Innovation Accounting
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Scaled Agile, Inc
The problem to be solved

Difficult to evaluate the profitability of large systems

Businesses require agility

Traditional financial metrics (e.g. NPV, IRR, etc.) are based on DCF and are insufficient to measure risk and returns on large, complex systems
“What if we found ourselves building something that nobody wanted? In that case, what did it matter if we did it on time and on budget?” – Eric Ries, The Lean Startup
Why not use common ROI indicators

- Return on Investment (ROI) indicators are lagging indicators
- Based on predictable risk for homogenous systems
- Based on *crystal ball* calculations which are complex to create and track
- Not flow based
- Difficult to quantify for strategic jobs
The Innovation Accounting framework

Created by Eric Ries in *The Lean Startup* (but not just for startups)

Minimum Viable Product (MVP)

Tune the engine

Pivot or persevere
Build-Measure-Learn feedback/PDCA loop

- Ideas
- Build
- Product
- Measure
- Data
- Learn
Lean Startup Cycle applied

Approved airline website
Lean Business Case and 
Hypothesis

Epic

Build MVP

Users can browse flight schedules

Evaluate MVP

Implement additional Features

Persevere

Continue until WSJF determines otherwise

Pivot

Tune the Engine: Did call volumes decrease? Did website queries increase?

Stop work
Increase ROI using lean economics
Non-economic-based prioritization

Product Owners, Product Managers and Epic Owners will often face non-economic-based prioritization.

**HiPPo** – Highest-paid person makes the decision.
“The Senior VP said we should do this project.”

**Squeaky Wheel** – The person who yells the loudest or makes the biggest promise of revenue. ROI indicators may be too optimistic
“Fund my project and we will make a billion dollars!”

**LIFO/FIFO** – Making a decision based on when the project arrived in the queue. Leads to increased WIP and poor economic visibility
“While you may ignore economics, it won’t ignore you.” – Don Reinertsen, Principles of Product Development Flow
Why use WSJF

- Because we are in a flow based system
- Fast, easy to understand, without the complexity of traditional ROI (e.g. NPV, IRR, Payback, etc.)
- Routinely prioritize when there is new significant information or upon PI boundaries
- Gives preference to the smaller jobs

WSJF = \[
\frac{\text{User-Business Value + Time Criticality + Risk Reduction | Opportunity Enablement Value}}{\text{Job Size}}
\]
WSJF Ignores Sunk Cost

- Reinertsen’s quote illustrated in Principle #1 Take an economic view: *While you may ignore economics, it won’t ignore you*

- Do not consider money already spent

- This enables us to work in a more serial fashion.
Applying Innovation Accounting in SAFe
Applying Innovation Accounting in SAFe

Use fast feedback and small batch sizes

Milestones provide opportunities to reduce waste and improve economic outcomes

Three primary milestones in SAFe

1) PI
2) Fixed date
3) Learning
SAFe PDCA cycles
SAFe PI milestones
SAFe fixed date milestone

Continuous Delivery Pipeline

- Continuous Exploration
- Continuous Integration
- Continuous Deployment
- Release on Demand
Example walk-through
Example: An Airline website

Epic hypothesis

Business outcomes

Leading Indicators using non-standard financial indicators

NFRs (Non-Functional Requirements)
## Approved Epic example

<table>
<thead>
<tr>
<th>Epic Hypothesis Statement</th>
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<tbody>
<tr>
<td>For XYZ Airline members and guests who want to purchase airline tickets online, XYZAirline.com is a website that provides the ability to purchase tickets, search for flights, manage upgrades, and check-in for flights.</td>
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Unlike PDQ Airline, our solution processes electronic ticket refunds.

### Business outcome hypothesis:
- Majority of ticket sales will occur via website
- Call center volumes decreased
- Better customer experience via website

### Leading indicators:
- Less call center activity regarding flight schedules
- Increase purchases via website rather than phone

### NFRs:
- Two factor authentication login
- PCI compliant credit card transactions
Leading Indicators vs. Vanity Metrics
Beware of vanity metrics!

- Lagging indicators that make us feel good
- Doesn’t provide information about proving/disproving the hypothesis
- Does not provide information as to the success or failure of the initiative
- Doesn’t help with the *pivot* or *persevere* decision

Examples:
- Velocity
- Raw page views/hits
Focus on leading indicators

Answers two questions:

- Are we making progress on our outcome hypothesis
- How do we know?

Actionable metrics focused on measuring early outcomes, based on data

Examples:

- Evaluating new features based on control groups
- Cohort Analysis e.g. conversion rates
# Leading indicators

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<tr>
<td>Average Call Center Volume (per day)</td>
<td>10000</td>
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<td>Average Calls for Flight Schedules</td>
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<td>Average Talk Time (in minutes)</td>
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<td>Web site flight schedule queries</td>
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<td>200</td>
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The decision to pivot or persevere

- So difficult, many companies fail to make it
  - Data indicating a pivot is often disregarded
- Must ignore sunk cost
- Have we delivered sufficient value?
- Money allocated ≠ money spent
- Enables true business agility at scale
Learn more – www.scaledagileframework.com

SAFe® for Lean Enterprises

Portfolio SAFe

Select Configuration:

- Full SAFe
- Large Solution SAFe
- Portfolio SAFe
- Essential SAFe

Portfolio SAFe provides portfolio strategy and investment funding, Agile portfolio operations, and Lean governance. Learn more.

Advanced Topics

- Agile Contracts
- Agile HR Playbook for SAFe
- Agile HR with SAFe
- Applied Innovation Accounting
- CapEx and OpEx
- Enterprise Backlog Management
- Lean UX and SAFe
- SAFe Portfolio Workflow

What’s New in SAFe 4.5

SAFe 4.5 reflects the latest in Lean-Agile thinking, more visibly incorporating scalable DevOps and the Continuous Delivery Pipeline. It demonstrates advancements in configurability, implementation guidance, and enhanced capabilities for improving the user experience and accelerating time-to-market.

Recent Blog Posts

- Lean UX and the SAFe Program Increment Life Cycle
- An HR Playbook for a Successful SAFe Implementation
- SAFe 4.0 Being Retired on Oct. 31, 2018
- GDPR — Action required to continue receiving communications
Summary

SAFe applies Innovation Accounting

Fast feedback loops (PDCA) and small batch sizes are key

Multiple opportunities (milestones) to analyze data

Leading Indicators vs. Vanity Metrics

Pivot vs. Persevere