Steps to Product Development Strategy

May 2017
Product Development in BMC Context

Validate Customer Segment and Value Proposition

Product - Market Fit

Key Partners & Key Resources Assist In Prod. Dev.

Agile Yet Lean Cost Structure

Prod. Dev. To Deliver Val Prop (MVP)
Product Development in BMC Context

The Business Model Canvas

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And Value Proposition

Product – Market
Fit

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Agile Yet Lean
Cost Structure

Strategyzer
strategyzer.com
Key Activities: Agile Development – Getting to an MVP

Goals:

• Develop an MVP in Collaboration with Customer
  ▪ Real time feedback to address real customer pains
  ▪ Deliver incremental functionality for customer feedback by priority, by steps

• Deliver Value Earlier (time to market)
  ▪ Stress teamwork, transparency, response to change & collaboration over rigid processes
  ▪ Prove out functionality at each deliverable step
  ▪ Iterate until achieve MVP

• Overall Less Costly
  ▪ Effective Resource Utilization
  ▪ Optimized Work Flow
The Agile Manifesto

<table>
<thead>
<tr>
<th>Individuals and interactions</th>
<th>over</th>
<th>Processes and Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Product</td>
<td>over</td>
<td>Comprehensive Documentation</td>
</tr>
<tr>
<td>Customer Collaboration</td>
<td>over</td>
<td>Contract Negotiation</td>
</tr>
<tr>
<td>Responding to change</td>
<td>over</td>
<td>Following a plan</td>
</tr>
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That is, while there is value in the items on the right, we value the items on the left more.
Agile for Software Development – Scrum Process

- **PRODUCT VISION**
  - At Start*
    - Concept, Direction, Boundaries

- **ROADMAP**
  - Once a Year*
    - Long-Term Schedule of Major Milestones

- **RELEASE PLAN**
  - 3 - 6 Months*
    - Estimated Scope for Planned Schedule

- **SPRINT PLAN**
  - 2 - 4 Months
    - Real-Time Task and Allocation & Adaptation

- **DAY PLAN**
  - Every Day
Agile for Software Development – Scaling for Product Portfolio

Scaled Agile Framework

Portfolios Vision

Value Streams deliver solutions

Agile Release Train

Develop on Cadence

Iterations

Experis – “Agile for Executives and Managers”
Agile – Differences in Software vs Hardware

- SW is easier to change – cost of HW change is higher

- SW products evolve through multiple releases (accretion and refactoring)
  - SW – add new features and re-write code to support
  - HW – physical components cannot be “re-factored”; Can’t “accrete” new capabilities.

- HW may be constrained to incorporate std parts
  - Special HW may have long lead times
  - Special parts may require special tests

- Design is more highly dependent on architecture – more emphasis on archit. up front.
Agile – Differences in Software vs Hardware

• HW products require accelerated aging and environ. testing

• HW Products require coordination with mfg. and supply chain
  ▪ Mfg. process and testing/QA
  ▪ Supply chain and distribution agreements

• HW Products may require design for serviceability

• SW (remote staff possible); HW (localized staff)

• All the above – changes towards end of development come at higher costs
Agile – Despite Differences, Certain Principles Remain

• Create Solution with active customer involvement
  ▪ Define deliverables and parse out into bite size sprints

• Architect to enable short, well defined “sprints” with specific deliverables

• Identify interdependencies from stakeholders (Dev. teams, Mfg., QA, Supply Chain)

• Map sprints into rational sequence of “releases” (several wks duration).
  ▪ Each sprint has a set of testable deliverables to be validated
Agile – Despite Differences, Certain Principles Remain

• Ensure the customer can experience something new or tangible from your release, and get their feedback
Agile – Despite Differences, Certain Roles Remain (Project Level)

• Customer-Facing Product Owner
  ▪ Work with customers and stakeholders to identify needs, solutions, and business case.
  ▪ Translates customer needs and acceptance criteria into product requirements/specs.
  ▪ Review and approve deliverables.

• Scrum Master (up to three teams)
  ▪ Enforces the Process [facilitate mtgs; protect team from interference; monitors progress, etc.]

• Team – Task Execution
  ▪ Responsible for Estimates; Task Definitions; Task Assignments

For Small Startups, Some of These Roles Are Combined
Agile – Despite Differences, Certain Roles Remain (Program Level – multiple projects)

- Area Product Owner (if more than one Team Prod. Owner)
  - Work with Team Prod. Owners on sufficient detail on requirements, cost and ROI.
  - Develop business case for Product Releases.

- Program Manager
  - Ensure cross-team collaboration is effective in achieving the Product’s Release goals.
Agile – Common Metrics

- **Burn Down Chart**
  - Hours Remaining on all planned Tasks
  - Ahead of Sched if Bars below Line. Behind if Above

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![Scrum Taskboard with Burndown Chart](image)
Agile – Common Metrics

• **Burn Up Chart**
  - Is work proceeding at a reasonable & desired rate? If not, identify corrective actions.
  - Is Scope achievable? If not, adjust.
Standards and Regulatory – Usually Later in Development (Before Full Production)

- **Industry Standards**
  - Customers often reference compliance to standards
  - Proof of compliance often required by gov’t bodies as customers
    - ANSI, IES, ASTM, ISO, UL, etc.

- **Product Safety Standard**
  - Often required before one can sell in the open market
    - UL (CSA, TUV, etc.)
    - FDA – can be very long and expensive

- **EMI Compliance (FCC & CE)**
  - Required for any device emitting radio waves
Product Development in BMC Context

The Business Model Canvas

- **Key Partners & Key Resources Assist In Prod. Dev.**
  
- **Validate Customer Segment And Value Proposition**

- **Prod. Dev. To Deliver Val Prop (MVP)**

- **Agile Yet Lean Cost Structure**
Key Resources

- R&D Staff
  - Employment Agreements; IP Assignments, etc.

- Facilities, Equipment, other Tangible Assets
  - Building, Office, Lab Equip, etc.

- Intellectual Property & Other Intangible Assets
  - Patents, Trade Secrets, Trademarks, Copyrights, Customer Lists, Joint Dev. Agreements, etc.

- Capital
Key Partners

• Development Collaborators (early)
  ▪ Development Agreements (IP)
  ▪ Third Party Contractors (Agreements)

• Supply Chain “Partners”
  ▪ May be a Development Collaborator
  ▪ Supply Agreements, including Contract Manufacturers

• Distribution “Partners”
  ▪ May impact the way product is developed due to constraints on distribution, assembly at customer site, etc.
  ▪ Distribution Agreements
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Agile Yet Lean

Cost Structure

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Proc. Dev. To Deliver Val Prop (MVP)

Key Partners & Key Resources Assist In Prod. Dev.
Lean Yet Agile Cost Structure – Case Study at Nokia

- Separate Forecasting (realistic) from Target-setting (ambitious)

- Shorter Planning Horizon & Room for Uncertainty
  - Rough plan for long time horizon, more accurate for shorter time horizon
  - Try to flex content (deliverable), not resources or schedule
  - Change is inevitable; Adapt with flexibility on resource allocation; Plan using < 100% Utilization Rate
    - Identify bottlenecks as they develop and place resources there
Lean Yet Agile Cost Structure – Case Study at Nokia

• Delivery Window vs Fixed Date
  - Revenue planning based on end date of window (higher level of confidence)
  - “Flexible Revenue” based on MVP concept
    - Avoid “Feature Creep” and “Need for Perfection”
Thank You
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Agile for Software Development – Training

Certified Scrum Master | Certified Scrum Product Owner | Certified Scrum Professional | PMI - ACP® | SAFe® Consultant

Enterprise Agile Coach and Trainer
Since 2001 I have helped over 100 organizations move to Agile and Lean with a practical, effective approach.

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