

AGLPM2 - Unit 1 - Activity 2: OBSERVE
4th Agile Leadership Skills:
Get the Business and Technical People Together

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“Agile Project Management for Government “
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Agile Leadership Behavior Four: Get the Business and Technical People Together

Business people and developers must work together daily throughout the project.

Agile Manifesto Principle Four

One of the key aims of agile is to make sure that the solution being built will be practical, and will bring business benefits. Potential problems are identified as early as possible, with corrective action being taken immediately. At a micro level, this is achieved by a policy of *organic defect detection*. By putting testing at the heart of development, and by carrying out near continuous integration with iterative delivery of the product, we can be sure that the solution will be free of any significant errors. However, even a perfectly bug free delivery may not bring business benefits if it is a solution to the wrong problem. Tom Gilb comments:

“The intent is to strongly encourage software developers and their stakeholders to communicate with each other about ‘what is really needed and valued’, and ‘what is practical and what works’, immediately, frequently, orally, and by demonstration of old and new systems reference points. The intent is that a new system cannot get far, more than one day, off track to realistic usefulness.”ⁱ

At a macro level, then, we need to make sure that we are not only building the solution the right way, but we need to ensure that we are building the right solution. This is why the agile approach places the intended users of the solution at the core of the development team, and ensures that other stakeholders are engaged with as often as possible.

Getting the Business and Technical People Together

In the realm of software development (especially of large systems), it is often desirable for real-world users of a system to be integrated into the development teams. An early approach was Joint Application Design (JAD). This was intended to involve the users of a system by use of formal working meetings called *JAD sessions*. These highly structured events were preceded by the preparation of prototypes of the solution by a specialist JAD analyst. The JAD session was then executed with a tightly controlled agenda, and the decisions made carefully documented. A separate post-JAD session *wrap-up* phase was carried out by the JAD analyst, producing a refined prototype and supporting documentation for presentation to the executive sponsor.

This JAD approach has been criticized as being a mini-waterfall approach. Many felt that it did not get deep and continuous involvement of users because “managers and users are involved minimally during customization” and that decisions are often merely “distributed to the session participants”, ruling out effective collaboration.ⁱⁱ It was popular among systems professionals because it provided a “prescriptive ‘cookbook’ of techniques for eliciting information from passive users”. JAD was justified mainly in terms of technical gains, principally based on poorly evidenced claims of productivity gains that were made by advocates of the approach.ⁱⁱⁱ

Erran Carmel argues that the JAD approach was no more than a “consultative approach”, tending towards low user involvement in most of the processes. Techniques such as documentation walk-throughs, committee reviews, formal sign-offs and ‘liaison’ are advised. These approaches leave most of the decision-making power to the ‘expert’ technical staff, not the users. As such, JAD was used to support the BDUF of a waterfall approach such as Information Engineering where Beath and Orlikowski warned that users were given “a relatively passive role to play during development”.^{iv}

JAD focused on documenting designs, not evolving a working solution. In 2011, the UK Child Maintenance and Enforcement Commission (CMEC) abandoned the use of JAD on its massive waterfall systems redevelopment. The NAO had previously criticized CMEC for lack of clarity about the functionality of the required system.

CMEC responded by adopting the JAD approach, reporting in 2010 that this would “ensure that the requirements are more comprehensively defined... with the system being developed interactively”.^v However, the use of JAD and iterative development were abandoned when it was recognized that it merely produced “duplicated, conflicting, and ambiguous” specifications.^{vi}

The JAD approach, then, needed to be improved upon since it proved to be no more than a framework for how to run a meeting, and it maintained the power of specialists over the genuine needs of the business people who needed a working solution.

Participatory Design

The method of ‘Participatory Design’ (PD) was developed by Pelle Ehn in Scandinavia. There are areas of similarity to JAD, such as use of workshops and visualization/prototyping techniques, but the PD method was a move towards collaborative design rather than consultative requirements elicitation (see **Table 1**).

Two main themes make PD different. First, the idea of *mutual reciprocal learning* whereby designers learn about the stakeholders’ activities and business needs, and simultaneously the stakeholders learn about the possibilities of the available technologies. Second, there is emphasis on *design by doing* rather than documentation. The users and technical developers are expected to experiment with the technology together.

We not only need an effective way of ensuring participatory design, we also need to involve the right people. Not all stakeholders are simply ‘users’ of a technical solution. Early in this Part of the book, I mentioned some broad categorizations of stakeholders from a project manager’s point of view: users, bosses, subordinates, maintainers, sponsors and customers.

Table 1: Comparison of JAD to PD (adapted from Carmel, 1993)^{vii}

Joint Application Design	Participatory Design
Promise of time savings	Promise of conflict resolution
Design-led development	Collaborative development
Consultancy driven	Workplace driven
Completeness	Empowerment
Time delimitation	Satisfaction delimitation
Structure	Creativity
Stakeholder segmentation unclear	Stakeholder segmentation into users and managers

An effective way, then, of making sure that the right people are involved to create the right solution, is to:

- ◆ Identify the stakeholders for the coming iteration
- ◆ Identify their win conditions
- ◆ Reconcile their win conditions.^{viii}

Research shows that having a broad definition of what a stakeholder is, and thinking

broadly and systematically about their categorization, and therefore the method of engagement, will create:

- ◆ Greater flexibility in adapting to risks and uncertainties
- ◆ Better discipline in achieving operational capability
- ◆ Enhanced trust between the project stakeholders. ^{ix}

Stakeholder Engagement in Government

Although Agile Manifesto Principle Two talks specifically about the need for business people and developers to work together, there is general agreement in the agile community that any distinction between business user and developer could be a false dichotomy. Decades ago, in the days of mainframe computers, the distinction between programmers and users was clear. In agile teams, business people often bring great technical knowledge into the team. For example, at the British Library, a project to start *ingesting* e-journals into the permanent digital store also required the storage of closely related and very complex meta-data (i.e. not just the journal text, but information about the publisher and the authors).

The experts on the Electronic Data Interchange (EDI) standards for this meta-data were not the programmers on the team, but the 'users'. We must also recognize the importance of other technical staff. There may be a statutory accounting need for independent testing, an anathema for many agilists, but IT audit is a fact of life in government. We also need to include strategic planners, user-training specialists, public relations and communications experts and so on.

Thus, Agile Leadership Behavior Four goes beyond the narrow text of Agile Manifesto Principle Four. We must not only take a broad view, and stress close stakeholder involvement beyond just the community of users of the solution, but also we must engage effectively with those who will be impacted by it.

An example of the catastrophic effect of poor stakeholder engagement, and the production of a fatally flawed technical solution, was the failed UK Firecontrol project. It was initiated and run by the Office of the Deputy Prime Minister, John Prescott. After the cancellation of the project, with £469m wasted, Prescott claimed not to have known that there was great resentment among Chief Fire Officers about the proposed centralization that the project proposed in its business case. The aim was for the 46 existing local control centers to be reduced to just nine regional control rooms. A firm of management consultants had already advised against fast centralization, and had instead recommended a reduction to 21 centers. The changes were regarded with hostility by a broad range of stakeholders, including Chief Fire Officers, the Firefighters Union, and the Local Government Association.

When the project was eventually canceled at a cost of £469m, the NAO found that:

“A major reason why the project had failed was due to insufficient communication and engagement with stakeholders during the initiation and design of the project which led to concerns about its rationale and purpose from the outset.

“Fire and Rescue Authorities and their Services criticized the lack of clarity on how a regional approach would increase efficiency. The Local Government Association similarly asserted throughout the planning and delivery of Firecontrol that a centrally-dictated, one size fits all model was not an appropriate way to optimize resilience.”^x

In contrast, a major project by the UK Revenue and Customs had delivered 94% uptake of salaried employee tax returns over the period 2007-11 with effective stakeholder engagement applied during a phased implementation of online services. Each stakeholder group was identified and assigned a ‘champion’ to act as a single point of contact, and consultative groups were set up to liaise with tax agents and industry representatives. Customer concerns were researched and face-to-face events were held to help small businesses and individuals understand the new processes.

Requirements for the new services were prioritized according to stakeholder concerns. For example, as a response to these concerns mandatory filing was delayed, which gave rise to the opportunity to reduce the overall budget of £373m by about 10%. New requirements were proposed and implemented.

Examples of these were free software for small businesses, and *soft landings* of non-mandatory solutions that allowed customers to familiarize themselves with online filing without fear of penalties. Third party tax and accounting software developers were also identified as important stakeholders and targeted technical information was sent to them to assist them in developing compatible systems.^{xi}

The GAO identifies active engagement with senior management as a common critical success factor. In a survey of seven large and successful government IT projects collectively worth \$5bn, the GAO found that:

“Officials from all seven (projects) cited active engagement with program stakeholders as a critical factor to the success of those investments ... stakeholders regularly attended program management office sponsored meetings: were working members of integrated project teams: and were notified of problems and concerns as soon as possible.”^{xii}

The GAO found that the use of multi-disciplinary teams and early involvement of users in defining requirements had created transparency and trust and further increased the support from the stakeholders. In contrast to these successful projects, the GAO has regularly reported on instances of project failures due to poor stakeholder engagement.

Examples include:

- ◆ The Federal Emergency Management Agency (FEMA), where end-users were not sufficiently involved in defining requirements for the National Flood Insurance Program's insurance policy and claims management system. The program was canceled in final end-user testing after seven years of development and a budget of \$40m, forcing the agency to continue to rely on an outdated 30 year-old system.^{xiii}
- ◆ The Department of Homeland Security (DHS), which did not allow sufficient time for stakeholder involvement in its planning and had no consistent method for identifying stakeholder roles and incorporating their feedback.^{xiv}
- ◆ The 2010 US Census where lack of local user involvement in software testing hindered local governments' ability to update address lists and maps accurately.^{xv}

Stakeholder Engagement in Government

Stakeholders are individuals, organizations, or groups of organizations, which have an actual or perceived interest in a project. Some stakeholders, for example may be very negative about a project, and the best that can be achieved is a reduction of their negativity.

The Guide to the Project Management Body of Knowledge (a US ANSI standard) takes the view that stakeholders need to be "managed by the project manager (as) the lead person responsible for communicating with all stakeholders". The attitude is that stakeholder management is process driven being mainly "distributing information" and "managing stakeholder expectations".^{xvi}

In contrast, the UK Cabinet Office guidance materials on "Managing Successful Programs" (MSP) sees effective stakeholder engagement as a wider function of leadership, not process. An approach is encouraged where top management should demonstrate empathy with and influence of stakeholders, not treating communications as a mechanical top-down process. MSP notes that:

"Projects that stress the management of stakeholders can lapse into relying on planned communications that are little more than a task list with a bias towards outbound information. This does not sufficiently engage stakeholders, who generally do not appreciate being 'managed'."^{xvii}

In an agile project, stakeholders should be *engaged* not managed. Interactions need to be iterative and adaptive. There is a danger that if a detailed communications plan is set out initially it may become set in stone, and unresponsive to changing circumstances, or to the need for changed emphasis if the project objectives shift.

MSP requires a *Stakeholder Engagement Strategy* to be agreed at the start of each major project, and for an associated Communications Plan to be agreed and tracked. MSP provides guidance on running complex, large projects where many sub-projects need to be coordinated to a common business goal. The appointment of a *Business Change Manager* is required who is responsible for ensuring that implementation goes smoothly and ensuring that a *benefits realization plan* is being tracked.^{xviii} The project Communications Plan should recognize different levels of stakeholder engagement, and delegate relationship management to the most appropriate level, so that detailed co-working on specific issues can be encouraged.

Conclusions

Agile principle number four recognizes that business experts are often not the same people who are experts in developing technical solutions. Therefore close teamwork is required if business benefits are to be realized using technology. Frequent and close working relationships are needed between business people and the technical developers – often working in multi-disciplinary teams and/or communicating usually on a daily basis. Face-to-face meetings are likely to lead to the ‘richest’ forms of communication, but this is often impractical, and web-conferencing using shared visuals can often suffice.

The involvement of the business experts in structured Joint Applications Design (JAD) meetings with a tightly controlled agenda can often merely result in more paperwork and documentation, rather than a continually evolving co-developed solution. Agile approaches require a genuinely participative development approach with stakeholders, with expert business people working on an equal footing and status as the expert technicians who will build the solution.

Project approaches that focus at team level may inadvertently cause a form of ‘stakeholder myopia’ whereby external stakeholders are ignored. Top management leadership is required to ensure that the necessary stakeholder engagement is facilitated. It should recognize that the most effective communication is two-way, and devolved as far as practical to the grass-roots people. Early, detailed, lengthy, and ‘rich’ forms of communication regarding a small set of key points of detail will avoid major problems later on. Identification of ‘sticking points’ where disagreement over priorities or business objectives is important in advance of these detailed meetings – try to find a strategy whereby both sides meet their perceived objectives via ‘win-win’ resolutions of conflict.

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- i Gilb, Tom communication to the author July 2012
 - ii {August 1991 #203: 34}
 - iii {Carmel 1993 #204}
 - iv {Beath 1994 #70: 350}
 - v {Work and Pensions Committee 2010 #214}
 - vi {NAO 28/02/2012 #211: 37}
 - vii {Carmel 1993 #204: 44}
 - viii {Barry Boehm 1994 #201: 1}
 - ix {Barry Boehm 1994 #201: 1}
 - x {NAO #206}
 - xi {NAO 09/11/2011 #207}
 - xii {U.S. Government Accountability Office 21/10/2011 #37: 1}
 - xiii {U.S. Government Accountability Office June 2011 #38}
 - xiv {U.S. Government Accountability Office 15/09/2011 #209: 28}
 - xv {U.S. Government Accountability Office 14/06/2007 #210}
 - xvi ANSI 99-001-2008 and {Project Management Institute 2008 #129: 26 and 43}
 - xvii {OGC 2011 #205: 63}
 - xviii {OGC 2011 #205}