communication technology platforms at play, discussed in more detail in SRQ2, below.

Sub Research Q1: Evidence of early stage team empowerment by virtue of DCT in SAP and Wayfair

Based on primary research and interview feedback from SAP and Wayfair, below is a list of indicators, arising from the use of communication technologies employed during the induction and onboarding processes, which could potentially have had an impact on early stage team empowerment.

From the SAP perspective, the early stage team sampled indicated that interpersonal-orientated work shadowing, where the inductee would physically sit and interact with a colleague (without using communication technology) was perceived by them to be the most efficient in empowering them; a sentiment shared also by their managers, when compared to the use of communications technology (remote seminars and computer-based training).

Some similar themes were observed from the primary research carried out with Wayfair – with early stage team members preferring real-time, in person dialogue with other team members and mentors to be the most beneficial.

Sub Research Q2: Application of DCT Within The Sampled Organizations

In order to evaluate this dimension, we reflected on some of the more anecdotal findings of the primary research conducted with the team managers and training coordinators within each organization, along with observations specific to the composition of general (mature) team activity within each organization. It should be noted that in both the cases of Wayfair and SAP, the early stage teams would eventually, post induction, merge into a larger team concept, populated by more tenured employees.

- From the Wayfair perspective (wherein most team members exist collectively and contained in physical co-location context) the primary DCT platforms are:
- Microsoft Skype for instant messaging, voice and teleconferencing engagements, within the team and with other teams.
- Microsoft Outlook, facilitating the company's strong reliance on email communications, which team members use throughout the working day to interact and share information, statuses and updates.
- Various business systems are leveraged by the Wayfair teams, such as order management systems (in which communication capabilities exist), along with dedicated ticketing systems which supports inter-departmental communications.
- Outside of the office, each manager has a WhatsApp group, which they use to reach people out of working hours, along with a Facebook group (voluntary sign-up) where non-work-related discussion takes places within the teams.

From a SAP perspective, (where virtual teams are very common, and even direct team peers are often geographically distributed):

- The organization also uses Microsoft Skype and Outlook for the majority of communications – with most virtual team engagements (and indeed many intra-location engagements) being conducted virtually.
- Instant Messaging functionality (offered by virtue of Skype) is also favoured strongly inside the organization.
- A wide variety of ticketing systems and business systems also exist, used by both co-located team members and virtual team members.
- Specific recent focus in SAP is geared towards leveraging Agile Development tools, all of which have significant communication components contained therein, such as Slack, JIRA and VersionOne.

From this information, and understanding how these organizations are composed, and how they operate within the context of DCT, we observed a strong reliance on and adoption of DCT, almost to the extent that many engagements and communications that could be carried out interpersonally, through “traditional” means such as meetings and face-to-face discussions, are being carried out through the medium of technology instead.

4.4.6 Summary

Interviews with the team members, team managers and training managers have given insights into the ways in which induction training plans do or do not impact the empowerment of teams, in the context of Senge's five disciplines. In both companies, there is evidence to suggest that mental models, shared vision and early-stage forms of personal mastery and systems thinking are facilitated during the induction period. There is no strong evidence to suggest that Team Learning is present in either organisation, but there is also nothing to suggest that it will not evolve as the team increases in tenure and experience.

The modern workplace includes people from five different generations, from the Traditionalist through to Generation Z. Our research indicates that generational differences have little influence on team empowerment, and that empowerment is more reliant on establishing “psychologically safe” environments and “human bonds” as group norms than it is on reconciling any generational disparities. From the perspective of developing induction processes, our survey results are supported by the literature with respect to a strong preference for 'relational' rather than 'informational' processes, irrespective of generational background.

The theme of virtual teams and increasing leverage and reliance on DCT is a prevalent concept in today's modern workforce. The primary research engaged within SAP and Wayfair (both organizations who significantly leverage DCT throughout their business) indicates that in the concept of early stage teams, the perceived and articulated impact on empowerment from feedback, is slight – with the newly-inducted respondents indicating that face-to-face meetings were far more beneficial when queried against the backdrop of Senge's five disciplines. When applying the findings of our primary research, along with understandings of how the organizations leverage DCT, against Senge's five disciplines and Gershon's empowerment model, we see favourable potential for DCT to empower teams, especially in the domains of self-responsibility, personal mastery, but less so in terms of authentic communication and authentic communication, with high levels of subjectivity in how trust may be evidenced by virtue of the use of DCT. Strong potential is evidenced when assessing DCT's

empowerment in the context of Shared Vision and Team Learning, with some novel approaches undertaken by SAP and Wayfair in their use of DCT to empower caring.

4.5 Discussion and Conclusion

Taking into account the short timeframe within which the research was carried out and the limited sample size of interviewees, the study brought to light a number of initial findings; many of these align with existing literature, and indeed some do not. We have found evidence that elements of the induction training present in both organisations are contributing positively towards the empowerment of teams, as defined by Peter Senge. Other elements of Senge's theory are not fostered via the induction process or are done so only to a limited extent. We have also gathered some insights into the potential impact of a multigenerational team dynamic and the extent to which technology can have an impact on the empowerment of teams. Certain areas of the research findings suggest that further research would be beneficial.

4.5.1 Summary of findings

1. The interview responses suggest that both organisations have induction processes that foster many elements of the five disciplines associated with team empowerment

Both organisations have an induction process that appears to provide the team with the tools needed to do their job. While only the team at Wayfair spoke of having developed beyond this job knowledge within the first three months, both training co-ordinators spoke of how the intention of the induction is to give the team a foundation upon which they can develop within the organisation, thus facilitating the ongoing process of personal mastery.

The team at Wayfair unanimously felt that they had different mental models of the role and what it entailed after the induction process, whereas this sentiment was divided at SAP; some echoed this, but others felt that the role aligned with their expectations and assumptions. Both the Wayfair manager and one of the SAP managers felt that the mental models that existed within the team after the training were aligned to the role and did not have to be challenged, although the other SAP manager felt there were some negative aspects to the mental models formed during the training. The results from self-directed learning opportunities at SAP are as yet inconclusive.

The ability to articulate the shared vision of the company existed on both teams. This is facilitated through many aspects of the induction, most notably the peer-to-peer mentoring at SAP. Although Wayfair offers a similar program during the initial onboarding period, not of the interviewees mentioned this as having an influence on their adoption of the shared vision.

Both organisations place importance on integration of new hires within their teams and with other teams, to create an environment within which they feel supported and psychologically safe. While this is arguably a good foundation from which team learning can flourish, there was no evidence that this approach had led to team learning beginning within the short period of the induction training. SAP's adoption of the agile methodology meant this journey was shortened for their new hires.

While both teams reported knowing how their actions and omissions impact the other stakeholders in the organisation, the management of both teams felt that this awareness and knowledge was

limited. While the induction process alerts the new hires to the fact that their actions have consequences, it is not deep or nuanced enough to truly impart the complex implications that can arise from those actions. The induction process seems to promote systems thinking but does not necessarily produce employees who are proficient in it.

2. From interviewing the two teams, there was no discernible evidence that teams with multigenerational membership are any different to homogenous teams in terms of how induction processes set them up for empowerment.

The SAP team, with a mix of generations, but predominantly composed of Gen Y and Z, reported preferences that contradict some popular stereotypes associated with the generational buckets. They did not favour computer-based training, as external research would suggest. Wayfair's homogenous team of millennials, however, in line with popular theories, reported an aversion to long, theory-heavy training methods. The findings appear to align with Rollag, et al's (2005) MIT Sloan article where 'relational' approaches to on-boarding are shown to be more effective than 'informational' approaches.

3. Both the SAP or Wayfair teams cited face-to-face interactions as the most enjoyable and most beneficial means of empowering them to do their job during the early stages.

If we consider this training as an input to both team learning and personal mastery, and thus to empowerment, we may say that based on the sample taken, DCT was seen not to have been an advantageous or empowering addition. Further, the teams unanimously indicated that online courses (a form of one-way communication technology) were not perceived to be empowering. Applying the lens of intergenerational differences amongst the collective sample set of early stage teams resulted in no discernible evidence indicating an impact of DCT on team empowerment. As teams mature, there is some evidence that communications preferences evolve from in-person methods to those facilitated by DCT.

4.5.2 Implications for practice

The findings from the research suggest the following as possible implications for the two organisations studied:

1. Although it is not the core intention of induction training, there is some evidence to suggest that more advanced development and personal mastery can be facilitated during this period.
2. The fact that the mental models of the team were mostly changed during the onboarding process might suggest that the role descriptions at time of recruitment are not as accurate or reflective of the reality as they might be. This is something the organisations could examine and amend if necessary.
3. The peer-to-peer mentoring seems to be an effective tool for creating shared vision in SAP but was not referenced as an influencing factor in Wayfair. The program at Wayfair may benefit from review, to ensure it is having the desired impact on its newest recruits.
4. Both companies could potentially benefit from exploring ways in which to foster more integrated systems thinking during induction. This must, however, be balanced with the

business need to get new hires ramped up to a point where they can carry out their basic role in a relatively short timeframe.

5. When dealing with new hires from the Y and Z generational brackets, it may be appropriate to "break up" induction training formats in order to ensure consistent engagement and retention.
6. As 'relational' approaches are proven to be more effective than 'informational' approaches when it comes to the on-boarding process, it is important to fully consider the overall value of both offerings in the development of an induction process.
7. Developing "psychologically safe" environments and "human bonds" as group norms play a large part in building the 'perfect team', and organisations may benefit from facilitating their creation.

4.5.3 Limitations of the study

The interviews were carried out with three groups within each of the organisations: a team, its manager(s) and the induction/training managers. The sample size of these groups was small, particularly in the case of the team and induction managers. Additionally, the timeframe within which the research was carried out was relatively short, spanning a total of four weeks. The authors had limited opportunity to carry out the interviews, with each limited to 7-8 questions posed over a 20-minute period. This meant that opportunities to expand upon the information gathered during the primary research was limited.

The two teams that formed the subject of the research perform markedly different roles, and possess fundamentally different skills, which may have had an impact on the results of the study.

The research questions include the topic of multi-generational differences within teams. While there was a mix of generations on the SAP team, this was limited to just two, Generations Y and Z, and so may not provide a broad enough scope to make assertions based on generation gaps.

Despite these limitations, the authors believe that the scope of the study was sufficient to provide qualitative data on the experiences of the specific teams during their induction and how this impacted the empowerment of the team.

4.5.4 Recommendations for future research

During the course of the research, it was noted that there are very few articles specifically relating to how modern digital communication technology maps to team empowerment in general (including within physical sites); most focus exclusively on virtual teams and business KPIs. Additionally, it was noted that there was very little literature or research available that relates the modern corporate workplace to Senge's Fifth Discipline. It may be valuable to research these areas further.

The authors believe that further research may also be warranted in order to analyse induction training methods based on the generational profile of the new hires. Our research has suggested that there are very strong opinions and preferences and, as the make-up of corporate teams shifts ever further towards a Gen Y/Gen Z make-up, organisations may benefit from tailoring their approach to onboarding to ensure the team has a strong foundation for the journey towards team empowerment.

4.6 Summary and conclusion

The research we have undertaken has indicated that viewing processes through the lens of Senge's five disciplines is a helpful way to ascertain to what extent they set the team up to become a high performing entity. The interviews we carried out within this focus have shed light on the thoughts and opinions of team members, team managers and training & induction managers, relating specifically to how the induction training impacts the empowerment of the team.

Within the two teams, we saw evidence of personal mastery in terms of job-specific know-how and some elements of development skill progression. We also noted that mental models were often changed by the induction process, most notably at Wayfair, where all interviewees from the team reported this. The induction process would appear to play an important part in setting the scene for a shared vision among the team to flourish. This was particularly strong at SAP, but there does seem to be scope for further facilitating this via peer-to-peer mentoring at Wayfair. There was no apparent evidence of team learning at either site following the induction period, but the environment which was created for the teams during that period is arguably a good base from which team learning can grow. The early buds and shoots of systems thinking were evident amongst the team after induction, but manager feedback and observation indicates that this is something that teams can become proficient in with tenure and experience.

There was little evidence that multigenerational differences within teams had an impact on the empowerment of a team. The research did, however, suggest that certain assumptions regarding Gen Y and Z may not always hold true (preference for digital training methods). Research into the preferred methods of communication suggested that, despite the growing prevalence of DCT in companies and the shift in the workforce composition to "digital natives", the preference for communication methods during the initial onboarding within a company remains with face-to-face interactions. Given the increasing popularity of globalized, virtual and "work from home" teams, and the fact that this precludes physical interactions, this is something that companies should examine and take steps to mitigate against.

The research has provided the authors with valuable insights into the induction process for new hires in our organisations. This has enabled us to create actionable recommendations that we hope will facilitate the speedier and more streamlined empowerment of new teams coming on board.

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Chapter 5 Unconscious Bias

Investigation of the potential impact of unconscious bias on team empowerment within multigenerational teams

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Edited Martin Hughes and Michael Campion

5.1 Introduction

5.1.1 Overview

Embracing diversity, inclusion and growing organisations by growing people is a common feature of team empowerment training modules within industry at present. It's ironic in that it is often delivered in a standard training format of one-way (horizontal) learning that may not be conducive to team empowerment as outlined in *The Fifth Discipline* (Senge, 2006). There is also that additional challenge as noted within *The Practice of Management* (Drucker, 1955) as: "But the more one has learned the more difficult is unlearning".

A literature review was completed to research the meaning of "unconscious bias" in the context of the subject of this assignment and how it relates to multi-generational team dynamics. If we take Senge's five disciplines of 1) Personal Mastery, 2) Mental Models, 3) Building shared vision, 4) Team Learning and 5) Systems Thinking, it would initially appear that there is fertile ground where bias might not permit effective team empowerment and we will go on to explore this further within this paper.

5.1.2 Ingrained systems of thinking - overview

As humans, we have been successful and have survived to date due to the way our minds and thought processes have evolved through natural selection over time. The ability to identify patterns, relationships between factors, quickly make decisions and judgment, assess and solve perceived problems and reach a conclusion quickly has served our species well through the millennia. With this human intuitive mind-set however comes with it some habitual tendencies and certain deeply engrained bias. We may therefore not fully understand the spectrum of activity that occurs below our level of awareness within our subconscious mind that impacts our decisions, actions and how we interact within our reality everyday life.

There is a lot of insightful and valuable information on this subject in the work "Thinking, Fast and Slow" (Kahneman, 2012). His work on behavioural science describing two modes of thought as: "System 1" is fast, instinctive and emotional; "System 2" is slower, more deliberative, and more logical". He also discusses the human tendency to take the path of least resistance where he describes "A general law of least effort, which applies to cognitive as well as physical exertion." The law asserts that if there are several ways of achieving the same goal, people will eventually gravitate to the least demanding course of action.

"In the economy of action, effort is a cost, and the acquisition of skill is driven by the balance of benefits and costs. Laziness is built deep into our nature." This tendency to seek "cognitive ease" is important in the context of how humans can be described as Kahneman puts it "a machine for jumping to conclusions" based on limited information. This tendency is also outlined in The Fifth Discipline by Senge where he describes that "leaps of abstraction occur when we move from direct observations (concrete "data") to generalization without testing".

Kahneman describes "Confirmation bias", which involves a deliberate search for data that is likely to be compatible with a person's beliefs, likes and dislikes (affect heuristics) and seeking patterns and conceptual relationships. Gaps in knowledge can be filled with by emotional responses. With this bias, once the decision has been processed and accepted due to overconfidence, this can cause the individual to actually ignore objective information that could refute it. The way the mind quickly assess information one can also overweigh the importance of recent of highly memorable events that can skew the opinion subjectively. When challenged with complexity to avoid cognitive strain the mind can lean towards answering a different simpler question by suppressing ambiguity and spontaneously creating a coherent story as quickly as possible.

5.1.3 Stereotypical perceptions

All of the above traits can lead to mental models of accepting simple generalisations as fact and stereotypes remaining untested or questioned. Each generation has a unique perspective of their perceived larger reality within the world. This may not be perhaps always acknowledged or appreciated by the different generations which can cause conflicts of interest and preventing the team from learning how to learn together. Untested generalisations can lead to affirmation based on limited information or interactions with small numbers of people from the generations which can lead to further firmer generalisations. For example, you notice young people from generation Z looking into their phones and it re-affirms your belief that they do less work because they are always on social media. You may "unconsciously" not register the fact that they are on their lunch break.

Millennials for example, have been deemed to be lacking motivation yet around the globe "seventy-three percent report working more than 40 hours a week," and the average work week for Millennials in the United States is 45 hours. They are in fact working "as hard, if not harder, than other generations," (Manpower Group, 2016).

The objective, critical, rational mind would not want to draw possible incorrect conclusions about a specific individual in the team based solely on the statistics or perceptions of their generational group. An ideal state could be that generations suspend their assumptions of the stereotypes, see each other as colleagues to engage in dialogue with a mutual shared vision to gain deeper insight and clarity "If I can "look out" through your view and you through mine, we each see something we might not have seen alone" (Senge, 2006).

A survey published by Harvard Business Review (Week Pledger, 2017) found that employees of all generations value meaningful work, yet other generations have a perception that their colleagues from other generations don't work as hard as they do and perhaps value money over the meaning of the work.

Upon review, this topic warrants additional exploration to determine if the mental model of “unconscious bias” is causing multi-generational prejudice which can impact how people interact within groups and therein if it impedes team learning and empowerment.

5.1.4 Background and motivation for the research

In the publication “Driven” by Lawrence & Nohria (2002), they present a useful analogy for the modern day organisation:

“As organisations become more diverse and team more autonomous, different personalities become evident and this can be a melting pot as different personalities clash”.

The book asks us to imagine our organisation like a giant petri dish, where human traits can play out freely. And this is the reality we face when working with teams and groups of people. Do we really understand what drives the individuals in our organisation and within our teams? When traits clash, this is where an opportunity for leadership occurs.

Workplaces are encouraged to embrace team collaboration all with a view to improve the decision-making process and achieve organisational goals. But how do we know if we have made the correct choice? We use data, forecasts and experience to make what we feel is the right decision. But what if the decision you have made was influenced by something else without you being aware of it. Bias, exists, and exists in many forms including race, gender, age, social class and more.

We process a huge amount of information on a daily basis, our brains are hard wired to make unconscious decisions. It would be completely overwhelming if our brains had to consciously evaluate each and every decision. Thus, there is a direct link between our unconscious thinking and our actions and behaviour. Then if bias exists how do we know that we are accurately making an unbiased decision? (Mind Tools 2018).

5.1.5 Research objective and research questions

The context for this paper is set within the overall research monologue captured as “Systems for Team Empowerment 2.0 - Generations X, Y & Z in the 4th Industrial Revolution”. The aim of this research project is therefore to consider the impacts that unconscious bias has on the dynamic of team empowerment within multigenerational teams. To achieve this aim, three inter-related research questions have been formulated:

RQ1 – Does unconscious bias exist within multigenerational teams?

RQ2 – If it exists, how does it manifest itself within team empowerment?

RQ3 – What should businesses do to combat unconscious and does such an approach have value?

We aim to research and acknowledge its existence and therein to understand its impact on team performance.

5.2 Literature Review

5.2.1 Background

Unconscious bias is universal (McCormick, 2015), we are unaware of it and it typically causes us to make decisions in favour of one group over another (Ross, 2008), even though we may believe that prejudice and discrimination are wrong. Bias is part of the normal operation of your brain (Henneman, 2014) in the same way that we deal with fear and threats and in essence is helping us deal with how to deal with the world presented to us on a day to day basis. Given that bias may in fact be part of the autonomic nervous system (De Neys, Moyens and Ansteenwegen, 2010), it is difficult for organisations to deal with behaviours that are essentially hard wired into our brains.

One might logically ask the question of why it is important to deal with bias in any overt way or why does dealing with it add any value for an organisation. Research has shown (Cusumano, Kahl and Suarez, 2008) that informational and societal benefits are found to improve in top management teams where there is female representation within those teams (Weiner, 2014). Diversity is good for the bottom line, whether this is gender, racial or ethnicity where companies can expect to have better bottom lines on their balance sheets where diversity becomes part of the core values of an organisation and therein, unconscious bias is managed in a systematic and planned way.

5.2.2 Types of unconscious bias

There are a series of unconscious biases that one can expect to find in the workplace that are aligned to the diversity issues raised herein and these include:

Confirmation bias: This is the tendency to search for confirmation of one's preconceptions when making decisions i.e. this person arrives early to each meeting, so they must be good at managing their time. Conversely, it could also be to consider that if a person is always late to a meeting, then they must be very bad at managing their time.

Perception bias: The tendency to form assumptions and stereotypes about certain groups i.e. "Generation Y are difficult to work with", "Baby boomers are technologically illiterate", "Generation X need too much time off". These are preconceptions that one group may have about the other and present as unconscious bias while working in multigenerational teams.

Affinity bias: These people are just like me, they must be great at things I'm great at, and they will fit in around here just fine.

Halo effect: Where we admire one particular trait about a person and allow it to influence our thinking about all other abilities that person might have.

Cloven hoof effect: We see one thing that we don't like about an individual and project that all of their characteristics must be similarly negative. E.g. "Those Generation Y people don't dress professionally, their work must be similarly unprofessionally undertaken and I cannot rely on it".

Group think: This can occur when an individual tries too hard to fit into a particular group and their individuality and creativity can suffer as a result to the detriment of overall organisational performance.

When applying the lens of unconscious bias to how multigenerational teams functions in the workplace, we consider that there are both differences and similarities in how each generation perceives and works with the other. In particular, life experience and social trends (Anantatmula and Shrivastav, 2012) will have an effect on behaviours, viewpoints and communication approaches within teams.

	Veterans	Baby Boomers	Generation X	Generation Y
Time period	1922-1945	1946-1964	1965-1979	1980-2001
Other tags	Traditionals Matures Silent Generation GI Generation	Boomers	Post Boomers Baby Busters	Millennials Nexters Me Generation
Major events	Great Depression, Second World War Free education from GI bill	Cold War and economic prosperity	Civil rights Vietnam War Women's rights divorce rates technology usage	Iraq and Gulf War Fall of communism High tech revolution Internet
Workplace traits	Strong work ethic, respect Authority	Team oriented Optimistic Relationships Sacrifice Loyal Hard work	Practical Pessimistic Work-life balance Technical Independent Adaptable	Ambitious Self-esteem Narcissism Technical Independent Multitasking
Leadership style	Military Chain of command	Influencing Having high expectations Mentoring	Practical Goal oriented	Flexible Adaptable Lack of social grace Ambitious
Motivation	Value of experience Value of loyalty Value of perseverance	Demonstration of their ability Bonus and other incentives Value of their contribution	Work-life balance non- hierarchical structure Time-off as incentive Loyalty	Higher position Monetary gains Lower need for social approval Innovation
Learning style	Classroom On-the-job training	Classroom instructor focused	Technology focus Mentors	Creative thinking Visual

Source: Deal (2007), Dobbs *et al.* (2007), Gale (2007), Glass (2007), Howe *et al.* (2000), Houlihan (2007), Kogan (2001), Lyon *et al.* (2005), McGuire *et al.* (2007), O'Bannon (2001), Pooley (2005), Sirias *et al.* (2007), Smola and Sutton (2002), Sullivan *et al.* (2009), Timmermann (2007), Wong *et al.* (2008), Zemke *et al.* (2000, 2001) and Yu and Miller (2003)

Table 1 – Multigenerational characteristics (Anantatmula and Shrivastav, 2012)

It is important to understand the differences in work values between multi-generational teams as it informs how best to leverage the strengths of each generation in endeavouring to foster an atmosphere of team empowerment. Research (Retzloff, 2010) indicates that when Managers understand both the strengths and weaknesses of each generation, it can help them to create diverse teams and that those teams will work more effectively together. It can also help to realise how work differences between the generations may have an effect on commitment to the team, how it communicates and general attitudes to working within teams.

We must also recognise that Managers very often are not the most senior people on teams anymore and very often, it is the Millennial that has to learn to adopt strategies (Holian, 2015) to get the most from team members from other generations.

5.2.3 Knowledge transfer and trust

When considering the abstract of the overall monologue, the premise aligns to having considered where value might be added for those working in teams through an awareness of the presence of unconscious bias. Specifically, is there value to be obtained in the transfer of knowledge between multigenerational teams, not only in the traditional sense where the older worker passes their knowledge and experience of a particular industry to a younger worker, but also, can a Millennial educate an older colleague on the benefits of certain communication styles and educational attainment of younger generations.

For knowledge transfer to take place, there is an implied degree of trust needed between the generations and one must consider if unconscious bias plays a part in this. Research undertaken on the perceived effect of trust (Lorenz, 2008) in the workplace indicates that knowledge transfer in both directions adds value for organisations and that it requires cooperation and collaboration. If however stereotypical behaviours or unconscious biases prevail, then the transfer is at risk and team empowerment suffers as a result.

Finding inter-generational common ground is necessary to ensure communication without fear or rancour can take place and the group dynamic is effective. Shared viewpoints will foster an atmosphere of communication and collaboration and thus trust is engendered.

5.2.4 Unconscious Bias and Team Empowerment

We next consider the dynamic associated with how traditional leadership responsibilities are transferred to individual team members and therein team empowerment becomes effective.

Traditional manager led team members see their own role within that team and (possibly) how their individual contributions are brought together to form the deliverables. Within empowered teams however, team members are cultivated to have a collective belief that they are responsible for how the team functions and that each member has the authority to control the proximate environment (Rapp et al., 2016).

The team, in becoming empowered, still relies on external leadership to “lead itself” and this is the point where unconscious bias has the potential to fail. Mid-level managers may perceive a threat to the status quo and may resist such initiatives if they make changes to their individual level of authority or role in the organisation. Holding teams back that are ready for empowerment is in fact another form of unconscious bias (Goldsmith, 2010) as these Managers are reluctant to hand over the reins to their teams.

5.2.5 Unconscious bias – the legal & regulatory framework

The effects of unconscious bias in an organisation, if not dealt with, can have a negative effect on an organisations ability to comply with legal / statutory requirements (Lieber, 2012) insofar as it relates

to diversity in the workplace and HR practices (Oireachtas, 1998). Implicit bias is often cited in court cases as a ground on which discrimination cases are built. It must be an organisational goal therefore to deal with such biases in a planned way so as to ensure business continuity.

5.2.6 Dealing with unconscious bias in the workplace

Dealing with unconscious bias in the workplace has become a recognised issue for US multinationals and it is now estimated that 20 per cent of large US companies (Lublin, 2014) are actively looking at how they will deal with this problem, putting training programs in place to help address it. These companies include BAE, Google, Microsoft and Roche Diagnostics. The training has its' origins within the Implied Association Test (Greenwald et al., 2009) which examines how hidden stereotypes influence organisational thinking.

We don't have to look at US multinationals only though when considering this issue. Take the example of how NUIG is dealing with perceptions of bias (O'Brien, 2017) in their own workplace where anonymous marking was only recently introduced (although not for all students) to combat the perception that candidates might be unfairly marked based upon their ethnicity, gender or religion. The marking scheme then becomes blind as to who the candidate might be, those marking papers simply see a number and not a person.

5.2.7 Leadership in context of Generation x,y,z

"The most valuable asset of a 21st-century institution, whether business or non-business, will be its knowledge workers and their productivity." (Drucker, 1955).

We are in a rapidly changing world, the way we lead, manage, follow has changed drastically over the last decade. But the constant that has remained is the value of the people – whether they are the leader or the follower – the person is the most valuable asset an organisation possesses but also provides managers and leaders with their biggest challenge.

5.3 Case Study Research Methodology

5.3.1 Introduction

We have noted above that the Implicit Association Test (IAT) is one of the most widely used tools for determining if bias exists within an organisation. Project Implicit is a website that has been established by the Harvard education group as a non-profit organisation of researchers (Greenwald, Banaji and Nosek, 2011) that are interested in exploring implicit social cognition. The website allows data to be collected to fulfil their goal of educating the public about hidden biases. In the case of our case study, we have utilised it to help understand if there is an implicit association between someone's age and how they perceive others of an older or a younger generation.

5.3.2 Methodology

A very limited sample size (seven) was used, which cannot be taken to be representative of any meaningful pattern, but serves to illustrate how such a test might be administered to consider the question of hidden bias. Each participant was initially verbally asked if they would be willing to give approximately 10 minutes of their time to undertake a test on the Harvard.Edu website. Once they agreed, a link was emailed directly to them. There was no lead into what the test was about, it was set up blindly, although each participant was aware of what the test entailed once they clicked through to the link (Harvard.Edu, 2011). The test served to demonstrate if there was an implied bias toward good and bad words, faces of young and old people and if there was a correlation between both depending of the age profile of the person taking the test.

5.3.3 Profile of Participants

Seven team members, spread out across an SME business were selected, primarily using their age as the selection criterion. Two of seven were female and five of seven were male per the profiles indicated below. Each of the seven have worked with the other members in various project groupings over the last twelve months. They do not work together with other all of the time, rather they are assembled into groups as project needs arise.

Respondent	Age	Gender
1	46	Male
2	32	Female
3	24	Female
4	31	Male
5	28	Male
6	62	Male
7	66	Male

Table 2 – IAT: age profile of test respondents

Upon completion of the test, each respondent was asked simply to share the results of their test back with the originator. As one of the respondents, my personal test result stated: -

Your data suggest no automatic preference between Old people and Young people.

The test could produce three primary results, namely:-

- 1 No automatic preference between old and young people,
- 2 An automatic preference for young people compared to old people
- 3 An automatic preference for old people compared to young people

Within the results, it is possible for slight, moderate and strong graded results, but for the purposes of this test, we have collated these into a single group i.e. we have not considered that a slight automatic response differs in any meaningful way from a strong automatic response.

5.4 Findings and Analysis

5.4.1 Findings of Implicit Association Test

Of the seven that took the test, all seven reported results back on the same day of issue of the email with the following results:-

Respondent	Age	Gender	No automatic preference	Automatic preference for young people	Automatic preference for older people
1	46	Male	Yes		
2	32	Female		Yes	
3	24	Female		Yes	
4	31	Male	Yes		
5	28	Male		Yes	
6	62	Male			Yes
7	66	Male			Yes
Totals			2 (29%)	3 (43%)	2 (29%)

Table 3 – IAT overall results

It is difficult to draw any meaningful analysis from the overall numbers other than to state that there is a roughly equal split between each of the three categories. It is more insightful though when one looks at the age profile of the responders where each group primarily had an automatic preference for their own age group.

While acknowledging the limitations of the sample size, we can draw a simple conclusion from this study that unconscious biases are evident within this multigenerational team.

5.4.2 RQ1 – Does unconscious bias exist within multigenerational teams?

Our findings indicate that unconscious bias exists in multigenerational teams and this is evident in both the literature review and within the limited case study that we undertook as part of this paper. The case study, while of a limited size, points towards a view where older generations are more likely to have unconscious bias than their younger counterparts.

5.4.3 RQ2 – If it exists, how does it manifest itself within the area of team empowerment?

Our literature review points towards a position whereby the lack of diversity in teams, be that gender, race or ethnicity is bad for the bottom line. That is to say that those companies who actively promote a diverse workplace are more successful and considered to be better places to work. Unconscious bias has the potential to cause teams not to seek out diversity and therein not to progress to self-leadership models.

5.4.4 RQ3 – What should businesses do to combat unconscious and does such an approach have value?

We have seen above that NUIG has adopted a particular course for dealing with perceptions of bias. There are proven strategies (Ross, 2008) for dealing with unconscious bias in the workplace. Research by Ross indicates that the Implicit Association Test (IAT) is the most effective tool for use where the seven steps to be followed in this process include:-

1) Recognize that you have biases. 2) Identify what those biases are. 3) Dissect your biases. 4) Decide which of your biases you will address first. 5) Look for common interest groups. 6) Get rid of your biases. 7) Be mindful of bias kick back.

This tool allows organisations to bring awareness of unconscious bias to the fore and once recognised, it can be more effectively managed. Perhaps a more difficult proposition to manage might be the organisational bias that it itself has in the culture of the business. This is the set of basic assumptions and ways of interpreting the world that endures through time. These behaviours exert significant influences on the decisions and choices that a business makes on a day to day basis and if not recognised, they will keep the old ways of behaving firmly rooted and difficult to change.

The ten tools identified by Ross for dealing with bias include:-

1. Recognise that all have biases and in doing so, it will help to mitigate these
2. Review all aspects on organisational behaviour, focusing on fair treatment and respect
3. Carry out anonymous surveys to uncover hidden issues
4. Conduct anonymous surveys with existing employees to determine any legacy issues
5. Conduct tailored training giving a forum to deal with issues in a positive way
6. Offer an anonymous third party complaint channel
7. Study resumes of your teams to see if equal weighting is being applied
8. Take corrective actions on foot of the resume study
9. Support projects that help address bias in the workplace
10. Identify pipeline projects that help deal with bias in the longer term

5.5 Discussion and Conclusion

5.5.1 Implications for practice

Moving from the theoretical to the actual practice in a workplace can be a challenge so the group looked outward into other industries and sectors to ascertain if an effective template exists in the Republic of Ireland. Irish Nurses education in Ireland changed dramatically in the mid-1990s when it moved from a traditional apprenticeship model where all skills were learned directly in the workplace to one of a third level academic university based degree system with an increased emphasis on theory-led rather than practice-led education.

This new process then led to a problematic “gap” between theoretical knowledge and actual practice. This is very interesting in the context of this groups review as it specifically related to Senge’s thesis relating to “The main flaw in these situations is the absence of effective infrastructures to help people integrate learning and working”.

The Nursing and Midwifery Board of Ireland (NMBI) had to develop a process to create and maintain a clinical learning environment which specifically and intentionally combines the more experienced generations (boomer / generation X) in a role called a “preceptor” with the new less experienced student (millennial / generation Y). The process was developed in partnership with university based academics with research in the process of learning theories, reflective learning, behaviourism, socialisation and integration of new knowledge with past-experience.

There are some very interesting concepts and theories with the NMBI body of work that although using different terminology very much resembles what Senge describes as systems thinking. The NMBI is very much problem-based learning and they refer to a “cognitive apprenticeship” with the more experienced “preceptor” acting as a mentor and learning facilitator.

It was also noted very positively that the ongoing learning was two-way as the new student could also explain the theories behind the practices of the preceptor and also with new Information Technologies systems that were continuously updating within the clinical environments in the hospitals. It would be worthwhile to examine if this successful process and learnings could be transferred into another sector within industry.

5.5.2 Limitations of the study

We have noted above that the case study was conducted within a very small group. Any conclusions drawn from the study must therefore be considered against this position.

5.5.3 Parallels with Lean / Six Sigma

Lean and Six Sigma are business process management strategies which are commonly used in manufacturing industries to improve process efficiency and quality. Lean Philosophy was developed from the Toyota Production System (TPS) and is often combined with Six Sigma which was originally developed by Bill Smith of Motorola in 1986 using a statistical approach to reduce variation and eliminating defects in a process.

In Lean Six Sigma when tackling any issue the main approach is the Define, Measure, Analyse, Improve, and Control (DMAIC) model which is a systematic sequence of steps that must be followed for problem solving and root cause analysis to be effective. It is interesting to use this analogy because DMAIC is a formal structured approach designed to prevent the human tendency of jumping to solutions without fully understanding the actual problem, which was a common theme discussed throughout the assignment.

If you don’t fully understand the problem and clearly define what it is then it is difficult to expect to find a definitive root cause and subsequent effective solution. This assignment has Defined, Measured and analysed a problem and determined that:

- Unconscious bias exists between the generations in the teams interviewed.

- The interviewees were not fully aware of its presence and how it impacted how they interact with colleagues and their decision-making process.

The mental model of generational “unconscious bias” can impact team empowerment and team learning. The next logical steps in this process would be continue to Improve and Control. This final section is based on additional preliminary literatures reviews and group brainstorming to outline some areas that could contain potential solutions, corrective and preventative actions and opportunities for improvement to address the issue of unconscious bias in multi-generational teams.

5.5.4 Recommended Further Research

The employer/employee relationship and team generational ratios are changing and leaders need to take note of this. Generation Z is the youngest generation and is starting to enter the workforce rapidly and by 2019 it is estimated that they will account for approximately 20% of the workforce. This changing generational dynamic within teams presents an assortment of opportunities and challenges where forward thinking leaders can seek out strategies that leverage the strengths and unique characteristics of each the generations and also aim to reduce negative stereotyping that can inadvertently impede team learning and empowerment.

Essentially people are individuals and the generations are actually a lot more similar in terms of human characteristics, values, and desires than different. Concentrating on embracing the strengths, common beliefs and attitudes will help to facilitate and encourage understanding, creation of a shared vision and so add value to the organisation. The generational differences can actually present a definite positive opportunity for development at both ends of the age spectrum.

The group determined that the primary learning disability to “move beyond the labels” within the multigenerational team that exists is the absence of effective infrastructures to help people from each generation to integrate learning from each other while working. The group has identified three further areas of interest that would warrant additional research on this subject.

- Unconscious bias awareness training.
- Structured dialogue sessions within the workplace.
- Benchmarking across industry to review are there systems of “Reverse or reciprocal mentoring programs” that have been proven to be effective that could be applied to other sectors.

As discussed, humans and organisations will look for a quick fix, a fast-easy solution to this issue to promote more inclusiveness and leveraging the diversity of all the talents across the generations. Therefore, simple awareness training alone might not highlight the presence of bias and cause of a shift of mind “metanoia” to assure sufficient for consistent, meaningful, behavioural and organisational change.

“We can't solve problems by using the same kind of thinking we used when we created them”- Albert Einstein.

A topic for discussion would be an assessment of the effectiveness of such a training modules that are currently in use. Training versus learning, dialogue versus discussion and using inquiry and reflection are powerful concepts described in detail in The Fifth Discipline by Peter M Senge with regards to gaining alignment, shared vision and ultimately the goal of team empowerment. Using a Facilitator

who “Holds the Context” of Dialogue is described as one way to structure such a process. It would be interesting to bring forward a trial on this process and review the feedback from the participants to assess the effectiveness in workplace.

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Chapter 6 Dialogue Preferences

Investigate the effects of dialogue preferences within multi-generational virtual teams

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6.1 Overview

6.1.1 Introduction

The aim of this research is to examine and understand the effects of dialogue preferences on communication within multi-generational virtual teams. What is key to establish is whether there are barriers to effective communication due to generational preferences for different tools and approaches to communication in a virtual team setting.

To measure this in a real-world environment a medical technology company based in Galway was used to understand how their multi locational teams work on projects and how multi-generational team members and communication techniques are affecting knowledge sharing. One of the Company's key missions is to transform the lives of millions of people each year. The company currently has more than 84,000 employees and has a presence in more than 370 locations spread out across 160 countries.

6.1.2 Background and motivation for the research

As the world moves into the 4th Industrial revolution, the advances in technology have dramatically improved the methods of communication. Due to this many companies are now creating and operating virtual teams with people in different geographical locations and comprising of different cultures and generations. The traditionalists grew up with letters and phone calls in contrast to now in the mist of the 4th Industrial revolution newer generations are working with video conferencing, instant messages and email. These different generations are now working together on multi-functional, virtual teams.

This research is designed to investigate and understand if the current forms of communication are enabling or inhibiting team performance. Furthermore, it is to question is there a relationship between different generations and their preferred use of technology to communicate? And have certain generations adopted better to the use of technology to communicate in virtual teams?

6.1.3 Research objective and research questions

The aim of this study is to understand current practice with the theory of best practice of a learning organisation specifically in terms of knowledge sharing and dialogue in a virtual team setting. To

achieve this two multigenerational, cross functional, virtual teams, in the test company in Galway where analysed.

The research objectives are:

1. Determine the current tools of communication used
2. Obtain team members opinions on the effectiveness of these tools
3. Establish team members preferred tools for delivering and receiving communication to determine if there is a trend between the different generations.
4. Investigate if the teams are using the best practice dialogue skills as defined by Peter Senge author of the Fifth Discipline.
5. Test the theory that the younger generation have a different attitude to sharing information than the older generation.

6.1.4 Structure of Paper

A literature review was completed to define best practice for dialogue and discussion within teams and communication in virtual teams. Sample teams were identified and surveyed to establish the current practice, the "As Is" situation. Individual interviews were conducted to gain a deeper understanding across generations. The results were reviewed, and conclusions drawn. Recommendations were provided to improve team performance through more effective communication. Further research opportunities have also been identified.

6.1.5 Summary

The effects of dialogue preferences on communication within multi-generational virtual teams in a company in Galway were established. It was established that there were not barriers to effective communication due to generational preferences for different tools of communication.

Having compared defined theoretical 'best practice' of communication and an analysis of the 'current practice' recommendations to improve the team's performance were made.

6.2 Literature Review

6.2.1 Introduction

Dialogue and communication within teams may seem like a simple concept but it is one of the keys reasons why teams underperform or fail within an organisation (Brenner, 2017; Terry, 2018).

Peter Senge in the fifth discipline highlights team learning as a key building block to enabling an organisation to become a learning organisation. Senge gives huge weight to open dialogue and discussion within a team to foster team learning.

6.2.2 Virtual Teams

A virtual team can be defined as “groups of geographically, organizationally and/or time dispersed workers brought together by information technologies to accomplish one or more organization tasks”

(Powell, Piccoli and Ives, 2004). As more and more organisations begin to create virtual cross functional teams within their organisations, research has been undertaken to understand the effects on virtual teams from numerous perspectives, outlined below.

6.2.2.1 Culture

As virtual teams can cross borders and be comprised of many nationalities cultural differences play a big part in these teams and how they communicate and operate. The effect of difference cultures was investigated by (Shachaf, 2008) which showed that it improved decision making within virtual teams but culture had a negative effect on communication. The work of (Staples and Zhao, 2006) also looked at culture within virtual teams and compared them with face to face cultural teams and non-diverse teams. It was found that there was more conflict and poor cohesion within the cultural virtual team however their performance was better than a face to face cultural team. Conflict and stereotyping of groups within cultural virtual teams was also a finding from the work of (Au and Marks, 2012).

6.2.2.2 Time zone

As with culture, a virtual team can comprise of members from numerous time zones. This can have both positive and negative consequences. On the positive side teams can react to global situations quicker (Bergiel, Bergiel and Balsmeier, 2008) and in some situations progress work quicker and in a continuous manner such as a in a global software security company reacting to live hacking events across the globe. However, time zones can have a negative impact on virtual teams. There can be a limited window of when real time communication can occur and this can lead to poor virtual team management, planning and coordinating of activities (Kayworth and Leidner, 2000)(Martins, Gilson and Maynard, 2004). It has also been shown that time zones can affect the progress of a project team (Cummings, Espinosa and Pickering, 2009) and the greater the time difference the greater this effect is observed (Espinosa, Cummings and Pickering, 2012).

6.2.2.3 Technology

The technology at the disposal of and employed by virtual teams to communicate and share continues to grow year over year. Technology is used as a medium to allow knowledge sharing and communicating within the group and to overcome the challenges above posed by time and culture (Shachaf, 2008) (Gilson et al., 2015). Technology effect in virtual team has been researched in great detail over the last decade. The main methods of communication generally used are e-mail, virtual team rooms, discussion boards, social media and teleconferencing e-Meetings (Shachaf, 2008). Below are some of the key findings from previous work.

Where there are vast cultural differences and verbal and language barriers email has been found to be the best medium to communicate (Shachaf, 2008)(Hambley, O'Neill and Kline, 2007). Another aspect is media richness theory. This is used to rank how the different methods used in communication effects task performance (Hambley, O'Neill and Kline, 2007). These are well accepted in order of effectiveness as; face to face, videoconference, telephone, chat, e-mail, and print communications (Hambley, O'Neill and Kline, 2007). Instant chats have been shown to be more efficient for brainstorming ideas versus Face to Face or telephone as one usually chooses their words more carefully

and everyone can communicate at once therefore ensuring no lost ideas and can also these is reduce instances of conflict occurring (Griffith and Neale, 2001).

6.2.2.4 Team size

The number of members on virtual teams in comparison to face to face teams has also been researched. It has been shown that large virtual teams generate more ideas than teams of a similar size face to face. However, this can be influenced by the task given to the team and technology. For example, it has been found that large virtual teams communication is affected and poor when using a conference call communication method (Martins, Gilson and Maynard, 2004). Furthermore research has shown that there is an increase in Social loafing (the tendency of a team member to contribute less and provide less effort to a task versus if they were working alone) is higher in large virtual teams in comparison to similar sized face to face teams (Alnuaimi, Robert and Maruping, 2010).

6.2.2.5 Leadership

Studies have been conducted which point to leaders requiring greater communication skills than leadership skills in order to effectively manage a virtual team (Zhang and Fjermestad, 2006). As Face to Face time is limited it is important for the leader to be able to influence and motivate the team over different forms of communication and these are predominantly verbal and text based (Yoo and Alavi, 2004). It has also been found that leaders who focus on relationships and trust within a team create higher output than a task focused approach (Gilson et al., 2015).

It has also been shown that leaders cannot force team member to obey and it is important to have strong relationship and trust of the team members by the leader or manager (Connaughton and Daly, 2004). There are two types of power a leader has at their disposal. Positional power and personal power. As time and distance grows larger and especially in global virtual teams the positional power of the leader diminishes and therefore personal power and relationships become more important in order to lead effectively(Zhang and Fjermestad, 2006). It has been studied that highly empowered virtual teams provide greater levels of process improvement and customer satisfaction than non-empowered virtual teams and that where possible face to face meetings of the team should happen on occasion to promote this (Kirkman et al., 2004).

From a leadership perspective there is little research of how generation X leaders and managers are affecting the generations Y and Z in a virtual team environment. One recent study has touched on this in a study of generations across a virtual team in a construction team setting but only looking at individuals in the US which neglected cultural, language and large time differences and also ignored technology employed by the leaders and team members (Ferrara et al., 2017).

6.2.2.6 Dialogue and Discussion

An effective team needs to master strong communication skills. Peter Senge offers a theory of best practise for group communication in his book *The Fifth Discipline* (Senge, 2006). He separates group communication into two parts; dialogue and discussion. Effective dialogue is where issues are explored, each member of the team gets the opportunity to 'suspend' their thoughts on a topic within

the group, be heard and understood. The discussion does not begin until each member's thoughts have been 'suspended'. The objective of dialogue is to present each person's view from their personal perspective based on their experiences to date and for the others member to engage in deep listening. Discussion begins when these views, are considered, debated, built upon to create the best solution using individual thoughts and the team synergy. The objective of discussion is to reach an agreement and a decision.

David Bohm describes three basic elements for dialogue; thoughts are 'suspended', a facilitator is employed and a need from each team member to view other team members as colleagues (Senge, 2006). Based on these theories we questioned if the teams employed by the Galway medical device company practiced this form of communication within their virtual teams. This baseline of best practice seemed critical to consider along with the tools of communication employed and generational preferences.

6.2.3 Summary

From the current published information regarding virtual teams there appears to be a lack of understanding on the effect of team communication within multi-generational virtual teams in an R&D environment where dialogue, knowledge sharing, and team learning is key to an organisation success. This may be due to virtual teams only becoming the norm within companies over the last 15 to 20 years and only now is there beginning to be at least 3 generation's working in these teams, generations X, Y and Z.

6.3 Research Methodology

6.3.1 Introduction

The aim of this research is to examine the effects of dialogue preferences on communication within multi-generational virtual team and to establish if there are barriers to effective communication due to generational preferences for different tools of communication.

6.3.2 Research paradigms

The research paradigm that was been attempted to proven was that the most influential factor that affected people approach to communication was based on the age of the person rather than the location of the person relative to the rest of the team or any cultural preferences based on geographic location. Also, what effect technology has on knowledge sharing, and team learning which is key to an organisation success.

6.3.3 Qualitative and quantitative research

The approach employed to generate the data was in the form of an online survey that would be emailed to the various team members where they could fill in their responses anonymously. The data from the survey contained both qualitative and quantitative data which once was collated and

reviewed could then follow up with additional interviews to either clarify response or understand the reason or motivation for the persons choices.

6.3.4 Reliability, validity and triangulation

As a result of the survey being administered to a number of participant across various different demographics and the subsequent pooling of these responses individual biases were removed, assuming there was more than one respondent in each of the demographics. As the survey was also administered across various functions and locations data could also be used to investigate if there were any cultural or geographic effects thereby proving or disproving that the major contributor was age. Through the follow-on interview process this can be used to further verify and validate the responses. Originally, it was an aim to test the theory that the younger generation have a different attitude to sharing information than the older generation. However, since this information may be sensitive and sharing it would be a breach in contract it was concluded that the data would be unreliable and therefore chose to omit it.

6.3.5 Case study research

6.3.5.1 Background to the case(s) studied

66 people from two product development teams were surveyed that have a mix of age, sex and location and the results compiled to identify any key trends in the data. 30 responses were received to the survey.

6.3.6 Conducting interviews/focus groups

6.3.6.1 Profile of interviewees

A random sample of people were selected for additional interview in which 3 interviewees were selected, one from the 20-25 group one from the 30-35 and one from the 40-45.

6.3.7 Data collection and analysis

Data was collected using an online survey administered using Qualtrics software as this is the only software approved for internal use within the company.

6.3.8 Summary

The main source of the data was an online survey that was administered to 66 subjects with 30 people responding. Additional interviews are also completed to provide additional context to the answers. The survey questions and results are detailed in the Appendix.

6.4 Findings and Analysis

6.4.1 Introduction

This research is designed to investigate what are the current forms of communication enabling or inhibiting team performance. To question is there a relationship between different generations and their preferred use of technology to communicate and have certain generations adopted better to the use of technology to communicate in virtual teams. In order to answer these questions, an online survey using Qualtrics software was sent to 66 participants. These teams had a mix of age, experience, geographic location and functions.

6.4.2 RQ 1: Determine the current tools of communication used?

In the survey it was asked of the participants: What channels of communication do you use? and provided them with a list of options, and also left in another category and asked them if there were channels of communication that they utilized that were not listed.

The data below is a breakdown across all age ranges of the type and popularity of communication techniques utilized with the virtual team.

Communication Channel	% responded who utilise
Email	23
Jabber /Instant Messaging	14
Small Group Meetings	11
WebEx	10
1:1 Meetings	10
Large Group Meetings	9
Mobile Phone	8
Landline Phone	6
Video Conferencing	4
VOIP (phone)	4
1:1 Video Chat	2

6.4.3 RQ 2: Obtain their opinions on the effectiveness of these tools

Nobody felt the current communication practices inhibited communion within the team and when asked if there were other channels that they would like to utilize that are currently unavailable to them nobody identified any additional channels. Also questioned was if advances in communication technology had changed how they worked and 85% stated that it had changed the way they work, with only 15% said it hadn't. When asked if they felt they were leveraging communication technology effectively 89% of the respondents did, with only one comment who felt they were not leveraging it as effectively as they could and commented "Could probably use conference facilities more often and more effectively to break down cross-site borders".

6.4.4 RQ3: Establish their preferred tools for delivering and receiving communication to determine if there is a trend between the different generations?

The participants of the survey were also asked to rank their preferred method of communication when they are on the receiving end of the communication. The most preferred method identified was email at 52% email. This was by far the highest, with the next being WebEx at 11%. Phone landline, Jabber and small group meetings all were preferred by 7% of the subjects with Video Conferencing, Mobile phone and Larger group meeting all at 4%, nobody preferred, VOIP, 1:1 Video Chat, WhatsApp, Viber or Other the category.

The preference for communicating outwards or sending information, followed a similar trend with email again the most preferred method at a slightly higher percentage at 58%. WebEx was the second most preferred method at 15%; landline phones were 8%; video, mobile, 1:1 meetings, small group meetings and larger group meeting all came in at 4% and nobody preferred Jabber, VOIP, 1:1 video chat or the Other category

In order to get additional details to confirm if the situation changed the participants behaviour with respect to communication preferences a number of follow on interviews with a random selection from 3 of the age brackets was conducted. One from the 20-25 one from the 30-35 and one from the 40-45 age groups. These individuals were asked what their preferred method of communication was when it related to, Progress reports, resolving issues or Looking for New Ideas on a team project. Also specified was that for each of these three situations was there a different method used if they were communicating outwards, receiving inwards, or where discussion was needed. Below is a summary of these interviews based on the respondent's answers.

6.4.4.1 Progress Reports

20-25-year-old with No Direct Reports; preference for emails to communicate progress outwards as not all based on same site or same time zones and can compile at the end of the day and send out. Like to get progress reports via email also so can read and digest information. If discussion is needed it depends on how many people and where they are based. IM for 1:1 or in person if collocated.

30-35-year-old and has direct reports; Face to face as much as possible but email if not able to be face to face for outward progress reports. Likes to have face to face interactions when receiving information but is ok with email as realises especially with geographic dispersion face to face not possible.

40-45-year-old and has no direct reports; Email outwards for communication up the chain. Team meeting for communication to team. Likes to receive updates through email but if has questions may reach out via IM or phone. Depends on how many people need to be involved in discussion if only 1 person use phone or IM if more than one WebEx meeting if not all in one location or physical meeting if all in on location.

6.4.4.2 Resolving Issues

20-25-year-old with no direct reports; face to face if on site together or collocated. IM if remote or email for reaching out. Either email or in person for inwards communication. And IM or meeting or WebEx for discussion.

30-35-year-old with direct reports; Face to face if dealing with individuals. If more than one person involved hold a physical meeting if all in one location if not in one location have a meeting using WebEx.

40-45-year-old with no direct reports; Depends on issue. Email for upwards. If a small number of people involved email or phone if more hold a meeting for outward. Inward email usually as may be remote or a meeting depending on scale of issue and number of people involved.

6.4.4.3 Looking for New Ideas

Consensus around informal meetings or brainstorm for new ideas although may be prefaced by email to get initial thought (40-45).

6.4.4.4 Investigate if the teams are using the best practice dialogue skills as defined by Peter Senge author of the Fifth Discipline.

Specific survey questions were designed to determine if the team were employing best practise as defined by Peter Senge. These included asking respondents if they felt that each member of the team was viewed as a colleague, if hierarchy affected team decision, if decisions were made based on reaching a consensus, what role hierarchy played in team decisions, if team members felt their views were understood. Over one third of the team do not feel that members are viewed equally as colleagues. Nearly 60% feel hierarchy affects decision making. 11% of team members do not feel they understand other team member's point of view. Only 59% of team decisions come from discussions while 37% come from consensus. 44% of the respondents felt that only 50%-70% of their group discussions were effective. Only 15% felt they were 15% effective.

6.4.5 Summary

Of the 66 people who were surveyed we got a response from 30 people. These people were spread geographically with 85% on site in Galway and 15% off site primarily in the US. While it was a multifunction group the majority of 60% were from the R&D department. While this figure is high it is representative to the number of people per function across the team with R&D being the most represented function. The subjects were grouped in 5-year sections from 20 years to 55+ and we received responses in 7 out of 8 age group categories. 26% of the respondents had direct reports. Full details of the additional survey questions and the results can be found in the Appendix.

6.5 Discussion and Conclusion

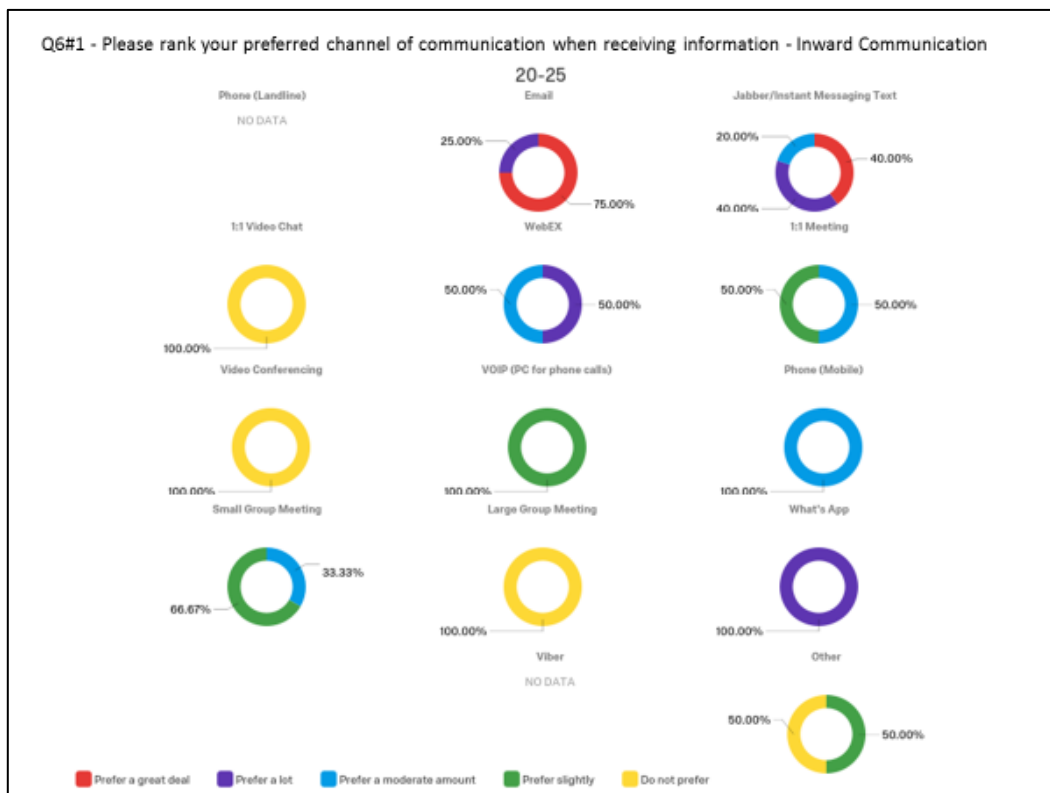
6.5.1 Introduction

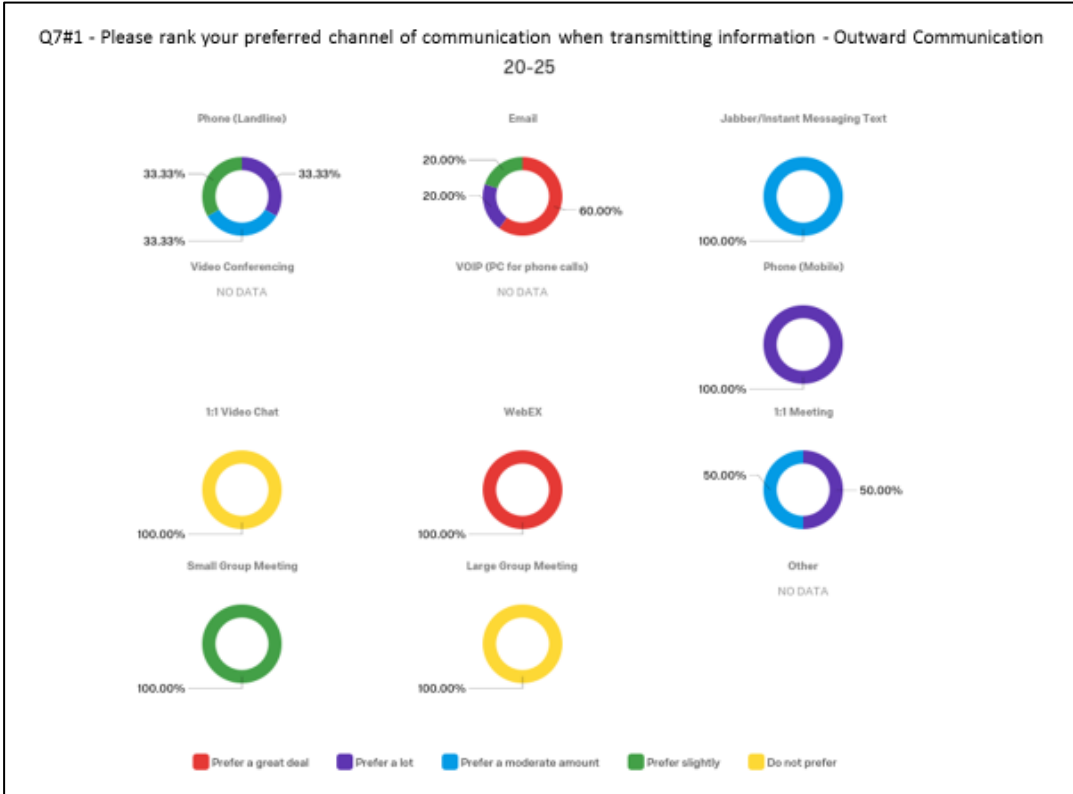
The participants surveyed were a multi-location, multifunctional, multigenerational team. There were a mix of managers and non-managers, approximately a 1:3 ratio. The results did not confirm initial expectations. By comparing the actual practice to best practise, it has highlighted some areas for development and recommendations for the teams.

6.5.2 Summary of findings

The most commonly used and the most preferred channel of communication for both inward and outward communication was email. While Jabber was the second most commonly used method of communication at 14% use, only 7% of participants preferred Jabber for inward communication and nobody had it as a preference for outward communication. The team perceived that the current forms of communication used seem to be effective with everyone responding that the current communication practices enabled communion within the team.

From the data captured from the questionnaire there was a slight preference across generations of how they wanted to receive and send information. Generation Z preferred text-based communication either by email, instant message or WhatsApp to receive information. In sending information text based again was a preference with some preferring WebEx and mobile phones. (see figures below).





Generation X still had preference for text-based communication but also preferred voice communication and small meetings. Sending information Generation X preferred to use voice over a landline also email and instant chat were also preferred to communicate (see Q6 and Q7 data in appendix).

Generation Y preferred small group meetings and 1:1 meetings (WebEx or face to face), video conferencing, mobile phone and email were preferred communication methods for receiving information. When sending information this Generation like to use voice via landline, email and 1.1 and small meeting groups (either via WebEx or face to face) (see Q6 and Q7 data in appendix).

An overall observation across generations was that none preferred to provide or receive information through large group meetings. Furthermore, Generation X don't like to use instant messaging to send or receive information.

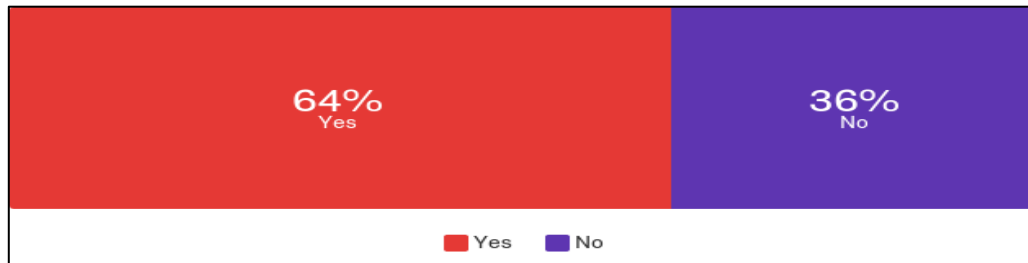
Another finding was that 29% of people (see figure below) who have direct reports don't have a facilitator for group meetings. This is a concern as according to Bohm this is one of the three basic elements for successful dialogue.

Q22 - Do you have a facilitator in your team for group meetings?



Furthermore 36 of respondents don't feel each member of the team views colleagues equally. This goes against the second basic element for effective dialogue in that it is necessary to view other team members as colleagues and less of a hierarchy approach to communication.

Q24 - Do you feel each member of the team views colleagues equally?



Further observations from the results was that 28% of people who have direct reports feel that they are not leveraging communication technology effectively within their team to promote communication and dialogue. This is linked to the data that shows there is a lack of training received in terms of communication. The above findings also goes against best practices from previous research of having strong relationships and trust and promoting highly empowered virtual teams (Connaughton and Daly, 2004)(Kirkman et al., 2004).

6.5.3 Implications for practice

While nobody felt the current communication practices inhibited communication within the team, the results identified clear opportunities to improve the effectiveness of communication. Barriers exist within the team resulting in one third of team feeling that members were not viewed equally as colleagues. The majority of the team felt that hierarchy affected decision making. Over 10% of the team felt they did not clearly understand other team members point of view. 37% of decisions were made based on consensus. "Power lies in the synergy of dialogue and discussion" (Senge,2006) the team is not harnessing this power with their current form of communication. There is an opportunity for the team to develop the skills to foster a team IQ which exceeds an individual's IQ.

The team need to be trained to understand the difference between dialogue and discussion and use the tools best suited to these forms of communication.

In dialogue each member communicates their view and the group accesses a larger pool of ideas and develops of common meaning of their purpose. Effective dialogue should result in 100% of the team feeling understood and that they clearly understand other team member's perspectives. (Senge, 2006) Through dialogue the group can explore issues from many points of view. Individuals present their assumptions freely regardless of place in the hierarchy. "The result is a free exploration that brings to the surface the full depth of people's experience and thought, and yet can move beyond their individual views."(Senge, 2006)

Through the survey results the team have acknowledged they are lacking two of the 3 basic conditions for effective dialogue as defined by David Bohm; all team members are not viewed as colleagues and there is only a facilitator 71% of the time. Through training and the practicing of new skills acquired, the team could work more effectively together to ensure each member communicates their views and understands each other's view. A review of each person's role and their purpose on the team could assist resolve the current issue where not all team members are viewed as colleagues. A facilitator

could be utilised for all group discussions initially while the team develop and practice their newly trained skills.

After effect dialogue, discussion leads the way to making decisions and determining actions. The benefit of the team dynamic is lost if hierarchy plays a significant role in decision making. The most effective decisions do not come from a group consensus decision. The survey revealed that 37% of decisions come from consensus. "Rather than representing everyone's view and making a whole, the parts build on each other to create something to make the whole." (Senge, 2006)

This team could benefit from training to reduce the role played by hierarchy in decision making and consensus led decision-making. With better dialogue and discussion skills, the team should aim for all participants feeling their views are represented, other's views are understood and discussion-based decision making dominates the decision-making process.

6.5.4 Limitations of the study

The limitations to this investigation was that the cross functional virtual team sample size was small n= 30 people. Furthermore, this team was mainly based in Galway and the US and therefore the full variability of time difference across the globe was not present.

Another limitation to this work is that it was difficult to investigate the theory that younger generations share more information readily than older generations. The reason is this virtual team is working in a commercial R&D setting where IP and knowledge is sensitive in nature and the company has policies and procedures regarding this. Therefore, this would influence and effect any results. This type of study would be ideally conducted in a university or more social setting or open industries where there are virtual teams operating where information may be less commercially sensitive.

6.5.5 Recommendations for future research

It would be interesting to repeat the survey after the team were trained on improving their team learning through effective dialogue and discussion. A positive change in the responses could justify the investment in team training and the potential to roll this training out among other teams in the company. Addition questions could be included to determine if team members felt team decisions were more effective, if the team synergy was being optimised, if the team members understood the value of each team member more and if hierarchy was removed from the decision-making process.

While the results in this report did not indicate a significant difference in preference for communication across the generations a further investigation could be undertaken on a single location site which did not involve virtual teams would the difference be greater? A single location site team could show a stronger preference for communication across the generations as they would not be dependent on technology to communicate as more personal meetings would be possible. Our hypothesis that the older generation prefer more personal communication while the younger generation prefer to use technology may be clearer if the virtual team dimension was removed from the research criteria. Further research could involve repeating the survey and interviews on a single location, multigenerational, multifunctional team.

6.5.6 Summary and conclusion

While there were slight differences in communication preferences across Generation X, Y and Z the results were not compelling in highlighting an effect of age on a team's ability to communicate effectively. However, some of the insights that have emerged is that some small changes could have a large impact on how teams communicate more effectively by providing training on how to generate better dialogue and assigning a facilitator for meetings. Another observation was that the natural default for most people when they have something important to share is to call a large townhall type meeting to get everyone together in the one place, this is not how most people would like to receive information, so the company may need to re think this for the future.

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