The Impact of Leadership in
Agile Information System Development Projects: A Pitch

Mone S. Andrias

The University of Queensland, Australia

1. Introduction

This research is a multidisciplinary topic based in the information system (IS) discipline and management research. I have developed this pitch following the guidelines by Faff (2014). First, I will provide some background information about my person and after that present how I decided about the topic for my thesis.

I graduated with an MBA majoring in corporate strategy and economic policy from Maastricht School of Management, Netherlands. After that, I was teaching at the University of Indonesia and have been involved in some management training and consultancy projects in Indonesia. I have limited experiences in doing academic research, and was challenged in identifying my Ph.D. research topic. What has been, however, clear to me from the start is I want to do a research topic that is focused on leadership. I expressed this intention in my application documents for Ph.D. programs at a number of different Australian universities.

From the University of Queensland, UQ Business School, my now advisor, Dr Sabine Matook, contact me after she saw the application documents and offer her willingness to become my advisor provided that I embed the research in the context of IS, specifically on agile IS development. She then sent me some papers to read and guided me to narrow down

a research topic because I had to start writing a research proposal since I need it to apply for a scholarship from the Indonesian government. After some time, I received the scholarship and have commenced my PhD at the University of Queensland, UQ Business School on July 2014. Since then, I have read extensively about leadership, software development, and the agile development method. Simultaneously, I have started creating the first milestone/ confirmation document.

About three weeks ago, I got the notification for the research pitch symposium and my advisor asked me to participate. I am glad I have done it and I have spent around 15 hours preparing the pitch. I was able to complete the template in this relative short amount of time because in the past six months, I had a created already a detailed literature review for my confirmation document. In addition, I had a number of discussions with my advisor, and I also got feedback from visiting IS professors at the UQ Business School.

It was fun to complete the research pitch template, and I enjoy it. It also helped me to become clearer about my research topic, especially as the IS discipline was foreign to me. The letter is written as follow: Section 1 is the introduction and followed by explanation of my pitch in Section 2. Section 3 contains my reflection on the pitch exercise, and Section 4 is the conclusion.

2.   Brief Explanation on the Pitch

The completed pitch is displayed in Table 1. The topic is about the impacts of leadership in agile ISD. My key research question is: What impact has leadership in agile ISD projects? There are sub-questions: What impacts have leadership factors on agile ISD team

characteristics? What impacts have leadership factors of the relationship between agile ISD team characteristics and agile ISD project outcomes?

I identified two key papers that are Dyba and Dingsoyr (2008) and Uhl-Bien et al. (2007). Dyba and Dingsoyr (2008) is important for my thesis since they discussed various characteristics of the agile ISD method based on a meta reviewing of articles published in different journals. Uhl-Bien et al. (2007) is important for my thesis because it presents the theoretical foundation in leadership, that is, complexity leadership theory.

 Agile ISD method is an "Iterative and incremental (evolutionary) approach to software development which is performed in a highly collaborative manner by self-organizing teams with "just enough" ceremony that produces high-quality software in a cost effective and timely manner which meets the changing needs of its stakeholders" (Ambler 2007, cited in Laanti et al. (2013)). The high change responsiveness of the agile method has let to improved ISD project outcomes such as compressed time to market, reduce cost, and improve software quality (Schawaber et al 2007). Hence, the basic motivation of this research is to conduct an empirical study to investigate the impact of leadership on agile team characterisitcs and agile ISD project outcomes. Leadership in agile ISD team is important because the self-organize team does not mean that there is no leader in place. However, traditional leadership is not appropriate for agile team as these are autonomous, complex, independent, and self-organising teams with no designated leader. I will use complexity leadership theory because the theory recognizes that leadership is not just from an appointed leader but may emerge from team members (Uhl-Bien et al. 2007) which is typical for agile ISD team.

The remainder of Table 1 outline "answers" of Faff's (2014) pitch template and it is self-explanatory so no more description needed.

Table 1: Completed Pitching Template

A. Working Title	The Impact of Leadership in Agile Information System Development Projects
B. Basic Research Question	What impact has leadership in agile ISD projects? What impacts have leadership factors on agile ISD team characteristics? What impacts have leadership factors of the relationship between agile ISD team characteristics and agile ISD project outcomes?
C. Key Papers	- Dyba, T., and Dingsoyr, T. 2008. "Empirical studies of agile software development: A systematic review," *Information and Software Technology* (50:9-10) Aug, pp 833-859. - Uhl-Bien, M., Marion, R., and McKelvey, B. 2007. "Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era," *The leadership quarterly* (18:4), pp 298-318
D. Motivation/Puzzle	**Motivation**: Agile ISD method is adopted widely since it is related to positive outcomes e.g. improve productivity, reduce costs, compress time-to-market, and improve software quality (Schwaber et al., 2007; VersionOne, 2014). However, not all agile ISD projects are successful. Leaders can make up for the failures, but little is know how as an agile team per se is set up to operate without a designated leader. **Puzzle:** What is the impact of leadership on agile team characteristics and agile ISD project outcomes?
THREE	
E. Idea?	Empirically test the impacts of leadership on agile characteristics and ISD project outcomes.. Some empirical studies showed positive impacts of agile ISD method but they "ignore" the impact of leadership on agile team characteristics and agile ISD outcomes.
F. Data?	1. **Setting**: worldwide; **Unit of analysis:** agile ISD team/project; **Sampling:** cross-sectional 2. **Expected sample size**: 250 agile ISD teams/projects; 3. **Data sources**: community of agile ISD practitioner 4. **Data collection**: survey (on-line)
G. Tools?	Google application for online survey Software: SPSS for data cleansing and preparation, and SEM software e.g. Amos or Lisrel for data analysis to test the research model.
TWO	
H. What's new?	There is no theoretical knowledge in the agile ISD literature about the impact of leadership because an agile ISD is conceptualized as an autonomous, complex, independent, and self-organising system where no explicit leader exists.
I. So What?	The result of this research will provide theoretical and practical knowledge about how to govern and manage agile ISD projects in the future.
ONE	
J. Contribution	A novel theory on leadership in agile ISD.
K. Other Considerations	A case study will follow the survey to provide more explanation for competing or ambiguous findings; an action research study is possible as well where the findings can be tested in team settings.

3. Personal Reflections on the Pitch Exercise

Starting a research project is challenging (Faff, 2014). If I reflect on my experience, I concur with this statement. There are so many research topics which I am interested in. The problem I have to deal is how to make sure that the research topic is important, that I focus on a gap in that area, and that my research will have a significant contribution in that area. In addition, because my PhD thesis serves as a basic foundation that will shape my competencies in a specific area, it will determine my "anchor" for my future research projects; if not my entire academic career. So when my advisor came up with the research topic, I believe that it is a good one but I was not sure about the gap that I want to fill and how my thesis would make a contribution.

After reading more papers, it is getting clearer how my thesis research will make a contribution. It is not a direct linear process actually, and sometimes I have to move backward several times before going ahead. I have intense discussions with my advisor as well. Then, I attended a seminar about pitching research by Professor Robert Faff held by the UQ Business School, and I read his paper. His paper and seminar gave me the confidence that I have a good research topic.

I really like Professor Faff's suggestion to treat the template as my "friend" and not to be worried to start a research. I believe that the template helped me a lot later to understand research on the way to become an independent researcher. It aided me to organize my research topic and communicate it to other potential collaborator.

The cocktail glass approach is useful because there are a lot of papers related to my research topic. After reading those papers, I realized that not all of them were relevant or useful for my own research. I think it would be great if a strategy on how to filtering the literature could be

offered, or how to enjoy the cocktail efficiently as the analogy made. It may be something that cannot be taught and one has to experience it, but general guidelines would help a lot.

The most interesting part of the research pitch is the Mickey Mouse approach. I have learnt and used this for my master thesis, but just use the simple Venn diagram. Professor Faff's approach to call it as Mickey Mouse approach is marvellous because I believe most people like this character and it makes it easier to understand what my research is about. In addition, it helps me as well to position my research to the relevant literatures. Figure 1 illustrates the Mickey Mouse approach for my research:
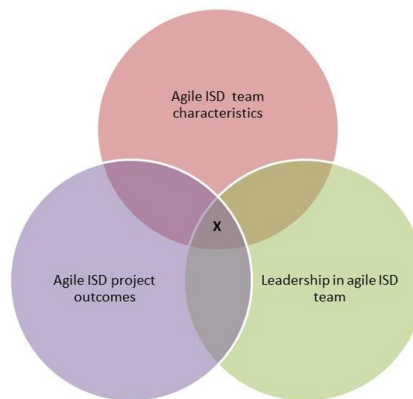

Figure 1. Mickey Mouse Approach to my Pitch

4.   Conclusions

This letter outlines my research pitch about the impacts of leadership in agile ISD projects. I found the template (Faff, 2014) very helpful to organize my research topic, to become clearer about my contributions, and to become aware of the missing pieces. Doing research is not easy, and how to start is probably the most challenging stage. Having the template made things simpler and easier for me, especially a novice researcher.

References

Dyba, T., and Dingsoyr, T. 2008. "Empirical studies of agile software development: A systematic review," *Information and Software Technology* (50:9-10) Aug, pp 833-859.

Faff, Robert W., Pitching Research (July 3, 2014). Available at SSRN: http://ssrn.com/abstract=2462059.

Laanti, M., Similä, J., & Abrahamsson, P. (2013). Definitions of agile software development and agility. In *Systems, Software and Services Process Improvement* (pp. 247-258). Springer Berlin Heidelberg.

Uhl-Bien, M., Marion, R., and McKelvey, B. 2007. "Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era," *The leadership quarterly* (18:4), pp 298-318.

VersionOne "8th annual state of agile survey," (Last accessed on 14 January 2015), http://stateofagile.versionone.com/, 2014.