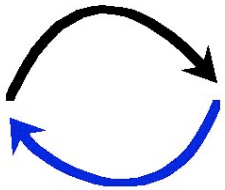
IIBA Business Analysis Conference, September 2009



More important than ever: The Business Analysts' role in Agile software development

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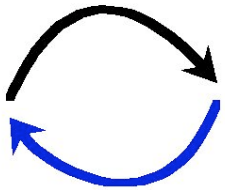
www.softwarestrategy.co.uk

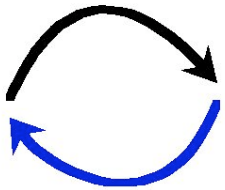
Final version

Allan Kelly, BSc, MBA



- I help companies navigate Agile adoption:
  - Consulting
  - Training & Coaching
- Author:
  - *Changing Software Development: Learning to be Agile*, Wiley 2008.

Agile



- Everyone familiar?
  - and Lean?

What is Agility?

Jim Highsmith, 2002

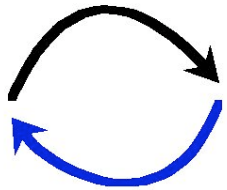
"Agility is the ability to both create and respond to change in order to profit in a turbulent business environment."

"Agile processes promise to react flexibly to changing requirements, thus providing the highest business value to the customer at any point in time"

Jutta Eckstein 2004

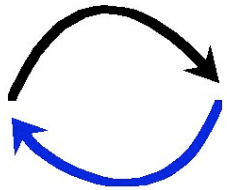
- Today: *Agile as Better*
  - Respond to changing (business) environment
  - Faster, more productive, higher quality
- Tomorrow: Agile creates new business models
  - Opportunities for those not confined by traditional IT

Agile

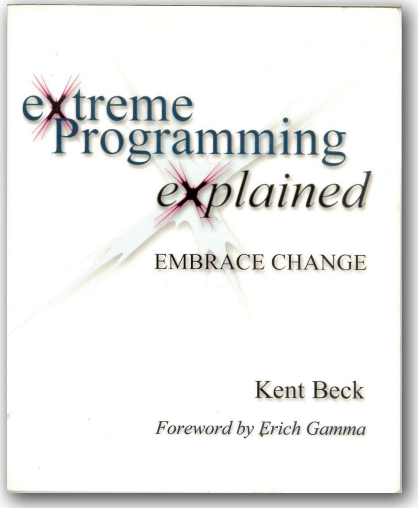


- Its the business need, *stupid*

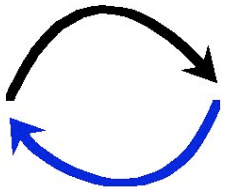
1999-2004: Agile = XP



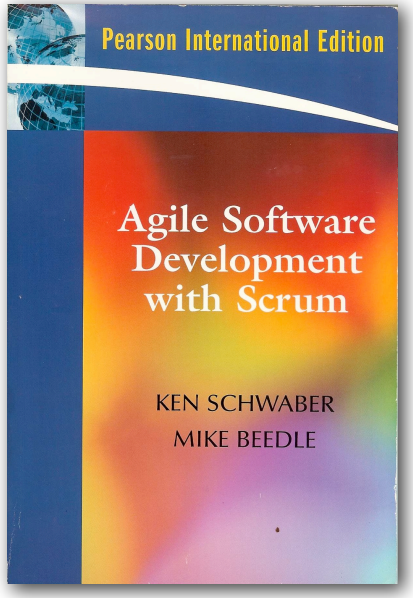
- Extreme Programming
  - First Agile method to gain popularity
  - Developer centric practices and literature
- Business need from *onsite Customer*
  - Customer on C3 was a Business Analyst
- "Customer" view too simplistic
  - Short sighted
  - Assume customer knows
  - No discussion on how the customer knows

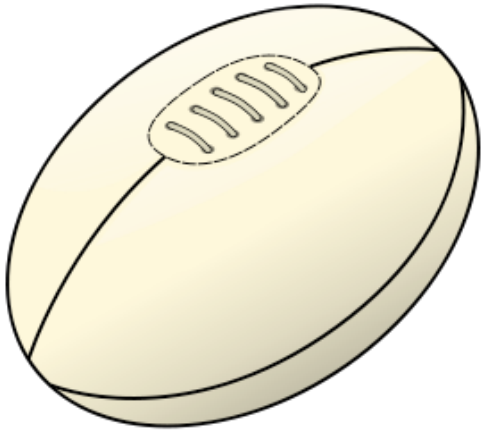


2005-today: Agile = Scrum

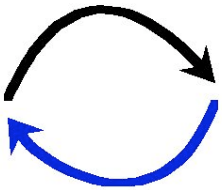


- Scrum
  - A project management method without a project manager
- *Product Owner* specifies need
- Scrum silent on how the Product Owner knows





Who is the Product Owner?

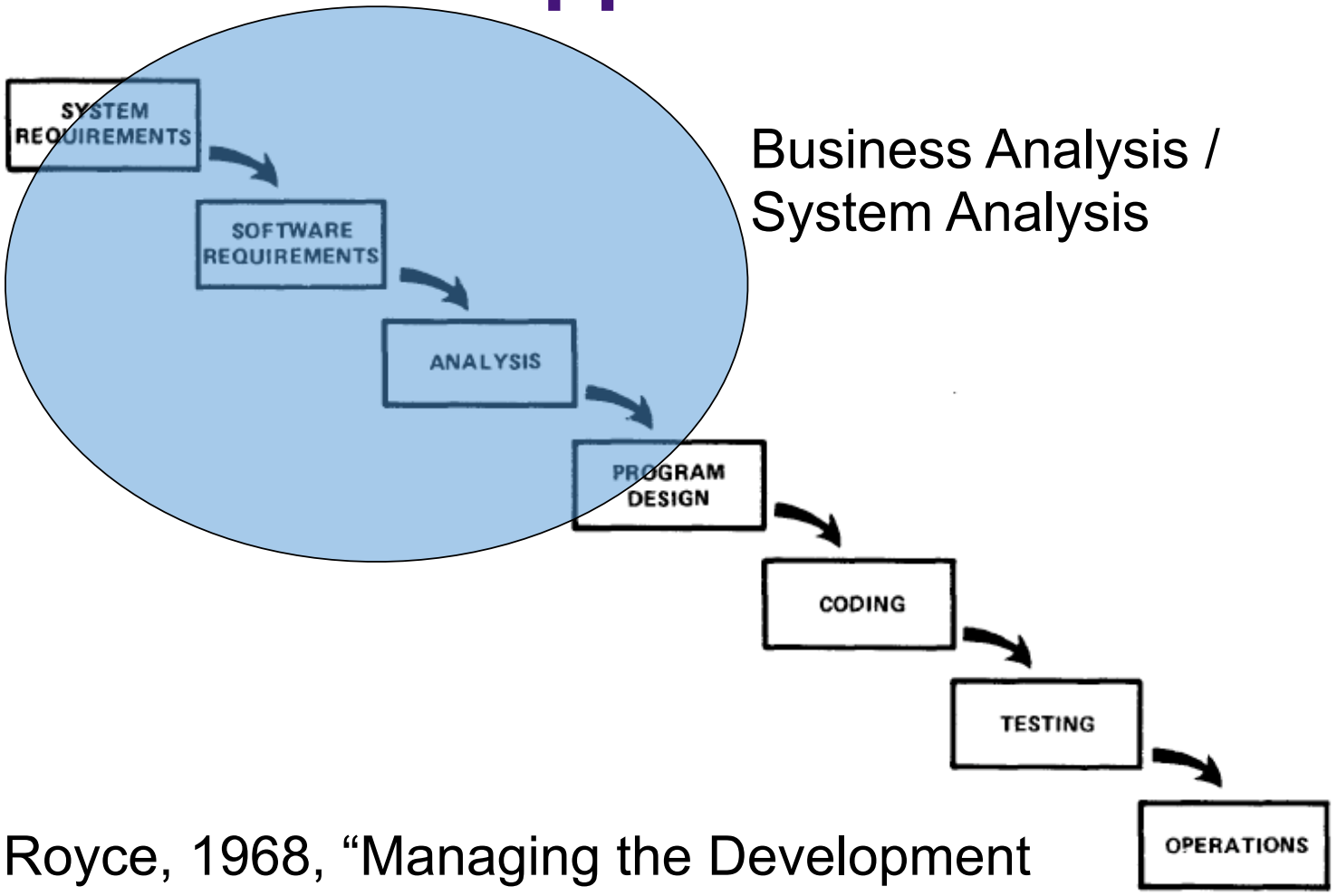


Subject Matter / Domain Expert

Product Manager

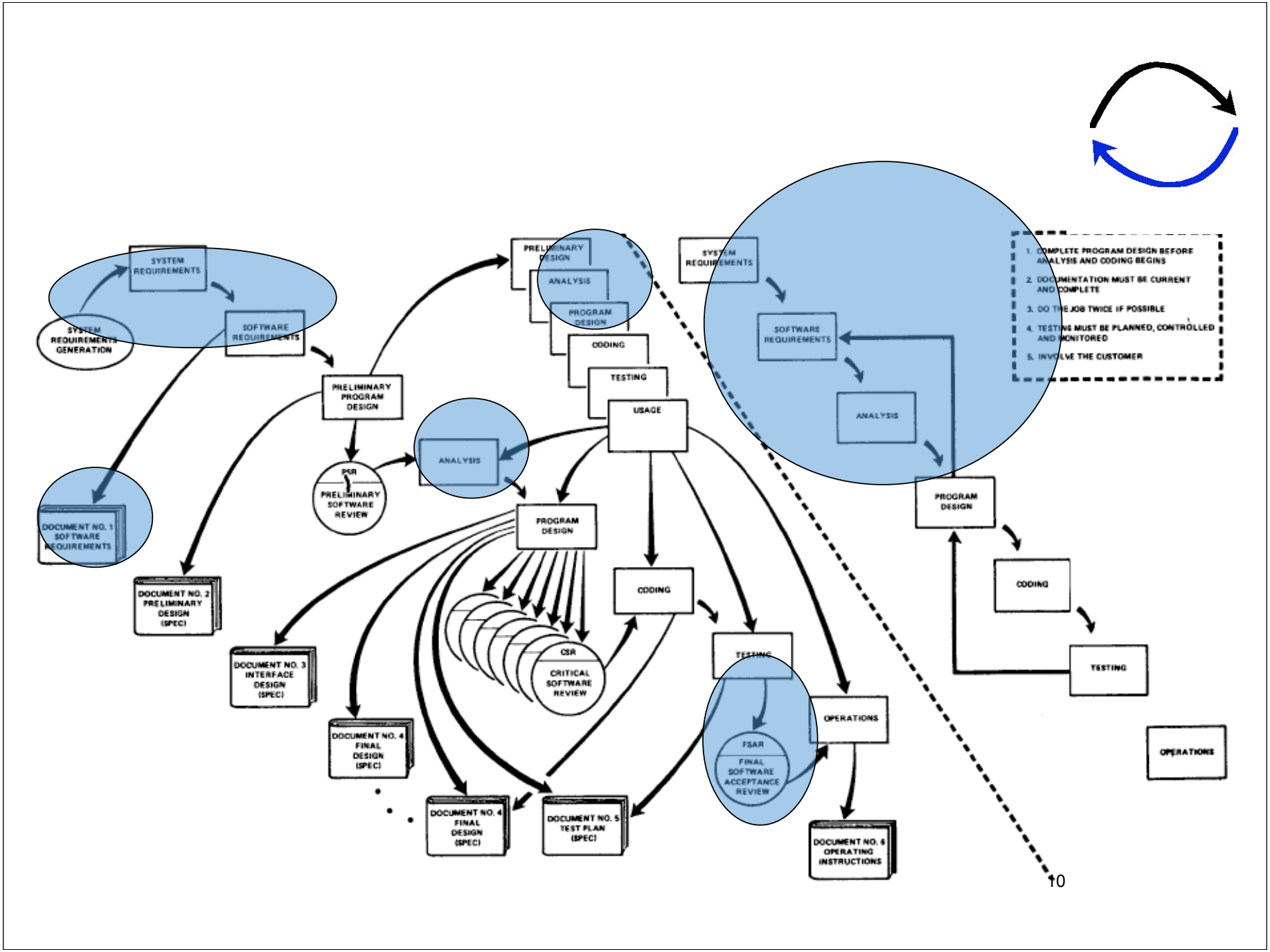
Business Analyst

Traditional approach



Business Analysis / System Analysis

Royce, 1968, “Managing the Development of Large Software Systems”


SYSTEM REQUIREMENTS
SYSTEM REQUIREMENTS GENERATION
SOFTWARE REQUIREMENTS
DOCUMENT NO. 1 SOFTWARE REQUIREMENTS
PRELIMINARY PROGRAM DESIGN
PSR
PRELIMINARY SOFTWARE REVIEW
DOCUMENT NO. 2 PRELIMINARY DESIGN (SPEC)
DOCUMENT NO. 3 INTERFACE DESIGN (SPEC)
DOCUMENT NO. 4 FINAL DESIGN (SPEC)
PRELIMINARY DESIGN
ANALYSIS
PROGRAM DESIGN
CODING
TESTING
USAGE
ANALYSIS
PROGRAM DESIGN
CODING
CSR
CRITICAL SOFTWARE REVIEW
TESTING
FSAR
FINAL SOFTWARE ACCEPTANCE REVIEW
OPERATIONS
DOCUMENT NO. 4 FINAL DESIGN (SPEC)
DOCUMENT NO. 5 TEST PLAN (SPEC)
DOCUMENT NO. 6 OPERATING INSTRUCTIONS
SYSTEM REQUIREMENTS
SOFTWARE REQUIREMENTS
ANALYSIS
PROGRAM DESIGN
CODING
TESTING
OPERATIONS
1. COMPLETE PROGRAM DESIGN BEFORE ANALYSIS AND CODING BEGINS
2. DOCUMENTATION MUST BE CURRENT AND COMPLETE
3. DO THE JOB TWICE IF POSSIBLE
4. TESTING MUST BE PLANNED, CONTROLLED AND MONITORED
5. INVOLVE THE CUSTOMER

Traditional approach
Agile approach

BA/Product Owner works ahead of team - scouting out

6+ months

- Slice through work

Decide requirement

- End-to-End
- Deliver I function

Analysis / Design

Code & Unit Test

Merge & Release

Decide requirement

Analysis / Design

Code & Unit Test

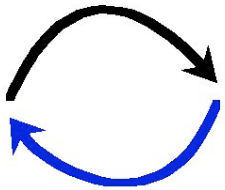
Iteration 1 (2 weeks)

Iteration 2 (2 weeks)

Close quarters requirements

- Goals and objectives
  - replace Big Requirements Documents
  - under continue review
- Requirements gathering is ongoing process
  - rather than only at the start
- BA needs to stay involved
  - rather than leave after initial stages
- Delivered functionality changes and evolves
  - in direction of the goal and objective
- More to it than requirements gathering
  - Dialogue over document

Less (software) is more



Potentially 80% of software development work is waste

- Better requirements can reduce demand by 80%

If 30+% of requirements change then

- Why bother doing work on them in the first place?

Solution:

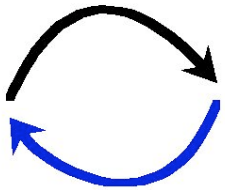
- **Just In Time Requirements**
- Identify, implement, deliver in quick succession

Only about 20% of features & functions in typical custom software are used

We often encounter requirements churn of 30% to 50%

Mary & Tom Poppendieck
Implementing Lean Software Development 2007

But....



There is a time and a place for everything

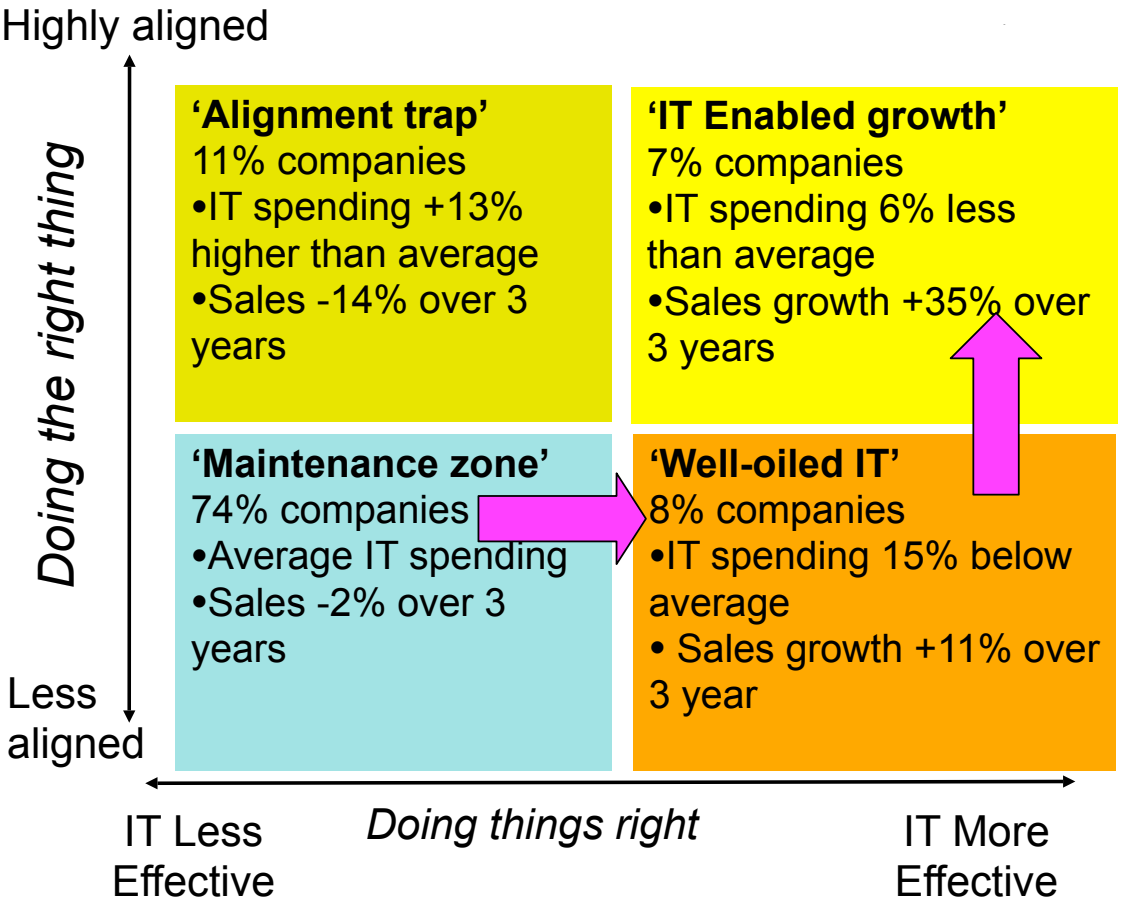
....

Requirements come second <u>when changing</u> to Agile

The Alignment Trap

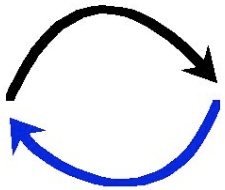
Challenge 1:
- Get Agile
- From *Maintenance* to *Well-oiled*
- *Delivery focus*

Challenge 2:
- From Well-oiled
- To Growth
- Requirements focus



Source: Shpilberg, Berez, Puryear, Shah: MIT Sloan Review, Fall 2007

When adopting Agile



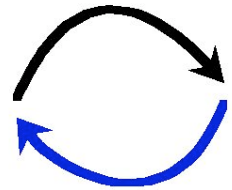
Sequence the changes

1. First ***Do it right***
   - Management focus on the development team
2. Do not emphasis requirements or BA role
3. Get developers more effective

Then

4. ***Do the right thing***
   - Focus on the what
5. Long term benefits in BA role

Project constraints



Product Owner needs to make these trade offs

Features

Resources (People)

Fixed in the short run (Brooks Law)

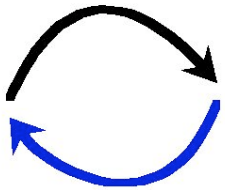
Scope control (run backwards)

Time

Time boxed

Agile projects negotiate over requirements rather than resources or time

More work for Product Owners
Less work for Project Managers



- Negotiate over feature delivery
  - Not when
- Flexible release plan
  - Not Gantt chart
- Measure value delivered
  - Not time spent

Project Manager

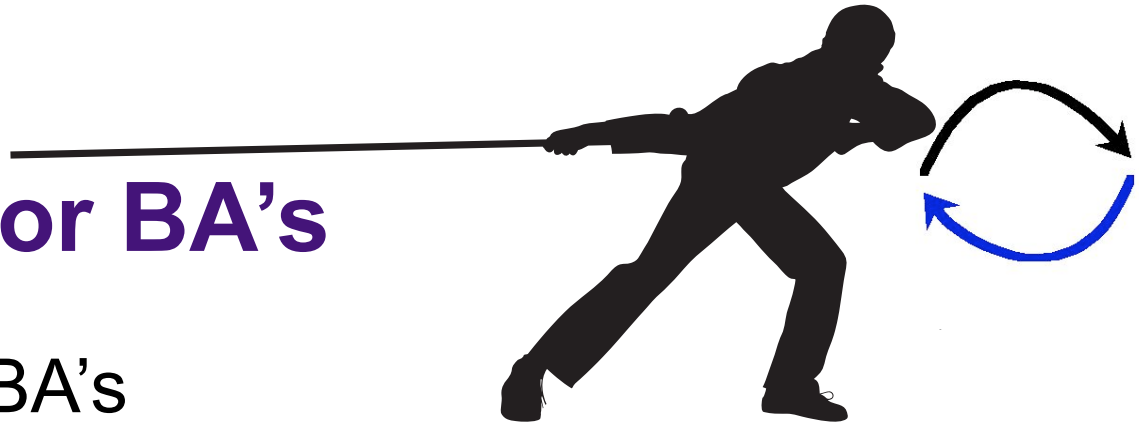
- Self organizing teams
  - No task allocation
- Tracking by delivery
  - Not % complete
- Commitment over estimates

- Changing requirements
  - No work packages
- Sustainable pace
  - No whip cracking

BA/Product Owner

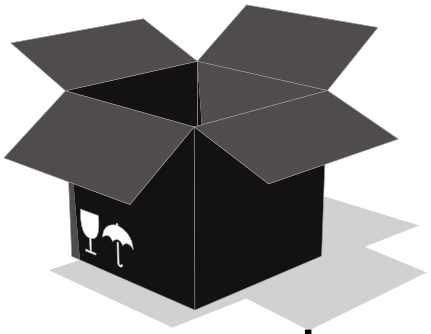
Development team

More work for BA's



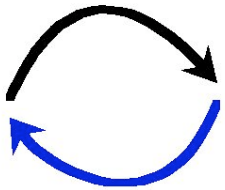
- More work for BA's
  - More/better analysis can reduce work load in time
  - More responsible for value delivered
  - More conversations with Developers
  - Slack for *Just in time requirements* (Queuing theory)
  - Writing/Creating acceptance tests
- Move from ***requirements push*** to ***need pull***
- Therefore... 1 BA for every 3 to 7 developers
  - Stable product: 1 BA -> 7 developers
  - Rapid change: 1 BA -> 3 developers

Take aways



1. Being Agile means delivering business needs
2. Product Owner is often a BA
   - Agile process does not remove need for needs
3. BA take a back seat in early transition
   - Step forward as team becomes effective
   - Key in reducing work to be done
4. Product Owner role is large than BA role
   - Need greater staffing
   - Shift from *Requirements Push* to *Need Pull*

Thank you



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