Customer Development Cycle
Lee Redden Co-founder/CTO

- B.S. in M.E. from UofNebraska-Lincoln
- M.S. in MechE from Stanford (June 2011)
- Leave of absence from Ph.D.
- Family of Farmers

BLUE RIVER TECHNOLOGY

- Founded May 2011
- 8 employees
- Funded by Khosla Ventures and NSF SBIR Grants
Need-finding

Beginnings of BRT for Good

Current/Future BRT
Initial Proposition:
Autonomous Mowing:

Intelligence

GPS
Laser
Mowing:
Proposed Initial Customers

Commercial
Consumer
Golf Course

Parks
Stadiums (Go Stanford!)
Leave Building: hypothesis testing

Doing a Customer Interview

1. Work to their schedule
2. Get psyched to hear things you don’t want to hear
3. Disarm “politeness” training
4. Start with behavior, not feedback
5. Ask open ended questions
6. Listen, don’t talk
7. Encourage but don’t influence
8. Follow your nose and drill down
9. Parrot back to confirm
10. Thank them
11. Ask for introductions
12. Write up your notes as quickly as possible

Key Questions for Value Prop

- **Problem Statement**: What is the problem?
- **Technology / Market Insight**: Why is the problem so hard to solve?
- **Market Size**: How big is this problem?
- **Competition**: What do customers do today?
- **Product**: How do you do it?
Key Partners: Who are our Key Partners?

Key Activities: What Key Activities do our Value Propositions require?

Value Propositions: Which one of our customer’s problems are we helping to solve? Or Which customer needs are we satisfying?

Customer Relationships: How will we Get, Keep and Grow customers?

Customer Segments: For who are we solving a problem or fulfilling a need? Who are the customers?

Key Resources: What Key Resources (suppliers, etc.) do our Value Propositions require?

Channels: Through which Channels do our Customer Segments want to be reached?

Cost Structure: What are the most important costs in our business model?

Revenue Streams: What is the revenue model? What are the pricing tactics? For what value are our customers willing to pay?
Who is the customer?

Cost

- Like Roomba

Safety

Storage

Cost

It needs to look really good only 7 days a year

You Would Replace My Son!

Mowing:

Proposed Initial Customers

Commercial

Consumer

Golf Course

Parks

Stadiums (Go Huskers!)
Mowing:
Proposed Initial Customers

Who is the customer?

Commercial
Consumer
Golf Course

Parks
Stadiums (Go Stanford!)

Cost
Like Roomba
Still a possibility?

Safety
Storage

Cost

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You Would Replace My Son!
Mowing: Proposed Initial Customers

Consumer

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Parks

Stadiums (Go Huskers!)
Mowing:
Proposed Initial Customers

- Cost
  - Like Roomba
  - Still a possibility?

Consumer

Golf Course

Parks

Stadiums  (Go Stanford!)
Safety
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Mowing:
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12
Mowing:
Proposed Initial Customers

You Would Replace My Son!

Golf Course

Parks

Stadiums  (Go Stanford!)
Mowing:
Proposed Initial Customers

Parks
Stadiums  (Go Stanford!)
Mowing:
Proposed Initial Customers

Safety
Storage
Cost
Parks

Stadiums (Go Huskers!)
Mowing:
Proposed Initial Customers

Stadiums  (Go Stanford!)
Mowing:
Proposed Initial Customers

It needs to look really good only 7 days a year
Stadiums  (Go Huskers!)
Mowing:
Proposed Initial Customers
Mowing:

Proposed Initial Customers

- Commercial
- Consumer
- Parks
- Golf Course
- Stadiums (Go Huskers!)

Safety

Storage

Cost

It needs to look really good only 7 days a year.

Who is the customer - Cost - Still a possibility?
Now What?

We failed to find a suitable business plan. How should we feel?
We cheaply (  )
Succeeded to 
eliminate bad 
business models

5 people
part-time
3.5 weeks
Key Partners
Who are our Key Partners?

Key Activities
What Key Activities do our Value Propositions require?

Value Propositions
Which one of our customer’s problems are we helping to solve? Or Which customer needs are we satisfying?

Customer Relationships
How will we Get, Keep and Grow customers?

Customer Segments
For who are we solving a problem or fulfilling a need? Who are the customers? Does the value proposition match their needs? Is this a single-sided or multisided market?

Key Resources
What Key Resources (suppliers, etc.) do our Value Propositions require?

Channels
Through which Channels do our Customer Segments want to be reached?

Cost Structure
What are the most important costs in our business model?

Revenue Streams
What is the revenue model? What are the pricing tactics? For what value are our customers willing to pay?
Talk $$$
Holy Grails
Past Failures
Agricultural Weeding

1. Need Finding
2. Customer Hypothesis Testing
3. Technical Hypothesis Testing
Weedy Farms

Above: Organic Carrots, 7wks.
Top right: Conventional carrots
Bottom Right: Very weedy. Will require multiple passes of hand weeding
State of the Art Weeder
State of the Art Weeder
Carrots Have No Chance

Carrot vs. Weeds
Due to small root systems, carrots have no chance against weeds
Intra-row Weeds are the Worst

Organic Broccoli, closely cultivated. Weeds close to plants are hand-picked.
Customer Hypothesis

Hypothesis Confirmed
• Growers interested in **own** equipment
  • Industrial (10,000s of acres)
  • Large (1,000s of acres)
  • Willing to pay $100k for one unit

• Smaller growers (100s of acres) usually **subcontract** the labor services or **rent** equipment

• All purchases through **local dealers**
  • Customer service is essential
Customer Map #1 – Industrial Growers

Example: Bolthouse Farms – Large Industrial Carrot Producer – 8K acres/yr

- **End User**
  - Equipment Operator

- **Influencer**
  - Local Farm Mgr
    - Cliff Kirkpatrick, visited

- **Recommender**
  - Director, Ag Technology
    - Justin Grove, interviewed

- **Decision Maker**
  - VP, Growing Operations

- **Approver**
  - CFO, CEO (Jeff Dunn)

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**Equipment Operator**

**Cliff, Farm Mgr**
Customer Map #2 – Service Providers

Example: Ag Services – Service Provider, Salinas Valley

End User

- Equipment Operator

Influencer

- Grower

Recommender

- Service Mgr

Decision Maker & Approver

- ?? (service mgr’s boss)

Fred (left, BRT), Marty (middle, Service Mgr), Doug (right, Grower)
Carrot-Bot

Wednesday

Thursday

Friday

Saturday

Sunday

Monday

Tuesday

Confidential
Our Name: How does it feel?
Engineering for Good!

- Cheaper Organics
- Cheaper Vegetables
- Reduce Herbicide Use
- Food Safety
- Reduced Labor Dependence
- Serving a Basic Need
Interesting Need Finding