Why are transformational innovations so difficult for large and successful incumbent firms?

Transformational and disruptive innovation?

Sustaining Innovations

Transformational Innovations
Disruptive Innovations
Large companies are not innovative
Be sure to ask about the side effects

OK – large companies are innovative
BUT not in developing new business models
Why are new business models so difficult for large companies?
Business Model Rigidity

Leaders will make significant investments in transformational innovation, but will force the solution into the sustaining business model.

Business Model Rigidity

Kodak invests $5 billion in digital over the next 10 years (40-50% of R&D budget)
The Church of New Finance

I. Return on net assets (RONA)
II. Economic Value-added (EVA)
III. Gross Margin %
IV. Internal Rate of Return (IRR)

V. Earnings per share (EPS)
VI. Return on Capital Employed (ROCE)
VII. Marginal Revenue / marginal cost
VIII. Thou shalt be data-driven and fact-based.

Adopted from a Clay Christensen presentation
Common methods of financial analysis systematically bias against high risk innovation
IHFY
Income in a Hypothetical Future Year

IHFY = (Unit Volume) x (Price) x (Margin)

Goal is to estimate 3x - 10x to determine potential income provides enough value to the firm.

Presentation from John Evans, VP of Engineering and Technology, Lockheed Martin
Most large companies do not protect transformational innovation efforts with the correct organizational structure.


Separated

NewCo Senior Management

Emerging Business
  Mfg  Sales  R&D

Existing Business
  Mfg  Sales  R&D

Executive Sponsor

CoreCo Senior Management

Ambidextrous

SBU Senior Management (CoreCo)

Emerging Business
  Mfg  Sales  R&D

Existing Business
  Mfg  Sales  R&D
Ambidextrous organizations are **90% more effective** in developing transformational innovations than either integrated or separated.

Apply the same FEI management methods we use in sustaining to transformational innovations.
Learning Strategy

Follow a plan to learn

Loop around the Basketball Court

Adopted from a Clay Christensen presentation

Can’t Use Stage Gate to manage transformational innovation
“No business plan survives the first contact with the customers”


Business plans are valuable in sustaining businesses – when you can execute on the plan
Some facts from start-ups

Most start-ups fail
And the ones that succeed change their original business model 66% of the time

Quoted from Ash Maurya

90% of transformational innovation projects change their business models 4 times before they “get it right”

Adopted from Mark Johnson, author of Seizing the White Space, HBR, 2010
Sustaining businesses execute a business model, transformational innovations search for one

The true product of the transformational innovation effort is the business model NOT the solution

Adopted from a Steve Blank presentation
For managing transformational innovations in large corporations

Lean start-up
Lean Start-Up

Business Model

Very early customer/user visits

Agile Development

Minimum Viable Prototype

Uses the **business model** as a converging tool for brainstorming for transformational business hypothesis

<table>
<thead>
<tr>
<th>CUSTOMER VALUE PROPOSITION (CVP)</th>
<th>OPERATING MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROBLEM FORMULATED AS A POV</strong></td>
<td><strong>SOLUTION</strong></td>
</tr>
<tr>
<td>What is the customer’s “Job” and the problem from their perspective?</td>
<td>What is the devised product and/or service that delivers on the key attributes?</td>
</tr>
<tr>
<td><strong>CUSTOMER/CONSUMER CIRCUMSTANCE</strong></td>
<td><strong>SOLUTION ATTRIBUTES</strong></td>
</tr>
<tr>
<td>How can we define the customer’s circumstances?</td>
<td>What attributes do we need to deliver to the customer?</td>
</tr>
<tr>
<td><strong>REVENUE MODEL</strong></td>
<td><strong>KEY RESOURCES</strong></td>
</tr>
<tr>
<td>How will we make money?</td>
<td>What are the key resources needed to deliver the CVP — people, technology, partners, infrastructure, and processes?</td>
</tr>
</tbody>
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<th>RISKS AND ASSUMPTIONS</th>
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<td>What are the top three risks and assumptions?</td>
</tr>
</tbody>
</table>
2. Early and abundant customer visits

We often wait too long to talk with customers

3. VERY EARLY, fast low fidelity prototyping

Show this

Don’t wait for this
4. Rapid Learning

Experiences with large corporations
All of the companies struggled with getting to the right problem.
Many innovations fail not because of a fatal flaw in the innovation itself, but because the company fails to understand the problem they are solving.

Newton: Enamored by technology. PC in your pocket. Not what functions are needed by mobile user.
Segway: A transportation device for everyone NOT for someone. Not determining which users have a problem requiring the attributes of a Segway.
Google Glass: A mobile device for everyone. Not determining which users have a problem requiring it

“....Google didn’t improve Glass in specific ways for an application to attract users from a target market to buy Glass. In the end, by trying to be a “cool tool” for everyone Glass ended up being something nobody really needed”

-Forbes, Feb 12, 2015, Adam Hartung
Apple Watch: What **problem** are they trying to solve and for **whom**?

If I had only 1 hour to save the world, I would spend 55 minutes defining the problem and only 5 minutes finding the solution.
What is the right problem?

Incubators for 3rd world rural regions
Is this the problem?

Rural clinics in India, Bangladesh, Nepal, Cambodia and Indonesia need a much lower cost and maintenance free incubator so that they can prevent premature babies from dying.
Neonuture Incubator

Is this the problem?

Desperate parents living in remote villages without electricity and are far from clinics

needs the means to give her dying baby a chance to live
Confuse solution attributes with the solution
Solution Attributes Map

- **Coffee Taste**
  - Bland
  - Rich Flavor
  - Notes

- **Ready to drink**
  - 1 min
  - 5 sec

- **Time to clean**
  - > 10 min
  - < 1 min

- **Easy to use**
  - Complicated
  - Seamless

Importance

3
Osterwalder’s Business Model Canvas does not work in the FEI for transformational innovations
To use as a **brainstorming tool** each item on the canvas **MUST be distinct and explicit**
# FEI Canvas

Developed specifically for large companies

## Problem Formulated as a POV
What is the customer/consumer problem or "Job" you are solving?
Problem is formulated from the Point of View (POV) of the user. Commonly as "Jobs to be done".

## Customer/Consumer Circumstance
How can we define customer/consumer in terms of who they are and their circumstance and in the form of personas?

## Solution Attributes
What attributes do we need to deliver to the customer? Which of our customer problems are we solving with these attributes?

## Competition and Barriers
What are the competitive alternatives to getting the job done and barriers to getting it done well?

## Solution
What is the desired product and/or service that delivers on the key customer attributes?

## Channels
What are the key channels the company uses to reach its customers?

## Payment Structure
What is the price and how does the customer pay for the solution?

## Key Resources
What are the key resources needed to define the CVP? People, technology, partners, funding.

## Key Processes
What are the key processes needed to deliver the CVP? R&D, marketing, manufacturing.

## Revenue Streams and Adoption
How does the company generate cash from each customer segment when considering payment "volume"?
How do adoption dynamics impact the revenue stream?

## Cost Structure
What are the costs (direct and overhead) incurred to operate the business model?

## Risks and Assumptions
What are the top three risks and assumptions?

## Profit Formula
How does the company generate cash from each customer segment when considering payment "volume"?
FEI teams focus on the wrong customers
People who need new product

Standard Products Available

lead users create custom solutions
early adopters
market trend
routine users
laggards
Most envision the prototype as a fully featured solution
The initial prototype is often much more minimum than you think.

Courtesy of IDEO
...and in conclusion

Lean start-up should be used to manage transformational innovations in large corporations
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Implementation

Lessons Learned

Focus on the problem you are solving
Reframe it as a POV
Don’t confuse the solution with the solution attributes

Focus on lead users and early adopters NOT routine users
Use the FEI$_{canvas}$ for transformational innovations

Embrace very early prototyping as a collaborative and communication tool
www.frontendinnovation.com

Lean startup