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Panel

Agile Management – An Oxymoron? *Who needs managers anyway?*

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ABSTRACT

“Self-directed team” is one of the mantras of Agile Methodologies. Self-direction means that the team’s manager is relegated to a facilitator role with little or no influence over day-to-day activities. For example, Kent Beck has written that the manager of an XP project can do four things: ask for estimates on cost and results, move people around among projects, ask for status reports, and cancel the project. Agile literature in general says that managers shouldn’t be directly involved in analysis, design, coding, testing or integration. They may (but only occasionally!) facilitate the process between the customer and the developers – and it would be nice if they provided food and toys to keep the team happy. It appears, then, that the agile manager is expected to hover on the fringes of a project asking a few questions and throwing in goodies – but with ultimate power (cancellation) in her hip pocket.

This scenario makes one wonder. Do managers really matter to the success of an agile project? Are they superfluous? What happens when managers step over the prescribed line – does it mean that the end of Agile Methodology as we know it and as handed down by the Agile Manifesto? The panel will explore this ticklish terrain by answering the following questions.

- Why Agile Methods and managers don’t mix. Or do they?
- What can/should managers do in an agile environment?
- Under what conditions are managers an absolute requirement in an agile environment? (e.g. Government applications?)
- Do good management techniques apply to both Agile and non-Agile environments?
- Is management a dead-end profession in an Agile world?

Categories & Subject Descriptors:

K.6.1 Project and People Management: *Management techniques*

K.6.3 Software Management: *Software development/process*

General Terms: Design, Management

Keywords: Agile Methodologies, Management Best Practices

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Lougie Anderson is Vice-President of the Engineering at Sabrix, Inc. and is an adjunct faculty member at the Oregon Graduate Insti-

tute. She has over 20 years experience in the computer industry, having managed product groups involving internet technology, object technology, databases, and interactive multimedia. She has published papers on database benchmarking, data modeling, database user interfaces and tools, corporate digital libraries, and object technology. She served as the General Chair for the OOPSLA’96 Conference in San Jose and was a past board member of the OMG.

2. Glen B. Alleman, glen.alleman@rfets.gov

An operational definition of the management role is the “removal of impediments to progress.” A typical set of functions performed by a manager includes: planning and budgeting, organizing and staffing, controlling and problem solving, and producing predictability, order, and consistency. The environment for these activities is rarely found in software development in the way intended by the author, John P. Kotter his book *What Leaders Really Do*. Kotter defines leadership as establishing a direction, aligning the people, motivating and inspiring, and producing a dramatic useful change. In a software development environment based on agile development methods, the role played by a manager should be more closely aligned with those of a leader. Kotter’s manager roles are provided by the agile team, its self-directed leadership processes and the fully engaged customer. In this context the manager is outside the domain of the agile development team.

If the operational definition of management is taken to be Kotter’s second set of activities, the role of management is critical to the success of the agile team. Not in the delivery of software, since that takes place internal to the team, but in the role that moves the organization forward in the deployment of agile development methods. Following Kotter, the “manager as leader” must perform the following: establish a sense of urgency, form a powerful guiding coalition, create a vision, communicate the vision, empower others to act on the vision, plan for and create short-term wins, consolidate improvements and produce still more change, and institutionalize the new approaches.

With this approach to management the agile team can operate within its domain, while the external forces affecting its success become the domain of the manager.

Glen Alleman is the Vice President for Program Management, CH2M HILL, Rocky Flats Environment Technology Site, Golden Colorado. CH2M HILL provides Information Technology services in support of the closure of the former nuclear weapons plant at Rocky Flats. In this capacity, Glen directs a staff of project managers, administrators, and accountants in the delivery of program management services for software development, telecommunications,

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networking, and server operations for the Rocky Flats site. Prior to CH2M HILL, Glen was the Chief Technology Officer of Niwot Ridge Consulting specializing in enterprise application integration, system architecture, business process improvement, and project management applied to manufacturing, electric utility, petrochemical, aerospace, process control, publishing, and pharmaceutical industries.

3. Kent Beck, kent@threeriversinstitute.org

Diana Mekelburg describes three axes of project expectations:

- Product – what features are in the product
- Business – what business effects you expect to see from a product with the expected features
- Conduct – what behavior the rest of the organization expects from a well-run project.

The first two sets of expectations are manageable for the team. Presenting a reassuring and honest face from a project that is running internally quite different from the rest of the organization is a job requiring nerve, perspective, communication, contacts and creativity. In other words, the same skills that get managers made into managers.

Ordinary internal operations on an Extreme Programming team do not require management intervention. Daily business is covered by the team's rules, but more importantly the social contract implicit in the rules. Extraordinary events and foreign relations, though, are inevitable and an absolutely appropriate venue for the exercise of managerial responsibility, or, as we geeks say, "Do some of that manager stuff..."

Kent Beck is the founder and director of TRI. He has pioneered patterns for software development, the xUnit family of testing frameworks, the HotDraw drawing editor framework, CRC cards, refactoring, and most recently Extreme Programming. He is the author of *Extreme Programming Explained*, *Planning Extreme Programming*, and *The Smalltalk Best Practice Patterns*. He lives on 20 acres in rural southern Oregon with his wife, five children (one sadly now gone to college), four dogs, two sheep, and a variable number of domestic fowl.

4. Joe Blotner, joeb@sabrix.com

One of the myths of Agile Development is that self-organizing teams do not need direction. The agile development movement focuses primarily on programmers – programmers should do X, Y and Z, and everyone else should do whatever it takes to support the programmers. A fantastic start, since programmers are the people who actually build the organization's product; however, few techniques are offered to the rest of the organization.

The admonishment to managers instructing them to only provide "toys and food" and buffer the team from external distractions implies that leaders in an agile environment should do less work, and be less involved with the team on a day-to-day basis, than in a more traditional environment. In fact a leader in an agile group must do more than he/she would in a more traditional environment and must be even more involved in the day-to-day activities of the team.

I assert that management best practices, when applied appropriately and discerningly, do not limit, but rather enhance, the productivity and job satisfaction of the individual members of the Engineering team, and improve the end product in the process. A good manager can and should help the team be more productive, have a better understanding of their fit in the organization as a whole and develop

team members by being active and involved with the team and the rest of the company.

Joe Blotner has been involved in building software since 1996, as an engineer and a manager (in most cases, at the same time). He has performed these tasks for Timberline Software, Tektronix, Xerox and MeasureCast. In these organizations, he has worked in Waterfall, Iterative and Extreme Programming(TM) environments. He is currently in the trenches as the Senior Engineering Manager at Sabrix, Inc., a start-up software company delivering enterprise class transaction tax software to Global2000 customers. At Sabrix he reined in the chaos by developing and implementing a unique Agile development methodology as reported in his experience report "Agile Techniques to Avoid Firefighting at a Start-Up", presented at OOPSLA 2002. He started out his adult life as a stage actor, which dovetails nicely with his management career.

5. Ward Cunningham, ward@c2.com

There is more to management than handing out assignments and taking notes in the weekly status meeting. That *more* is the part that remains when you adopt an agile method. Extreme programming, for example, says nothing about capital purchase approval or salary administration, but that doesn't make these "downward looking" responsibilities go away. There are also "upward looking" responsibilities such as budgeting and strategic planning that are probably best if shouldered by an individual.

Still agile teams take time-consuming management activities and make them their own. That means a manager does more oversight than day-to-day "managing" of the programming activities. Can we therefore expect the role to change? Certainly. Every XP value: communication, simplicity, feedback and courage, suggests possibilities for the role. Can paired managing be far behind?

Ward Cunningham is a founder of Cunningham & Cunningham, Inc. He has served as Director of R&D at Wyatt Software and as Principle Engineer in the Tektronix Computer Research Laboratory. Ward is well known for his contributions to the developing practice of object-oriented programming, the variation called Extreme Programming, and the communities hosted by his WikiWikiWeb. He is active with the Hillside Group and has served as program chair of the Pattern Languages of Programs conference which it sponsors.

6. Mary Poppendieck, mary@poppendieck.com

Sports teams have coaches. Orchestras have conductors. Even jazz bands have leaders. Note: sporting teams also have managers, so do orchestras, and often jazz bands do too. The manager is the one who sees to the administrative tasks of the organization, while the coach, conductor, or leader sees to coordinating the team or orchestra or band. Coaches and conductors do not play with the team or band, but they know the sport or the music very well, and their job is to organize the group so it can perform at its best.

Software development teams need leaders who set direction, align people, obtain resources, coordinate efforts, run interference, and provide a motivating environment. New team members need to be recruited and trained. Standards must be set and various areas of expertise require nurturing. In complex systems, expert designers are important; if they are not appointed, they will emerge.

Teams appreciate good leadership, because it helps them be successful. I distinguish management tasks – getting the maximum value from the dollar – from leadership tasks – helping people to excel. Leaders are required. Managers are optional.

Mary Poppendieck, Managing Director of the Agile Alliance, is a seasoned leader in both operations and new product development with more than 25 years of IT experience. She has led teams implementing solutions ranging from enterprise supply chain management to digital media, and built one of 3M's first Just-in-Time lean production systems. Mary is currently the President of Poppendieck LLC. Her book *Lean Software Development: An Agile Toolkit* brings lean thinking to software development.

6.1 Rebecca Wirfs-Brock, rebecca@wirfs-brock.com

I've always done what's needed. I don't like to be pigeonholed as just being good at one thing. So as an engineer I've happily planned, documented (gasp), and made tough choices. Coding or design for me has never been the end goal—just the fun part. Satisfying complex problem within a limited time, budget, and with changing customer needs is the real goal.

I've also had the title of software manager. Even in those jobs I jumped in and did what was needed. It startled people that I would write and read code, and wanted to weigh in on design alternatives. You might not have liked me as your manager. But as a manager, I had added responsibilities that were never officially part of my non-

managerial jobs. People and political and organizations issues were front and center. Accountability and getting the group to gel were my responsibilities. So while I'd like it if everyone would just assume the right attitude, play well together, and do what's best, I believe there is an important role for managers in an agile world. In this agile world, I think there are even more managerial challenges. As a manager, you can't just follow a standard recipe for success—you must adapt, reflect, and lead by example.

Rebecca Wirfs-Brock is lead author of *Object Design: Roles, Responsibilities and Collaborations*, Addison-Wesley 2003. She is a recognized innovator in practical object analysis and design techniques. She invented the set of development practices known as Responsibility-Driven Design. No wonder why she thinks being responsible and accountable (whether object or human) is important! She spent 17 years as a Software Engineer at Tektronix, where among other accomplishments; she managed the first commercial Smalltalk effort and was the technical lead for the development of Color Smalltalk. She has been involved in the design and architecture of a telecommunications framework, an online banking system, and has mentored teams in design, architecture, and managing incremental, iterative object-technology projects.