

Experimenting in Start-ups: Lean Start-up Methods

Sabancı University

MGMT402: Entrepreneurship

Summer 2022

Kerem Kılıç

How is the course going so far?

Antecedents of lean start-ups

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Lean Manufacturing

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Agile Software Development

- Rapid iterations
- Small batches

Antecedents of lean start-ups

Lean Manufacturing

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- Focus on just-in-time manufacturing
- Minimize stock and other avoidable costs by optimization

Agile Software Development

- Rapid iterations
- Small batches
- Short cycle-times

Lean startups

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- Not merely about cost-minimization as experiments could be very costly
- More about finding the right product-market fit before scaling
- A very 21st century approach to business

Main philosophy of lean start-ups

“Test, then invest”
Main philosophy of lean start-ups

Step 1: Develop Business Model

Business Model

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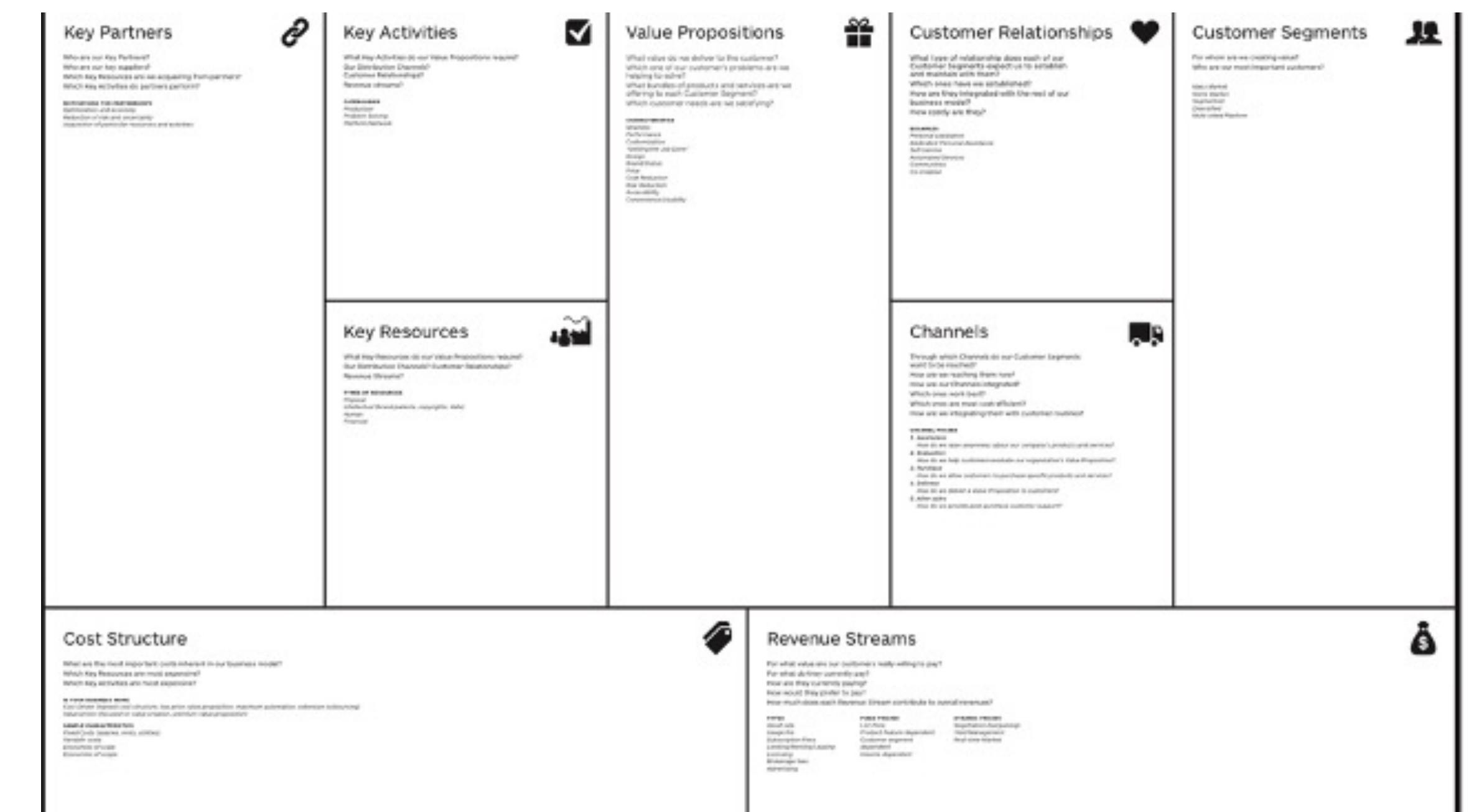
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 - How to capture value



Step 2: Turn Choices into Hypotheses

What are we hypothesizing?

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 - Marketing
 - Costs, etc.

Falsifiability

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 - The choices have to be scientific
 - You should be able to accept or reject your hypothesis through experimentation, i.e. falsifiable

Examples of Hypotheses

Version 1

Version 2

Examples of Hypotheses

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Our product will spread through word-of-month.

Version 2

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We believe that 60% of dog owners aged between 30 and 40 would be willing to pay upwards of €10 a month for this service.”

We will achieve an average monthly growth rate of 40% in our number of active users in the first 6 months of our operations.

Step 3: Test

A/B Testing

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- Typical steps:
 - Pick sample size, and stick to it
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 - Divide whole sample into two groups: treatment and control
 - Collect data at the end of the treatment period
 - Compare differences to the hypothetical scenario where there wasn't a treatment, i.e. false positives (p-value)



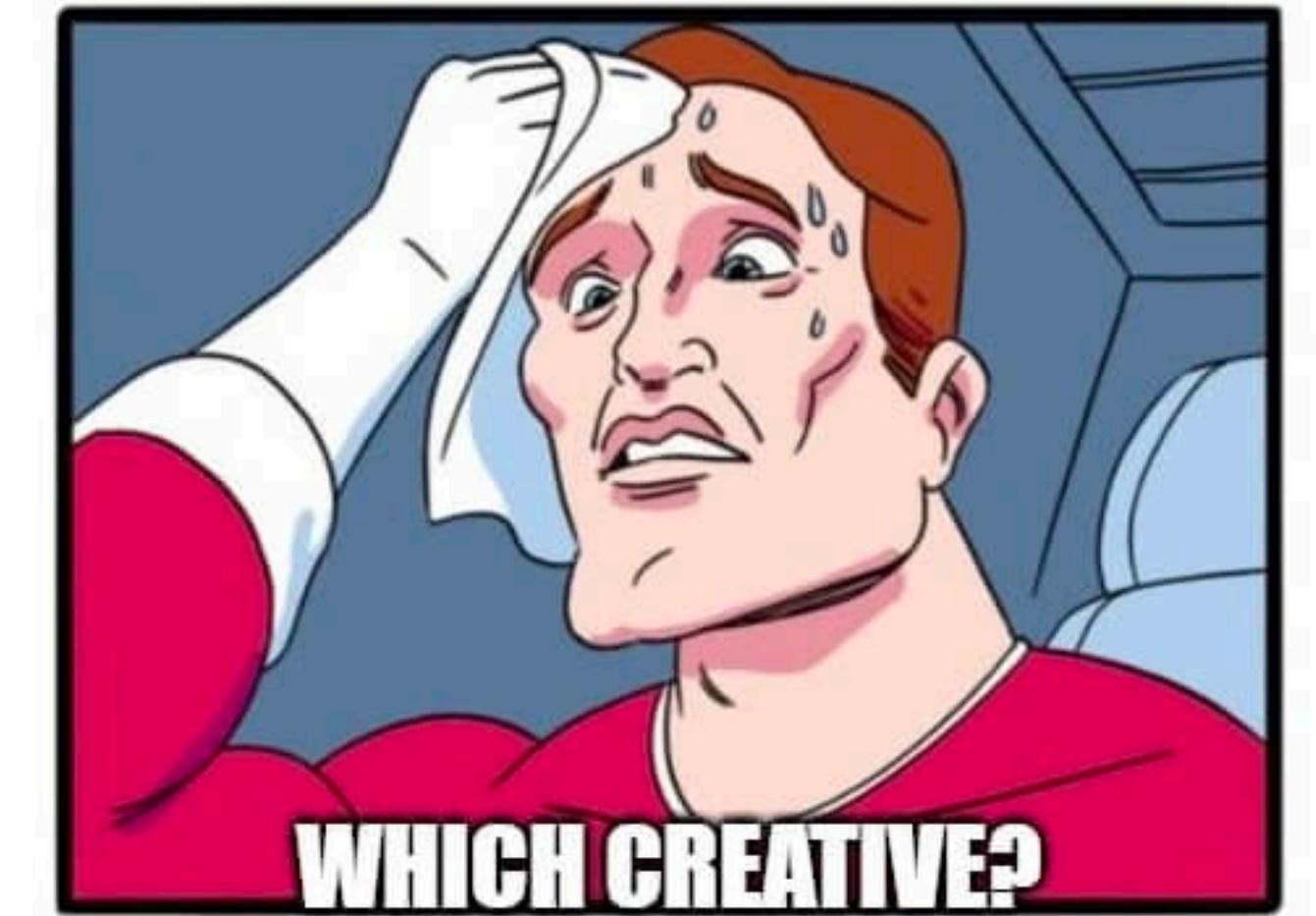
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- The most basic kind of randomized controlled experiment



Examples of A/B testing

Control

Treatment

Examples of A/B testing

Control



Want a preview to check the quality? Visit the [SEOMoz post](#) I wrote which contains most of this eBook in a blog format.

This section shows the bottom portion of the landing page. It includes a 'CREATED BY UNBOUNCE' section with a screenshot of the Unbounce platform interface. Below this, the 'THE NOOB COURSE FEATURES' section lists three main features: 'A giant infographic' (with a preview image), 'Track A: Learn each marketing channel' (described as a simple channel-based approach), and 'Track B: The 6-month guided action plan' (described as a 24-week course). Each feature has a small circular icon next to it.

Treatment



Examples of A/B testing

Control

The landing page features a large central image of the 'NOOB GUIDE TO ONLINE MARKETING' book cover. To the left, there's a form for users to download the guide. Below the form, a section titled 'CREATED BY UNBOUNCE' shows a screenshot of the Unbounce platform interface.

THE NOOB GUIDE TO ONLINE MARKETING
DOWNLOAD THE FREE 62-PAGE PDF

Our free 6-month course will teach you how to become an expert in 8 of the critical internet marketing disciplines including landing pages, PPC, SEO, email marketing, analytics, lead generation, content marketing and conversion rate optimization.

Email *
[Download Now!](#)

Your email will never be shared and we won't spam you.

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CREATED BY UNBOUNCE
Brought to you by the conversion experts at Unbounce - creators of the world's best DIY Landing Page Platform.

THE NOOB COURSE FEATURES
50 essential internet marketing techniques to help you master ways to market your business online, including...

- A giant infographic**
Click the image above to preview the 15 million pixel infographic or see how one of [our fans printed it out!](#)
- Track A: Learn each marketing channel**
A simple channel based approach that lets you learn one marketing discipline at a time (such as social media marketing).
- Track B: The 6-month guided action plan**
A 24-week course is plotted out for you, lining up each of the 50 marketing tasks in an order that makes the most sense.

Treatment

This version of the landing page includes a 'GET IT FOR A TWEET!' button with a Twitter icon. The rest of the content is identical to the control version.

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Share this page on Twitter to get the guide for free! You'll get the chance to change the text you tweet!

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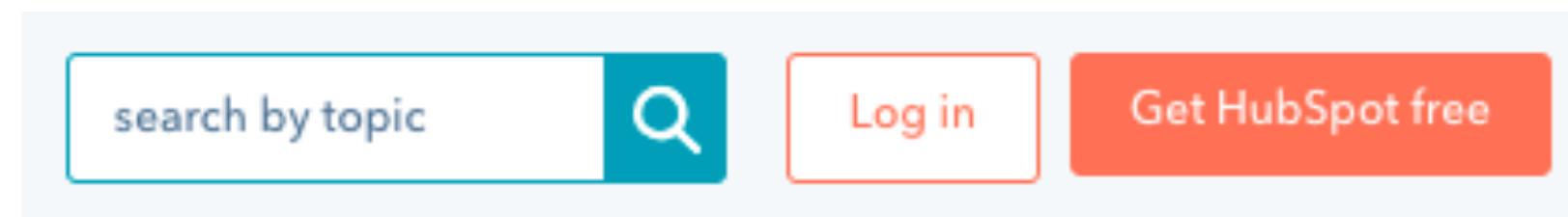
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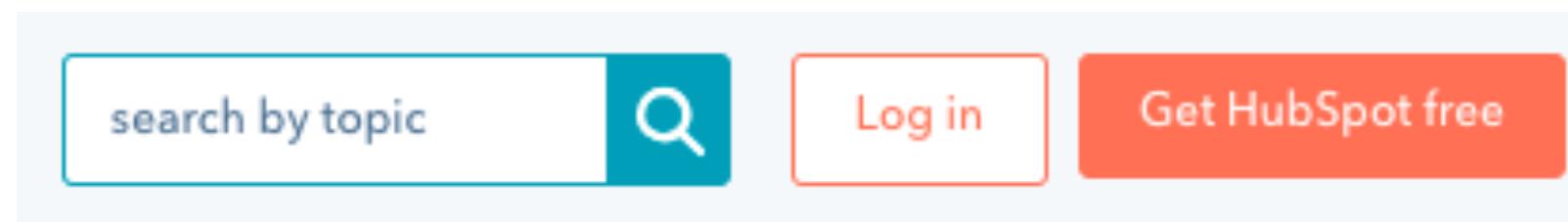
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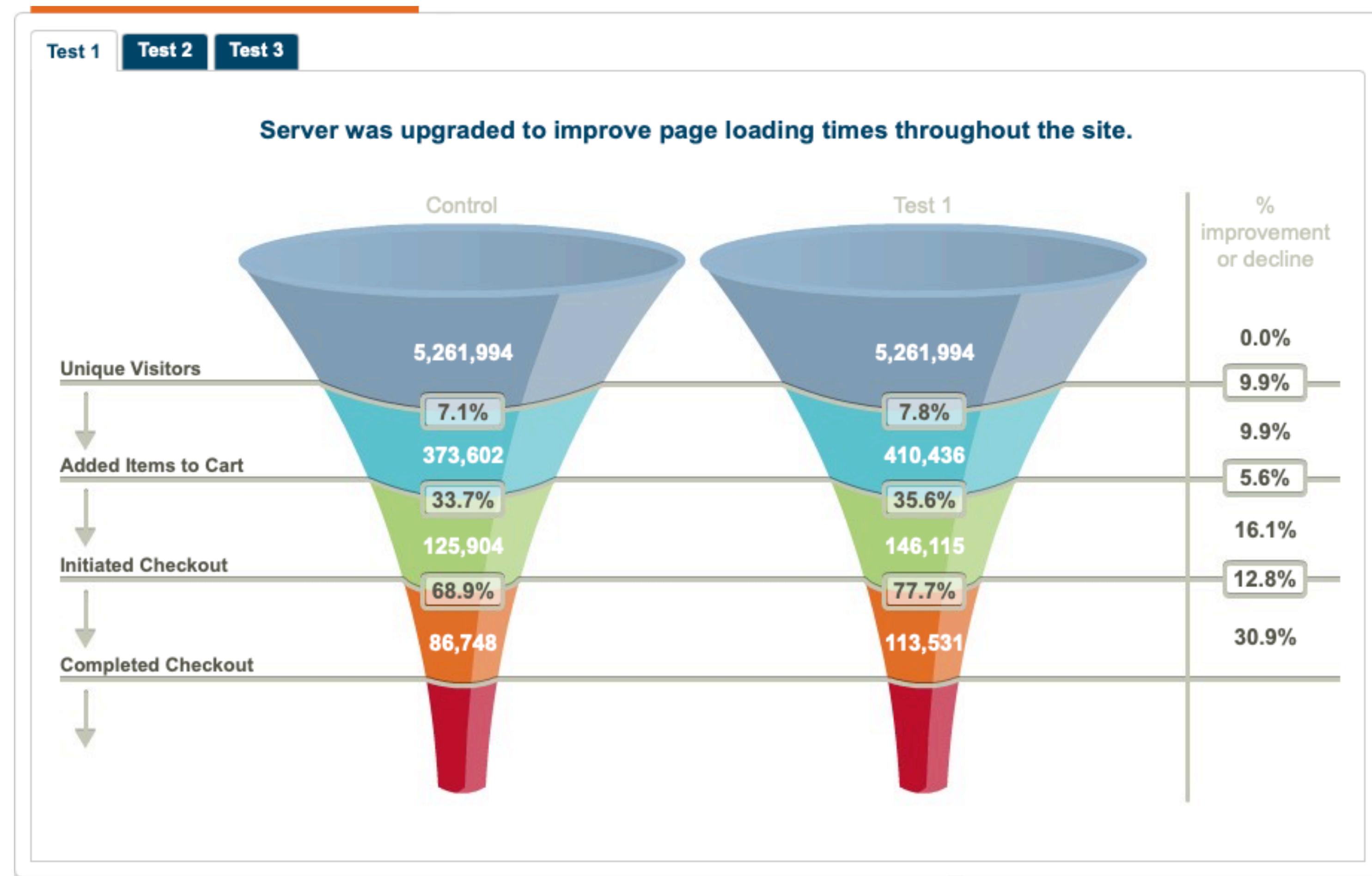
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Examples of A/B testing



Organizational benefits of A/B testing

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- Data-based decision making

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- Data-based decision making
- Limits the influence of HIPIOs – highest paid individual's opinion
- Opportunity to try out many hypotheses rapidly and with minimal cost

MVP Testing

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 - Reduce product development cycles and have quick feedback before investing too much time in features that no one will use
 - Release feature revisions in small batches to interpret test results and to diagnose problems

MVPs

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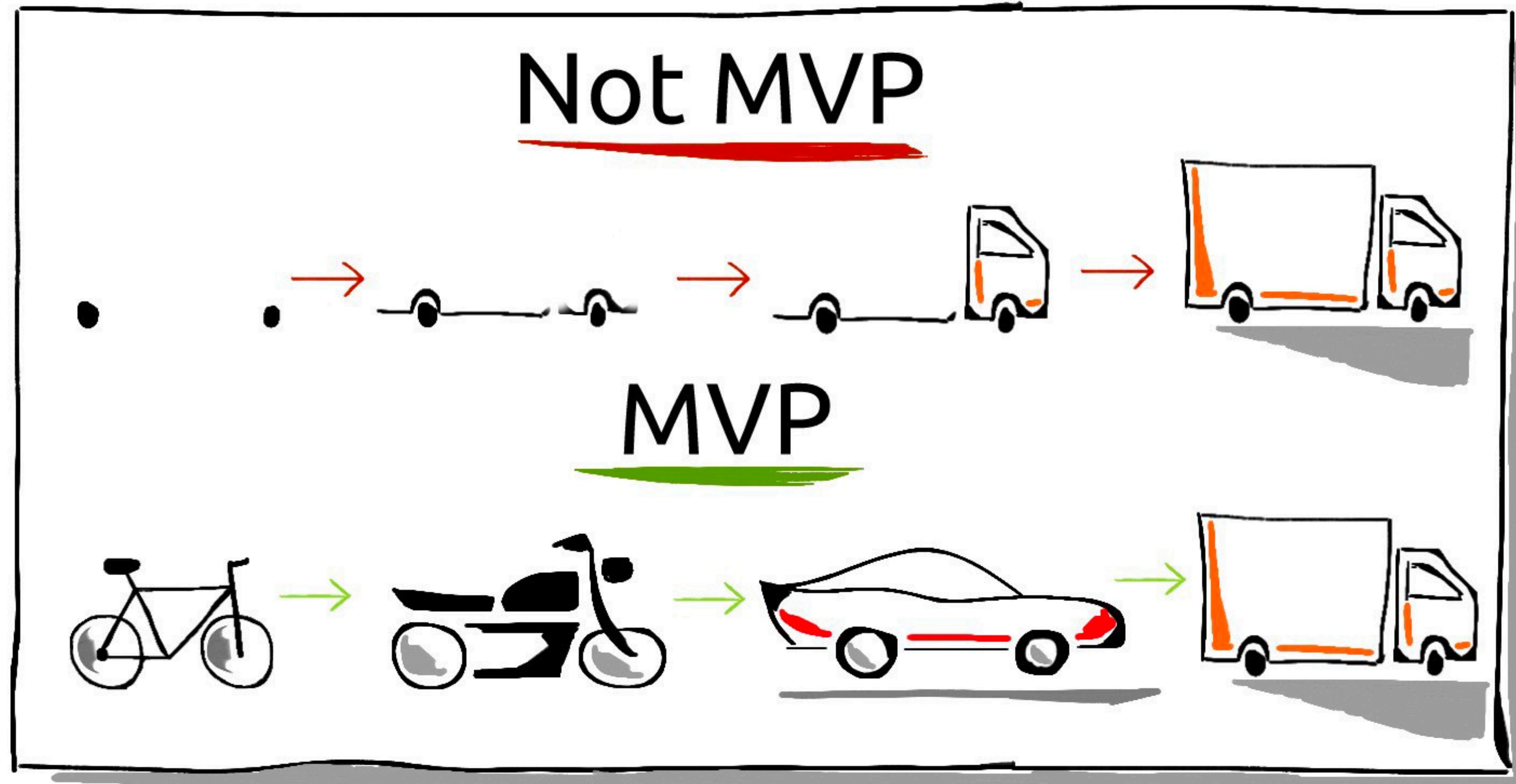
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 - Smoke tests

Examples of MVP tests



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 - A pivot changes some business model elements while retaining others. You can change, e.g., some product features, targeted customers, sales and distribution channels, pricing method...
- **Perish:** If an MVP test decisively rejects a very important business model hypothesis and you cannot identify a promising pivot opportunity, then you should shut down the business.

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- False negative: Rejecting an hypothesis that should have been accepted
 - Bad MVP
 - Poorly managed experiment

The Lean Path

The lean path

The lean path



The lean path

Search



The lean path

Search

Execution



The lean path



The lean path



- Business model canvas

The lean path



- Business model canvas
- Initial hypotheses

The lean path



- Business model canvas
- Initial hypotheses
- Test value proposition

The lean path



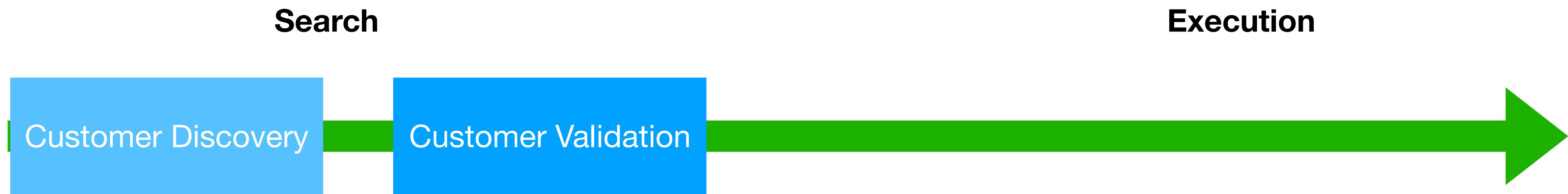
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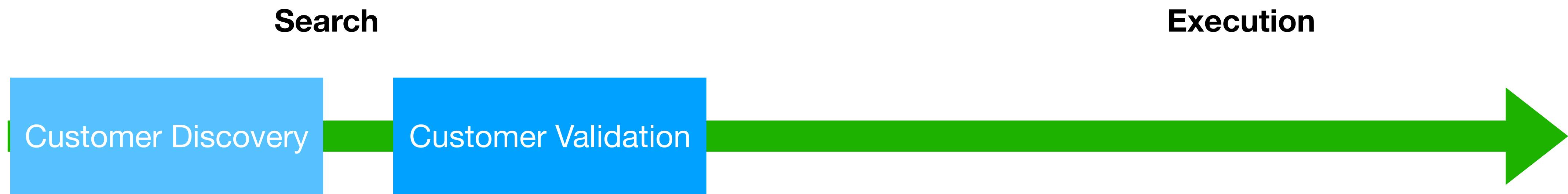
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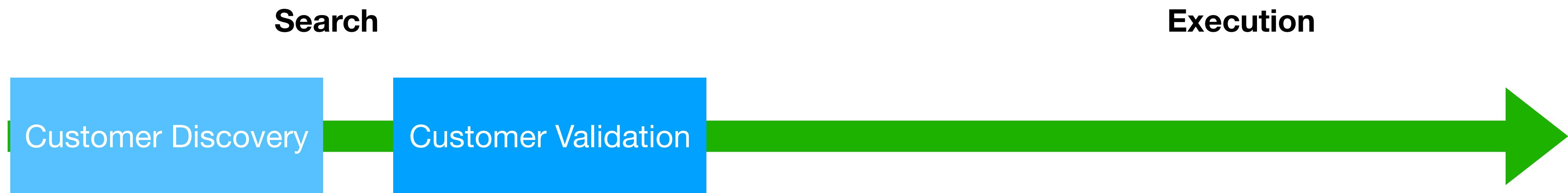
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The lean path



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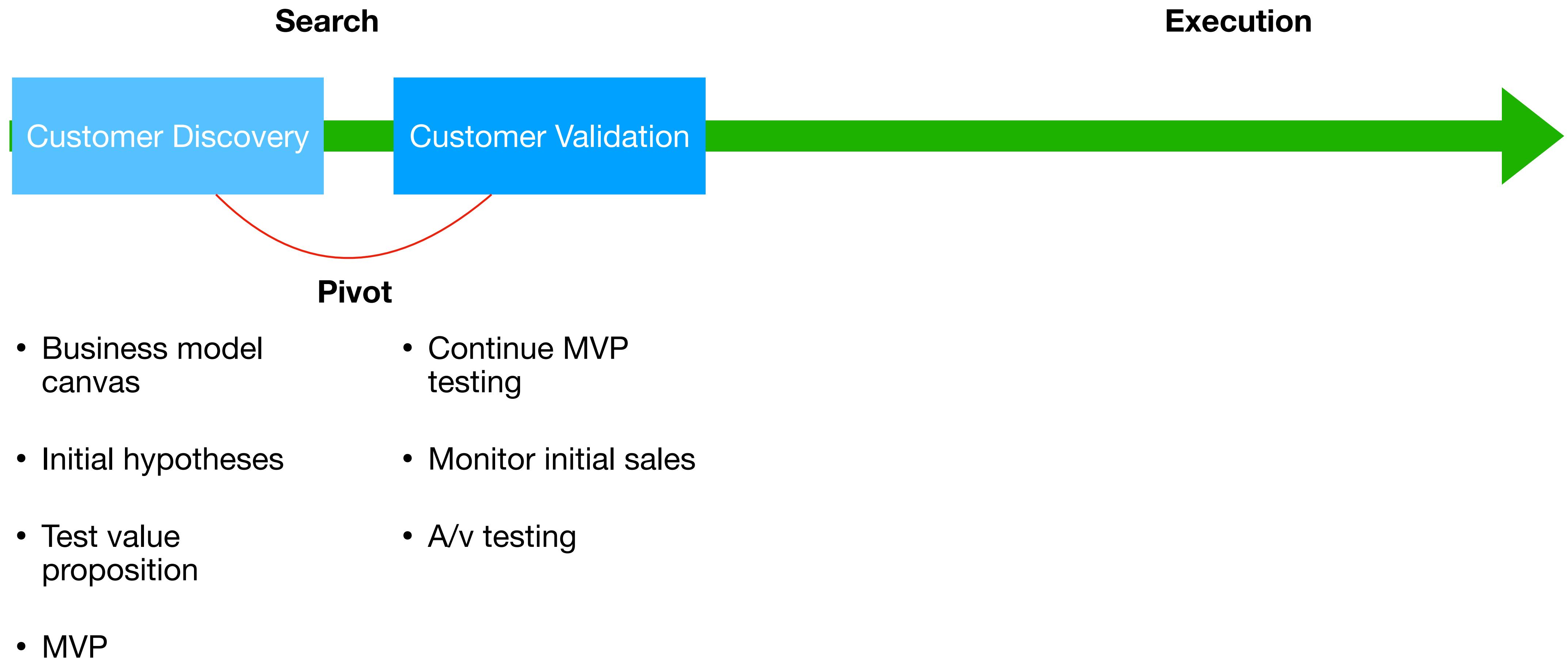
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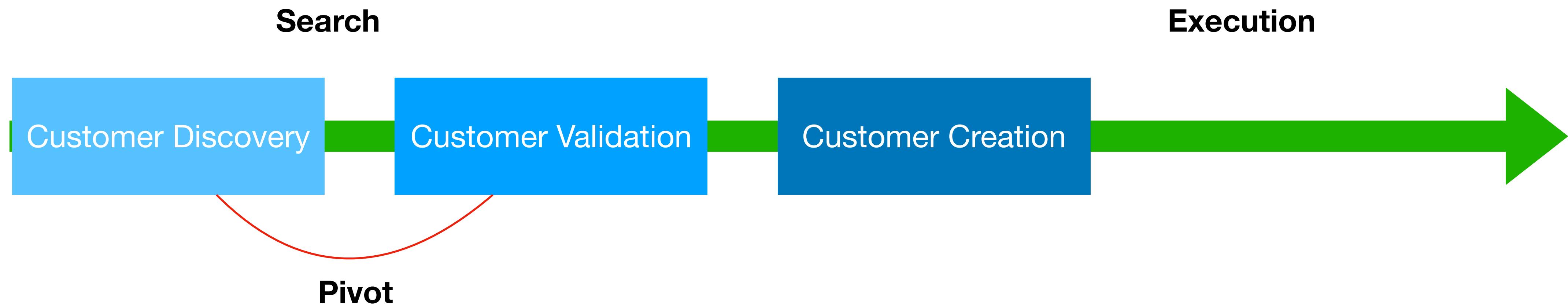
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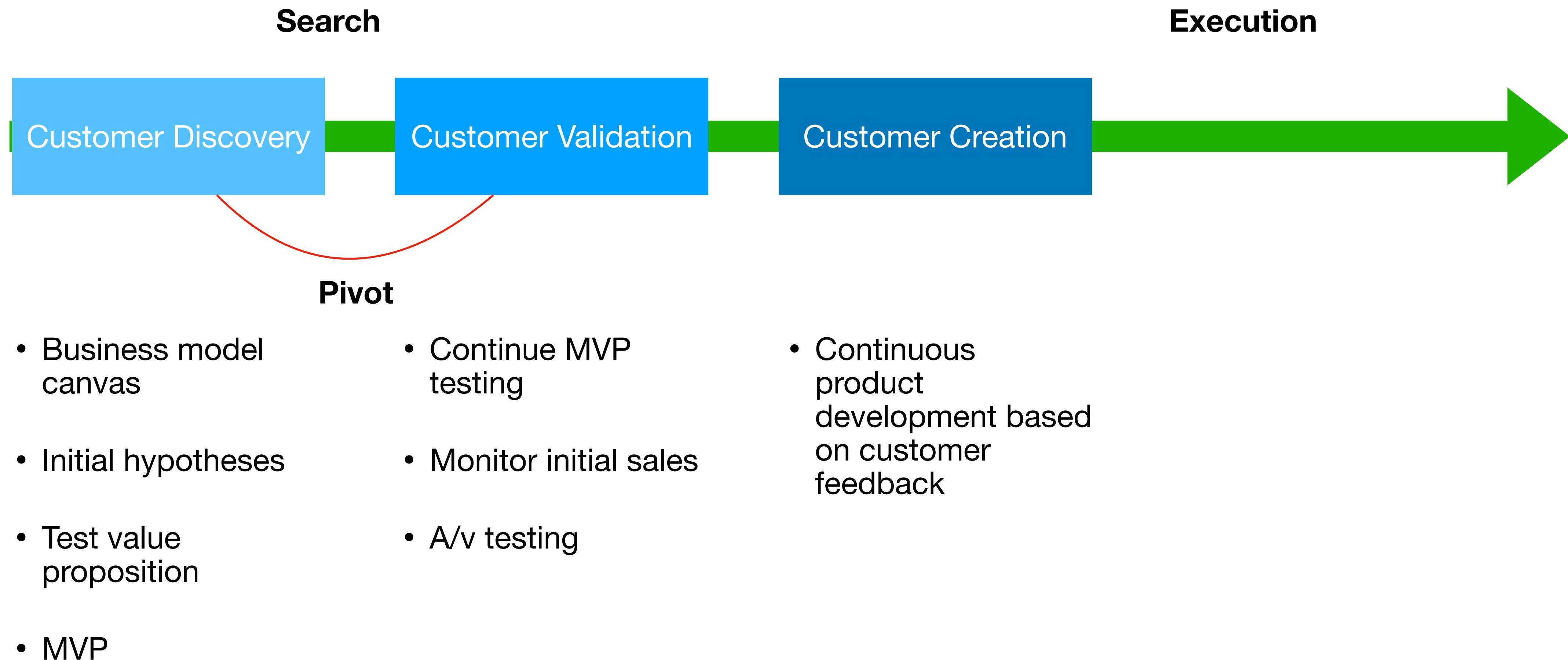


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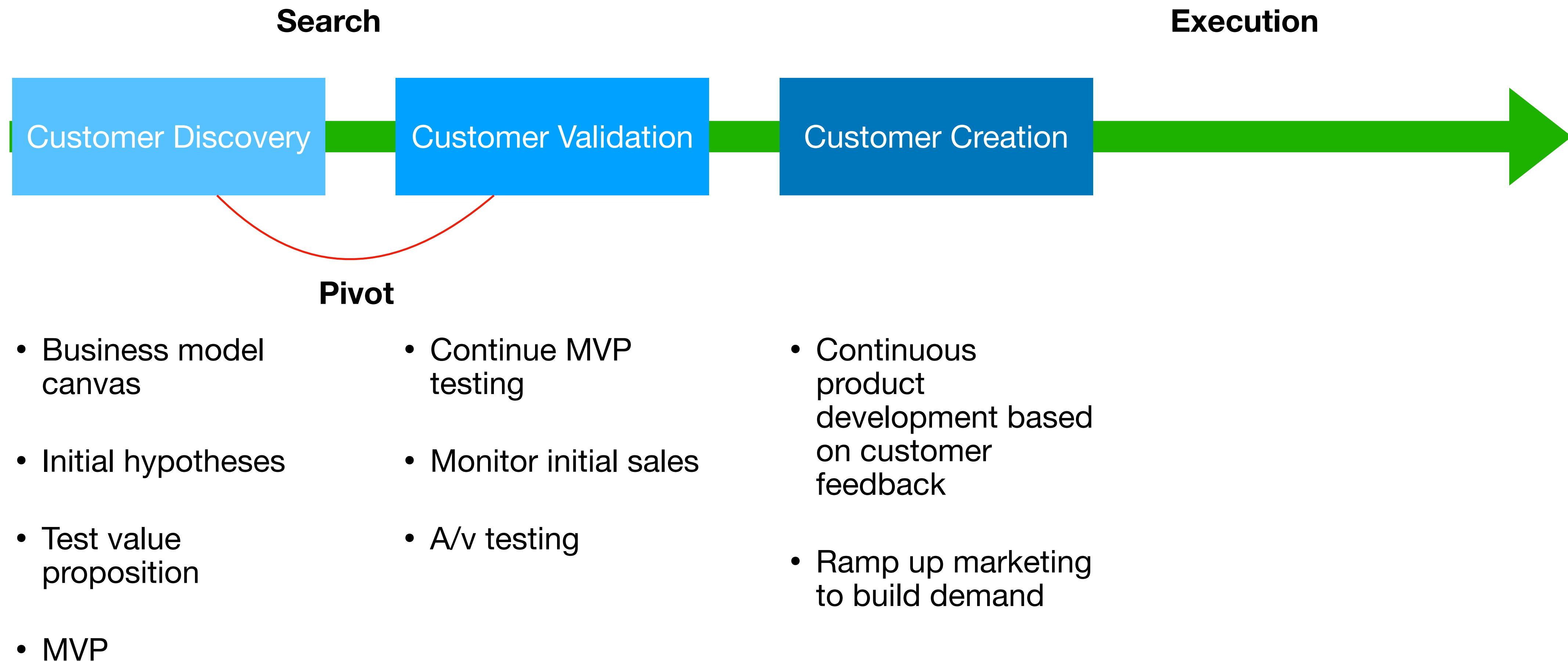


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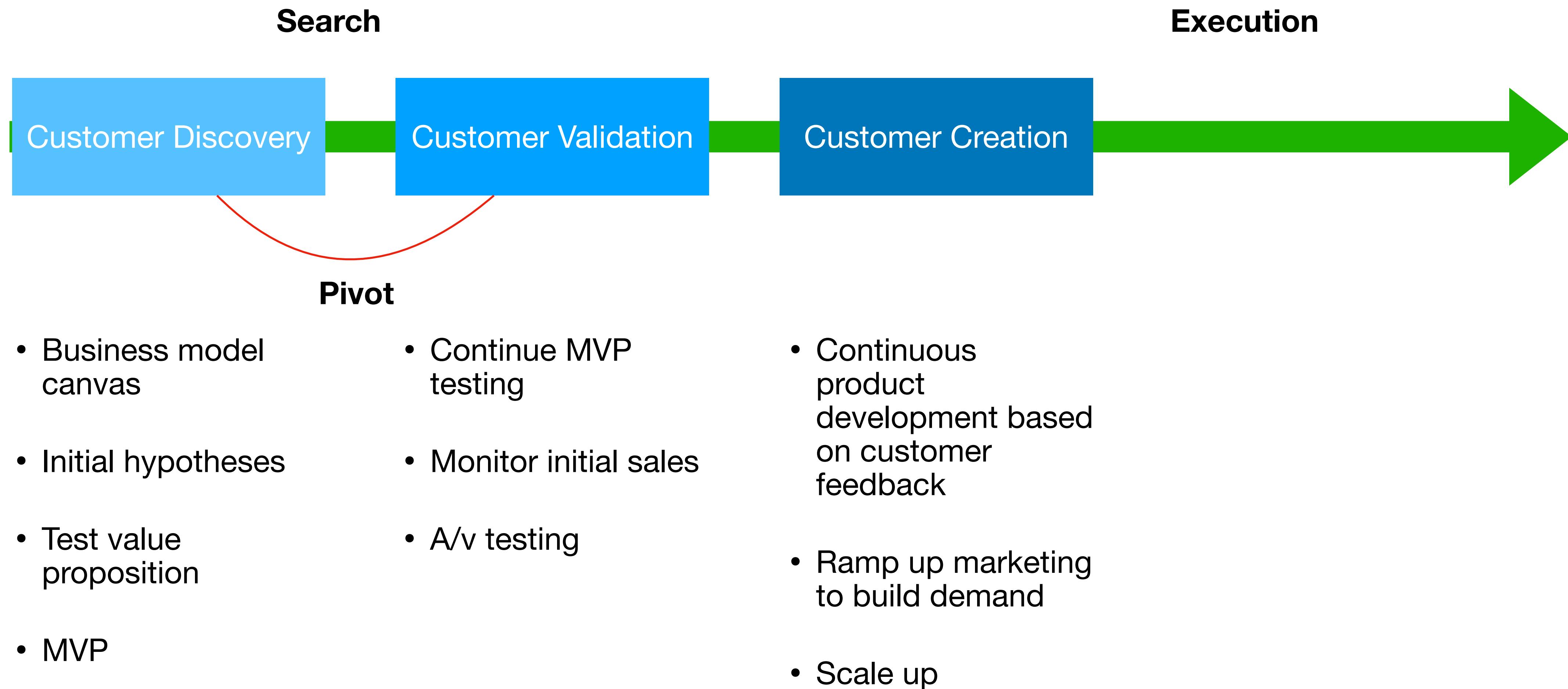
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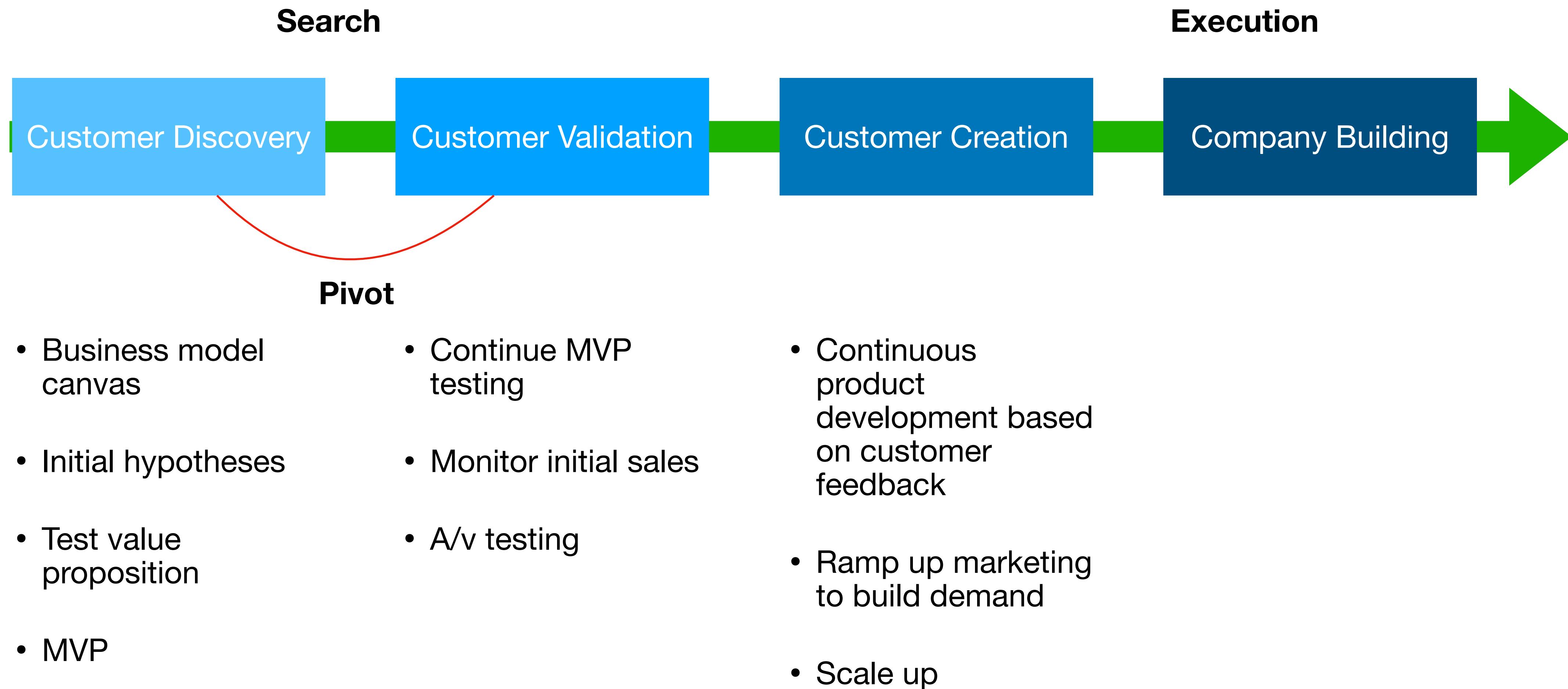
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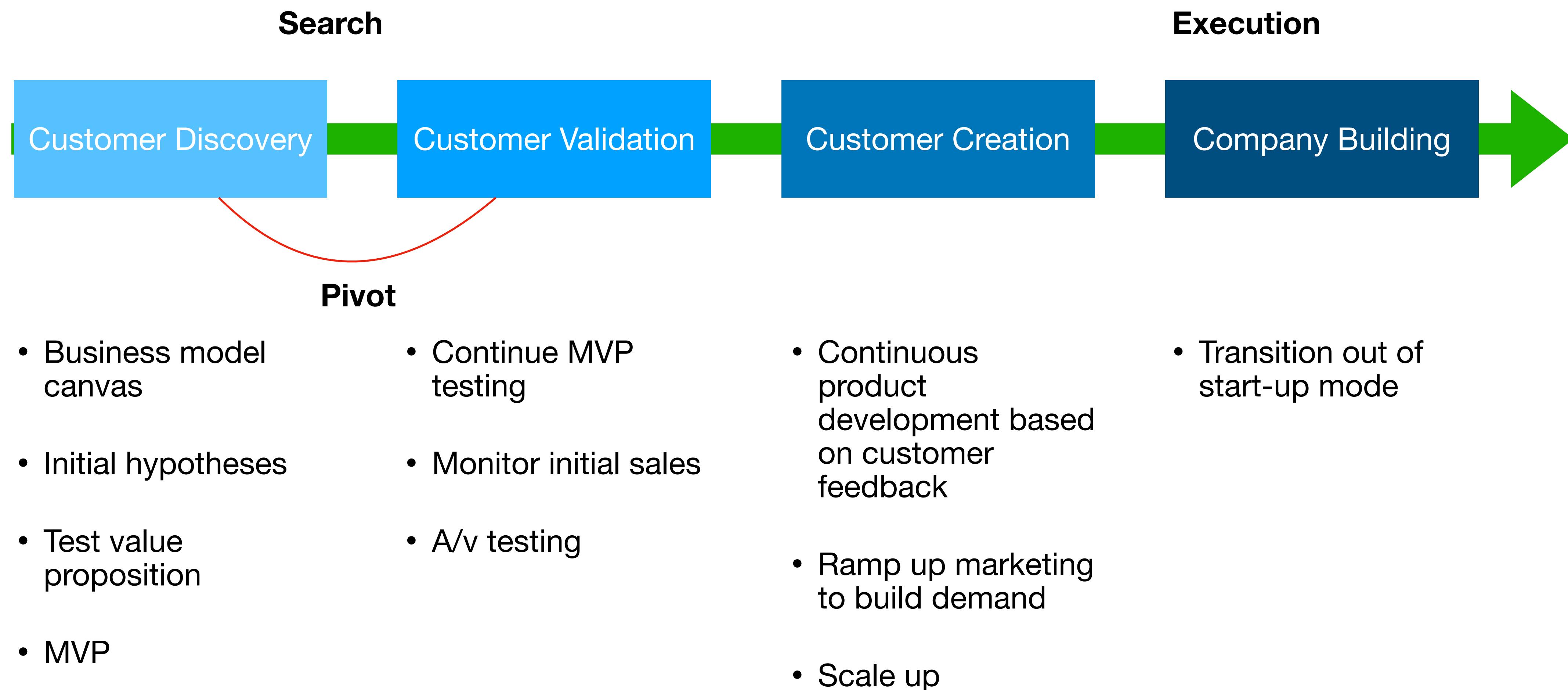
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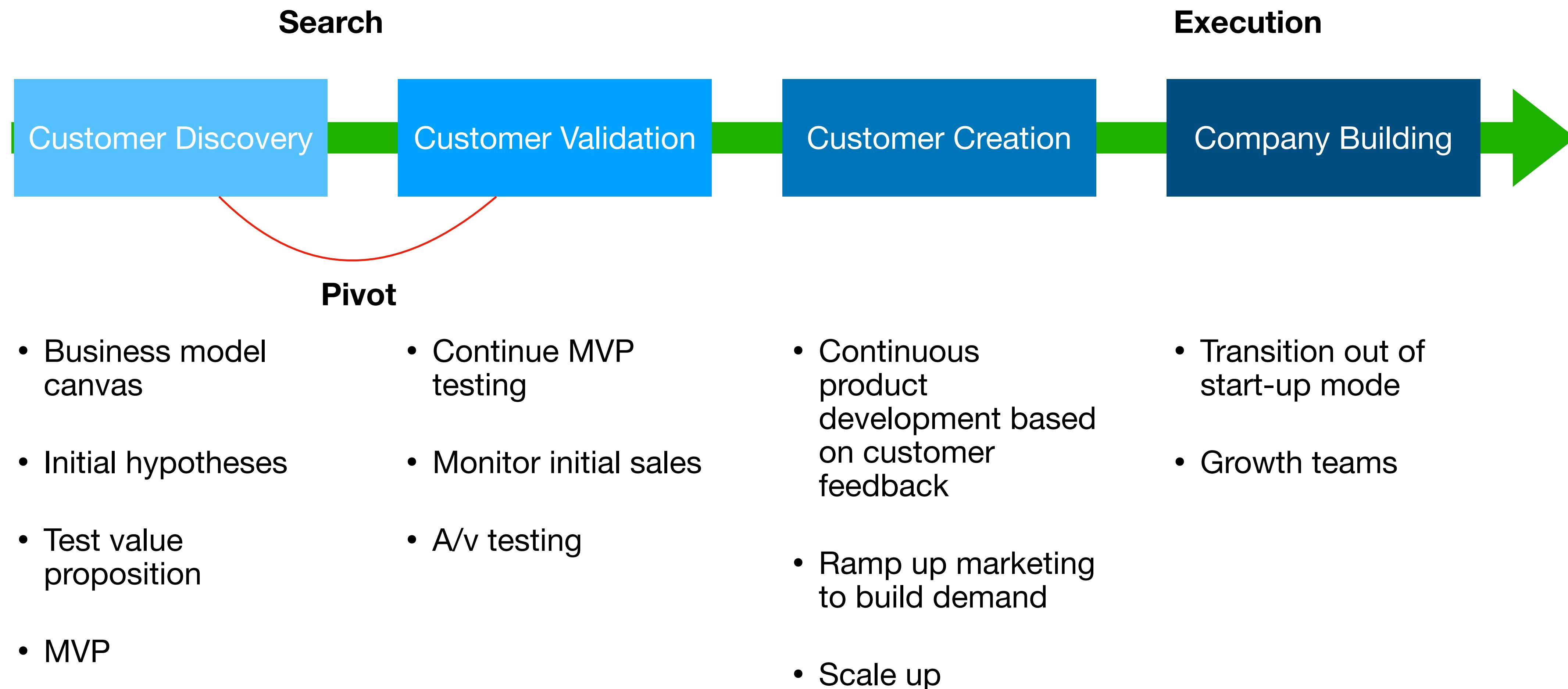
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What lean start-ups do differently

Strategy

Product Development

Engineering

Failure

Speed

Accounting

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Engineering		
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Failure		
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Low Demand Uncertainty

- When there is a clear (obvious) demand for a product or service, using experimentation could cause the start-up to lose very precious time
 - e.g. green energy, cancer drugs

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- Fat start-ups should still embrace the lean method, however, sometimes it is hard for them to maneuver