Session 59 PD, The Need for Agile Actuaries: Introduction to Agile Project Management

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Session 59: The Need for Agile Actuaries: Introduction to Agile Project Management

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Practical Aspects of Agile

• Why an iterative process sometimes works better?
• When should you consider Agile?
• Why I am not a purist?
• How to incorporate an Agile methodology?
• Available Tools
• Understanding the Objections?
• Celebrate the success
Why an iterative process sometimes works best?

Design and Analyze
But what if requirements are not known

Implement
Can we begin with the known?

Test/Verify
Should we test as we go along?

Deploy
We then can integrate as details are set.
Why I am not a purist?

• Sometimes discipline and FINAL documentation is essential
  (appropriate documentation is always essential!)
• Often SCOPE is highly important
• The risk of inefficiency cannot be assumed
• Routine/Repeatable exercises
• Modified approaches can be effective
• Definition is more important than speed or improvements
When should you consider Agile?

• How aggressive are you timelines?
• How difficult are requirements to define?
• Are there possible innovations?
• Are there potential process improvements?
• How knowledgeable are the people assigned?
Tools are available?

Tools I use (free, low cost entry)

https://www.atlassian.com/software/jira/agile

http://blog.capterra.com/agile-project-management-software/

A practical approach – familiar(?) approach

Step 1 Plan
- Identify high level tasks
- Estimate needed effort

Step 2 Start
- Begin sprint
- Monitor and refine regularly

Step 3 Implement
- Adapt
- Test
- Document
- Re-plan and repeat
Ingredients for success

- Planning and documentation
- Daily 15 minute stand up meetings keep the process oiled
- Communication
- Collaboration
- Accountability is a good discipline
- Flexibility
- Prepare for change
Understand Objections

• Agile is NOT “no documentation”
  • The required documentation MUST be developed

• Agile can be used with any Size Project
  • Not just for small projects or teams

• Agile requires teams that are closely aligned
  • Agile does require collaboration (but technology is a wonderful bridge)

• Agile does not fit our corporate approach
  • A modified Agile may work
Celebrate!

• Compile lessons learned
• Recognize that PEOPLE make things happen
The need for Agile Actuaries:
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Steve Stockman, ASA, MAAA
Agile Project Management vs. Waterfall Project Management

Waterfall Project Management
- Similar to previous projects
- Repetitive

Agile Project Management
- Unknown issues and outcomes
- Not similar to other projects
- Able to respond to critical path
Job Related Examples

- Valuation
- Reinsurance Administration Audit
- Online PBA Educational Courses
Valuation

- Valuation is a Waterfall Project
- You follow the same outline every quarter
- Even adjustments are step driven
Reinsurance Administration Audit

Originally anticipated Waterfall Project Management but turned out to be Agile Project Management.

- Created a list of 25 potential errors to review and 7 controls to install for client
- Each completed audit resulted in new findings and new errors
- I now have 45 potential errors to review and 10 controls to install for client
- Need to be ready to dig and determine if uncovered error is isolated or systemic.
  - If systemic need to find a way to uncover each error
  - If systemic need to determine if a new control is possible/desirable
Online PBA Training Course

Agile Project Management

- We created these courses because we knew there would be surprises.
- PBA changes everything so there is no template to follow
- Examples of surprises:
  - The deterministic reserve would often be greater than the NPR
  - Small companies would be best served by taking the small company exemption more complex than it appears
  - A company is not at a disadvantage by delaying implementation of term products to VM 20
  - Our research did not match public findings
  - Determined what is perceived important was not always the case
Questions ...

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The Need for Agile Actuaries: Introduction to Agile Project Management

Kelly Rabin, FSA, CFA, MAAA
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Scrum is like a workout...or is this work or a workout?

Agile methodology has some funny terminology, but don't let it scare you off!
Don’t go chasing waterfalls

Traditional product development and project management approach.

**Stepwise approach.** Each phase of the development life cycle is completed by the appropriate team and then passed to the next team.

**Can limit communication between areas.** When Product Mgmt, Development, and Quality Assurance don’t talk, the outcome is often a failed product.

**Formal requirements and specs created and approved early in process.** If don’t collaborate with downstream areas, specs can be misinterpreted and even modified without authorization.
Please switch to the new agile methods you’ve heard of

Agile is a newer approach that continues to gain momentum, particularly in IT. In many insurance companies, the business still uses waterfall for the overall project, even though IT is using an agile approach.

Rather than locking down specs up front, the team works in short bursts called sprints. 2 to 4 weeks of focused effort on a specific piece of the project. Requirements are determined as needed.

Culture of open communication and collaboration. Co-location and stand-up meetings aim to avoid coding in a vacuum.

Product can better evolve to meet changing business needs. Decisions are not made until they have to be. Products have less chance of being already obsolete by time of launch.

Manifesto Digital – London, England
I know that you’re going to use Scrum or nothing at all

Three main roles in a Scrum process

**Product Owner.** Member of Product Mgmt team. Defines product and prioritizes the backlog (development task list). Liaison to customers and internal stakeholders. Focus on product content.

**Scrum Master.** Member of Development team. Focused on managing processes to successfully build product. Facilitate exchange of ideas and ensure that team is organized and efficient.

**Team Members.** Analysts, developers, and testers who actually build the product. No managers. Members get task list (called stories) from pre-sprint meetings (called iteration planning) and are responsible for completing them. Group effort during iteration planning to develop estimates and divide up tasks.

Why is it called Scrum? In a rugby scrum, players only make forward progress when they push as one. The same concept applies to a successful development effort.
But I think you’re moving too fast

If agile is so awesome, why isn’t everybody doing it? Remember how we develop specs on the fly in agile? That isn’t always ideal. If Team Members make “what” decisions instead of “how” decisions, it can cause real problems.

How do I mitigate this risk? Ideally, the Product Owner and Scrum Master are plugged into what is going on. Trust needs to be established such that a Team Member feels like the best thing is to raise their hand and get clarification, instead of plowing ahead due to fear of missing a deadline. Make good use of co-location and stand-up meetings.

Agile is always faster, right? It depends on how you measure “faster”. Faster to develop a product that is actually successful? Yes. Faster to produce pieces of code that can be tested? Yes. Faster to launch something that matches original specs? No, that award goes to waterfall. An advantage of agile is that iterations allow for corrections and tweaks as we gain more information. A disadvantage is that it is possible to iterate forever. Planning to a launch date is still important.

But what if I uncover something during my sprints that makes me go back to the drawing board? This is a real risk, and is why people have gone to an approach called Hybrid Agile.
The hybrid approach

**Iterative design, then build.** Create documentation prior to beginning sprints, which is then used to define stories.

**First the “what”, then the “how”**. The business provides the “what”, the product content, in a requirements document. Development uses this to determine the “how”: how a product should be coded and should function from a technical perspective, which goes in a specifications document. This process is iterative so that all have the opportunity to weigh in on possible impacts.

**This sounds like waterfall…** since requirements are defined up front. The difference is, in a waterfall, you can’t go back upstream. Here, since Development has been collaboratively involved in design, if they uncover an issue down the road, they should raise their hand so the team can make a decision. They are empowered to raise questions, rather than in a waterfall where they are expected to take orders from the business.
Examples of agile hybrid processes

The spiral model is closer to pure agile. Iterations follow four key phases that are designed to identify and mitigate risks:

1. **Determine** the objectives and **plan** the scope of the increment
2. Prototyping, experimentation and **research to identify and resolve potential risks** (technical, conceptual, etc.)
3. **Design, develop and test** the increment
4. **Release and monitor** the increment, and use feedback to aid in planning the next iteration

In the iterative and incremental model, the entire project is broken down into smaller increments that apply lessons learned from previous iterations. Learning is continuous, allowing the application to evolve incrementally upon the completion of each iteration. In each iteration, all the waterfall steps are completed, only often without a release.
Is this just an IT thing?

No! Agile tactics can be used in so many different ways, even if the entire process isn’t agile.

Tips to bring agile to life and annuity product development:

Build iteration into the process. What once looked like rework now looks like design refinement. The goal is to reduce the pressure to hit a home run with the first set of specs. Being allowed to make changes in the future takes away the fear of commitment.

Well-defined decision-making process. Agree as an organization who makes what decisions. Have a Product Owner who understands the business very well such that they know when something needs to be escalated.

Work in mini-sprints. Whatever the work is, it will get done better with focused effort. Need to draft a contract? Lock people in a room until it is done. It is rare to get dedicated resources across the board, but can you get them for a day or a week at a time?

More on this topic in my February 2016 Product Matters article
Thank you

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