Establishing the Agile PMO: Managing variability across Projects and Portfolios

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Abstract

Our Portfolio Management Office helps to balance the demand on the firm’s resources from multiple competing and sometimes inter-dependent projects. Traditional Project/Portfolio Management Office supports the Project/Portfolio Managers. As more and more of our Project Managers become Scrum Masters and the Portfolio Managers becomes the Group Scrum Master, our Portfolio Management Office needed to become Agile itself. We converted our Traditional PMO that supported the Project Managers to an Agile PMO that staffed experienced Agile coaches who supported the different Portfolio and Agile Project Teams. The services included conducting Agile Training, starting up new Agile teams, encouraging Team Empowerment, transforming existing roles, artifacts and processes to become more Agile, capturing metrics across Portfolio and Project Teams and creating the Management reports. We are sharing the lessons learned and hopeful that it will benefit those starting on the Agile adoption journey.

1. Introduction

Capital One Auto Finance is the nation’s (USA) third largest non-captive auto lender. It is one of the fastest growing divisions in the Capital One Umbrella. Our IT Systems are the key to our business as every day thousands of loan applications get evaluated and millions get serviced. IT is the key driver to bringing new business initiatives quickly and reliably to market. We have a separate IT Department that is about 500 personnel strong not including offshore teams.

Before we started on the Agile journey, our in-house development methodology options were pretty much waterfall though you could get it in different flavors to suit your project size. It was routinely looked upon as a bloated methodology and the IT Projects that followed it routinely took a long amount of time to deliver business value. Not surprisingly, the general perception of IT in our customer’s minds wasn’t that good. So, the time was ripe for some positive changes to happen. This is the story of how Capital One Auto Finance IT division started the Agile journey; the first obstacles, the continuing battles, the frequent wins and the current state. Being a top-down implementation of Agile, the interesting bits are in how the message was spread, how an atmosphere of acceptance was created and how the central PMO (Portfolio Management Office) was instrumental rather than detrimental in the spread, acceptance and support of Agile.

We think there is lot to share with other companies embarking on this journey themselves and exchange notes with those who have been on this path for a while.

2. Our Agile Journey guided by the PMO

It was late 2005 when the CIO, Dick Daniels, who was very supportive of trying out Agile in our company, gave the green signal for hiring an Agile Coach from outside and starting the first pilot Agile project. At that time our entire division was using methodologies based on waterfall and all the deliverables, handoffs and reporting structures were based on waterfall or phased approach.

2.1 Hiring an Agile Coach to get started

I (Ash) was hired as a coach to lead the Agile adoption effort. It was a Herculean task for me as before this I was a Scrum Master with Thoughtworks and even though that had given me the most valuable Agile learning experience in my life, one team is different and an entire IT division is a different beast altogether. I found an able supporter of Agile inside the existing PMO in Scott Noble. He had already paved the way for the first pilot project to start and was excited to work with me on establishing Agile at COAF.
2.2 Our Agile Strategy

Agile means a lot of things to a lot of people. I like Diana Larsen’s take on Agile [1]. Something like “As long as a team is delivering incremental value while working in fixed-length iterations and then doing retrospectives to improve the delivery… you can call that Agile”. We wanted to take a simple approach. Our biggest gains were expected from collocation, collaboration, communication and incremental delivery of business value. We chose Scrum as a starting point. Scrum would address all immediate issues of team structures, real estate, team roles, customer collaboration, fixed length Sprints, frequent releases to provide value etc. We would definitely need the Extreme Programming side of things one day. We decided that day was later. We still think that is a right approach for a top-down implementation.

The other important thing to remember about our journey was that we had set a clear goal and captured some good metrics to help us measure how we were doing. Before we started Agile Projects, we knew what our Time-to-Market was and what our Customer-Satisfaction rating was. So with Agile, we set a clear goal. Reduce the Time-to-Market or Cycle Time for our Projects and Increase the Customer Satisfaction scores by increasing the collaboration and becoming a partner in their vision. Having these metrics helped us a lot in showing the success of Agile. We highly encourage anyone beginning their Agile journey to capture some key end-to-end metrics to show the increase in value.

2.3 The existing PMO

Interestingly, I was staffed in the COAF PMO, Portfolio Management Office. I had never worked in a PMO before and in fact dreaded the central all-controlling authority that it had come to represent in other companies I had worked with before. The existing PMO staffed Project Planners, supported the Project Management Tools, supported the Portfolio and Project Budget piece, owned the phased/waterfall methodology along with the templates and artifacts to be delivered with each phase, trained new Project Managers on our tools and methodology etc. It was an alien environment for me. Too waterfall like.

So the first thing I looked for is internal acceptance and support. If we are going to deploy Agile through the PMO here, are the people in the PMO supportive of the idea in the first place? To my joy, the answer was an astounding “Yes”. We even had one Certified Scrum Master amongst our ranks! At that time it was the excitement of trying something new, something different. The results were unknown. We needed a pilot project.

2.4 Pilot Project and our first failure

One of the Portfolio Managers was an early adopter type of fellow. He wanted to try the ‘Agile’ thing with his team. We had a team of 5 to coach and show results. We got them an Agile room to co-locate. The Product Owner from Marketing was to reside with them for 4 hours every day. We identified a Scrum Master candidate and started coaching him and the team on Agile. As we started the Project, we hit one after another obstacle that was a reminder of just how much waterfall our environment is and that we are trying to “grow an avocado in Texas” (This is a favorite quote of mine though I have heard second-hand and was credited to Kert Peterson [2]. He says the soil has to be fertile and accepting for a seed to grow. Doing Agile in an extremely waterfall environment is like growing an avocado in Texas. It doesn’t grow well at all.)

First, the team members weren’t allocated fully to the Project. One was 25%, one was 50%, another 40% and you get the idea. So what happened was that the Product Owner would show up in the Agile room and none (and I mean NONE) of the project team members were around to collaborate. Any remaining excitement the customer had soon drained away. The other problem was the reporting structure and the expectations that go with it. Team members were still using the waterfall artifacts along with the Agile ones. So, while they had a Product Backlog going, they also kept the ‘Business Requirements Document’ for CYA value. Same was the case with the System Spec. and the Design Spec and Test Plan and on and on. So the team felt like rather than being Agile they were even slower than before. No wonder. When inquired why they felt the need to stick around with the phased documentation, they said that their Manager had given them the templates and those needed to be followed. So, we decided the next step was to talk to their manager’s and convince them of the non-value add of these documents in the Agile environment. Easier said than done! Some Manager’s were very open to change, others weren’t. We met the Analysis manager and presented him the book “User Stories Applied” by Mike Cohn [3]. He read it in a few days and immediately asked the analyst on the project not to write the large requirement specification and instead to concentrate on getting better at writing User Stories. Good stuff!
Needless to say, the first pilot project did not meet leave alone exceed our goal of reducing Time-to-market and increasing Customer satisfaction. But we learned some valuable lessons and had data to prove that wrong implementation would cause disasters. A few ground rules had to be put in place. Waterfall documentation had to go. Team members had to allocate full time to a team. Agile is different. Let’s not try to put a square peg in a round hole.

2.5 Training and Coaching through the PMO

While we were starting the pilot Project, we put in place a training and coaching program. The training was to be open to all. We started with Agile 101 and Agile 102 classes, broken into two because we wouldn’t get as many people to come for a long one day class. The initial classes weren’t full. To build interest and awareness, we teamed up with communications department and created posters, emailed full page ads to everyone and even started awarding a certificate and 3 credits towards their PMI Project Management certification (bummer). Whatever we had to do to get them in the class and understand and discuss the ideas, we did. The classes started being full and in one year’s time, 250+ employees had attended the Agile training classes. This was way better than expected number. The feedback for the classes also ranged from good to excellent. We had started generating some serious buy-in. People now wanted to try this out.

The Agile Coaching path was a good approach and something worth sharing too. We had created a coaching path for people who had a passion for Agile and a background in Project Management or had displayed the right characteristics for being an Agile Coach or Scrum Master. Our Agile Coach path starts by a candidate getting the Scrum Master Certification. After that he/she is mentored by an experienced Agile Coach on active Agile Projects for a few months. This apprenticeship period lasts until the mentoring coach and another observing coach both decide that the candidate has developed enough understanding of Agile and skills to lead a team on his/her own. At that time the recommendations are submitted to the Agile Center of Excellence (yes, we have this too) and a written test and a panel interview is setup. One has to get 80% on the test and has to generate confidence in the panel on their Agile understanding and abilities so that they can certify the candidate as an Capital One certified Agile Coach. If we continue doing great things with Agile, we hope this certification will carry some weight in the industry®. Certification has brought focus to Agile knowledge leadership in the company. Once certified, the Agile coach not only continues to be a Scrum Master with their Project Team, they also have objectives to expand the usage and effectiveness of Agile in the organization. The Agile coach candidate selection, mentoring, testing and certification are coordinated through the PMO. The experienced or Senior Coaches are staffed in the PMO. These coaches work on a ‘Program Backlog’ that includes things like starting new Agile teams, mentoring Scrum Masters to be certified Agile Coaches, Coaching Team Members, Training, Audit Controls, Organization Impediments like approvals, artifacts, environments and other constraints etc. The type of candidate we try to select for the Coaching path is one who displays leadership skills, servant leader mentality, less command and control behavior and is focused on breaking down organizational hurdles and carries credibility in the organization. At the same time we don’t want them to be too high in the org. chart as they have to be on the team and provide time to the release as well. We do recognize that the CIO is the ultimate Scrum Master and in that spirit, our CIO meets with the PMO Agile Coaches once a quarter to understand progress and impediments and help remove them.

Soon, we plan to have similar certification paths for the Product Owners and Agile Managers.

<table>
<thead>
<tr>
<th>Agile Training</th>
<th>Frequency</th>
<th>Attendees</th>
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<tbody>
<tr>
<td>Agile 101</td>
<td>Bi-weekly</td>
<td>250+</td>
</tr>
<tr>
<td>Agile 102</td>
<td>Bi-weekly</td>
<td>250+</td>
</tr>
<tr>
<td>CSM 2 Day Class</td>
<td>Twice/Year</td>
<td>40</td>
</tr>
<tr>
<td>Certified Product Owner</td>
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<tr>
<td>Agile Manager Training</td>
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Table 1: Agile Training and Coaching through PMO

2.6 Change in Traditional Roles and Authority

The one universal impediment when implementing Agile in a large organization is the change it brings to people’s roles and the authority they exert in the organization.

One such area is functional managers. I do have to say that this is less of a problem in a top-down Agile adoption because their manager’s have already bought into the idea. The thing you have to watch out for is internal resentment or private checkout. We approached our functional and resource managers and explained to them the Agile philosophy. Instead of just saying that they don’t get to review and approve everything, we showed them how in an incremental environment, it wouldn’t even be possible for a team to do that. How (and when) do you approve the business requirements when the Product Backlog is a living
artifact? Instead, they were asked to be more involved in the planning and review meetings and to have a conversation with their direct reports every Sprint to understand their obstacles, helping them be fast and efficient and enabling their growth as a Team Member. The people who refer themselves as ‘Tech Lead’ or ‘Lead something’ are another barrier to being an effective Agile team. The PMO coached the team members that they can still be leaders based on their actions and don’t have to carry the title with them. The key initiative in creating a level playing field was the increased focus on ‘Team based performance’. We realized that HR did not prevent us from moving towards team based vs. Individual performance appraisals. All we really had to do was generate the buy-in from the Management and increase the weight on team based performance objectives in the goals and development plans of our employees.

Some key artifacts the PMO produced that would help the teams were a new and lean ‘Approval Matrix’ that would show the artifacts and who has the approval authority. Needless to say, the Agile matrix looked much lighter than the Waterfall one and most approvals rested within the team, either with the Product Owner or the Scrum Master. Be wary of people who will put up walls based on excuses of ‘audit’ and ‘manager direction’ to not become a true ‘Team Member’. Understand the segregation of duties control well to be able to reply to these people knowledgeably.

2.7 Creating Portfolio Work Control System

Once the Agile teams started understanding the methodology better and delivering value frequently to the customers, our next task was to drive higher Portfolio efficiency. The different customer facing Portfolio groups each had multiple Projects going on at any given time. Because of this, there was a resource crunch and people used to be split up across Projects. Also, there was a lot of work-in-progress with less focus on completing any one Project. Also, due to the randomness of the implementations, the test and pilot environments experienced spikes of usage and became a roadblock quite often. Frequent Production changes were not enjoyed by the Business customers either.

To address all these issues, we came up with a Lean-Agile 1-2 punch idea. Each Portfolio created a ‘Portfolio Backlog’ that has as line items ‘Projects’ that the customers were prioritizing. Along with Projects, the Portfolio Backlog could also have one off enhancement requests or maintenance type items. The beauty was that this gave the line of business executive sponsor a consolidated view of the Projects their line of business was prioritizing and could check on the status of the completed or in-progress Projects. Each Portfolio also put in place 2-3 Agile teams in place for the entire year. The core team members were fixed and some specialists could be added for any Release or Sprint as required. These Agile Teams were fully cross-functional units with analysis, development and testing skills. Also at this time, a dedicated test environment or region was created for each portfolio team. These teams were soon called ‘Release Teams’. Each team had their own Product Backlog that was fed from the Portfolio Backlog. The Release teams “pulled” from the Portfolio Backlog as they had capacity in their Sprints.

The trick with the Portfolio Backlog was to have one Product Owner for that backlog. This was tough because the Portfolio Backlog contained Projects from different sub-teams in the line of business that had different stakeholders and interests. For one Portfolio, the line of business sponsor assigned one person in charge of the Project prioritization and in case of another Portfolio a committee of three customers was required to do the prioritization every month.

The way we solved the problem of too many Projects in flight at the same time and thus facing environment bottlenecks was by creating a scheduled Release process. So, now we had a standard ‘Project’ process, one where the Project is a Backlog of User Stories and Releases are when the Customer decides that they have a working releasable set of features ready. We also had a ‘Scheduled Releases’ process where a team has a scheduled release every 2 months to production and the Customer can prioritize what is important to be released in the next 2 months. Of course, this process works for us because there are a large set of small enhancement type Projects in our Portfolio. This kind of scheduled Release process eliminates the need to create a new Project for each of these enhancement type efforts and carry the overhead of paperwork, controls and activities involved in a Project. There were many small enhancement type items that the customers wanted IT to do but were not prioritized.

![Figure 1: Portfolio Backlog “pull” system in action](image-url)
earlier. This was due to them not being large enough to be Projects. These now found their way into the Sprint capacity and got delivered. Also, the scheduled Releases meant that the Customer could anticipate a production release from each team every 2 months. By staggering the Teams, there was a Release every month for the Customer and a new Release was about to start within the next 30 days that could work on their new requirements. This has worked beautifully for us and is highly recommended if you have a lot of small enhancement type of work.

2.9 Metrics: Backing up the Success Story

2.9.1 Measure stuff that matters

We started with a goal to reduce our Time-to-Market and increase our Customer Satisfaction. After 40+ Agile Projects completed in the last one and half years, we can confidently say that we have achieved what we set out to do. Though the journey has just begun, the numbers so far are impressive. Our Customer Satisfaction is very high. We survey our customers after and during every active Project and use a standard scale for scoring the Projects. All our Agile Project customers surveyed so far have reported 100% customer satisfaction with the Project planning, execution, cost management, collaboration and results. This is highly encouraging for us. It validates our initial belief that “Customer Collaboration over Contract Negotiation” [4] will bring about great results. The other metric Time-to-Market has seen great results and controversy too. We now deliver our Projects faster by 50% using the Agile methodology. This great result is because of increased focus on delivering value on the current Project than spending time planning the next one. Dedicated teams and focused Product Owner are the largest contributors.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Time-to-Market Improvement</th>
<th>Customer Satisfaction Rating</th>
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<tr>
<td></td>
<td>50%</td>
<td>100%</td>
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Figure 2: Agile Success Story through Metrics

Not that we didn’t have other metrics. We have plenty. Some Project level metrics we have or had at one time with Agile are Velocity, Function Point Productivity, Drag Factor trend, Stretch Factor, Commitment Index, Volatility Index etc. Remember though that we never lost focus on the two that matter to us. We would love to have a ‘Value Delivered’ metric added to the two we have as end-to-end metrics but right now we are not there. That is because the Project value is not broken down to the Epic/Story level and hence it is hard to understand value delivered per Sprint or Release or something like that until the entire Project is delivered.

2.9.2 Roll up of metrics to Executive Management

As mentioned in the paragraph above, the key metrics like Business Value, TTM and Customer Satisfaction can be rolled up to the Executive Management for periodic review. The problem starts when one rolls up the ‘Agile’ metrics like Velocity or Drag Factor. This is because these metrics are localized in the context of the particular Team and Project. Here I would advise taking the approach suggested by Mike Cohn in his ‘Agile estimating and planning’ classes where he asks different teams to use different scales for Story Points thus rendering any comparison pointless. Well, still, we had two demands from stakeholders that we wanted to meet. One was from the IT Management. They wanted to understand if there was a way that they could know which teams are doing better and which ones are struggling relatively. And second was from our Customers who said that since scope can be negotiated in Agile to meet the time and cost, how do we know we did well or didn’t. My first reply is always to ask “Did you get the value you expected out of the Project?” According to me that is the best metric to have. We also do use Function Points, which is interesting because most Agile folks think it is not compatible with the Story Points type of Agile estimation techniques. We use FP to initially take swag at size and cost so that the Portfolio can prioritize the Project in the Portfolio Backlog. This is done even before the Team gets their hands on the Project. So, it does not interfere with the Agile estimation techniques but it does give us a better handle on the initial estimate and also on the ‘size’ of the scope delivered. It is also one of the metrics (along with TTM, Customer Satisfaction and Value Delivered) that can be rolled up to the Management. It may even help show that Agile is delivering software faster than our other waterfall based approaches.

3. Conclusion

The bottom line message of this experience report is that anyone starting their Agile journey, specially in a top-down approach, should leverage their PMO. The PMO is looked upon as the guiding body in
terms of Project, Program or Portfolio Management. Working with the PMO you can create a training program, mentor Agile Coaches and train the current Project Managers. PMO can retool the current Project Management toolkit to be more Agile compatible. It has the authority or the influence to get rid of detailed Project Schedules and Gantt Charts and to make the timesheets easier to manage. PMO can run efforts to lean the documentation while ensuring that adequate controls and governance practices are being followed by Projects. The PMO can look into the right kind of metrics to be captured and can put processes in place to roll it up to the Executive Management. In summary, the PMO is a very effective group through which you can bring agility to the organization. What you will need is the right kind of people in the PMO who have an open mindset and a will to make things better for the Organization. It should also have a strong champion from senior management who will sponsor the effort. From our experience we can say that the support that the folks on the ground will need as you transition to Agile can be best provided by an Agile PMO. Ultimately, deploying Agile successfully in an organization depends on many different factors. Don’t let the PMO be a hurdle in that journey, make it a partner!

10. References

[1] Diana Larsen, FutureWorks Consulting, Notes from online blog
[2] Kert Peterson, kertpeterson.com, Notes from his Certified Scrum Master Training Class