Original Research Paper

Management

IMPACT OF LEADER'S INVOLVEMENT IN AGILE MATURITY ASSESSMENTS

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ABSTRACT Agile is the way we look at things happening around us. Agile is a behavior pattern, how you look at the world's complex situations, how you react to situations, how you visualize a solution, how you reach the solution. You can either think of a complex problem or a situation and worry about it or you break that into meaningful small chinks & try to solve it. Agile adds that fun element of tackling smaller challenges systematically. As we move from the traditional hierarchical working to self-managing and agility, it is evident for teams to see the radical shift in people's day-to-day behaviors. These new ways of working bring in an increased sense of ownership, proactive, open communication, accepting failures, and more importantly trust and transparency among team members. Agile maturity assessments are tools or processes used to evaluate and measure an organization's or team's level of agility and their effectiveness in implementing Agile principles and practices. These assessments help identify areas of strength and improvement, enabling organizations to enhance their Agile adoption and transformation journey.

INTRODUCTION

Agile maturity assessments are tools or processes used to evaluate and measure an organization's or team's level of agility and their effectiveness in implementing Agile principles and practices. These assessments help identify areas of strength and improvement, enabling organizations to enhance their Agile adoption and transformation journey.

There are various frameworks and models available for conducting Agile maturity assessments, each with its own set of criteria and indicators. Here are a few commonly used ones:

Agile Maturity Model (AMM): The Agile Maturity Model assesses an organization's Agile maturity across different dimensions such as culture, leadership, practices, and metrics. It typically uses a multi-level scale to determine the organization's stage of Agile adoption and provides guidance on the steps required to progress to higher maturity levels.

Agile Assessment Framework (AAF): The Agile Assessment Framework provides a structured approach to assess Agile teams or organizations. It focuses on evaluating key areas such as Agile mindset, team collaboration, technical practices, and delivery effectiveness. It often employs questionnaires or interviews with team members to gather data.

SAFe (Scaled Agile Framework) Agile Maturity Assessment (AMA): The SAFe Agile Maturity Assessment is specifically designed for organizations implementing the Scaled Agile Framework (SAFe). It evaluates the organization's Agile practices, lean-agile leadership, and the adoption of SAFe principles at different levels of the organization.

Scrum Maturity Assessment: Scrum, being one of the most popular Agile frameworks, has its own maturity assessment models. These models evaluate a team's implementation of Scrum practices, such as sprint planning, daily stand-ups, sprint reviews, and retrospectives. The assessment helps identify areas for improvement and suggests actions to enhance the team's Scrum maturity.

During an Agile maturity assessment, various data collection methods can be employed, including interviews, surveys, observations, and document reviews. The assessment results are then analyzed to identify strengths, weaknesses, and improvement opportunities. Based on the findings, organizations can develop action plans to address gaps and enhance their Agile practices.

Agile maturity assessments are not meant to be one-time events. Agile is a continuous improvement journey, and assessments are often conducted periodically to track progress, identify new areas for improvement, and ensure sustained growth in Agile maturity.

2. Review Of Literature / Theoretical Framework

Agile Maturity Assessments are tools or processes used to evaluate and measure the level of agility and maturity of an organization or team in implementing Agile principles and practices. These assessments provide insights into the current state of Agile adoption, identify areas of strength and improvement, and guide organizations in their Agile transformation journey.

Here are some key points to know about Agile Maturity Assessments:

Purpose: The primary purpose of Agile Maturity Assessments is to assess the effectiveness of Agile adoption within an organization or team. They help identify gaps, challenges, and improvement opportunities to enhance Agile practices and outcomes.

Evaluation Criteria: Assessments are typically based on a set of criteria or indicators that reflect Agile principles, values, and practices. These criteria can include aspects such as Agile mindset, team collaboration, Agile practices, leadership involvement, technical excellence, and continuous improvement.

Assessment Methods: Agile maturity assessments can be conducted using various methods such as surveys, interviews, workshops, observations, and document reviews. Data is collected from team members, stakeholders, and relevant artifacts to gather insights on Agile practices and organizational dynamics.

Maturity Levels: Many assessment frameworks use a maturity model with different levels or stages to assess Agile maturity. These levels often range from initial or ad-hoc adoption to optimized or highly mature Agile practices. Each level represents a progression in Agile adoption and maturity.

Benefits: Agile Maturity Assessments provide several benefits to organizations. They help identify areas for improvement, prioritize actions, and set goals for Agile transformation. Assessments also promote transparency, collaboration, and shared understanding among team members and stakeholders.

Continuous Improvement: Agile Maturity Assessments are not one-time events. Agile is a continuous improvement process, and assessments are typically conducted periodically to track progress, measure the impact of improvement initiatives, and adapt Agile practices to changing needs.

Tailoring Assessments: Organizations can customize or adapt existing assessment frameworks to align with their specific context, goals, and Agile implementation approach. Tailoring assessments ensures relevance and captures the unique challenges and characteristics of the organization.

Action Planning: Once the assessment is complete, organizations develop action plans based on the findings and recommendations. These plans outline specific initiatives, strategies, and timelines to address identified gaps and improve Agile maturity.

Agile Maturity Assessments provide organizations with valuable insights into their Agile adoption and maturity levels. They serve as a guide for continuous improvement, helping organizations enhance their Agile practices, increase efficiency, and deliver customer value effectively.

There are various tools and techniques that can be used for conducting Agile Maturity Assessments. Here are some commonly employed ones:

Surveys and Questionnaires: Surveys are a popular tool for collecting quantitative and qualitative data. They can be used to gather information from team members, stakeholders, and leaders about their perceptions of Agile practices, mindset, collaboration, and other relevant aspects. Questionnaires can be structured with rating scales, multiple-choice questions, and open-ended questions to capture a wide range of feedback.

Interviews and Focus Groups: Conducting interviews with individuals or focus groups allows for in-depth discussions and exploration of Agile practices. This technique provides an opportunity to gather qualitative insights, uncover challenges, and understand different perspectives. Interviews can be conducted with team members, leaders, and stakeholders at various levels of the organization.

Observations and Shadowing: Observing teams in action and shadowing team members during their daily work can provide firsthand insights into Agile practices. This technique allows assessors to witness team dynamics, collaboration, and the application of Agile principles in real-time. Observations can be supplemented with checklists or observation guides to capture specific behaviors or practices.

Document and Artifact Reviews: Reviewing Agile-related documents and artifacts, such as sprint backlogs, user stories, product increment, and retrospective notes, can provide valuable information about the organization's Agile practices and the quality of deliverables. Assessors can analyze the documentation to identify adherence to Agile principles, the effectiveness of communication, and the level of technical excellence.

Workshops and Collaborative Sessions: Facilitating workshops or collaborative sessions with Agile teams and stakeholders can foster dialogue and collective understanding. These sessions can be used to gather feedback, validate assessment findings, and identify improvement opportunities. Techniques such as brainstorming, affinity mapping, and retrospective exercises can be employed to engage participants and generate insights.

Data Analysis and Metrics: Analyzing quantitative data, such as team velocity, cycle time, and customer satisfaction metrics, can provide objective measures of Agile maturity. Assessors can analyze trends, identify patterns, and compare data against benchmarks or industry standards to assess the organization's progress and identify areas for improvement.

Agile Assessment Tools: There are specialized software tools available that provide pre-built assessment frameworks and automated features for conducting Agile Maturity Assessments. These tools often include customizable questionnaires, data analysis capabilities, and reporting features, which streamline the assessment process and provide visual representations of the results.

It's important to select the appropriate combination of tools and techniques based on the organization's context, the scope of the assessment, and the available resources. A well-rounded approach that combines both qualitative and quantitative methods often provides a comprehensive understanding of an organization's Agile maturity and helps drive meaningful improvement initiatives.

Sample Agile Assessment:
Agile Practices are categorized into multiple cards (left side of the below image) and are scored as per a scale of 0 to 5 (unused to Expert as per right-hand side of the below image)
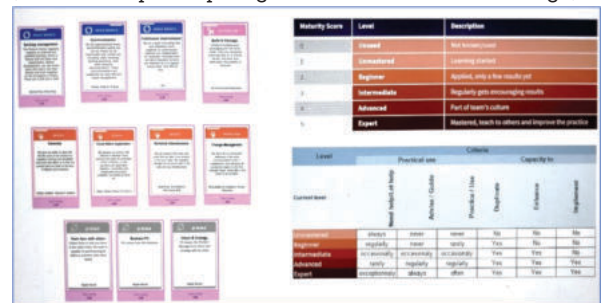

Image 1: Above Agile Assessment is created & conducted using Klaxoon.com
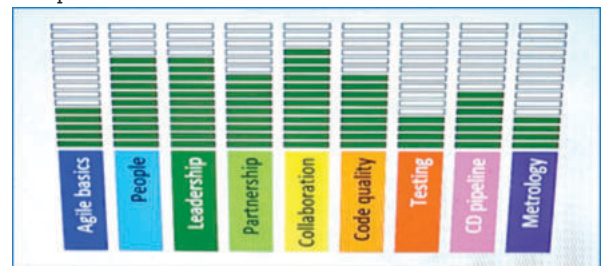
Sample Assessment Results:

Image 2: Assessment results

3 RESEARCH DESIGN / METHODOLOGY
This study involves quantitative approach for research. The data will be collected using structured questionnaires from agile teams. The quantitative approach would be used to get a good understanding of how teams are successful implementing agile at scale framework with leadership influence. Quantitative approach and questions including qualitative in some context of this study to enable generalization of the results over a larger agile team to obtain a better knowledge of how the impact of leadership & teams drive towards achieving desired outcomes & results. The study revolves around people & agile at scale framework implementation.

The sample size for collecting the data was 475 across different IT industry sectors. Primary data was collected using a structured questionnaire containing both open-ended and

closed-ended questions with Respondents including profiles - Developers, Testers, Scrum Masters, Product Owners, Business Representatives, Agile Coaches, Release Train Engineers, Solution Train Engineers, Tech Managers & other Service team members. Due to the pandemic, Questionaries will be hosted online & video interviews were conducted where ever necessary for Data collection.

For this research study, convenience sampling will be more useful. Convenience sampling enables easy selection of the population under study and also helps in fulfilling the objectives of the research. The organizations (IT majors) who are currently in Agile at scale mode, sample will be decided on the basis of their Delivery predictability, faster time to market, employee motivation, productivity increase & defect reduction.
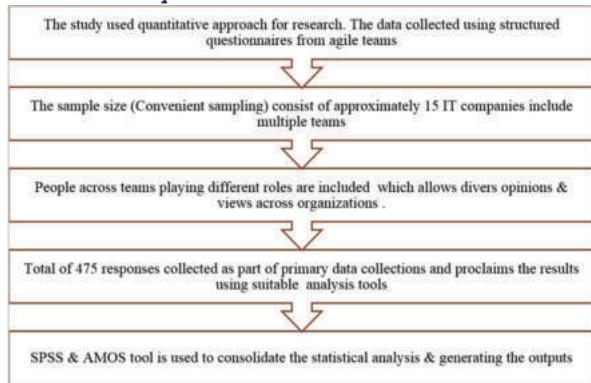
Plan of the Study conducted as stated below:

Figure # 4: Methodology

4 ANALYSIS AND INTERPRETATION / RESULTS & DISCUSSION
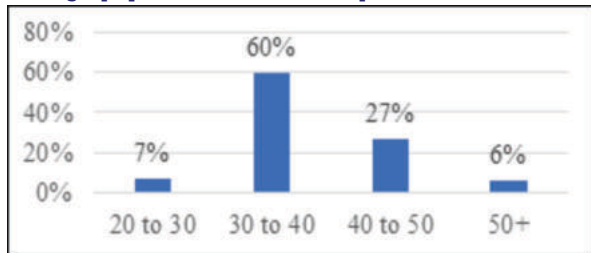**Demography and varied roles of respondents:**

Figure 5. Respondent Age Group
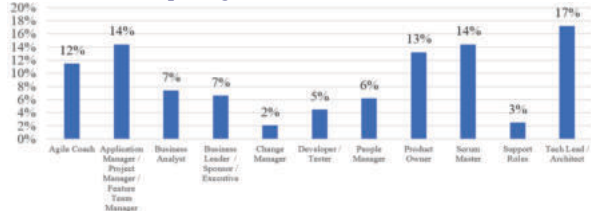
The Role You Play in Agile & Scale Environment

Figure 6. Respondent's The Role You Play in Agile & Scale Environment

From the following table we can observe that, about 52.0% of the respondents were working in a company with size of 10000 + employees. Following bar chart also shows taller bar corresponding to the same.

Table 1: Company Size

Company size				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1000 - 5000 Employees	82	17.3	17.3	17.3
10000 + Employees	247	52.0	52.0	69.3
5000 - 10000 Employees	124	26.1	26.1	95.4
less than 1000 Employees	22	4.6	4.6	100.0
Total	475	100.0	100.0	

From the following table we can observe that, statement "Mutual transparency allows better collaboration" had a high mean value of 4.74 with a standard deviation of 0.5.

Table 2: Descriptive Statistics - Mutual transparency allows better collaboration

Descriptive Statistics - Mutual transparency allows better collaboration					
	N	Minimum	Maximum	Mean	Std. Deviation
As a team (including Ops and support) work together to continuously improve our collaboration	475	3.00	5.00	4.1853	.74019
Teams are co-responsible and practice sustainability by avoiding concentrated roles and knowledge held by one single person	475	1.00	5.00	3.9768	1.03396
Teams are committed to expose our objectives, constraints and priorities to our partners	475	2.00	5.00	4.0253	.88315
On all organizational levels, synchronization points are set up, known by all teammates and carried out, including: daily meetings, backlog grooming, inter-team sessions, demonstrations	475	2.00	5.00	4.2337	1.08018
Mutual transparency allows better collaboration	475	3.00	5.00	4.7411	.50556
Managers seek to facilitate communication, sharing of knowledge and cross training of teammates both internal and external	475	1.00	5.00	4.1032	.97862
Time is dedicated to sharing of knowledge, onboarding of new arrivals, mentorship pairings, strengthened influence of most knowledgeable colleagues	475	2.00	5.00	4.1389	.91267
Team contributes to continuous improvement and take part in retrospectives openly	475	3.00	5.00	4.4105	.54916
Trust takes place in the team's culture.	475	3.00	5.00	4.4274	.57780
Regular feedback is natural and constructive, without judgement	475	2.00	5.00	4.4316	.67275
Experimentation and right to failure are core principles of our team	475	1.00	5.00	3.8695	.84433
Raising an issue is considered valuable as it drives continuous improvement	475	3.00	5.00	4.4063	.70946
Team adheres to a high standard by themselves in order to provide the best quality of product possible to clients	475	2.00	5.00	4.4947	.60368

Team values and rules exist and are built and shared by the entire team (manager included). Instead of pointing fingers, we try to lead by example.	475	2.00	5.00	4.3326	.82606
Agile & Agile at scale maturity assessments are carried out at an interval of 6 - 12 months	475	1.00	5.00	3.8568	1.17666
Valid N (list wise)	475				

From the following table, we can observe that, statement "Openness" had a high mean value of 3.96 with a standard deviation of 0.3,3 and statement "Self-organization" had a low mean value of 3.95 with a standard deviation of 0.36.

Table 3: Descriptive Statistics - Behavioural attributes

Descriptive Statistics – Agile Behavioral attributes					
	N	Minimum	Maximum	Mean	Std. Deviation
Self-organization	475	1.00	5.00	3.9495	.36395
Respect	475	1.00	5.00	3.9516	.34337
Commitment	475	1.00	5.00	3.9516	.35545
Coverage	475	1.00	5.00	3.9537	.35275
Openness	475	1.00	5.00	3.9558	.33144
Transparency	475	1.00	5.00	3.9516	.35545
Valid N (list wise)	475				

From the following table, we can observe that, statement "Team Involvement" had a high mean value of 3.96 with a standard deviation of 0.33, and statement "Retrospective" had a low mean value of 3.96 with a standard deviation of 0.34.

Table 4: Descriptive Statistics - OKR Implementation Exercise

Descriptive Statistics – OKR Implementation Exercise					
	N	Minimum	Maximum	Mean	Std. Deviation
Frequency	475	1.00	5.00	3.9558	.34394
Team Involvement	475	1.00	5.00	3.9642	.32605
Facilitation	475	1.00	5.00	3.9558	.32502
Retrospective	475	1.00	5.00	3.9579	.34113
Workshops	475	1.00	5.00	3.9579	.33488
Valid N (list wise)	475				

From the following table, we can observe that, statement "Participation" had a high mean value of 3.96 with a standard deviation of 0.,3 and statement "Respect" had a low mean value of 3.95 with a standard deviation of 0.35.

Table 5: Descriptive Statistics - Maturity assessment (MA)

Descriptive Statistics - Maturity assessment					
	N	Minimum	Maximum	Mean	Std. Deviation
Participation	475	1.00	5.00	3.9642	.29905
Stakeholder engagement	475	1.00	5.00	3.9600	.34446
Knowledge sharing	475	1.00	5.00	3.9579	.32204
Openness	475	1.00	5.00	3.9621	.32904
Respect	475	1.00	5.00	3.9516	.34946
Transparency	475	1.00	5.00	3.9474	.36074
Valid N (list wise)	475				

Hypothesis:
Hypothesis # 1
- H1 Hypothesis: Agile Assessments doesn't involve leaders
- H0 Hypothesis: Leaders play a very important role in Agile Assessments

Table 15: Hypothesis 4

One-Sample Test	
	Test Value = 3

	T	DF	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Impact of Leader's Involvement in Agile Maturity Assessments	34.585	474	.0001	1.32421	1.2490	1.3994

- The T value corresponding to the mean difference between role of leaders and a fixed mean value of 3 was 34.585 and its corresponding p value was 0.000<0.05.
- Since the p value was less than 0.05, we can conclude that leaders play a very important role in Agile Assessments.

Hypothesis # 2:
- H0 - Agile manifesto [(1) Individuals and interactions over processes and tools. (2) Working software over comprehensive documentation. (3) Customer collaboration over contract negotiation. And, (4) Responding to Change Over Following a Plan] play a very important role in OKR implementation
- H1 - Agile Manifesto [(1) Individuals and interactions over processes and tools. (2) Working software over comprehensive documentation. (3) Customer collaboration over contract negotiation. And, (4) Responding to Change Over Following a Plan] doesn't have any important role in OKR implementation

Table 5: Hypothesis 6

One-Sample Test						
	Test Value = 3					
	t	DF	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Agile manifesto play a very important role in Agile Maturity Assessment	23.600	474	.000	1.10316	1.0113	1.1950

- The T value corresponding to the mean difference between the agile manifesto and a fixed mean value of 3 was 23.6 and its corresponding p-value was 0.000<0.05.
- Since the p value was less than 0.05, we can conclude that Agile manifesto [(1) Individuals and interactions over processes and tools. (2) Working software over comprehensive documentation. (3) Customer collaboration over contract negotiation. And, (4) Responding to Change Over Following a Plan] play a very important role in OKR implementation.

5. CONCLUSION
A famous quote from Mahatma Gandhi, "be the change you want to see", exactly reflects the Agile behavioral attributes. Organizations with Agile behavioral attributes helps to build more adaptive organizations.

With this current VUCA (volatility, uncertainty, complexity, and ambiguity), the world is depending largely on how organizations are embracing the change. Organizations with Agile behavior attributes help teams and organizations thrive by showcasing values such as Respect, Openness, Commitment, Courage, Transparency & Self-Organizing.

Leadership has a significant influence on shaping the organizational culture. By being involved in the assessment process, leaders can reinforce the importance of Agile principles and practices and foster a culture of continuous learning, collaboration, and adaptability.

Agile maturity assessments often uncover organizational

impediments and barriers to Agile adoption. Leadership involvement enables them to gain firsthand knowledge of these challenges and take appropriate actions to remove roadblocks, whether they are related to resource allocation, organizational structure, or resistance to change.

Overall, leadership involvement in Agile maturity assessments is crucial for creating a supportive environment, aligning Agile adoption with organizational goals, and driving continuous improvement efforts. Their active participation reinforces the importance of Agile principles and practices and helps overcome organizational challenges to achieve higher levels of Agile maturity.

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