Chapter 33

The Business Benefit of Agile Methods

The Principles of Agile Methods

It is time to revisit the 12 principles of Agile methods and examine what they really mean from a business perspective.

Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.

Agile methods believe in Throughput dollars. The highest priority is to deliver client-valued functionality and to do so in a systematic, process-oriented fashion of continuous production. Agile methods believe in a system of software production which delivers client-valued functionality at a steady pace. However, this principle might be better re-written as “Our highest priority is to satisfy the customer by maximizing delivery of valuable software.” This modification emphasizes Throughput rather than lead time. Early delivery of partial release may have no Throughput value because deployment of an incomplete system is impractical. Early delivery merely mitigates risk.

Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.

Agile methods accept that change is a fact of life. They also accept that delivering a stale requirement is valueless. There are no Throughput dollars associated with a useless and obviated requirement. Agile methods seek to eliminate these by coping with change, even late change. It is this attribute

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1 Suggested by Philip Bradley on the FDD community website
which gives Agile methods their name. The ability to cope with change shows genetic fitness. Fitness implies agility.

Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.

Agile methods believe in short lead times and by implication low inventory levels. As such, Agile methods are compatible with The Goal². Through a preference for short lead times and lower inventory, Agile methods encourage smaller levels of Investment and reduce the Operating Expense of producing software. Agile methods deliver greater value-added and more Net Profit through a focus on regular flow of Throughput dollars and through a reduction of operating expenses. Agile methods generate a greater ROI, through reduction of the Investment and increased Net Profit.

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

Agile methods recognize that waste is extremely costly and rework is undesirable. They advocate an on-site client who can catch misunderstandings and correct problems with analysis and design. This reduction of waste and consequent reduction in rework will increase production, shorten lead times and directly contribute to increased Throughput dollars, reduced Inventory and reduced Operating Expense.

Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.

This principle hints at leadership and delegation. With respect to the Theory of Constraints, this principle is really saying that the management should focus on identifying constraints and removing them through exploitation and elevation. “The environment and support they need” implies an environment free from constraints where optimal Throughput can be achieved.

² The Goal [Goldratt 1984] identifies the goal of all business is to make a profit. Profits not working code are the most important method of judging a software business.
The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.

Face-to-face conversation is preferred because it minimizes setup time and eliminates by-products such as documentation. In Lean parlance face-to-face communication minimizes waste and lead times. The focus isn’t on zero documentation but on an optimal minimal set of documentation, i.e. just enough to keep the project moving forward and keep the idea transformation going, but not enough to represent needless by-product which is never read or referenced.

Face-to-face interactions are also believed to increase quality by improving communication. It is believed that writing and reading documents can lead to misunderstanding. Further, it is often true that the author of the document is a specialist document author who plays a role as interlocutor between the customer or client for the system and the developers. The translation effect from the interlocutor can lead to misunderstanding and errors. These errors cause rework.

By minimizing lead time and maximizing quality through face-to-face interactions, Agile methods shorten lead times which reduce Operating Expense, reduce inventory levels and Investment and maximize production generating more Throughput dollars.

**Working software is the primary measure of progress.**

Agile methods advocate that the main metric is production quantity, \( Q \), i.e. working code which delivers client-valued function. It is possible to measure this as completed inventory or as Throughput dollars. Regardless of which, Agile methods have identified and focused on the most important metric, \( T \). Agile methods are directly compatible with The Goal. They measure delivered value.
Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.

Agile methods recognize that cash flow is important and that lead time is important. By focusing on the development of sustainable systems of software development, rather than the stop-go cycles of heavyweight alternatives, Agile methods turn Investment into Net Profit faster generating a greater Return on Investment. In Lean terms, Agile methods encourage flow and believe in slack (or below maximum efficiency). Slack allows for regeneration of staff and training to improve their skills.

Continuous attention to technical excellence and good design enhances agility.

Agile methods recognize that rework and waste are costly to production and profitability. Hence, they value high quality of craftsmanship. Agile methods recognize the personal mastery discipline as a vital element in maturing a learning organization.

Simplicity--the art of maximizing the amount of work not done--is essential.

Agile methods realize that simple designs can be built more quickly and involve less testing and are less likely to have faults. Through a focus on simplicity of design, Agile methods reduce lead times through faster coding, less testing, less likelihood of bugs and overall higher quality. Once again, reduced lead times lead directly to lower Investment and reduced Operating Expense. Simpler designs which can be built faster potentially increase the overall production leading to higher Throughput dollars.

The best architectures, requirements, and designs emerge from self-organizing teams.

This is perhaps the only principle of Agile methods which cannot be easily justified in business terms. The premise that self-organized teams, rather than teams commanded and controlled by a manager produce better designs...
which lead to shorter lead times could be tested using the metrics described in this book.

At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

Agile methods believe in the principle of a learning organization\textsuperscript{ii}. By building a culture where every member of the team is encouraged not only to do what they do but also to think about how they do it and devise mechanisms for doing it better, Agile methods encourage a culture of continuous learning. This culture is compatible with The Theory of Constraints and compatible with the new agile maturity model for the learning organization presented in Chapter 32.

Perhaps the most important business benefit from Agile methods is the tendency towards a culture of continuous improvement. Even if Agile methods do not immediately lead to better profitability, the cultural change which will come from implementing them and the subsequent iterations of learning will lead naturally to a more profitable business.

Agility implies survivability but survival is not enough!

As Seth Godin wrote in his 2002 book\textsuperscript{iii}, “Survival is not enough!” The term “Agile Methods” suggests that these are software development approaches designed to cope with change which will deliver successful projects rather than failed projects.

Success, in and of itself, is a huge improvement for the software industry. This is still a world where up to 30\% of projects become extinct before they ever delivered any business value for the client. By focusing on genetic fitness, agility delivers survivability.

However, Agile methods are actually about much more than simple agility. Perhaps they are misnamed. Other names are possible – “Lean Development” is term being popularized by Mary and Tom Poppendieck\textsuperscript{iv} and Bob Charette\textsuperscript{v}. The term is borrowed from manufacturing industry

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where it is used to imply – just-in-time delivery with total quality. It doesn’t 
take a huge mental leap to map this to lower Investment, lower Operating 
Expense and increased production and realize that “Lean” means “Profit”.
So perhaps “Lean Development” would communicate a better message to the 
business community, because Agile methods are really all about better 
profits. “Lean” certainly implies more than just survivability.

However, Lean Development is talked about as an agile method. This is 
perhaps an unfortunate choice as I believe it would be a better term for the 
set of methods thought to be Agile. Let me then make a final suggestion. 
Perhaps these should be called “Profitable Development Methods”!

**Making Profitable Development Happen**

If such a suggestion provokes your CEO into replying, “What do you mean 
profitable methods’? Can you prove it?” then that is exactly the reply you 
were looking for. Ask for a sensible budget and tell him that you’ll be 
inviting him to your operations review within 3 months. You hope to show 
him through monthly operations reviews that Agile methods truly are more 
profitable within 6 to 9 months and it will all be presented to him in a single 
slide at the start of each review – the Financial Metrics for a system of 
software production. You will back this financial information with hard 
Production Metrics for Production Quantity, Production Rate, Lead Time, 
and Quality. You will demonstrate that Agile methods added more value and 
lead directly to improved Net Profit and ROI.

Go and choose the correct Agile method for your organization. Use the guide 
in chapter 32 to help you select one. Or, devise your own Agile method from 
first principles adopt the Theory of Constraints and use Lean Development 
tools to elevate the constraints and improve the agility of the software 
production process. Be an agent of change! Clearly communicate to the team 
why you are changing, what you are changing to, and the benefit you see 
from making the change. If applicable use a greater fear to overcome the fear 
of change – the fear of out-sourcing. Demonstrate the competitive advantage 
to be gained from successfully deploying agile development.

Finally, just get on and do it!
The Agile Manager's New Work: Part 3 – The Case for Agile Methods

1 [Senge 1990] The Fifth Discipline
2 [Senge 1990] The Fifth Discipline
3 [Godin 2002] Survival is Not Enough
4 [Poppendieck 2003] Lean Development
5 [Highsmith 2002] Agile Software Development Ecosystems
6 [Poppendieck 2002] Lean Development: An Agile Toolkit

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