The Importance of Business Architecture and IT Architecture in Successful Agile Project Management

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Agenda

- Definitions of Business Architecture and Agile Methodologies

- Introduction of SAFe principles

- Why is Business Architecture important in Agile environments?

- Discussion

Definition and Use of Business Architecture

- Business Architecture: "A blueprint of the enterprise that provides a common understanding of the organization and is used to align strategic objectives and tactical demands."[4]

- Deliverables provide
  - ➢ Communication Tools for Stakeholders
  - ➢ Basis for Requirements Definition
  - ➢ Basis for Metrics

Value Stream Example

Place Order	Prepare Coffee	Collect Payment	Deliver Cup of Coffee
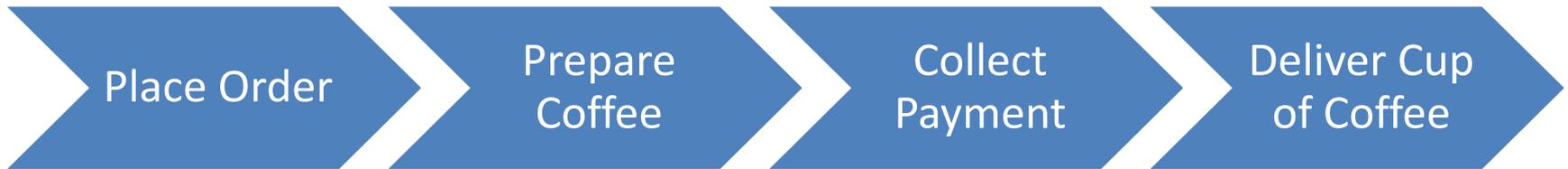
Capability Heat Map Example

Financial Management	**Human Resource Management**	**Marketing Management**
Customer Management	Production Management	Product Management

"Agile Methodology" versus Lean versus Six Sigma

- Agile advocates iterative elaboration
  - ➢ Originally applied to software development
  - ➢ Adapted throughout business
- Agile is a journey to becoming flexible and quick [2] with emphasis on delivering value in a rapidly evolving environment
- Agile is just one way to accomplish "Lean"

Agile Manifesto Values	Over
Individuals	Processes and Tools
Working Software	Comprehensive Documentation
Customer Collaboration	Contract Negotiation
Rapid Responses to Change	Adherence to Rigid Plans

"Agile Methodology" versus Lean versus Six Sigma

- "Lean" focuses on continuous improvement in order to create more value with less waste

- Six Sigma is a specific methodology of statistical analysis to accomplish Lean

- Agile Retrospectives and Value Stream mapping are lean techniques
  - Allow easy identification of improvement points and contributing capabilities [2]

- Agile can actually improve alignment of IT solutions to business [2]

- Lean and Six Sigma do not typically focus on IT and business alignment.

Contrast Agile with Traditional Project Management

- Agile focuses on regular delivery of value without fixing requirements [2]
- Agile has less documentation
- Waterfall project management suggests
  - Describing all requirements (fixed scope) up front
  - Delivery according to fixed schedule and cost (Triple Constraints)
  - Emphasizes planning and risk analysis up front
  - Less standardization among cost estimation than Agile techniques
- Neither allows scope creep, but waterfall has arduous change request process

Contrast Agile with Traditional Project Management

- The claim that Agile is outside the PMBOK® Guide has no basis in fact![1]

- The PMBOK® Guide included:

  - Rolling Wave Planning

  - Progressive Elaboration

  - Decomposition long before the Agile Manifesto was written. [1]

- Over time, Agile stabilizes metrics

  - Velocity, quality, and change rates

  - Cost estimates become more reliable than traditional ones [1]

Overcoming risks of Agile methodologies

Risk with Agile	Mitigation
Missing two key components - budgeting and sophisticated scheduling	The PMBOK® Guide solves those problems and makes Agile better! [1]
Independent teams set their own priorities	Scaled Agile Framework (SAFe) addresses several challenges of self-directed scrum teams
Dependencies and coordinated value delivery problematic	Engage program/portfolio managers to coordinate dependencies across scrums and use demos and showcases
Lack of formal communication to and from self-directed teams may result in waste and/or missed value	Before every sprint or program increment, PM's/Scrum Masters/Release Train Engineers consult with product managers and business and IT architects to review any changes in strategy and impact on feature backlog

http://www.scaledagileframework.com/

Some Key Elements of Scaled Agile Framework (SAFe) http://www.scaledagileframework.com/

- Establish Portfolio Management Team(s), Program Management Team(s), and Dedicated Development Teams, empowering decentralized decision-making

- Early collaboration of business and IT architecture to build "runway"

- Use the concept of a Release Train with no more than 150 people on each train. Fund Release Trains versus individual projects or programs.

- Program Increments are typically composed of 5 2-week sprints capped off with showcase.

Some Key Elements of Scaled Agile Framework (SAFe) http://www.scaledagileframework.com/

- Use program scrum of scrums to manage different teams on each release train and portfolio scrum of scrums to manage different release trains in a business division, and division scrum of scrums to manage different portfolios across the enterprise.

- Limit queue size to maximize productivity

- Pull down work versus push down work from portfolio to program to teams

- Definition of done for each stage is critical
  - ➢ Epics at portfolio, Features at program, Stories at team

Integrating Business Architecture into Agile methodologies

Why take the time for business architecture?

- Multiple surveys state poor requirements gathering as main reason for stakeholder dissatisfaction with initiatives

- Business Architecture artifacts offer tools for communication and metrics, mitigating shortcomings of self-directed, isolated agile teams

- Understanding capability maturity helps with estimating and determination of when to close budgets

- Facilitates tying delivered value to capability maturity, goals, and strategies tied to vision

Integrating Business Architecture into Agile methodologies

Best practice suggests the following cycle:

1. Brainstorm about Mission and Vision

2. Conduct customer and stakeholder research

(p. 8 of Business Architecture and Agile Methodologies whitepaper by Eric Shane Elliot, Francis Fons, Alex Randell) Key questions to ask include:

- Who are the key stakeholders?

- What pain points are felt by customers?

- What pain points are felt by the executives?

- What are the immediate business priorities?

- What are the pending initiatives and their prioritization?

3. Formulate goals and strategies

Integrating Business Architecture into Agile methodologies

4. Review capability maturity (Assumes organization mapped capabilities already) and utilize performance dashboard and analysis tools like Porter's Five Forces model[5], the Business Model Canvas[6], SWOT Analysis[7] and/or Impact Grid [3]

5. Prepare Business Architecture deliverables focused on goals and strategies and business model canvases
   - Strategy maps
   - Capability heat maps
   - Value streams
   - Process maps, context diagrams, and information maps, desired versus current state

6. Business Architects collaborate with Agile portfolio and program management teams on Epic, Feature, and Backlog prioritization
   - Use end to end scenarios, context diagrams, and value streams to frame desired outcomes for relevant stakeholders.

Integrating Business Architecture into Agile methodologies

Best practice suggests the following cycle:

- Decide on frequency of need to repeat steps 1-3 on prior slide for your organization and who should collaborate

- Business Architect should collaborate with Agile teams, repeating actions in steps 4-6 on prior slide as needed. Prepare documents to show measured value.

- Business Architect should collaborate during release planning and SAFe program increment planning (Remember releases are typically not after every sprint)

- Next slide's diagram captures business architecture involvement
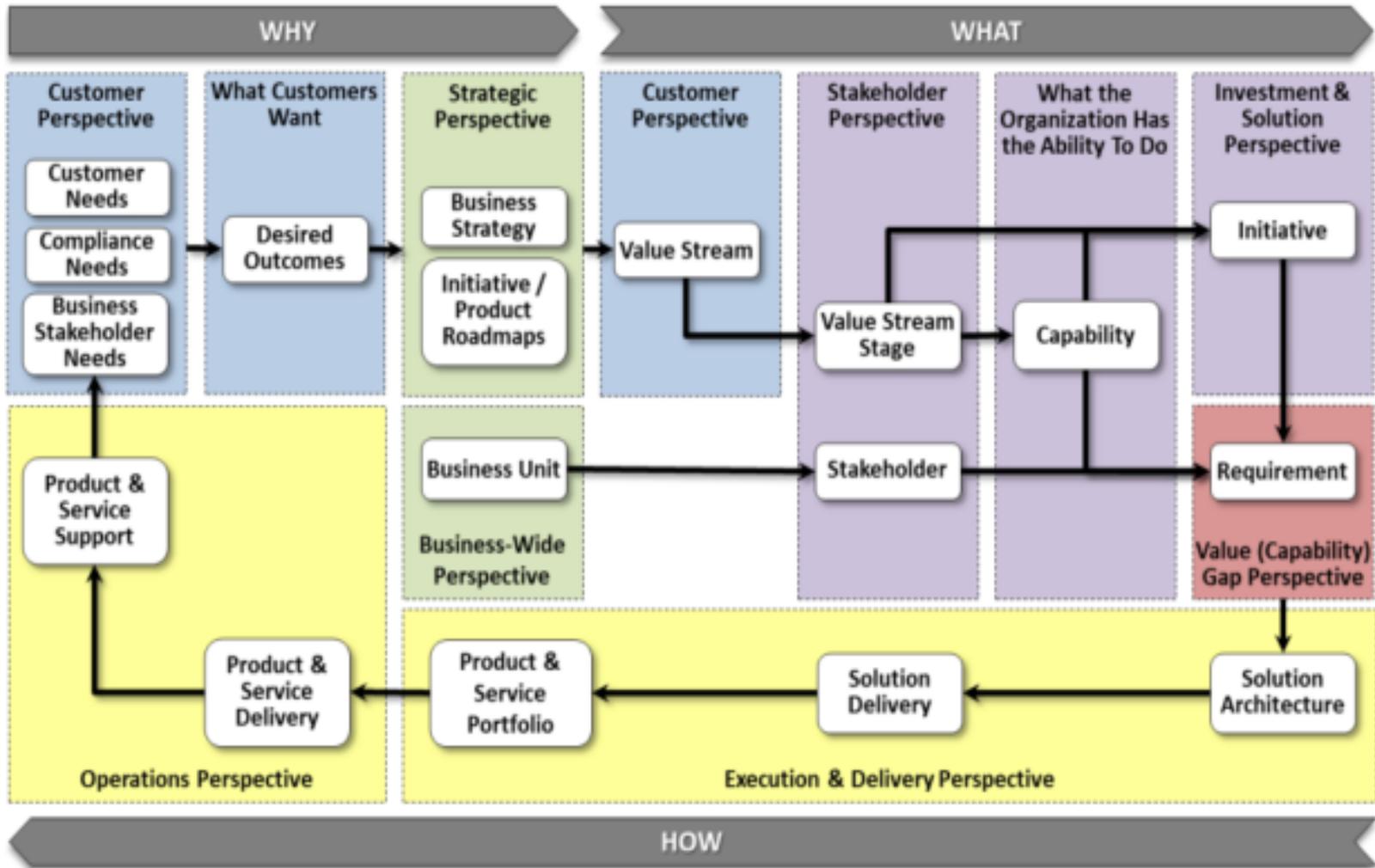
Business Architecture Frame of Reference Enables Business Requirements Traceability across Multiple Business Perspectives

Alex Randell, Eric Spellman, William Ulrich, Jeffrey Walk. "Leveraging Business Architecture to Improve Business Requirements Analysis – A Business Architecture Guild White Paper," Mar. 2014.

Integrating IT Architecture into Agile Methodologies

Why take the time for IT architecture?

- Agile strives to help organizations to be lean, and lack of IT strategy can result in unnecessary duplication of platforms and future wasted costs in service

- IT Architecture artifacts offer tools for communication and metrics, mitigating shortcomings of self-directed, isolated agile teams

- Understanding capability and IT platform maturity helps with estimating and determination of when to close budgets

- Facilitates tying delivered value to capability maturity, goals, and strategies tied to vision, with minimal waste

Examples of Agile methodologies over multi-year transformation

- CRM&ERP solutions – switch to Agile versus traditional waterfall or some combination is becoming more prevalent

- Taking sales, support, and operations mobile (Companies cannot afford static long term plans because environments too dynamic)

- Mergers/Acquisitions suggest agile approach to combining services or processes

Discussion

Thank You
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Resources

1) John Stenbeck, PMP, PMI-ACP, CSM, CSP of GR8PM

2) ASPE – PMI Agile Certified Practitioner Workshop Materials in conjuction with Davisbase

3) Impact Grid is part of methodology developed and employed by SentientPoint principal partners Jack Hilty and Janice Koerber

Resources

4) Business Architecture Guild, *A Guide to the Business Architecture Body of Knowledge™, v 4.1 (BIZBOK® Guide*), 2014. Part 1, Page 1.

5) "Porter Five Forces Analysis." *Wikipedia*. Wikimedia Foundation, Mar. 2014. Web. Nov. 2014.

6) Business Model Generation, A. Osterwalder, Yves Pigneur et al., self-published, 2010.

7) Business Architecture Guild, *A Guide to the Business Architecture Body of Knowledge™, v 4.1 (BIZBOK® Guide),* 2014. Section 2.1, Pages 27-28.

Resources

[Why Agile Initiatives Fail and Why DevOps Initiatives Should Worry](#)
July 17, 2013
By [Mike Kavis](#) ([Mike Kavis on Google+](#))

**Blending Traditional and Agile Project Documentation
A project Portfolio Perspective,** Fergal McGovern, Founder, VisibleThread

"Business Architecture and Agile Methodologies", A Business Architecture Guild Whitepaper, February 2015, Eric Shayne Elliott, Francis Fons, Alex Randell