15356 PROJECT PERFORMANCE IMPROVEMENT

Individual Assignment

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Abstract

This paper discusses the benefit of using reflection and improvement techniques in a software development and organisational change project. While the project was reasonably mature in the change management and implementation streams the paper argues that reflection could be embedded in a more structured fashion and that there is always room for improvement when teams are working together in this more virtual and complex world. The dark side of the organisation is explored and the conclusion is that there is plenty more work to be done on this human aspect of project management.

The paper concludes that the company where the new system was being implemented could have reduced costs if three areas of improvement were given more focus, employee understanding of the change, developer understanding of the user experience and more detailed planning of the support required during the implementation.

Keywords: Reflection, Experiential Learning, Project Barriers, Lessons Learnt, Project Improvement

Introduction

This assignment describes a project in which the author was a participant and analyses the approach to the project that was taken when the project was active. Then the lessons learnt through reflective practice are articulated and analysed based on what the author now understands of reflection and project improvement based on the subject just undertaken. Specific reflective tools and techniques are referred to and expanded upon.

Finally a focus on the reflective aspect of how the project was managed is demonstrated using the chosen topic material be able to describe an improved outcome if this approach had been applied to the project. In fact reflection was used during the project but in a less structured way that the author would now implement and some improvements are discussed and would definitely have contributed to a more successful project.

Project Description

The company and the supplier entered into an agreement to develop a brand new system to manage the company core business of managing the departure of passenger aircraft. The current system used by the company was old and very expensive to run. Any software changes either to better the commercial position, improve customers perception of the company as leading edge and one to remain loyal to or to implement regulatory requirements were proving to be expensive to implement and also time to market was slow. The supplier had a lot of experience in the reservations and distribution but not in the departure side of the business. So the company and supplier set up a joint project where the company provided the business knowledge and the supplier the development expertise.

To develop one of these systems from scratch is not a trivial exercise as with all large projects. The specific statistics on the development are not available but it can be safely concluded that it took over fifty developers and three to four years to develop the system so the rough cost of that alone would be AUD$25 million (based on an average salary of AUD$150k per year) to the supplier. The company costs would end up being similar to funding the business subject matter experts and the implementation team to embed the system into the company business.

Description of Approach

The approach to the implementation of the system into the company business is going to be the main point of discussion.

When designing the approach to implementation the prime concerns were to minimise the impact to the customers and maintain the company's lead in the on time performance statistics.

Following many stakeholder engagement sessions it was agreed to do a pilot implementation in the West Australian (WA) ports followed 2 months later by all the Australian based Domestic ports (mainline and regional) and then finally all the on and off shore international

ports.

The reasons for this approach were that implementing company and worldwide in one go was too high risk as there would not be enough people and expertise to react to fix issues quickly and the possibility of delaying aircraft worldwide, which takes many weeks to recover from as can be seen by the recent impact of volcanic ash clouds. Implementing flight by flight was not feasible as the old and new systems could not be operated from the one desk or device. Having some flights on the new system and others on the old could be sustained but had to be done in a smart way as the functionality would be restricted and thus the service to the customers reduced until all flights were being operated on the new system. Therefore the implementation had to be done by region and WA was chosen as the first region as it is quite an isolated business and the aircraft used in this region are contained so any delays that occurred during the implementation would not have a knock-on effect on the eastern seaboard operation.

It must be noted that the implementation of this new system would impact all five thousand company staff in airports around the world. They would have to learn to use a new graphical and modern system based on being intuitive in the place of the existing mainframe system based on user knowledge of the entries to be used to execute the required functionality. The new system favoured young staff members comfortable with technology and this meant that the older and more senior staff members felt threatened and had lost their power as super users.

The Pilot

As the company had implemented many large system changes in the previous ten years the project team was experienced and the WA implementation was well planned. The unknown was the performance of the system and how much the functionality change would impact the company staff when using it in a live situation. The test phase of the project was extensive and the test team was a mixture of professional testers and experienced users and extensive performance testing was also done.

The Training schedule and content was also well planned though the logistics of the operation meant that everybody had to be taken offline for three to five days to be trained and that could not be done at the optimum time i.e. close to the implementation. Therefore people had to be trained well before implementation and skilling sessions had to be arranged and this impacted the comfort and usability of the staff members in the first few days of the system implementation.

All the usual checks were done before implementation in that the airports signed off that they were ready i.e. trained and all new procedures understood and documented. This was done in the knowledge of what the outstanding issues were and the workarounds in place to deal with them. They also signed off that they were ready to implement the manual business continuity process in the case where the system would be unavailable or unusable due to a software issue. All the technical checks were done and the executive steering committee endorsed the project recommendation to proceed with the implementation.

The cutover was done on a Saturday morning as this is generally the quietest time for the WA airports. The first few flights went well but a creeping connectivity issue was experienced where the desktops, maintained by an external supplier, were timing out when connecting to

the Supplier data centre in Europe. The project team reacted quickly to this issue with the desktop supplier and they worked together to firstly identify an immediate workaround and secondly work on a permanent fix that could be implemented to resolve the issue. As the Monday and Tuesday came along and the schedule became busier the functional issues came to light and caused the WA staff many issues when finalising and departing flights.

These connectivity and functional issues meant that the staff couldn't process customers as quickly and in as facilitative was as usual and the queues in the airport grew, the customers became irate as they had to wait longer than usual and the staff were tired and emotional as they were being abused by customers and couldn't actually do anything to resolve the situation. These events were reported in the papers and on television and the company reputation was impacted.

So, a quick plan was put in place to deal with the issues in WA in the near term by implementing workarounds, getting extra support staff on the ground to help staff and customers, loading quick technical fixes and in a few days the area was stabilised, and the negative reputation impact was arrested.

After that a wider group began to reflect on the longer term impact of these events on the implementation plan for the rest of the company.

Lessons Learnt through Reflective Practice

Lessons Learned sessions were scheduled for the business, supplier and implementation teams and the individuals were asked to reflect on the issues that occurred and the mitigation actions that could be taken. While there was a process in place to resolve the functional issues in WA and the rest of the implementation could not be done until this plan was complete, the implementation approach itself was also revisited.

The Lessons Learnt sessions were very robust and not surprisingly emotional but every piece of feedback was documented, an action plan agreed and distributed to all the impacted and interested parties. This plan was updated weekly and distributed so that the impacted areas could see that their issues were being taken seriously and being worked on. This shows the power of transitioning tacit knowledge into explicit knowledge defined as "has been documented or articulated into formal language in order to be more easily transferred among individuals" by Groff & Jones (2003, p. 10) and the value of the outcome of such an exercise.

The following areas were the main areas of interest.

The Supplier did not understand the impact of the top issues raised by the company frontline staff. These issues were constantly de-prioritised and the required focus was not on them. The mitigating action was to form teams of Supplier developers and frontline staff with some project people and to experience the pain on the frontline, i.e. supplier staff standing at the check-in desks with the company staff to fully experience the issue. This experiential learning exercise (Boud and Walker 1992) meant that the developers actually experienced the issue from the user perspective and empathised with them and saw how the change to the system that was requested could improve the user experience firsthand. The further benefit of this approach was that the Supplier developers formed a team with the users and started to lobby

for the issues to be fixed with their management and the line between the supplier and user was removed and replaced with a common team working together on the issue and resolving them quickly. This finding is supported by Faraj and Sproull 2000 who said that 'expertise coordination is vital to project performance' and therefore exposing the developers to the expertise of the users and experiencing their workplace and use of the system first hand could have minimised the issues experienced in WA and therefore improve the project performance.

As mentioned previously the new system did threaten the senior staff who were less comfortable with technology. This theme ran through the Change Management stream of the project as these users realised that they were about to lose their power within the organisation. This dark side of the organisation proved to be a significant barrier to the change management progress and success within the project. As Hase et al (2006) said 'Experts generally feel that knowledge is power and therefore are unwilling to share it. They consider the value of knowledge as stock rather than flow'. To be honest this particular issue was not dealt with specifically and was just an acknowledged barrier that the project champions on the ground had to deal with. There was no specific help or guidance given to them other than the support of their local manager. More change management effort could have been put into explaining to the staff why the new system was being implemented but the truth was that the new system would allow the company to hire cheaper resources and train them more quickly and the existing staff were aware of this. The impact was that this drained the energy of the champions and trainers and definitely made their job more difficult and diverted them from doing positive work on the project. There is no doubt that this impacted the project performance and credit must be given to the on-site people for driving through the system change in the face of this substantial barrier.

Lastly the impact to the business in WA was assessed and the implementation approach for the rest of the ports was changed as follows:

- ➢ Five Domestic mainline ports to be done first
- ➢ The remaining mainline ports done two weeks later
- ➢ Regional ports split into two and implemented two weeks apart
- ➢ International ports split into two as well

The main driver for this approach was that frontline staff and managers from the mainline ports could travel to WA and work there for three to five days and experience the new system and how the WA staff were using and managing it. This approach also enabled experience staff from ports already cut over to support the new ports during their cutover.

The downside of splitting the implementation into these smaller bits was twofold, impact to customers checking onto flights on a different system and the cost of staff visiting other ports and being back filled.

The customer impact was managed by corporate communications in that they let the customers know exactly what was happening and when and also explained the benefit to the customer in the longer run i.e. online and mobile check-in, customer value being built into the system.

The cost issue was problematic in that more funding had to be requested from the board. While nobody ever wants to go back to the board for funding the justification was tangible

and the case was not difficult to build and was supported by the relevant stakeholders. Brand reputation measured by the on time performance metric is the top priority to an airline and the extra funding was successfully negotiated and the knowledge visits were arranged.

There were some intangible benefits to the WA experience in that it focused the attention of senior management onto the project and they willingly became involved in the project and the exercise to minimise the risk to their business. This also meant that they took ownership of the change to their business and supported their staff through the change. This increased the staff buy-in and strengthened the team.

In hindsight this reflective lessons learned process was a little ad-hoc and it only in hindsight that the benefit of the reflection could be quantified as such. In all future implementations this reflective process should be built into the schedule and team approach and the tools implemented to operate the reflection and implement the agreed changes.

Conclusion

This assignment paper explored a project that the author worked on from the perspective of reflection and project improvement. Three key subjects were identified for detailed analysis, transitioning tacit knowledge into explicit knowledge; experiential learning when developing software systems and project barriers, specifically the retention of knowledge to maintain power which can otherwise be described as 'visiting the dark side of organisations'.

On reflection the transitioning of tacit to explicit knowledge was identified in the project but could be implemented in a more recognised and structured fashion. The use of this technique did ensure that the team learned from the pilot phase of the project and changed the implementation approach to reduce the risk of impacting the company reputation when implementing the new departure control system worldwide. A built-in reflection phase to all aspects, not just implementation, of the project would definitely improve the experience of the project and its success.

The experiential learning technique is a new concept to the author and the extra step of putting the developers into the users shoes as early as possible will definitely be planned in future projects to ensure that requirements are fully understood and the priority in which they should be developed and implemented. In most software development projects subject matter experts are involved in the analysis and design stage but the extra step of putting the developers in the users shoes will definitely reap benefits and save costs ultimately.

The barrier to successful projects described as knowledge retention is a complex issue and in the project outlined in this paper the issue was not dealt with up front and remained as a thorn in the change management side throughout the project. As Hase et al said 'staff have no incentive or motivation to share their knowledge for the common good' so this is a complex human issue that needs careful analysis and planning to combat it.

Ultimately the project this paper is based on did complete and was successful in hindsight. The paper does describe three techniques and tools that if implemented in a structured fashion would most likely have saved the company money and ensured an even more successful project and a less stressed project team.

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