

The tale of two Agile projects using OpenUP

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WHERE TEAMS ARE **R-HEROES**



Who am I?

Stuart Hughes – Corporate IT Delivery Manager

Moneysupermarket.com compare things and we are #1!

We're on the internet so time to market is king!

In Corporate IT

We, in 2007, had a Waterfall based Software Development Lifecycle

We are completing a transformation to Agile/OpenUP

We use Microsoft technologies C#, .Net, ASP.net, SQL Server

I have worked in IT for over 10 years and have risen through the ranks from developer.

Most importantly I'm not here to sell anything!

Our customer promise



- Best price
- Most comprehensive
- Clear & impartial
- Trustworthy
- Supportive



What am I going to talk about?

Today we will cover

Why moneysupermarket.com has chosen to move from Waterfall to OpenUP

A better way, an Open UP way....

The answer to the Estimate Tango

Case studies of projects and what we learnt

Why would you want to know this?

You may be under pressure to deliver business value faster

You may struggle to cope with change on a project

You may want to move to Agile and don't know how

Iterative 2008 vs. Waterfall 2007

Iterative Development



Waterfall Development



Both processes start with understanding the outline scope of the project

Iterative 2008 vs. Waterfall 2007

Iterative Development



In a iterative project we take the outline and create a prototype focusing on removing risk

Waterfall Development



In a waterfall project we keep talking and gather all of the requirements

Iterative 2008 vs. Waterfall 2007

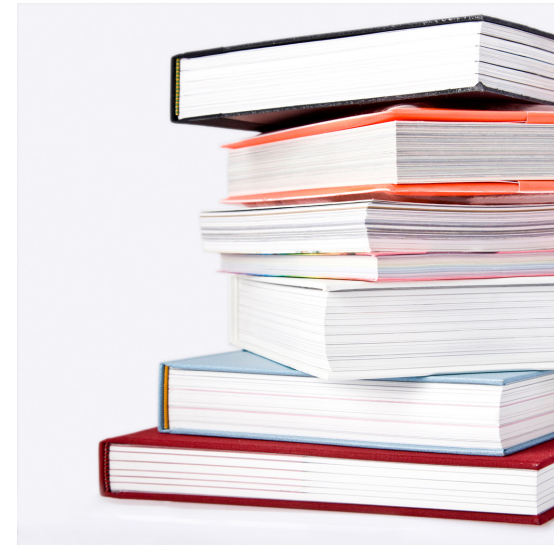
Iterative Development



Using Iterative we have delivered an outline prototype, which users can use to develop the initial idea



Waterfall Development



Using Waterfall we have delivered some documents

Iterative Development



We then continue to iteratively develop the idea making “in-flight” changes as we progress to ensure that the product meets the needs of the users

Waterfall Development



We start formal change requests and impact analysis. Still no code!

Iterative Development



In iterative we are working closely with the stakeholders to refine the idea in each iteration until the Master piece is finished!



Waterfall Development

This is where the IT team “vanish” for several weeks/months completing the development work.

The business users begin to sweat from lack of information.

IT come back to say they can't meet the deadlines with the current scope.

The business reluctantly agree to sacrifice the functionality.

Waterfall Development

After long days and nights something is finally delivered often having sacrificed functionality to deliver something on the deadline.

Ever planned
a masterpiece
and built a Mutant?



Introducing OpenUP

How did we sell Agile to the stakeholders?

Our business listed the following problems with our process

- **Unreliable delivery**
- **Time to market**
- **Cost**
- **Flexibility to change the requirements when they want**
- **Little demonstration of progress**

As a Delivery team we saw Agile as the answer to these problems and chose OpenUP as it suited our governance process and provided the control we were looking for.

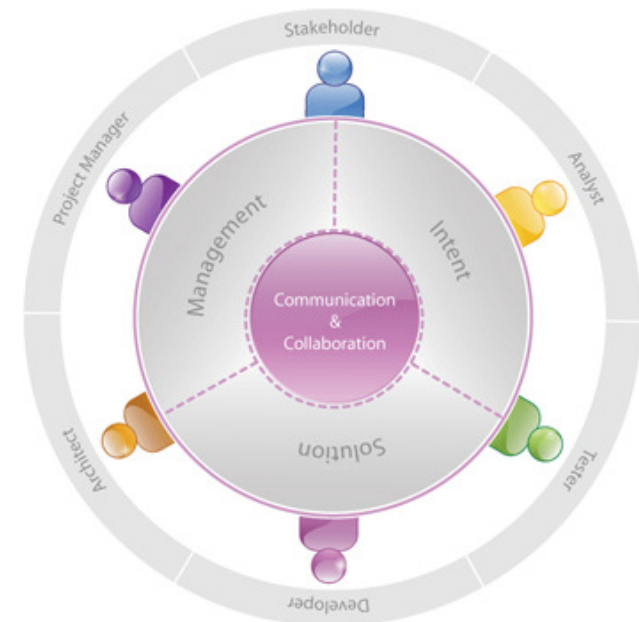
In exchange they agreed that they must prioritise requirements and be flexible on the exact scope of a delivery

I will go through these areas over the next few slides

OpenUP is based on a set of core principles:

- **Collaborate** to align interests and share understanding
- **Evolve** to continuously obtain feedback and improve
- **Balance** competing priorities to maximize stakeholder value
- **Focus** on articulating the architecture

OpenUP is influenced by Scrum, Eclipse Way, XP, and RUP



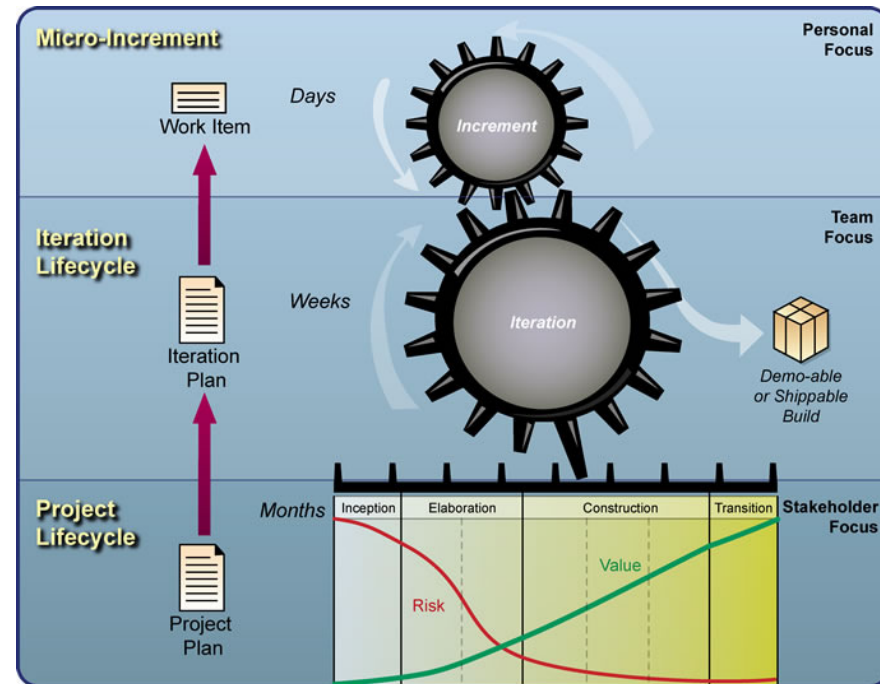
OpenUP - Phases and Milestones

4 Phases

- Inception
- Elaboration
- Construction
- Transition

4 Gateways

- Lifecycle Objective Milestone
- Lifecycle Architecture Milestone
- Initial Operation Capability
- Product Release Milestone



We hold a Project Board with Executive Stakeholders at each gateway to secure funding to proceed

How do we use OpenUP?

We prioritise and manage work using a work item list defined by business based on Business Value and always work to it.

The priority of work is determined through a tradeoff between business value, risk and long term goals.

We only gather “Outline” requirements at the start and complete more detailed requirements on a “Just in Time” basis.

We deliver incremental releases of production quality that are able to be deployed using

- Acceptance Tests
- Unit Tests
- Continuous Integration
- Pair Programming
- Test Driven Development

We review progress against each iteration and encourage changes in scope and priority to deliver the correct solution not the design

How did we sell OpenUP to the Business?

Make like a politician and lobby!

I created a presentation that I went through with as many people as possible.

I tailored the presentation for the audience.

I preached the benefits at every occasion

Advice

I found it easier to conduct the presentations as a one to one with just a laptop.

It allowed me to answer questions using language and concepts important to them. People felt less conscious about asking questions

Then I waited for a project to arrive where we were about to enter the

“Estimate Tango”



The Estimate Tango

The Estimate Tango occurs at the point when we deliver the first estimate to the stakeholders and goes like this...

We're probably having a passionate conversation about an estimate, are we discussing

- **The number of days effort is too high**
- **The duration is too long**
- **The cost is too high to support the business case**

The business probably want to “Challenge” the estimate because it has worked in reducing the numbers in the past. **Did it really?**

The Business View

- The Business have created a business case that describes their idea and that makes business sense
- The Business understand their vision for the project and it seems simple
- The Business want to start the project to capture the market and need to understand the project costs to set a budget quickly
- The Business can't understand why what they want can take so long and cost so much

The IT Department View

- IT are busy completing the current projects and have been asked to assess a 'business case' and produce an estimate
- IT with the limited information and limited time give a best guess based on the information they have
- IT understand that the estimate is a 'rough order of magnitude' and has a 100% tolerance and believe they have done the best they can with the information they have

The Result - Estimate Tango

- The Business want to 'Challenge' the estimate to reduce it. After all it's worked in the past!
- The exercise moves into a cycle of challenge and re-estimate
- During each cycle IT learn more about the scope and the estimate solidifies

OR

- The IT staff get drained and give the Business what they want to hear

The Impact

- Breakdown of trust between business and the project team.
- The project team begin feeling failure is inevitable
- Projects are impacted due to the re estimating cycle, delaying project start

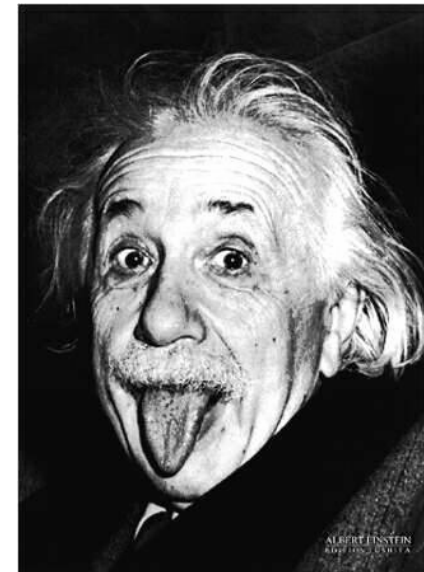
Ultimately we go through the process of, change requests, date slippage, budget overruns and lots of wasted time that we call an IT Project!

Madness?

According to Einstein the definition of Madness is

***“continuing to do the same things
expecting a different outcome”***

Are we guilty of this?



Cygnnet

Vision

Implementation of a CRM platform to give us an insight into our customers

Objectives

- Understand who our customers are
- Understand how many we have got
- Understand the segments they fit into
- Market to them things they want in an unobtrusive way!



Features

- Analytical data store and tools
- Single customer view data store
- Campaign tools to send marketing
- Containing 15 months worth of historical data from 20 data sources

The next few slides describe some of the techniques we used on Cygnnet

Approach

Cygnnet was an ideal project to pilot OpenUP as

- The technology was new and we would not be capable of planning up front
- The stakeholders were bought into the process and understood the benefits
- Regular pulsed delivery allowed the business to change the requirements to focus on delivery of the business benefits as early as possible
- Technical risks were high, so getting something up and running early would help shape the rest of the project

So what did we do

- **Customer-Focused** – focus on high value features
- **Collaborative** - no blame, working together, planning poker
- **JIT Requirements Gathering** – only specify what you are about to build
- **Iterative development** - Break it down into chunks
- **Retrospectives** – at the end of each iteration we assess ourselves and self correct

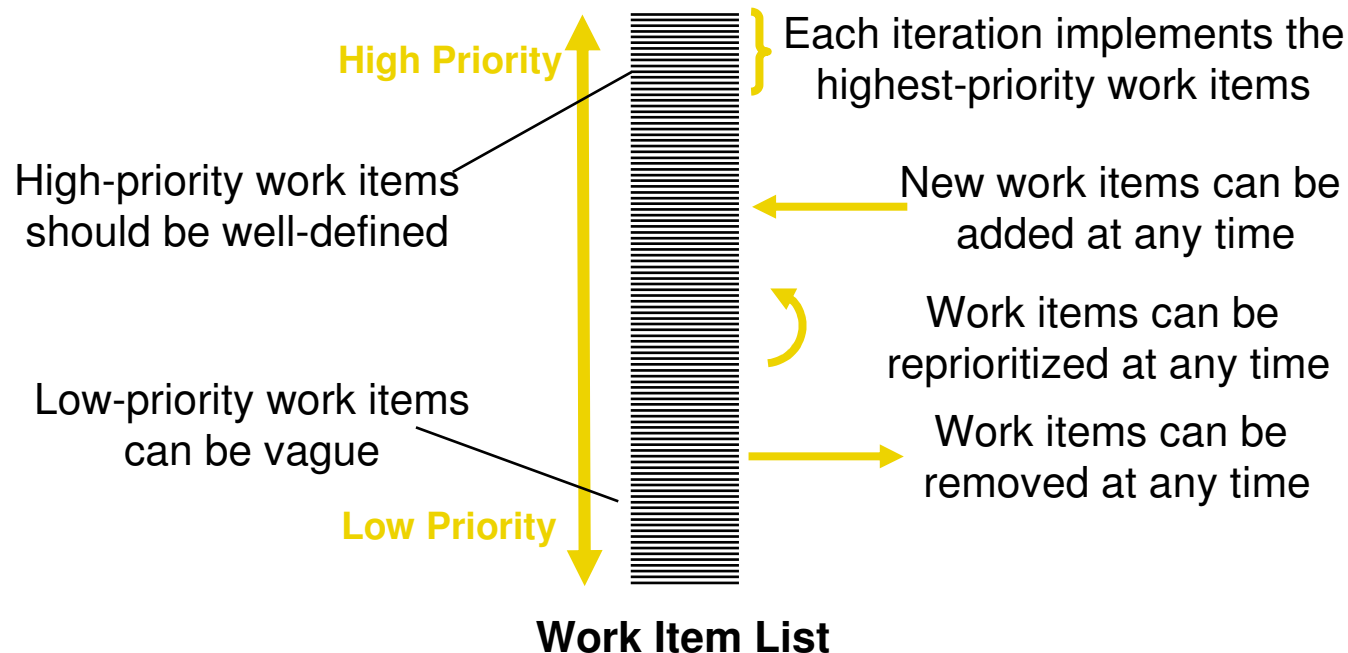
Outline First, Detail “Just in Time”

- At the start of the project we produce an outline requirement for each feature to allow the project team to estimate and plan
- Just before the iteration that the feature will be built in we will complete the detailed requirements work
- The stakeholder, analyst, developer and tester work together to gather the requirements and define an “Acceptance test” for success

Benefits

- The stakeholders see the project progress quickly into delivery; no “Analysis Paralysis”
- The stakeholders can refine the features “in flight” based on project progress and any further development of the business idea
- The low priority features never get analysed saving time and money as they are not built
- Collaboration ensures that no time is wasted due to misunderstandings and that the correct features are built

Prioritise and Manage Work Based on Business Value



Benefits

- Only the highest priority work items reducing waste and focusing on what's important
- Encourages the business to change features at anytime
- Low priority and obsolete work items are never completed, saving time and cost

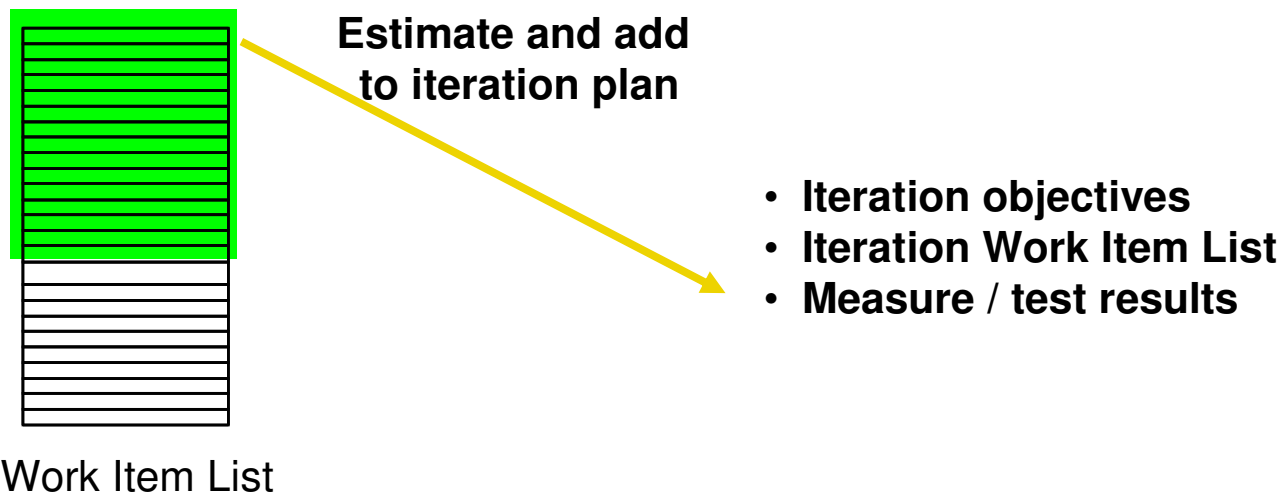
Plan Your Iteration

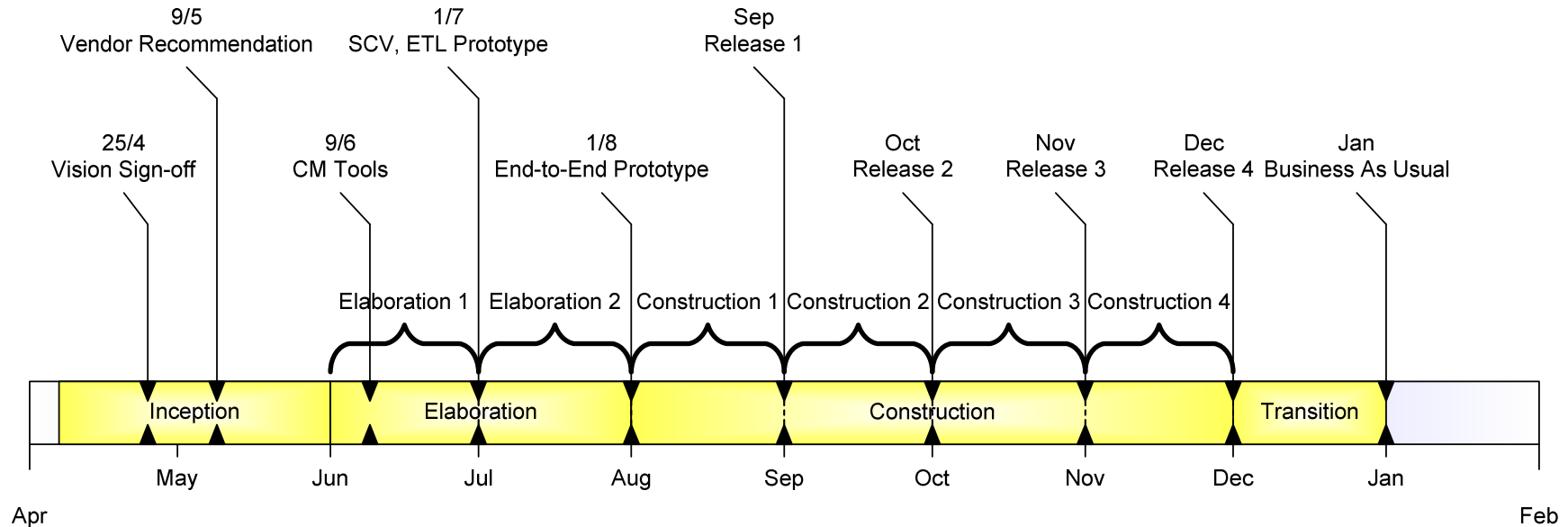
Specify target WI to be complete (velocity) and outline iteration objectives in iteration plan

Analyze top priority Work Items

- Estimate effort in hours
- If too big to fit within iteration, break down into smaller work items
- Add to Iteration Plan
- Analyse next work item in priority order until Iteration Plan is “full”

Specify test and other assessment criteria





Inception	Elaboration	Construction	Transition
<i>Iteration 1</i>	<i>Iteration 1</i>	<i>Iteration 1</i>	<i>Iteration 1</i>
Vision document	Single Customer View prototype	Historical Data Mart	Transition to BAU
Vendor selection		SCV	
Outline Business Analysis	<i>Iteration 2</i>	<i>Iteration 2</i>	
	End to End prototype (4 sources)	Analytical Mart	

Cygnets – What we learnt

- You must lobby and gain the trust of your stakeholders by presenting the benefits and how it will help them achieve their goals
- You need a Senior Manager providing “flight cover” and protection for the team
- A senior member of the team must have knowledge and experience with OpenUP or Agile
- You must have more discipline on OpenUP than Waterfall; if you haven't got experts you will not know what to be disciplined on
- When stakeholders become uncomfortable about progress, reminding them we can stop and write all the requirements down up front often changes their mind
- You must be prepared to discover what you don't want to know. Feedback is raw, rapid and regular

Middleware for Products

Vision

An Architecturally strategic project responsible for the creation of a framework to quickly produce new static data channels

Objectives

- Improves speed to market in new business areas

- To provided a reference architectural and implementation guide to ensure we all build channels using the same architecture

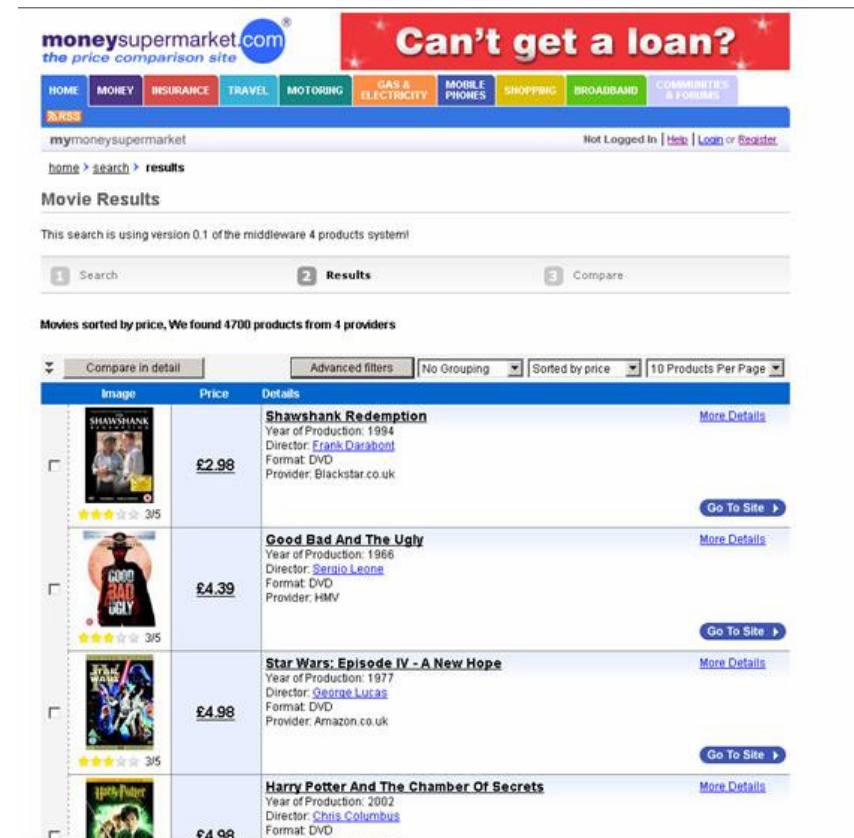
- We wanted to create a framework we reduced the total cost of ownership to support a channel

Features

- Production of a framework to build static data channels

- An implementation guide

- A test channel complete with unit and functional tests



Approach

MWFP was an ideal project to pilot OpenUP as

- The stakeholders were within IT and could give us the time to learn from our mistakes.
- It gave the team the time required to focus on ensuring the development process was Agile.
- It required regular pulsed delivery to allow the architects to make changes to ensure the deliverable was correct

So what did we do

- **Iterative development** - Break it down into chunks
- **JIT Requirements Gathering** – only specify what you are about to build
- **Customer-Focused** – focus on high value features
- **Collaborative** - no blame, working together, stand-up meetings, planning poker
- **TFD** – Test First Development giving us a unit test suite for automated testing
- **Refactoring** – adding tasks to the work item list of code that should be changed
- **Retrospectives** – at the end of each iteration we assess ourselves and self correct

Stand up Meetings

Agile projects have daily stand-up meetings that last 20 minutes or so.

This meeting is designed to talk about the previous day's activities and to discuss any problems that may occur or that may be foreseen.

It is highly disciplined and involves answering 3 questions.

What did you do yesterday?
What will you do today?
What are you blocking issues?

The results of the questions are used to move the cards.



Our boards include

- The Vision statement
- An Iteration Plan
- Progress tracking on work items
- An up to date Burndown and Velocity chart

Key Concepts: Agile Estimation & Planning Poker

Team activity used to estimate Use Case size

1. Use cases are assessed against as Fibonacci (1, 2, 3, 5, 8, 13, (21), BIG)
2. Each member of the team estimates size independently and everyone shows their card at the same time.
3. If there is a large difference between highest and lowest it is discussed and played again

Size (points):

For each work item, we estimate how big it is. We focus on relative size, so key is to be consistent within your work items list.

Velocity

A measurement of how many points are delivered in each iteration



Effort :

Estimate of actual effort in Perfect Engineering days

Retrospectives

Everyone in the team meets and discusses the following

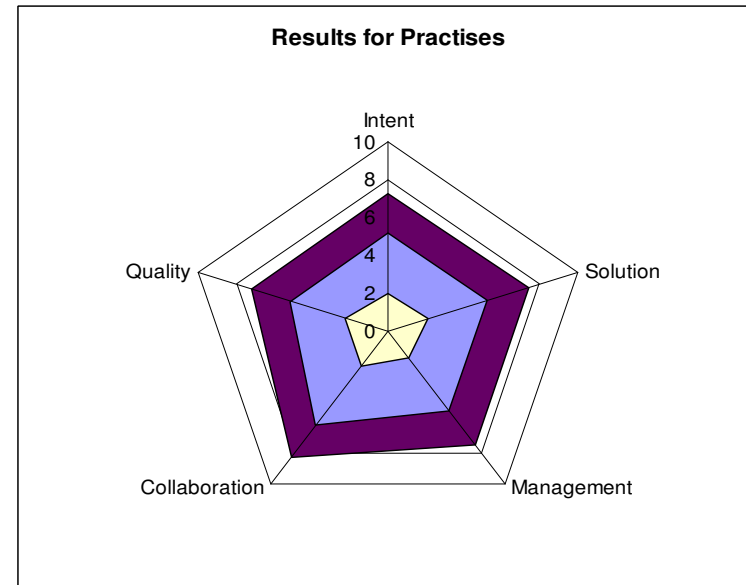
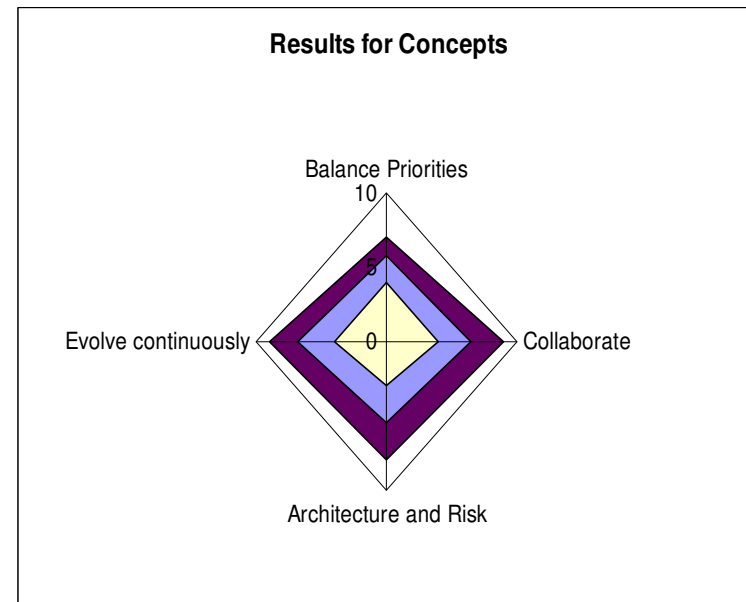
Good, Bad, Puzzles, What to do Better/Different?

Picking at most 3 process related things to do better that are quantifiable or have a clear DONE state that should make working easier.

The findings are compiled and objectives to be completed for the next iteration are set and added to the board.

At moneysupermarket.com we have also created an **OpenUP Maturity Assessment** that is used at the end of each phase.

We use this for continuous improvement



Key Advice

Stand-up morning meetings will give you the discipline and control you need

make sure everyone answers the 3 questions

make sure everyone stands up

make sure the board is up to date

Retrospectives are key to the team learning about Agile by making mistakes

make sure that everyone gets there say

make sure you only agree to solve up to 4 bad things at once

make sure you track against the retrospective objectives and achieve them

Have a mechanism in place to ensure everyone actually understands OpenUP and the practices being used

Make sure a copy of the OpenUP portal is installed on site and used



