



Service Science  
UniMiB  
F9101Q022

Acceleration

[mirko.cesarini@unimib.it](mailto:mirko.cesarini@unimib.it)

# Innovation Accounting (Recap)

- (1) Create an **MVP** and select **metrics**
  - Metric matters. Without a clear-eyed picture of actual situation, progress cannot be tracked
  - **Identify the baseline** (the actual KPI values)
- Repeat several times
  - (2) **Tune the engine** from the baseline toward the ideal
    - Every strategy and or engine requires **tuning** before reaching **optimality**
    - Identify **target** and **deadlines** (i.e., learning milestones)
    - Several “Build-Measure-Learn Feed-back loops” to tune an engine of growth
  - (3) **Pivot or Persevere** i.e.,
    - Persevere if the company is making **good progress** toward the ideal (i.e., learning is effective)
    - Dilemma in case of continuous negative results (or not enough positive): Pivot or Persevere?

# Acceleration

- Start-up's **runway**
  - It is the **number of pivots** it can still make
  - The remaining time is related to the **available resources**
- Life-or-death **struggle to learn** how to build a **sustainable business** before running out of resources
- A start-up team may be faced with the question: Quality or Speed?
- E.g.,
  - better focus on solving existing problems ...
  - ... or focus on adding new features?

# Quality vs Speed

- **Trade-off** between quality and speed.
- Again, a **knowledge problem**
  - The Build-Measure-Learn-Feed-back loop can't be executed if
    - New **features**/experiments are **not implemented**
    - The **MVP**/product/service is **not working**
  - On the other side, solving **problems** that **don't matter** for customers is a waste of resources
- Underlying problem: the team doesn't have unlimited energy/resources (**resource limitation**)

# How much Effort to solve Problem(s)?

- How to deal a (single) problem?
  - Ignore the problem as much as possible?
  - Allocate resources to fix it (removing resources from other activities)?
    - Several solutions might be available? E.g.,
      - Solution A., Optimal, 3 man/months
      - Solution B., Sub-Optimal, 1 man/month
      - Solution C., Minimal, 0.5 man/month
- How to choose?
- When several problems arises, how to prioritize interventions?

# Call for Adaptive Organizations

- General suggestion: it's dangerous to trade quality for speed
  - Problems not addressed early might require a lot of work later
  - Early adopter customers are forgiving about errors,
  - Other customers might be very scared about problems
- Speed regulators are required to find the optimal pace of work

# 5 Ws Methodology

- When a problem arises, the root-cause relationships should be investigated
- Suggestion: 5Ws Methodology
  - Keep asking "**Why**" until the **problem root cause** is identified (usually 5 steps are enough)
  - Once the problem root cause is clear, identify the possible **corrective actions** considering
    - the required **effort**
    - the **advantages** brought by the correction

# Example

- A company suddenly start receiving complaints from customers about a just released product version
- Problem: The new release turned off a feature
  - (W1) Why? Because a particular **server failed**.
  - (W2) Why did the server fail? Because a **subsystem** was **used** in the **wrong way**
  - (W3) Why was it used in the wrong way? An engineer **didn't know** how to use it properly
  - (W4) Why didn't he know? Because he was **never trained**
  - (W5) Why wasn't he trained? Because his **manager doesn't train** new engineers because he and his team are "too busy"



# Solutions

- Steps of the complete solution (8 weeks activities)
  - a) Fix the server (1 day)
  - b) Change subsystem to make it less error-prone (1 week)
  - c) Educate the engineer (7 weeks)
  - d) Have a conversation with the engineer's manager (1 hour)
- Which one(s) to execute?
- Suggestion: do a proportional investment
  - If the **outage** is a **minor glitch**, make a **minor investment** in fixing/training e.g., only *step (a)* i.e., 1-day activity
  - If the problem occurs **again**, or reveals as more **severe**, **go further** along the complete solution plan e.g., 1, 7, or 8-week activities, depending on the problem severity

# 5 Ws as Pace Regulator

- Considering the problem of a start-up team deciding whether to trade **quality for time**
- The 5 Whys approach acts as a natural **speed regulator**
  - The team build new features
  - The **more problems** the team has, the **more** the team **invests** in solution to those problems
  - As the investment in fixing problems pay off, the the severity and number of **crises** are **reduced** and the team speeds up again