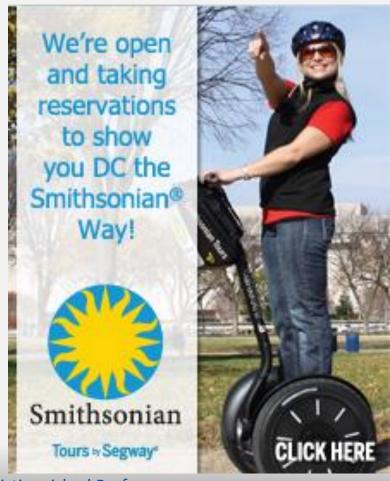
Starting New Ventures 64-361.202

Chap 3 Segway: A Case Study in Lack of Due

Diligence





Segway – Hailed as New Form of Transportation

- Code Name: Ginger
- Intense Hype and Mystery
 - Anti-gravity?
 - Personal helicopter?
- Dec. 3, 2001 unveiled on Good Morning America
- John Doerr: VC: As important as the internet
- Steve Jobs: Cities will be built around it.
- Factory could produce 40,000 per month
 - (actual was less than 300 /mo. or 6000 in 21 months)



1 Hour Segway Tour of the Boston Harbor Walk.



Dean Kamen



- Attended WPI, but dropped out to invent
- invented the first drug infusion pump and started a company, AutoSyringe, to market and manufacture the pump.
- His company DEKAResearch (NH) patents
 - technology used in portable dialysis machines,
 - an insulin pump (based on drug infusion pump technology)
 - an all-terrain electric wheelchair known as the iBOT
 - 440 Total Patents in his name
- Founded FIRST in 1989
 - For Inspiration and Recognition of Science and Technology



Segway



- The Segway technology was adapted from his brilliant gyroscopic wheelchair.
- Segway was a technological tour de force
- The technology worked perfectly and exactly as designed and advertised.
- It passed extensive field testing and environmental stress testing
- What happened?



Feasibility Analysis –lets do our own.

- Some things are easy —there are no competitors
- Founder is brilliant and experienced.
- This is an entirely new market and there is no easy historical trend
- Consider Item 5 in First Screen part 1
 - Strength of Business Idea
 - 5. The degree to which the idea requires customers to change their behavior! SUBSTANTIAL!



Regulatory Issues

- Is this a motor vehicle?
- May it travel on roadways?
- May it travel on sidewalks?
- Where do you park it?
- How do you get it from place to place over longer distances?
 - Car? Train? Bus?
- Are cities designed to accommodate this?
 - (Did Steve Jobs REALLY believe that cities would be redesigned for this?)
- Who represents the potential market and how large is it?
 - Who do you target first?
- What happens when you run out of charge?
 - Re-charging stations?



Answers were hard to find.

- And then there are the safety issues.
 - Driver safety?
 - Training?
 - Pedestrians in the area.
 - -Some cities outlawed it immediately! (i.e. San Francisco)
- Would you rather try to drive this in New York City traffic or on a crowded New York City sidewalk.
 - What about an LA Freeway?
 - On a snowy Massachusetts street?
 - In a rainy Portland road?
- Requires two hands and thus cannot be used by anyone that needs to have a free hand.



And What is the Market?

- Markets probably exist, but were not targeted.
 - They targeted everybody and nobody
 - Price was too high at \$4950
 - Did financing pressure force the broad target?
 - Why not do a competition to pick a first city?
 - Get the leaders on your side.
 - Build publicity and excitement
 - Create envy in other cities.
 - Ramp up slowly and create an artificial shortage?
 - Find a target group
 - Police
 - Tourists
 - Military, etc.



Sold

- In 2010 Segway was sold to a British Millionaire –Jimi Heselden
 - He died in a Segway accident on September 27,2010
 - Heselden, 62, apparently fell off a 30-foot cliff into a river while riding a Segway near his home in West Yorkshire, UK. Police found Heselden's body and a Segway personal transporter in the river.
 - Police and security organizations have become the major purchasers.







Unexpected Result

 The technology created to save the world, by saving energy and re-making cities is now mainly a police and military technology!



Questions

- Speculate as to why they failed to do a feasibility analysis.
- Tell how you would have done the feasibility analysis.
- How could Segway have done a better job to prepare the market for its introduction?
- Are there markets that you would have targeted first? How?
- If you were made CEO of Segway tomorrow, how would you try to reposition it? Or is it simply a lost cause?
- How does such a brilliant guy make such a huge mistake?