

Develop Agile Leadership Competency Model to Drive Project Performance in IT Organizations

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Abstract – Leadership changes are per time and context. Technology and digitalization have caused massive disruption for organizations creating lot of complexities as well as opportunities. Accordingly, leadership needs to be re-evaluated. While lot of conceptual framework exists on what traits are needed to be an effective leader in the digital age, there is a lack of empirical evidence on how relevant these traits are to derive specific outcomes like effective project execution within time, scope and cost defined.

The main objective of the research is to empirically understand the linkage between which agile leadership traits have maximum impact on overall effectiveness of executing the agile based methodology projects. As part of this, the study will understand various complexities posited by the agile world and what agile traits the leaders need to develop in the organization that drives project performance.

In order to conduct the research, a comprehensive literature survey will be conducted on agile leadership characteristics, features of agile project management, traits necessary in agile age etc. Then these will be empirically tested via a questionnaire sent to ~500 participants across various software organizations in India. The results will be analyzed using various tools and methodologies like multiple regression, ANOVA testing, SPSS, Alteryx etc. which then will highlight the specific traits that drive maximum project performance and hence the customer satisfaction.

Agility in leadership has become the most critical competency in leaders of the organization so that they can efficiently execute the projects and hence become more effective in providing customer their required results. Hence, this paper seeks to identify how agile leadership can certainly impact knowledge work and to discover which leadership traits need to be established to backup organizational learning, agility in the era of continuous changes and yields the maximum project performance in terms of cost, time and scope measures.

Key Words: Agile, Leadership, Agile Age, Leadership Style, Project Performance, Traits

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1. INTRODUCTION

Effective leadership is on the most critical and fundamental drivers for an organization in order to achieve any organization objective. What constitutes an effective leader is not a static set of characteristics, traits or behaviors and is not a text book answer. It is a constantly changing and evolving concept based on the situation, context, need and age.

As a humanity, we have made rapid progress specially in the last decade and we have officially entered in the technological era. The great 'Agile Age' has well arrived and is here to stay. We live in a world of rapidly advancing technology which is influencing lives like never before. The technology is

changing various sphere of life including business, politics, economies and even day-to-day interactions. This certainly has led to a disruption in the leadership style as well. There are IT software firms rapidly changing too and can see the rising need of executing the projects in agile manner.

If we assess the impact of this change from an organization standpoint, there are two distinct changes:

- a. **The business model itself is changing –** from brick and mortar to network aggregators. Fortune 500 changes based on financial data from the S&P 500 companies, it is found that Network Orchestrators — companies that invest in

intangible assets, like relationships with customers and suppliers (Facebook, LinkedIn, Airbnb, TripAdvisor) have the highest Multipliers (price to revenue ratios) at an average of 8x.

- b. **The behaviours and motivations of stakeholders of the business are changing** - Employees want more ownership rather than to follow instruction; customers want to participate in the marketing and development process; and leaders are finding that open and agile organizations are able to manoeuvre more effectively than organizations where “all insight and direction comes from the top. In short, the autocratic Commander, whether brilliant or misguided, just won’t cut it anymore.

Since the computer advanced from specialist to widespread use in businesses there have been many significant developments, with digitalisation being described as a revolution causing a level of disruption to the previous way of life comparable to the industrial revolution (Brynjolfsson & McAfee, 2014) [1].

Canwell et al (2018) in an EY research state that as the pace of change intensifies, many companies just cannot compete; 50 percent of the 2006 Fortune 500 companies no longer exist. Competition rains in from every direction. Looking ahead, technologies such as robotics and artificial intelligence (AI) are projected to affect two billion jobs over the next decade. These trends represent both a threat and an opportunity.

Neubauer et al (2018) [2] in an interesting study point that one-third of the participants responded that the disruption caused by digital is ‘very significant’, with additional 28% believing it to be ‘fairly significant’.

This is eye-opening and points towards the intensity of the change and hence a relook at the leadership approach in technological era. This is further aggravated by the fact that **<15% organizations consider themselves to be prepared for this rate of change.**

Hence, there are clear signs and evidences that we are in a different era which requires a re-look at what does it take to be a successful agile leader in the rapidly changing technological world. The leader needs to exhibit certain traits which are required to execute project efficiently within the required scope, cost and timelines.

1.1 Agile Leadership

Agile leadership [3] is the craft of creating the right environment for agile teams to thrive. Therefore, the leader has to create an inspiring environment where teams take ownership of their work and learn fast

from customers. The leader has to handle well in a wide range of circumstances, especially new, changing and ambiguous situations. It is associated with mode four leaders (Modes of Leadership) who have the ability (and agility) to operate in any mode (system of thinking) and most importantly see from the perspectives of the other modes. It is this ability to think in a number of different ways that gives such leaders their agility.

As shown in Figure 1 below, Agile Leaders [4] focus on three things: (1) they create and nurture a culture in which experimentation and learning are embraced; (2) they collaborate with employees (at all levels in the organization) to find common values to create a greater goal for the company and the teams; and (3) they create an organizational structure that reinforces and rewards the other two dimensions.



Figure 1

Agile leadership is intended at the capability to aspect at situations from diverse perspectives and respond to them with high flexibility. Inside Agile leadership, the evolution and collaboration of teams are of prime importance. This is where it varies from traditional leadership. Agile leadership can vary and if it leads to decent and adequate results, it is probable to disregard its rules every now and then.

Some of the characteristics of an Agile leader are below and also shown in Figure 2 -

1. Agile leader works with multifunctional teams
2. Agile leader is flexible and continuously adapts, adjusts and respond to the environment
3. Agile leader is goal oriented and inform team members about project and organization vision goals.

4. Agile leader stimulate change and take quick actions.
5. Agile leader is caring, empathetic and passionate, so they can really influence team members.
6. Agile leader is open to ideas and a critical thinker
7. Agile leaders are always open to receive and give feedback.
8. Agile leaders work organization wide and influence more than just one departmental team.

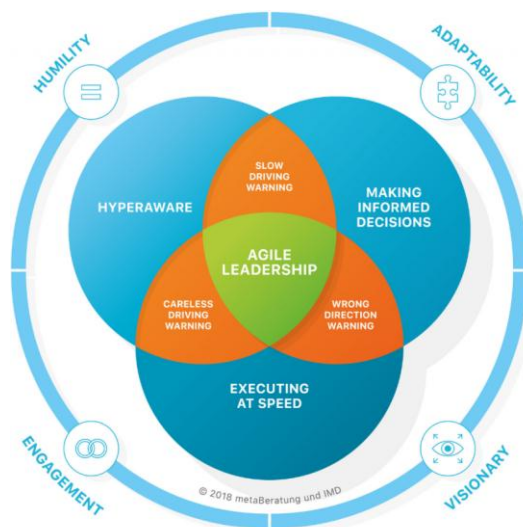


Figure 2

1.2 Agile Delivery or Agile Project Management

Agile, Agile Delivery or Agile Management is an iteration-based approach for delivering projects and software development. Agile is a supported delivery approach within the Bank. Any approach tries to meet the Agile Manifesto [5] as set out below comes under this umbrella.

Agile Project Management [6] is related to the rolling wave planning and scheduling project methodology. It consists of Uses iterations (“time boxes”) to develop a workable product that satisfies the customer and other key stakeholders. The Stakeholders and customers review progress and re-evaluate priorities to ensure alignment with customer needs and company goals. Adjustments are also made and a different iterative cycle begins that subsumes the work of the previous iterations and adds new capabilities to the evolving product.

2. RELATED WORK

Numerous surveys and studies had been done that depicts the popularity of agile leadership and the traits required to execute the agile projects in the

organization. Some of the reviews and the noteworthy findings learnt in this context are as summarized below:

Traits required in an agile leader

There is a lot discussed and written about what are the specific traits which the leaders of today and tomorrow need to possess in order to not only survive but rather thrive in the new chaotic and complex changing world.

A study by Bill Joiner, Stephen Josephs (2007) [7] indicated that with escalating intricacy and interdependence and the snowballing pace of modification in organizational environments, leadership agility has converted to a much-needed skill or competency. It recognized five different stages of leadership agility; each resembles to a level of adult ego advancement. It also caused the discovery of four leadership agility competencies named as stakeholder, context-setting, creative, and self-leadership agility and further eight varied underlying capabilities that advance as managers step up from one level of leadership agility to another level.

A study by Jane McKenzie and Paul Aitken (2012) [8] resulted in a 12 leadership agility framework and related practices that were fixated on creating favorable conditions for knowledge distribution, learning, association and team engagement. Engagement. Their thought process combined an extended history of leadership and change management process with the insights from a collective research project.

A study by Roger David Hall, Caroline Ann Rowland (2016) [9] shown that in a tempestuous economic climate, categorized by pressures to expand productivity and diminish costs, leadership and performance supervision have a more crucial role in serving to certify competitive advantage. The aim of this paper is to discover existing demands on leaders and actions to discover connections between management schooling and agile leadership. Syllabuses do not imitate the attributes that organizations think leaders to own and are content driven instead of process focused.

Neubauer, Tarlin and Wade (2017) [10], in an article for IMD, Global centre for Digital Business Transformation, talk about four key characteristics of agile leaders. They posit that agile leaders with following competencies tended to significantly out-perform other leaders on measures such as work engagement and leadership effectiveness. They call it HAVE competencies:

- Humble: Ability to accept feedback and acknowledging that others may know more than they do.

- Adaptable: Accepting that change is constant and changing mind based on new information or requirement is a sign of strength and not weakness
- Visionary: Having a clear sense of long-term direction even in the face of short-term uncertainty
- Engaged: A willingness to listen, interact, and communicate with internal and external stakeholders.
- Being data-intuitive in times of disruption where robust data that tells a clear story rarely exists;
- Ability to plan adaptively while celebrating successes and viewing setbacks as learning opportunities, not failures;
- Willingness to savour surprises in the face of unexpected technological developments, competitive moves, customer comments, economic and political shifts, and other unforeseen events.

Paxson (2018) [11] writes in a Forbes article on 'Human up: Why Human leadership skills are critical in a digital age': "In the age of digital Darwinism, speed and adaptability are the keys to survival. That comes from the top down in any company, whether it's a two-person start-up or an established company pivoting from traditional methods to the fast pace of the digital economy." She references Google's project Oxygen (2014) which looked at data behind corporate leadership and recommends the new age leader to:

- a. Be a nurturer and communicator
- b. Have insights into others
- c. Empathize and support colleagues
- d. Think critically

It is to be noted that many of the above-mentioned skills were traditionally thought to be more 'feminine', at least in many cultures. But leadership is not about gender, it is about possessing right traits which are required in the given context and time.

A similar view is presented in an HBR article 'As AI Makes More Decisions...' by Premuzic and Jordan (2018) [12]. It predicts that advent of agile and artificial intelligence will inevitably lead to more emphasis on the "soft" elements of leadership – the personality traits, attitudes, and behaviours enabling others to achieve a shared purpose or common goal.

According to the American Management Association (2018), aspiring leaders in the agile age should develop several attributes that differentiate them from successful leaders of other eras. These include:

- Leapfrogging mindset with the intent of 'changing the game' and creating or doing something radically different;
- Ability to push boundaries by finding creative solutions and opportunities within seemingly impossible challenges;

Gaps in existing research

Review of literature so far indicates several discussions on agile age, its complexities and how leadership could potentially need to be different to meet the requirements of new complex agile realities. However, I found 3 key gaps –

1. A lot of the research and discussions are conceptual theories and frameworks on 'new agile leadership'. There are very limited empirical studies which link the traits required to specific outcome (e.g. project performance) statistically to draw meaningful and significant conclusions.
2. Many of these theories and postulations seem to be polarized – some indicating that past is so radically different than future that everything related to agile leadership is uncertain and need to be redefined. While some others naively state that future will be a replica of past when it comes to agile leadership traits and it is a timeless concept not requiring much change. There needs to be a more balanced view/model on this topic.
3. The research also indicated the lack of a robust and objective tool which can measure the effectiveness of agile leadership style in agile project execution context.

Accordingly, I have set following objectives for my research:

1. To identify specific requirements, characteristics and complexities presented by the rapidly changing agile world which need a modified or enhanced leadership approach.
2. To empirically analyse the traits and attributes required in an agile corporate leader and finding correlation with project

performance of the organisation which is measured in cost, scope and timeline.

3. To develop an agile leadership competency model identifying critical traits, attributes and characteristics which a new-age agile corporate leader should imbibe and exude in order to be effective in rapidly changing times.

3. RESEARCH METHODOLOGY

The broad objective of the research is to analyze the critical traits of an agile leader and how these traits are impacting the performance of project execution in the organization.

The overall aim can be divided into 3 specific research objectives:

RO-1: To identify specific requirements, characteristics and complexities presented by the rapidly changing agile world

RO-2: To empirically analyse the traits and attributes required in an agile corporate leader and finding correlation with project performance of the organisation measured in cost, scope and timeline.

RO-3: To develop an agile leadership competency model identifying critical traits, attributes and characteristics which a new-age agile corporate leader should imbibe and exude in order to be effective in rapidly changing times

I would adopt a comprehensive research methodology including various qualitative and quantitative approaches.

Key methods are listed below:

- Literature search – I will begin my research by doing a comprehensive and relevant literature search of various publications, scholarly work, journals articles and other material on this topic. Purpose of the literature review is to understand has already been done in the field on this and related topics. I will also consider different viewpoints on the subject and understand what the gaps are. Few themes which I would like to explore in-depth:
- What is leadership and different theories of leadership so far
- What is technology/agile age and what are its unique characteristics
- What traits the leader of tomorrow need to have in order to succeed in agile age – which of these traits are fundamental and

age-old and which ones are relatively new traits to develop

I will make use of popular platforms like Google Scholar, Research Gate, Ebsco database etc.

- Data Collection – Given I want to empirically test the findings and link the traits of a successful leader in digital age to the success outcome of either increase in profits or better employee satisfaction, I will collect data from a combination of primary and secondary data sources.

a) Primary Data

- Survey questionnaire: I intend to design a well structure questionnaire which asks the relevant questions on the topic. I will then administer the survey to 400-500 participants to collect real world sample data.
- Focused group discussions/Interviews: I will supplement my findings by conducting live discussion with various stakeholders. This would comprise of different cohorts i.e. people in leadership positions, managers, executives. I also plan to cover the gender diversity, demographic diversity and both old school and new type of organizational set up.

b) Secondary Data

- Published Material – I will use the work of different authors and to accompany available data and material. Few key journals on leadership such as HBR, Leadership Quarterly etc. will also leveraged
- Case studies: I also intend to examine few real-life cases in depth for on the ground understanding of the topic and what implications does it have in real world operations
- Internet Search: This includes companies' websites, general web search, case studies on effective agile leadership etc.
- Quantitative analysis – I will deploy relevant statistical tools and techniques including regression, correlation, ANOVA test etc. I also plan to use the relevant tools such as SPSS, Stata, E-Views, Minitab etc. for better statistical analysis.
- Conclusion and recommendations – The final results and recommendations will be offered based on a very careful and detailed study of all the key parameters. I

will ensure to obtain relevant expert inputs before finalizing the results. Objectivity will be the key mindset approach to ensure results are not coloured by personal biases. I will take care to try and make the recommendations as much as action oriented as possible.

4. PROPOSED WORK

The goal of this proposed research is to analyze the critical traits of an agile leader and how these traits are impacting the performance of project execution in the organization.

The research will be logically studied in three parts, to help conclude the traits of agile leadership which are helpful in driving project performance in the IT software organizations:

1. Analyse and Identify specific requirements, characteristics and complexities presented by the rapid changing agile world which need a modified or enhanced leadership approach
2. Empirically analyse the traits and attributes required in an agile corporate leader and finding correlation with project performance of the organisation which is measured in cost, scope and timeline.
3. Develop an agile leadership competency model identifying critical traits, attributes and characteristics which a new-age agile corporate leader should imbibe and exude in order to be effective in rapidly changing times

The research work will be carried out in five stages.

- Stage 1: Comprehensive literature review, with special focus on theories and material related to improving agile methodology for software maintenance.
- Stage 2: Data collection (industry wide and company specific)
- Stage 3: Specific administration of a detailed questionnaire
- Stage 4: Analysis and Interpretation
- Stage 5: Recommendations and validation

5. LIMITATIONS OF THE STUDY

1. Due to time constraints, the research might not be able to cover all aspects of real-life situations in this field.

2. The research will focus on specific outcomes e.g. project performance in terms of cost variation, schedule variation and scope variation and hence may not be able to cover comprehensive scope of what an effective leadership could impact overall.
3. In the similar vein, the study will be for a specific context (region, type of companies etc.) and not a cookie cutter view across all possible scenarios.
4. Depending on the data availability and survey responses, necessary adjustments will need to be made to interpret the results and generalize recommendations.

6. CURRENT AND FUTURE DEVELOPMENTS

Various agile leadership methodologies will only continue to develop in the global marketplace. Thus, it is imperative that project managers if they are leaders have a thorough understanding of the needs of their clients, their current processes, and the techniques that can assist them in improving their agile capabilities for competitive advantage in today's world with the intelligence to apply the right skills at workplace and during the project execution.

The broad objective of this paper is to analyze the critical traits of an agile leader and how these traits are impacting the performance of project execution in the organization.

The competency model will assist the Technology sector of organizations to work better using the agile methodology in executing the projects and delivering the right product and quality to the customer within required timeframes thereby achieving project excellence.

These proposed traits can be readily used in practice in IT organizations for their software project deliveries to the customer. The findings are of direct practical relevance to IT sector.

Some further productive areas for future research comprise: intensifying knowledge about how leaders mature from one level of agility to other, classifying the competencies and skills allied with the level outside synergist, and healthier understanding of the organizational development stages that are analogous to the stages or levels of leadership agility.

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