

Overview of Lean Startups for Life Science/Biotechnology

Panel Discussion for BIO 2016

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Two Lean Startup Pioneers

- Eric Reis
 - “A human institution designed to create new products or services under conditions of extreme uncertainty”
 - “Works in a company of any size, in any sector or industry”
- Steve Blank
 - “startups are not versions of larger companies”
 - “a startup is a temporary organization in search of a scalable, repeatable, profitable business model”
 - Requires different rules, roadmaps, skill sets, and tools to minimize risk and optimize chances for success

The Lean Startup Process

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Sketch out hypotheses
(use the scientific method)

**Use Business
Model
Canvas**

Test Hypotheses
Listen to Customers!

Discover
Develop
Pivot

Quick, Responsive
Development (agile)

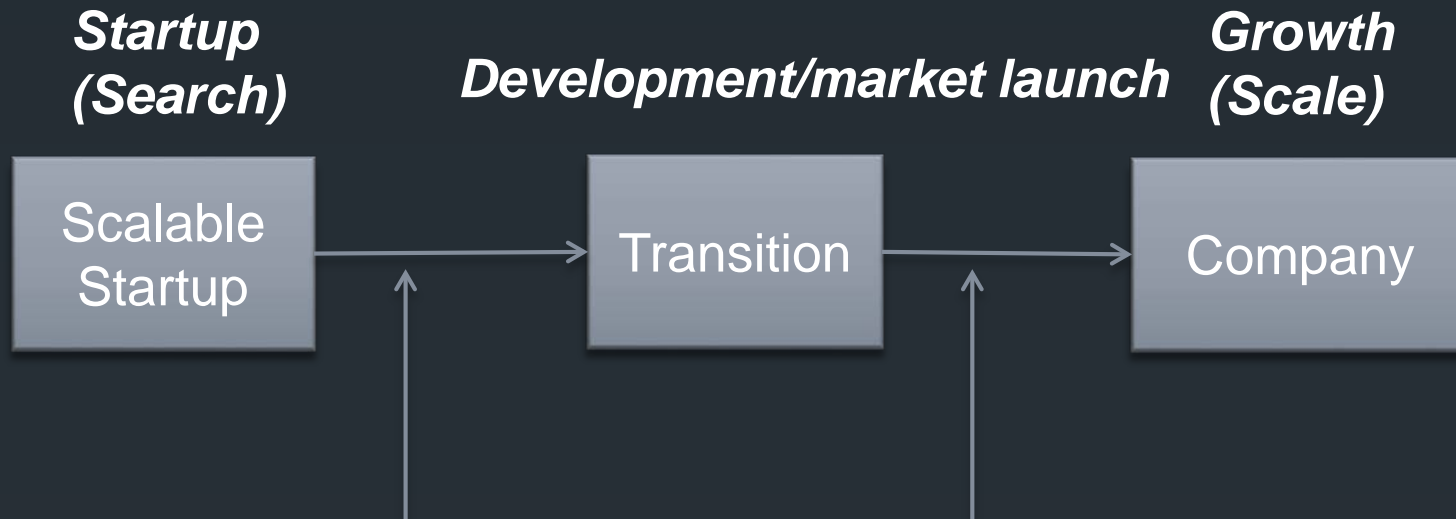
Short, repeated
cycles

Validate the need, solution and business model (iteratively)

The Scalable Startup From Blank

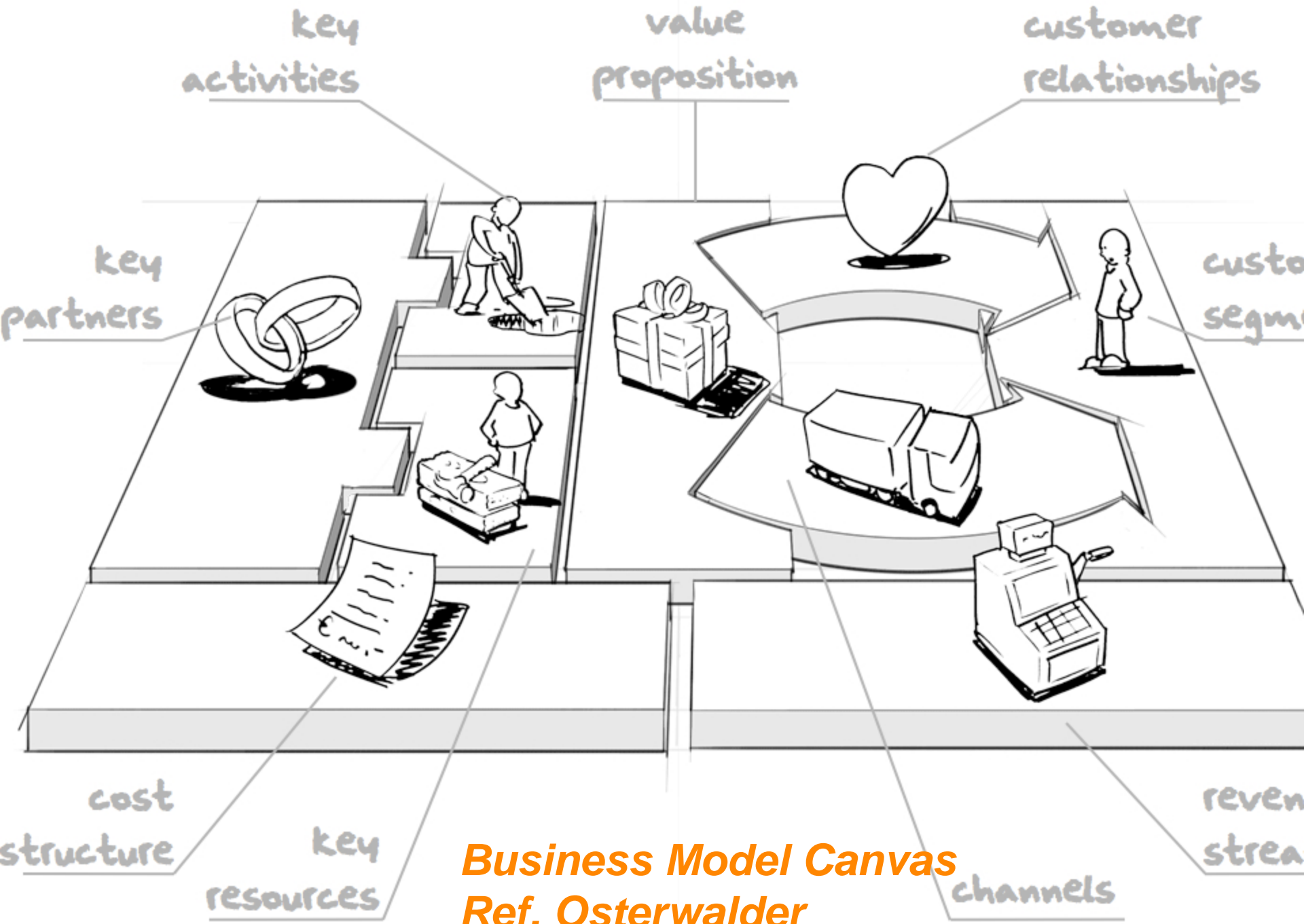
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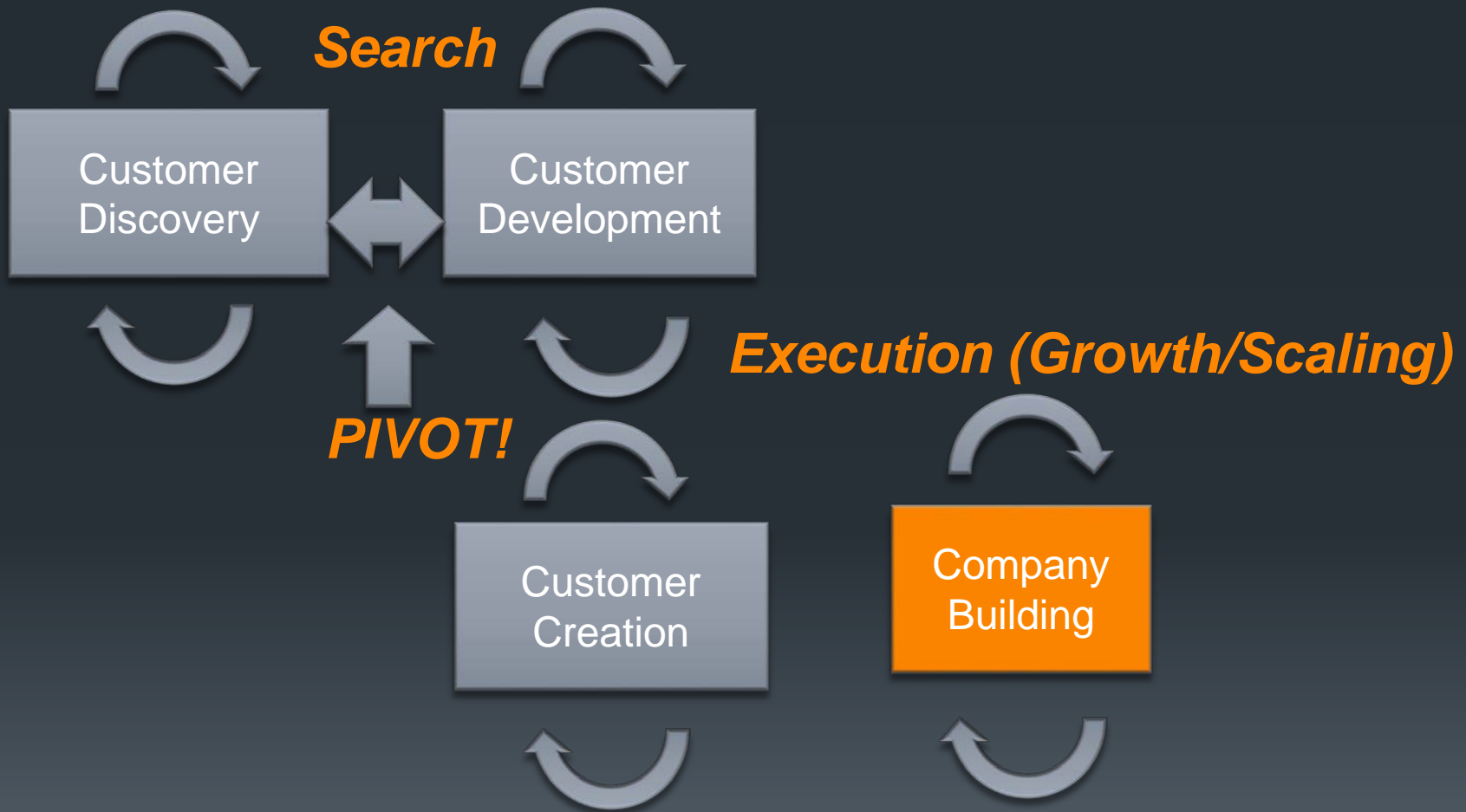
Business Model found
Product/Market fit
Repeatable sales model
Manager hired

Cash-flow breakeven
Profitable
Rapid scale
New Sr. Management
- 150 people



Business Model Canvas
Ref. Osterwalder

From Search to Execution



Key Principles

- Strategy is business model & hypothesis driven
 - Use business model canvas for testing critical elements early before spending
- Validated, customer-centric learning
 - Product and customer selection to validate product/market fit
 - Iterative product releases to test MVP
 - Supports development of a repeatable and scalable business model

Lean Biotech Startup

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Good science does not necessarily translate into great products

VALIDATED CUSTOMER LEARNING IN A MULTI-SIDED MARKET

- The biotech/healthcare business model addresses multiple “customers” → get out of the building!
 - Patient
 - Physician
 - Provider
 - Payer
 - Regulator
- Must validate improved standard of care at acceptable cost

Moving Rapidly

PIVOTING BASED ON MARKET FEEDBACK –from all constituents

- Identify most compelling application/product attributes
- Identify most receptive target entry market segments

Moving Rapidly and Efficiently in a Regulated Market

- Identify and design ‘smart’ clinical demonstrations for regulatory and reimbursement issues
- Identify regulatory issues early-on in the startup phase and make that part of the growth strategy for clinical demonstration and market development
 - ISO
 - GMP
 - Reimbursement

Moving Efficiently in a Multi-sided Market

CAPITAL EFFICIENCY THRU OPEN INNOVATION

- Borrow or lease Cap. Ex.
- Generate revenue via fee-for-service
- Partner (lease business model elements) to offer more value at lower cost
- Non-dilutive capital
- 'Virtual teams' and Accelerators

Issues in biotech and other healthcare opportunities

- Discuss application of lean startup principles
 - Devices
 - Mobile Health
 - Healthcare IT
 - Pharma
 - Small molecule
 - Protein