Service Validation, Incremental and Iterative Development

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Agenda

- Service Reality Check
- Common language: definitions
- Incremental development?
- Iterative development?
- V-models
- Understanding customer/user value
- Questions
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- **Service Reality Check**
  - Common language: definitions
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Reality Check

- IT exists to support the business

- IT focus?
  - It's not about building a Better Mousetrap
  - It **is** about making the mice less visible
    - Solving the customer's problem, not the technology
    - Customer doesn't care about the technology
    - Just want to do their job or solve a problem

- It's also about quality...
  - What **is** quality?
Quality

"Quality in a product or service is not what the supplier puts in. It is what the customer gets out and is willing to pay for....

Customers pay only for what is of use to them and gives them value. Nothing else constitutes quality." (Peter F. Drucker – PFD)
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Common language

- Without common meaning, what are we talking about?
- How do you pronounce this word: **OBJECT**
  - What you need to know: noun or verb
  - Another: What does **LAST** mean? Order or persistence?
- The term **service** is horribly overloaded (duh 😊)
  - Without a modifier or a context, what is it?
    - Religious, table, tennis…
    - SOA, SaaS, WS*
- Need some definitions
But first a word from PFD

- What is the purpose for business?
  - Hint: it's not about profit

- Yes profit and profitability are important, even crucial for business.
  - However, according to PFD, profit can actually be, "a limiting factor on business enterprise and business activity."

- So what is the purpose for business?
The purpose for business is…

- Profit is the test of the validity of the real purpose for business.

And that is…

- The purpose for business is…
  - … to create a customer.

With that in mind, now some definitions
Service Management Defined

- **Service Management**: A set of specialized organizational capabilities for providing value to customers in the form of services.

- In other words, the driver is customer value.

- Properly done, *specialized organizational capabilities* become assets.

(source: ITIL V3 Service Design Volume)
Service Defined

**Service**: A means of delivering value to customers by facilitating outcomes customers want to achieve without the ownership of specific costs and risks.

- The customer just wants it to work
- Flick the switch and the lights turn ON
- Put the definitions together: Services are assets that deliver value to the customer.

(source: ITIL V3 Service Design Volume)
Why is this important?

- Part of what is needed is a shift from technical focus to customer focus.

- Could mean an organizational cultural shift necessary to develop the set of specialized organizational capabilities that:
  - (a) Recognize the customer value requirement
  - (b) Consider IT delivered services as assets to the business

  • Intended consequence: change the relationship between IT and the business to develop trust.
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Incremental & Iterative

- What's the difference between the two?
- Session abstract talks about scope and schedules, what else...?
- Neither are waterfall.
  - They represent the antithesis of waterfall.
- Opposite of waterfall
  - Big-bang integration *versus* pieces that add-on
  - BDUF *versus* evolving
- Need "just enough" R/D UF
Incremental Development

- Work broken into small pieces, scheduled to be developed, and integrated as completed
- Each piece is a (full) set of functionality
  - Each additional piece adds more (functionality)
- Ready for some level of user testing no later than the 3rd increment (typically by the 2nd)

- Staging and process strategy
Iterative Development

- Time set aside to improve existing code
- Evaluation includes consideration of requirements, technology and in rare cases business case
- Core method: refactor
- Approaches
  - Develop the best as possible to minimize rework
  - Least amount possible, evaluate and revise
  - Related, TDD
More definitions (A. Cockburn)

- **Incremental development**: A staging and scheduling strategy in which the various parts of the system are developed at different times or rates, and integrated as they are completed.
  - Incremental development is about **process** improvement.

- **Iterative development**: A rework scheduling strategy in which time is set aside to revise and improve parts of the system.
  - Iterative development is about **product** improvement.

http://www.stsc.hill.af.mil/crosstalk/2008/05/0805Cockburn.html
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V-Models

- System development and testing model to minimize perception of complexity.
  - Also considered as a testing/validation paradigm
  - Not new, used on an OS/2 project circa 1989
- Graphic model, covers activities & results
- Maps major development processes stages
- Catch it sooner
  - ...the earlier a problem is addressed, the cheaper it is to resolve
Typical Validation (simplified)

Both Incremental and Iterative

- Elicit Requirements
- Design
- Code
- Test
- Ship/Integrate or Examine

Time & Maturity
Typical V-Model

- Originated in waterfall world
- Has been adapted to Agile, RAD
  - Incremental and Iterative
- Typically flowed down left side, up the right
  - Left to right measured both time and maturity
- Doesn't show a direct requirement for customer/user involvement.
  - Though that's what happens with adaptations
Different Validation Model

Level 1

Define Customer/Business Requirements

Define Service Requirements

Service Review Criteria/Plan

Validate Service Offerings, Packages, Solutions

Level 2

Define Service Requirements

Service Acceptance Criteria/Plan

Service Acceptance Tests

Level 3

Design Service Solution

Service Operation Criteria/Plan

Service Operational Readiness Tests

Level 4

Design Service Release

Service Release Test Criteria/Plan

Service Release Package Test

Level 5

Develop Service Solution

Component And Assembly Test

Component Build & Test

Internal & external suppliers

Level of configuration & testing

Baseline Point

Deliveries from internal & external suppliers

(source: ITIL V3 Service Transition Volume)
ITIL V-Model

- Left side is specification
  - Expressed as outcomes
- Right side is validation
- At each level there is direct involvement from all stakeholders (tech and customer)
- Steps down in parallel
  - Customers who sign off on left-side outcomes also sign-off on right-side validation
Validation & Verification

- What’s the difference between the two?
- Validation has to do with business need. Validation should be performed against current business need.
  - Agile approach helps keep development in sync with business
- Verification determines the completeness, accuracy, and reliability of the deliverable to ensure that it correctly maps the design (and customer expectations)
Why a different model?

- Customer outcomes, not specifications, are (should be) the basis for services.
  - Need a validation model that fits

- Agile development is a technical attempt to address this realization
  - Needs to be more than a technical approach
  - Cooperation is needed from all stakeholders, Customer/end-user, business, and all organizations that are considered part of IT
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Organization Health & Customer Value

- Previously IT/IS was a supporting element for the business...
- ...today IT is a basis for value
  - \((\text{Business} == \text{IT}) \& (\text{IT} == \text{Business})\)
- We've talked about organization culture
- Recognizes changing role for IT
- Customer value starts with internal attitude that requires both Business and IT to understand their interdependence.
Value Propositions

- Organizational resources & capabilities have become the basis for creating value, competition, and distinctive performance.

- Organizational efficiency and effectiveness become critical
  - Effective processes achieve agreed objectives
  - Efficient processes achieves objectives with the minimum amount of time, money, people or other resources
Services as Assets

- This is one of the reasons that validation, from a customer perspective, is important.

- Think about the purpose for SOA
  - Rename: Business Process Oriented Architecture
  - Talked about the results last year

- Need a way to assure adoption of services
  - Some type of Service Catalog is required
  - Has to be published so that users know the service is available.
Service Portfolio

- Investments & commitments of the enterprise

- Service Pipeline: planned & coming services
  - For a market space or a customer
  - Phased into operation through Service Transition

- Service Catalog: Live – in operation
  - Business services, IT services, and 3rd party services
  - Only aspect that recovers costs or earns profit

- Retired Services: services no longer in use
  - Phased out of operation through Service Transition

- Health of the organization can be predicted from the Service Pipeline
Developing the Portfolio

- Complete treatment isn't possible here
- Need approaches that consider strategy
  - Services are *strategic* assets
- Need processes focused on customer outcomes, customer expectations, and customer value
  - It's not about the technology...
Invisible mice revisited

- If the purpose for business is to create a customer...
  - ...then we have to **know**, not guess, at what the customer actually values, the outcomes they want
  - We need actual input, guidance, and contact with the customer throughout the development life cycle
  - Very often 2 constituencies of customers
    - Think Coca Cola (end consumer and the store to purchase)

- **WE** care about the neat stuff, the techie stuff...
  - ...the customer just want it to work
  - Make the mice less visible
Circle back

- Starting question about business purpose
  - Create a customer

- According to PFD: 2 functions for a business
  - Marketing & Innovation.
  - Function: team or group of people & tools they use to carry out 1 or more processes/activities.

- From a business perspective, innovation isn't about invention but about getting better.
  - Innovation is economic, not technical
  - Validation is part of the process
It works…

- By changing the validation models to begin with (and include) customer value, it becomes easier to deliver needed systems
  - Process works with Agile

- One project started with validation models and decreased (cut in half) "re-do" for software service delivery.
  - Specifically re-do caused by missed targets, incorrect systems, lack of understand customer value expectations
Summary

- John Soyring talked about service jobs.
- What IT should offer is IT Service Management to the business.
  - The way to develop trust
  - Move from IT merely supporting the business to IT as an integral vital part of the business
- Requires commitment to facilitate outcomes customers want to achieve
  - Formally validated with the customer
Questions & Discussion

If you don't ask, who will?
If not now, when?

There aren't any dumb questions.
The only dumb question is the one not asked!
Thank You

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