



## **ARCHITECTING PROJECT MANAGEMENT**

for Enterprise Agility...

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## **Cultural shift - Transition from Waterfall to Agile**

Organization Design for Enterprise Agility

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## ABSTRACT

Growing needs of market, demands every organization to adopt mechanisms that could help in getting faster delivery, as they accommodate the changes required for the customer over the period of development. IT world has the popular "Agile" methodology targeting early functional deliverables bringing a better handshake between supplier and user. In an organization, where there are multiple units focusing on different areas such as sales & marketing, production, purchase, software development - does this approach work? Given, each unit has its own way of working with its processes in place, the feasibility of this approach for a product development is analysed.

Beyond the laid out rules of the framework, key aspect which brings in success for the development and the approach itself is the cultural shift. This transition is lot to do about the way of thinking, discussing, resolving and concluding any topic or issue. Apparently, one important aspect which has been noticed is the revamp of people's mind set. This paper intends to share the experiences and learnings gained from project transitioning from traditional approach to agile world with visual management techniques.

## INTRODUCTION

Majority of the software projects are moving towards agile development. [1] Techbeacon survey taken in the year of 2015, indicates that Agile is the norm in IT organizations. Two thirds of the people described their company being agile or leaning towards Agile as represented in Figure 1.

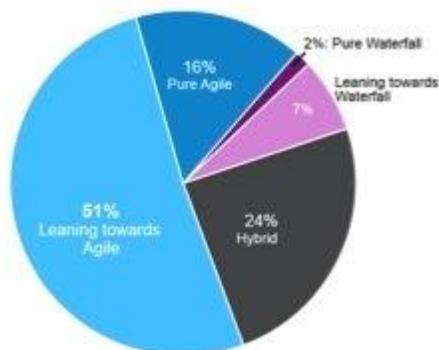


Figure 1: Primary development method used in organization across projects. Source: HP online survey of 601 development and IT professionals.

Many organizations have software development as part of their complete workflow. And time to market, does not mean just the software deliverable, but an integrated solution which constitutes of hardware, firmware or a platform, on top of which the software shall exist. Extending the Agile principles from software to “product development” along with lean concepts, non-IT core organizations can certainly gain a huge step forward with respect to not only execution, but also to set strategy and goals. This paper elaborates the experiences on applying agile processes over traditional setups.

## DETAILS OF THE PAPER

This paper with the background of the need for a change, followed by steps taken towards Agile provides the learnings from the transitioning process.

## NEED OF CHANGE - PROBLEMS FACED

There were schedule delays in the product delivery which was contributed from various functional units. Software teams were trying shorter waterfalls and were applying iteration on to it. This was expected to give at least a good control of project tracking and delivery. However, from software implementation, though these were all existing, as a product - the instances of timeline delay couldn't be discarded.

Knowledge of a complete product at one place is difficult to attain. Products take different lifespan. None of them is less than a minimum of 6 years[2]; there is a history to many of them and reasons for why a feature was developed in a certain way. With people movement, there were risks with the understanding of complete picture. From an overall standpoint, there were gaps at multiple levels - in terms of understanding the domain, the working of software in field, silo mentality and how an end customer uses the developed product.

It all seems to be right with appropriate handshakes through shorter waterfalls and the organization business model, there is a perception of having required control in handling projects. However, the question of "How far are we in reality" always stands good. This demanded us to have an understanding between what we aligned in terms of cost, scope and schedule at the end of planning vs completion. Once the approval of scope is complete and after the execution starts, change management with all stakeholders by itself becomes a huge task

When the output of virtual world touches the real ground even as testing in lab, it had become implicit that teams would have integration issues and an accepted mind set to resolve issues. Weightage on defects detected later in the lifecycle causes rework, risk towards promised dates and functionality. Especially, issues on non-functional parameters such as performance and memory would lead to cascading impact.

Above all, apart from examples such as healthcare.gov[3], Versionone[4], there are many organizations which have not succeeded even after agile adoption. It certainly demands an understanding of what are the foundation which could possibly fail the project and eventually the organization.

With these in the back ground, the key targets for the transition was set as –

- Delivering a working and valuable product
- Reduce time to market
- Improve collaboration

## SHIFT TO AGILITY

Given, there is a clear demand to change the approach, so as to achieve the set targets, Agile with lean concepts seemed to be way forward. Evolutionary development with high flexibility for planning, promoting team work certainly fits in for the right picture.

Hence, there were clear steps taken to move towards Agile.

- ✓ Business critical projects which had schedule as success factor were chosen, even if it were to be ongoing
- ✓ Teams were trained for agile implementation
- ✓ Requirements backlog was made available and product manager had set the priorities with stack rank
- ✓ Clear planning of tasks for a month or 15 days were listed along with priority order
- ✓ Definition of done was aligned
- ✓ Team decided the goals, what needs to be worked on, how much time required, how to go with implementation and measuring their performance.
- ✓ Daily stand ups were held with visual boards
- ✓ Half way of the iteration, status of iteration targets were relooked and appropriate planning and alignment was adapted
- ✓ In the end of the iteration, demo was provided on the implemented feature
- ✓ Post demo, qualitative retrospection taken up with specific improvement actions for next cycle
- ✓ Steps were taken to remove/handle the impediments and how to handle the required improvements.

## CHANGES PERCEIVED

All this in a flow seemed to be very powerful and perfect.

- ❖ There were much improved communication with all required stakeholders across or within groups and even between developers and testers.
- ❖ It was not a sinusoidal utilization pattern and teams always had running backlogs irrespective of the project status which made the management happy.
- ❖ From a project management standpoint, people were able to track tasks easily with visual board. Slippages were evident within iterations making it easier for Scrum master to discuss on required re-prioritizations.
- ❖ In terms of productivity as well, there are benefits seen.

However, the question is "Are we doing agile" or "Are we being agile"[5]. In few examples, the team had turned out to have a task driven mind set. Does this favour long run? By the Agile values, the teams should become self-driven and self-managed. Mere interactions or discussions with scheduled meetings does not bring the cohesion within teams. Something which seemed to be missing in this picture was nothing but the "Mind set". Any change if not embraced at its roots shall revert back to its previous state. Very similarly, if this approach is treated only as a process, it shall not yield much of value.

This is not certainly something which happens overnight. There were many aspects required to be transformed to move forward not only at individual level, but as a team, group or business unit.

## LEARNINGS IN THE COURSE OF THIS TRANSFORMATION

During the process of becoming Agile, from the many learnings, here is a consolidation on major points. In a nutshell, Figure 2 depicts the transition expected to happen in each mind. It's not what role you play matters, but how well, makes the picture perfect.

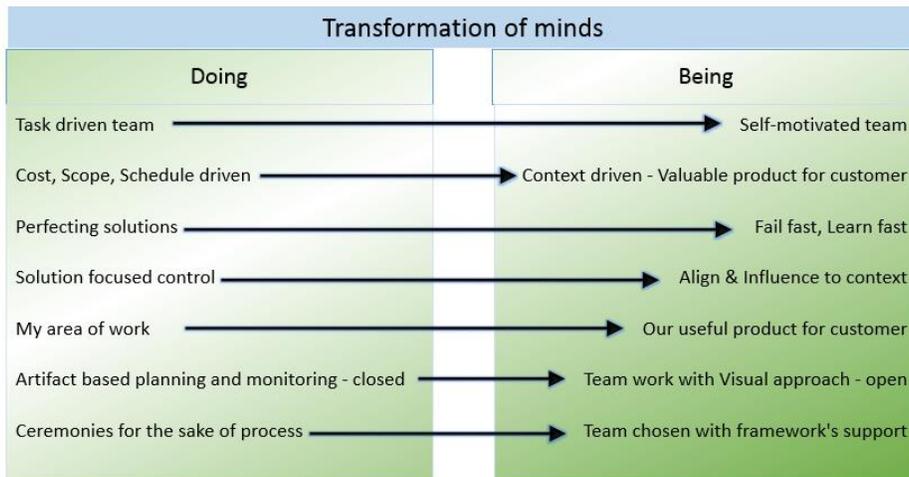


Figure 2: Consolidated view of the transition towards Agile implementation

Details of the points are given with explanation.

### People & Agility

- Following ceremonies of scrum is not Agile; Being Agile matters.
  - With an example of an iceberg or onion model, values and beliefs make up a person. Without transforming the belief of an individual, it's unrealistic to expect much of benefits just by changing the process.
  - In Agile world, People are everything. Teams are typically tuned to the way of understanding differences between groups and accommodating them. In its base, the success of a project depends on the relationships within the team members. Hence, standing by own values and building relationships with authenticity is much stronger than accommodating.
- Fail fast and learn fast. This means the management should also work along even when the team is stumbling or not meeting the set iteration targets. Though everyone would prefer to be in the ideal world of "Doing things right in the first time", this takes time to achieve. Every involved party should understand this and provide enough space where the team members can feel safe to share their mistakes or failures and not be feared about being penalized for it
- If you could get a good full time coach with all parties involved, it certainly works well. It sets the base and style of working for everyone in the team. This did require some time and effort of all key members being co-located and it certainly is worth the cost
- Irrespective of the multi-site implementation, involvement of all functional units including product management, design, development, testing, supply chain, production and documentation together helps

tremendously. Perhaps, the testing effort is high and the only solution out is to handle it with test automation.

- Length of sprints could be two weeks to two months. The team is allowed to choose this. However, there is no moving beyond the time scale. Given a scenario where the team needs just 2 more days to complete the targets, it's very attractive to stretch the iteration and call the targets complete. It's very important to follow the set guideline and it's a key role of coach or a scrum master to let the team move on with the pattern.
- Use the option of continuous alignment for schedule or scoping or prioritizing. Given the list, team should take a judicious call and apply the reprioritization of user stories. If there is a feature which does not make sense any more, re scoping should be done in the iteration planning. Intent is to provide a reliable, working product which meets the customer's needs. And if there is any obstacles seen to it, team should come forward rather than sinking back to the traditional approach. As the project development journey proceeds, there can be as many re-alignments required and that's the critical factor which allows a valuable product.

### **Manager vs Leader**

This is a very important shift that has to be instilled, since in traditional models, Project Managers for the most times remains to be the centre of attraction. To be agile, adaptive leaders are required. Typically, PMs are tuned to the scope, cost and schedule approach. Modifying it to the approach of delivering a valuable product is difficult. This is a huge success parameter for being agile, since all decisions and actions would evolve around this.

The key role of a leader is to be a facilitator, safe guarding teams from distraction and providing the focus towards delivering a product and solution which delights the customer. If there is a grooming required, this should be taken with utmost priority.

### **Requirements and Product owners**

- Evolving requirements does not mean that the product owner or the manager can introduce changes anytime. Just by the name of Agile, it cannot be considered that there is no structured way to it.
- With this model, it does not indicate to the product managers that they join the meetings just to take a stock of the status. It's an equal contribution providing inputs to the team where ever required or addressing a question on prioritization of user stories or gliding along for the business critical aspects. In a

way, there is a huge step up required from the business stakeholder side, since they have to make a commitment to work along the project. This is very different for those who have been following the waterfall model. There needs to be product owner grooming, if required.

### Visual management technique

- Usage of visual management techniques is very effective. As the saying "A picture is worth thousand words", with the physical room, placed with boards on overall timelines for various functional units, iteration targets and scrum boards - there is so much information shared across effectively. This technique in specific helps the whole team to understand the issues of each other functional units and allows everyone to take up realistic dates with acceptable risks. Daily stand up may not be useful with supply chain, marketing and sales groups. Depending on the project needs, a weekly or bi-weekly involvement in the physical room or via VC helps to connect
- Though the trials of online visual management tools are being explored, nothing works as good as all team members being in the same place, followed by the option of Video conferences. A sample view of how a project room with visual management being used is shown in Figure 3. Here is where, project's objective, expected product details, overall project plan with list of deliverables, integration points and scrum boards are placed. Teams can choose to mend the need and availability of each functional unit, as required for the project. For example, supply chain or production team may not have the need to join in with the same frequency of software development. Team chooses and sets the right frequency of involvement, respecting everyone's time. It's important not to be bogged down by the tools but to retain the focus of targets.

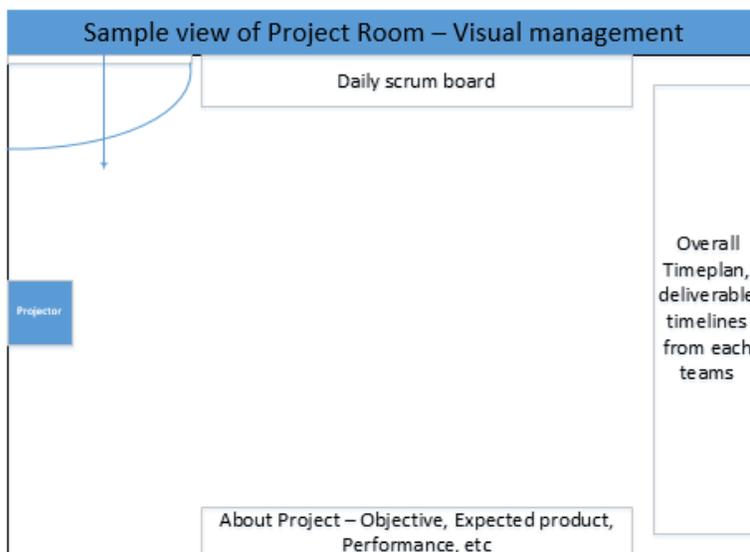


Figure 3: Sample view of how project room with visual management technique applied

- Power of white board and super sticky notes in use is commendable. However, if the management expects to still get specific set of traditional reporting or KPIs, it shall divert the focus of the team member from targets to data consolidation back again. As a team, expectations in terms of reporting/status updates should also be made clear.

## Design

“How granular should be the design?” becomes a crucial question. Architect could provide an implementation proposal at high level. It certainly cannot be expected to have all nuances documented. There is clear line between being more and being less and drawing the right boundary completely depends on the team’s coordination. Receiving ends takes the accountability of asking required inputs and clarification, whereas - the providing end is accountable for sharing all the needed information.

## Retrospection

As part of iteration retrospection, apart from the team bringing the points on what went well, what could be improved – the questions on “Do I enjoy working?”, “Am I efficient?”, “Is collaboration easy?” are put in place. With different personality types, not everyone is going to come out with their points on these. However, with a team providing enough space for sharing, even introvert types put their views forward.

Beyond everything, No blame games allowed. Winning or losing, it's as team. Strictly no appraisal goals connected. Commitment to agile transformation indicates openness. Resource unavailability and changing requirements cannot be issues. These are known factors handled with good collaboration and trust.

## CONCLUSION

As we engage and proceed along with agile implementation, every team, irrespective of their functional area of work, gets to unlearn and learn the way of execution. As the way it's quoted that it takes a minimum of 21 days for any change to become a habit, this transition also takes time. Apparently, this ends up being a continuous learning and transforming process.

And more specifically, it's a lot about the adaptive leadership at every level that brings in the magic to the organization. In contrast to the meeting room approaches, there is lot more on floor stand ups, in and around team

working area. It certainly indicates lot of energy and vibration towards their work. End of the day, having self-motivated teams certainly can be seen as one of the key output with the organization transformation.

Over period, we have seen improved collaboration and trust within the functional units in the products where this approach was experimented.

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