

“If you build it they will come!”

Not always true

TOP 10

STARTUP MISTAKES



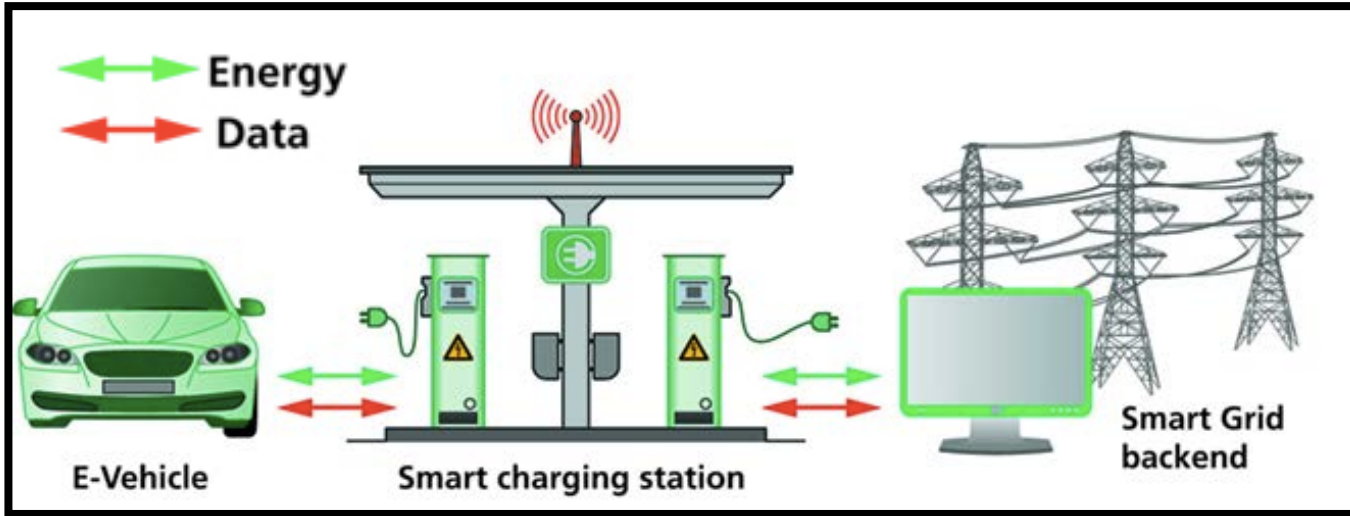
100+
FirstHits

www.100FirstHits.com

- 8. Spending Too Much Money **18 (2,1%)**
- 9. Failing To Ask For Help **12 (1,4%)**
- 10. Ignoring Social Media **6 (0,7%)**

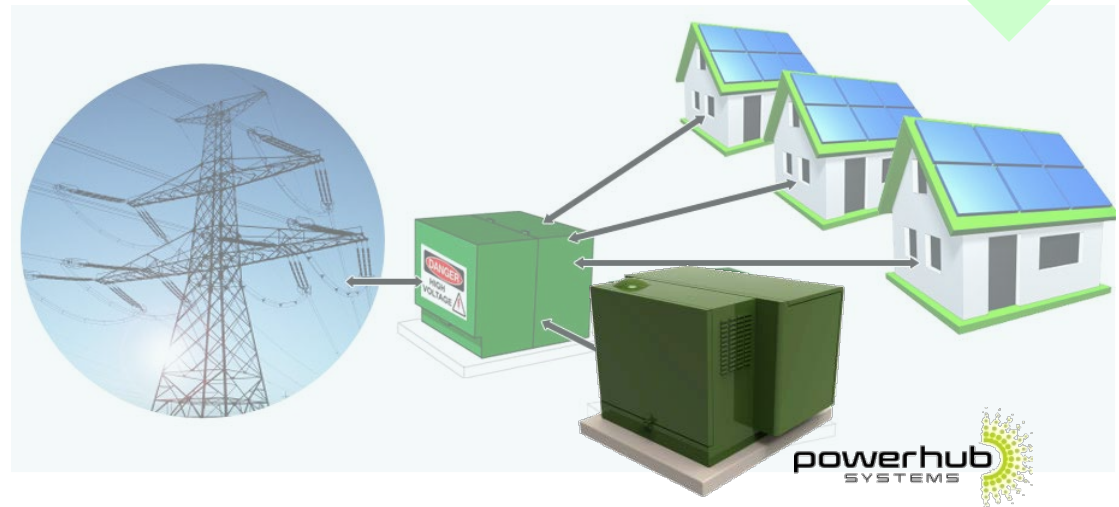
- 5. Not Having The Right Co-Founders **66 (7,9%)**
- 6. Chasing Investors, Not Customers **45 (5,4%)**
- 7. Not Making Sure You Have Enough Money **28 (3,3%)**

PowerHub Systems



Through Customer Discovery we moved from V2G to Community Energy Storage

PowerHub provides interoperable battery storage systems at the edge of the grid for demand management



So what?

- Am I solving a problem that somebody really cares about?
- If I solve it, will they come/buy it?
- What problem should I be solving?

I - Corps *Story*

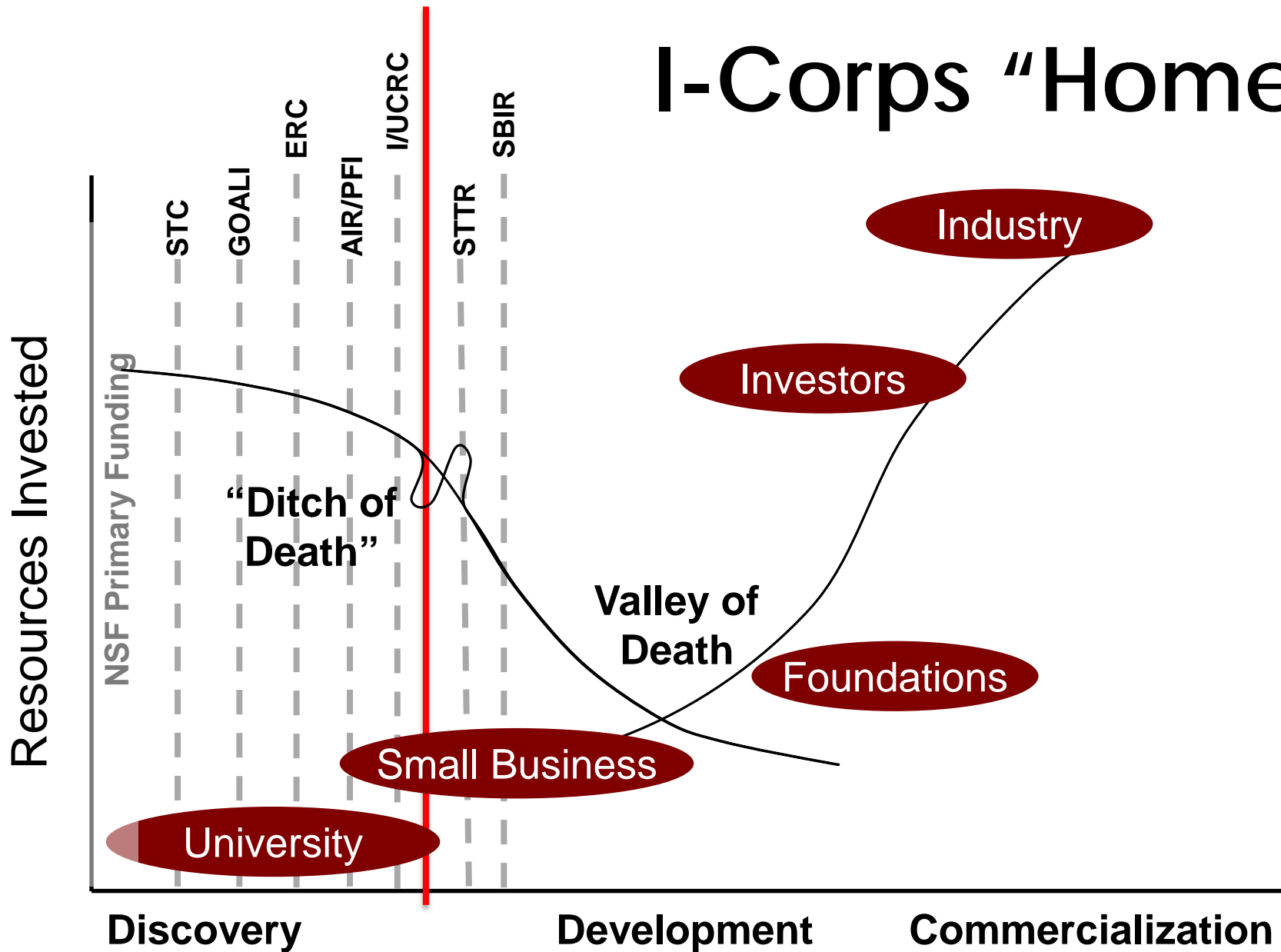
\$7 *Billion*

*“How can we increase the
economic impact of the
research dollars invested every
year?”*



Innovation Corps

I-Corps "Home"



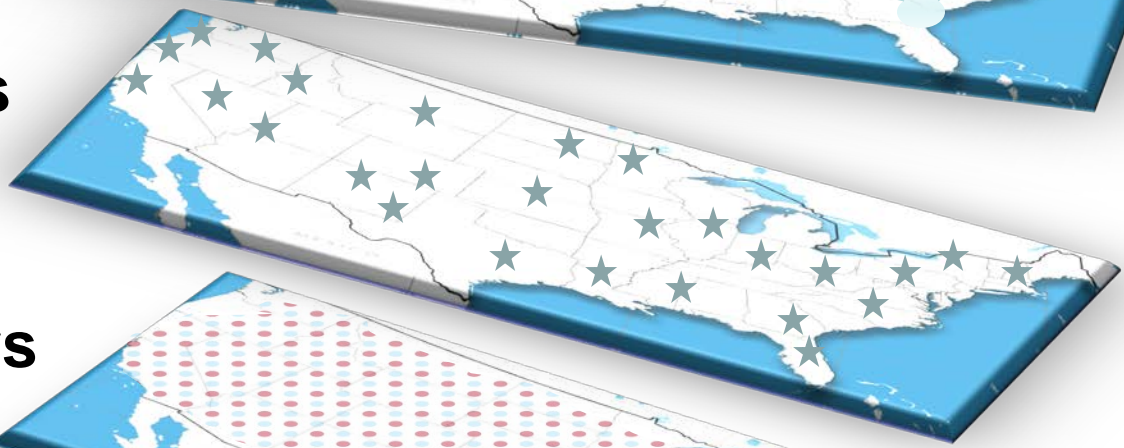


The Nation's I-Corps "Fabric"

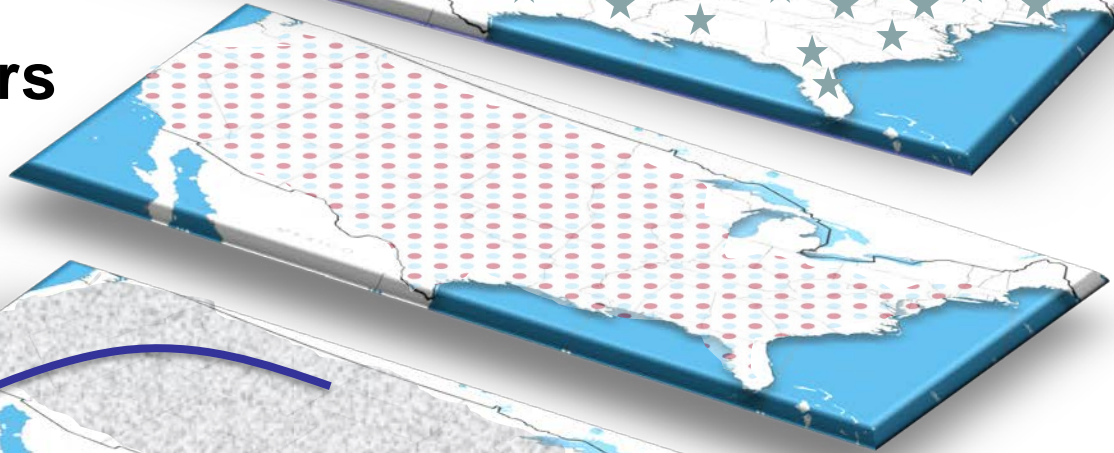
I-Corps Nodes



I-Corps Sites



I-Corps Mentors



I-Corps Teams



NSF I-Corps Nodes





Dean Chang
PI, Instructor
Assoc VP I&E,
UMD



Jim Chung
PI, Instructor
Exec Dir I&E,
GWU



Jack Lesko
PI, Instructor
Assoc Dean,
VT



Edmund Pendleton
*Director,
Lead Instructor*
UMD



Dan Kunitz
*Director of
Accelerator,
Instructor*
GWU



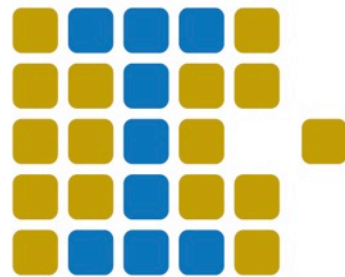
Lindsey Mitchell
*Program
Manager*
VT



Elizabeth Good
Instructor
Director Ventures,
JHU

<http://www.dccorps.com>





CORPS
NSF Innovation Corps

Lean LaunchPad Course

Steve Blank is a consulting associate professor at Stanford University and a lecturer and National Science Foundation principal investigator at the University of California at Berkeley and Columbia University. He has participated in eight high-tech start-ups as either a cofounder or an early employee.

Why the Lean Start-Up Changes Everything

by **Steve Blank**

Harvard Business Review

hbr.org

MAY 2012

85 **Idea Watch**
The Limits of Social Influence
Simon Aral

92 **Spotlight**
In Search of the Next Big Thing
An interview with Marc Andreessen

141 **Case Study**
The Unmanageable Star Performer
Abhishek Goel

TURN A GREAT IDEA INTO A GREAT BUSINESS



"Lean" is changing everything you know about starting a new venture [PAGE 63](#)

by Harvard Business School's Shikhar Ghosh shows, 75% of all start-ups fail.

But recently an important countervailing force has emerged, one that can make the process of starting a company less risky. It's a methodology called the "lean start-up," and it favors experimentation over elaborate planning, customer feedback over intuition, and iterative design over traditional "big design up front" development. Although the methodology is just a few years old, its concepts—such

"minimum viable product" and "pivoting"—have quickly taken root in the start-up world, and business schools have already begun adapting their curricula to teach them.

The lean start-up movement hasn't gone totally mainstream, however, and we have yet to feel its full impact. In many ways it is roughly where the big data movement was five years ago—consisting mainly of buzzword that's not yet widely understood, whose applications companies are just beginning to grasp. As its practices spread, they're turning the conventional wisdom about entrepreneurship on its head. New ventures of all kinds are attempting to improve their chances of success by following its principles of failing fast and continually learning. And despite the methodology's name, in the long term some of its biggest payoffs may be gained by the *large* companies that embrace it.

In this article I'll offer a brief overview of lean start-up techniques and how they've evolved. Most important, I'll explain how, in combination with other business trends, they could ignite a new entrepreneurial economy.

Developed by
entrepreneurs

Taught by
entrepreneurs

Our *Goal*

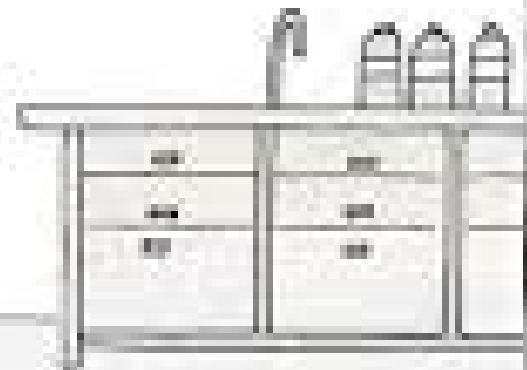
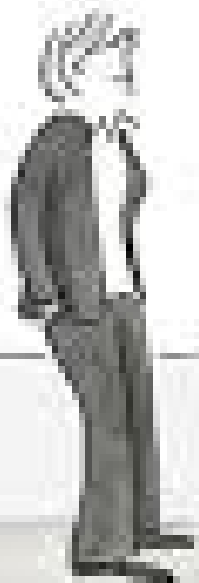
Improve *Odds*



Pick *Winners*

We use Customer Discovery
and follow Scientific Method

TALK TO CUSTOMERS?
WHAT DO CUSTOMERS
HAVE TO DO WITH THE
PRODUCTS WE
EVENTUALLY WANT
THEM TO BUY?



Cartoon: Tim Flanagan. Drawing: Talking To Customers 2011 Creative:

What's a *startup*?

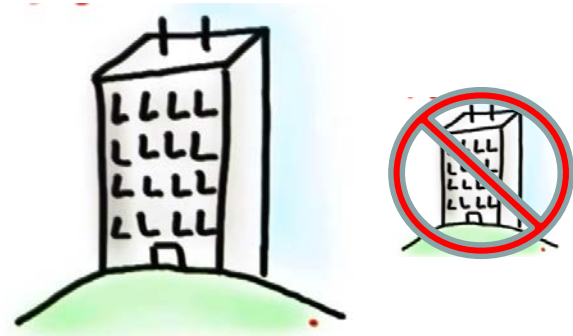
A *temporary* organization
designed to *search*
for a *repeatable and*
scalable
business model

Startups

- More startups fail from a lack of customers than from product/tech failure.



- Startups are not smaller versions of large companies.

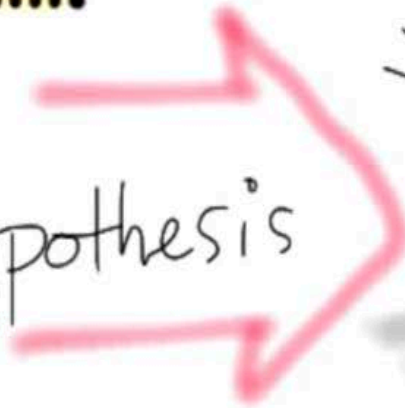
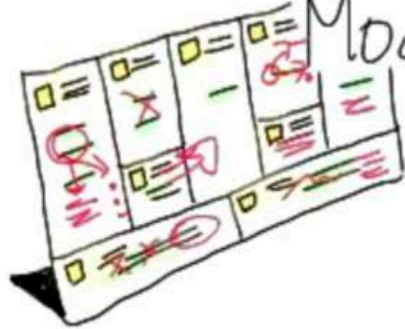


Startup to Company

SEARCH

EXECUTION

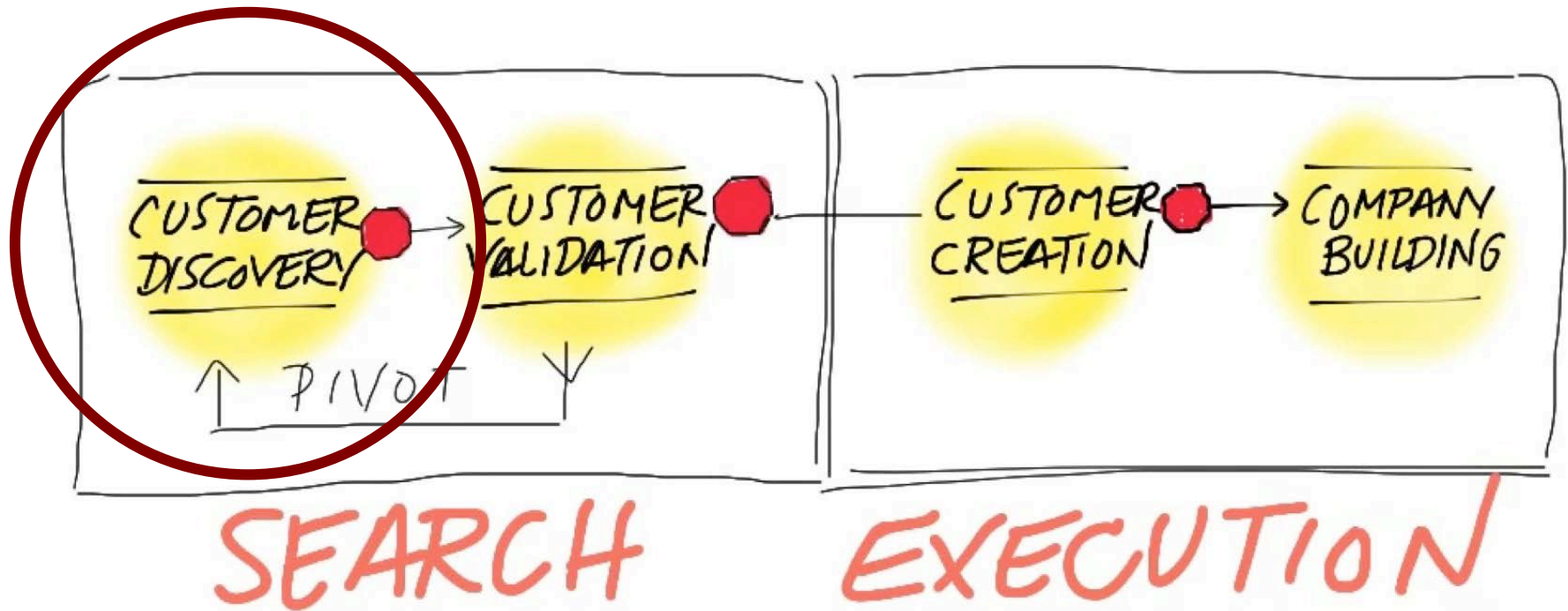
Business
Model Hypothesis



Startup

Company

“Customer Development”



how you go *from startup to company*
how you *search for Product-Market fit*

Product-*Market Fit*

“MVP”

The Holy Grail!

MVP (Minimum Viable Product)



Minimum Viable Product

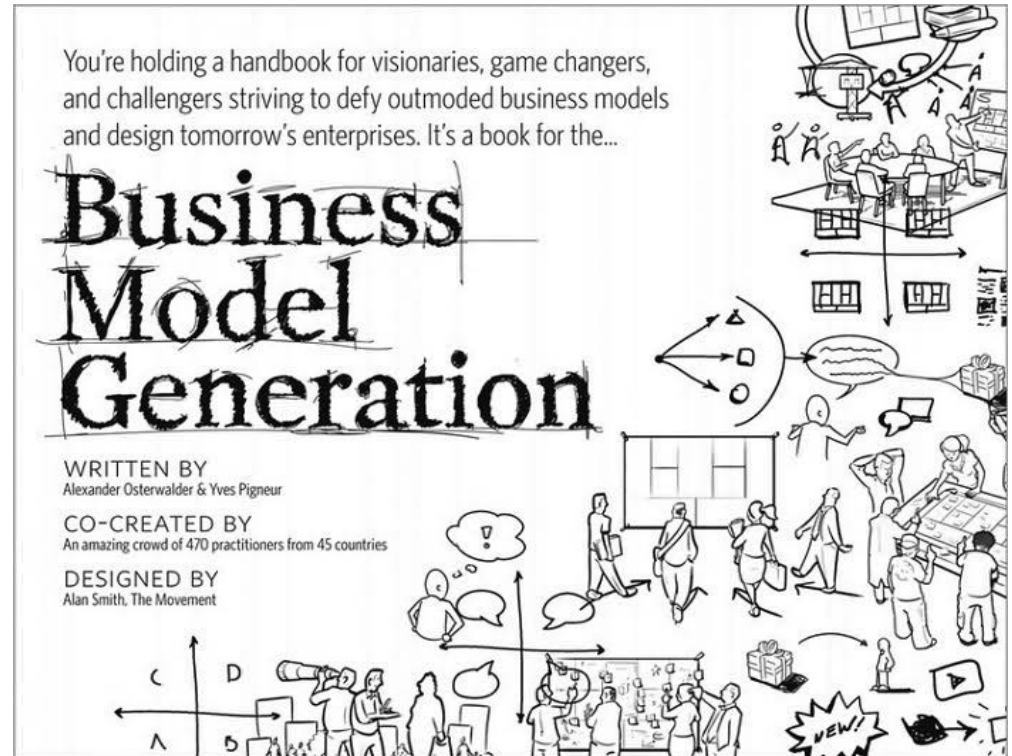
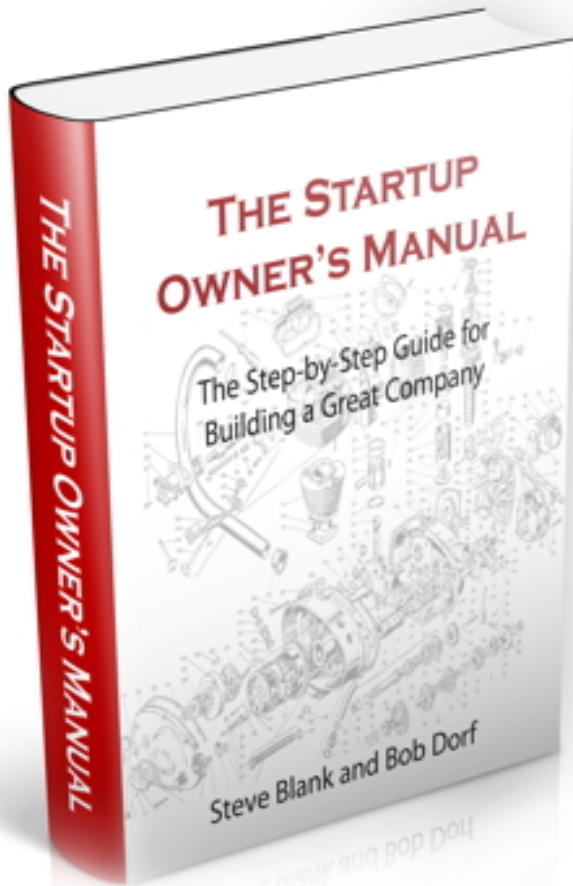


Product Vision

With Product-Market Fit

Minimum Viable Product – The product with the minimum feature set to meet the needs of a Customer Segment and Value Proposition(s)

Customer Development

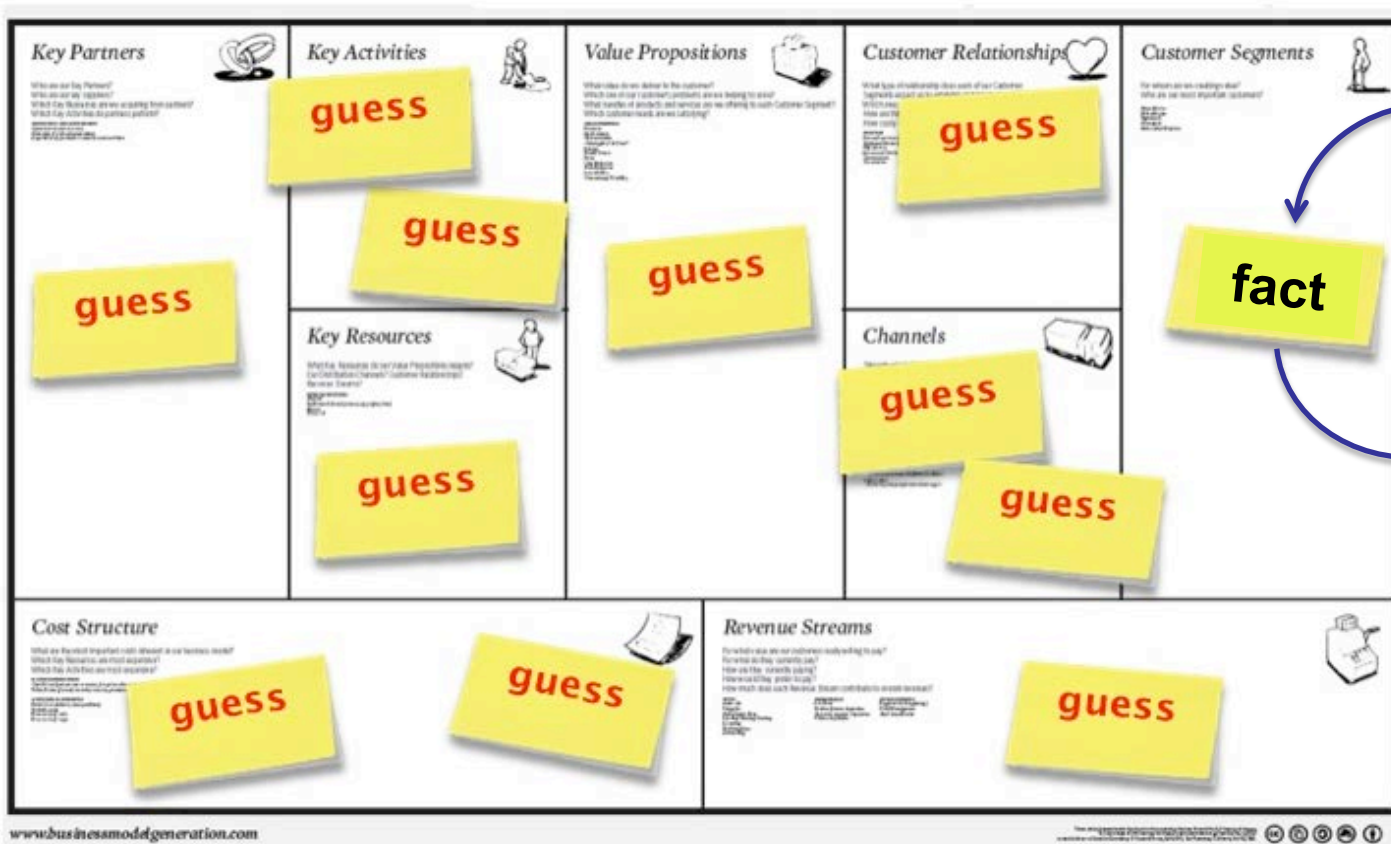


+ Research Outcomes



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Don't be A Faith Based Organization



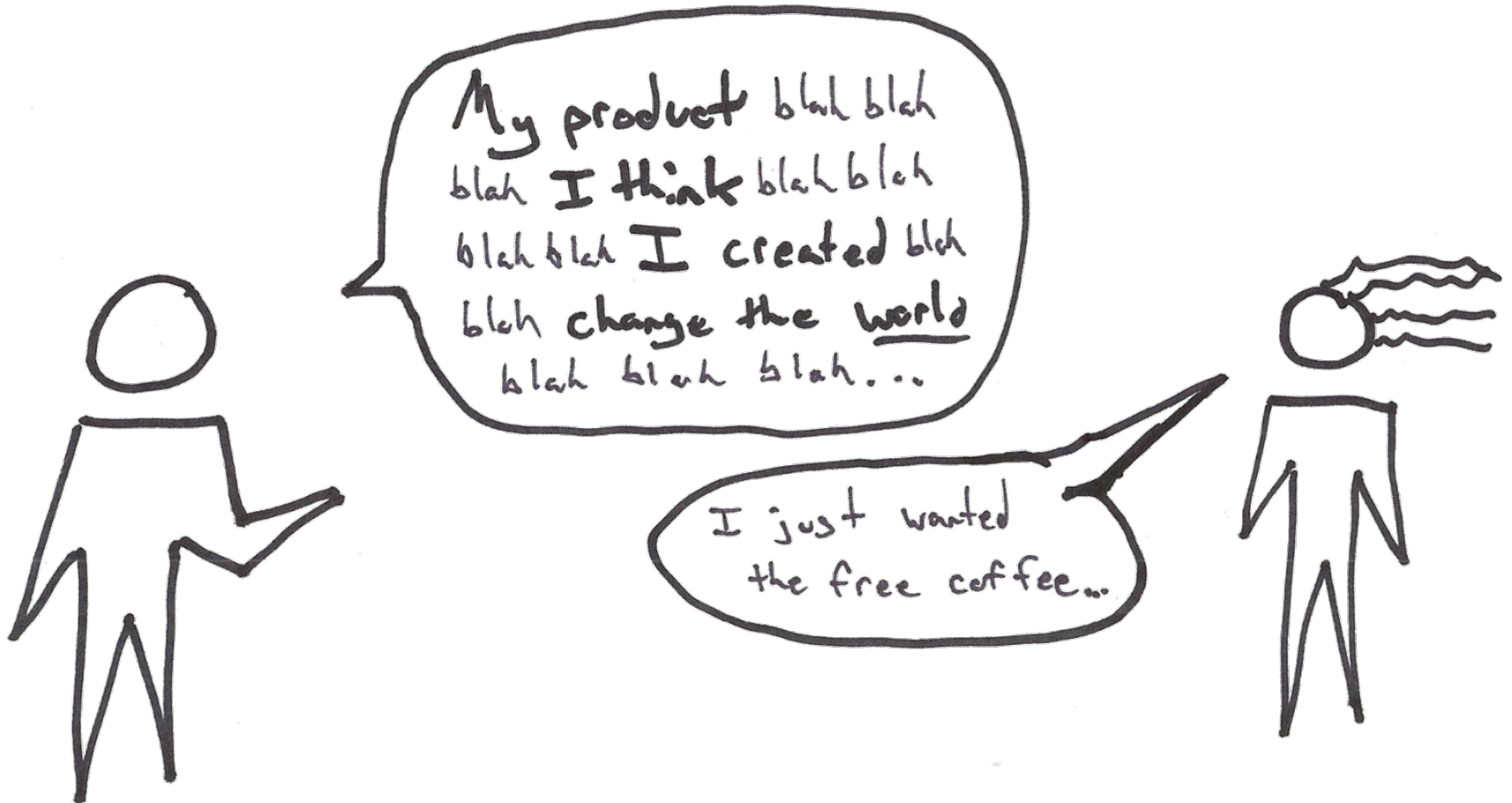
100+ Interviews

Business Model Canvas



Get *out* of
the building!

The art of customer interviews



INTERVIEW PROPERLY

–Do not sell!

- Don't show a demo.
- Don't do a technical presentation

–You are there to learn. Ask about how they do their job. Ask about their **problems**

–Look for the unexpected. The **surprises**



MOVELINE™

*Why are
you
moving?*



Moveline.com founder Fred Cook pitching at TechStars' Demo Day.

GAINING INSIGHT

–**Insights** are your goal

–Don't just scratch the surface, dive **deep** ... Find the hidden motivations.

–**Depth of understanding**
always leads to insight

ASK THE RIGHT QUESTIONS

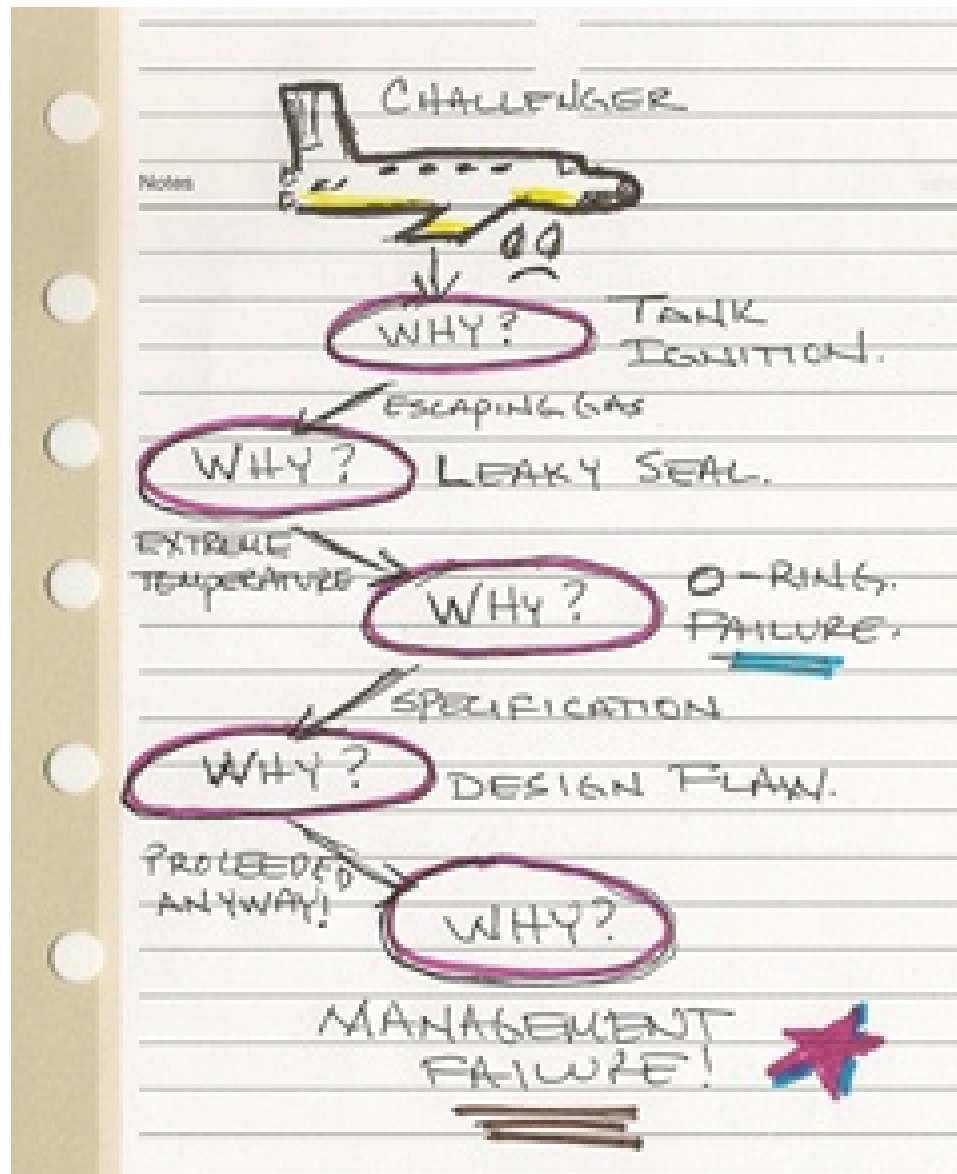
–Always ask **open-ended** questions

–Ask questions starting with : **who, what, why, how**

–Do not ask questions starting with: ***is, are, would, do you think, should***

–ask **why?** then **why?** then **why?** again

The Challenger



Types of I-Corps Training

TYPES OF I-CORPS TRAINING

National

- \$50,000 NSF Grant
- Opening on-site – 4 days
- 3 hour Webex once a week – 5 weeks
- Closing on-site – 3 days

100 Interviews – 7 Weeks
17 interviews per week!
OFFICE HOURS!

Regional

Introduction to I-Corps
Oct 25 – Nov. 29

- Open: 10/25, 5:30-8:30, Goodwin 440
- Close: 11/29, 5:30-8:30, Goodwin 440
- Office Hours: Nov. 17-18, Virtual (Mike & Jack), In-person (Lisa), times are TBD

www.dccorps.org/introatvt2016application

An I-Corps Team

Goal: Prepares scientists and engineers to extend their focus beyond the laboratory and broadens the impact of federally funded research



Mentor

**Principal
Investigator**

**Entrepreneurial
Lead**

The Startup Class

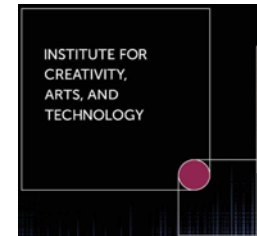


The Startup Class

- An interdisciplinary pilot course
- Deploys the Customer Discovery curriculum
- To become part of a minor/certificate
- Broad mentor engagement (VT Alums)



Dept. of Engineering Education



NATIONAL COLLEGIATE INVENTORS AND INNOVATORS ALLIANCE

funding and training faculty and student technology innovators

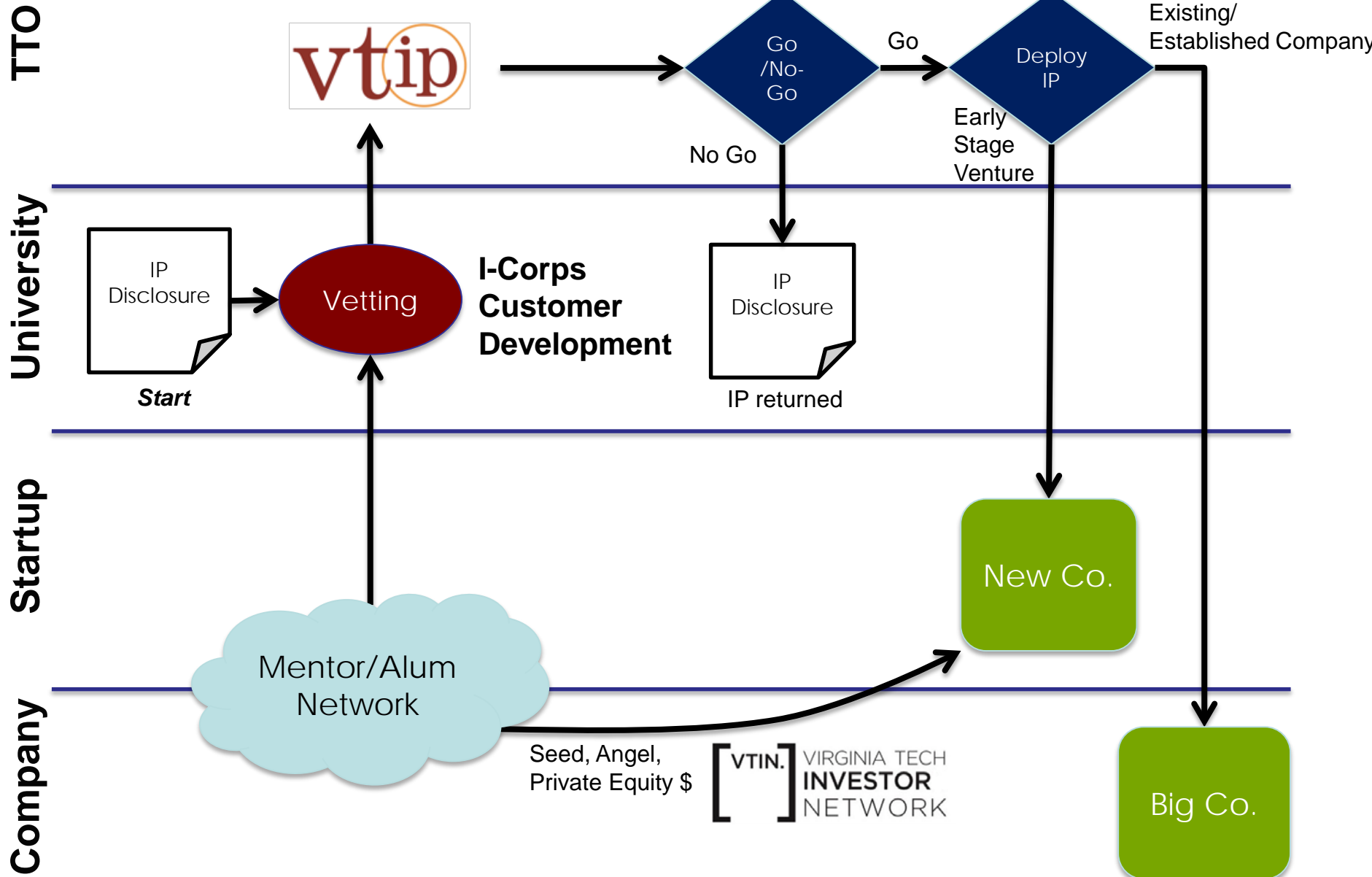
Card Isle – The Startup Class Grads



www.cardisle.com

I-Corps and the **CURRENT** NSF ERC

Envisioned Process



I-Corps and You



- Better identify what you should be building, for and why
- Makes you a better researcher
- Research the issues that people care about
- Alternate ways to integrate I-Corps principles into the NSF ERC

**GET
UNCOMFORTABLE**

#GetOutOfTheBuilding