

CS445 / ECE451 / CS645 / SE463
Software Requirements Specification & Analysis

Problem Fit



The Problem Is To Know What the Problem Is

“If I had only one hour to save the world, I would spend fifty-five minutes defining the problem, and only five minutes finding the solution.”

Albert Einstein

Webvan

Webvan was an early Internet start-up: a grocery store with online ordering and same-day delivery.

- Goal: to capture a small piece of the \$500B/yr US grocery market
- Implemented as “get big fast” to capture the market (26 cities)
- Raised \$1.2B through venture capitalists and IPO
- Quickly ramped up the infrastructure (warehouses, delivery vans)
- Developed its own software for online ordering, for order filling at the warehouses, for optimized route planning for delivery vans
- Began major marketing program to promote WebVan name, recruit customers, promote repeat business
- Began operations in summer 1999, and closed in July 2001.

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Webvan

The company never conducted consumer testing, such as focus groups or surveys, to learn if there was sufficient demand for online grocery shopping.

- People like to choose their own meats, produce, product substitutions
- They get menu ideas by looking at store shelves.
- They were confused by the large number of product choices offered.
- People want to use coupons, which Webvan allowed only at the end
- People want to buy economy-size items, which Webvan did not offer
- People could not commit in advance to be home for deliveries.
- A trip to the grocery is often coupled with other errands.
- People like to talk to store personnel and ask questions.

Most customers were happy with the variety and quality of the products, but fewer than half first-time customers ever returned

Focus on “Who” more than “What”

More products **fail from a lack of customers** than from a failure of product development

Steve Blank and Bob Dorf, *The Startup Owner's Manual*, K&S Ranch Publishing, 2012

If you don't get the requirements right, it doesn't matter how well you execute the rest of the project.

Karl E. Wieggers and Joy Beatty. *Software Requirements*, 3ed. Microsoft Press, 2013.

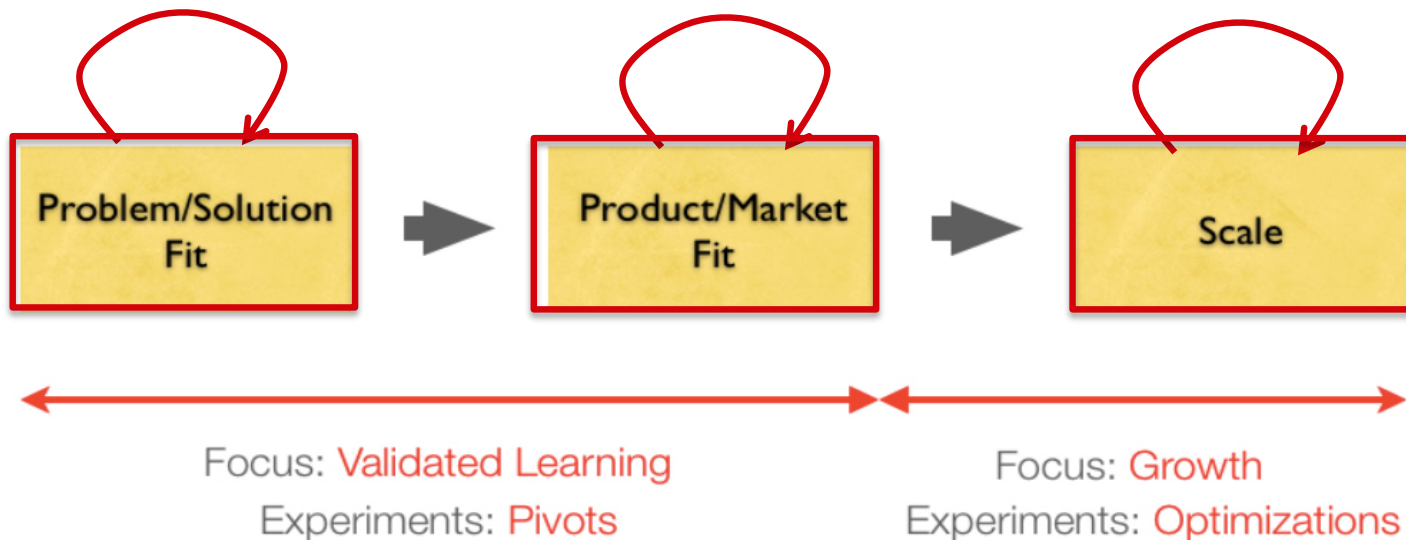
Traditional Product Model



A product's success relies heavily on how well the product and its concepts meet customer's needs
BUT

- Business team might not understand customers' needs
- Customers might not understand their own needs
- Customers' needs might change

Lean Product Development Model

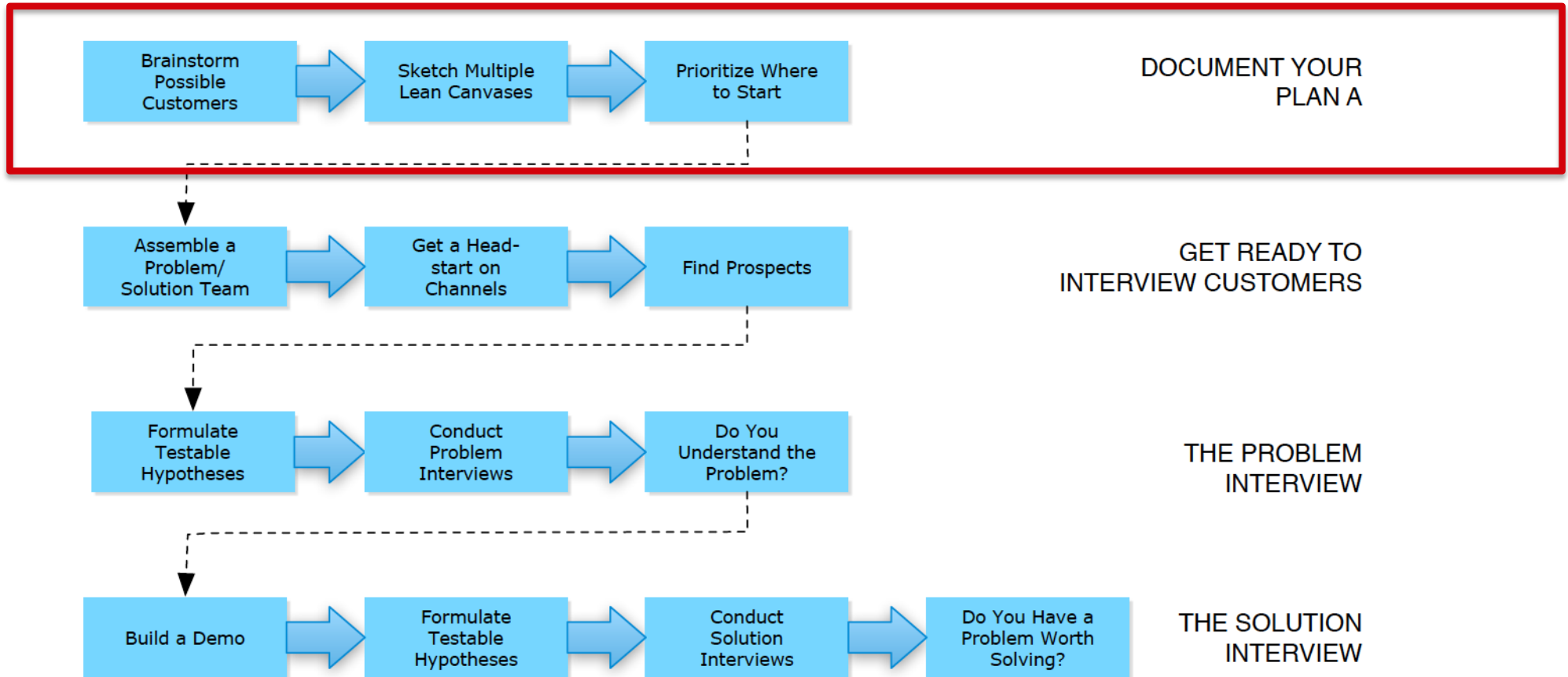


Ash Maurya, *Running Lean*, O'Reilly Media, 2012

- **Problem/Solution Fit** – Do you have a problem worth solving?
- **Product/Market Fit** – Do you have a solution that people want?
- **Scale** – How to grow the market?
- **Experiments** to answer the above questions

Problem / Solution Fit

THIS WEEK



References

Karl E. Wiegers and Joy Beatty. *Software Requirements, 3ed.* Microsoft Press, 2013.

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- Chapter 1: “The Path to Disaster: A Startup Is Not a Small Version of a Big Company”

Ash Maurya, *Running Lean, 2ed*, O'Reilly, 2012.

- Chapter 1: “Meta-Principles”

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