

Career Planning and Leadership Development

Technological Entrepreneurship for Science Students

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Technology Entrepreneurship

“From Idea to Exit”

Objectives:

- Develop a solid knowledge and understanding of entrepreneurship and be able to transform it into practice
- Obtain global perspective of entrepreneurship and its contributions to regional development and economy growth
- Explore various aspects and different stages of technology ventures life cycle (innovative startup companies)
- Understand entrepreneurial leadership perspective and build leadership skills
- Develop abilities to create business plan for technology venture "from idea to exit"

Technology Entrepreneurship

Topics to discuss

- What is technology entrepreneurship/who is innovator entrepreneur/leadership
 - Entrepreneurship contribution to regional development and economic growth
 - The unique and challenging environment of technology venture
 - Technology venture life cycle (start-up companies)
 - Networking and business networks/Guanxi
 - Intellectual properties and asset protection
 - Commercialization of university R&D
 - Global perspectives and global impact
 - Financing technology venture
 - Social responsibility
 - Value creation
 - Ethical issues
 - Legal issues
-
- Creating **BUSINESS PLAN** for tech venture
 - Entrepreneurship leadership perspective

What is Technology Entrepreneurship?

Why become entrepreneurs?

Why should engineering and science students
study entrepreneurship?

What qualified me to stand in front of you?



Digital Equipment Corporation (DEC)
Software development/Electronic Commerce



AST computers (**Albert Wong**, Safi Qurashi, **Tom Yuen**)
Business applications/analysis and development



Western Digital WDC
World Wide Electronic Commerce Strategy deployment

Safeskin - IT Manager/Sold M&A transaction to Kimberly Clark-\$150M

Broadcom-IT application Manager/M&A -Record setting NASDAQ IPO



AppliCure Technologies – Tel Aviv - IPO
TradedBen – ☹



Ben-Gurion University of the Negev
Bengis Center for Entrepreneurship
& Hi-Tech Management
Guilford Glazer Faculty of Business & Management

Ben Gurion University-School of Business & Management
Bengis center for entrepreneurship

Angel investor – early stage
Member advisory boards

What is Technology Entrepreneurship?

Why become entrepreneurs?

Why should engineering and science students
study entrepreneurship?

What is Technology Entrepreneurship?

- Taking the initiative to generate an innovative idea
- Organizing it and act to create and manage a venture
- Transforming it to sustainable business entity
- Assuming the risk, responsibility, and reward

All the activities of mankind were once a dream

Why become entrepreneurs?

Why should engineering and science students study entrepreneurship?

Fulfillment – Implement your own ideas, combine leadership and technology skills

It provides the ability to be involved in the total operation of the business:
from concept to design and creation, from sales to business operations and customers

Prestige of being the person in charge

Enjoy the freedom to manage your own career, schedule, desire
(for people who do not like bureaucracy, large organizations, supervisors)

Forced by the conditions/economy (Can't find a job)

Possibility of achieving significant financial rewards

Entrepreneurs contribution to the economy

Entrepreneurs create new businesses, generate new jobs
(for themselves and those they employ)

Change the way people live and work

- Increase competition
- Increase productivity
- Improve the quality of life
 - Improving communications
 - Providing new forms of entertainment
 - Improving health care

Small technology companies produce 13 times
more patents per employee than large firms

Are entrepreneurs born or cultivated?

Can entrepreneurship be learned?

Successful entrepreneurs come in various:
ages, income levels, gender, race, education and experience

Research indicates that most successful entrepreneurs share certain personal attributes:

- Self-confidence
- Creativity
- Dedication
- Determination
- Flexibility
- Passion
- Focus

They dare
Demonstrate leadership

Are entrepreneurs born or cultivated?

Can entrepreneurship be learned?

Every entrepreneur has these qualities in different degrees

The most important strategy is to be aware of strengths and weaknesses and

build on them

But what if a person lacks one or more?

- Many skills can be learned
- Some can be hired/purchased/outsourced

Go It Alone or Team Up?

Potential advantages:

- Team members share decision-making and management responsibilities
- Provide each other emotional support/help reduce individual stress
- Lower risks – back up
- Combining monetary resources
- Team interactions often generate creativity - “brainstorm” solutions
- Complementary expertise/skills - Engineering/Marketing/Management/Finance

Studies show that:

Investors seem to prefer financing new businesses started by more than one entrepreneur

Potential disadvantages:

- Shares ownership
- Shared control in making decisions – slow, disagreement
- Risk of working with partners with bad habits or poor judgments

Go It Alone or Team Up?

What skills do you need?

When do you need the people?

Development

Management

Production

Marketing

Support

Finance

Legal

Sales

HR

PR

QA

Understanding the Characteristics and Challenges of Technology Venture

Uncertainty/unknown

IP – Intellectual property

Protection of Intellectual property

Long duration of development period

Skilled employees – not easy to find/high cost

Dependency (on other technology) – design win

Frequent changes in standards/technology/interfaces

Leadership skills and capabilities – ability to sell a dream

Leadership skills and capabilities - multidisciplinary/multitasking

Leadership skills and capabilities - flexibility/roller coaster environment

High Risks/High Costs/High Rewards
“Liability of newness”

Choosing a Product and a Market

- The idea doesn't have to be revolutionary
- There are many ways to look for ideas:

Read a lot, talk to people, consider such questions as:

- What limitations exist in current products and services?
- What would you like that is not available?
- Where is the pain?

- Are there other uses for new technology?
- Where is the value creation?
- Is there a potential ROI?

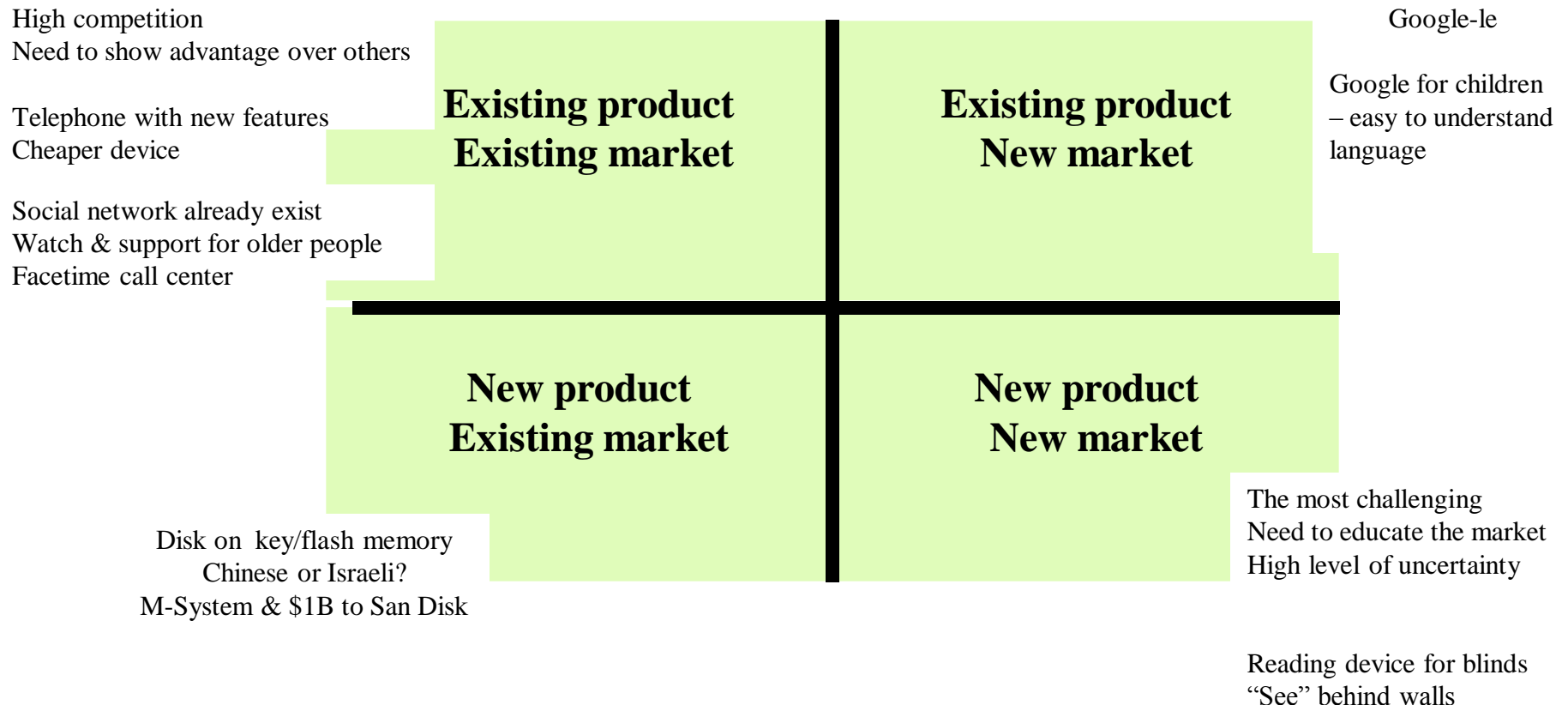
Choosing a Product and a Market

Business ideas usually fit into one of four categories

| | |
|---|--|
| Existing product Existing market | Existing product New market |
| New product Existing market | New product New market |

Choosing a Product and a Market

Business ideas usually fit into one of four categories



Choosing a Product and a Market

Many factors need to be considered

- *Does it interest you / Love to do it / Do you have the passion*
- *Do you have the knowledge, skills, and capabilities*
- *Market readiness – Do they really need it? Are they ready for it?*
- *Market potential – Where is the market? How big?*
- *Financial resources – What does it take to built and introduce it?*
- *Competition- who are they? What do they do? Can I do better?*

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Why would a consumer choose us
(Why they buy from us or use our product/service?)

What distinguishes us from others? What make us different?
Can we stand out from our competitors?

Can we provide something that others can not?

Financing technology venture

- Long development cycle
- High cost of skilled workforce
- Can not get traditional loan/banks
 - banks no not have expertise to evaluate venture's value/risk
 - banks can not risk their customer saving money
- 3Fs – Family, Friends, Fools
- Government programs/Universities
- Angel investors
- Venture Capital firms (VCs)
- IPO/M&A

Form of Business

Sole proprietorship - Individual entrepreneur owns the business and is fully responsible for all its debts and legal liabilities

Partnerships - Consists of two or more people who share the assets, liabilities, and profits of a business

Corporations - Legal entity that has a life separate from its owners

- Divided into shares or stocks, owned by one, a few, or many
- Ownership is based on the percentage of stock owned
- Can be sued, acquire and sell property, lend money
- Can more easily obtain investment and raise capital by selling stock
- Provide more protection from liability than other forms of business
- Their potential for growth is unlimited

However, corporations are more complex and expensive to set up and are usually subject to a higher level of government regulation

Creating Business Plan

Vision, Capabilities & Milestones

A written document that provides information about the proposed venture

It presents the product or service being offered,

Provides analysis of market and competition,
the marketing strategy,
the operating plan, and
the management

It forecasts expenses, revenue, and profit

Creating Business Plan

Vision, Capabilities & Milestones

Reasons for writing a business plan:

Creating Business Plan

Vision, Capabilities & Milestones

Reasons for writing a business plan:

- It serves as a communication tool with stakeholders such as partners/employees/investors/customers/suppliers/etc
- Assist management in goal-setting & long-range planning
Set milestone for progress, set measurements
- Attract investors and get financing
- Help stay on track/focused

Creating Business Plan

Vision, Capabilities & Milestones

Some entrepreneurs create two plans:

- a planning document for internal use
- a marketing document for attracting outside investment

Business plan can be 10 - 30 pages in length/no rules

The language should be free of jargon and easy to understand

Uses good visual formatting, such as bulleted lists, tables, illustrations

Strong on facts

Leadership
perspective

Enthusiastic

Business plan Structure

The basic elements of a standard business plan include:

- Title Page/ Table of Contents
- Executive Summary
- The problem
- The solution
- Company description
- Team/organization – management, skills, experience, capabilities
- Product/Service – technical details/protection
- Markets/size/potential - Competition
- Business model – how we make money
- Marketing and Sales Strategies
- Operating Plan
- Financials – How much money is needed and for what/stages
- Financials – revenue /expenses forecast/breakeven point /profit
- Supporting Documents

Business plan topics to address

- What problem it solves/What value added
- Solutions / Forming concepts
- Validating technology feasibility - Proof of Concept (POC)
- Building a team – recruiting needed skills
- The team – strengths and weaknesses
- Formulating business model – How the venture will make money
- Funding – Raise capital (finance the activities throughout different stages)
- Developing product/service
- Protecting venture's intellectual property
- Marketing & market penetration-go to market strategy/crossing the “valley of death”
- Managing growth - **Create value**/ Build equity
- Venture valuation (market value)
- **EXIT**

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