

The Importance of Entrepreneurship



Entrepreneurship works –

- In business formation
- Inside existing companies
- In academic R&D
- in life in general



The Importance of Entrepreneurship The Role of Universities

Massachusetts Institute of Technology

- One in four faculty involved in technology venturing
- 28.500 companies founded by graduates and faculty since 1861
- Employees at MIT– companies ~ 3.300.000
- Turn-over of MIT- companies > \$2.000Billion/yr
(Denmark, GNP app: \$ 350 Billion/yr)
- If a nation: MIT Business Community the 11th largest in the world

Source: Mandag Morgen Aug. 2010

Entrepreneurship teaching and training in Further education:

- A global trend
- Adopted by all significant universities and engineering schools
- Designed to cater for
 - Career development
 - Business formation
 - Business development
 - Tech trans
- Also a cost efficient industrial development activity:
"The prevalence of High Expectancy Entrepreneurial Activities varies significantly and directly with national levels of entrepreneurship teaching and training in further education, and inversely with government regulation on new firm entry. All other Entrepreneurial Framework Conditions seem to have little or no influence on the High Expectancy Entrepreneurial Activities." [Erkko Autio; Jonathan Levy, longitudinal GEM study, 2000-2007]

DTU course 42705: Knowledge based Entrepreneurship

*Develop your passion for opportunities:
The entrepreneurial **MINDSET***

*Improve your executive skills:
The entrepreneurial **SKILLSET***

Entrepreneurial Motivation

- The ultimate demonstration of your power and skills
- Great fun and lots of interesting work
- A catching lifestyle
- An independent lifestyle
- A team sport with highly motivated friends
- Great expectations, great perspective
- To make a Gazillion?

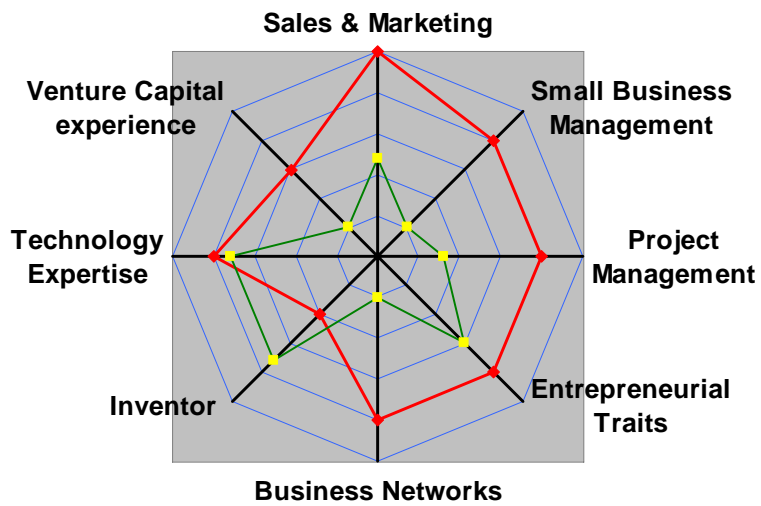
**It happens - but
Get Your priorities right – and focus on company
development.**

The Entrepreneur

- Extrovert
- Proactive
- Energetic
- Initiator
- Capable of – and quick in - making decisions and enforce them (*a DOER rather than a PLANNER*)
- Personal integrity
- Stubborn
- Ressource-demanding
- Unpatient

A Napoleon A charming bastard!

The IDEAL Entrepreneurial Team



9 DTU Management Engineering,
Technical University of Denmark

The Birth of an IT Venture



1

The Ideal Preconditions

- **Up-to-date education**
- **Domain knowledge**
- **Entrepreneurial skills**
- **A positive life situation**
- **A global perspective and a good command of English.** (BE-standard OK)

Succes factors

- **QUALIFIED TEAM** including all experiences and competences needed to complete the task
- **COMPREHENSIVE UNDERSTANDING of the CUSTOMER** – reflected in products and services
 - Start in markets in rapid change and transition
 - Market pull versus technology push
 - Methodical preparations before launch
 - A readily understood and logic business rationale
 - Enough CASH to produce commercial results
 - Product development plans on strategic level
- **GOOD MANAGEMENT** in all aspects

From the Bankruptcy Statistics

- **Sales failed** *The 80% is not the market!* **39%**
- **Beaten by competitors** **21%**
- **Operating costs too high** **11%**
- **Overhead costs too high** **4%**
- **Bad depts: customer bankrupt** **9%**
- **Production or technology fails to comply** **4%**
- **Any other reason:** **12%**
 - Mess and disorder
 - Inappropriate localization
 - Fraud
 - Health problems, natural disasters etc.



Massachusetts Institute of Technology

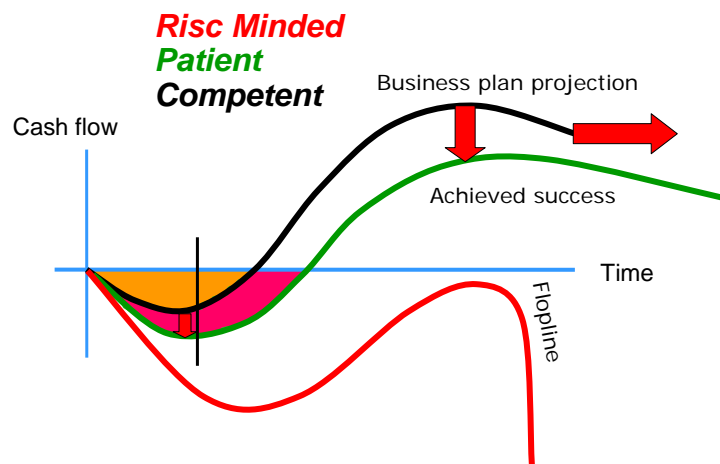
The MIT Recipy

- **Where is the Pain?** (No Pain = No Sale = No Company)
- **What is your value proposition** (VP)
- **Quantify your value proposition** (QVP)
- **Who is your customer** (who is your jury)
- **Why would he or she buy** (Pain X Value breaks Barriers)
- **How much is he or she willing to pay?** (VP)
- **Practice your Elevator Pitch**
before meeting your customer/investor

Financing a High-Tech High-Growth Start-up

Capital: for what?

Business Development!



The entrepreneur's most important Capital Sources

- **Your own bloody money**
- **FFF**
- **In Kind** Family, Friends & Fools
- **Your first customer:** The more pain, the better
- **Investors' money** If your business potential and -opportunities depend on speed and volume.
Preconditions: scalability, exitability and obscene growth potential. (the unfair competitive advantage)

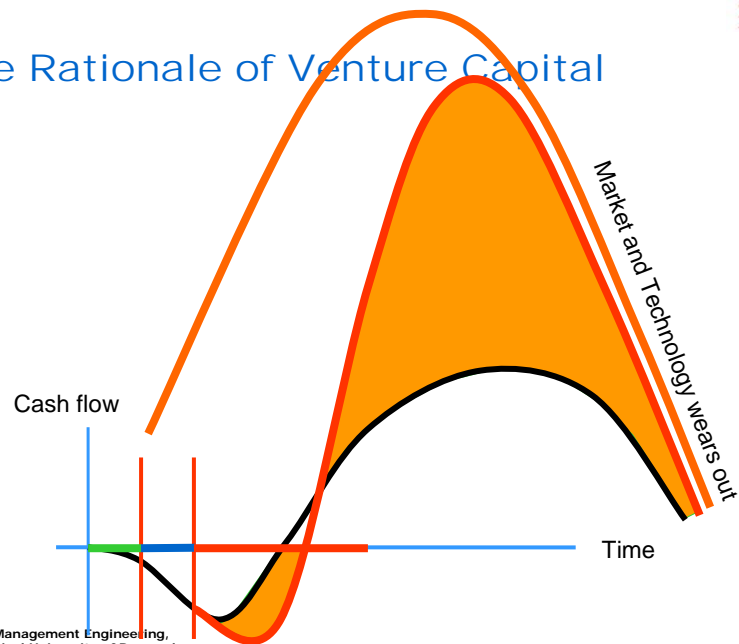
EXIT

The inherent consequence of equity financing

Investor sells ownership (shares) and pull out

- | | |
|---------------------------------------|------------------------|
| • IPO: Initial Public Offering | Rare but rewarding |
| • Trade Sale | Acquisition |
| • Management buy-out/buy-in | Not best but ROI > 0 |
| • Earn-outs | Even worse but ROI > 0 |
| • Repayment of loans | Not sustainable for VC |
| • Enforcing preferences | Cutting the loss |

The Rationale of Venture Capital



19 DTU Management Engineering,
Technical University of Denmark

Investors

Pre-seed

- FFF: the Business Angels
- DK: Innovation environments
- US: Small Business Agency (SBA)

Seed – Early Stage

- SEEDCapital Denmark
- Business Angels
- Venture Capital companies (VC)
- Vækstfonden

Second round, follow-on

- VC and Corporate Venture Capital
- Credit Institutions
- Banks
- Vækstfonden
- Some stock exchanges

20 DTU Management Engineering,
Technical University of Denmark

Investor's Criteria for Interest

5P

- **Pain/value proposition** *Is it a disruptive technology.*
- **Perspectives** *Market size/share exit-opportunities*
- **People** *Track records, competencies, ambition*
- **Platform** *Proof of principle, concept, value, pull, profit*
- **Process** *The project according to the Business Plan*

Comments:

- Must be a Venture Case: ROI > 10 in less than 5 years.
(126 rule applies too: 100 mio in T/O, 20% profit in less than 6 yrs)
- The team is the single most important precondition
- Platform: the more commercial proofs, the better.
Commercial proofs reflect risk and competence

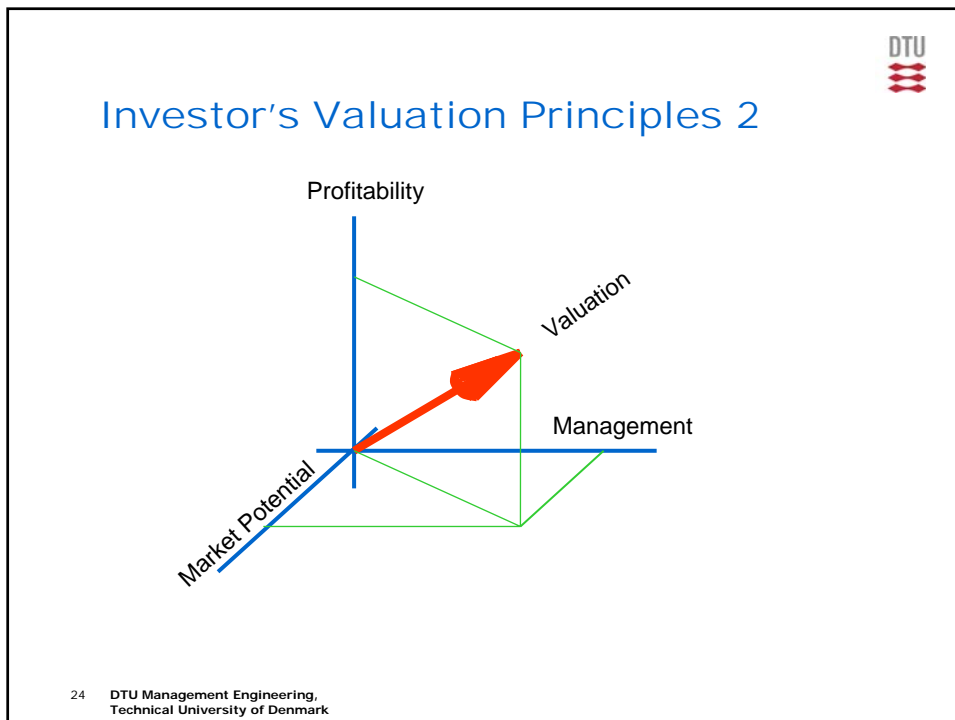
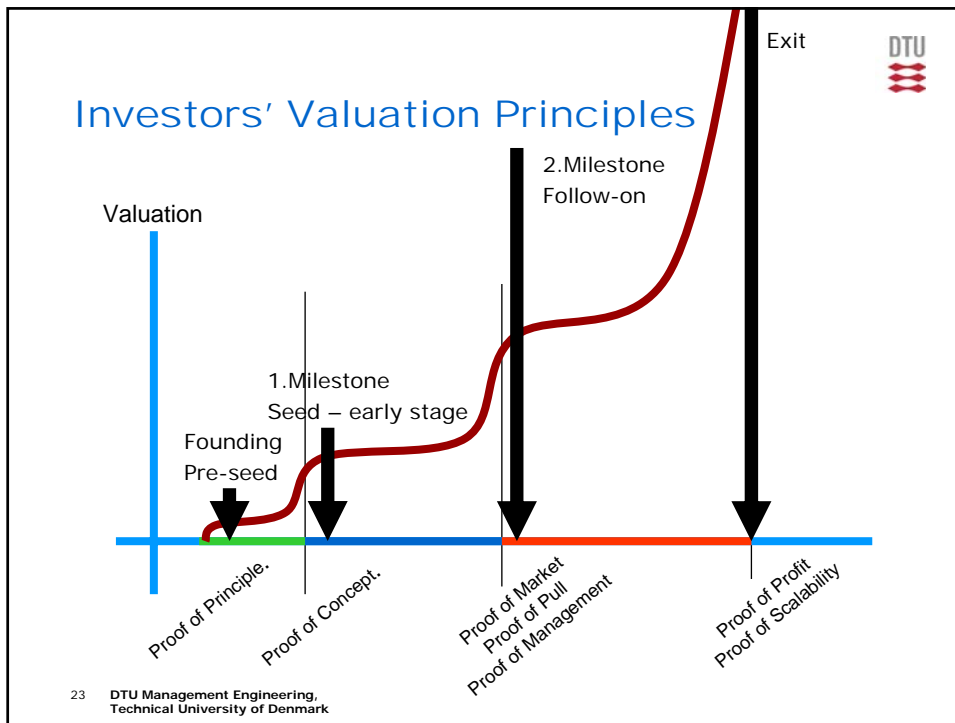
Dancing with Woolves

Or how to deal with investors

- **Capital always Wins**
- **Your counterpart has done this many times**
- **Your counterpart is not depending on you**
- **Your counterpart has lots of time**

Negotiating tactics:

- **Freedom of Maneuvering**
Never enter negotiations without having fall-back positions.
- **No major payments that jeopardize your project**
Your investor will find out at "due diligence"
- **Don't go for money unless you can do without**
Make it clear from the beginning that you are not for sale at any price
- **If you are asked for exclusivity: it costs** (all claims cost)
Exclusivity reduces your freedom of maneuvering
- **Consider to get more investors into the game – transparently**
- **The more proofs before investment – the better**
- **Strategic partners also an asset**
- **Get yourself a management team and a battle-proven consultant before opening the game**

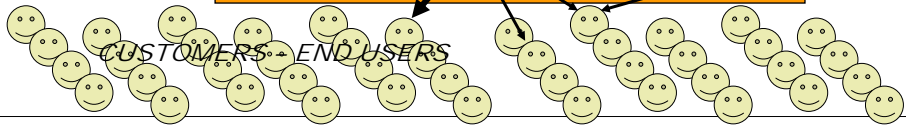
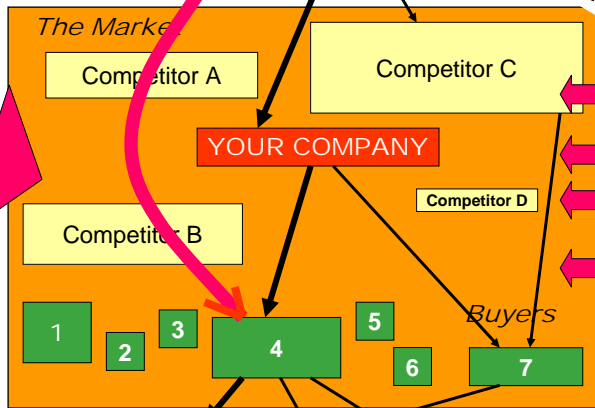


Market Analysis

Michael Porter Supplier A Supplier B Supplier C Supplier D The Substitutes



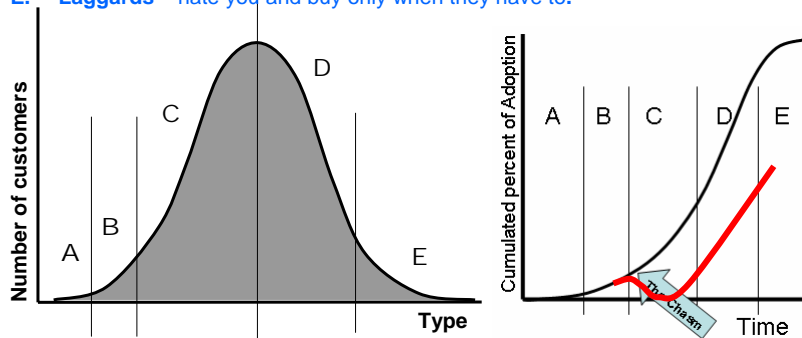
The Intruder



Market Response to new products

Thanks to [Everett Rogers](#), 'diffusion of innovations' theory

- A. **Pioneers** – love change and technology.
- B. **Early Adopters** – do too, but they are rational and particular
- C. **Early Majority** – no strong opinions, influenced by early adopters
- D. **Late Majority** – fat and lazy – and driven by early majority
- E. **Laggards** – hate you and buy only when they have to.



Bridging the Chasm: [real pain killing gets the early adopters to ring the bell!](#)

Protecting IP & Knowledge

Protecting your IP (The Protective Shield)

PATENT

Global, efficient, expensive, resource consuming

UTILITY MODEL (Poor Man's Patent)

National - local, cheaper, risky (no novelty search)

DESIGN PROTECTION

National, mandatory in certain business areas

TRADEMARKS, BRANDS

National, mandatory when leaving your niche

SECRECY

Can be cost/efficient, risky, requires secrecy agreements with employees = extra payments

NICHE PROTECTION

Patent not worthwhile

SPEED PROTECTION

Patent useless

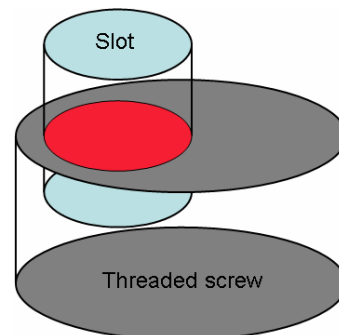
KEEP the BRAINS!

They contain your knowledge

Patents – interaction and impact

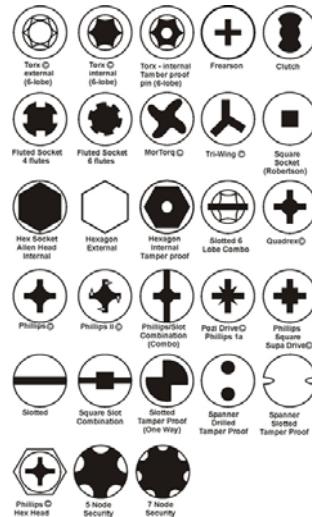
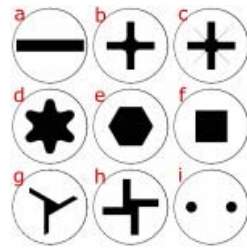
Any one **may file a subsidiary patent on an invention, which improves an existing and patented invention**

No one is allowed to exploit the subsidiary patent without the permission of the owner of the existing patent



Subsidiary patents are door-openers to cooperation and license revenues

Subsidiary patents are door-openers to cooperation and license revenues - and only Man's fantasy sets the limits



Protection Strategies, IP

1. Production

Secrecy agreements, niching, stock options, Non-compete obligations, patents, design, trademarks

2. Consultancy

Non-compete obligations, stock options

3. ICT

Speed protection, niching, stock options, secrecy agreements, lock up – and patents

4. Biotech

Patents, stock options

Management

Management is ---
--- the Noble Art of ---
---- achieving Results ---
--- by means of *OTHER PEOPLE*



Context at Work



35 DTU Management Engineering,
Technical University of Denmark

Create the Appropriate CONTEXT

1. **Develop and maintain corporate values** *like honesty, trust entrepreneurship, good behaviour, social responsibility - and a sense of business and profit*
2. **Combine values with realistic and logic objectives** *that are easy for everybody to act upon => develop a corporate culture with a high degree of self governance = set realistic winning criteria (People like to be part of a winning team)*
3. **Set your team: be specific when hiring (and firing)**
4. **Set the standards by being a role model yourself**
5. Errors and failures are side effects of independant employees. Accept them – and correct them discretely and with empathy.
6. Corporate culture needs continous maintenance and development

Personal preconditions for being a good manager:

- a. *Integrity*
- b. *Some intelligence*

36 DTU Management Engineering,
Technical University of Denmark

What is a Business Plan?

Two things:

1. The detailed rationale behind your business
2. The project plan for the business start-up

Ad 1: Information, analysis, calculations and conclusions to support the assumption that this can be achieved, and that the business project is applicable and realistic

Ad 2: There is a goal – and it is specific

There is a process described by

Actions to conclude
Resources involved

There is a time table with some milestones

There is a budget with a cashflow projection

1+2: there is a business opportunity, and this is how we will exploit it.

The contents - 1

The executive Summary:

Background - very brief – then:

- the Five P-Approach:

1. **Pain-value-jury**
2. **Potential**
3. **People**
4. **Platform**
5. **Project**

Executive summary *the single-most important section*

GetBetterQuick Ltd. is a new knowledge-based company with a high growth potential within on-line monitoring of physiological recuperation of out-patients in orthopaedic retraining programmes.

Orthopaedic retraining is costly, it requires extra and inconvenient treatment, it is often neglected for same reasons, and as a result, a high number of patients do not recuperate to full performance. It goes without saying that this is not an ideal situation.

Our system allows early discharge plus cost-efficient and convenient retraining and recuperation. Saving potentials of efficient treatment - to society, to healthcare and to patients - are high. In Scandinavia alone, the annual economic savings of a 10% reduction of bed days of orthopaedic patients, which is a realistic measure, are as high as 100 mio. €/yr.

End-users are patients with an internet connection in their homes. Customers are orthopedic departments. Users are physiotherapists and orthopaedic MDs. Buyers are hospitals and clinics.

First 3 prototype systems have finalized clinical verification successfully. Results are published.

The founding team comprises ---, M.Sc., --- MD, and --- MBA, with a background as a CEO of ---.

It is our ambition to develop GBQ Ltd. into an international market leader within internet-based on-line monitoring of patients in retraining programs in their homes.

We envisage to establish within the next five to six years, a company with an annual turnover above €25 mio., with more than 80 employees in high quality jobs and an export of innovative new monitoring systems, exceeding €20 mio. /yr.

Several major players in the market indicate good exit opportunities, and GBQ Ltd is expected to be ready for acquisition some 4 – 6 years from kick-off. Valuation could amount to 30 – 50 mio. €.

We plan a quick expansion to this level through one or two funding rounds.

Our total capital requirement is €2 mill. The founding team so far has invested €100.000

The contents - 2

• Market Research and - Analysis:

- *Customers in numbers, types, geography, etc.*
- *Competitors in types, advantages and weaknesses*
- *Market analysis f.x. acc. to Michael Porter*
- *Entry barriers (technical, legal, etc.)*

• Technology:

- *How does it work?*
- *Why is it superior?*
- *Patent situation*
 - *Freedom to operate*
 - *Efficiency of claims as entry-barriers*
- *Production issues*
 - *Bill of materials, (BOM) and unit costs*
 - *Necessary equipment, machinery etc.*

The Contents - 3

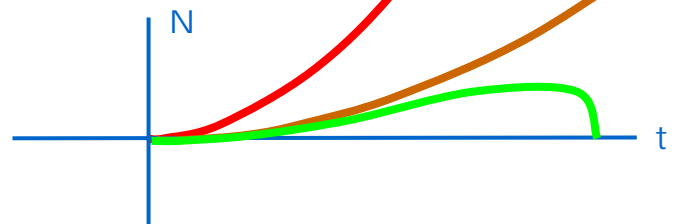
The business development scenario:

Qualified guesswork:

- Establish sales of units in a time domain, market A.
- Repeat for market B etc.

Quantify the consequences:

Goods/hours sold per Month



Spinn-out instead of License - when

1. You have a team and a dream
2. The invention has a venture perspective
3. Investors are interested
4. The university agrees + in kind opportunities
5. You have the time to prepare launch from a secured position

Lifestyle companies OK – full respect – but to an enterprising person, this is hardly an attractive alternative to a career as a researcher or an R&D engineer.