The Business of Software

DEPARTMENT OF COMPUTER SCIENCE
University of Toronto
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THANK YOU FOR INVITING ME

Agenda

- Software Industry
- Business Environment
- Opportunity Scale

Wrap Sheet – Industry & Entrepreneurial

- International tech entrepreneur and investor in a portfolio of U.S. based startups
- Co-founded and exited from four successful startups
- Executive career in brand name Silicon Valley tech companies (Oracle, Sun Microsystems)
- Serve as an advisor to U.S. Government Departments and agencies on export and repatriation control policy for advanced supercomputing technologies.

Wrap Sheet - Academic

- Lecture at Rice University's Jesse H. Jones Graduate School of Business
- Member and sponsor of the Rice Alliance for Technology and Entrepreneurship in Houston Texas
- Sessional lecturer, student mentor, and an advisor for Special Projects and Entrepreneurial Initiatives at the University of Toronto's Department of Computer (DCS Innovation Lab, Watson Challenge Advisor, Co-Chair DCS Entrepreneurial Committee
- MBA – Rice U, Engineering – U of T

Course Objectives

The objectives of the course is to provide students with a distinct competitive career advantage in the startup ecosystem or in industry by establishing an understanding of;

- The tech business environment in general and specifically the unique aspects of the software sector
- The validation techniques in launching a viable software venture as well as the business fundamentals and concepts of using simulation and forecasting models to support sustainability claims
- How to develop, present and critique business proposals for software ventures

Upon completion of the course material students will have had direct exposure to the processes involved in commercialising innovation into an investable venture.

Course Description

Students are introduced to the contemporary software industry and learn the key components necessary to commercialise tech innovation in a startup ecosystem or an established company (cite: startups, IBM, Samsung)

- A combination of lectures, guest speakers, evaluation panels, tutorials, assignments and a test

- Teams of four are expected to develop an investable business plan and present a proposal for launching a sustainable software company to a judging panel

Guests speakers include active entrepreneurs, investors and industry executives with experience and current perspectives on the software industry

Software Industry

- Although the computer (not software) industry is 100+ years old the word software was coined in the mid 1950's and started hitting the English lexicon in the 1960's when software became commercialised sparking the software industry
- In the early years of the computer industry manufacturers bundled software with mainframes as a packaged deal
- Following the unbundling of software in the late 1960's and the dawn of personal computers in the 1970's the software industry took off as new firms entered the market with packaged applications and services
- Since then software has touched every aspect of our lives in every corner of the world and yet we have barely scratched the surface
- Software is arguably the most effective tool since the rock!

Software Industry Facts & Figures

- Globally the consumer (B2C) and business (B2B) expenditure on software, hardware and services is estimated to exceed $1.5 trillion (Canadian GDP) out of the $70 trillion of the commercial activity worldwide

- Software and services make up about two-thirds of this expenditure

- Software market is large and highly globalised
  - US is largest software market (46%) however more than half of the software market lies around the world
  - Over 4 billion units of software shipped in 2013

- Employs over 4 million people worldwide - average salary $85,000+ , roughly 190% of national average

Software Industry Facts & Figures

- The more software we create the more software we need especially as everything is becoming intelligent and actuated through automation
- Gross margins of 85% are common – compared to construction 30%, food & beverage 28%, oil/gas 56%,
- 2013 sector grows an average of 5% outperforming the economy by about 2.5 times
- In the last 10 years announced mergers and acquisitions totaled more than $100 billion this trend
  - Google alone has spent more than $28 billion on 163 companies since 2001

Accelerators of the Innovation Ecosystem

- Chip manufacturers have been roughly doubling the number of transistors on an affordable integrated circuit every 18-24 months at the same price point
- This along with component miniaturisation, commoditisation, and multi-core integrated circuits, have driven the advancement of infrastructure, software development tools enabling startups to speed up the proliferation of innovation.
- Successful small software ventures that can develop into successful large software companies can often be started with almost no capital investment
- Acquisition of startups and small companies are credited for catalysing significant incremental volumes of revenue through the larger companies that acquired them (i.e.: Android)

Innovation Today

- Innovation can come from anyone and any corner of the world - underdeveloped regions can and have made contributions due to access to information and the Internet
- It can come from startups, small-medium enterprises, industry and academia
- Innovation has to solve a clear and defined significant problem – the bigger the better
- It's a money game and it always has been – investors and companies are looking for a ten fold return on their investment and it has to address a market of greater than a billion dollars or frankly no one cares.
- Businesses and startups fail because of lack of customers usually attributed to incorrectly forecasting the market size and who the target customer(s) is/are.

Startups & Founders by the Numbers

- In 2012 over 500,000 were launched in the US
- Startup Founders age profile
  - 20 (<1%), 20-29 (34%), 30-39 (40%), 40-49 (20%), 50+ (5%)
- Average funding per startup $1.5 million, average value of a funded company $22 million
  - Hottest investment sectors today, Internet (27%), healthcare (27%), mobile/telecom (14%)
  - 75% of all startups fail and 90% of all products fail
- 68% of entrepreneurs believe the odds of business succeeding are better than others in their sector. Only 5% their odds are worse

Anatomy of an Investable Venture

Thinking outrageously big is a must to play in the big leagues

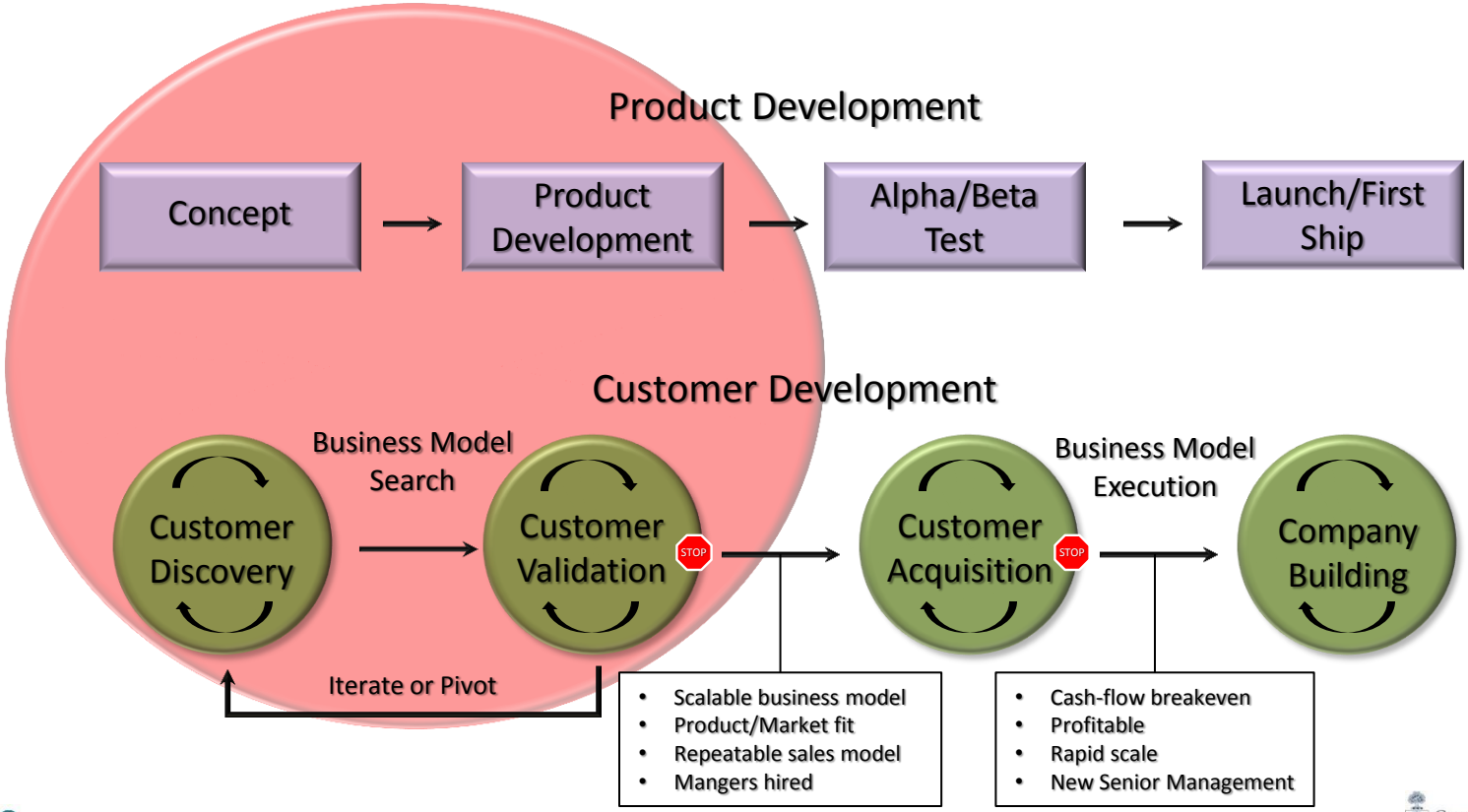
- Industry disruptive or creating a whole new industry with a solution that addresses a massive perceived or yet to be perceived need (i.e.: search, music, social)
- Today the rule of thumb is that you should be looking at a market worth in excess of $1 billion along with adjacent markets to expand into
- Investors will be looking for a return of 5-10 times what they originally invested
- There should be an order of magnitude in improvement in relation to your closest direct or indirect competitor

Anatomy of an Investable Venture

Other considerations include

- Strength of the business model
- Distinct competitive advantages (proprietary IP)
- Viability of founding team (dedication, background, track record, chemistry)

In the Grand Scheme



QUESTIONS

THANK YOU