A Wisdom Management Tool for future management

Wisdom and Wisdom Management on the Move

Master Thesis submitted in fulfillment of the Degree

Master of Business Administration

In Information Systems Management

Submitted to Dr. Marta Sabou

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Thurnharting, 25. February 2016

AFFIDAVIT

I hereby affirm that this Master's Thesis represents my own written work and that I have used no sources and aids other than those indicated. All passages quoted from publications or paraphrased from these sources are properly cited and attributed.

The thesis was not submitted in the same or in a substantially similar version, not even partially, to another examination board and was not published elsewhere.

26th February 2016

Date	Signature

ABSTRACT

In the context of Information Systems Management this thesis is built on the general knowledge that information management in general, and knowledge management in particular can supply managers with sets of interrelated components and summarized information, visualize this information through graphs, as well as archive and distribute information in order to support managers in their decision making (Sabou, 2015, p.13). In fact, today's world strives not only for knowledge but also for wisdom, and research needs to be at the cutting edge to meet the demands for solid definitions and adequate tools (Zeleny, 2006, pp.1). It can be determined that a clear shift from knowledge to wisdom is starting to happen in the ISM realm. "T*he discovered knowledge cannot sufficiently support meaningful decision-making actions, and there is a significant gap between mining results and real-world application requirements"* (Shen, 2014, p.3). The thesis at hand determines how managers define wisdom and what makes managers using or not using a WMT. It shows what the certain features required by managers for a WMT are.

The main research question is: "What are the characteristics of a Wisdom management tool that supports managers (profit and nonprofit)?" The objective of this thesis is to obtain a high level model for a WMT. Additionally the thesis reaches the following objectives: It proposes a definition of wisdom and wisdom management. It raises the understanding for managerial needs of the new millennium that could be met by a WMT. From a managerial perspective, it obtains a high-level understanding of Crowd sourcing systems as the innovative technologies for a possible WMT. It gives a list of managers' requirements for a WMT. The thesis introduces ideas for a future vision pilot of a WMT.

The methodology was designed for the research area 'management' and 'organization as a system' and was conducted in order to gain an external and internal view on the topic at hand. A three-step design of the research approach was taken, meaning an enquiry period (literature research and semi-structured qualitative interviews), an analysis and interpretation phase and a conclusion phase. Following this research approach, the research instruments being literature research and semi-structured qualitative interviews were conducted.

Outcomes of the thesis: A definition for wisdom and wisdom management was found. The importance of crowd sourcing systems could be determined. Managers' needs were investigated and managers' expectations towards a tool suitable for the demands of the new millennium, were researched. Out of these results, a future vision pilot for a WMT was developed. Some major contribution of the thesis are: The Wisdom Definition; The Wisdom Management Definition; Crowd Sourcing Systems being shown as highly beneficial for a WMT; A WMT that fits all major conclusions of the thesis is introduced in this thesis.

"Wisdom comes on silent toes" (Hammerschmid, 2015).

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LIST OF ABBREVIATIONS

Crowd Intelligence	CI
Crowd Sourcing	CS
For example	e.g.
In example	i.e.
Information Systems	IS
Information Systems Management	ISM
Information Technology	IT
Interview	I
Knowledge Management	KM
Knowledge Management Tools	KMTs
Manager	MGR
Not determined	Not det.
Planning, Organizing, Staffing, Directing, Controlling (*instead of Coordinating), Reporting, Budgeting;	POSTDCORB
Research Question	RQ
Wisdom Management	WM
Wisdom Management Tool	WMT
Wisdom Management Tools	WMTs

1 INTRODUCTION

In the following chapter, the context of the thesis is introduced and a brief overview on previous research is given. Furthermore, the research aims and objectives are presented, and the methodology suitable to obtain the research goals is briefly shown. The chapter ends with a short section showing the structure of the thesis.

1.1 Context and previous research

The field of Information Systems (IS) in organizations shows many examples of how technology can provide benefits for organizations and employees (Dwivedi et al., 2014). Technology can supply solutions to managerial problems through innovation and change in the technology developed and provided (Kobe, 2010, p.27). In the context of Information Systems Management (ISM) this thesis is built on the general knowledge that IS and Knowledge Management (KM) in particular can supply managers with sets of interrelated components and summarized information, visualize this information through graphs, and archive and distribute information in order to support managers in their decision making (Sabou, 2015, Introducing Information Systems, p.13). In fact today's world strives not only for knowledge but for wisdom, and research needs to be at the cutting edge where the worldwide move demands solid definitions and adequate tools (Zeleny, 2006, pp.1). It can be determined that a clear shift from knowledge to wisdom is starting to happen in the ISM realm. "*The discovered knowledge cannot sufficiently support meaningful decision-making actions, and there is a significant gap between mining results and real-world application requirements"* (Shen, 2014, p.3). We also miss views from managers to know exactly what they would potentially require from such a WMT. What is the Vision pilot of a WMT? What functions and features should it provide? What emerging/existing technologies could be considered to be implemented into a WMT?

Can IS generate wisdom for managers, that can be trusted by managers? The fear of losing control, transparency and change is causing managers to hesitate to adopt new management tools easily (Borchert & Stirzel,2010, p.502). Certain tools named "Wisdom Management Tools"(WMTs) are already available and supporting managers in certain areas (Gausemeier et al, 2010, p.485). But do these tools really meet the requirements for a WMT? The context of this thesis is ISM, wisdom, managers and current new technologies that have a high potential to become part of a new WMT. The thesis on hand determines how managers define wisdom and what makes managers using, or not using a WMT. It shows what the certain features required by managers for a WMT are, and how these features can influence the future working place of managers. The following investigation on the already available literature can be categorized in three areas and helps to understand where the research questions discussed in the upcoming chapter are rooted.

1.1.1 The Wisdom definition in previous research

Investigating wisdom definitions one can determine that in several disciplines of science, wisdom is somehow, however not precisely defined. There are vast amounts of definitions around that might or might not be true, and the scientific traceability of measures on how these definitions were formed or categorized, is often not transparent or – even more often – nonexistent. Research on wisdom has been going on in different sciences and disciplines since ancient days (Edwards et al., 2013, p. 16). Not long ago, in 1984 Maxwell was promoting an intellectual revolution that should move all sciences from knowledge towards wisdom (Maxwell, 1984). Korkki just recently says: "The question remains compelling: What is Wisdom… (Korkki, 2014)?" What can be seen is that despite all the uncertainties concerning the wisdom definitions, there is a distinct difference between wisdom and knowledge: "To have Wisdom one must have particular attitudes to knowledge" (Roney et al., 2010, p.70). Or "… to make wise judgments, one often has to complement one's explicit knowledge with implicit knowledge" (Sternberg, 2001, p.230). Investigations on previous research show that coming up with a clear definition of "wisdom" for ISM is highly relevant, because one can find multiple definitions being built on various theories and disciplines. As far as the author could determine, no definition is covering the demands of ISM. The demand would be a definition, which origin is traceable and transparent. It should be a definition, which is applicable and fit for futures reality.

1.1.2 Wisdom Management in previous research

Research on Wisdom Management (WM) is still very young. Any research found by the author was not older than 10 years. Before that, the term "Practical Knowledge" meaning knowledge that was based on experience and measured by impact, was discussed among management researchers (Tsoukas & Cummings, 1997, p. 673). WM is a very new concept and researches are currently trying to find "clues on how to develop wisdom and how to apply it into the management field, i.e managerial wisdom" (Ekmekçia & Teramanb, 2014).

WM research is strongly related to human resource management (Wisdom Management Consultancy, 2015). This is the reason why the definition of wisdom in WM till today, seems to mainly build on psychological research and definitions. What can be seen is that the raising interest currently pushes research further towards wisdom management concepts. The reason behind this seems to be the need, to find strategies to apply practical wisdom in the managerial domain (Ekmekçia et al., 2014, p 1202).

In ISM the area of WM could not be found to be covered with research results. In observing the meaning of WM, a close relation to crowd management can be detected. This means that through information technology a differentiated view from and on the crowd (definite or indefinite) can supply systems with crucial information and insights on communication and transformation processes (Vehlken & Pias, (2014), p.168).

1.1.3 Wisdom Management Tools in previous research

"The next two or three decades are likely to see even greater technological change than has occurred in the decades since the emergence of the computer, and also even greater change in industry structures, in the economic landscape and probably in the social landscape as well" (Drucker, 2007, p.14). What are the answers from the ISM side for managers to face these changes? WMTs are researched and discussed in the IT area. The main interest of research is how and on which system these tools should be built upon (Thierauf & Hoctor, 2006, p.94). Further investigation shows that wisdom was often used synonymously with knowledge, and only in recent years, there is a clearer distinction between these terms. Currently some of the tools on the market are called "Wisdom Management Tools" (WMTs) but they seem to be no different to "Knowledge Management Tools" (KMTs). The author could not find any research, which distinguished between KMTs and WMTs. No clear ideas on what would be called either one or the other could be identified. History shows that KMTs were "the fastest growing software applications" (Sabou, 2015, Types of information Systems, p.18). WMTs would per se be the tools that support managers to evolve from the knowledge area into the wisdom realm:

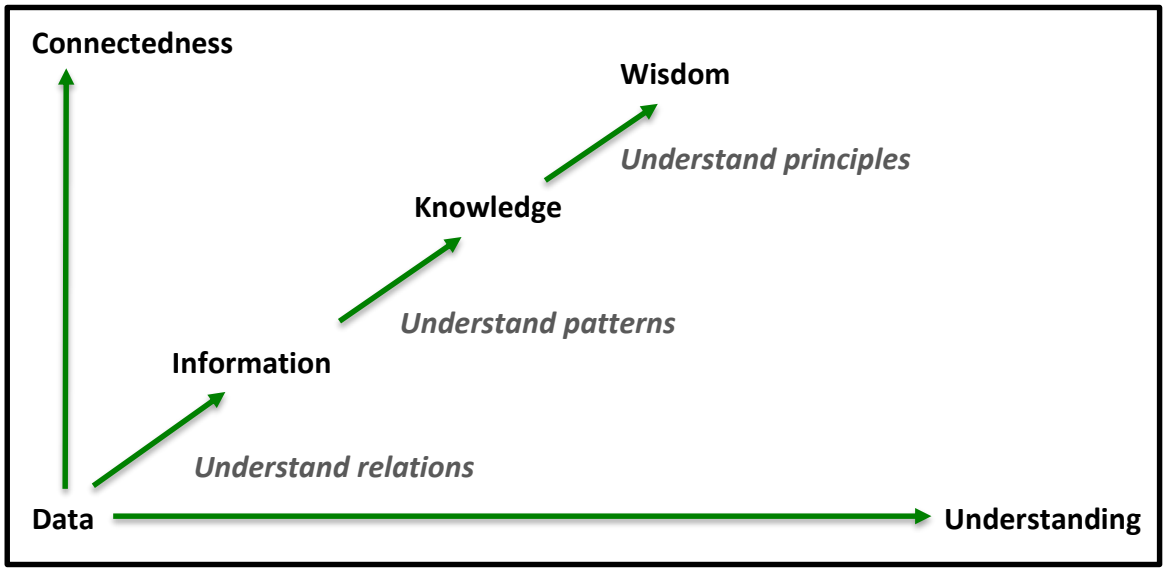


Figure 1: Emerging Knowledge perspectives (Bellinger, 2004)

Figure 1 shows that the wisdom area can be determined by understanding principles. The question is, where does this assumption of wisdom come from? Does wisdom really mean understanding principles? If yes, this should be seen in a modelled WMT as well. If figure 1 is true it could be interpreted that the move from knowledge to wisdom is already happening. Assuming that this might be the case, the question would be, how to support managers to take advantage of what is already there?

Looking at figure 1 Nonaka's statement saying, "Civilization has 'progressed', slipped away from the collective consciousness and been replaced by more technical concerns with objectivities,

control, prediction and outcomes" (Nonaka et al., 2014), may be true. Whether ISM and especially the wisdom area could bring back or even enhance collective consciousness, could not be answered through available research papers. The need to answer pressing questions led to the research aims and objectives explained in the following chapter.

1.2 Research aims and objectives

The research questions can be shown in the main research question and in secondary research questions. Answering these questions will bring the desired outcome that can be seen through the research objectives being attached to each question.

Main Research question

The major research aim of this thesis is to find an answer to the main research question:

RQ1: What are the characteristics of a Wisdom management tool that supports managers (profit and nonprofit)?

The main objective when answering this RQ, is ***O1: Obtain a high level model for a WMT***

There are secondary research questions that underline the main research question and specify the outcome of the thesis as such. These questions, their objectives and the chapter numbers relevant for each are listed in Table 1.

The secondary research questions

Secondary research question	Objective	Chapter
RQ2: What does wisdom mean? (Generally and especially for managers?)	O2: Propose a definition of wisdom and wisdom management	2, 5, 6
RQ3: What are the needs of managers (profit and nonprofit) that could be met through a WMT?	O3: Understanding of managers' needs in the new millennium that could be met by a WMT	3, 5, 6
RQ4: What is currently being offered in terms of WMTs? How are these tools being used? What is missing? How could they be improved to reach a WMT-style service suitable for managers?	O4: Obtain a high level understanding of new possible technologies for a WMT	5, 6

Secondary research question	Objective	Chapter
RQ5: What do managers require from a WMT?	O5: List of requirements from managers of what they expect from a WMT. Drafting ideas for a future vision pilot	3, 5, 6

Table 1: Secondary research questions and research objectives

1.3 Methodology

The research problem addressed in this thesis was approached on the basis of two fundamental questions of social researchers: “What is going on?”[Descriptive research] and “Why is it going on?” [Explanatory research] (De Vaus, 2005, p.1) Coming from these questions the researcher defined the units of analysis and the research objectives. From there the appropriate research design was developed and the methodology design was concluded (Van Wyk, 2016, p.5). Due to the novelty of the research problem, the research problem was addressed with a multi-method qualitative research approach (Saunders & Lewis et al., 2009, p.152). This approach contains a descriptive study and an explanatory study.

“Descriptive research does not fit neatly into the definition of either quantitative or qualitative research methodologies, but instead it can utilize elements of both, often within the same study” (Kupfer & MacLellan, 1994, p.1196). Explanatory studies prove to help researchers to research unexplored areas of social research effectively (Liu, 2014, pp.7).“The main aim of exploratory research is to identify the boundaries of the environment in which the problems, opportunities or situations of interest are likely to reside, and to identify the salient factors or variables that might be found there and be of relevance to the research” (Van Wyk, 2016, p.8). Future prospects are that the findings of the multi-method qualitative research approach will be the basis of further studies and research. Therefore a very broad, high level approach was necessary. The research approach led to the methodology, which consists of an external and internal view on the research problem.

The external view on the research problem was addressed through literature and internet research (secondary data). The internal view was obtained through semi-structured qualitative interviews (primary data) conducted among a small sample of 18 managers from profit and non-profit companies. After merging the external and internal findings, combined requirements for

a WMT could be obtained and a recommendation for a WMT is given. Figure 2 provides an overview of the methodology of the thesis and maps each phase of the methodology to the relevant research questions and objectives.

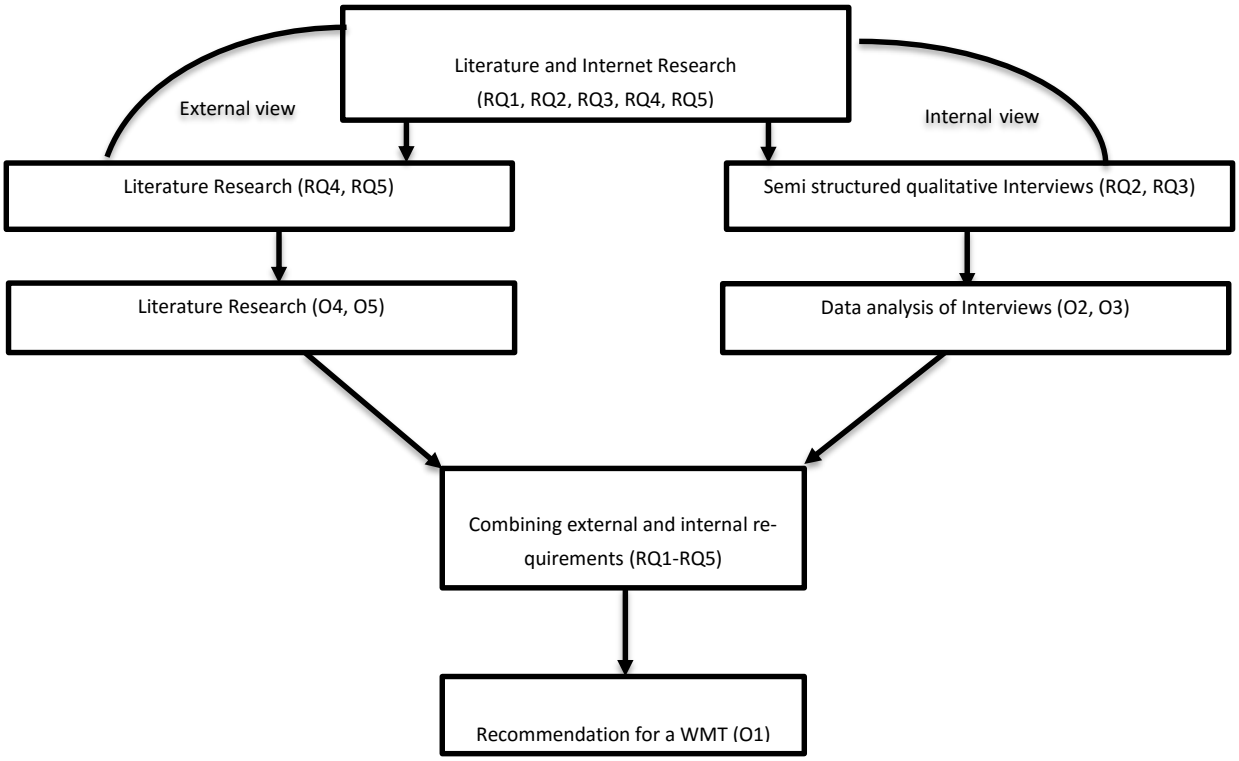


Figure 2: Empirical Research Approach

1.4 Structure of thesis

The thesis starts with chapter 1 introducing the research topic, research aim and objectives. This is where the context of the thesis, the underlying previous research findings, the research questions as well as the objectives of the research are introduced. Chapter 2 is searching for definitions of wisdom in the literature and tries to come up with a definition of wisdom, which is built on a major literature review of multiple scientific backgrounds. Chapter 3 starts with laying a base for the management definition that is relevant in ISM. Based on this definition major challenges for managers in the new millennium are discussed. This discussion leads towards a definition for Wisdom Management, which is based upon the definition of wisdom introduced in chapter 2. Chapter 4 gives the background and insight on the methodology used for the research at hand and is followed by chapter 5. This chapter contains the results and discussions arising from the research findings. Chapter 6 gives a summary on the research findings and answers all research questions briefly. It concludes with a future perspective on necessary further research and ends with concluding thoughts from the author.

2 DEFINING WISDOM

This chapter takes a close look on the first part of research question 2: What does wisdom mean (generally)? This chapter gives a broad overview on how the term wisdom is defined generally, and in areas as diverse as philosophy, education, psychology, religion, politics and economics. In order to come up with a clear definition of what "wisdom" is, one needs to have a strategic look on definitions out there. Only then will it be possible to reach objective 2: A proposal of a definition of wisdom.

2.1 General wisdom definitions

Through a close look on five definitions of wisdom in online dictionaries, a set of shared concepts by these definitions can be detected.

- Wisdom can be defined as "knowledge that is gained by having many experiences in life; the natural ability to understand things that most other people cannot understand; knowledge of what is proper or reasonable… good sense or judgment" (An Encyclopædia Britannica Company Dictionary, 2015).
- Wisdom is "The quality of having experience, knowledge, and good judgment; the quality of being wise. The soundness of an action or decision with regard to the application of experience, knowledge, and good judgment. The body of knowledge and principles that develops within a specified society or period" (Oxford Dictionaries, 2015).
- The Cambridge Dictionary defines wisdom as "the ability to use your knowledge and experience to make good decisions and judgments" (Cambridge Dictionaries, 2015).
- The free online Dictionary on the other hand, defines wisdom as "The ability to discern or judge what is true, right, or lasting; insight… a wise outlook, plan, or course of action" (Free Dictionary, 2015).
- Wisdom is also defined as "1. The ability to make good decisions based on knowledge and experience; 2. Knowledge that you have gained over a long period" (Macmillan, 2015).

The main wisdom defining concepts and their frequency in Common Dictionaries are:

Concepts of the term wisdom in common dictionaries	
1.	• Knowledge (8)
2.	• Experience (5)
3.	• Judgment (5)
4.	• Decision (3)
5.	• Ability (3)
6.	• Action (2)

Table 2: The main wisdom defining concepts and their frequency in common dictionaries

Table 2 shows that in five online dictionaries the concepts of knowledge, experience, judgment, decision, ability and action are in some way combined when defining wisdom. But where do these dictionaries take the concepts of their definitions from? A closer look on specific scientific disciplines can help to light up the roots of where wisdom definitions come from. (Wiktionary, 2015)

2.2 Philosophical perspectives of wisdom

Philosophers have been trying to explain wisdom since the early 5th century B.C. (possibly even earlier). Back then, Socrates, as one of the well known representatives, found a way to achieve wisdom (Philosophical Society, 2015). Over the centuries, there were multiple approaches in philosophy to define wisdom. One way is to group the definitions of wisdom in five general philosophic approaches and define them in brief:

There is a wisdom ('**wisdom as epistemic humility'**) which is defined by a person who is in fact wise, but believes s/he isn't. Another kind of wisdom (**'wisdom as epistemic accuracy'**) is defined by a person who knows exactly what s/he knows and what s/he doesn't know (=knowledge) and it can be proven that it is so. The third form of wisdom in philosophy is wisdom **('wisdom as knowledge'**) that can be measured by the amount of general knowledge in various areas the person has and can be seen if the person can successfully implement this knowledge into life. The fourth form of wisdom (**'hybrid theory'**) is seen in a person who has major general knowledge and implements it successfully into life. This can be proven, but also has some unjustified beliefs. The fifth form of wisdom (**'wisdom as rationality'**) is seen in a person who is wise, has all the parameters of the above-mentioned forms of wisdom and additionally is sensitive to his/her limitations (Stanford Encyclopedia of Philosophy, 2013).

In summing up the definitions of wisdom, philosophy is coming up with three major concepts:

Concepts of the term wisdom in Philosophy	
1.	• Knowledge (3)
2.	• Successful implementation of knowledge in life (= proven action followed by decision build upon knowledge) (2)
3.	• Sensitivity towards personal limitations (1)
Source of wisdom:	
• Human	
Property of whom:	
• Human being wise	

Table 3: Wisdom definition concepts in philosophy

Table 3 shows that out of the five general philosophic approaches, three main concepts can be seen which sum up as knowledge, successful implementation of knowledge (proven action built upon decision) and sensitivity to limitations. The source of wisdom in philosophy is the human being. Wisdom also belongs to the human being, who is wise.

2.3 Educational perspectives of wisdom

From the educational perspective, wisdom means carrying formal and informal education through informal and formal teachers to the ones being taught. It also means making sure that the receivers are able to use this wisdom in their own lives as well as handing it over to others after them (Henschke, 2015). Wisdom in this perspective means ensuring knowledge transfer with the most appropriate techniques to carry tacit knowledge, making it explicit and known (Adam et al, 2015).

To illustrate these definitions the following table helps:

Concepts of the term wisdom in Education	
1.	• Knowledge transfer (2)
2.	• Most appropriate techniques to transfer knowledge (2)
3.	• Making sure that others receive it (2)
Source of wisdom:	
• Available Information	
Property of whom:	
• Humanity	

Table 4: Definition of wisdom in education

In the educational realm, wisdom is described with three words: knowledge transfer, transfer techniques and knowledge recipients. The source of wisdom is the available information. In education the available information is the property of humanity.

2.4 Psychological perspectives of wisdom

Entering the psychological sphere wisdom is defined as “The quality or state of being wise; knowledge of what is true or right coupled with just judgment as to action; sagacity, discernment, or insight” (American Psychological Association, 2015). There is no clear-cut definition used for wisdom in psychology but through empiric research on 500 subjects, wisdom can be defined as a person, who has understanding and communication which outstands others (these are the most distinctive features of a wise person). It is a person that has a good amount of general knowledge and is socially competent (Holliday & Chandler, 1986). Marchand says: “Wisdom is an appealing concept but,… it is also an extremely complex one, and not particularly transparent given the multiple dimensions (cognitive, affective and conative) it involves” (Marchand, 2015).

The psychological approach of wisdom knows five major concepts:

Concepts of the term wisdom in Psychology	
1.	• Knowledge (2)

Concepts of the term wisdom in Psychology	
2.	• Social competency (outstanding communication and understanding skills) (2)
3.	• Action(1)
4.	• Judgment (1)
5.	• Insight (1)
Source of wisdom:	
• Human	
Property of whom:	
• Human being wise	

Table 5: Wisdom definition in psychology

In Psychology as the table above shows knowledge, social competency, action, judgment and insight is defining wisdom. One also needs to keep in mind that in psychology wisdom is "a person"– Only people can be carriers of wisdom. The source of wisdom in psychology is human and the wisdom is the property of wise human beings.

2.5 Religious perspectives of wisdom

"The great majority of people in the world belong to one of the five major religions" (Jewell, 2012). In order to define wisdom through a strategic approach of literature research one must know how the five world religions define wisdom.

2.5.1 Judaism

Wisdom (Hebr. חכמה; Greek, σοφία) in Judaism means 'practical intelligence'; the cognitive perception which digs deeper and strives to understand the 'nature of things' It does also mean that someone is able to 'skilfully perform difficult tasks'. Thereby practical intelligence can be divided into 'intuitive and creative'. In the Jewish understanding, wisdom means 'deep understanding and artistic skill'. It is defined as a 'human and a divine property'. The origin of wisdom in Judaism is God. (Jewish Encyclopaedia, 2015)

Concepts of the term wisdom in Judaism
• Practical intelligence
• Cognitive Intelligence
• Skillfully performing difficult task (combining practical and cognitive intelligence)
Source of wisdom:
• God
Property of whom:
• Human and Divine property

Table 6: Wisdom definition in Judaism

In Judaism, wisdom can be seen in three concepts, which is practical intelligence, cognitive intelligence and the realization of both which leads to skillfully performing difficult tasks. The source of wisdom is God. Wisdom belongs to humans and to God.

2.5.2 Christianity

In the Christian understanding the word for wisdom comes from the Greek word "σοφία"(= sophia). Wisdom in the Christian sense is secular and divine. Jesus is called the "Wisdom of God" (Bibleserver, 2015, wisdom). Christians base the assumption of Jesus Christ being "the Wisdom of God", on the Old Testament, where wisdom can be personified (Teknia Greek Dictionary, 2015). In the Christian sense wisdom means general knowledge, ability, practical wisdom, prudence, learning, science, scientific skills, professed wisdom, human philosophy, superior knowledge and enlightenment, divine wisdom, revealed wisdom and Christian enlightening (Teknia Greek Dictionary, 2015). The origin of wisdom in Christianity is the triune God (Bibleserver, 2015, Proverbs 2,6).

Concepts of the term wisdom in Christianity
• Knowledge
• Ability
• Practical wisdom (Scientific Skills, Science, etc.)
Source of wisdom:
• God
Property of whom:
• Human and Divine property

Table 7: Wisdom definition in Christianity

Table 7 shows that Christianity defines wisdom through concepts such as knowledge, ability and practical wisdom, which can be achieved and expressed through science. One also needs to keep in mind that in Christianity (just like in psychology) wisdom is defined as a person. Christianity knows "Jesus" as the supreme carrier of wisdom and encourages others to learn from him and even through him. In Christianity God (being three in one) is the source of wisdom and wisdom is the property of human beings and God.

2.5.3 Islam

In the Islamic thinking "wisdom" (حكمة in Arabic) is "a hidden power of thinking and logic" (Islamic wisdom, 2015). Wisdom in the Islamic sense identifies not yet known things in the frame of an already known concept. Out of that kind of wisdom, one makes logic rules that can be explained logically by the way one came about those rules. Out of such a wisdom 'useful conclusions' and results occur. The authority of wisdom in Islam is by most Islamic Scholars seen as

'one of the four sources of Islamic fiqh[1] (Islamic wisdom, 2015). The origin of wisdom in Islam is God (Koran, 2015, Sura 2,32). The owner of wisdom in Islam is God as well (Wahf al-Qahtani, 2015).

Concepts of the term wisdom in Islam
• Hidden power (of thinking and logic)
• Frame of known concept
• Fiqh (= one of the four sources in Islam)
Source of wisdom:
• God
Property of whom:
• God

Table 8: Wisdom definition in Islam

In Islam, the concepts that are implemented in the wisdom definition are a hidden power of logic and thinking, in the frame of the known concepts of Islam. This wisdom is rooted in God and God's property.

2.5.4 Buddhism

In Buddhism wisdom means 'the wisdom of emptiness'[2] and knowing the four noble truths (Wikipedia, 2015, Prajñā (Buddhism)), that 'life means suffering, which is due to the fact that people attach themselves. This attachment can be overcome and there is a path to do so.' This path is called the eightfold path of: 'right view, right aspiration, right speech, right action, right livelihood, right effort, right mindfulness, right concentration' (Boeree, 2015). The source of wisdom is in the fact that the human has to keep an open mind (Dhammika, 2015). The three major concepts of the wisdom definition in Buddhism are shown as follows:

Concepts of the term wisdom in Buddhism
• Emptiness
• Knowing the four noble truths
• The eightfold path
Source of wisdom:
• Human keeping an open mind (Sixth sense given to those of particular value)
Property of whom:
• Because the goal is to achieve emptiness it doesn't belong to anyone

Table 9: Wisdom definition in Buddhism

[1] **[**"Whomever Allah wants good for, He will grant him 'fiqh' (deep understanding) of the religion**."** (Bukhari and others"](On Islam, 2015)

[2] ['I am not, I will not be. I have not, I will not have. This frightens all children and kills fear in the wise.'(Nagarjuna)] (A view on Buddhism, 2015)

The Buddhist concept of wisdom contains emptiness, the four noble truths and the eightfold path. The source of wisdom is laying somewhere out there. Wisdom does not belong to anybody.

2.5.5 Hinduism

In Hinduism, wisdom is dependent on the goodness of the person itself. If the good person (bad people cannot get wisdom) gets wisdom, this wisdom means "seeing the things in the real light (The Heart of Hinduism, 2015)". In the Hinduistic worldview wisdom means "rich knowledge about life, emotional regulation, insight, and a focus on common good (compassion)" (Jeste & Vahia, 2008). Wisdom's origin in Hinduism is the god of wisdom 'Ganesha' (Free Dictionary, 2015, Ganesha) and the godess of knowledge 'Sarasvati' (Free Dictionary, 2015, Sarasvati).

The following table shows the major concepts of a Hindu view on wisdom:

Concepts of the term wisdom in Hinduism
• Seeing the things in the real light
• Rich knowledge about life, emotions, regulations
• Insight
• Focus on the common good
Source of wisdom:
• Ganesha and Sarasvati (god and godess of wisdom)
Property of whom:
• Ganesha and Sarasvati (god and godess of wisdom)

Table 10: Wisdom definition in Hinduism

The wisdom definition in Hinduism knows the concepts of seeing things in the real light, rich knowledge, insight and focus on the common good. The source of wisdom and the owner of wisdom in Hinduism are the gods Ganesha and Sarasvati.

2.6 Political perspectives of wisdom

Political wisdom is a wisdom that cares for the common goods and increases happiness for everybody. "For political wisdom is about acting as well as deliberating" (Moss, 2012). In politics, experience seems to play a major role as Morrisey says: "Circumstances change, but wisdom doesn't and it teaches by example (Morrisey, 2015, p.1)!"

The major concepts in a political definition of wisdom can be seen in the table below:

Concepts of the term wisdom in Politics
• Caring for the Common good
• Action
• Deliberating
• Experience

Concepts of the term wisdom in Politics
Source of wisdom:
• History
Property of whom:
• Everybody

Table 11: Wisdom definition in politics

The concepts of wisdom in politics contains aspects such as caring for the common good, action, deliberation and experience. The source where politics gain wisdom from is history and the achieved wisdom is owned by everybody.

2.7 Economic perspectives of wisdom

Looking for a definition of wisdom in economy, one faces the problem that economists seem to pick their wisdom definition from several sciences and disciplines, such as psychology (Lim & Yu, 2015), philosophy (Ayme, 2015), politics (Ruhm, 2015), education (Jordan, 2015), religion (Bock & Foster, 2015) etc. This leads to the simple fact that it is often not clear, where the definitions used in economy come from.

In order to understand the wisdom concepts of economy the ten pillars of economic wisdom designed by Henderson are a representative source for further investigation. These ten pillars show how Henderson defines wisdom and where the roots of the different pillars might be found:

Wisdom pillars by Henderson (Henderson, 2012)	**Pillars origin**
Nothing is for free	Economic Theory (Martin, 2016)
Incentives matter	Personal Management (Hagedorn & Manovskii et al., 2015)
Economic thinking is thinking on the margin	Controlling (Nilsson, 2001)
Value adding means creating wealth	Finance Management (Durant, 1999) and Controlling
Information is highly valued and information costs (often hidden- decentralized)	Systems Theory (Gablers Wirtschaftlexikon, 2016) and Information Technology (Bryn-jolfsson, 1991)

Wisdom pillars by Henderson (Henderson, 2012)	Pillars origin
Network effects from everything a manager does	Behavioural Economics (Easley & Kleinberg, 2010, pp.509), Systems Theory and Information Technology
Value (for a good or service) is subjective	Economic Theory and Behavioural Economics
Creating jobs is not creating wealth	Ethics in Economy, Social Economy and Economic Policy (Thielemann, 2016)
To increase a nations income means to increase output	Political Economy (Ott, 2012, p.116)
Competition is tough	Digital Economy and Economic Policy (Vangrop & Batura, 2015)

Table 12: The ten pillars of wisdom in economy and their possible origins

From Henderson pillars of economic wisdom, one can draw the conclusion, that the economical definition for wisdom is highly complex. One way to see what kind of concepts are laying behind those pillars, is to extract the main essence of the pillars. Thereby the author comes to the conclusion that wisdom in economy means knowledge (coming from information) followed by action (creating, competing, increasing), creating wealth and value, output oriented working together achieving margins that contain and ensure a sustainable future for this planet. The author assumes that these concepts can be found, in one way or the other, in most of the economical wisdom definitions.

The following table shows how economy defines wisdom:

Concepts of the term wisdom in Economy
• Knowledge
• Action
• Creating wealth and value (Achieving margins)
• Output oriented working together
• Ensuring a sustainable future for the planet
Source of wisdom:
• Human
Property of whom:
• Everybody

Table 13: Wisdom definition in a free market economy

The economic wisdom definition the author determines, contains the concept of knowledge, action, creating wealth and value, output oriented working together and to ensure a sustainable future for the planet. The source of wisdom in economy is human and wisdom belongs to everybody.

2.8 Analysis of definitions of wisdom

After having had a brief, close look at wisdom definitions from philosophy, education, psychology, religions, politics and economy, one needs to get an overview of the frequency of the concepts that arise in wisdom definitions. This can help to create a well thought through definition for wisdom in the ISM and consequently illustrates how often a certain concept was used and in which area it was used.

Wisdom definitions								
Concept	**General**	**Philosophy**	**Education**	**Psychology**	**Religion**	**Politics**	**Economy**	**How often was the concept named?**
Knowledge	9	5	1	1	5	1	1	**23**
Action	3	4	2	1	5	1	1	**17**
Ability [to understand better than other people, discern, apply knowledge, Dig deeper (analyse)]	1	1	1	1	5	1	1	**11**
Skilfully perform difficult tasks	2	3	-	-	2	1	1	**9**
Experience (long period)	5	-	-	-	1	1	1	**8**
Judgement (good and just)	6	-	-	-	2	-	-	**8**
Decision (good)	3	-	-	-	1	1	1	**6**
Science	-	-	1	-	2			**3**
Scientific skills	-	-	1	-	2			**3**
Insight	2	-	-	-	1			**3**
Good communication	-	-	1	1	1			**3**
Focus on common good	-	-	-	1	1	1		**3**
Emotional regulation	-	-	-	1	1			**2**
Learning	-	-	1	-	1			**2**
Hidden power of thinking and logic	-	-	-	-	1			**1**

Wisdom definitions								
Concept	**General**	**Philosophy**	**Education**	**Psychology**	**Religion**	**Politics**	**Economy**	**How often was the concept named?**
Wisdom of emptiness	-	-	-	-	1			**1**
Sensitive to limitations	-	1	-	-	-			**1**
Intuitive wisdom	-	-	-	-	1			**1**
Creative wisdom	-	-	-	-	1			**1**
Most appropriate knowledge transfer techniques	-	-	1	-	-			**1**
Social Competence	-	-	-	1	-			**1**

Table 14: Wisdom definitions and concepts occurrence

Table 14 shows that the main concepts often used in wisdom definitions are: knowledge, action, ability [to understand better than other people, discern, apply knowledge, Dig deeper (analyze)], skillfully perform difficult tasks, experience, judgment (good and just) and decision (good). All other concepts which are used in certain areas can (by the view of the author) not be used in a commonly acceptable definition.

2.9 Conclusion: The definition of wisdom

The author just showed how and where the concepts contained in wisdom definitions come from. In the next step a clear definition built upon the results of literature research is introduced. In concluding the various wisdom definitions coming from general dictionaries, philosophy, education, psychology, religion, politics and economy the author decides to integrate the major concepts, which were most often mentioned into a wisdom definition:

Knowledge (24)
Action (17)
Ability [to understand better than other people, discern, apply knowledge, Dig deeper (analyse)](11)
Skilfully perform difficult tasks (9)
Experience (long period) (8)
Judgement (good and just) (8)
Decision (good) (6)

Table 15: Most often mentioned Wisdom concepts from literature

This is leading to the following Wisdom definition coming exclusively from literature research:

Wisdom is knowledge combined with the ability to understand, the skill to perform difficult tasks, experience (long period) and judgment that lead to good decisions which can be seen in actions.

This definition coming from literature resources can be shown through a Wisdom graph:

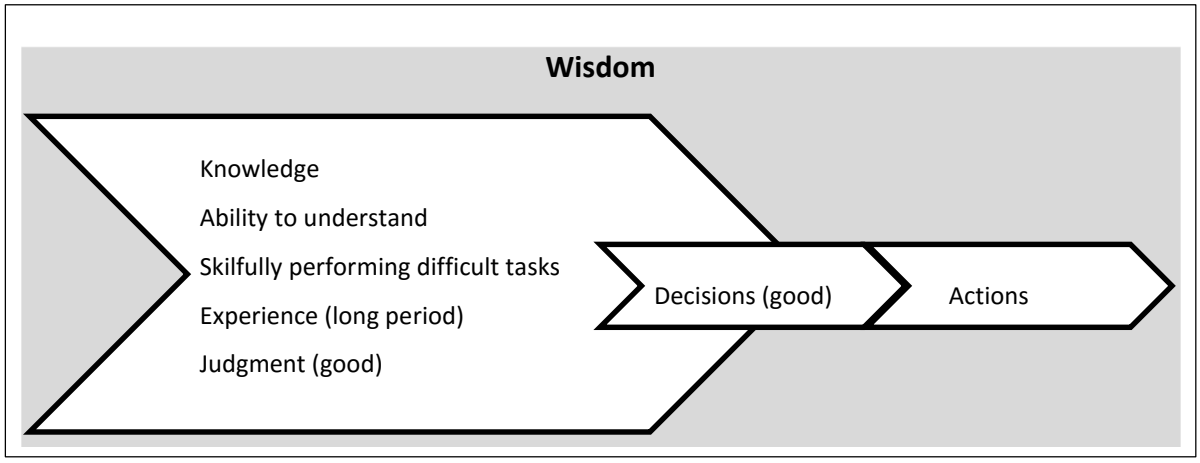


Figure 2: Wisdom definition based on literature research

From the conducted literature research it can be seen that wisdom can be defined as a combination of knowledge, the ability to understand, skillfully performing difficult tasks, experience (long period) and judgment (good) leading to good decisions which can be seen in actions. The remaining questions among possibly many others are if this is the wisdom definition of current managers?

3 WISDOM MANAGEMENT BACKGROUND AND DEFINITIONS

To put the new wisdom definition in the context of Information Systems Management (ISM) it is important to define management. This chapter is designed to build the base on which research question three, ”What are the needs of managers (profit and nonprofit) that could be met through a Wisdom Management Tool (WMT)?” will be discussed further. Before being able to research the needs of managers, it is most important to define what management is, and who managers are. This chapter also leads to a Wisdom Management Definition that lays the foundation for the progressing research.

3.1 The “two-function” management definition

There are many ways to define management, but in the light of ISM the attempt to divide management in two functional areas seems helpful. Therefore, the definition is divided into two major areas of management. A closer look at the area of the organizational functions of management and the area of the personal function of management generates the management definition used in this thesis.

3.1.1 The organizational function of management

In the organizational function of management, the definition can clearly be seen as an “… action-oriented term” (Sage Publications, 2015). Management can be defined as, “*The organization and coordination of the activities of a business in order to achieve defined objectives… Management consists of the interlocking functions of creating corporate policy and organizing, planning, controlling, and directing an organization's resources in order to achieve the objectives of that policy”* (Business Dictionary, 2015, management).

In other words it is “*the act or manner of managing; handling, direction, or control… the skill in managing; executive ability, great management and tact”* (Dictionary com, 2015). The organizational function defined by the author’s perspective means that management is coordinating (Coordinating = planning, organizing, staffing, directing, controlling, reporting and budgeting[3]), intentional actions that move a system towards its previously defined goals.

The following illustration visualizes this organizational management definition:

[3] The POSDCORB was defined by Luther Gulick and Lyndall Urwick in 1937.(Business Dictionary, 2015, POSDCORB) It was modified by the author in order to sum up all the managerial activities under the term coordinating, she instead inserted controlling instead of coordinating.

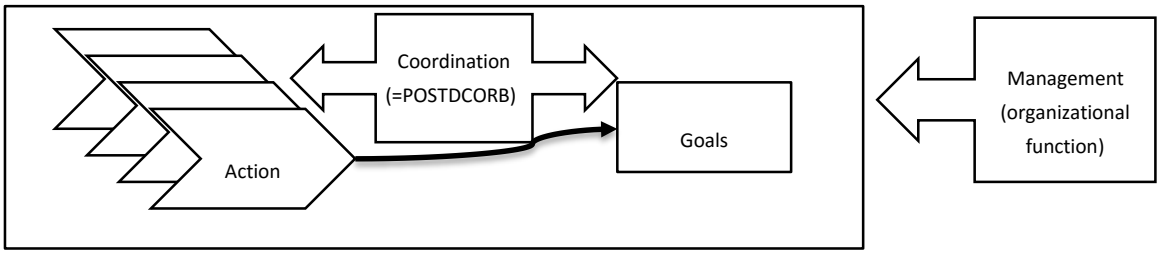


Figure 3: Management definition (organizational function)

The figure above shows that management in terms of its organizational function is defined as the coordination (POSDCORB) of actions in order to move a system (organization) towards its previously defined goals. Usually this organizational function is carried out by people. This is where the personal function area comes into perspective.

3.1.2 The personal function of management

The personal function of management is, as the term implies, driven by people: "*The directors and managers who have the power and responsibility to make decisions and oversee an enterprise"* (Business Dictionary, 2015, management). Managers are people, who intentionally drive systems towards certain goals (Gabler Wirtschaftslexikon, 2015), use theirs and other people's skills and abilities accordingly to make sure that the input (resources used) and the outcome (produced products) are in a proper cost-value ratio (Onpulson, 2015). The personal function of management can be defined as people driven decisions, which lead to certain activities in order to achieve certain goals. Management in the personal function are people who have power and responsibility to decide and oversee the organizational funtion. Bringing the two functions together defines the management definition used in this thesis.

3.1.3 The Management definition

Management is carried out by people (managers) who have the power and responsibility to drive systems towards previously defined goals and hereby undertake various decisions in order to coordinate (POSDCORB) actions.

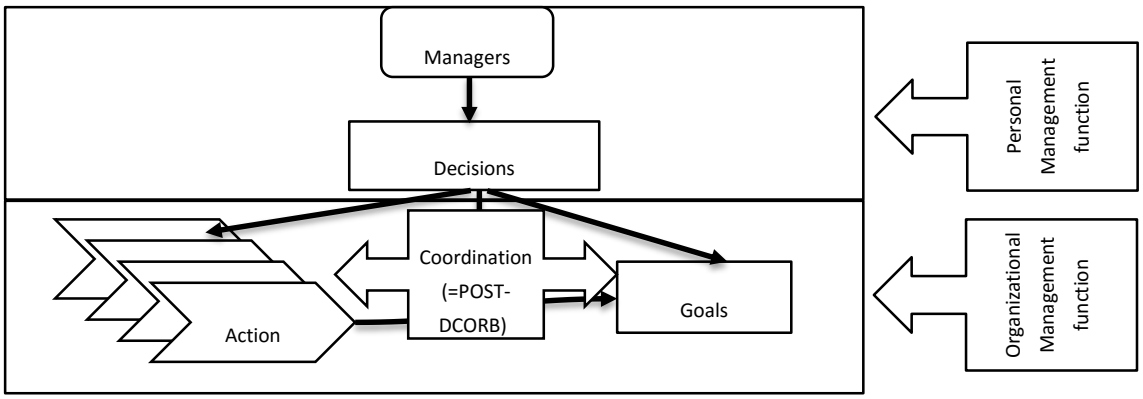


Figure 4: The management definition of this thesis

Figure 4 shows the management definition used in this thesis. Research question 3 is looking for the needs of managers in terms of a WMT. The answers concerning "managers' needs" will be investigated in the frame of the figure above. The needs of managers are somewhere in their power and responsibility, decisions, coordinating (POSDCORB) and in their capability to drive the system towards its defined goals.

3.2 Wisdom Management in the new millennium

In order to be able to define Wisdom Management (WM), one needs to have a close look at the challenges for managers the new millennium brings about. Looking at these challenges and then defining WM will lead towards a better understanding of the needs of managers today.

3.2.1 Challenges of the new millennium

The new millennium brings about major changes for managers. Recalling figure 1 the question arises: What kind of changes will the "wisdom area" bring for managers? What actions need to take place in order to prepare managers for the wisdom area? As Drucker says: *„Not only governance, but its related concepts and tools, will need to be confronted and transformed over the next fifteen years"* (Drucker, 2007, p. 56). In order to come up with suitable concepts and tools, the main challenges managers are facing need to be determined:

- The constantly increasing need to educate financial owners about the business and to justify **actions** that were taken (Fancy & Bennetts, 2015, pp.1)
- The **decision** making process of managers has to change dramatically according to the new technologies available (University Western Illinois , 2015, p.431)
- Major changes occur outside the existing market, product or technology, therefore managers need to have major access to **knowledge** outside their business environment (Mc Crimmon, 2010)
- **Technologies** score each other out and productivity is not a high performance guarantee (Lozano et al., 2002, pp.4)
- The power sphere of managers is changing. Due to the fact that the traditional way of accomplishing work is happening less and less, the need to try to control everything is not working anymore. Thereby work is often done by people who cannot be told what to do. Managers need to **partner** more than to command (Walther-Klaus, 2004)
- Increasingly competitive world economy: Physical resources and skills do no longer provide an advantage but the **productivity of knowledge workers** provides the business with a competitive advantage (Drucker, 2007, pp. 55)
- The **diversity** of individual employees (learning modes and interpersonal styles) strive for **systems beyond the traditional approaches** (Mauri, 2015)

The list of challenges is by no means complete, but shows the complexity of demands on managers. What is the answer to these fundamental challenges? Prahalad stresses that the key to organizational change is to create one's future and not to adapt to external change (Prahalad, 2015). To create one's future means that managers would start to rethink their traditional way of justifying their actions, decision-making, information and knowledge yield, commanding versus partnering and raising their businesses to a competitive advantage. The new approach needs to implement new concepts of actions, decisions, knowledge, technology, partnering, productivity of knowledge workers provide, diversity and systems beyond the traditional approaches. Could that new kind of future management be called: "Wisdom Management"? How could Wisdom Management be defined and how does it look like? Can a Wisdom Management Tool be designed that meets the pressing needs of managers to face the challenges of the upcoming future?

3.2.2 Steps towards defining Wisdom Management

A suitable WMT which meets the needs of managers can only be modeled if Wisdom Management is defined. The definition found will lay the foundation to answer the research question: What are the needs of managers (profit and nonprofit) that could be met through a WMT? Wisdom Management as described in chapter 1.1.2 is a new area of future management. The term itself needs to be defined. The definition is built on the definition of wisdom, developed through the previous literature research and combining this definition with the definition of management just introduced. Combining these two definitions leads to the following definition of Wisdom Management:

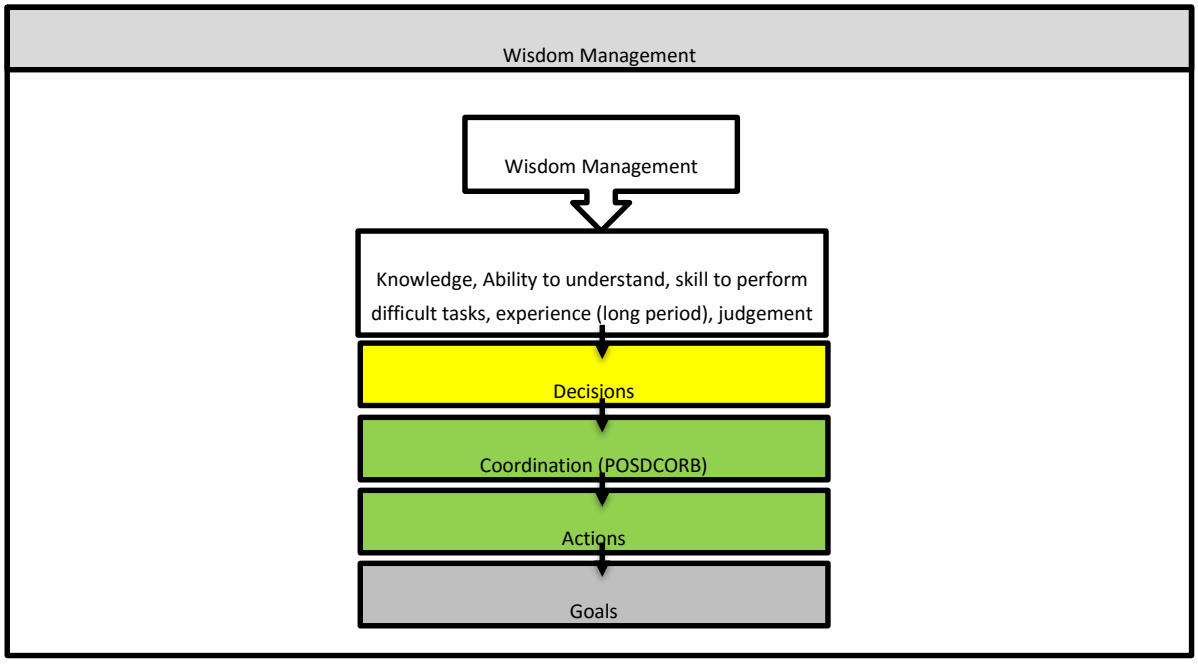


Figure 5: Wisdom Management Definition Graph

In looking at the Wisdom Management graph, the term Wisdom Management combines wisdom and management. Wisdom Management can be defined as: Management that is rooted in wisdom, meaning knowledge combined with the ability to understand, the skill to perform difficult tasks, experience (long period) and judgment (good), leading to decisions that support coordination and can be seen in actions, which lead a respective system towards desired goals. This Wisdom Management needs to implement new concepts of actions, decisions, knowledge, technology, partnering, productivity of knowledge workers, diversity and systems beyond the traditional approaches.

3.3 Conclusion: The definition of Wisdom Management

Wisdom Management can be defined as management that manages through wisdom in decisions, actions, coordination (PSODCORB) and goal systems. In Wisdom Management, wisdom is defined as knowledge combined with the ability to understand, the skill to perform difficult tasks, experience (long period) and judgment that leads to good decisions, which can be seen in actions. In chapter 3.2.1 it was shown that management in the new millennium acknowledges the need to find new concepts. The following graph combines the new WM definition with the challenges mentioned in chapter 3.2.1:

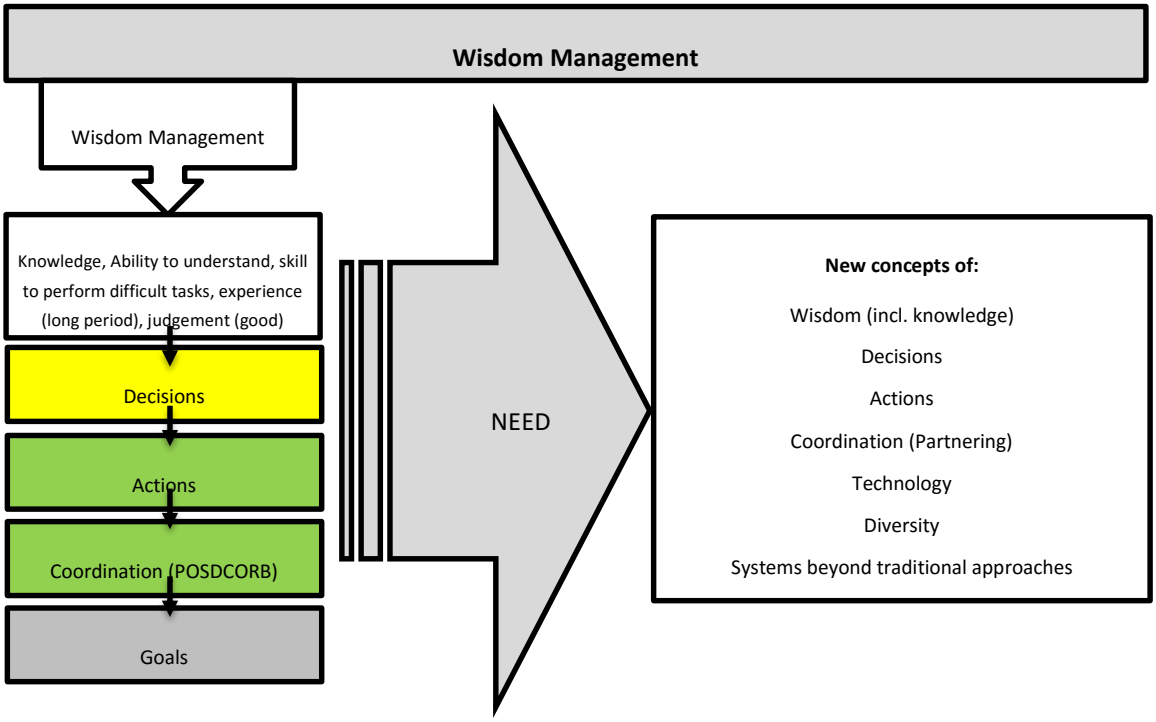


Figure 6: Wisdom Management definition and needs arising in the new millennium

Figure 6 indicates that new concepts are needed, in order to be able to speak of WM in the previously defined way. The question is, what kind of new innovative technologies could provide systems beyond traditional approaches? To answer this question, a close look under chapter 5.2 on new technologies for a possible WMT, with a focus on crowd sourcing systems will bring some insights. Before that, the methodology of the conducted research is introduced.

4 METHODOLOGY

To answer the already introduced research questions a certain methodology is needed. This chapter introduces the selected methodology, the research area, the selection of the study site, the research instruments and the way the data was analyzed. The chapter finishes with a short summary on the methodology.

4.1 Selection of methodology

As already explained under Chapter 1.3, the research problem can be seen as a new research subject. Therefore the chosen methodology needed to be able to give a wide and broad, as well as useful overview on what was found.

A brief overview on the key parameters of the research design depicts as follows:

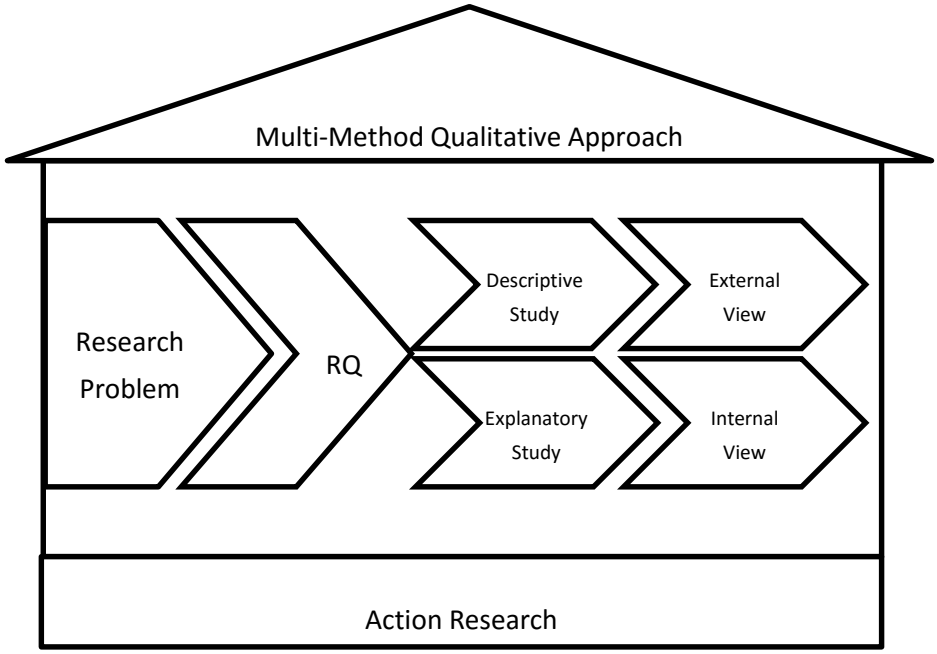


Figure 7: Research Design

The research problem was addressed through a multi-method qualitative approach (see Chapter 1.3.) and action research. Action research is an attempt to approach a wide and new research field with the intention to uncover and combine knowledge and information that can be useful to a certain group of people (Berg, 2004, p.197)

All relevant factors that led to the chosen methodology are rooted in the primary and in the secondary research questions (RQ). These were adressed by a dual approach realized through descriptive and explanatory studies, which provided an external and internal view (See Figure 2 and Figure 7)

The selection of the methodology was also influenced by two additional major factors: the research area and the study site. From this strategic perspective, the research area is shown first. Thereby the author ensures that nothing is overlooked and also shows the borders of the research at hand. The second consideration concerning the selected methodology is the study site.

4.1.1 Research Area

As the descriptive and explanatory studies are undertaken, it is essential to determine which area of research the external and internal investigation should focus on. Li says that, "*There are four approaches for scientists to investigate social phenomena: microtheory - based approach, macro-theory-based approach, micro–macro approach, and micro–meso–macro approach*" (Li, 2016, p.23). The St. Galler Modell is specifically designed to show different views on the macro-, meso- and micro-level of the business environment (Rüegg-Stürm, 2016, pp.65).

The St. Galler Modell also helps to show, why a micro-theoretical approach to answer the research questions at hand is useful. Thereby the model defines business as a complex system (Rüegg-Stürm & Grand, 2014). The view of businesses being complex or even highly complex systems, are also underlined by Luhmann's system theory (Mattheis, 2016, p.627). The St. Galler Modell was designed to reduce the complexity of business systems and gives an overall view on different business levels. This allows a certain view on the research area. The model also structures the research area. At the first level of the model the micro-theoretical view of business context is introduced and can be seen as follows:

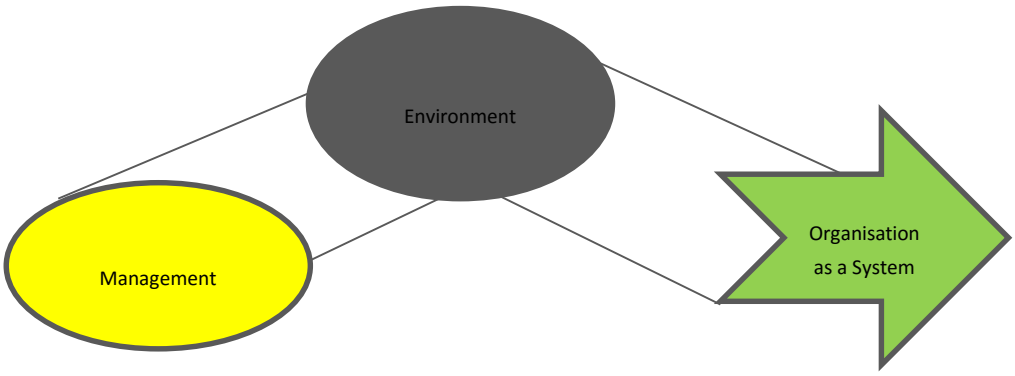


Figure 8: St Galler Modell Auflösungsebene I - Research Area (Rüegg-Stürm & Grand, 2014, Chapter 4)

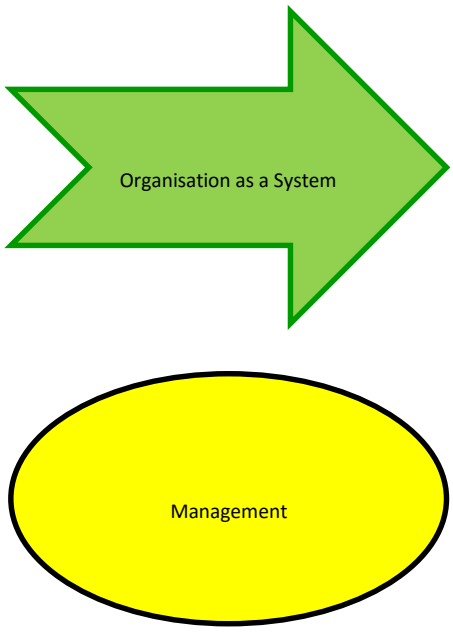
Looking at Figure 8 one can see that the research questions and the relevant research area for wisdom, WM and WMT is located somewhere in the management area, the organizational area and the environmental area. The remaining question that needs to be answered, on this micro-theoretical view, is: Which of the areas would be meaningful, to start research on, in order to answer the research questions? To find a useful answer to this question and to show the research area in more depth a 'research area distinction table' is helpful:

Research Area	Unit of Analysis	Possible Questions
Business Environment	Branches	Which branches do currently use WMT?
	Markets	In terms of WMT what is the current market situation?
	Companies	Which companies are more likely to use WMT?
Economic Environment	Propensity to consume	How high is the propensity to consume a WMT for managers?
Legal Environment	International business law	Are there legal requirements that should be considered when designing an appropriate WMT?
Political Environment	Employment Policy	Will a WMT impact the employment policy, and how?
Ecological Environment	Sustainability requirements	Can the implementation of a proper WMT support sustainability requirements?
Technological Environment	IT technologies	What are the IT technologies that are currently available to support a WMT?
Organization as a system	Management experts	Who are the experts who could supply expertise on an ongoing basis for a WMT?
	Individual Workplaces	How can WMT support the move from office work to home office work?
Management	Managers	What is most important for managers in terms of WMT?

Research Area	Unit of Analysis	Possible Questions
	Decisions	Which are the most common decisions where a WMT could help managers?
	Goals	How can a WMT support the decision process to achieve agreed upon goals?

Table 16: Research Area Distinction Table (Lehner & Farthofer, 2012. p.22)

Table 16 shows the research areas that could be addressed through this research. The research at hand focuses on the 'Management' and the 'Organization as a system' area and therefore defines the research area as follows:



Management experts	Who are the experts who could supply expertise on an ongoing basis for a WMT?
Individual Workplaces	How can WMT support the move from office work to home office work?
Managers	What is most important for managers in terms of WMT?
Decisions	What are the most common decisions where a WMT could help managers?
Goals	How can a WMT support the decision process to achieve agreed upon goals?

Figure 9: Research area of thesis

According to what could just be shown through the St. Galler Modell, combined with the research area distinction table the following decisions were made:

The research area of this thesis lies in the organization as a system (which is just touched briefly) and management (which is looked upon intensively). The next step was to determine a study site, where the research questions could be answered.

4.1.2 Selection of study site

The selection of the study sites was determined by the expectation to gain an external and an internal view as well as by the chosen instruments and can be explained in two main study sites. The external study side approached through a literature review and the internal study site approached through a qualitative semi-structured questionnaire conducted in the research area of management (see chapter 4.1.1.).

4.2 Research instruments

The research was launched through a three steps approach:

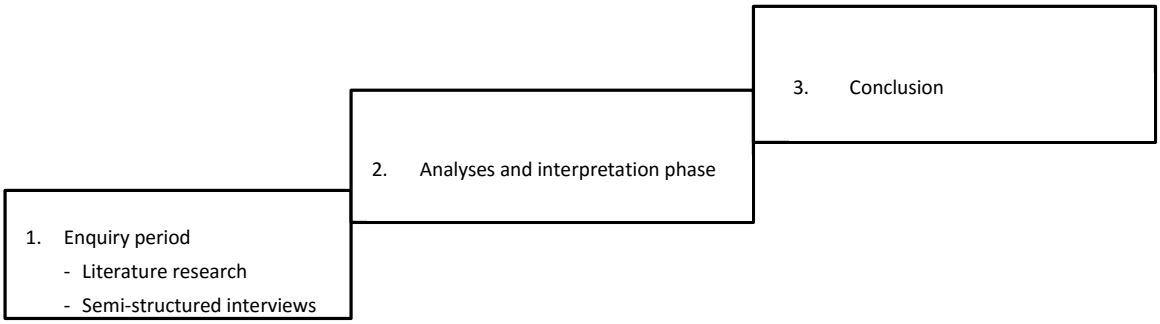


Figure 10: 3 - Step Research Approach

The relevant methods for the enquiry period (see figure above) are determined by the two main research areas, which are “management” and “the organization as a system” (as shown in Figure 9). Due to the research question, it is essential to choose descriptive and explanatory studies, which means that in choosing instruments accordingly, the author decided to answer the research question descriptive (What is going on? What is out there already?) combined with explanatory arts (Why is it going on) (De Vaus, 2005, p.1). For this approach primary data, and secondary data needs to be investigated. Thereby the author makes sure that the model designed can be compared to certain real measures (Smith, 2009, p.24).

4.2.1 Literature review

This chapter gives a brief overview on how the literature research of this thesis was conducted. Due to the fact that the research topic is very young, the author had no other choice but to search for literature that would cover the research topic from multiple perspectives.

The literature this thesis examined, can be grouped in the following categories:

- Literature to obtain a Wisdom definition
- Literature to obtain a management definition
- Literature to obtain a Wisdom management definition
- Literature to investigate current WMTs and new technologies for a possible WMT
- Literature to develop a suitable methodology

Every category had to be approached differently. The next section shows the theoretical framework of each category.

Literature to obtain a wisdom definition

In moving towards a Wisdom definition, the author choose a comprehensive approach, which can be seen in the following figure:

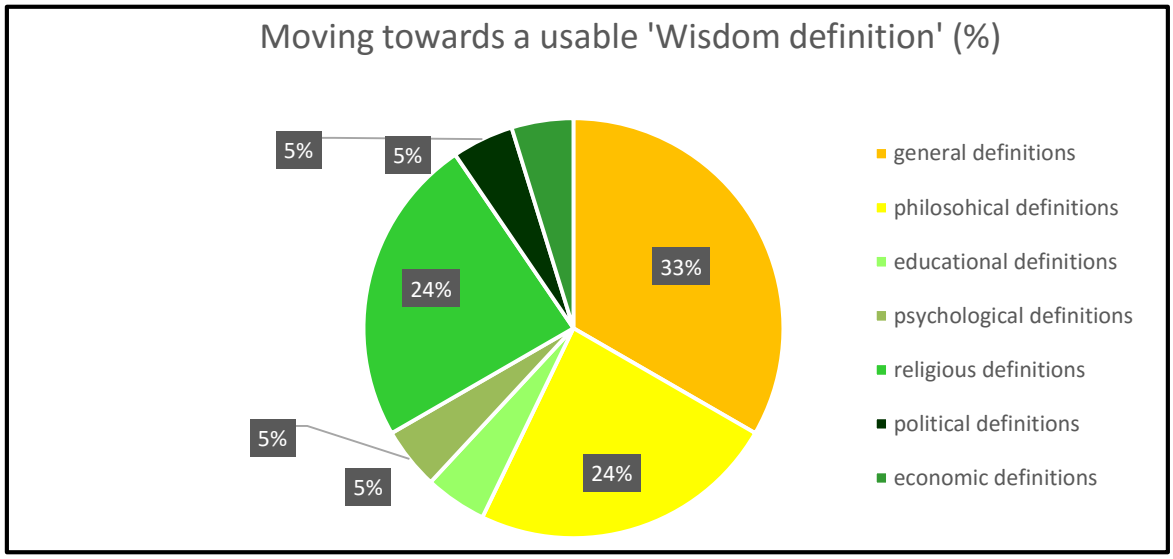


Figure 11: Wisdom Literature research relation (n=21)

33% of the literature could be found in general dictionaries, 24% in Philosophy, 24% in religion, 5% in education, economy, politics and psychology.

Literature to obtain a management definition

The literature that is forming the base of the management definition in this thesis is general economy literature, which can be considered as largely accepted in the managerial realm.

Literature to obtain a Wisdom Management definition

The definition for Wisdom Management in this thesis is built on the definitions that grew from defining wisdom and management and is a result of the author's research concerning defining "wisdom" and "management".

Literature to investigate in Crowd Sourcing systems as innovative technologies

The literature showing current developments in innovative technologies was found in the following areas:

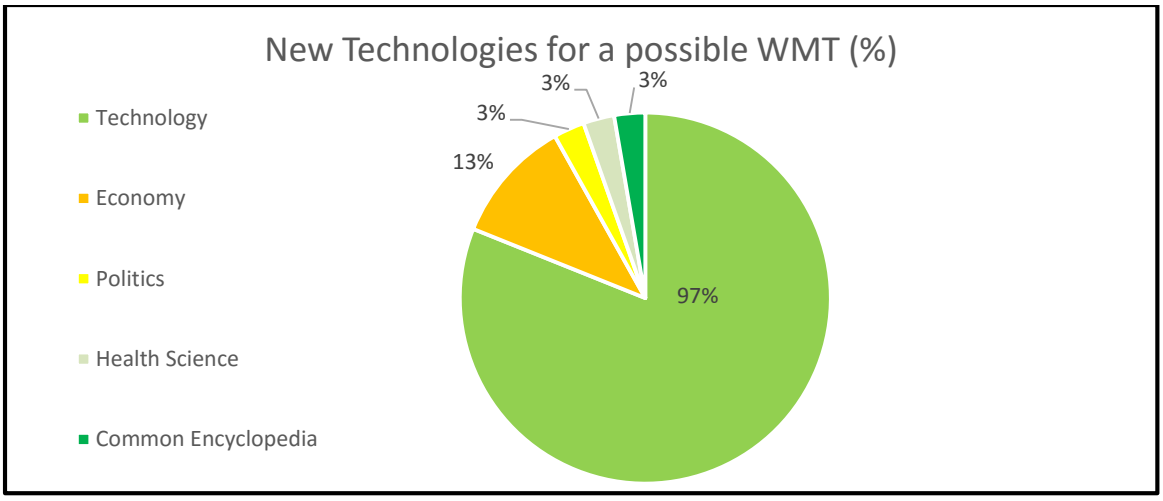


Figure 12: Innovative Technology Literature used in Thesis at Hand (n=37)

In technological literature cutting edge technologies are broadly discussed, which explains the excessive use of technological literature (97%). In economy (13%) some literature could be found, which was implemented in the thesis. The other areas where not investigated thoroughly and only account for 9% overall.

Literature to obtain a suitable methodology

The literature to obtain a suitable methodology was found in Social Science and in Strategic Management Methodologies.

Overview of all literature resources

Figure 13 depicts the main areas that provided literature resources for this thesis:

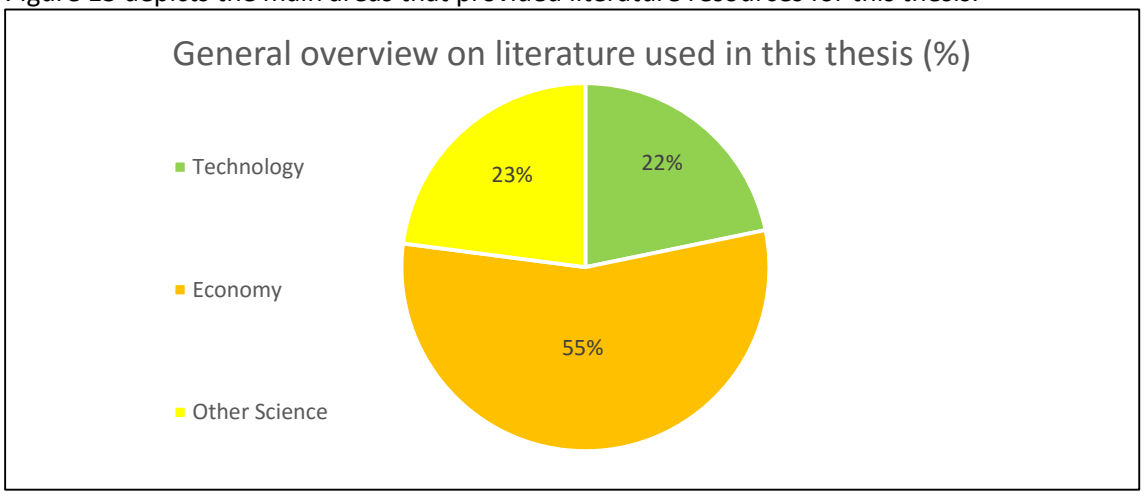


Figure 13: General Overview on literature used in this thesis (n=170)

In the thesis at hand, 55% of the literature are rooted in Economy, 22% in Technology and 23% in other sciences (such as politics, health science, psychology, etc.).

4.2.2 Semi structured qualitative Questionnaire

Simultaneously to the research of the external view, the author explored the internal view. Due to the fact that WM and WMTs are still in an early phase (in terms of research), the author decided for a semi structured qualitative questionnaire, because by this method structured information as well as unknown problems in the research area can be captured. (Lehner& Farthofer, 2012, pp.82) The research approach contained closed and open questions, which allowed the researcher to confirm or disconfirm already known concepts concerning wisdom, WM and WMTs. At the same time the author intended to collect new ideas for all three areas. The design of the questionnaire is a set of the main concepts suggested by Rogers:

- What kind of support do managers need concerning their activities and decisions?
- What kind of activities can be expected from managers using a WMT?
- How can a WMT support managers in achieving their goals?
- What kind of stable requirements can be a valid basis for a WMT (Roger et al., 2015, p.351)?

And were extended by the following conceptual questions:

- What does wisdom mean? (Generally and especially for managers?)
- What are the needs of managers in terms of problems that could be answered through a WMT?
- What is currently being offered in terms of Computer Support and how could this support be improved to reach a WMT-style service suitable for managers?

The semi structured interview questionnaire can be seen in Appendix 1.

For the semi structured qualitative questionnaire which was conducted to give the insights to the internal view, the information came from managers of companies selected by size and Profit versus Nonprofit sector. Following the Austrian tax law (Justline, 2015) the author defines big companies as companies that have more than 250 employees. Medium Size Companies have between 50 to 250 employees. Small companies have 1 to 50 employees. Non profit organizations are “not conducted or maintained for the purpose of making a profit” (An Encyclopaedia Britannica Company, 2015, nonprofit). “*A business or other organization whose primary goal is making money (a profit), as opposed to a non profit organization which focuses a goal such as helping the community and is concerned with money only as much as necessary to keep the organization operating”* (Business Dictionary, 2015, for profit organizations). From the available population of managers from profit and non-profit organizations (N=unknown), 9 managers from profit (by size) and 9 from non-profit companies (by size) were selected. The selection followed a distinct order:

- Is the company profit or non-profit and does it fit one of the organizational sizes required?
- If it is a profit company, is it known as one of the 'best companies' in its area of expertise?
- If yes, is the manager of the company available?
- If it is a non-profit company, is the company known as one of the 'best companies' in its area of expertise?
- If yes, is this company relevant for the researches organizational background?
- All managers being interviewed should come from the high management level

The selected managers (n=18) served as a stratified sample, and with all eligible managers, whose companies fit the above-mentioned criteria, semi-structured qualitative interviews were arranged and conducted. The interview schedule can be seen in Appendix 2;

Organizational Size	**Profit**	**Non Profit**
Big companies	Microsoft Austria, Andreas Rynes	AG Globale Verantwortung, Mag. Anneliese Vilim
	AT&T, Mag. Titus Berchtold	Horizont 3000, Mag. Andrea Heiden
Medium Size Companies	EconGas GmbH, Mag. Doris Schäfer	Wycliffe Germany, Susanne Krüger
	Fujitsu Austria, Mag. Martin Hammerschmid	Wycliffe Switzerland, Thomas Deusch MA
	Easy Bank Austria, Sonja Sarközi	UKH Linz, Mag. Hermann Kloimstein
	Shell Austria GmbH, Dr. Gert Seybold	Schloss Klaus, Dipl. Kfm. Jürgen Kieninger
Small Companies	Bäckerei Fenzl, Franz Fenzl	Wycliffe Austria, Mag. Sabine Oetzel
	Super Social News, Matthias Haas	Operation Mobilization Austria, Philipp Eschbach BA
	MediaDialog, Andreas Varnholt	Am Puls, Oskar Kaufmann

Table 17: Manager Interviews (n=18)

4.3 Research Timeline

The following timeline for the thesis at hand was followed:

Timeline	Topic	Outcome
May-June 2015	• Literature research on topic	• Relevance determined
		• Further steps discussed
June-July 2015	• Literature research	• Conceptual framework
	• Research questions	• Methodology research
	• Focus clarification	• Clarified research approach
September 2015	• Literature research	• Clarified research approach
	• Preparation of framework	• Fixed timeline
	• Methodology	• Submission of research topic outline
October 2015	• Master Tutorial II	• Adjustments following Master Tutorial II
	• Interview design	• Questionnaire design ready
	• Pilot running for questionnaire	• Pilot testing conducted for questionnaire
	• Checking of questionnaire	• Appointment for interviews fixed
November 2015	• Interviews	• Research conducted
	• Literature research	
December 2015	• Data analysis	• First draft of thesis
	• Thesis write up	
January 2016	• Internal thesis checking	• Adaptions and adjustments
February 2016	• Internal and external checking	• Thesis completed
End of February 2016	• 26th February submission of thesis	• Evaluation of thesis
		• Date for defence

Figure 14: Research Timeline

4.4 Thoughts on data analysis

The following thoughts concerning data analysis were made before engaging in the research. Literature research was conducted in the way that generally the most recent relevant literature of the research area was read, compared and analyzed by different methods suitable to the stage of the thesis and the research questions. The analyzing methods are mentioned at every single step of the literature research. The literature research was mainly based on the Grounded Theory as a method, which means: “Using Grounded Theory, a researcher is afforded the luxury of maintaining an open mind and allowing the data to inform the discovery of theory“ (Jones &Kriflik et al., 2005, p.3).

This approach was seen as important due to the pioneering stage of the research topic. For the semi-structured qualitative interview, qualitative as well as quantitative analyzing methods according to the question were conducted. This can be seen in the research findings (see Appendix 3). In order to analyze the collected data, the data had to be transferred into a table sheet on the computer. At the transfer stage, the data underwent a minor reduction: if an interviewee was sure or not sure whether to check or not check a certain box of the questionnaire, the data

would be taken without any reduction (Blaikie, 2000, p.32). If the person was not sure but explained why and then checked the box showing this through (X) in question 2.5 of the interview questionnaire, the data was dealt as if the box was not checked. In question 3.3 and 5.7, if the interviewee was not sure whether to check the box or not, the answer was dealt as if the interviewee had given a yes. These decisions were taken in advance in order to ensure a meaningful useful outcome and where explicitly marked in the ongoing analysis.

4.5 Conclusion

The methodology was defined for the micro-level - research area 'management' and 'organization as a system' and was conducted in order to gain an external and internal view on the topic at hand. A three step design of the research approach was an enquiry period (literature research and semi-structured qualitative interviews), an analysis and interpretation phase and a conclusion phase. Following this research approach, the research instruments being literature research and semi-structured qualitative interviews were introduced.

Due to the research question, the researcher combined statistical predicting models and explanatory models, which means that in choosing the instruments, the author decided to answer the research question with predictive accuracy (what is going to be needed?) and also with explanatory arts (what is out there already?) (Smith, 2009, pp.1). For literature research Grounded Theory was chosen, which allowed the author "… the luxury of maintaining an open mind and allowing the data to inform the discovery of theory" (Jones & Kriflik et al., 2005, p.3). This approach was very important due to the pioneering stage of the research topic as such. For the semi-structured qualitative interview, which was conducted among 18 managers of profit and non-profit companies (selected by size), qualitative as well as quantitative analyzing methods according to the question were conducted, as seen in the research findings. The way the data was analyzed was briefly discussed. As Wilson says: "…*a research agenda must emerge to provide the theoretical basis for information management so that its problem areas can be identified and explored in a coherent and rigorous manner"* (Wilson, 2015). In the next chapter the research findings of the literature research concerning current WMTs, innovative technologies for a possible WMT and of the semi-structured qualitative interviews are introduced.

5 RESULTS AND DISCUSSION

The key results of the research at hand are presented in three blocks of research findings. The blocks are designed along the research questions that are to be answered. The first block called, "Current Wisdom Management Tools", contains answers to RQ4: What is currently being offered in terms of WMTs? How are these tools being used? What is missing? The answers found in this section are based on internet research (see methodology chapter 4.2.1.).

The second block called, "New Technologies for a possible Wisdom Management Tool", provides an overview of new technologies that might be suitable to answer the last part of RQ4: How could they (currently available so-called WMTs) be improved to reach a WMT-style service suitable for managers? This question was answered on the basis of literature research (see methodology chapter 4.2.1.).

The third block shows the "Combined Research findings of the semi-structured qualitative interviews", and answers RQ2: What does wisdom mean? (Generally and especially for managers?) and RQ3: What are the needs of managers (profit and nonprofit) that could be met through a WMT? Methodology wise this block is built on the semi-structured qualitative interviews (see methodology chapter 4.2.2.).

5.1 Current Wisdom Management Tools

When investigating Wisdom Management Tools that are currently on the market, the author could not find a single tool that fits the definitions of wisdom and wisdom management introduced in this thesis. From the author's perspective, it became evident that there are a vast number of knowledge management tools (KMTs) available. Such KMTs are called WMTs. But what are they really? The author could determine that the majority of so-called WMTs on the market, are supposed to help managers in project management. Transferring big data to knowledge is happening on the basis that "These tools are just tools not project managers" (Milin, 2015, p.234). Meaning that the solution finding, the decision making part and the action verification still is entirely depending on managers and not addressed through current WMTs.

The following three examples, representative (though not randomly selected), for various management tools available, show that these currently available so-called WMTs can by the author's view, not be considered WMTs. They do not match the Wisdom management definition we are recalling: Wisdom Management can be defined as management that manages through wisdom in decisions, actions, coordination (PSODCORB) and goal systems. In Wisdom Management, wisdom is defined as knowledge combined with the ability to understand, the skill to perform difficult tasks, experience (long period) and judgment that lead to good decisions, which can be seen in actions.

One of the currently so-called WMT is called WyGISC (Wisdom, 2015). It is an environmental management tool, designed to help in environmental projects. It helps managers to get information on landscape, wildlife data etc. Due to the tool's lack of transparency, managers using the tool, do not know where the information the tool displays, is coming from. Obviously the tool generates information and transfers it to knowledge. But according to the wisdom definition in this thesis, there is no wisdom generated. The technologies being used in this tool, do combine and present information, based on big data and open data technology. "… because of big data, managers can measure, and hence know, radically more about their businesses, and directly translate that knowledge into improved decision making and performance" (McAfee & Brynjolfsson, 2012, p.62). Still the solution seeking and decision making part is utterly dependent on the manager. The lack of transparency and human interaction is leaving managers alone with the challenges of the new millennium (see chapter 3.2.1). To the knowledge of the author, no Crowd Intelligence (CI) or Crowdsourcing (CS), or Wisdom of Crowds technology, in order to generate wisdom, is implemented into the tool (see chapter 5.2). Thereby the author cannot see the tool is helping managers to generate wisdom through collective consciousness (see chapter 1.1.3).

Another so-called WMT is called CRIF (CRIF GmbH, 2015). It is a Credit Management and Finance Marketing tool which helps managers to determine the creditworthiness and reliability of partners. It offers risk management solutions along the product life cycle. The tool offers quality measures such as: ISO 9001:2008 certified quality management system, Information security certified by ISO 27001:2005, a software development certified CMMI Maturity Level 3 and Payment– data security standards. The tool does not fit the wisdom management definition of this thesis, for it lacks the ability to support managers in decisions, actions and coordination. It supplies managers with certain information and general knowledge. The decision making part is again entirely depending on the managers. The tool is not transparent in showing where the information it displays is coming from. To the knowledge of the author CI or Crowdsourcing technologies are not implemented into the tool (see chapter 5.2).

The third so-called WMT is Logpoint 5.1. (logpoint, 2015). This tool supports managers in Security Management, Compliance Management and Event Management. It helps managers in risk Assessment and supplies them with a dashboard for ease of control. It helps managers in data enrichment which means that it has applications that enable database monitoring, show event correlations and also contain an active response engine. It enables out of the box reporting and even builds scales according to system requirements. The tool ensures that ISO 27001 Compliance Standards are met. The author could not figure out what the promises in terms of ISO standards exactly indicate and if any transparency was given. The tool is not a WMT by the author's definition. It seems to be built on "Big data" technology. No CI or Crowdsourcing implemented (see chapter 5.2).

The following table gives a brief overview on the three so-called WMTs:

WMT	Management Area	Management Tool for:	Quality Standard	Transparency of tool	WMT by definition of Wisdom graph	CI, CS, Wisdom of Crowds implemented
WyGISC	Environmental Management	Project Management	Not det.	Not det.	No	No
CRIF	Credit Management and Finance Marketing	Creditworthiness Risk Management solutions	ISO 9001 ISO 27001 Certified CMMI Maturity Level 3 Payment– data security standards	Not det.	No	No
Logpoint 5.1.	Security Management, Compliance Management, Event Management	Risk Evalution Event Organization Reporting	ISO 27001	Not. Det.	No	No

Table 18: Current so-called Management Tools

Currently so called WMT are missing transparency were the information they are displaying is coming from. As they combine information, they do not offer solutions that might help managers in their decision-making. Some lack quality standards. They do not use CI or Crowdsourcing technologies (see chapter 5.2). Therefore the author assumes that a new approach of creating and developing an adequate WMT needs to be found. WMTs needs to live up to the WM definition shown in the WM graph in chapter 3.3. WMTs also needs to implement innovative technology to meet current managers' needs.

5.2 New Technologies for a Possible WMT

From literature and internet research, it is evident that currently so called WMT are missing transparency, decision-making features and features to verify actions as well as CI or CS technologies. So the author assumes that current so-called WMTs are by far not meeting future demands of managers. The new millennium, carrying the wave of change towards the wisdom age, brings ongoing changes that drive managers and organizations (personal and organizational function) towards major shifts. The situation is getting more and more complex. "Complexity is due to the fact that risks are becoming increasingly interconnected" (Bradea et al, 2013, p.80). Therefore wisdom is urgently needed. The author suggests that new technologies provide systems beyond the traditional approaches of the knowledge wave (see Figure 2). The quest for technologies supporting the change is increasing.

The following statement from one manager interviewed, in terms of technology for a suitable WMT stresses the concern: "*Please make sure that wisdom and intelligence are not confused. A WMT corresponds to experience. For example: Mobility: It is wonderful that the individual traffic can work very well by these new technologies. But there is the emotional factor- the factor that people in traffic come to terms with each other. One does contradict legal requirements, the other makes up for it by how he drives. If this wisdom was missing it would be a provocation"* (Seybold, 2015). Managers are striving and needing the crowdsourcing systems of technology that can provide them with the information that cannot be obtained by just combining big data in a certain form. WM needs to incorporate the human component in order to be fit for the wisdom area. This is why and where CI, CS and the Wisdom of Crowds come into perspective.

But what are Crowd–Sourcing systems and what do they try to solve? There are three Crowd-Sourcing systems introduced in this thesis: Collective Intelligence (CI), Crowd Sourcing (CS) and the Wisdom of Crowds. The main challenges crowd - sourcing systems are trying to solve are: How to recruit and retain users? What contributions can users make? How to combine user contributions to solve the target problem? How to evaluate users and their contributions? (Doan et al, 2015). Could a WMT that implements CI, CS and the Wisdom of Crowds be suitable for todays managers?

In observing new innovative crowd technologies that might be considered supporting a WMT, the author decides to evaluate these new technologies along the following three major considerations introduced by Park:

1. Monetary Costs for human workers
2. Human interaction slows down computer driven tasks
3. Result quality is influenced by mistakes made through humans (Park, 2014, p.1)

5.2.1. Collective intelligence

The intelligent social behaviour of bird flocking can be seen as one of the basic phenomena of collective intelligence (CI). "Bird flocking can be defined as the collective motion behaviour of a large number of interacting birds with a shared objective" (Ahmed & Glasgow, 2014, p.3). By the way these large flocks of birds behave, it can be assumed that they have the same knowledge, goals, decisions and actions and therefore achieve their desired optimum results.

Collective intelligence can be defined as "groups of individuals acting collectively in ways that seem intelligent" (Malone & Bernstein, 2015, p.2). Or as Por describes it: "Collective intelligence is the INTELLIGENCE of a COLLECTIVE, which arises from one or more SOURCES" (Por, 2015). Collective intelligence can be seen throughout the internet and is, as a matter of fact, actively harvested on an ongoing basis by various internet companies such as Google, Wikipedia, etc (Malone, 2012). There are two categories for collective intelligence: Social Collective Intelligence and Cooperative Collective Intelligence.

Social Collective Intelligence

As social networks (such as Facebook or Twitter and others…) evolve, it is evident that these networks can produce much information but also supply multiple insights in social relationships, social impact as well as common views on certain topics. Interestingly people tend to share information (comment) more than interact (communicate) in a platform such as Twitter (Cuesta & Barrero et al, 2013, pp.631).

Cooperative Collective Intelligence

"The common assumption is that the more experts there are, the better the consensus" (Maleszka & Nguyen, 2015, p. 339). This common assumption still needs to be investigated. There is little to no research available on this topic yet. A recent research paper dealing with the positive effect of collective intelligence being driven by globalization says that "*Accordingly, individuals with given levels of skills can enhance productivity when they work with colleagues who have complementary levels of skills through positive assortative matching of cognitive skills*" (Burhana & Sidek et al, 2015, p.157). Cooperative knowledge sharing builds on communication (Grünberg-Bochard & Schaltegger, 2014, p.147) rather than on commenting. This kind of intelligence would match the Wisdom definition in the thesis at hand.

5.2.2. Crowd sourcing

Crowd Sourcing means that human activity supports machines in tasks that are difficult or even not at all possible to automate (Šimko et al, 2013, p.64). In other words, "*Crowdsourcing is the practice of outsourcing tasks to a broad, loosely defined external group of people in order to introduce new or more developed skill sets and improve efficiency*" (Rouse, 2015). To add to this definition crowdsourcing is "*the practice of obtaining needed services, ideas, or content by soliciting contributions from a large group of people and especially from the online community rather than from traditional employees or suppliers" (*Encyclopædia Britannica Company, 2015, crowdsourcing).

Crowd sourcing systems mean that a group of people (crowd) provides solutions to existing problems. Managers have used Crowd sourcing (CS) approaches for centuries in various forms (Ellmer, 2015, pp.16). But where can managers access the "crowd" of the new millennium, and how could it be used to provide solutions to existing problems?

Current developments show that the Web is growing and changing constantly as millions of institutions and people shape it, and billions of people use it (Baeza-Yates, 2014, p.11). This is also determined for Austrian organizations (profit and nonprofit) (Koo, 2015, p.152), as one country of reference for this thesis. Doan says, "Compared to the physical world, the Web can dramatically improve existing crowdsourcing systems and give birth to novel system types" (Doan et al, 2015).

CS has already been successfully implemented in the area of computer vision, language processing and information retrieval, in order to label data sets for games (Riek et al, 2011, p.277). "*Crowdsourcing is increasingly gaining attention as one of the most promising forms of large-scale dynamic collective work*" (Lykourentzou et al, 2013, p.90). Nevertheless, there are complaints about the quality of crowd-sourced results. This can be seen in the most relevant areas of usage: "The crowdsourcing principles are in general, relevant for the learning domain" (Šimko et al, 2013, p.64). Research in the learning realm of crowdsourcing shows the following characteristics:

1. "…a crowd is able to validate learning objects with quality comparable to their teachers"
2. The crowd is susceptible to the "trusting student" phenomenon, which means that the more people vote for incorrect answers the more likely this incorrect answer will be perceived as correct
3. The interactive character of a crowd sourcing event combined with 'gamification incentives' motivates to participate (Šimko et al, 2013, p.70).

Whereas point 1 and 3 are positive, point 2 needs to be dealt with, in order to ensure that CS technology is used efficiently in a future WMT. One possible answer to the "trusting student" phenomenon could be guided crowdsourcing.

Guided Crowdsourcing

Guided crowd sourcing, is a fast moving new concept that guarantees high quality as well as cost and time efficiency for the customer (Lykourentzou et al, 2013, p.91). The major steps of guided crowd sourcing depicts as follows:

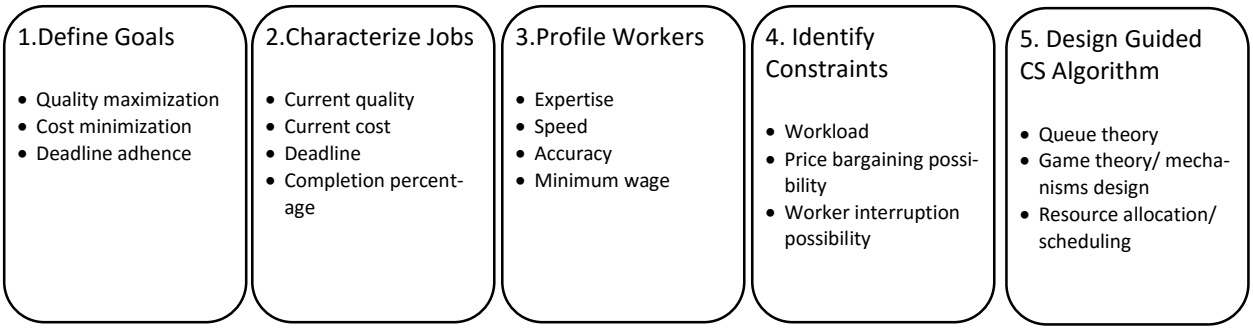


Figure 15: The five steps of guided crowd sourcing (Lykourentzou et al., 2013, p.93)

It can be seen that there are certain steps in guided crowdsourcing that show a transparent understandable path of achieving crowdsourcing solutions. In order to assess the value of crowdsourcing in a WMT, one needs to understand that there is a a distinction between general crowdsourcing and corporate crowdsourcing.

General Crowdsourcing versus Corporate Crowdsourcing

The main difference lies in the fact that in general crowdsourcing anyone in the web can contribute to the solution of a certain task, whereas in corporate crowdsourcing only a certain group of people contributes.

Corporate crowdsourcing can then be specified through a chosen group of people, for example workers of a certain company. Corporate crowdsourcing is significantly lower in cost and the quality of the results is highly predicable (Lykourentzou et al, 2013, p.94). Can crowd sourcing technologies (supplied by distinctive groups) generate collective intelligence which can be crowd sourced to harvest wisdom? The following table provides a quick overview on how the literature research can contribute to answer these questions:

Crowdsourcing	
Definition	Crowdsourcing is highly relevant in learning and means generating solutions from certain crowds (General or corporate groups) in order to support automated solutions where human support is needed.
Monetary Costs for human workers	Low
Human Interaction (slowing down computer driven tasks)	If not enough humans available time consuming, If enough humans available very fast
Result Quality (influenced by human mistakes)	High accuracy (although "trusting student phenomenon" not solved yet)
Justified Knowledge generated automatically	In 'Corporate Crowdsourcing'- yes In 'General Crowdsourcing'- not yet (more research needed)
Measurements of verifiable actions possible	Yes

Table 19: Crowdsourcing quick facts (Park, 2014, p.1)

Current Crowd Sourcing technologies

CS technologies are currently seen in different programming approaches of various companies and CS platforms. "Outsourcing to the crowd, or crowdsourcing, has launched extremely successful businesses, such as Linux" (Peng, 2014). Crowdsourcing participants also meet through platforms such as for example "TopCoder" (TopCoder, 2016). There are multiple technologies of which some are used extensively, whereas others are there, but not demanded and some remaining technologies are not yet ready and are lacking significant demand. This shows that CS technologies work, and that even less demanded technologies find their contributors (Nagel, 2016).

- **CS technologies that are ready to be used and have significant work from the crowd already done, such as:**
  Android Platform, Github Saa5, jQuery Framework, SFDC Lightening Components Framework, Angular JS Framework, Gitlab Saa5, DCjQuesry Mobile Framework, Apex Language, HTML 5 Language, Css Framework, et al.
- **Medium range CS technologies, that are crowd-ready but the market demand is too small:**
  D3.js Framework, Ember.js Framework, leaflet.js Framwork, Go Language, et al.
- **CS technologies, which are not ready and lack significant demand such as:**
  Akka Framework, JSF Framework, CartiDB Saa5, et al. (Epner, 2015)

"600,000 people have registered on the TopCoder website so far, and 15 percent of them have participated in at least one algorithm competition" (Peng & Babar et al., 2014). The platform Topcoder has a special approach for CS technologies organizing competitions in design, development and data science (Topcoder, 2016). But how can one ensure that the CS task is solved through the optimum number of crowd participants? To tackle this, Crowdsourcing Data Analytics System (CDAS) was invented. It is a CS system that develops query plans that are based on two sub-model, one being the prediction and one the verification model. "The prediction model estimates the number of workers required for a specific task while the verification model selects the best answer from all returned ones" (Liu, Lu et al., 2016, p.1051).The CDAS system strives to ensure that CS is producing high quality solutions (Liu, Lu et al., 2016, p.1051). CS examples can be found in any area imaginable (Kreuz, 2016): architecture(Arcbazar, 2016), media design (Crowdspring, 2016), government (Challenge.Gov, 2016) and many more.

5.2.3. Wisdom of crowds

"The *Wisdom of crowds* refers to a phenomenon where collective opinion generates superior solutions to a problem than can be obtained by any individual in the group" (Brown, 2015). If it is possible to achieve superior solutions by gathering the opinion of many, wisdom could be generated quickly. "In the era of Web 2.0, people are allowed to give their opinion about everything such as movies, hotels, etc.. These reviews are social knowledge that can be exploited to suggest possibly interesting items to other people" (Fosci et al, 2013, p.443). The Wisdom of crowds can currently be captured through three different web flavors as described by Baeza-Yates:

Web Data Flavor	Data content
Content	text, images
Structure	hyperlinks
Usage	navigation, queries

Table 20: Wisdom Of Crowds used to improve Web (Baeza-Yates, 2014, p.11)

Each Web Data Flavor produced by a certain group of people (Wisdom of group), contributes to a certain data content (Baeza-Yates, 2014, p.11). “While this kind of collective intelligence is extremely valuable, it is also fallible, and policing such sites for inaccuracies or missing material is a costly undertaking“ (Milo, 2013, p.7).

In contradiction, empiric research shows that the Wisdom of crowds can reach high accuracy but cannot replace scientific statistical measurement procedures, which on the other side use a lot more resources (Kattan et al, 2015). To solve this problem new algorithms are currently sought, to be able to at least in certain groups produce a very high accuracy towards superior solutions (Alizadeh et al, 2015). “In the most general sense, an optimization (problem) is concerned with finding the best option (with regard to given criteria) from a set of available alternatives” (Zăvoianu, 2015, p.1). Therefore evolutionary algorithms are needed to address the multi-objective optimizing problems (Zăvoianu, 2015, p.153).

The following table gives an overview on how the Wisdom of Crowds could contribute to a WMT:

The Wisdom of Crowds	
Definition	Solutions for problems solved through a crowd (defined or undefined group of people) in Web 2.0 and available for whoever needs these solution.
Monetary Costs for human workers	Low
Human Interaction (slowing down computer driven tasks)	If not enough humans available time consuming, If enough humans available very fast
Result Quality (influenced by human mistakes)	High accuracy
Current Wisdom Definition of “Wisdom of Crowds” according to this thesis	No
Knowledge generated automatically	No
Measurements of actions possible	Yes

Table 21: The Wisdom of Crowds - quick facts (Park, 2014, p.1)

In what context and how, would the Wisdom of crowds be the source to achieve wisdom meaning knowledge combined with the ability to understand, the skill to perform difficult tasks, experience (long period) and judgment that lead to good decisions which can be seen in actions?

Current Wisdom of Crowd technologies

"Technologies such as these collect, maintain and disseminate information provided by users to establish reputations and recommendations for practically everything – high schools, restaurants, doctors, travel destinations, and even religious gurus" (Kremer & Perry et al., 2013).

Current examples can be: Amazon (Amazon, 2016), Trip Advisor (TripAdvisor, 2016), Dining Advisor (Miami.Com, 2016), Doctor Evaluation (Mein Arzt, 2016) and many others.

5.2.4. Conclusion on possible current new technologies for a WMT

New technologies such as the Wisdom of crowds, collective intelligence (social and cooperative intelligence), guided crowd sourcing and corporate crowdsourcing could be one answer to the future demands of managers for a suitable WMT.

A short summary following Park's categories (Park, 2014, p.1) of the major pros and cons on these innovative technologies are:

New technology	Pro	Contra
Wisdom of Crowds	• Low Monetary Cost • High Accuracy • Human Interaction needed • Justified knowledge input possible • Verifiable action measures possible • Computer driven decisions are much faster and highly accurate	• Algorithms to define cooperate group not found yet
Collective Intelligence: Social and Cooperative		
Crowd Sourcing: Guided Crowdsourcing Cooperate Crowdsourcing		

Table 22: Pros and Cons of Cutting Edge Technologies considered for a WMT

All three new technologies such as the Wisdom of Crowds, Collective Intelligence (Social and Cooperative) as well as Crowd Sourcing (guided and cooperate Crowdsourcing) have many positive aspects that would be beneficial for a WMT. The contrary aspects such as not yet developed algorithms that could define cooperative groups need to be solved. The fact that human interaction is needed can be contrary if missing humans are slowing down the system, but it is also positive if humans are available and can give their input. Due to the fact that human interaction in WM is highly demanded (see chapter 5.2, p.38), "human interaction needed" it is not implemented in the contra.

5.3 Combined research findings of the semi-structured qualitative interviews

This section introduces the research finding from the semi-structured qualitative interviews. The section follows the order of the interview questionnaire, which at the same time follows the order of the research questions that will be answered in chapter 6, when the research findings are merged.

5.3.1 General information on interviews

All planned interviews (n=18) could be conducted as intended and the interviewees had generally a high, interested, excited attitude towards the interview. The atmosphere in all interviews was ranging from welcoming to warmly welcoming and the interaction during the interviews was intense. All interviews arranged could take place with the managers of the highest level except in one case, where a manager sent a personnel manager from the low level, and in one case, where the manager interviewed was from the medium management level. In both cases, it did not affect the interviews nor the outcomes of the interviews. The results of all questionnaires can be seen under Appendix 3.

Confidentially statement: Due to confidentiality constraints, the actual interview transcripts were not made public, but their anonymized version can be shared for research purposes upon request.

5.3.1.1 Demographic background of interviewees (Interviewees profile)

Out of an infinite number of possibilities to investigate, a segment of available as well as representative selection of managers was chosen for the semi-structured qualitative interviews.

From the 18 managers chosen to be queried, all 18 did participate in the interviews. While most interviews were conducted face to face, some took place via Skype (Skype, 2015). All interviews were transcribed and recorded simultaneously to the interview and typed in later (while back checking the recordings). The data transcription was checked again at the analysing stage, when transferring the data to the analysing tool. Due to the small number of interviewees the response rate of 100% can be seen as the optimum sample size (Survey Monkey, 2016, Sample Size Calculator).

	Personal interview "Face to face"	**Online Interview "Skype"**
Managers surveyed	14	4
Response rate	78%	22%

	Personal interview "Face to face"	**Online Interview "Skype"**
General Response rate		100%

Table 23: Research response rate (n=18)

The table shows that the response rate was 100%. 78% managers were interviewed face to face whereas 22% of managers were interviewed via Skype (Skype, 2015).

The age group of the managers interviewed can be seen in the following graph:

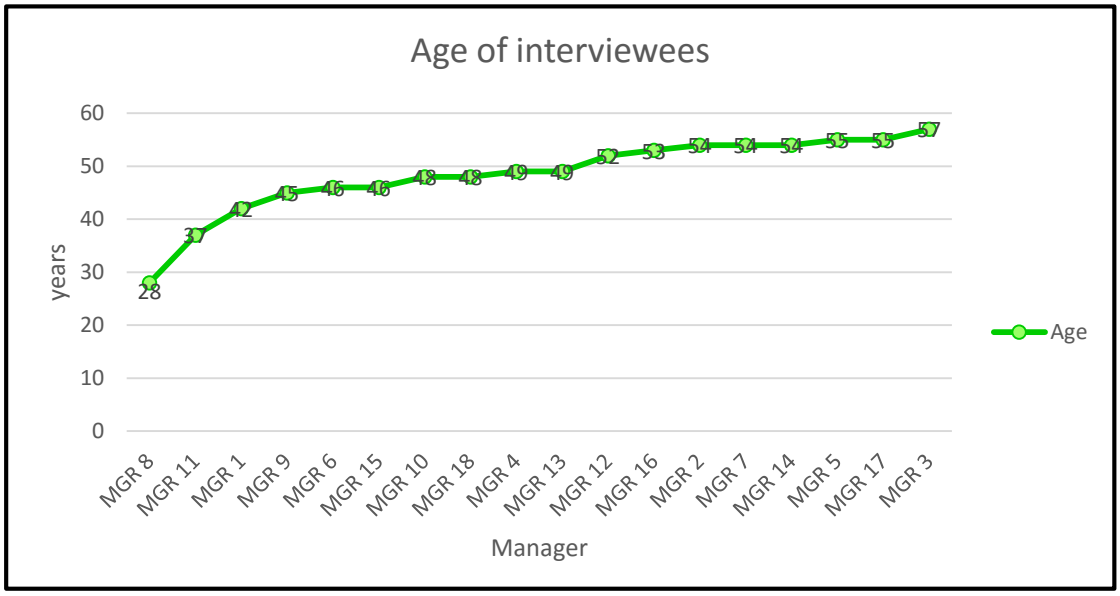


Figure 16: Age of interviewed Managers (n=18)

It can be seen that only two managers were under 40 years old. 8 managers were between 40 and 50 years old, 8 managers between 50 and 60 years old. The age of the managers did not correlate with their experience. In terms of experience in managerial activities most managers interviewed were working in management for over 5 years:

Work Experience in Years	**Unique Respondents**	**Response Rate (%)**
Less than 5 years	2	11%
Between 5 to 10 years	7	39%
Longer than 10 years	9	50%
Total	**18**	**100%**

Table 24: Work Experience of Interviewees in Years (n=18)

50% of interviewed managers had more than 10 years of experience. The second largest group had between 5 to 10 years of experience. The smallest group had less than 5 years of experience. The following table shows the management level the interviewees were engaged:

Management Level	Unique Respondents	Response Rate (%)
low	1	6%
medium	1	6%
high	16	89%
Total	**18**	**100%**

Table 25: Management level of Interviewees (n=18)

It can be seen that 89% percent of the managers interviewed are a high management level. The manager working at the medium management level was interviewed due to the fact that he was working at a big IT company as an IT development manager, which had the prospect of giving helpful insights for the further research on a possible WMT. One occupied manager (at the high level) sent her personnel manager from the low level to the interview. The researcher was not informed in advance, but as she was to go through the interview under the authority of the high management level the interview was conducted. The results were then checked and it could be observed that they did not differ from the other interviews results. Therefore they were included into the research findings.

The managers interviewed were divided into two groups of organizations and the same amount of managers was interviewed in any of the organization groups and also organization sizes:

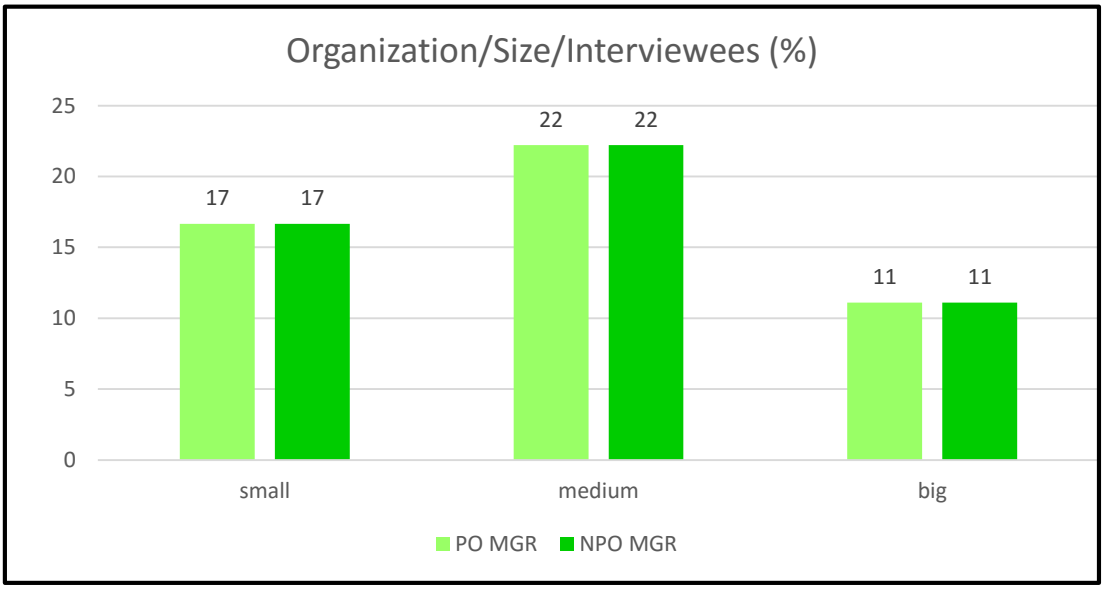


Figure 17: Managers interviewed by organization (PO/ NPO), Size and Amount of interviewees (n=18)

Among the 18 managers interviewed, 17% came from small profit organizations, 22% from medium size profit organizations and 11% from big profit organizations. The same applies to the non-profit organization managers who were queried.

5.3.2 Defining wisdom

The section of the questionnaire 'defining wisdom' aimed to find an answer to RQ2: What does wisdom mean? (Generally and especially for managers?)

5.3.2.1 How do managers define wisdom?

In investigating the wisdom definitions of the interviewees in the qualitative approach of question 2.1 (questionnaire), the following findings can be shown:

Concept of certain aspect in Wisdom definition	Number interviewees mentioned concept	Additional information
Experience	10	This term was combined with age and life experience in four mentions
Decision	9	This concept was twice mentioned together with the expectation of sustainable results
Knowledge	7	
Action	6	This term was combined with the concept of doing something "right" and "accordingly"
Intelligence	6	
Interpret reality	4	This concept was mentioned in combination with world view, religion, etc.
Right time	3	
Feelings	3	Feelings were mentioned in combination with gut feelings, heart and empathy
Learn	2	wisdom seen as something one can learn
Insight	1	
Skills	1	

Table 26: Concepts of Wisdom Definitions of Interviewees (n=18)

All interviewees understood the term wisdom as being a combination of multiple aspects of the concept such as displayed in the table above. Interestingly there were certain types of managers who preferred certain combinations of concepts. Due to the analysis of the first ad hoc brainstorming of their Wisdom definition, all 18 managers can be grouped in three types of "Wisdom definitions":

Type 1 "Wisdom definition": Wisdom are decisions based on experience and knowledge

Type 2 "Wisdom definition": Wisdom means doing the right thing at the right time

Type 3 "Wisdom definition": Wisdom is experience and insights combined with feelings

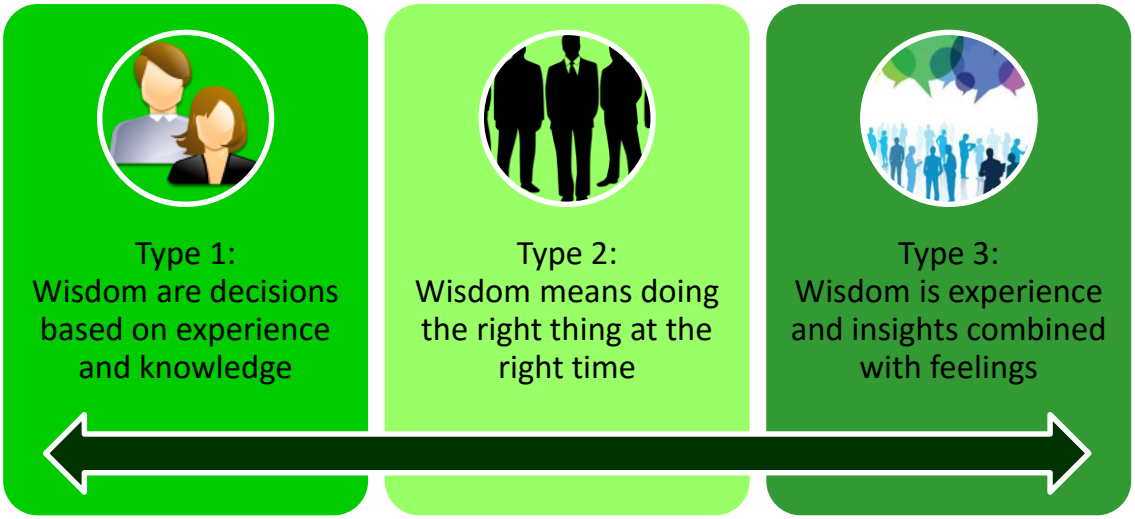


Figure 18: Three types of wisdom definitions

Through the answers to question 2.1 the researcher could determine three types of wisdom definitions that occur among managers. Whether these findings have evidence, might be seen through the answers to question 2.2.

5.3.2.2 Combined concepts in Wisdom definition of managers

Under question 2.2 the interviewee could check the boxes which s/he thought contain the concepts of the manager's Wisdom definition. The results are as follows:

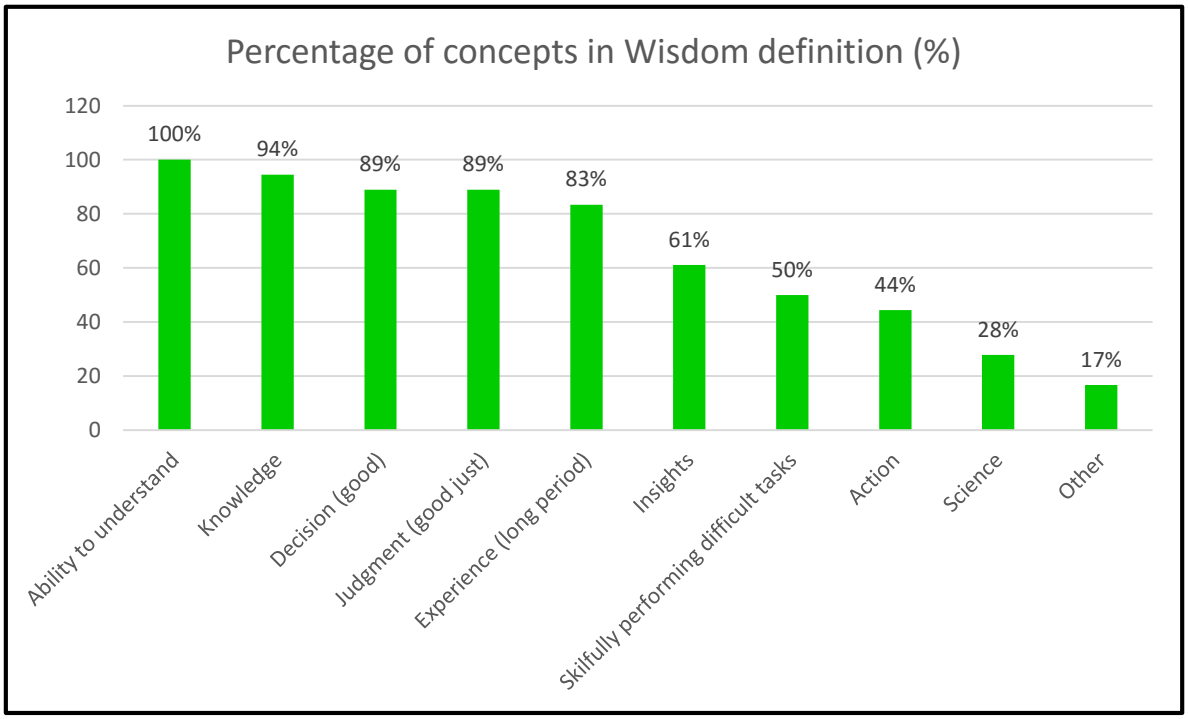


Figure 19: Percentage of concept in Wisdom Definition (n=18)

The evaluation of the Wisdom concepts of managers interviewed show that all Wisdom definitions (100%) contain the concept of "the ability to understand". This concept is followed by the concept of "knowledge" (94%) and the concept of "good decision" and "good judgment" (89%). 83% mention "experience" followed by "insights" (61%) and the concept of "skilfully performing difficult tasks" (50%). Interestingly, 44% of checking show, that "action" is not as important in the concept. 50% of managers think that action is the outcome of wisdom and not the means of wisdom.

In terms of trying to find out whether there is a definite tendency towards the three wisdom types, one can determine a tendency of managers checking the concepts of experience and knowledge also check decision (Type 1). The Wisdom definitions that seems to combine the concept of action, skilfully performing difficult tasks, judgement (good, just) and decision (good) suggests that these managers tend to see wisdom as doing the right thing at the right time (Type 2). All who checked insights also checked experience and good decision. Many of those checking all three of the previously mentioned boxes also checked skilfully performing difficult tasks. This can be seen as some evidence towards the Type 3 definition of wisdom as experience and insights combined with feelings.

Due to the fact that the research approach was a qualitative one and there were too few probands to prove any hypotheses it is suggested that further studies design a quantitative approach to prove whether the assumption that there are three types of wisdom definitions among managers could be true.

5.3.2.3 Wise versus unwise decisions

In order to get a basic idea what managers perceive to be a wise versus an unwise decision question 2.3 asking, Can you think of an example of a wise versus an unwise decision? Can be concluded as shown in figure 20:

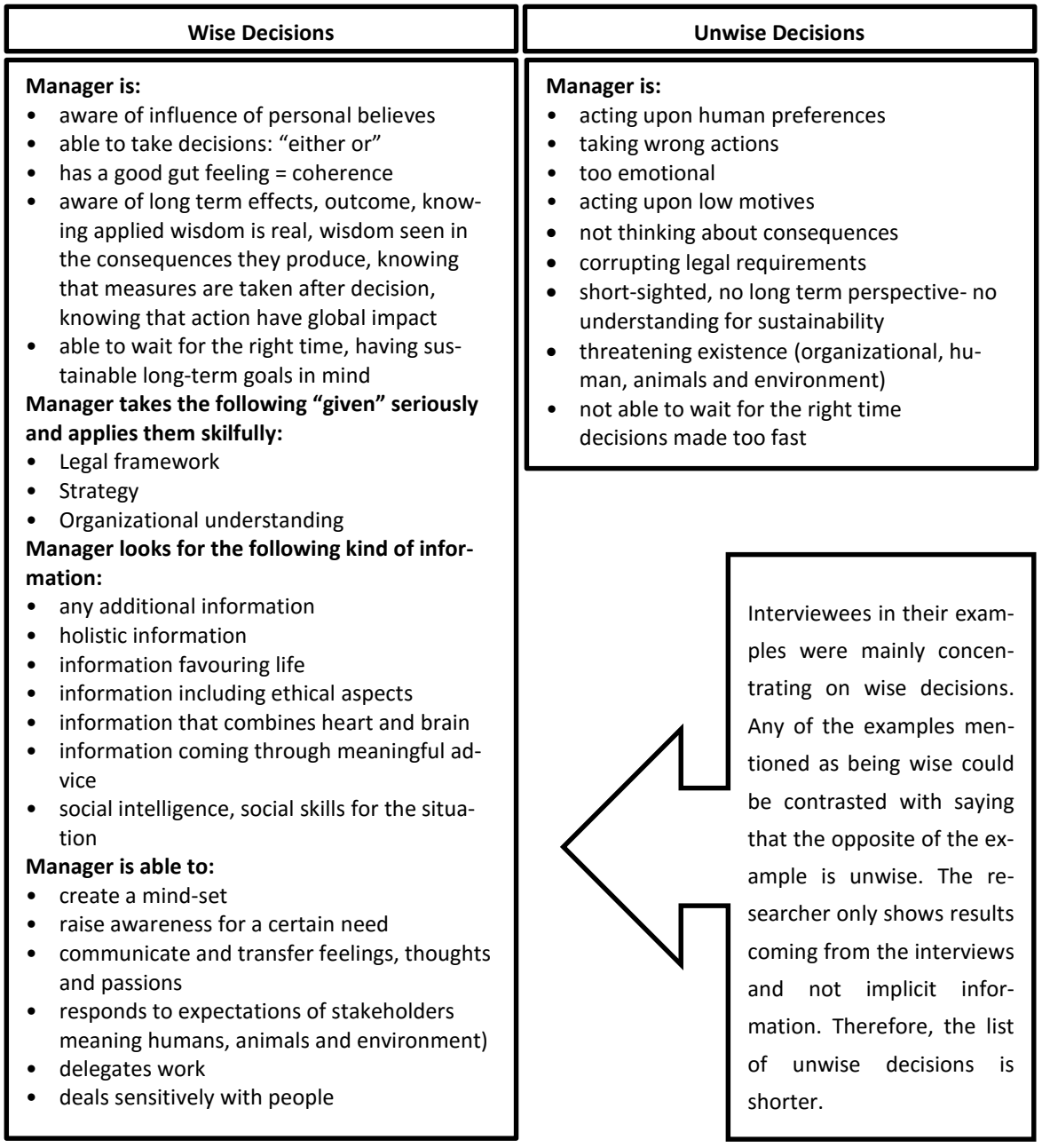


Figure 20: Wise versus unwise decision (n=18)

5.3.2.4 Wisdom for managers needed

Question 2.4 asked managers whether they think if wisdom for a manager was needed in order to perform well. 94% of managers (n=18) answered with "yes", 0% answered with "no" and 6%

of managers could not decide whether wisdom for a managers was needed in order to perform well. One manager added that some issues were daily essentials that can be handled by knowledge and/or experience without specifically having wisdom.

5.3.2.5 Current Wisdom generation sources of managers

Currently managers generate wisdom through the following sources:

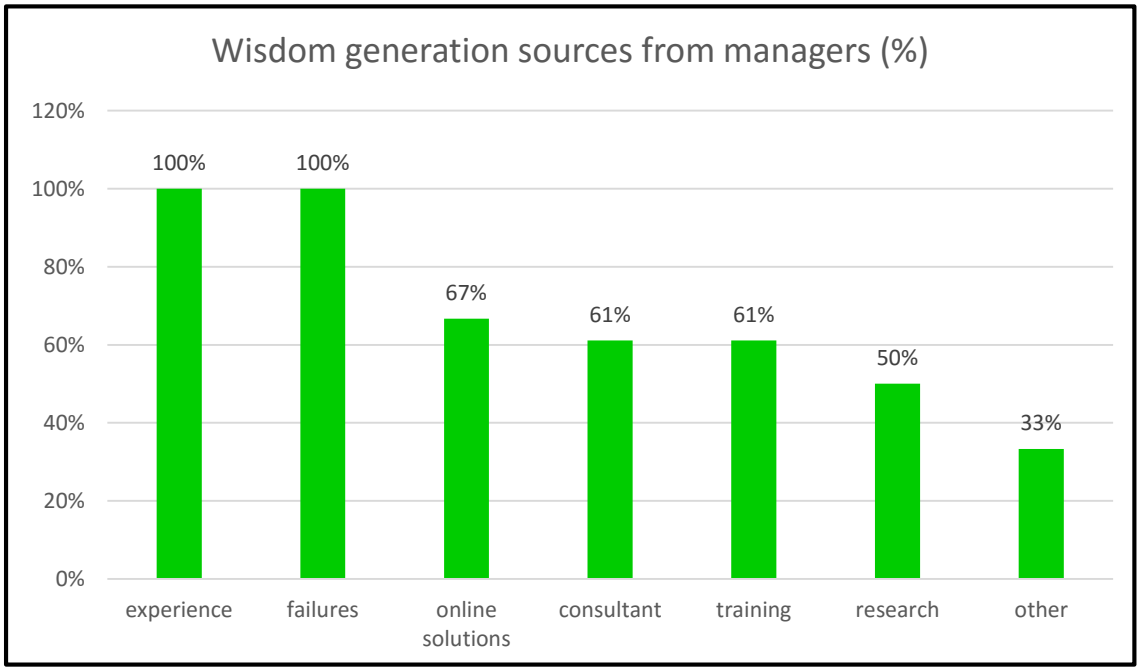


Figure 21: Managers Wisdom Generation sources (n=18)

The figure above shows that 100% of the interviewed managers (n=18) generate wisdom through experience and failures. 67% generate wisdom through online solutions. 61% gain wisdom through consultant advice. 50% of managers generate wisdom through research findings. The 33% percent standing for "other" sources of wisdom were specified through the following sources by the interviewees: Silence, talks, inputs, the Bible, their team, inspirational people, the "best", best practise examples, intensive observation and reflection, other experiences (often looked up online), feedback sharing and receiving, prayer and expert platforms (chronical order of mentions following the interviews order). The author can se that expert platforms could be the link to collective intelligence systems.

5.3.3 Management problems that require wisdom

Under this set of questions the researcher investigated problems that managers perceive as problems that need wisdom. On the basis of the answers given RQ3: "What are the needs of managers (profit and nonprofit) that could be met through a WMT?" will be answered.

5.3.3.1 When managers need to be wise

Question 3.1 was asked to understand when managers need to be wise. The answers show that 78% of all managers (n=18) think that they need wisdom when tackling problems, in decision making, planning, leading and evaluating. One manager thought that all he is doing is "leading" and can be summed up under this term. Therefore, he checked the "leading" box only, while another manager thought that all the boxes would mean "leading" and he did not check the "leading" box. Both could be seen as outliers (further quantitative research needed). Two managers (10%) are not involved in evaluating. Three managers mentioned under "other" that they think they can solve daily problems by standard business knowledge, but that they need "wisdom" for other problems such as non-standard issues e.g. employee problems, stakeholder challenges, etc.

5.3.3.2 Frequency of arising problems or situations when wisdom is needed

Question 3.2 dealt with the question of how often wisdom for a manager was needed timewise.

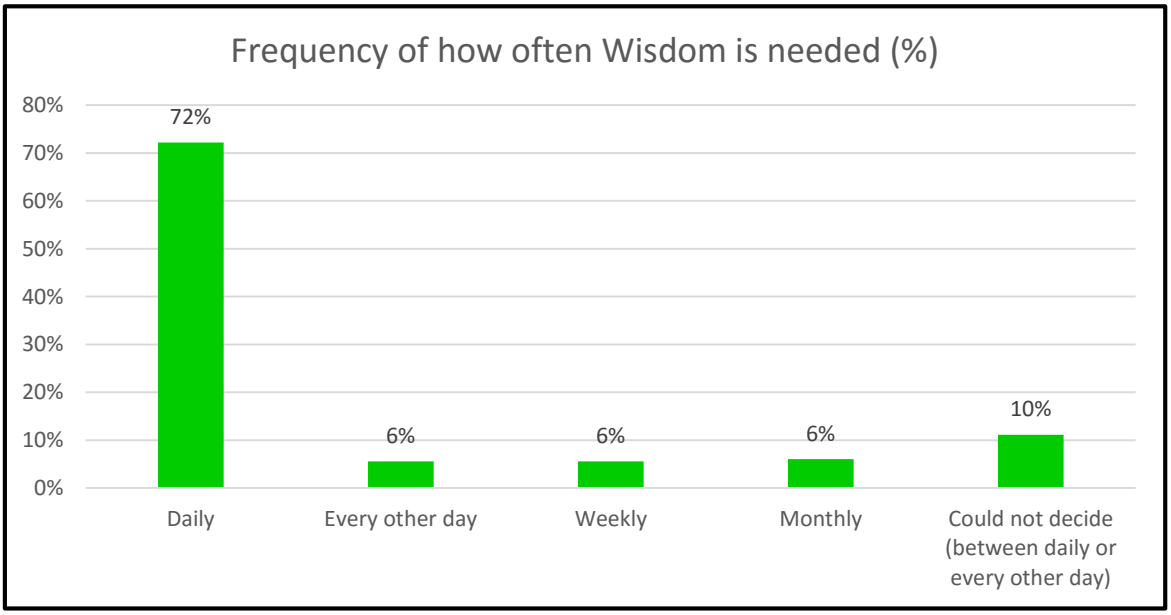


Figure 22: Frequency of how often wisdom is needed (n=18)

72% of managers (n=18) said that managerial problems that needed wisdom arise daily. 6% said that they needed wisdom to solve their challenges every other day, weekly or monthly, respectively. 10% could not decide between daily or every other day. Both of these managers struggling with deciding, were coming from medium size non-profit companies. Further research needed.

5.3.3.3 Tactics of addressing problems that need wisdom

Question 3.3 was asked to learn how managers generate wisdom, when facing an issue that needs wisdom. The results can be shown as follows:

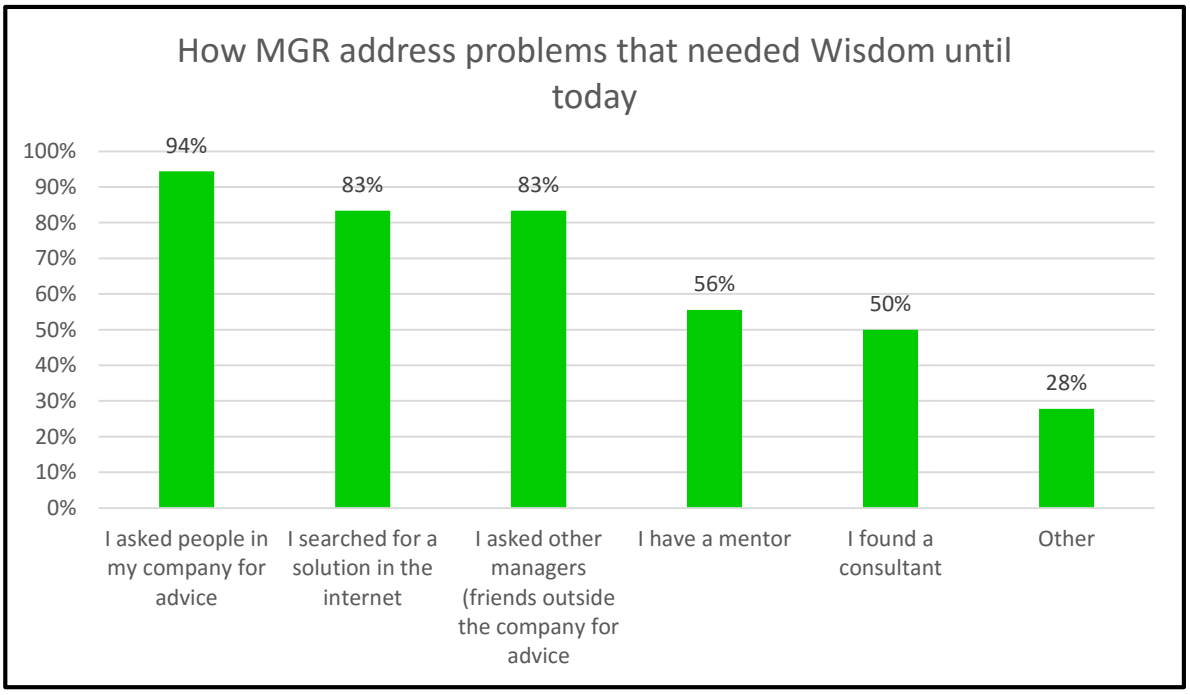


Figure 23: Managerial wisdom need solving until today (n=18)

94% of all managers said that they asked people in their company for advice (although two managers added that they would ask people in their company for their *opinion* not for their advice), 83% searched for a solution on the internet. 83% asked outside the company for advice. 56% said that they had or have a mentor. 50% of those checking the "I have a mentor box" added that they have a mentor on and off and that these relationships are not always helpful. 50% said that they found a consultant. 28% added some other way, saying that, depending on the size of the problem, they use a combination of all boxes. One manager said that for 20 years she has been attending a yearly training in the Buddhist area (for 10 days). This triggers her gut feelings, then she knows that she feels good and how other people are doing. This is again evidence to show that the religious aspects involved are not to be underestimated.

The answers to this question (3.3) can be compared to the research findings of question 2.5 and put into a figure that shows remarkable differences.

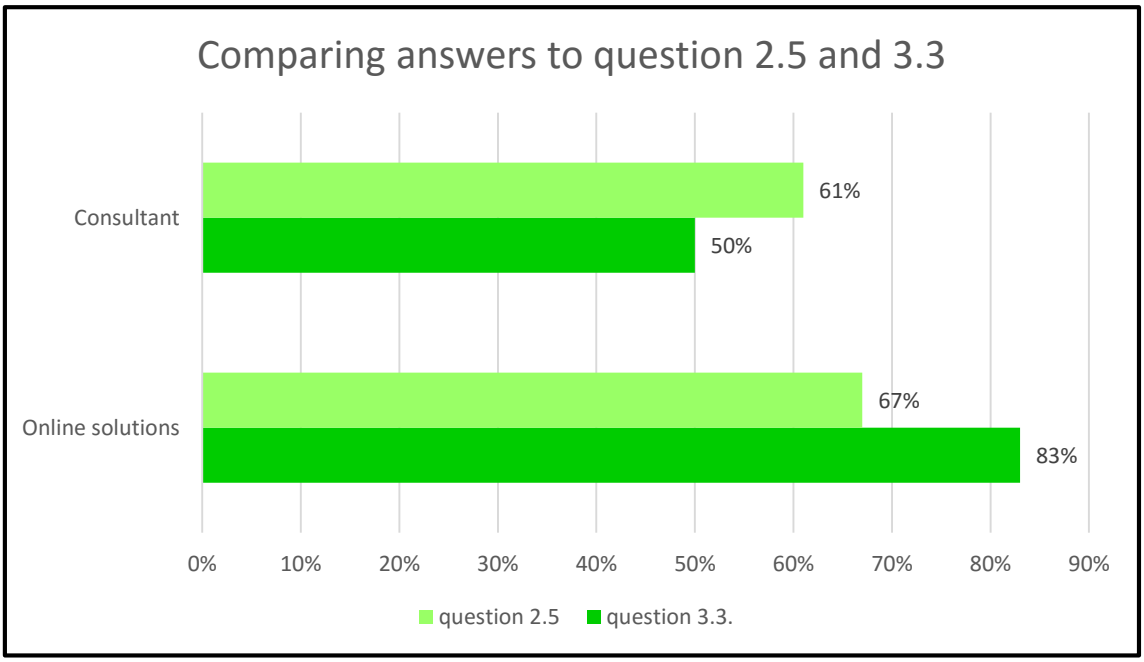


Figure 24: Comparing answers to question 2.5 and 3.3 (n=18)

Question 2.5 of the questionnaire asked, "**How can a manager currently generate wisdom?"** The answer of 61% managers was, that they would address a consultant. 67% said that they would search for an online solution. Question 3.3 worded the same question in a slightly different way- making the question personal, "**How did you address problems or issues that needed wisdom until today?"** Interestingly only 50% said that they used a consultant. Whereas 83% said that they search for an online solution. This indicates that there might be significant differences in the way managers see other managers to generate wisdom, to what they personally actually do. It supports the assumption that a high percentage (83%) look for solutions online.

Comparing the two question sets (2.5 and 3.3) and their answers, it also shows that managers who look for expert help, other managers' help or internal company advice as well as for solutions online. This predicts that there is a high potential for CI technology to meet managers' explicit needs for wisdom.

5.3.4 Current Computer Support for wisdom related tasks

This set of questions helps to answer RQ4: What is currently being offered in terms of WMTs? How are these tools being used? What is missing? How could they be improved to reach a WMT-style service suitable for managers?

5.3.4.1 Computer support for wisdom related task

Question 4.1. shows that 89% of managers (n=18) use computer support for wisdom related tasks. 11% said that they would not use computer support for wisdom related tasks. Additionally 39% of the interviewees said that they would primarily use visualization techniques and sketching in order to support them in wisdom related tasks. They would use those techniques on Flip Charts and white paper lacking computer support in visualisation.

5.3.4.2 Frequency of computer support for wisdom related tasks

How often managers use computers to support them in their wisdom related tasks, can be visualized as follows:

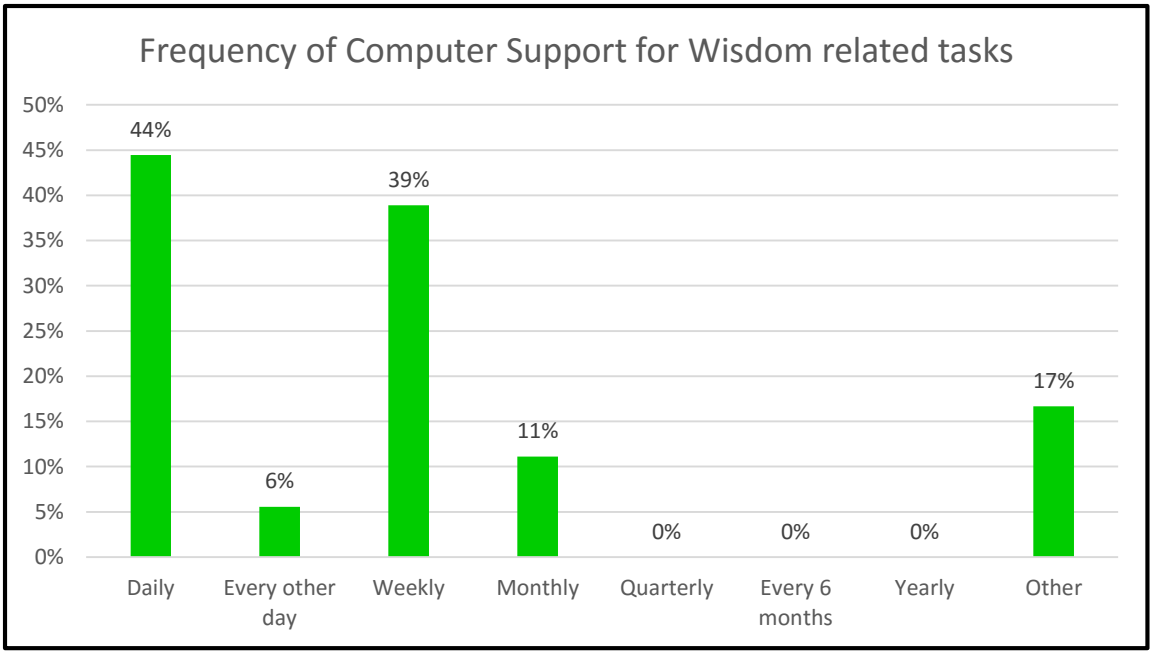


Figure 25: Frequency of Computer support for wisdom related tasks (n=18)

44% of interviewees say that they use computer support for wisdom related tasks daily. 6% use it every other day. 39% use computer support for wisdom related tasks weekly and 11% use it monthly. The 17% of interviewees, who checked “other” could hardly decide or were not using any computer support for wisdom related tasks.

5.3.4.3 Organizational areas addressed with computer support in general

78% of all interviewees (n=18) use computer support for Human Resource, Finance, Project Management, Data Analysis, Organization, Structure and processes. 17% agreed on all the mentioned areas minus 1-2 of the mentioned areas, due to their slightly different role modelling. 6% of interviewees said that they did not use any computer support to fulfil their management role. Further research is needed.

5.3.4.4 Desktop based versus internet based systems

In terms of computer support used for wisdom related tasks it can be shown that managers use desktop-based and internet-based systems:

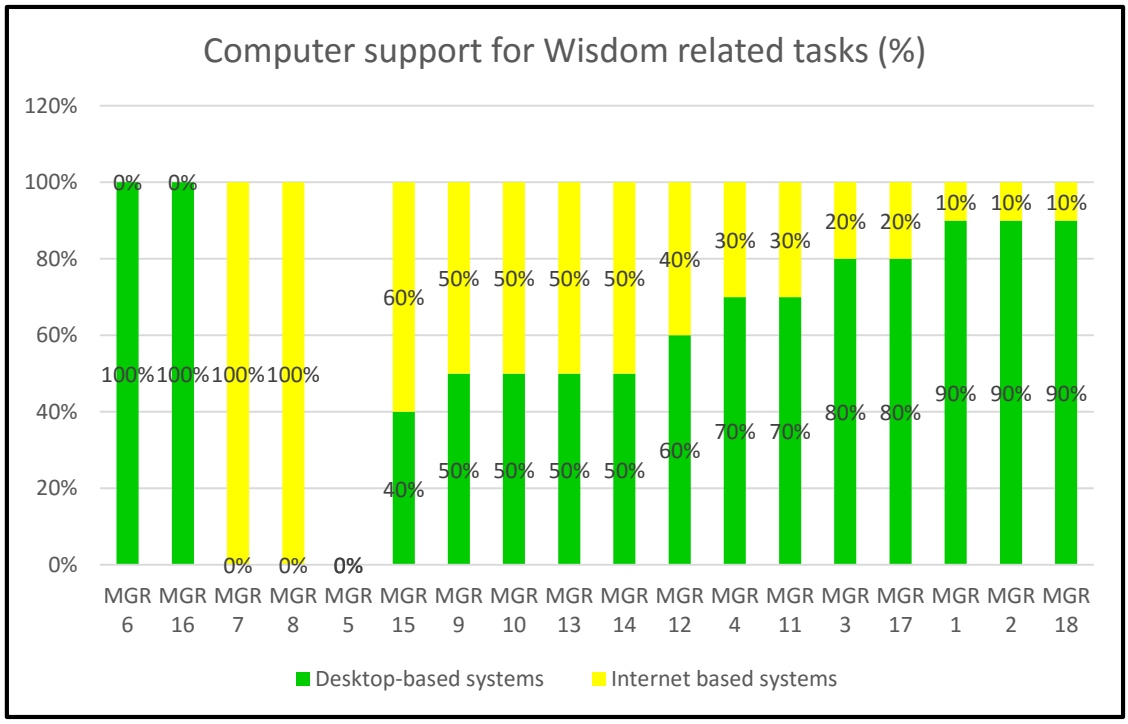


Figure 26: Desktop-based systems and internet-Based systems used to support wisdom related tasks (n=18)

The figure above shows that 2 managers (n=18) are using 100% desktop-based systems (both stressing the importance of data security and system security). 2 managers only use internet-based systems. One manager, who can be determined as an outlier, is not using any computer support for wisdom related tasks. 13 managers are using a combination of both systems in a slightly different percentage distribution. A manager from an IT company said that this question was not asked well- because all their systems are operating in the cloud/ internet already and even the so-called desktop-based systems are not in-house based. The move towards the cloud can be assumed but needs to be tested based on evidence.

5.3.4.5 Limitations of current computer support for solving wisdom related tasks

The limits of the currently available computer support for managers can best be shown in the statements of the 18 managers interviewed:

MGR	Computer Limitations	Human Limitations
MGR 1		I cannot give an answer here, because I do not know what is possible. I would need to know more.

MGR	Computer Limitations	Human Limitations
MGR 2	Current computer support has the tremendous potential to organize data. I look at computer support and I see that it is supplying data in a certain order in a helpful way, but the wise decisions at this point very much depends on the human intelligence and intuition of the manager.	
MGR 3		TIME!
MGR 4	Organizational wise I am coming to my limits with the support offered	
MGR 5	Currently we are operating on all levels in an online system that even helps our customers to interact with us in certain areas. The internet technology enables us to be connected; all our processes are interlinked etc. But I am asking myself the question on which base and by what means is the data being cumulated and interpreted and so on… I totally miss transparency and therefore to make the right decisions, I decide which data to use and which consultant to ask.	
MGR 6	I am missing a toolkit to visualize a problem or tasks. Something, that I can in some form do in PPT, but much quicker, more efficient.	
MGR 7		IT knowledge. Wisdom is more than IT, it is including emotions and that the manager needs to handle.
MGR 8	Time efficiency, the skills to draw. My offline picture should be easily be seen online. I miss experience sharing, face to face interaction, and social as well as emotional information.	
MGR 9		My expertise is in terminating which details from different perspectives of a stakeholder have which influence… human experience and interaction from person to person
MGR 10	The computer has no body, but wisdom needs a body. You cannot know what is good for a human if you do not walk in his shoes. You need experience and also a body to be able to determine what is good for people.[4]	
MGR 11	The way the standard cloud functions – every project is different… there are a lot of limitations.	
MGR 12	The managerial wisdom component which deals with people face to face cannot be supplemented by email or anything else. In addition, visualizations in workshops for teams are very difficult if not impossible to do on the computer.	
MGR 13	The human interaction factor is missing. I cannot talk to the computer. There is no atmosphere created. We often sketch or work with cards and Flip Chart, especially when doing group work. Colours, shapes etc. then help to better categorize etc.	

[4] If CI technology is used in a WMT the lack of humans - barrier does not exist any longer

MGR	Computer Limitations	Human Limitations
	we make photos and make sure that the outcomes are somewhere stored in the computer. The computer cannot help us with that analytics.	
MGR 14	Some issues need to be dealt with face to face. You need the feelings and to grasp the human component.	
MGR 15	The current computer support is too complicated and too time consuming. Speed and availability are key limitations to me.	
MGR 16	The systems are not easy enough. Too complex, too complicated, too time consuming…	
MGR 17	No discussion possible, no feedback, no reflection → personal level missing	
MGR 18	You have to look at 10 different documents (sources) and you need to cumulate the information yourself. I miss solutions that come from cumulating different sources for a certain issue.	

Table 27: Limitations of Computer support for wisdom related tasks (n=18)

The way managers describe the limitations shows their need. Grouping these limitations one can accumulate the following limitations:

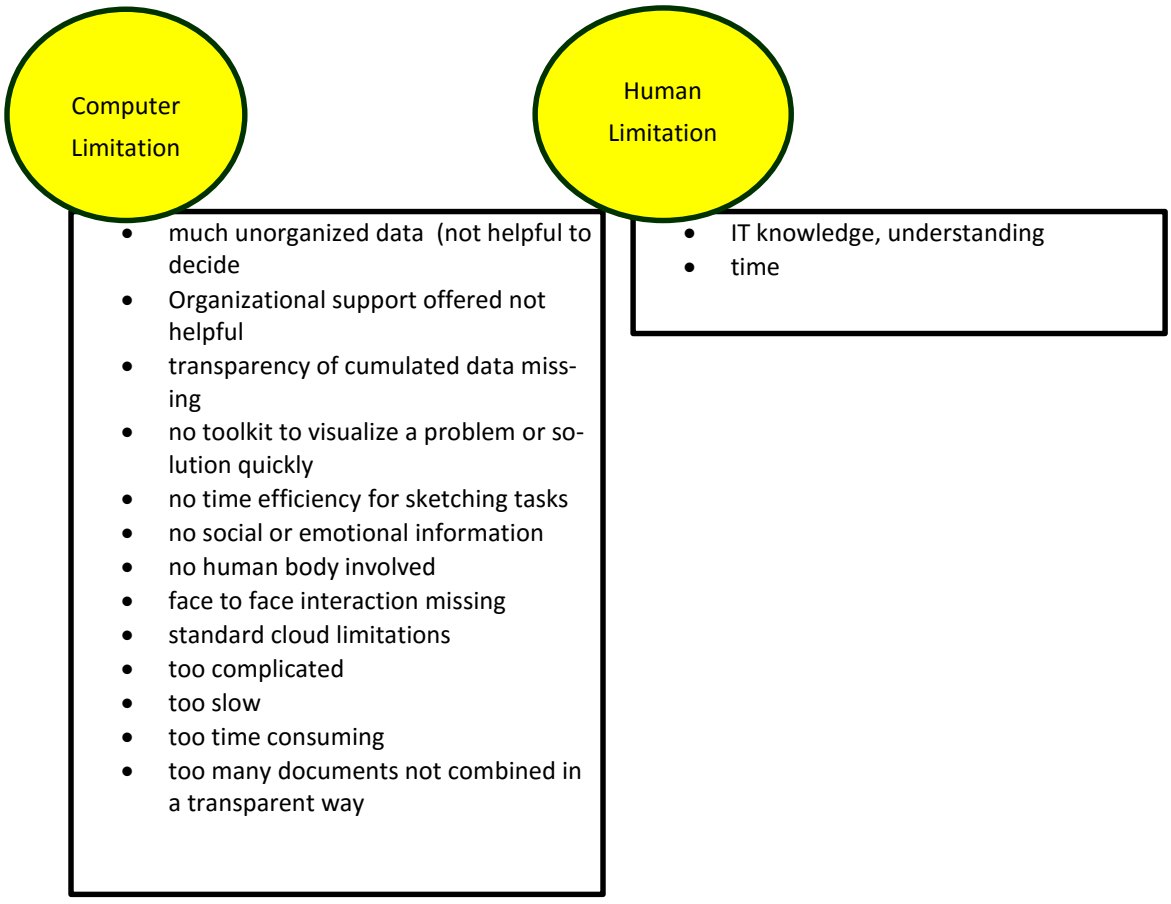


Figure 27: Limitations of current computer support for wisdom related tasks (n=18)

5.3.5 The Wisdom Management Tool

The set of questions concerning a possible WMT was designed to answer RQ4: How could they be improved to reach a WMT-style service suitable for managers? and RQ5: What do managers require from a WMT?

5.3.5.1 WMT area of application

Question 5.2. was asked in order to figure out in which organizational areas managers would use a WMT.

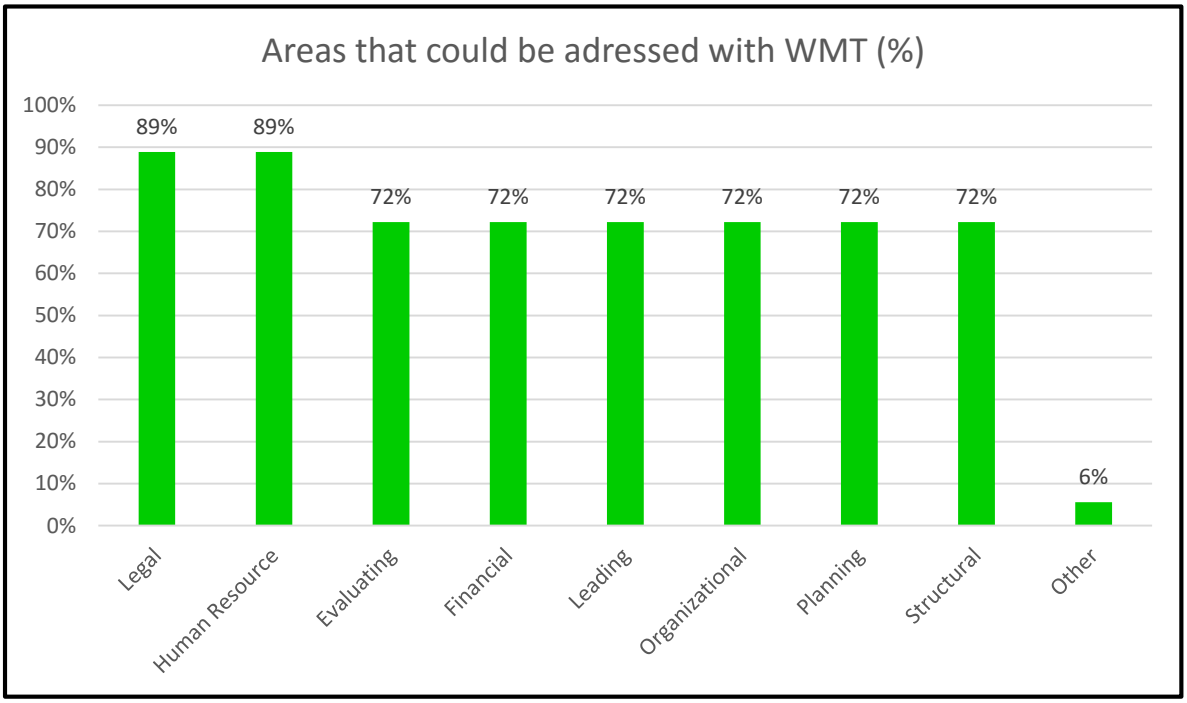


Figure 28: Areas that could be addressed with a WMT (n=18)

The figure shows that 89% of managers (n=18) would use a WMT for the legal and human resource area. 72% would use it for evaluation, finance, leading, organization, planning and structural areas. 6% of interviewees checked the "other" box adding additional information on how complex he thinks the concept is but not referring to the asked question in specific.

5.3.5.2 Managers expectations for a WMT

The interviewees, when asked for their expectations answered that they would expect the following from a WMT:

WMT Outcome Expectations
• Answers to my questions
• Getting a wider horizon
• Achieving a larger context
• Triggering of my thinking process

WMT Outcome Expectations
• Various solutions being offered
• Reduction of complexity by solutions being offered
• Wisdom for the HR area
• Flying higher (getting a bird's perspective) to make better decisions
• Broader base for decision making
• Seeing what others consider as very relevant and important
• Personal solutions
• Highest possible diversity in solutions (not differentiating PO/ NPO)
• Visualizations of my problem
• Visualization of possible solutions
• Quick solutions
• Rational
• Confidential

Table 28: WMT Outcome expectations (n=18)

WMT Features Expectations
• Wisdom function that can be adapted with any request (personalized and adaptable for any case) Wisdom function needs to be specified (culture, region,…)
• Best practice examples
• Evaluation feature
• Combined information from database sources
• Face to face interaction if my problem is unique and special help in solving it online (face to face)
• Real leaders active in the tool (inspirational people)
• Ranked solutions
• Legal requirements taken in consideration and shown for any solution offered (legal aspects for another country we are operating in added) (high court decisions added as well…)
• See what can be seen by others
• Decide if I want others to see my feedback or if I want to keep if for my reference only
• E.g. Conflict Management requests: Conflict culture in other nations considered
• Measurable functions
• Tool determines whether I am stressed and offers solutions for that (heartbeat function…)
• Key assumptions transparent (politics, socio - political, economical…)
• Solution containing of what sources - transparent
• Feedback option
• No links, just solutions
• Print function
• I can insert my own markers
• Personal history tracking

Table 29: WMT Feature Expectations (n=18)

WMT Design Expectations (User Experience)
• Simple structure
• User - friendly
• Easy to handle
• Voice recognition and understanding
• Simple user journey

WMT Design Expectations (User Experience)
• Time saving
• Beautiful and simple
• Colourful
• Interactive (can talk to me)
• Music (music helps to relax)
• Triggering my learning experience

Table 30: WMT Design expectations (n=18)

5.3.5.3 Importance of certain content of WMT

Under question 5.3 the interviewees were asked what they perceive as being an important content of a WMT. The following figure shows the importance of certain contents:

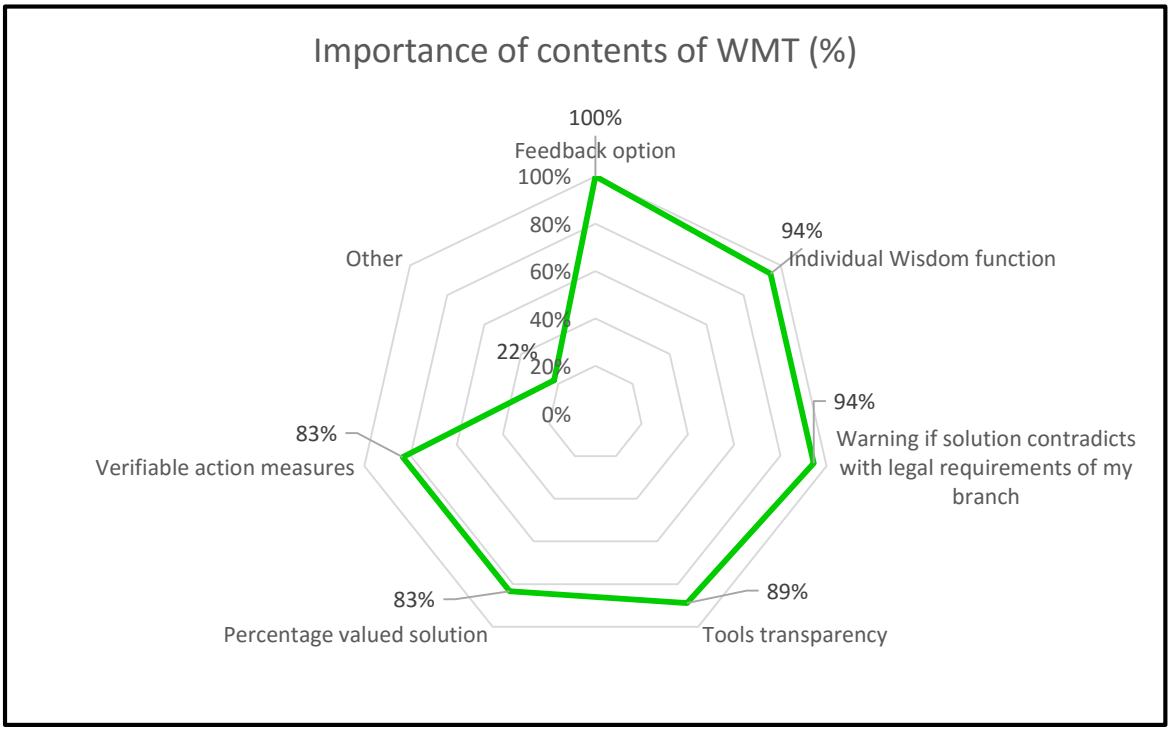


Figure 29: Importance of contents of WMT (n=18)

It can be seen that the feedback option is important to 100% of managers (n=18). The individual wisdom function is important to 94% which is also true for the warning if the solution contradicts legal requirements of the branch. Tool transparency is important to 89%. Percentage valued solution and verifiable action measures are important to 83%.

Additionally two managers insisted that the tool should be explicit in that the responsibility to implement a solution utterly is upon the manager in charge and not the tool. One interviewee said that the tool should show social, ecological and human right components, as well as cultural

no-goes. 83% of managers (n=18) thought that there should be a general wisdom function (personalized at the beginning – when working with the tool) and a specific wisdom function (which can be personalized with any request).

5.3.5.4 Willingness to use a WMT

Question 5.4. was asked to see if managers could imagine using a WMT as previously introduced. 94% of managers (n=18) said "yes" they would use such a WMT. 6% of the interviewees said that they could not decide whether they would use it, "because it is a very new field – I wonder if such a tool could be sophisticated enough. I studied linguistics years ago and at that point, we were talking about artificial intelligence being able to do immediate translation while one was speaking over the telephone in German, the other person would hear the person speaking Japanese at the other side of the line. I think until today we are not there…" (MRG 2, I2) 33% of interviewees added when saying "yes" that they would try the WMT and if it works, they would continue using it.

5.3.5.5 Trusting a WMT

Question 5.5. was asked to learn what would make managers trust a WMT:

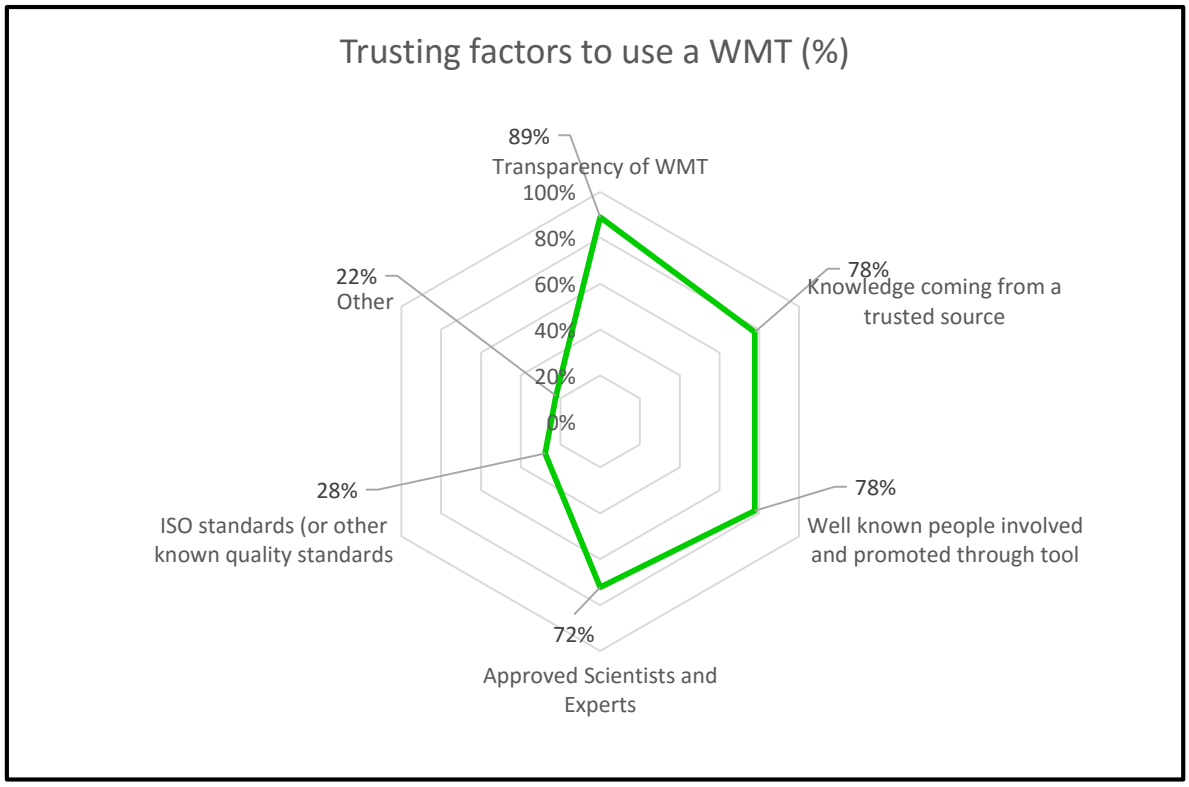


Figure 30: Trusting components for a WMT (n=18)

The figure above shows that 89% managers (n=18) think that the transparency of the tool (the tool showing from which sources the tool produced a certain solution) would make them trust the WMT. 78% say that if the knowledge used in the tool is coming from a trusted source they

would trust it. 78% said that well known people involved and promoted through tool would make them trust the WMT. 72% said that trust would come through approved scientist and experts. Only 28% said that any kind of quality standard would make them trust the WMT. 22% said that other means would make them trust the tool, such as their own trial-and-error experiences with the tool, a desired output, outcome or impact, the crowd or the word of the mouth and success stories as well as best practise examples.

5.3.5.6 Advantages of WMT

The advantages that can be seen by the interviewees of using a WMT can be shown as follows:

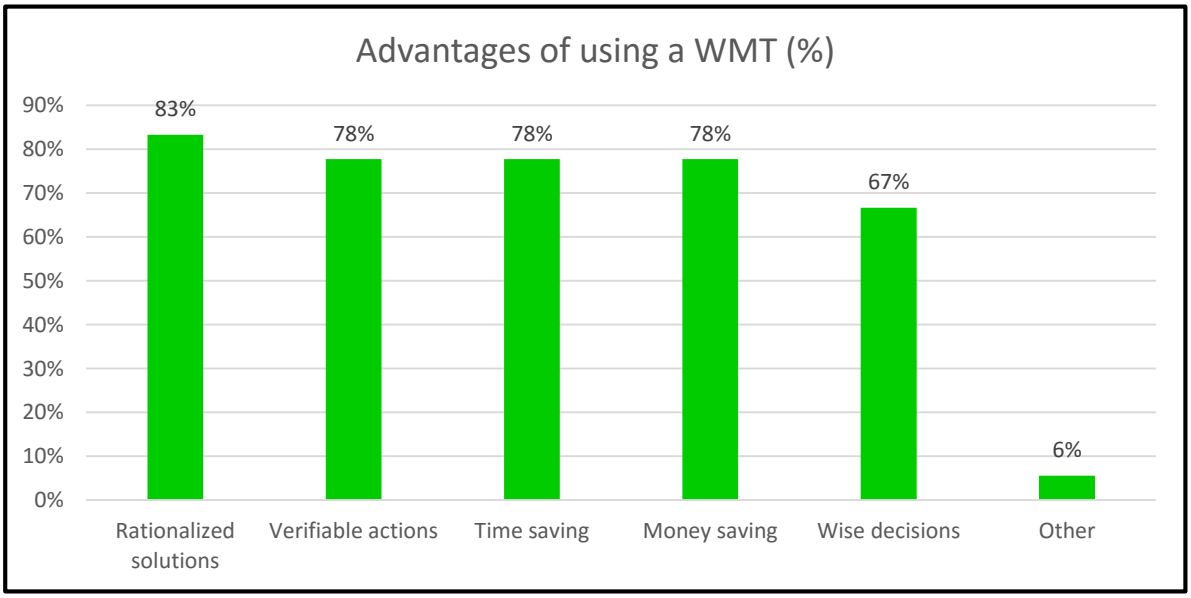


Figure 31: Advantages of using a WMT (n=18)

83% managers (n=18) said that they can see the advantage in getting rationalized solutions. 78% said that they would see the advantage of verifiable actions. 78% could see that a WMT is time saving and 67% said that a WMT would have the advantage of wise decisions. 6% said that they would not say “wise decisions” but “wiser decisions”.

5.3.5.7 Additional words from managers about a WMT

Most of what the interviewees answers to question 5.7 were already mentioned under section 5.3.5.2. (Expectations of managers). Therefore, only the additional not yet analysed answers are shown here.

General words:

- The idea of a WMT seems to be taking people into a different kind of world.
- I guess that managers between 20-35 years may be much more close to such a tool.
- I imagine me having a problem and 10 other managers answering, how they would solve that problem. Then I really like the solution one manager gave. I can contact this person

and interact… this would be a totally new form of networking (somehow like Xing) but much more advanced and interesting.

- It is tackling a very difficult complex task- I need a tool for managerial problems – which is kept general… I do not need so much wisdom for my branch- because I can get statistics and best practise for my branch easily, but for managerial problems, which I assume are the same in every company, I cannot get wisdom until today… this would be really interesting.
- It will use a lot of people who will need to give a lot of input (not so much output) at the beginning- this will create wisdom long term.
- The more managers use it, the better the tool will be.
- If many managers of big companies use it for one year the output will be highly relevant because their experience will create and generate wisdom.
- The idea is magnificent.
- "Wisdom comes on silent soles." This means that as soon as it can be of use for many even with very few functions it will make its way….
- The idea is brilliant. The WMT would change branches, regions, tremendously.
- A computer does not know feelings and it will be a challenge to manage and process the flood of data. Artificial intelligence will enable the tool to continuously learn and improve; that will be key.

In continuing with the idea of a WMT please consider:

- WMT needs to have a great freedom: (if I want to see the 10 best solutions- fine. If I want to see 100 solutions – fine too.).
- A WMT needs to be easy, simple and personal.
- This tool needs to be very complex and very extensive.
- I think the tool should ask the managers community how it can best become the wisest tool. Invisible people are often very wise but their wisdom cannot be generated for they are not seen. The tool needs to be successfully implemented therefore it should start with 2-3 functions which can be used and get input from and by the crowd and analysed so that it can be of use to as many as possible right from the start.
- It needs to start with the coolest app.

Thoughts from philosophy, religion, politics:

- I can see that it makes sense for any standardized solution or for any usual managerial problem that one tackles. But there are problems that are happening with a lot of tension and in this area of tension one needs to get God's sight and God's will and for these problems I am sure you need more than one tool.

- Please make sure that wisdom and intelligence are not confused. A WMT corresponds to experience. For example: Mobility: - It is wonderful that the individual traffic can work very well by these new technologies. But there is the emotional factor. The factor that people in traffic come to terms with each other. One does contradict legal requirements, the other makes up for it by how he drives. If this wisdom was missing, it would be a provocation. Self-driving cars, cannot diminish error sources. I believe in the personal creativity. An element of wisdom, which fosters human interaction and the creative element.
- I really need to know the key assumptions in politics, economy and socio-politically, in order to get valid information. You need to make sure that it continues to be a tool and that it does not start to become independent. I want to stress again that a political wisdom function is important. There are certain trade politics, which influence development work and undermine development goals. The solutions offered by the WMT, for managers of development agencies, would be of no use, if the political view is not put into the wisdom function at the beginning of the solution finding process. The same is true for the economy wisdom function. It needs to be there.
- The tool needs to be based on a Christian biblical fundament. It cannot just be scientific, secular, but I would want to know that the basic assumptions are Christian. My company is not secular and I want solutions that are fit for my company. Christian values. The tool needs to use sources that I would usually use as well….

5.4 Conclusion

The key results of the result of chapter 5 were presented in three blocks of research findings. In the first block “Current Wisdom Management Tools” were discussed and it could be determined that so-called WMTs that are on the market today, do not fit the wisdom or wisdom management definition of this thesis. It could be seen that these WMTs lack transparency and do not incorporate CS or CI technology. They do not fit the wisdom definition of this thesis and the author assumes that they can therefore not be called WMTs. The second block introduced new technologies that seem to be suitable for a WMT. Here Collective Intelligence, Crowd Sourcing and the Wisdom of Crowds were introduced. These evolving technologies have great potential and are even today shaping and influencing ISM. If CS, CI, or Wisdom of Crowds technologies could be implemented into a WMT the author predicts a have a high potential for the WMT to be the optimum support for WM. The third block introduced the “Combined Research findings of the semi-structured qualitative interviews”, showing what wisdom means for managers, the needs of managers (profit and nonprofit) that could be met through a WMT, current usage of computer support of managers for wisdom related tasks and how managers want a WMT to look like.

6 CONCLUSION

In concluding the thesis, the finishing chapter answers the main and secondary research questions. Along the research questions the reader is provided with a concise overview, on what the research could accomplish. It also shows the scope of contribution this thesis provides, to ISM. Finally it gives an outlook on future research perspectives and finishes with prospective concluding thoughts of the author.

6.1 Summary of Research Questions answered

As a summary, the researcher follows the outline of the research questions starting with RQ 2, RQ3, RQ4 and RQ5 and finally finishes with the main research question RQ1 (see chapter 1.2). by this means the researcher introduces the achieved objectives (see chapter 1.2).

6.1.1 What does wisdom mean?

The section of the questionnaire 'defining wisdom' was meant to find an answer to **RQ2: What does wisdom mean? (Generally and especially for managers?)** Comparing the findings from literature research in chapter 2.9 and the findings gained through the qualitative semi-structured interview section concerning managers' wisdom definition the following can be concluded:

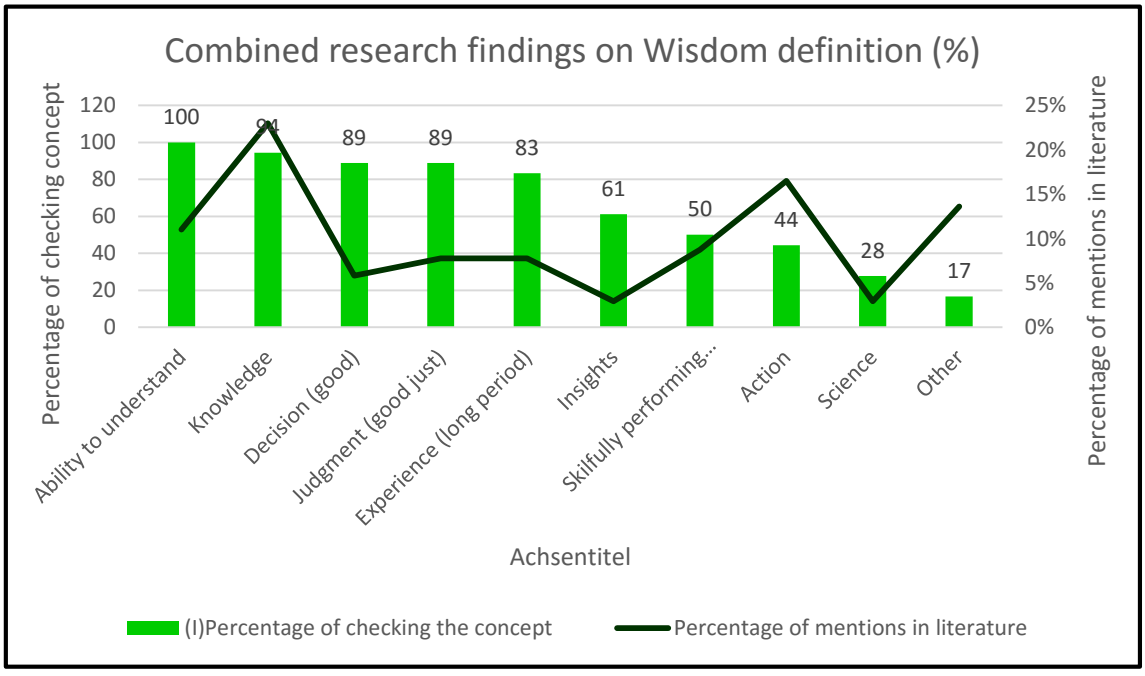


Figure 32: Combined research findings on Wisdom definition (n=18 for percentage checking the concept and n=103 for mentions in literature)

The results of the semi-structured qualitative interviews show that the definition of wisdom in literature as it can be seen under chapter 2.9 cannot simply be applied for managers. One major

outcome of the research is there is evidence that the definitions of managers for wisdom contain the same concepts as seen in literature.

This is also be supported by managers' statements about wise versus unwise decisions. Managers evaluate if a decision was wise by the outcome of the decision and the impact it had (sustainability). Therefore the following wisdom definition can be concluded from literature and interview research and meets the requirements of **O2: Propose a definition of wisdom for managers:**

Wisdom is the ability to understand, knowledge and good judgement combined with experience (long period) and the skill to perform difficult tasks that lead to good decisions, which can be seen in sustainable actions.

This combined definition coming from literature research and interview findings can be shown through the following wisdom graph:

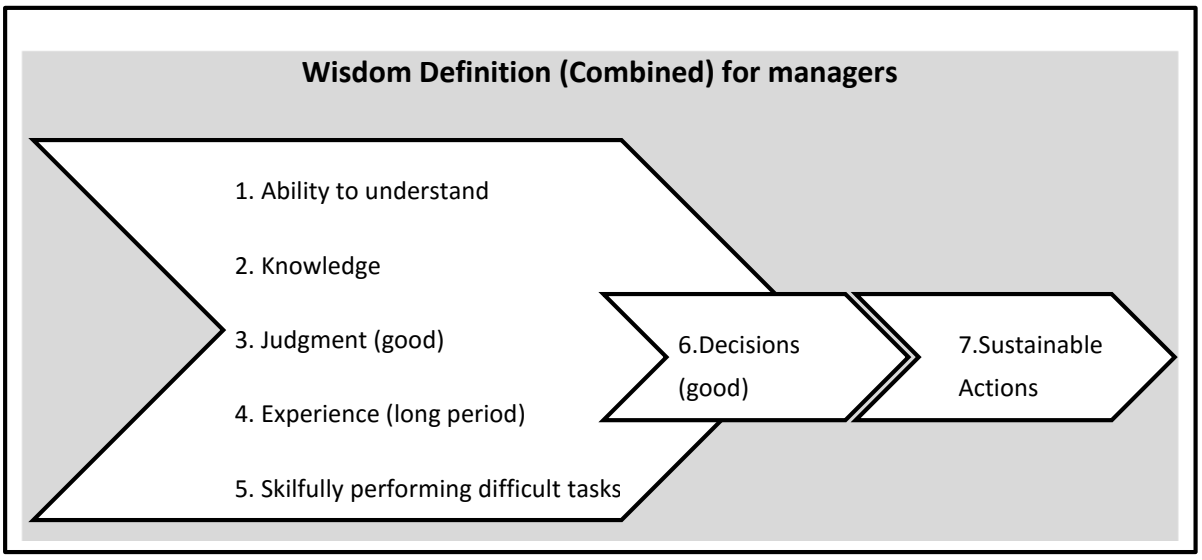


Figure 33: Combined Wisdom definition based on literature research and research findings

Through the research findings it can also be seen that coming up with one definition is not that easy. The researcher suggests to conduct further research on the following wisdom definition types:

Type 1 "Wisdom definition": wisdom are decisions based on experience and knowledge
Type 2 "Wisdom definition": wisdom means doing the right thing at the right time
Type 3 "Wisdom definition": wisdom is experience and insights combined with feelings

Greco et al defined personality types as "**rational**" (= Type 1), "**emotional**" (= Type 2) and "**contextual**" = Type 3)(Greco & Bouchon - Meunier et al., 2012, p.122) His findings would certainly support the wisdom definition types from the research at hand.

6.1.2 Manager's needs met through a WMT

The findings of these set of questions help to answer **RQ3: What are the needs of managers (profit and nonprofit) that could be met through a wisdom management tool (WMT)?**

The complexity of demands that managers face in the new millennium lead to the need for **new concepts of wisdom and wisdom management**. The needs of managers are somewhere in their power and responsibility, decisions, coordinating (POSDCORB) and in their capability to drive the system towards its defined goals. Managers need to make good decisions that lead to sustainable actions. In order to meet this need they have an increasing demand for suitable technological support. They strive for **a tool** that helps them to deal with high diversity and systems beyond traditional approaches.

A majority of managers say **that they need wisdom** when tackling problems, in decision making, planning, leading and evaluating. They say that they have a **daily** need for wisdom. In order to generate wisdom until today, 94% of managers asked people in their own company for advice. 83% search for a solution in the internet.

94% of managers already ask people in their company for their advice. **Corporate collective intelligence and social collective intelligence technology** implemented into a WMT would address the need to get advice or the opinion of people in one's company. At the same time it would optimize resource flows in that respective. Further research is needed in that area.

83% asked outside the company for advice. **Guided crowdsourcing and cooperate crowdsourcing** could certainly meet the need of getting advice by other people, consultants or experts outside the company. This need of outside advice could also be met by crowdsourcing technologies as shown in chapter 5.2.

56% of managers said that they had or have a mentor. 50% of those managers said that they had problems in their mentor relationships. This could be a piece of evidence that **crowdsourced systems** might be able to meet the need of managers who said that they have a mentor to solve problems that needed wisdom, but are frustrated with the personal relationship component. **Cooperate crowdsourcing by a specified consultant group** could be the answer to this need.

Managers' needs according to research findings	How this need could be met
• The need for wisdom in a highly complex world	• WMT
• The need for online solutions	• WMT
• The need for other people's advice	• CI + CS + Wisdom of Crowds included WMT
• The need for suitable technologies	• CI + CS + Wisdom of Crowds included WMT
• The need for good decisions	• WMT
• The need for verifiable actions	• WMT

Managers' needs according to research findings	How this need could be met
• The need for sustainable solutions	• WMT
• The need for any additional information	• Structured big data
• The need for holistic information	• CI + CS + Wisdom of Crowds included WMT
• The need for information favouring life	• CI + CS + Wisdom of Crowds included WMT
• The need for information including ethical aspects	• CI + CS + Wisdom of Crowds included WMT
• The need for information that combines heart and brain	• CI + CS + Wisdom of Crowds included WMT
• The need for information coming through meaningful advice	• CI + CS + Wisdom of Crowds included WMT
• The need for social intelligence, skills also social skills for the situation	• CI + CS + Wisdom of Crowds included WMT

Table 31: Managers' needs in the new millennium

Table 31 indicates that the WMT including CI, CS and Wisdom of Crowd technology can meet managers expressed needs.

Figure 37 depicts the broader view of managers' needs that could be met through a WMT:

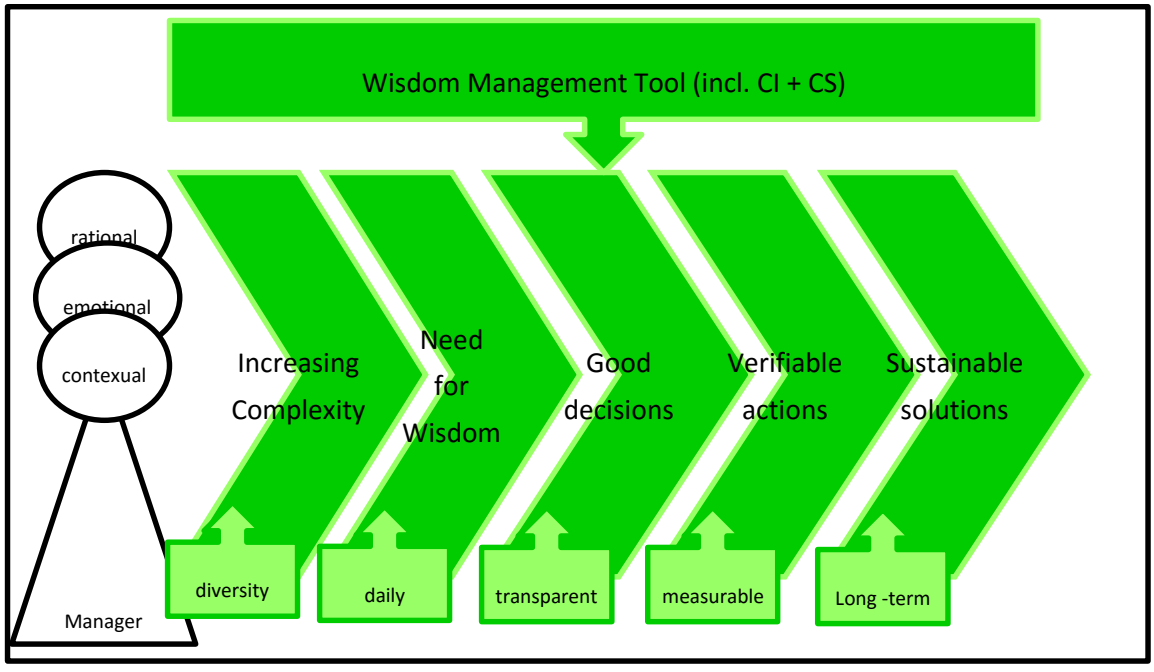


Figure 34: Managers' needs met through WMT

In a world of increased complexity and diversity, managers (differentiated by their wisdom type plus their political, economic und religious worldview), have a daily need for wisdom. Their good decisions need to be transparent in order to ensure verifiable actions that lead to their expected outcomes. The solutions implemented are long term sustainable solutions. A WMT can meet their expressed needs.

6.1.3 Current WMTs

In order to answer the set of questions **RQ4: What is currently being offered in terms of WMTs? How are these sites being used? What is missing? How could they be improved to reach a WMT-style service suitable for managers?** the author investigated current so-called WMTs and asked managers what they are missing currently.

The author showed that currently available WMTs are not meeting the requirements of a WMT by the wisdom definition introduced in this thesis. Actually the current **demand of managers** is **by no means met** and leads to an entirely unbalanced market situation.

In fact **the majority of respondent managers say that they use computer support to solve wisdom related tasks.** Nearly half of the managers say that they use the computer **daily** to support them with their wisdom related tasks. The other half uses computer support for their wisdom related task **weekly**. The author assumes that it is fair to define this situation as a high demand from managers for an adequate WMT.

But what areas would managers address with such a WMT? The vast majority of managers say that they use computer support in nearly **all areas of their organization**. Most of them currently using combined **desktop- and internet-based systems**. The move towards the cloud can be predicted but needs to be tested evidence based.

In order to understand what is currently missing the limitations mentioned by managers for the currently available systems can be accumulated in two **main limitation** sets, human limitations and computer systems limitations.

Human limitations are that managers are complaining about the lack of IT knowledge and understanding and that they are constantly facing a shortage of time. **Computer system limitations** are that managers say that they have access to much unorganized data, which is not offering any organizationally helpful support at all (big data problem). The transparency of cumulated data in the currently available systems is missing. Managers are missing a toolkit that visualizes a problem or even a solution quickly. They are missing social and emotional information, human interaction and they see standard cloud limitations. They say that the current systems are too complicated, too slow, in addition too time consuming and that current systems mostly combine documents in a non-transparent way.

A WMT that incorporates technologies such as the Wisdom of Crowds, CI and CS would need to address the above mentioned limitations.

In merging the research findings current WMTs fall short in the following areas:

Missing components in current WMTs
• Lack of daily useful applications
• Lack of all organizational areas addressed in one tool
• Lack of supplementation of missing IT knowledge from managers
• Lack of time efficient solutions
• Lack of organized data that offers organizational support
• Lack of transparency where tool gets the data and solutions from
• Lack of visualizations of problem and solution
• Lack of emotional information
• Lack of human interaction
• Lack of optimum cloud solution

Table 32: Missing components of current WMTs

6.1.4 Characteristics of a WMT

The set of questions concerning a possible WMT was meant to answer part of **RQ4: How could they be improved to reach a WMT-style service suitable for managers?** The research at hand shows that a WMT that is suitable for managers of the new millennium is not there yet and needs to be invented from scratch.

General Characteristics

The idea of creating a WMT is highly relevant for managers and triggers excitement as well as imagination. Both profit or non-profit managers show that their expectations for a WMT are equal.

Such a WMT needs to be developed according the new concepts of wisdom (see chapter 6.1.1) and wisdom management (see chapter 3.3) introduced in this thesis. The WMT needs to meet the needs of managers to create their future. Managers are forced (external and internal forces) to rethink their traditional way of justifying their actions, decision-making, information and knowledge yield, commanding versus partnering in order to raise their businesses towards a competitive advantage.

Social Collective Intelligence can support managers in their challenges of this new millennium. “Crowdsourcing is increasingly gaining attention as one of the most promising forms of large-scale dynamic collective work” (Lykourentzou et al, 2013, p.90).

How would a WMT suitably function?

A manager faces a problem, which requires wisdom. s/he enters his/her wisdom function (general or personalized) into the tool. Then the managers explains the problem that requires wisdom. The WMT visualizes the problem. By looking at the visualization the manager can specify the problem before the WMT generates solutions.

Now the manager can choose which source and combination of sources s/he likes, or if s/he wants to leave it up to the WMT where it accesses the sources from. Then the WMT generates solutions from 1. Economic Science Literature, 2. Best practise examples, 3. Consultant Solutions, 4. Legal Requirements. The tool searches for solutions and presents the found solutions to a defined crowd (CS, CI). The crowd says whether this solution could work and ranks the solutions by percentage. The manager gets the solution to his problem in either a visual or a verbal format (as the manager wishes). The manager can see who else tried that solution, and how good the solution was. The feedback option improves the tool constantly. By clicking on the solution, the manager can see where the solution comes from (transparency). The WMT also shows whether the proposed solution might contradict any legal requirements. The manager is asked to give feedback on the solution he picked. During the whole process the history of action is saved so that the manager can trace how the WMT came about a certain solution.

Would managers use a WMT and in what areas?

All managers asked said that they would use such a tool for multiple areas of their organization. More specifically as a starting point, the majority of managers say that they need such a tool to solve wisdom related tasks, especially and urgently, in the area of statutory regulations and human resource.

What are the most important expectations in terms of sources for a WMT?

The following figure shows the most important sources, for a WMT:

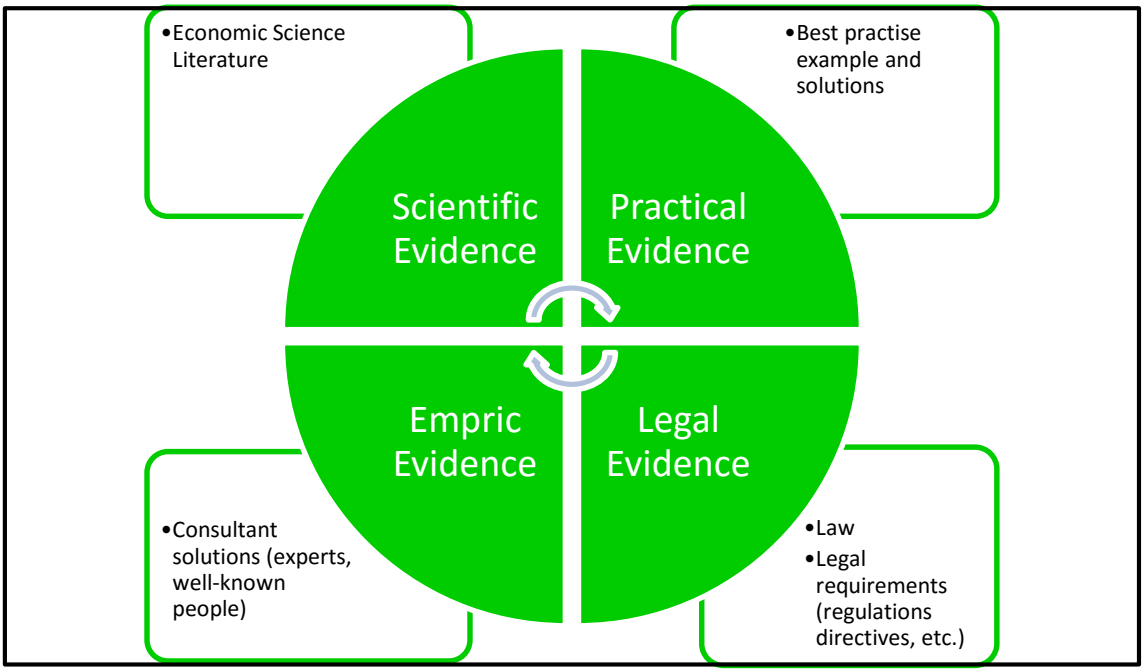


Figure 35: Data Sources for WMT

In terms of sources managers expect the WMT to combine Economic Science Literature, Best practice examples and solutions, Consultant solutions, Law and legal requirements.

Major functions and human contributions managers expects in the WMT:

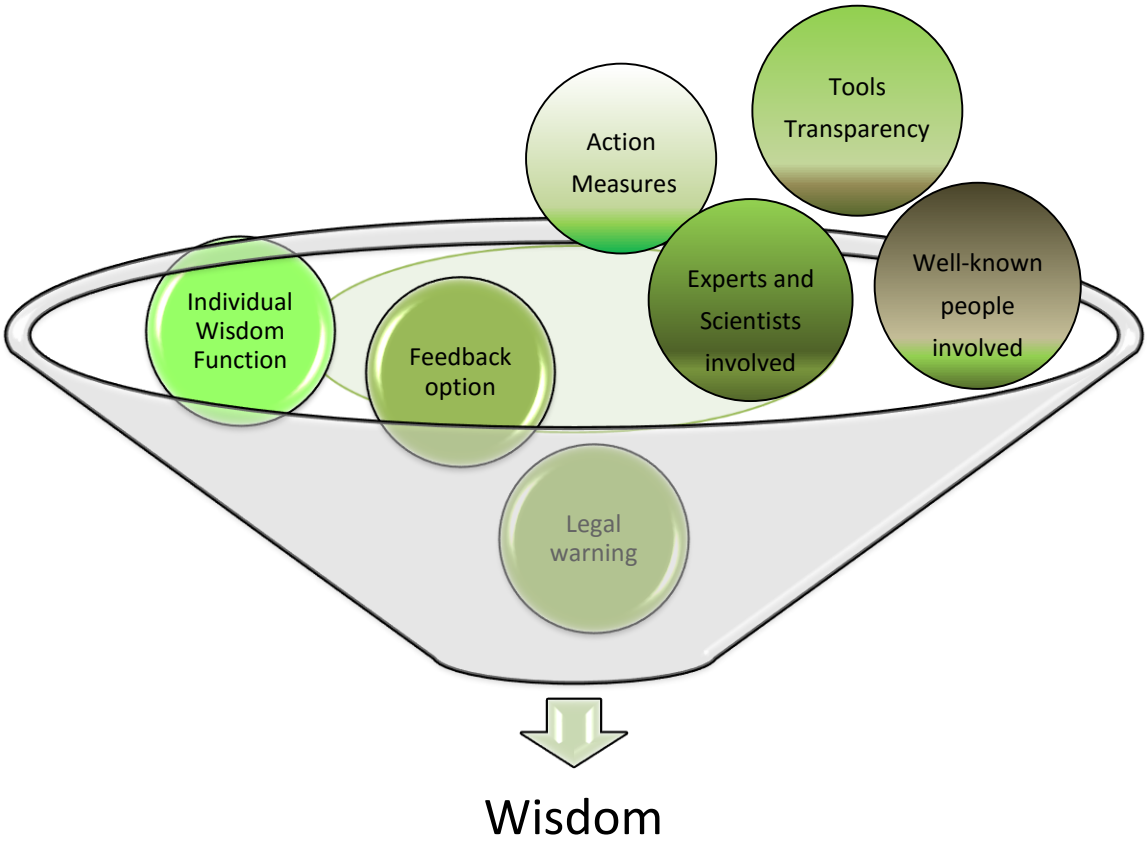


Figure 36: Important functions and human contributions of WMT

Managers expect an individual wisdom function, a feedback option, legal warning if the solution produced through the tool contradicts legal requirements, action measures, the tools transparency, experts and scientists as well as well-known people involved.

Managers' major expected outcomes of WMT:

- Rationalized solutions
- Solutions with the highest possible diversity
- Visualized problems and solutions
- Time saving solutions
- Money saving solutions
- Individual solutions
- Verifiable actions measures
- Linking to other managers (NO linking to other sides!)
- Linking to experts and expert platforms
- Linking to well-known people of the management area
- Widening their horizon

CI, CS technology needed

- Helping to take a larger context into consideration
- Triggering thinking progress
- WMT to be quick, rational and confidential

Managers major design expectations for WMT:

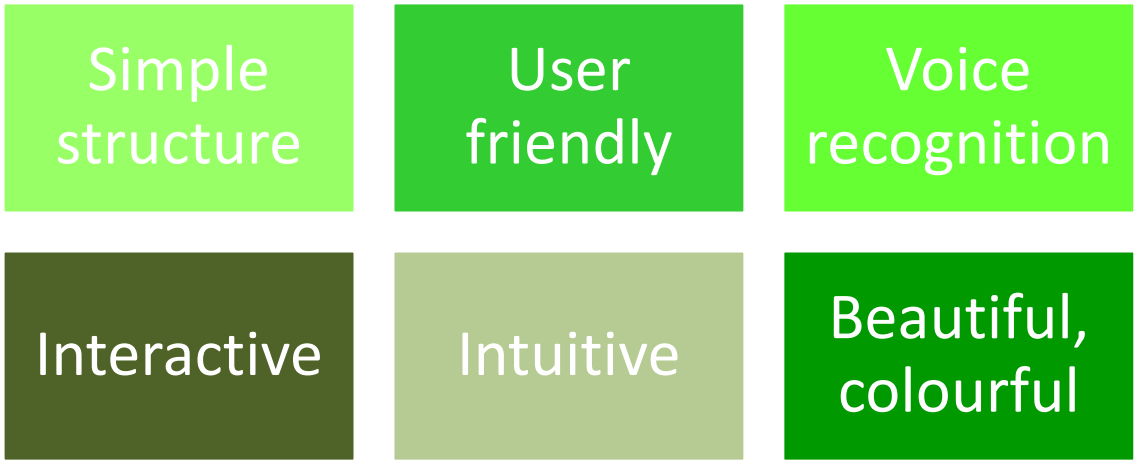


Figure 37: Managers' design expectations

Managers' design expectations concern the users interface (Telkar, 2016, p.16). "User interfaces are already succeeding in increasing opportunities by empowering people to interact with technologies that might otherwise be too difficult to use (Tannen, 2016). Managers are by their own understanding limited in their ability to learn to understand information technology. Therefore it seems essential for the success of a WMT, to design a tool that meets managers' expectations in the area of user interface.

The following graph show the processual characteristics of a WMT due to the research findings:

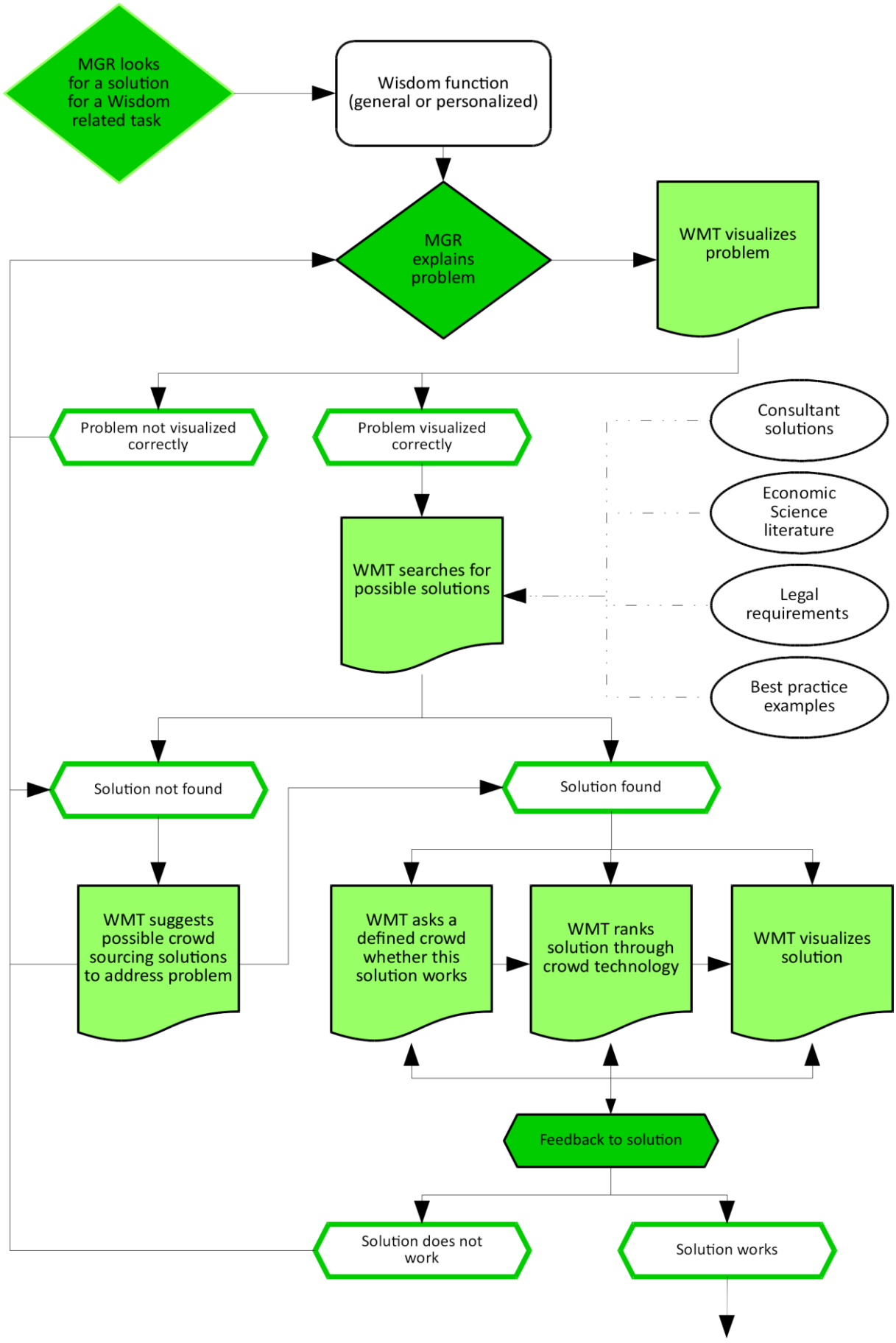


Figure 38: Processual characteristics of WMT

6.2 Contribution to Information Systems Management

"In the knowledge economy dog eats dog. The wisdom economy says dogs do better in packs" (Dobson, 2010). As the wave of change moves managers into the wisdom age the importance of a WMT including Crowd Sourcing Systems was shown. A WMT fit for the demands of managers of the new millennium was modelled and introduced throughout the thesis. The contribution to Information Systems Management can be visualized as follows:

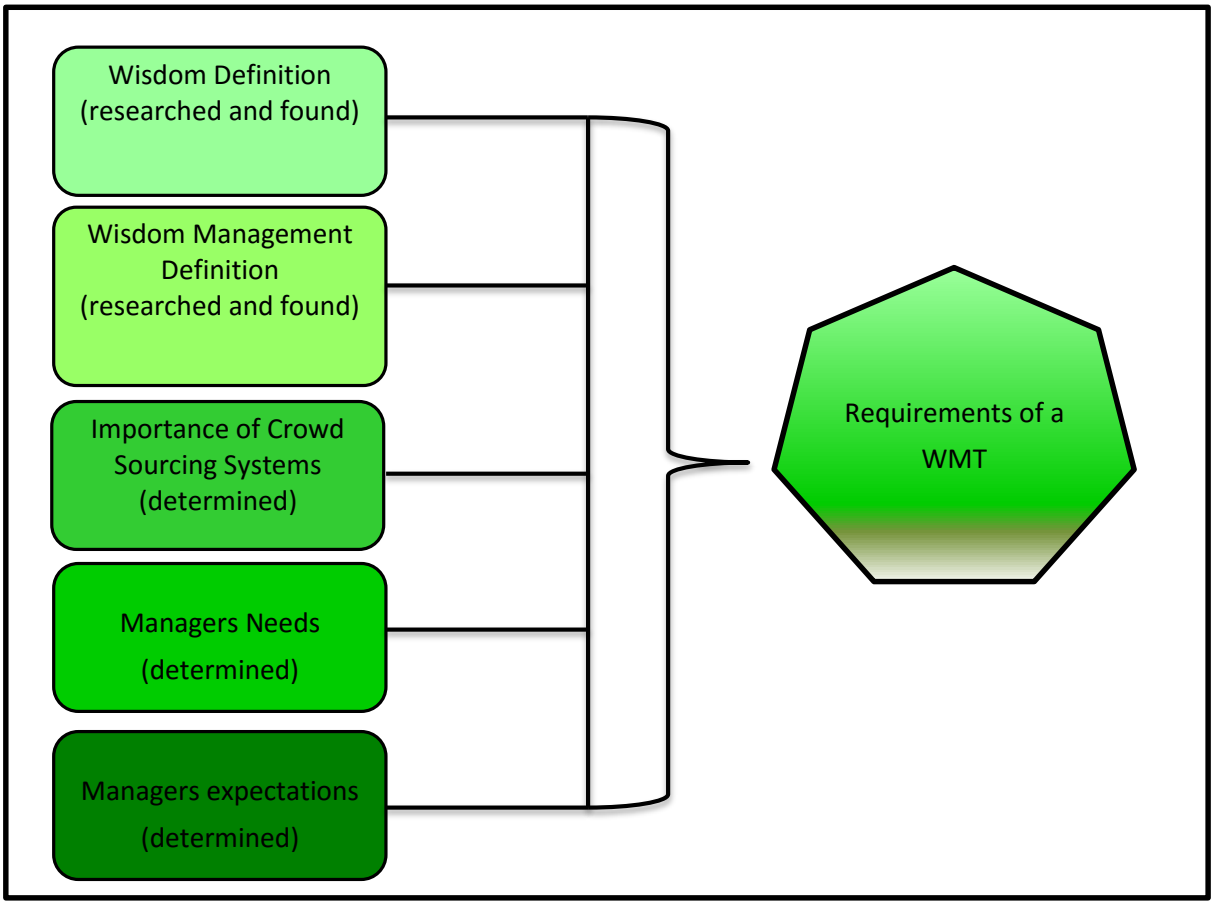


Figure 39: Contribution to Information Systems Management of thesis

As the figure above shows a wisdom definition was researched and found, a definition for WM was created, the importance of Crowd Sourcing Systems was determined, managers' needs were investigated and managers' expectations towards a tool suitable for the demands of the new millennium were researched. Out of these results, a future Vision pilot for a WMT was developed.

6.3 Future research

Due to the fact that the research approach was a qualitative one and there were few probands to prove any hypotheses, it is suggested that further studies design a quantitative approach to prove whether the assumption being introduced in this thesis can be proven true.

There are umpteen future research possibilities for Wisdom, Wisdom Management and the WMT. Concerning the **Wisdom Definition** the following questions, among many others, are yet to be answered:

- How much does the "Wisdom Type" influence managerial decisions and solutions?
- How can the wisdom definition become part of professional managers training?
- If managers today start to work according to what they believe is wise, how would their working behavior change?

Prahalad stresses that the key to organizational change is to create one's future and not to adapt to external change (Prahalad, 2015). To create one's future means that managers would start to rethink their traditional way of justifying their actions, decision-making, information and knowledge yield, commanding versus partnering and raising their businesses to a competitive advantage. In order to proceed with the **Wisdom Management Definition** various questions remain to be answered:

- In the light of the new Wisdom Management definition, how can the following concepts be defined: Decisions, Actions, Coordination (Partnering), Wisdom Technology, Diversity and Systems beyond traditional approaches?
- The new Wisdom Management definition demands for a suitable WMT, which is not there yet. What are the current actual problems and resource deficits for IT non- affine managers, who are missing a suitable WMT? (considerable waste of resources can be estimated)

Drucker said, „Not only governance, but its related concepts and tools, will need to be confronted and transformed over the next fifteen years" (Drucker, 2007, p. 56). Due to the thesis at hand it is evident that much research still needs to take place before **the requirements of the WMT** shown in this paper will be transferred into a real WMT. An idea that came up at the finishing stage of the thesis which recommended to implement a risk ranking function on the solution output of the WMT, needs to be investigated (Nagel, 2016). It needs to be evaluated whether and how much sense such a risk function would make for managers. Further research in the area of technology and environment (see distinction table 30) needs to take place.

Technology: The technological area needs much more research and solutions for pressing problems: For example evolutionary algorithms are needed to address the multi-objective optimizing problems (Zăvoianu, 2015, p.153). To enable at least certain groups to produce a very high accuracy towards superior solutions, new algorithms are currently sought (Alizadeh et al, 2015). In cooperate collective intelligence, "The common assumption is that the more experts there are, the better the consensus" (Maleszka & Nguyen, 2015, p. 339). This common assumption still needs to be researched. There is little to no research available on this topic yet.

Environment: In order to understand the environment for the WMT the research area distinction table opens another set of questions not yet addressed:

Business Environment	Branches	Which branches would use the developed WMT?
	Markets	In terms of WMT what is the current market situation?
	Companies	Which companies are more likely to use WMT?
Economic Environment	Propensity to consume	How high is the propensity to consume a WMT for managers?
Legal Environment	International business law	Are there legal requirements that should be considered when designing an appropriate WMT?
Political Environment	Employment Policy	Will a WMT impact the employment policy, and how?
Ecological Environment	Sustainability requirements	Can the implementation of a proper WMT support sustainability requirements?
Technological Environment	IT technologies	What are the IT technologies that are currently available to support a WMT?
Organization as a system	Management experts	Who are the experts who could supply expertise on an ongoing basis for a WMT?
	Individual Workplaces	How can WMT support the move from office work to home office work?

Table 33: Research distinction table of areas not yet addressed (Lehner & Farthofer, 2012. p.22)

Future Economic Considerations

- **Sustainability:** ”Every time you spend money, you're casting a vote for the kind of world you want” (Lappe, 2015). The thesis proves that managers increasingly value and share

the importance of sustainability concepts. How could a WMT generate wisdom that is offering sustainable solutions on an ordinary basis and not just when requested? Further studies would be required here.

- How many resources could be saved if managers would use a WMT instead of meeting a consultant, lawyer, an expert, a colleagues etc.?
- **Management work markets:** If such a WMT was actually invented what are the implications for future management work markets? How will management work 20 years from now? Etc.

6.4 Concluding thoughts

Managers are faced with multiple challenges that could be overcome by wisdom that is implemented through Wisdom Management and supported by a WMT.

An overflow of information, unstructured big data, constant time pressure and the need of single employees to be heard are challenging managers, while at the same time they need to find rational, quick, transparent and reliable solutions. Managers of today create the business world of tomorrow. They are the ones, who allocate resources and change the market towards future reality. They need to communicate, be informed and inform and at all times be transparent. They are held accountable and liable in the sphere of their responsibility.

A WMT that meets managers' current pressing needs is highly demanded and does not exist yet. Technology can create such a WMT in combining traditional and innovative technologies. By this means managers would be enabled to professionally approach a highly diverse and complex business world.

With the highest expectations for the near future, the author intends to trigger further research. Managers need to be able to access a suitable WMT in order to significantly improve the efficiency and effectiveness of future management. By this means one will see a sustainable business world, where wisdom is not just an ancient word, but a concept that is expressed through a management style called Wisdom Management and supported by a WMT that lives up to its name. A WMT that sets the highest possible standards for WM.

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APPENDICES

Appendix 1: Semi-structured qualitative interview questionnaire

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Wisdom Management Tool for Managers

MBA Thesis project: Alice Martha Tlustos BA

Supervised by Dr. Marta Sabou

Dear Manager,

The questionnaire at hand is designed to generate ideas to create a Wisdom Management Tool (WMT) that fits managers' needs. This Wisdom Management Tool has the potential to support managers with an online solution for their managerial problems.

The Questionnaire has four main parts focusing on the following topics:

1. Defining Wisdom
2. Identifying managerial problems that require wisdom
3. Exploring current computer support for managerial problems that require wisdom
4. Exploring the idea of a Wisdom Management Tool

To model a Wisdom Management Tool as a master thesis goal, I need your help. Please answer the following questions. There is no right or wrong answer. Your time and effort is highly appreciated.

Thank you!

(Alice Martha Tlustos BA)

Alice Martha Tlustos, Kirchbergerstraße 10, 4061 Pasching; 0650/2809704; alice.tlustos@gmail.com;

Details of Interview

Date of Interview:

_____

Company:

_____

Location of Interview:

_____

Name of interviewee:

_____

Please note that the interview details will be kept secret and are just supporting the evaluation of the interview, which is done by Alice Tlustos.

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1. Interviewee Profile

1.1 How old are you?

..... years

1.2 What is your gender?

Female ☐

Male ☐

1.3 At what management level are you currently working?

High ☐

Medium ☐

Low ☐

1.4 For how long have you been involved in management activities?

Less than 5 years ☐

Between 5 to 10 years ☐

Longer than 10 years ☐

1.5 Is the company you are currently working in a profit or a non-profit company?

Profit ☐

Non-profit ☐

1.6 How would you describe your company by size?

Big (over 250 employees) ☐

Medium (50 – 250 employees) ☐

Small (10-50 employees) ☐

2. Defining wisdom

2.1. What does wisdom mean for you:

✍

2.2. Based on your definition of wisdom, which of the following concepts would come close to your definition? (check the boxes that fit your definition, multiple answers possible)

Knowledge	Action	Ability to understand	Skilfully performing difficult tasks	Experience (long period)	Judgment (good just)	Decision (good)	Science	insights	Other
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

If your definition of wisdom includes something else, please explain:

2.3. Can you think of an example of a wise versus an unwise decision?

2.4. Does a manager need wisdom in order to perform well? (check the boxes that fit your definition)

Yes	No
☐	☐

If you cannot decide, explain why:

2.5. How can a manager currently generate wisdom? (check the boxes that fit your definition)

Training	Research	Experience	Consultant	Failures	Online solutions	Other
☐	☐	☐	☐	☐	☐	☐

If you have other ideas about means to generate wisdom:

3. Management problems that require Wisdom

3.1. When do managers need to be wise? (check the boxes that fit your definition)

When tackling arising problems	Decision making	Planning	Leading	Evaluating	Other
☐	☐	☐	☐	☐	☐

If you have other ideas about situations that need wisdom:

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3.2. How often do managerial problems that need WISE solutions arise?

Daily	Every other day	Weekly	Monthly	Quarterly	Every 6 months	Yearly	Other
☐	☐	☐	☐	☐	☐	☐	☐

Please explain what other means to you:

3.3. How did you address problems or issues that needed wisdom until today?

I found a consultant	I searched for a solution in the internet	I asked people in my company for advice	I asked other managers (friends) outside the company for advice	I have my Mentor	Other
☐	☐	☐	☐	☐	☐

Please explain what you mean by other:

4. Current computer support for wisdom related tasks

4.1. Do you use any computer program to support you with managerial issues that require wisdom?

Yes	No
☐	☐

If you cannot decide, explain why:

4.2. If yes, how often do you use computer support to solve management problems that require wisdom?

Daily	Every other day	Weekly	Monthly	Quarterly	Every 6 months	Yearly	Other
☐	☐	☐	☐	☐	☐	☐	☐

Please explain what you mean by other:

4.3. Which areas of management do you address with computer support in general?

Human Resources	Finance	Project Management	Data Analysis	Organization	Structure	Processes	Other
☐	☐	☐	☐	☐	☐	☐	☐

Please explain what you mean by other:

4.4. What type of computer support do you use for wisdom related tasks?

Desktop-based systems ☐

Internet based systems ☐

Anything else ☐

4.5. What are the limitations of your current computer support for solving wisdom related tasks?

5. Wisdom management tool

5.1. If there was a Wisdom Management Tool: for which areas would it be useful?

Human Resource	Financial	Organizational	Structural	Planning	Leading	Legal	Evaluating	Other
☐	☐	☐	☐	☐	☐	☐	☐	☐

Please explain for what else would you use a WMT:

5.2. What would you expect from a Wisdom Management Tool?

5.3. How important would it be for you to find the following contents in a Wisdom Management Tool?

Individual Wisdom function	Tools transparency	Percentage valued solutions	Feedback option	Verifiable action measures	Warning if the solution contradicts with legal requirements for my branch	Other
☐	☐	☐	☐	☐	☐	☐

Please explain what else you mean by other:

5.4. Can you imagine using a Wisdom Management tool?

Yes	No
☐	☐

If you cannot decide, explain why:

5.5. What would make you trust a Wisdom Management Tool?

ISO standards (or other known quality standards)	Transparency of WMT	Knowledge coming from a trusted source	Well known people involved and promoted through tool	Approved Scientists and Experts	Other
☐	☐	☐	☐	☐	☐

Please explain what else makes you trusting a WMT:

5.6. What advantages can you see from using a Wisdom Management Tool?

Time saving	Money saving	Rationalized solutions	Wise decisions	Verifiable Actions	Other
☐	☐	☐	☐	☐	☐

Please explain what else you mean by other:

5.7. What else would you like to tell me concerning a possible Wisdom Management Tool?

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Thank you very much!

Appendix 2: Interview Schedule

Organizational Size	Profit	Date	Non Profit	Date
Big companies	Microsoft Austria	When: Thursday 26th Nov, 8:30 am Where: Am Euro Platz 3, 1120 Wien	AG Globale Verantwortung	When: Thursday 26th Nov. 2015, 9:30am Where: Apollogasse 4/9, 1070 Wien
	AT& T	When: Wednesday 25th Nov., 7:00 am Where: Schloßhofer Straße 13-15, Wien, Wien, 1210	UKH Linz/ Emergency Hospital	When: Tuesday 1st Dec., 12:30pm Where: UKH Linz
	Easy Bank Austria	When: Thursday 3rd Dec., 13:00 pm Where: Modul University, Kahlenberg 1, 1190 Wien	Horizont 3000	When: Thursday 26th Nov., 11:00 am Where: Wilhelminenstraße 91/ II f, 1160 Wien
Medium Size Companies	EconGas GmbH	When: Wednesday 25th Nov., 15:00pm. Where: ARES Tower, Donau-City-Straße 11, 1220 Wien	Wycliff Germany	When: Monday, 16th Nov., afternoon, Where: Skype
	Fujitsu Austria	When: Wednesday 25th Nov., 18:30pm Where: Tricafe Börse, Wien	Wycliffe Switzerland	When: Wednesday, 18th Nov. 8:00-9:00 am, Where: Skype
	Shell Austria GmbH	When: Wednesday 25.11. 8:30-9:00 Where: Lobgrundstr.3, 1220 Wienölhafen Lobau	Schloss Klaus	When: 23.11.2015, 9:00-10:00 Uhr Where: Klaus 16, 4564 Klaus a.d. Pyhrnbahn

Small Companies	Bäckerei Fenzl	When: Monday 23.11.2015, 11:00-12:00 Where: Freistädter-str. 428, Linz	Wycliffe Austria	When: 1st Dec. 2015, 16:00 pm Where: Passaustr. 19, 4030 Linz
	Super Social News	When: Wednesday 25.11.2015, 10:00-11:00 Where: Engerthstt. 143/5/1/6, Vienna	Operation Mobili-zation Austria	When: Tuesday 1.12.2015, 9:00 Where: Passaustr.19,4030 Linz
	mediaDialog; mediaDIALOG GmbH	When: Monday 23.Nov.2015; 16:00- Where: Skype	Am Puls, Verein für Entwicklungs-hilfe und Soziale Dienste	When: Friday, 27. Nov.,2015, 8:30 am Where: Skype

Appendix 3: Results of all questionnaires

1. Interviewee Profile

1.1 How old are you?

Result questionnaire 1.1.:

Manager	Age	Agegroup
MGR 8	28	1
MGR 11	37	2
MGR 1	42	3
MGR 9	45	3
MGR 6	46	3
MGR 15	46	3
MGR 10	48	3
MGR 18	48	3
MGR 4	49	3
MGR 13	49	3
MGR 12	52	4
MGR 16	53	4
MGR 2	54	4
MGR 7	54	4
MGR 14	54	4
MGR 5	55	4
MGR 17	55	4
MGR 3	57	4

Age-group	20-30	1
	31-40	2
	41-50	3
	51-60	4

1.2 What is your gender?

Manager	Sex
MGR 1	female
MGR 2	male
MGR 3	male
MGR 4	male
MGR 5	male
MGR 6	male
MGR 7	male
MGR 8	male
MGR 9	female
MGR 10	male
MGR 11	male
MGR 12	female

MGR 13	female
MGR 14	male
MGR 15	male
MGR 16	male
MGR 17	female
MGR 18	female

1.3 At what management level are you currently working?

Manager	Management Level
MGR 1	high
MGR 2	high
MGR 3	high
MGR 4	high
MGR 5	high
MGR 6	high
MGR 7	high
MGR 8	high
MGR 9	high
MGR 10	high
MGR 11	medium
MGR 12	high
MGR 13	low
MGR 14	high
MGR 15	high
MGR 16	high
MGR 17	high
MGR 18	high

high	89
medium	6
low	6
	100

1.4 For how long have you been involved in management activities?

Manager	Experience in years
MGR 1	5 to 10 years
MGR 2	5 to 10 years
MGR 3	longer than 10 years
MGR 4	longer than 10 years
MGR 5	longer than 10 years
MGR 6	longer than 10 years
MGR 7	5 to 10 years
MGR 8	5 to 10 years

MGR 9	5 to 10 years
MGR 10	longer than 10 years
MGR 11	less than 5 years
MGR 12	longer than 10 years
MGR 13	less than 5 years
MGR 14	longer than 10 years
MGR 15	5 to 10 years
MGR 16	longer than 10 years
MGR 17	5 to 10 years
MGR 18	longer than 10 years

Less than 5 years	11
Between 5 to 10 years	39
Longer than 10 years	50
	100

1.5 Is the company you are currently working in a profit or a non-profit company?

See 1.6.

1.6 How would you describe your company by size?

Manager	Age	Sex	Management Level	Company Size
MGR 1	42	female	high	medium
MGR 2	54	male	high	medium
MGR 3	57	male	high	medium
MGR 4	49	male	high	small
MGR 5	55	male	high	small
MGR 6	46	male	high	big
MGR 7	54	male	high	medium
MGR 8	28	male	high	small
MGR 9	45	female	high	medium
MGR 10	48	male	high	medium
MGR 11	37	male	medium	big
MGR 12	52	female	high	big
MGR 13	49	female	low	medium
MGR 14	54	male	high	small
MGR 15	46	male	high	small
MGR 16	53	male	high	big
MGR 17	55	female	high	small
MGR 18	48	female	high	medium

Manager	Profit/Nonpro-fit	Company Size
MGR 1	NPO	medium

MGR 2	NPO	medium
MGR 3	NPO	medium
MGR 4	PO	small
MGR 5	PO	small
MGR 6	PO	big
MGR 7	PO	medium
MGR 8	PO	small
MGR 9	PO	medium
MGR 10	PO	medium
MGR 11	PO	big
MGR 12	NPO	big
MGR 13	NPO	medium
MGR 14	NPO	small
MGR 15	NPO	small
MGR 16	NPO	big
MGR 17	NPO	small
MGR 18	PO	medium

Manager	PO	Company Size	Manager	NPO	Comany Size
MGR 4	PO	small	MGR 14	NPO	small
MGR 5	PO	small	MGR 15	NPO	small
MGR 8	PO	small	MGR 17	NPO	small
MGR 7	PO	medium	MGR 1	NPO	medium
MGR 9	PO	medium	MGR 2	NPO	medium
MGR 10	PO	medium	MGR 3	NPO	medium
MGR 18	PO	medium	MGR 13	NPO	medium
MGR 6	PO	big	MGR 12	NPO	big
MGR 11	PO	big	MGR 16	NPO	big

Size of company	PO MGR	NPO MGR
small	17	17
medium	22	22
big	11	11
		100

2. Defining Wisdom

2.1. What does Wisdom mean for you:

I1:

Generally doing the right thing in the right time including the right activity. And/ or: To interpret reality and in relation to that decide. **(T2)**

I2:

To perceive and evaluate in a balanced (wholesome, holistic, godly) way, and to decide and act accordingly **(T2)**

I3:

Wisdom means from a human perspective: experience by age and through crisis.

From a spiritual perspective: Seeing events, decisions, human decisions from God's perspective. What is he thinking about the situation?

Our human thinking is restricted therefore I acknowledge the Word of God/ the Bible as God's Wisdom and I can see God's Wisdom in the old Testament and the revealed Wisdom of God through Jesus Christ. I am totally depend as a manager on the Wisdom of God. I want to act according to that Wisdom. I read the Wisdom of Salomon in the Old Testament, where I can see that the beginning of Wisdom is the fear of God- in the sense that I acknowledge God as the supreme Wisdom who wants to share His Wisdom with me- therefore he reveals himself and talks through the word of God. If I want to know the Wisdom of a human, I start to talk to that human. Then the person reveals him-/herself-, which helps me to graps her/his Wisdom. Because God by His Wisdom created everything, I can find traces of His Wisdom at other places. Jesus is the Wisdom of God and because of this, I can involve Him in my decision processes, my personal life. **(T3)**

I4:

Wisdom means to make the right decisions, due to experience and due to knowledge. (T1)

I5:

Wisdom is a conglomerate of knowledge based intelligence and experience. It is a product of Knowledge, Experience and intelligence (T1)

I6:

To perform right in order to achieve sustainable decisions for the benefit of employees, customers and the company. **(T2)**

I7:

Knowledge that is intelligently and persuasive applied, knowledge that is used intelligently and smart. (T1)

I8:

Wisdom is the next step from knowledge, something you can learn, a combination of knowledge, experience and wise decisions. (T1)

I9:

Wisdom is a combination of experience and cognitive thinking. The ability to continue to think in scenarios. Human experience, a good gut feeling, Stakeholderanalysis and energy field analysis. A feeling for people and for what is possible and what isn't. (T1)

I10:

Wisdom means combining heart and head. Wisdom has many aspects. It cannot be measured. It is an abstract thinking construct. We have a feeling about what is a wise decision. **(T3)**

I11:

Wisdom means Experience, Knowledge, Skills (T1)

I12:

A mixture of experience and knowledge. **Competence** combined with sustainability = long term impact. (T1)

I13:

Life experience, Empathy, ***respect***, if one can find ***answers to questions*** that can implement lfe experience, empathy and respect. **(T3)**

I14:

To understand circumstances with looking at employees. To evaluate from ones own perspective. To be open to the leadership of the Holy Spirit. To get **insights from the Holy Spirit for certain situations. The more experience you have the more it helps you. (T3)**

I15:

If thoughts, input, feelings and passions can be processed at the same time and then be communicated. If one receives and shares input/ thoughts/ feelings in an appropriate manner at the right time. **(T2)**

I16:

There are multiple definitions. Life experience, which can be seen in the decisions undertaken. Wisdom also means being to wait for the right time. Wisdom means being ready to learn from experiences and also conclude from it. (T1)

I17:

Making decisions that involve all stakeholders and include all the impact results. ***Listening to others*** and God and to be lead. Decisions that have positive results. **(T3)**

I18:

The wealth of experience that I gained over the years put to action. Wealth of Knowledge and Experience. (T1)

Experience	10 times mentioned
Decision → sustainable results, positive results;	9 times mentioned
Knowledge	7 times mentioned
Action	6 times mentioned
Intelligence	6 times mentioned
Interpret reality (different concepts, world view- religion…)	4 times mentioned
Right time	3 times mentioned
Feelings	3 times mentioned
Learning	2 times mentioned
Insights	1 time mentioned
Skills	1 time mentioned

Type 1: Decisions based on experience and knowledge

Type 2: Doing the right thing at the right time

Type 3: Experience and insights combined with feeling

2.2. Based on your definition of Wisdom, which of the following concepts would come close to your definition? (check the boxes that fit your definition, multiple answers possible)

	MRG	Knowledge	Action	Ability to understand	Skilfully performing difficult tasks		Experience (long period)		Judgment (good just)	Decision (good)		Science	Insights	Other
2	MRG1	X	☐	X	☐	☐	☐	☐	X	X	X	☐	X	X
3	MRG2	☐	X	X	☐	☐	☐	☐	X	X	X	☐	☐	☐
4	MRG3	X	X	X	X	X	X	X	☐	X	X	X	☐	☐
5	MRG4	X	X	X	☐	☐	X	X	X	X	X	☐	☐	☐
6	MRG5	X	☐	X	☐	☐	X	X	☐	X	X	☐	☐	☐
7	MRG6	☐	☐	X	X	X	X	X	X	X	X	☐	☐	☐
8	MRG7	X	☐	X	☐	☐	X	X	X	☐	☐	☐	☐	X
9	MRG8	X	☐	X	☐	☐	X	X	X	☐	☐	☐	X	☐
10	MRG9	X	X	X	☐	☐	X	X	X	X	X	☐	X	☐
11	MRG10	X	☐	X	☐	☐	X	X	X	X	X	X	X	☐
12	MRG11	X	☐	X	X	X	X	X	X	X	X	☐	X	☐
13	MRG12	X	X	X	X	X	X	X	X	X	X	☐	X	☐
14	MRG13	X	X	X	X	X	X	X	X	X	X	☐	X	☐
15	MRG14	X	X	X	X	X	X	X	X	X	X	X	X	X
16	MRG15	X	☐	X	X	X	☐	☐	X	X	X	☐	☐	☐
17	MRG16	☐	☐	X	☐	☐	X	X	X	X	X	☐	X	☐
18	MRG17	X	☐	X	X	X	X	X	X	X	X	X	X	☐
19	MRG18	X	X	X	X	X	X	X	X	X	X	X	X	☐
20	Percentage of checking the concept	94	44	100	50		83		89	89		28	61	17
21														

28	Concept of wisdom definition	Ability to understand	Knowledge	Decision (good)	Judgment (good just)	Experience (long period)	Insights	Skilfully performing difficult tasks	Action	Science	Other
29	Percentage of checking the concept	100	94	89	89	83	61	50	44	28	17
30											

		true	one concept missing	
Type 1	Wisdom are decisions based on experience and knowledge	9	7	
Type 2	Wisdom means doing the right thing at the right time			Concept seems to be combined with action, skilfully performing difficult tasks, judgement (good, just), decision (good)
Type 3	Wisdom is experience and insights combined with feelings	6		whoever checked insights also checked experience and good decision. Many of those checking all three of the previously mentioned boxes also checked skillfully performing difficult tasks

2.3. Can you think of an example of a wise versus an unwise decision?

Wise

People

Take a decision → either or

Time → waiting, right time, sustainable, long-term

Long term effects → outcome, Applied Wisdom is real Wisdom seen in the conspequences they produce, measures after decision taken, global impact- eco design, fairtrade

Information → additional, holistic, favouring life, including ethical aspects, heart and brain combined,listen to advice, including social intelligence and skills also social skills.

Legal framework

Strategy

Gut Feeling, → coherence,

Faith

Organizational Wisdom → to turn chaos into structure

Creating a mindset

Being able to raise awareness for a certain need → communicate and transfer feelings, thoughts and passion

Responds to expectations of stakeholders, all involved, humans and animals- environment;

Delegating work

Unwise

Human preference

Not thinking about the consequences

Too fast

Based on emotions, too many emotions involved,

Not thinking long term- not sustainable-threatening existence, deciding short sighted,

Low motive

Wanting to do everything by yourself as a manager

I1:

In a **change process**, it is unwise to bring about change by announcement. It is wise to involve the people who will be concerned with the change right from the start. This will enable you to better implement any change.

I2:

Depending on the level you are looking at, there are multiple examples but yesterday we had a situation when Wisdom was needed:

We had a situation where an event was evaluated by the team. There were lots of comments coming from the team to improve the event next time. As a leader I noticed that the person who had organized the event got more and more discouraged. She took the comments as if the others where saying that the event was not good. At this point I realized that I had to take a decision: I could either let the discussion continue or stop it at this point. It would have been unwise to let it continue so I decided to stop the discussion and continue at a different time.

I3:

Conflictmanagement: I had to employees who were struggeling with each other. I got advice that I should act in a certain way, which was proven to managerial standards good advice. But then I met a friend of one of the employees, who adviced me to wait- because he was sure that her friend would finally understand without him intervening. This really happened.

If would have been unwise to act according to managerial standardized advice but it was wise to wait for a person who knew the one person and helped him to understand in a deeper sense. If he would have acted as perceived by man. Standards right it would have crashed one of the employees. But by waiting he realized that both employees could recover.

I4:

Conflictmanagement: If I am angry and I fire an employee without asking why and how it came about that he acted like he did. → this is unwise. Unwise means to act without the additional information I need to decide wise.

I5:

(political decision)=The refugee crisis shows an unwise decision: Mr. Merkel decided by human preference to welcome refugees. She did not take the legal framework which is not permitting such an extraordinary step into account. A wise decion means: wholelistic, long term and strategic! All these parameters were not met by Mrs. Merkels decision. She put human approach over strategy and legal requirements. Her human decision was perfect but it was not wise.

I6:

Personnel decision: If you have a complicate employee situation and you try to solve that you need a gut feeling, and I as a Christian need the Holy Spirit a prophetical gift as well as organizational Wisdom. Over the past years I continuously developed new organizations, new concepts, which were not there before. For example, I am working in the area of "Billing" for our top customers. I am an expert in how to turn chaos into structure. For example, I invented the magical triangle, which visualizes 3 functions for the good of an organization. Everyone must play his part. …

I7:

In these days, **the political decision** of Mrs. Merkel was not wise. The first part: to create a Mindset of not getting stuck in details for the population was wise, but the second part of the decision which can be seen in the consequences that Europe now faces was not managed well and can be seen as not wise.

I8:

A wise decision can be seen in long term effects. If someone has expert knowledge and can integrate that and all the other things that are at stake combine this with his own experience, he still needs to apply Wisdom in relation to his employees, personally and socially to make it seen.

I9:

A **business decision** where you restructure and venture into a new market. If I cannot manage to ***raise awareness for a certain need*** in my environment then I cannot restructure. Many things are good luck or bad luck but without the ability to raise awareness you will not succeed. So in my view a wise decision means the ability to raise awareness in my surroundings.

I10:

A wise decision is a decision that ***responds to all expectations of various stakeholders***. If a manager has listened to all parties and comes to a conclusion that can bring advantages for everyone in a biosphere sense. A decision that favors life. A decision that is including ethical aspects. A decision that has something to do with sustainability – not ***too fast and not based on emotions***.

Heart and brain combined in order to open a Gordian knot. A decision that implements creativity and a holistic approach long term.

I11:

A wise decision can only be measured afterwards. It is about action that can be measured and lead to an output that . There are situations when everybody is against what you are doing but it is not always wise to do what all the others want you to do. The measures after the decision was taken will determine whether your decision was good.

I12:

If I think of **an unwise decision you can just look at VW**. They did ***not think long term*** or in a ***sustainable way and this lead to threating their existence***. An example of a wise business model is a fairtrade business modell which has a long term positive impact at all levels and thinks about the global impact on an eco-design level.

I13:

If **no one gets hurt,** if I am coherent. If I have a good gut feeling for me and ***all the others involved humans and animals.***

I14:

The story of king Salomon, who was a wise king shows best what Wisdom means. By that ancient time king Salomon was faced with a human problem. Two women were claiming a baby to be their own. By telling the women that he would split the baby in two halves the king helped the true mother to be seen. She would of course not let her baby be split and rather have the other woman have it. By this action King Salomon could **divide true love from greed**. This was Wisdom.

I15:

Communication: The problem is often not the decision itself but the way the decision is communicated. The decision has nothing to do with how you perceive the world but with how you ***can transfer and communicate it***. It is all about transferring ***feelings, thoughts and passions*** at the right time in the right way and how to ***create an atmosphere*** in ***which the other can understand*** what you mean.

I16:

Bankruptcy: if managers ***decide very shortsighted without any long term vision*** and ***without thinking about the long term impact*** of their decisions it shows ***low motives***. This is unwise. Wise decisions can be seen in the consequences they produce.

I17:

When Moses (old biblical figure) lead the Israelites out of Egypt he needed help in his leadership, because he **wanted to do everything by himself** (not wise). But then he listened to advice from his father in law and **delegated a lot of work** to other people who were capable (wise).

I18:

Unwise decisions have ***too many emotions involved***. Wise decisions include social intelligence and skills also social skills.

2.4. Does a manager need Wisdom in order to perform well? (check the boxes that fit your definition)

MRG	Yes	No	Could not decide
MRG 1	1	0	0
MRG 2	1	0	0
MRG 3	1	0	0
MRG 4	1	0	0
MRG 5	1	0	0
MRG 6	1	0	0
MRG 7	1	0	0
MRG 8	0	0	1
MRG 9	1	0	0
MRG 10	1	0	0
MRG 11	1	0	0
MRG 12	1	0	0
MRG 13	1	0	0
MRG 14	1	0	0
MRG 15	1	0	0
MRG 16	1	0	0
MRG 17	1	0	0
MRG 18	1	0	0
	17	0	1
	94	0	6

2.5. How can a manager currently generate Wisdom? (check the boxes that fit your definition)

	MRG	training	research	experience	consultant	failures	online solutions	other
2	MRG 1	☐	X	X	☐	X	☐	☐
3	MRG 2	X	☐	X	☐	X	☐	☐
4	MRG 3	X	X	X	X	X	X	X
5	MRG 4	X	X	X	X	X	X	☐
6	MRG 5	X	X	X	X	X	☐	☐
7	MRG 6	☐	☐	X	☐	X	☐	☐
8	MRG 7	☐	☐	X	☐	X	☐	X
9	MRG 8	☐	☐	X	☐	X	☐	X
10	MRG 9	X	☐	X	X	X	X	X
11	MRG 10	X	X	X	X	X	X	☐
12	MRG 11	X	X	X	☐	X	X	☐
13	MRG 12	X	X	X	☐	X	X	☐
14	MRG 13	X	☐	X	X	X	X	☐
15	MRG 14	X	X	X	X	X	X	X
16	MRG 15	☐	☐	X	X	X	X	☐
17	MRG 16	☐	☐	X	X	X	X	X
18	MRG 17	☐	☐	X	X	X	X	☐
19	MRG 18	X	X	X	X	X	X	☐
20		61%	50%	100%	61%	100%	67%	33%

		experience	failures	online solutions	consultant	training	research	other
28	MRG	100%	100%	67%	61%	61%	50%	33%

3. Management problems that require Wisdom

3.1. When do managers need to be wise? (check the boxes that fit your definition)

MGR	When tackling arising problems	Decision making	Planning	Leading	Evaluating	Other	
							78%
MGR 1	X	X	X	X	X	X	6%
MGR 2	X	X	X	☐	X	X	6%
MGR 3	X	X	X	X	X	X	11%
MGR 4	X	X	X	X	X	☐	
MGR 5	X	X	X	X	☐	☐	
MGR 6	X	X	X	X	☐	☐	
MGR 7	☐	☐	☐	X	☐	☐	
MGR 8	X	X	X	X	X	☐	
MGR 9	X	X	X	X	X	☐	
MGR 10	X	X	X	X	X	☐	
MGR 11	X	X	X	X	X	☐	
MGR 12	X	X	X	X	X	☐	
MGR 13	X	X	X	X	X	☐	
MGR 14	X	X	X	X	X	☐	
MGR 15	X	X	X	X	X	☐	
MGR 16	X	X	X	X	X	☐	
MGR 17	X	X	X	X	X	☐	
MGR 18	X	X	X	X	X	☐	

3.2. How often do managerial problems that need WISE solutions arise?

	MRG	Daily	Every other day	Weekly	Monthly	Quarterly	Every 6 months	Yearly	Other
1	MRG								
2	MRG 1	x	x						
3	MRG 2	x	x						
4	MRG 3	x							
5	MRG 4	x							
6	MRG 5	x							
7	MRG 6				x				
8	MRG 7	x							
9	MRG 8		x						
10	MRG 9	x							
11	MRG 10	x							
12	MRG 11	x							
13	MRG 12	x							
14	MRG 13	x							
15	MRG 14	x							
16	MRG 15	x							
17	MRG 16			x					
18	MRG 17	x							
19	MRG 18	x							

Daily	Every other day	Weekly	Monthly	Could not decide (between daily or every other day)
72%	6%	6%	6%	11%

3.3. How did you address problems or issues that needed Wisdom until today?

	A	B	C	D	E	F	G
1	MRG	I found a consultant	I searched for a solution in the internet	I asked people in my company for advice	I asked other managers (friends outside the company for advice	I have a mentor	Other
2	MRG 1	X	X	X	X	☐	☐
3	MRG 2	X	☐	X	☐	☐	☐
4	MRG 3	X	X	X	X	(X)	☐
5	MRG 4	X	X	X	X	(X)	☐
6	MRG 5	X	X	X	X	☐	☐
7	MRG 6	☐	X	☐	X	X	☐
8	MRG 7	☐	☐	(X)	X	X	X
9	MRG 8	☐	X	X	X	☐	☐
10	MRG 9	☐	X	X	X	☐	☐
11	MRG 10	X	X	X	X	(X)	☐
12	MRG 11	X	X	X	X	X	☐
13	MRG 12	☐	X	X	X	☐	☐
14	MRG 13	☐	X	X	X	☐	X
15	MRG 14	X	X	X	X	(X)	X
16	MRG 15	☐	X	X	X	X	X
17	MRG 16	☐	☐	X	X	(X)	☐
18	MRG 17	☐	X	X	☐	X	X
19	MRG 18	X	X	X	☐	☐	☐
20		50%	83%	94%	83%	56%	28%
21							

	I asked people in my company for advice	I searched for a solution in the internet	I asked other managers (friends outside the company for advice	I have a mentor	I found a consultant	Other
MGR	94%	83%	83%	56%	50%	28%

4. Current computer support for Wisdom related tasks

4.1. Do you use any computer program to support you with managerial issues that require Wisdom?

MGR	Yes	No
MGR 1	X	☐
MGR 2	X	☐
MGR 3	X	☐
MGR 4	X	☐

MGR 5	X	☐
MGR 6	X	☐
MGR 7	☐	X
MGR 8	X	☐
MGR 9	☐	X
MGR 10	X	☐
MGR 11	X	☐
MGR 12	X	☐
MGR 13	X	☐
MGR 14	X	☐
MGR 15	X	☐
MGR 16	X	☐
MGR 17	X	☐
MGR 18	X	☐
	89%	11%

4.2. If yes, how often do you use computer support to solve management problems that require Wisdom?

	A	B	C	D	E	F	G	H	I
1	MGR	Daily	Every other day	Weekly	Monthly	Quarterly	Every 6 months	Yearly	Other
2	MGR 1	☐	☐	X	☐	☐	☐	☐	☐
3	MGR 2	☐	☐	X	☐	☐	☐	☐	☐
4	MGR 3	☐	☐	X	☐	☐	☐	☐	X
5	MGR 4	X	☐	☐	☐	☐	☐	☐	☐
6	MGR 5	X	☐	☐	☐	☐	☐	☐	☐
7	MGR 6	☐	☐	☐	X	☐	☐	☐	☐
8	MGR 7	☐	X	☐	☐	☐	☐	☐	☐
9	MGR 8	X	☐		☐	☐	☐	☐	X
10	MGR 9	☐	☐	☐	☐	☐	☐	☐	X
11	MGR 10	X	☐	☐	☐	☐	☐	☐	☐
12	MGR 11	X	☐	☐	☐	☐	☐	☐	☐
13	MGR 12	X	☐	☐	☐	☐	☐	☐	☐
14	MGR 13	☐	☐	X	☐	☐	☐	☐	☐
15	MGR 14	☐	☐	X	☐	☐	☐	☐	☐
16	MGR 15	☐	☐	X	☐	☐	☐	☐	☐
17	MGR 16	X	☐	☐	☐	☐	☐	☐	☐
18	MGR 17	☐	☐	X	(X)	☐	☐	☐	☐
19	MGR 18	X	☐	☐	☐	☐	☐	☐	☐
20		44%	6%	39%	11%	0%	0%	0%	17%
21									
22									
23		Daily	Every other day	Weekly	Monthly	Quarterly	Every 6 months	Yearly	Other
24		44%	6%	39%	11%	0%	0%	0%	17%

4.3. Which areas of management do you address with computer support in general?

	A	B	C	D	E	F	G	H	I
1	MGR	Human Resources	Finance	Project Management	Data Analysis	Organization	Structure	Processes	Other
2	MGR 1	x	x	x	x	x	x	x	☐
3	MGR 2	☐	☐	x	☐	☐	☐	☐	☐
4	MGR 3	(x)	x	x	x	x	(x)	x	x
5	MGR 4	☐	x	x	x	x	x	x	x
6	MGR 5	x	x	x	x	x	x	x	☐
7	MGR 6	x	x	x	x	x	x	x	☐
8	MGR 7	x	x	x	x	x	x	x	☐
9	MGR 8	x	x	x	x	x	x	x	☐
10	MGR 9	x	x	x	x	x	x	x	☐
11	MGR 10	x	x	x	x	x	x	x	☐
12	MGR 11	x	x	x	x	x	x	x	☐
13	MGR 12	x	x	x	x	x	x	x	☐
14	MGR 13	x	x	x	x	x	x	x	☐
15	MGR 14	x	x	x	x	x	x	x	☐
16	MGR 15	x	x	x	x	☐	x	x	☐
17	MGR 16	x	x	x	x	x	x	x	☐
18	MGR 17	x	x	☐	☐	x	x	x	☐
19	MGR 18	x	x	x	x	x	x	x	☐
20									

all boxes	78%
no boxes	6%
leaving out 1-2 boxes	17%
	100%

4.4. What type of computer support do you use for Wisdom related tasks?

MGR	Desktop-based systems	Internet based systems
MGR 1	90%	10%
MGR 2	90%	10%
MGR 3	80%	20%
MGR 4	70%	30%
MGR 5	0%	0%
MGR 6	100%	0%
MGR 7	0%	100%
MGR 8	0%	100%
MGR 9	50%	50%
MGR 10	50%	50%
MGR 11	70%	30%
MGR 12	60%	40%
MGR 13	50%	50%
MGR 14	50%	50%
MGR 15	40%	60%
MGR 16	100%	0%
MGR 17	80%	20%
MGR 18	90%	10%

4.5. What are the limitations of your current computer support for solving Wisdom related tasks?

MGR	Computer Limitations	Human Limitations

MGR 1		I cannot give an answer here, because I do not know what is possible. I would need to know more.
MGR 2	Current computer support has the tremendous potential to organize data. I look at computer support and I see that it is supplying data in a certain order- in a helpful way- but the wise decisions at this point very much depend on the human intelligence and intuition of the manager.	
MGR 3		TIME!
MGR 4	Organizational wise I am coming to my limits with the support offered	
MGR 5	Currently we are operating on all levels in an online system which even helps our customers to interact with us in certain areas. The internet technology enables aus to be connected- all our processes are interlinked.. etc. But I am asking myself the question on which base and by what means are the data being cumulated and interpreted and so on… I totally miss transparency and therefore to make the right decisions I decide which data to use and which consultant to ask.	
MGR 6	I am missing a toolkit to visualize a problem or tasks. Something that I can in some form do in PPT but much quicker, more efficient.	
MGR 7		IT knowledge. Wisdom is more than IT, it is including emotions and that the manager needs to handle.
MGR 8	Time efficiency, the skills to draw. My offline picture should be easily be seen online. I miss experience sharing, face to face interaction and social as well as emotional information.	
MGR 9		My expertise is in terminating which details from different perspectives of a stakeholder have which influence… human experience and interaction from person to person

MGR 10 The computer has no body, but Wisdom needs a body. You cannot know what is good for a human if you do not walk in his shoes. You need experience and also a body to be able to dertermine what is good for people. At the same time a computer can do many things bet-ter than a human.

MGR 11 The way the standard cloud functions – every project is different… there are a lot of limitations.

MGR 12 The managerial Wisdom component which deals with people face to face cannot be suplimented by email or anything else. Also visualizations in workshops for teams are very difficult to not possible in the computer.

MGR 13 The human interaction factor is missing. I cannot talk to the computer. There is no athmosphere created. We often sketch or work with cards and Flip Chart. Especially when doing group work. Colours, shapes etc. then help to better categorize etc. we make photos and make sure that the outcomes are somewhere stored in the computer. The computer cannot help us with that analytics.

MGR 14 Some issues need to be dealt with face to face. You need the feelings and to graps the human component.

MGR 15 The current computer support is too complicated and too time consuming. Speed and availability are key limitations to me.

MGR 16 The systems are not easy enough. Too complex, too complicated, too time consuming…

MGR 17 No discussion possible, no feedback, no reflection → personal level missing

MGR 18 You have to look at 10 different documents (sources) and you need to cumulate the information yourself. I miss solutions that come from cumulating different sources for a certain issue.

5. Wisdom management tool

5.1. If there was a Wisdom Management Tool: for which areas would it be useful?

	C	D	E	F	G	H	I	J
1	Financial	Organizational	Structural	Planning	Leading	Legal	Evaluating	Other
2	X	☐	X	☐	☐	X	☐	☐
3	X	X	X	X	☐	X	X	☐
4	☐	☐	☐	☐	X	X	☐	☐
5	☐	X	X	X	X	X	X	☐
6	☐	X	X	X	X	X	☐	☐
7	(X)	X	X	X	X	☐	☐	☐
8	☐	X	☐	☐	X	☐	☐	☐
9	X	☐	☐	X	X	X	X	☐
10	X	☐	☐	X	☐	X	X	☐
11	X	X	X	X	X	X	X	☐
12	X	X	X	☐	☐	X	X	X
13	X	X	X	X	X	X	X	☐
14	X	X	X	X	X	X	X	☐
15	X	X	X	X	X	X	X	☐
16	☐	☐	☐	☐	☐	X	X	☐
17	X	X	X	X	X	X	X	☐
18	X	X	X	X	X	X	X	☐
19	X	X	X	X	X	X	X	☐
20	72%	72%	72%	72%	72%	89%	72%	6%
21								

Evaluating	Financial	Leading	Organizational	Planning	Structural	Other
72%	72%	72%	72%	72%	72%	6%

5.2. What would you expect from a Wisdom Management Tool?

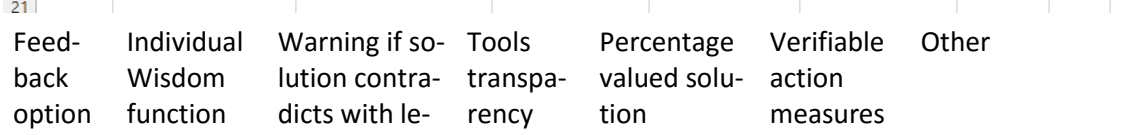
MGR 1	I would not want the tool to take my decision making away, but to give me a wieder horizon to decide , to trigger my thinking process, to think through various solutions being offered. Eventually even to reduce complexity by the solutions given. Every Change process needs new tools and new ways. We are currently trying to reverse the polarity in order to go more towards IBM. To me the main question would be: Are others doing that as well? How are they dealing with it? I want to have an evaluation feature.
MGR 2	For me it would be most appealing: To have a number (at least one) potential solutions generated, which I had not thought of.
MGR 3	To answer this question is very difficult for me. If we have a HR problem – I often realize that the human behavioral component is very complex and not easy to solve.
MGR 4	I need Wisdom in the organizational , HR and structural area

MGR 5	I am expecting a horizontal enlargement which means that I can have access to best practice examples, see what others did. My flying hight becomes bigger, - I can see problems in a much larger context and from a much higher perspective. This enables me to better understand situations and to base my decisions on a much broader base. The Feedback Option is very interesting for me in that respect, because I can see what others see as very important and relevant.
MGR 6	I expect a personal solution with seeing best practice solutions (not differentiating Profit/ Nonprofit) in order to achieve the highest possible diversity. I need visualization techniques that offer me possibilities to show my problem. A database should help to get Wisdom hits. Therefore, I want to see people active in the tool who are real leaders – it even can be spiritual. For example, sometimes even a sentence from Konfucius helps. A simple sentence of inspiration.
MGR 7	I do not believe in the concept that technology can generate Wisdom. Wisdom is extremely interlinked and has to be applied situationally. I can see that such a tool can help in technical dimensions but the human touch is not possible.
MGR 8	I need rankings, interdisciplinary areas where I can get compact visualized solutions There is so much info in text online but no graph. Vizualizations give me a quick understanding and I am always under time pressure. I need to see legal requirements and solutions that help me to see where the the legal framework is. If the tool cannot find a solution I want to be intelinked to a face to face consultant. I need to decide quick and fast, rationally and confidentially. I need to see what can be seen by others and whether I want to share my feedback with the whole community or just keep if for myself as a memory reference. I want a Wisdom function that can be adapted at any request in order to help me in internal matters. If my customer is from another country/ continent/…- I need the adaptable Wisdom function- this is very important to me. Living in a highly diverse context I need high diversity in the solutions offered.
MGR 9	I would definitely examine such a tool. To me in my position I work with individuals, see their behavior and also have to know that systems are combined differently. In HR for example I would be interested in the legal aspects for another country. Working internationally it would help to get some hints there. Also Japan's conflict culture… could there be solutions that offer ways to interact in a culturally sensitive way if one is not coming from that culture…
MGR 10	I expect it to be user friendly, easy to handle, homomorphy, it needs to be able to understand my voice. I want to talk to it. The longer and the more you use it, the better the tool gets. I need visualized solutions. Some measureable functions. If the tool could determine whether I am stressed and give me some solutions for that. Heartbeat rate / stress level…
MGR 11	I would expect answers to questions that arise in a certain moment, I have a pool of data, I want answers…
MGR 12	I would expect that the key assumptions are transparent, that the main assumptions the tool is working with are transparent. I need to know what the tool uses in terms of politics, sociopolitical, economical…
MGR 13	I can easily imagine such a tool. It would be a great way to bundle information. But what about the own responsibility? Currently one is strongly challenged to learn constantely in order to continue to develop. Can such a tool help me to continue to learn. If yes, I can see the feedback option as very essential.
MGR 14	It would be a very helpful service. It would help me to get solutions for my questions and problems…

MGR 15	I would use such a tool to see what options are there. I would think over the solutions offered, discuss them and pray over them. Such a tool would be helpful to see what options are there. I would not want any pre- decision on ranking because what one manager would consider important might not be important to me. Such a tool could show me the direction…
MGR 16	✍ I ask myself if it can be neutral enough? Frying in your own juice is not the right approach. It seems important to me that people do not only give positive feedback but also negative one otherwise the tool would be too optimistic. In the NPO sector (hospital) many things are determined by externl factors which cannot be influenced. Therefore the Wisdom option which can be defined by any request needs to be there. If you think about the medium management level- you often are not able to do what would be wise or good, due to constrains such as politics. etc. The tool needs to be: • User-friendly • Simple structure • quick
MGR 17	This tool would be great to get useful workable answers…
MGR 18	I would expect an immediate link to legal aspects : high court decisions, what I need to consider. I need the sources the tool is using. I do not want any links! The tool needs to be user-friendly, efficient and needs to have a print function! I need to be able to insert my own makers, my own evidence , my personal history path so that I can look up how I came to the solutions I got…

5.3. How important would it be for you to find the following contents in a Wisdom Management Tool?

	A	B	C	D	E	F	G	H	
1	MGR	Individual Wisdom function	Tools transparency	Percentage valued solution	Feedback option	Verifiable action measures	Warning if solution	Other	
2	MGR 1	X	X	☐	X	X	X	X	Th
3	MGR 2	X	X	X	X	X	X	☐	He
4	MGR 3	☐	☐	X	X	X	X	☐	He
5	MGR 4	X	X	X	X	X	X	☐	Th
6	MGR 5	X	X	X	X	X	X	☐	Th
7	MGR 6	X	X	X	X	X	X	☐	
8	MGR 7	☐	X	☐	X	☐	☐	☐	
9	MGR 8	X	X	X	X	X	X	☐	
10	MGR 9	X	X	(X)	X	X	X	X	Pe
11	MGR 10	X	X	X	X	X	X	X	Sc
12	MGR 11	X	X	X	X	X	X	☐	I g
13	MGR 12	X	X	X	X	X	X	X	Th
14	MGR 13	X	X	X	X	X	X	☐	
15	MGR 14	X	X	X	X	X	X	☐	Th
16	MGR 15	X	X	☐	X	☐	X	☐	Th
17	MGR 16	X	X	X	X	X	X	☐	Th
18	MGR 17	X	X	X	X	X	X	☐	Th
19	MGR 18	X	X	X	X	☐	X	☐	Ve
20		94%	89%	83%	100%	83%	94%	22%	
21									



	gal require-ments of my branch					
100%	94%	94%	89%	83%	83%	22%

5.4. Can you imagine using a Wisdom Management tool?

	Yes	No
MGR 1	**X**	☐
MGR 2	☐	☐
MGR 3	**X**	☐
MGR 4	**X**	☐
MGR 5	**X**	☐
MGR 6	**X**	☐
MGR 7	**X**	☐
MGR 8	**X**	☐
MGR 9	**X**	☐
MGR 10	**X**	☐
MGR 11	**X**	☐
MGR 12	**X**	☐
MGR 13	**X**	☐
MGR 14	**X**	☐
MGR 15	**X**	☐
MGR 16	**X**	☐
MGR 17	**X**	☐
MGR 18	**X**	☐
	94%	6%
	trial/ error	33%

5.5. What would make you trust a Wisdom Management Tool?

	A	B	C	D	E	F	G
1	MGR	ISO standards (or other known quality standards	Transparency of WMT	Knowledge coming from a trusted source	Well known people involved and promoted through tool	Approved Scientists and Experts	Other
2	MGR 1	X	X	X	X	X	X
3	MGR 2	☐	X	X	☐	☐	☐
4	MGR 3	☐	X	X	☐	☐	X
5	MGR 4	X	X	X	X	X	☐
6	MGR 5	☐	X	X	X	X	☐
7	MGR 6	☐	☐	X	X	X	☐
8	MGR 7	☐	☐	☐	X	☐	☐
9	MGR 8	X	X	X	☐	X	☐
10	MGR 9	☐	X	☐	X	☐	☐
11	MGR 10	☐	X	X	(X)	X	☐
12	MGR 11	☐	X	X	X	X	X
13	MGR 12	X	X	X	☐	X	☐
14	MGR 13	☐	X	☐	X	X	X
15	MGR 14	X	X	X	X	X	☐
16	MGR 15	☐	X	☐	X	☐	☐
17	MGR 16	☐	X	X	X	X	☐
18	MGR 17	☐	X	X	X	X	☐
19	MGR 18	☐	X	X	(X)	X	☐
20		28%	89%	78%	78%	72%	22%
21							

Transparency of WMT 89%

Knowledge coming from a trusted source 78%

Well known people involved and promoted through tool 78%

Approved Scientists and Experts 72%

ISO standards (or other known quality standards 28%

Other 22%

5.6. What advantages can you see from using a Wisdom Management Tool?

	A	B	C	D	E	F	G
1	MGR	Time saving	Money saving	Rationalized s	Wise decisions	Verifiable actions	Other
2	MGR 1	☐	☐	X	☐	X	☐
3	MGR 2	X	X	☐	X	☐	☐
4	MGR 3	X	X	X	X	(X)	☐
5	MGR 4	X	X	X	X	X	☐
6	MGR 5	☐	☐	X	X	X	☐
7	MGR 6	X	X	X	X	X	☐
8	MGR 7	☐	☐	X	X	☐	☐
9	MGR 8	X	X	X	X	☐	X
10	MGR 9	X	X	☐	☐	☐	☐
11	MGR 10	X	X	X	X	X	☐
12	MGR 11	X	X	X	X	X	☐
13	MGR 12	X	X	X	X	X	☐
14	MGR 13	X	X	☐	☐	X	☐
15	MGR 14	X	X	X	X	X	☐
16	MGR 15	☐	☐	X	☐	X	☐
17	MGR 16	X	X	X	☐	X	☐
18	MGR 17	X	X	X	☐	X	☐
19	MGR 18	X	X	X	X	X	☐
20		78%	78%	83%	67%	78%	6%
21							

Rationalized solutions	Verifiable actions	Time saving	Money saving	Wise decisi-ons	Other
83%	78%	78%	78%	67%	6%

5.7. What else would you like to tell me concerning a possible Wisdom M**anagement** T**ool?**

MGR 1	✍ If a WMT would be available then the following things are very important: • User friendly (easy to handle) • Time saving (I have very little time) • It needs to have a great freedom: (→ If I want to see the 10 best solutions- fine. If I want to see 100 solutions – fine too.) • The Wisdom function: it needs to be personal! I need to be able to decide what Wisdom means to me. So concluding I would say: A WMT needs to be easy, simple and personal!
MGR 2	I would give the WMT a try if: it does not need days to get to understand the tool: • WMT needs to be consumer friendly • Reasonable • Time efficient • I do not need get a lot of trials/ errors • If it does produce ideas I had not thought of, I would use it • I strongly believe in human intuition and action • But if it does give options I had not thought about and if it is time efficient and easy to use I would use it Interviewer: If the WMT would be limited to your organization- say that only managers from Wycliffe Global Alliance would generate ideas…? Interviewee: The more limitations you put into such a tool the more limited are the solutions you get. Maybe if you would start within an organization you could make it work quicker but in the end the more input you get from others outside your own NPO the better. I wonder if an NPO solution would be the way forward. The world of SIL would definitely be a starting point.

	I am not sure whether is just my age group, or how I typically make decisions myself, - there is a need to publicize a tool like that in a way that would give people, that may be far away, an idea. The idea of a WMT seems to be talking people into a different kind of world. The need of explaining, giving examples can catch the interest of people. I guess that managers between 20-35 years may be much more close to such a tool. The difference between the NPO and the PO world shows that there have been quite some movement in the PO world, movements, ideas and tools of management that are adopted by the NPO world. The open question to me remains: How big is the gap between NPO and PO? Can one tool serve both? Do we maybe need two varieties? It would be great if you could talk at the European Leadership meeting in October about what you are doing…
MGR 3	• This tool needs to be very complex and very extensive • I can see that it makes sense for any standardized solution or for any usual managerial problem that one tackles. But there are problems that are happening with a lot of tension and in this area of tension one needs to get God's sight and God's will and for these problems I am sure you need more than one tool.
MGR 4	• This tool needs to be easy to handle- user friendly • It is tackeling a very difficult complex task- I need a tool for managerial problems – which is kept general… I do not need so much Wisdom for my branch- because I can get statistics and best practise examples in my branch but for managerial problems which I assume are the same in every company I cannot get Wisdom till today… this would be really interesting.
MGR 5	• The personal aspect of the tool- I can have my Wisdom function.. etc. this will allow the tool to generate solutions that fit my circumstance • The Feedback option is very important- because I can see what worked for others or what did not work for them • I need an interactive channel→ a possibility where I can have a face to face option- or a log/blog where I can in case of need talk to someone real • I imagine me having a problem…. And 10 other managers answering how they would solve that problem. Then I really like the solution one manager gave- I can contact this person and interact… this would be a totally new form of networking (somehow like xing) but much more advanced and interesting

MGR 6	Nothing
MGR 7	Please make sure that Wisdom and intelligence are not confused. A WMT corresponds to Experience. For example: Mobility: - It is wonderful that the individual traffic can work very well by these new technologies. But there is the emotional factor- the factor that people in traffic come to terms with each other. One does contradict legal requirements, the other makes up for it by how he drives. If this Wisdom was missing it would be a provocation. Self driving cars cannot diminish error sources. I believe in the personal creativity. An element of Wisdom which fosters human interaction and the creative element.
MGR 8	Most important for any new tool is how it is designed: Design: • User experience • Simple, beautiful • User friendly • Time saving • Presentation • Simple user journey Content: • Output • It will use a lot of people who will need to give a lot of input (not so much output)at the beginning- this will create Wisdom long term • The more managers use it, the better the tool will be • If many managers of big companies use it for one year the output will be highly relevant because their experience will create and generate Wisdom The idea is magnificent!
MGR 9	Nothing
MGR 10	I think the tool should ask the managers community how it can best become the wisest tool. Invisible people are often very wise but their Wisdom cannot be generated for they are not seen. The tool needs to be successfully implemented therefore it should start with 2-3 functions which can be used and get input from and by the crowd and analyzed so that it can be of use to as many as possible right from the start.. It needs to start with the coolest app. “Wisdom comes on silent soles.” This means that as soon as it can be of use for many even with very few functions it will make its way….

MGR 11	The idea is brilliant. The WMT would change branches, regions, tremendously. A computer doesn't know feelings and it will be a challenge to manage and process the flood of data. Artificial intelligence will enable the tool to continuously learn and improve that will be key.
MGR 12	I really need to know the key assumptions in politics, economy and socio-politically, in order to get valid information. You need to make sure that it continues to be a tool and that it doesn't start to become independent. I want to stress again that a political Wisdom function is important. There are certain trade politics, which influence development work and undermines them- then the solutions offered for us would be of no use. The same is true for the economy Wisdom function. It needs to be there…..
MGR 13	The WMT needs to be: • User-friendly • I need to be able to talk to it • Interactive (can talk to me) • Lively • Colorful • I want it to use music as well (music helps me to relax)
MGR 14	The tool needs to be based on a Christian biblical fundament. It cannot just be scientific, secular, but I would want to know that the basic assumptions are Christian. My company is not secular and I want solutions that are fit for my company. Christian values. The tool needs to use sources that I would usually use as well….
MGR 15	The idea is good, but it doesn't take the decisions from the manager. It is dangerous to think that because others did that I am safe doing so as well. It is lie Wikipedia- but these are all answers from people- WMT is not free from failures. The Manager needs to be aware that he still has the full responsibility. Also the individual creativity is still very important. If you are in the legal framework it is very helpful to see in which frame you are and where the possibilities are…
MGR 16	Nothing
MGR 17	Nothing
MGR 18	Important: The tool needs to be intuitive! It needs to talk to me...