

Using Scrum to deliver a phase of a waterfall project : Experiences and Warnings



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This session looks at Scrum experiences over 2 ½ years for two companies adopting Scrum at different points in a project lifecycle, reviewing the challenges they faced, the actions taken and impacts of those actions. We will look at how one company used an offshore team to deliver a site that was referenced by Forrester as a benchmark of how to build and design great financial websites, and discuss how another company scaled Scrum in order to regain business confidence and align local decision making with global strategy.

- **Presentation – 60 minutes**
 - Introductions
 - Overview
 - Two Experience Reports
 - Background
 - Why Scrum?
 - Challenges
 - Actions
 - Impact
 - Where are they now?
 - In Retrospect
 - Summary
- **Panel Questions – 30 minutes**





- **Matt Roadnight**
- Matt is a CSM and has been practicing Scrum for the past three years, in distributed and scaled environments across a number of different organisations. Working as a Scrum Master and as an Agile coach for both Conchango teams and scaled implementations within customer organisations.



- **Doug McArthur**
- Doug has worked for the referenced FTSE 100 Company for 19 years in a number of roles within the IT competency, as a result has worked with a variety of methods. Currently Doug is responsible for ensuring that a large transformational project is delivered and the roadmap to become more agile is achieved.

Overview

- **Two projects, introducing Scrum in different phases of a traditional project approach**

Requirements

Specification

Design

Implementation

UAT

Maintenance

Order to Billing Project

FTSE 100 Company

**Major Update to CRM system
(Siebel)**

Started Jan 2007

Mortgage Sales Platform

Mortgage Company

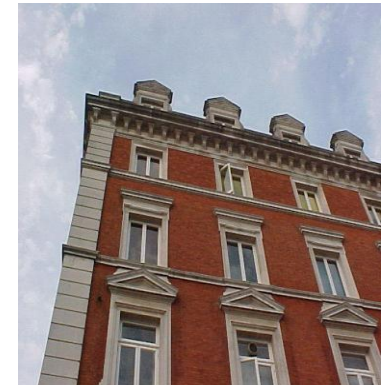
**Mortgage eCommerce Application
(.NET 1.1)**

Started July 2005

Mortgage Sales Platform – Background



- **Project to build a ‘Straight-Through’ Mortgage Processing Application for a major banking corporation**
 - 2 months analysis, architecture and design just completed
 - End date, cost and scope agreed
 - Cross-functional team, 3 testers + 7 developers
 - Romanian Off shore resources
 - Customer on another site



Mortgage Sales Platform – Why Scrum?



- **Conchango had successfully applied Scrum in other projects**
- **The team wanted to run the project in an Agile way, having strong beliefs in iterative engineering practices**
 - Test Driven Development, Unit test coverage, Continuous Builds, Automated Deployments
- **We wanted to get a realistic view of how long the work would take based on the team we had**
- **We wanted to work at a sustainable pace**
- **Strengthen and deepen our relationship with the customer**

Key Challenges - 1



Challenge

We had a good idea that we “were never going to be able to deliver all the functionality by the delivery date”

Action

- Generated product backlog from functional spec
- Put in place 20 day sprints and 1 day planning sessions
- Set up Sprint reviews
- Put estimates against product backlog items

Impact

- Good product backlog with well defined items
- The customer could see progress
- Questions about “dead time”
- We reviewed progress against estimates over the first 2 sprints and started to have a conversation about delivery dates
- Difficult conversations, but only had to go back and reset expectations twice, and after that continued to hit dates and more accurately

Key Challenges - 2



Challenge

We were using an offshore partner

Action

- The partner was carefully selected and vetted to ensure cultural fit and technical competency
- The whole team worked onshore together for 4 months
- Then moved offshore 2 or 3 at a time
- Remote access was provided to the development environment
- Daily Scrum over Skype

Impact

- The team gelled well and due to initial face to face contact had very few communication issues
- Initial rapport and trust built up was retained
- Whole team delivery into single code base with daily build
- Planning sessions were done remotely – reviewing PBIs before the planning session, tele-conferences and desktop sharing
- Competent developers

Key Challenges - 3



Challenge

Pressure to Deliver faster

Action

- Used the data gathered in the product backlog estimations
- Scrum Master protected the team
- Focus on strong engineering practices and “stop the line” mentality
- The customer had full visibility of the backlog

Impact

- Meaningful conversations with historic data
- Belief in the team and team growth
- The team were passionate about quality and following best practice, issues were addressed as soon as they were raised
- Regular releases into UAT environment
- Probing on Sprint backlog and over analysis

Key Challenges - 4

Challenge

Customer still took a traditional waterfall approach

Action

- Continued to deliver as quickly as possible into UAT
- Ensured we could move through environments quickly & reliably

Impact

- The customer didn't get testing in UAT early enough
- Robust, repeatable and practised deployment process
- Some change was stifled due to change requests
- Lots of UAT bugs and mainly "bug fixing sprints"
- Customer still has a waterfall mindset

Where are they now?



- The backlog is now held on Jira where items are prioritised for potential release, clarifications on teleconferences
- Responses to recent volatile changes in the mortgage market
- The customer has built full trust in the delivery team, their estimations and advice
- 2900 unit tests, weekly deployments and automated performance tests in UAT
- “Forrester now want to refer to it as a benchmark example of how to build and design great financial websites”

Feedback

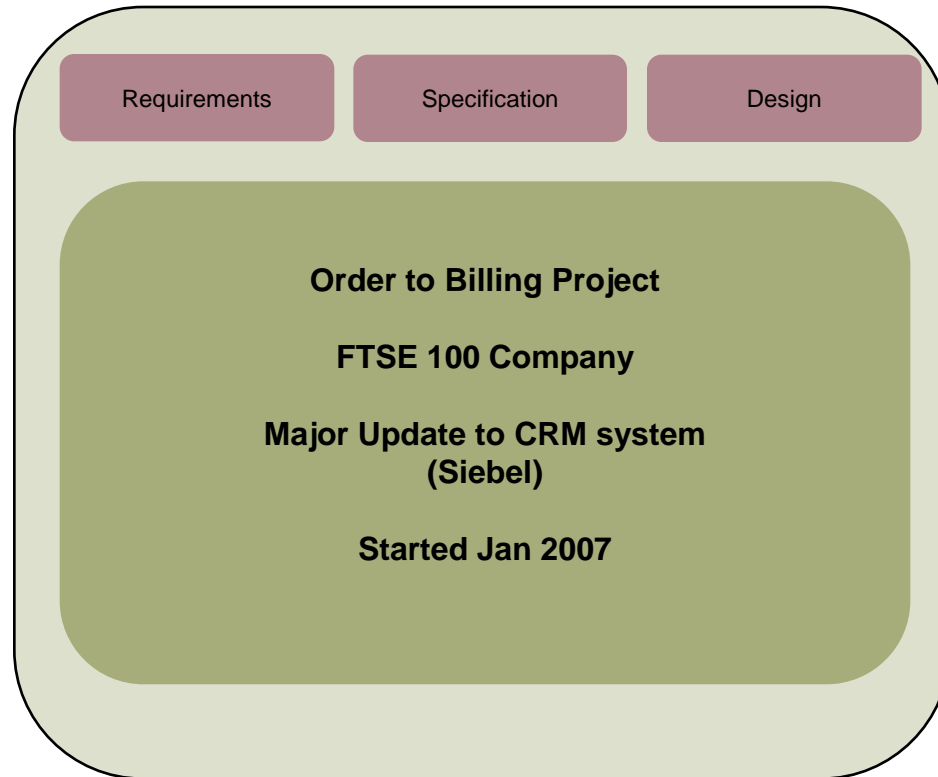
- “Our web site has become critical. If our web site is down we are out of business. We have to ensure air-traffic-control-type support to ensure that we are always ready to trade.” **Divisional MD**
- “In 25 years in IT, I have never worked before on a project where the business say how pleased they are with the developers!” **Project Manager**
- “It has taken a time to get here, but we now have a platform that allows us to flex our business to market conditions” **MD**



In retrospect

- **Would use again iterative delivery and Scrum approach in the delivery phase of a waterfall project**
- **The customer would not have accepted any more Agile adoption that we achieved**
- **Where we have the right mix, bid for business differently**
 - Company
 - Competitive Nature
 - Trust

Order to Billing Project



Order to Billing - Background



- FTSE 100 Finance product company
- Project to streamline the sales to installation process
- Based on a packaged product: Siebel
- Agile was not the only approach they had explored in the previous 9 months
- Large number of contract staff used
- In order to de-risk Agile adoption they chose an Agile approach to deliver design phase, with a 3rd party implementing the solution off shore



Project A – Why Scrum?

- CIO level messages to the organisation

- *acknowledge and adopt key lessons learnt*
- *need for earlier and clearer visibility of solution design*
- *flush out issues earlier to prevent date creep*
- *tighter organisation of testing and launch process*
- *more focus on performance of new capabilities*

- Previous projects had not meet business needs

- Senior Management visibility of the programme and wavering belief that we could deliver
- De-motivated workforce constantly re-planning
- This was the 3rd release in a 3 year roadmap
- Historic stigma attached to major programmes
- Time and budget pressured, historically end date and budget cycle driven
- Lack of business engagement, programme not delivering fast enough to effect bottom line of regional businesses
- Stakeholders in target driven environment, needed quick wins

What We Did



- **3 “Siebel development teams”**
 - BA, Dev & QA
- **Reporting & migration teams**
 - BA, Dev & QA
- **End to End Team**
 - BA, QA
- **Domain Experts supporting across the teams**
 - Architects, Project Managers, Agile Coach, Test Lead
- **Product Owners**
 - Business Subject Matter Experts representing each area of the business
- **20 day sprints, Reviews on same day**

Key Challenges – 1

Challenge

To de-risk implementation, Agile adopted for Design only with a bespoke approach

Action

- Recommended use of Scrum rather than bespoke approach
- In short time available trained project teams and business specialists
- Adopted key principles, but “bent” Scrum
- Used an old code base to develop PoC code on

Impact

- Initial scepticism in approach and how it could be achieved in the company environment
- Complex definition of “DONE” that was continually reviewed, but rarely achieved
- Documentation did not highlight gaps between teams and supported “incomplete” solutions
- Teams knew what they were supposed to be doing for the next sprint days
- High programme visibility; work was now being produced, rather than discussed
- Early adoption didn’t go that smoothly, without the level of commitment it may not have progressed

Challenge

Poorly defined product backlog & vertical team structure

Action

- Teams structured around traditional Siebel objects
- Story Writing workshops, driven from existing scope documentation
- Underline the importance of end to end delivery

Impact

- Backlog items not enough structure to allow teams to demo end to end functionality at end of sprint
- Bespoke approach defined backlog prioritisation by technical complexity and risk
- We were asking a lot of the business areas to gain global agreement in a short time, we had to start to co-ordinate this better and where possible “work ahead on the backlog”
- It took a majority of the sprint to define a product backlog item well enough to implement
- The business representatives found the backlog items useful as they understood them
- Focus for next release on clearly defining product backlog and representing business process and mapping to backlog items
- Full business case mapped to backlog items

Key Challenges – 3

Challenge

No master code base to work from or project environment skills on shore

Action

- Used a old code base to develop PoC code on
- Investigated ways to support iterative development in Siebel with regular releases
- Built on shore skills for project dev and sys test environment support
- Invested in full dev and system test environments for 6.1 release

Impact

- Unstable code base and lack of environment expertise made PoC development difficult
- Difficult to convince development manager that iterative Siebel development was possible
- Investment in environment and skills overcame performance issues, a separate demo environment has been a highly successful tool for user reviews
- Release 6.1 are now developing onto development and releasing to system test, with a migration to the master code base from the old code base
- 6.1 reviews have been highly successful in building business confidence

Key Challenges – 4

Challenge

Middle Management, I have responsibility, but no authority

Action

- Daily 30 min SoS catch-up
- Coaching on leadership style, understanding of Expert Coach role
- Could still use traditional skills in new world
- Reporting structure did not change, still had Risks, Issues and status reports
- Use of retrospectives

Impact

- Initially this was difficult
- Good traditional managers were doing this anyway
- The focus was on the environment rather than task planning
- Use of Scrum control points for management
- Use of backlog and story point estimation provided management tool
- Visibility of performance and incremental approach to resolving issues

Sound Bites

- **Comments from business users to the Business Sponsor**
- **Our solution...**
- **We are 3 months ahead of the game - these are the kind of issues we see at UAT.....**
- **Yes we can change the design - what would you like to de-prioritise so that we have the bandwidth ?**
- **It is very clear to me that you have a very strong story to tell.....**
- **I've never seen such energy in a Project.....**
- **I can see exactly where this supports my business benefits**



Where are they now?

- **The design phase of the waterfall project has been shipped offshore**
- **Next point release (6.1) has been started**
 - Fully embracing Agile and developing production quality code
 - Addressing previous challenges
- **The product back log has much more structure and focus**
 - Structured Stories (light use cases) provide context of what part of the business process PBI's mapped back to Structured Stories
 - Structured stories provide a high level communication tool to business users and sponsors
- **Sprint reviews have much more impact and inform debate at a business user and senior stakeholder level**

- **Doing this on a smaller scale would have resulted in failure**
- **Backlog Management**
 - Assign single owners
 - Where did items come from, who was it
 - Aligning backlog to big picture
 - Mapping business value
- **Strong Technical Leads**
 - Support backlog management
 - Consistently involved across teams
- **6.0 Team structure drove too many hand offs**

- **It's about people and setting expectations**
- **Adopting Agile principles & time boxing has benefits**
- **Changing behaviours is much easier within the team than it is outside**
- **Reviews breed confidence**

- You will find solutions to initial questions you have
- Investment in environments is key
- Start with a well formed backlog, but you won't get it right first time
- Use iterative engineering practices and lean software development techniques
- Adopting Scrum will bring benefits, Agile isn't a destination it's a journey



Panel Questions

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