

TESTING YOUR THEORY OF VALUE

THEORY

Beliefs Common	Core Problem

	Subproblems

Contrarian or Uncommon	Causal Logic <i>(expressed as if-then statements or hypotheses)</i> <i>IF</i> <i>THEN</i>

ACTIONS

Run Experiments
Shop for Investments
Search for Solutions

WHAT YOUR THEORY OF VALUE PROVIDES

- A vehicle for composing testable hypotheses
- A vehicle for engaging in “costless” thought experiments
- A vehicle for specifying real experiments to run and data to collect
- A vehicle to structure the search for subproblem solutions
- A logical architecture for interpreting the results of your experiments

A THEORY

Belief



There is vast reservoir of personal vehicles (and drivers) which could satisfy the unmet demand for taxi service

Problem

How do we provide fast, reliable taxi service, especially at times when taxis are difficult to secure?

Theory (in words)

If we can efficiently connect drivers to riders, enable riders to feel confident in the timeliness of service, and both riders and drivers to feel safe, then we can tap this vast reservoir of personal vehicles to address unmet taxi demand.

Sub Problems

Managing Payment and Tips

Arrival uncertainty/reliability

Efficient matching system

Driving with Strangers

A THEORY

Belief

Problem

Sub Problems



Computers can be a useful product for the masses

How do we make personal computers that are easy to use and reliable?

Theory (in words)

If we can make personal computers **easy to use and reliable**, then masses of consumers will purchase and purchase at a premium price.

Clumsy, non-intuitive OS

Mismatch between screen and printed output

Integrating peripherals and new software

Reliability/system stability

HOW DO I EFFICIENTLY TEST A THEORY?

- Key principle: **(Maximize learning; Minimize Cost)**
 - Experiment first where you can learn the most with the lowest investment
 - Experiment to test first the weakest assumptions—those which if false would negate entire theory
 - Search first for solutions to most critical subproblems—those which if unsolved would negate entire theory
 - Conserve on resources

THE MINIMUM VIABLE PRODUCT (MVP) PROBLEM

- What happens when the cost of testing the full solution (the MVP) is exorbitant?
- **Option 1:** solve easily tested problems
- **Option 2:** theory-based learning, search, and experimentation



Source: <https://www.flickr.com/photos/morville/4273477501>

A ROADMAP OF TESTS, EXPERIMENTS, RESOURCES TO FIND

- Will customers ride with strangers in private cars?
 - What experiment can we run?
- Can we compose an efficient matching app?
 - What analogous apps already exist?
- Can we facilitate confident, safe payment?
 - What existing technology already exists?
- Can we ensure and motivate quality?
 - What existing rating systems are there? Are there two sided rating systems?

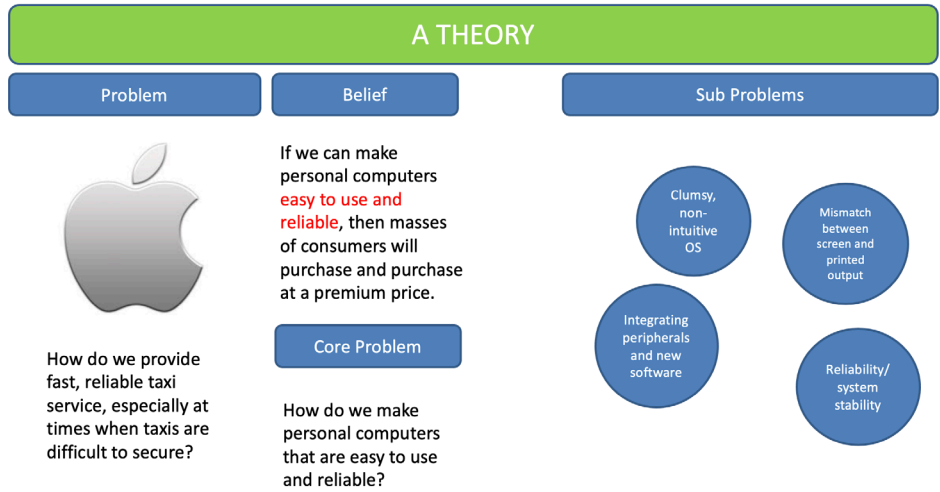


EVIDENCE IN SUPPORT OF THEORY-BASED LEARNING

- Randomized control trial involving hundreds of startups in Italy and UK, based on the Value Lab:
one group received standard startup training; other group pushed to develop theory by pushing beliefs into testable hypotheses.
- **Results:** Those trained to start with a theory were (relative to the control group):
 - more likely to develop clear theories and hypotheses, and to develop targeted experiments to test them.
 - more likely to pivot
 - more likely to exit (quickly)
 - more likely to develop a valuable business model

("A Scientific Approach to Entrepreneurial Experimentation", Camuffo, Gambardella, Cordova, Spina, *Management Science*)

THEORY BASED LEARNING

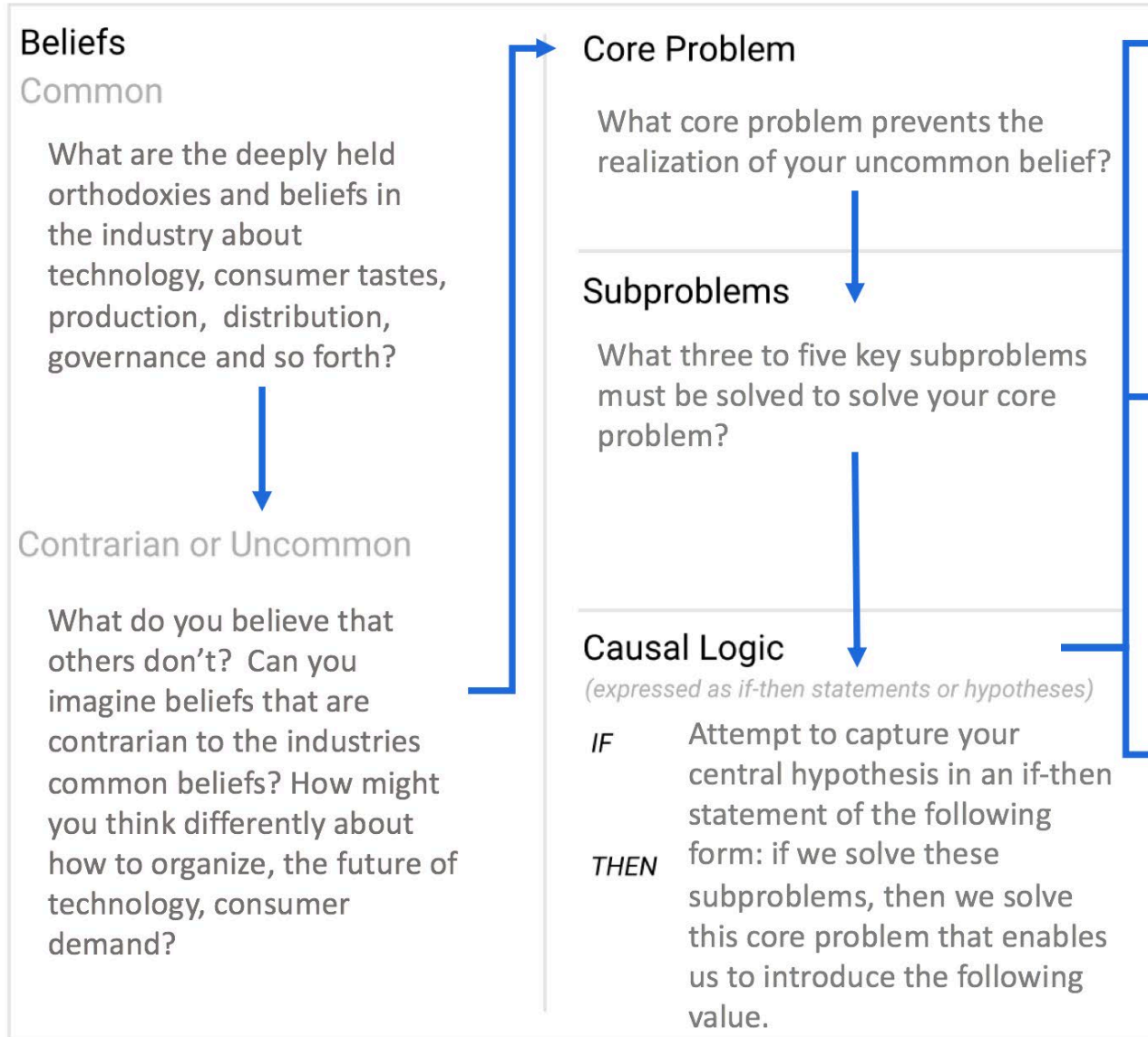


Theory

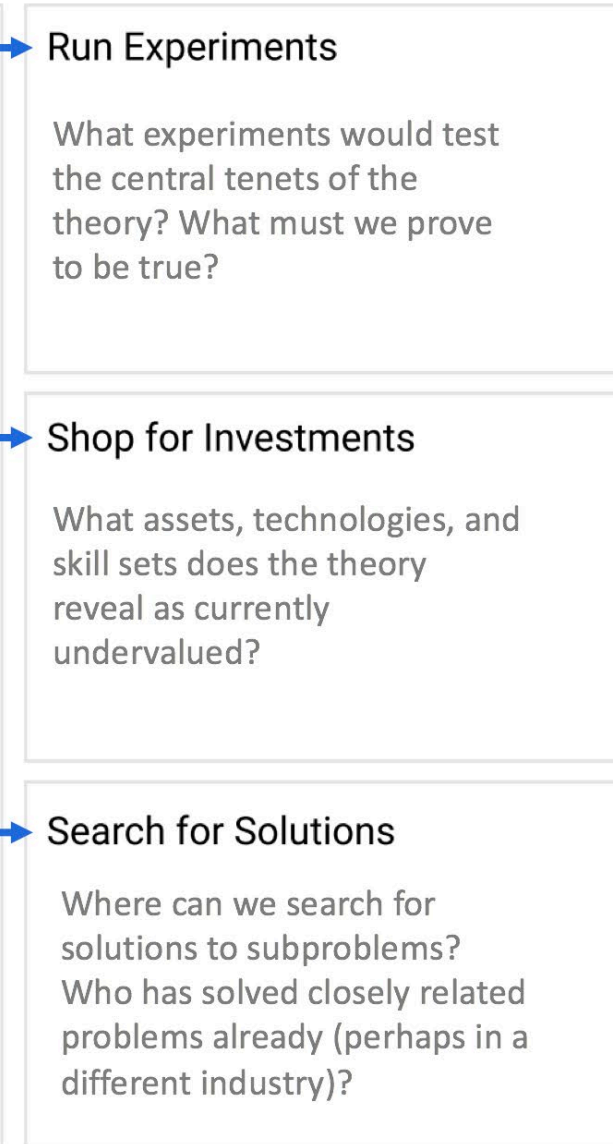
Experimentation
and Search
Results

Updates to
Theory

THEORY



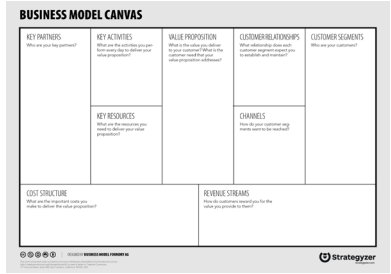
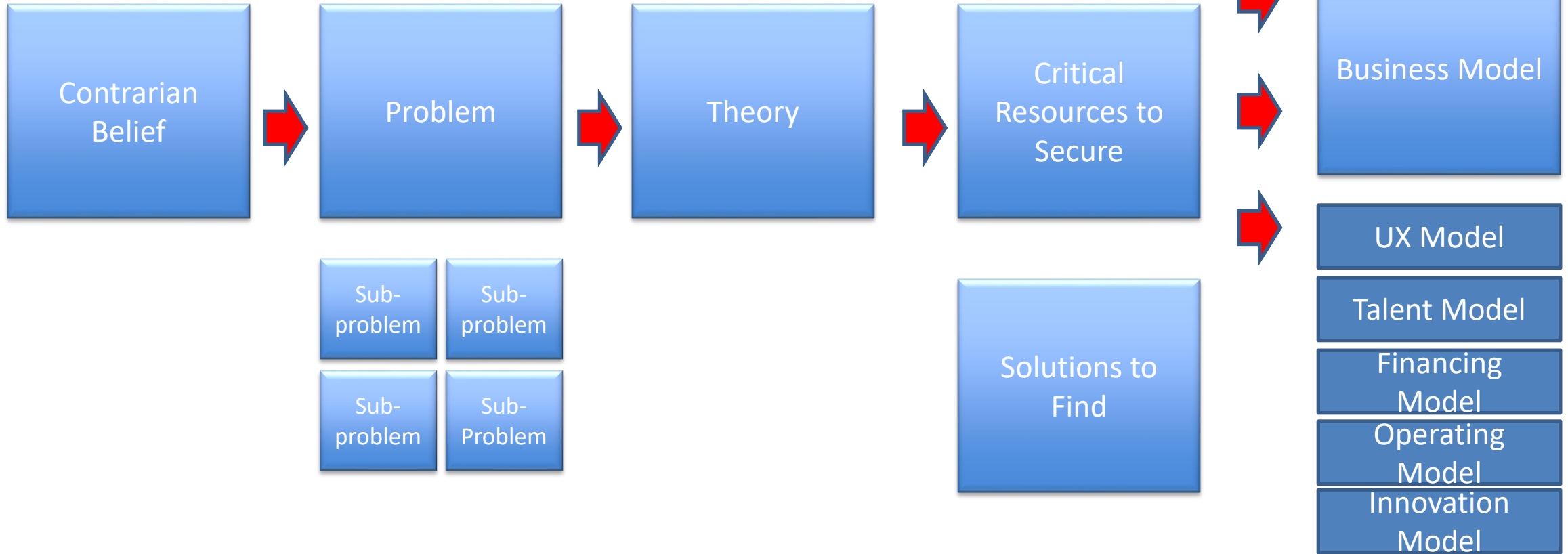
ACTIONS



Entrepreneurial Experiments and Action Steps

	Hypotheses or Assumptions to Test and How	Key subproblems to solve and where to search	Critical resources to secure and likely location

THEORY		ACTIONS
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	Subproblems	Shop for Investments
Contrarian or Uncommon	Causal Logic <i>(expressed as if-then statements or hypotheses)</i>	Search for Solutions
	IF	
	THEN	



KEY QUESTIONS

- What critical information would I like to possess?
- What are my critical assumptions?
- What do I wish I knew?
- What information might cause me to pivot to a different business model?
- What are the critical hypotheses or assumptions that need to be tested?

BREAKOUT ASSIGNMENT

- Develop a preliminary plan that spells out experiments you need to run, data you need to gather, and solutions you need to search for (and where to search).

APPLICATION VIDEO

