



## Knowledge based Entrepreneurship

Entrepreneurship is -  
**the pursuit of opportunity without regard to  
resources currently controlled, for the creation  
of new economic value**

*Howard Stevenson, Harvard Business School*

## 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

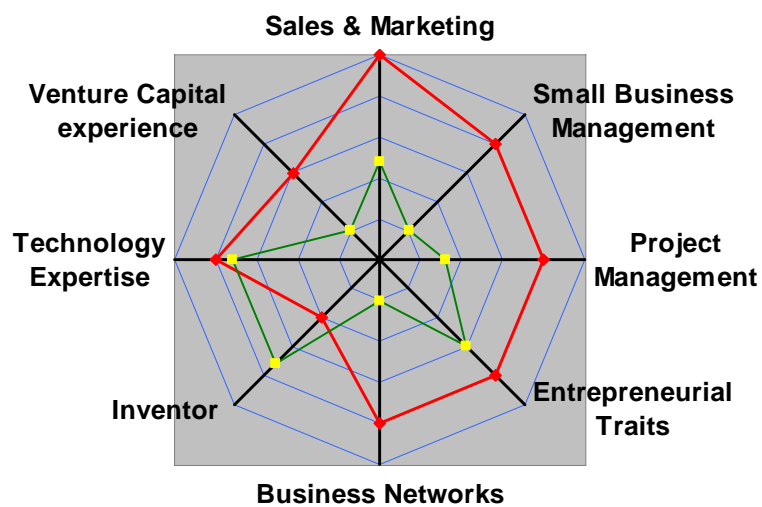
- The ultimate demonstration of your power and skills
- Great fun and lots of interesting work
- A catching lifestyle
- An independent lifestyle
- A team sport with highly motivated friends
- Great expectations, great perspective
- To make a Gazillion?

## 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***

## The IDEAL Entrepreneurial Team



## 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 Devil is in the Market Place!* **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

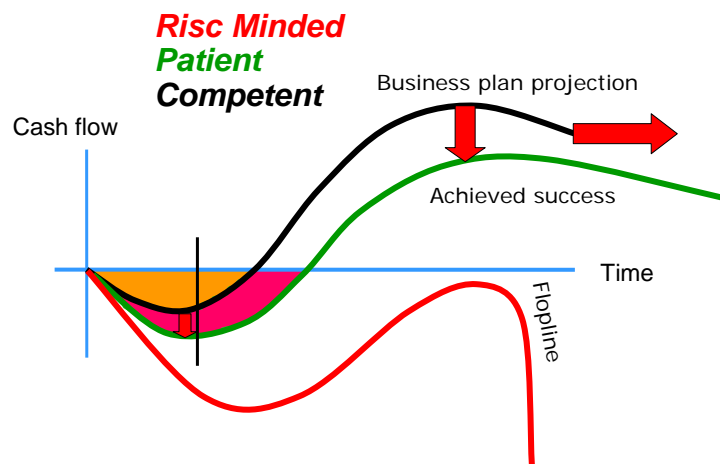
### *The MIT Recipy*

- **Where is the Pain?** (No Pain = No Gain = 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** Family, Friends & Fools
- **In Kind** Other people's resources
- **Your first customer:** The more pain, the better
- **Investors' money** If your business potential and -opportunities depend on speed and volume.  
*Preconditions: scalability, exit ability and obscene growth potential. (the "unfair" competitive advantage)*

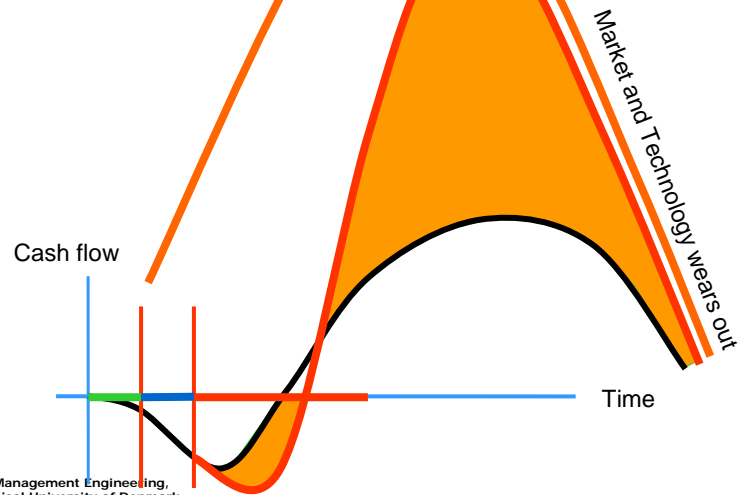
## EXIT

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



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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

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## 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

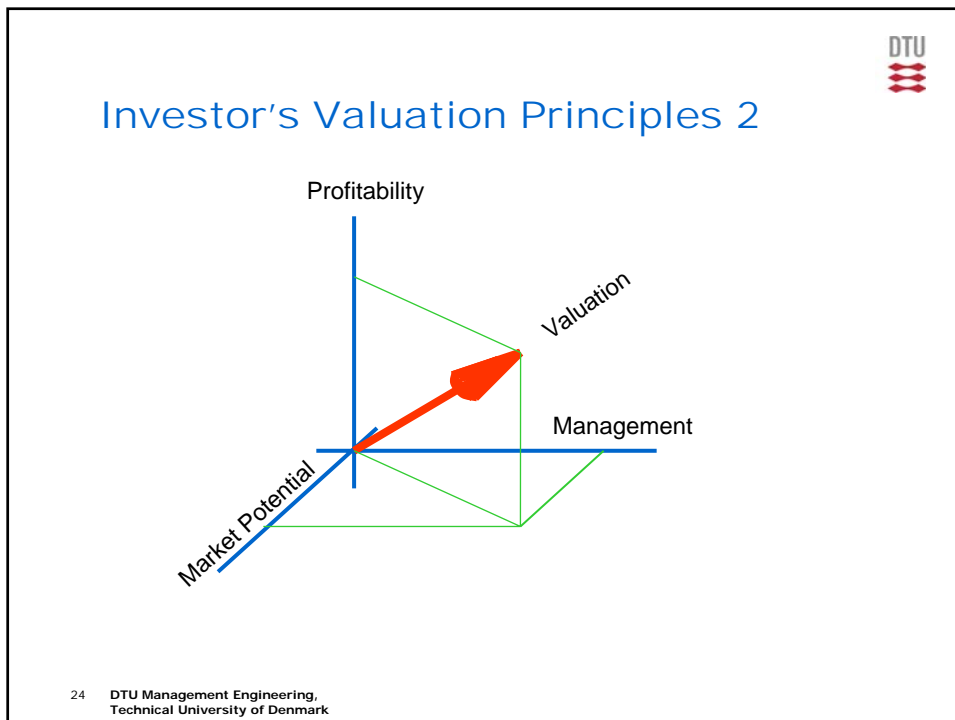
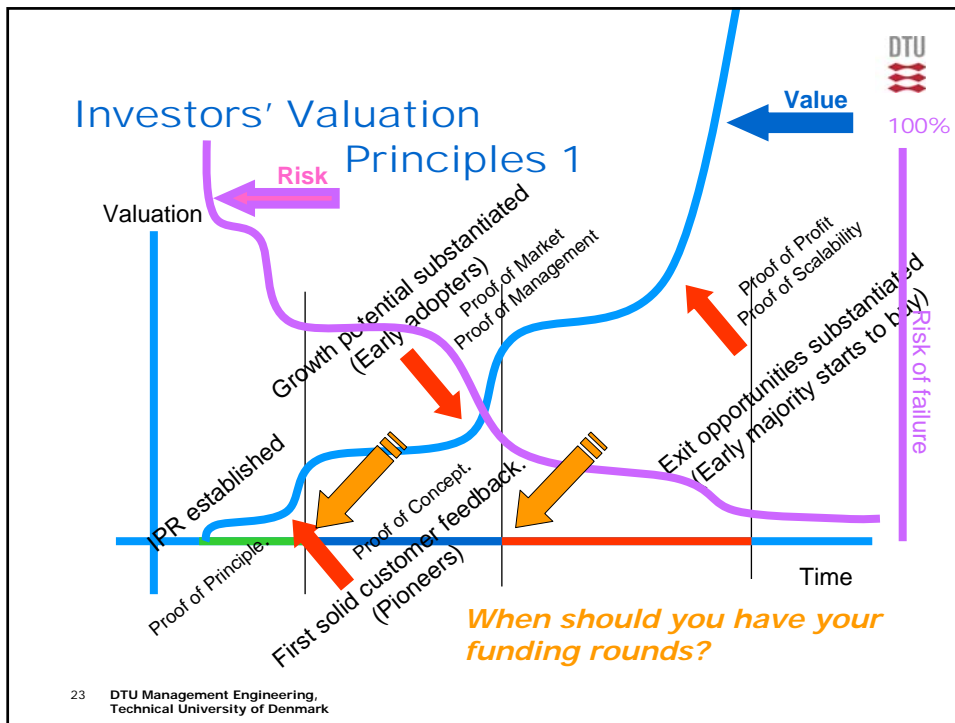
## Dancing with Wolves

### 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**

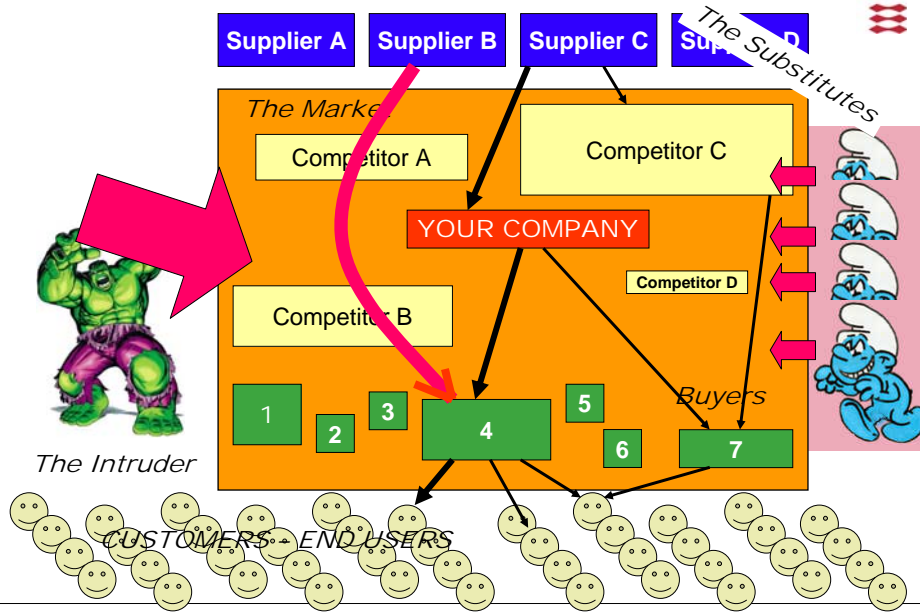
### Negotiating tactics:

- **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

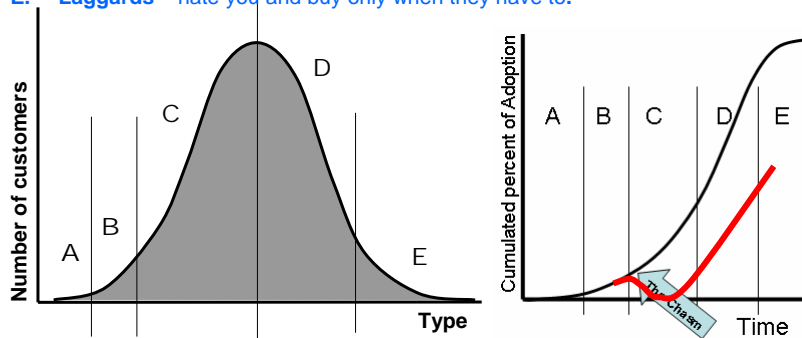
## Michael Porter's market – and the forces



## 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

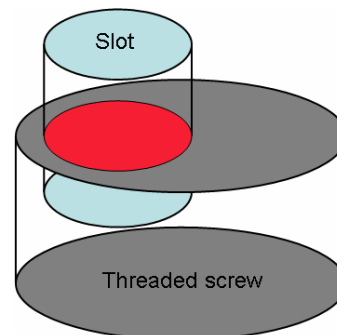
### KEEP the BRAINS!

They contain your knowledge

## Patents – interaction and impact

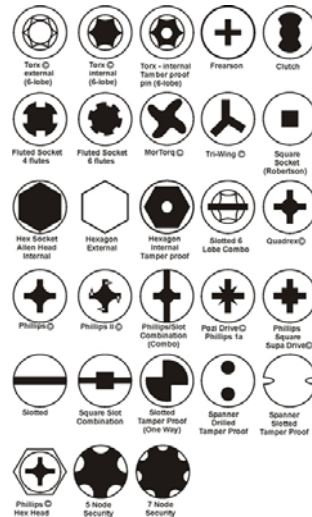
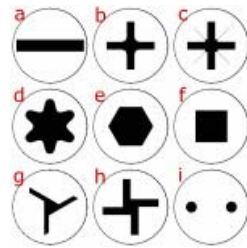
Any one **may file a subsidiary patent on an invention, which improves an existing and patented invention**

**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

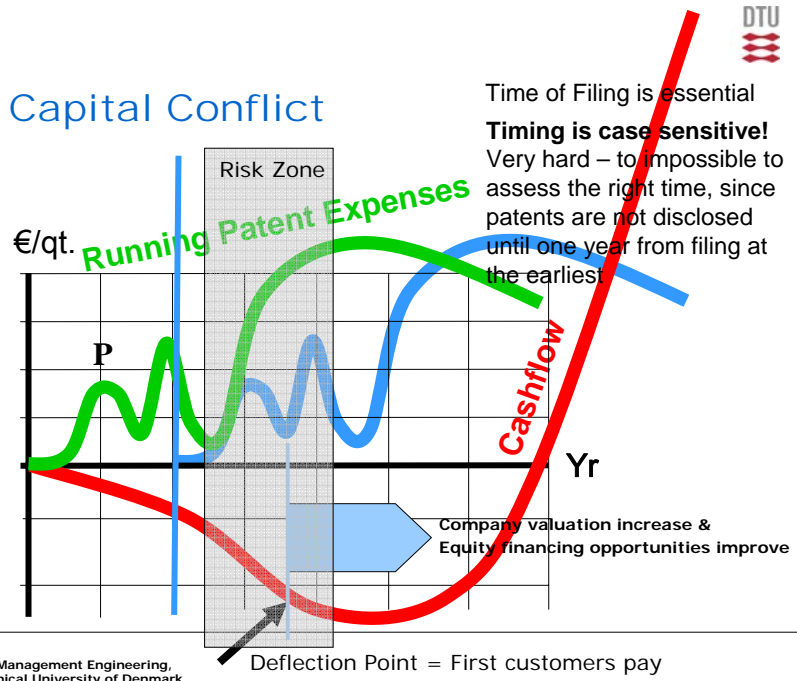
### 3. ICT

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

### 4. Biotech

Patents, stock options

## The Capital Conflict



## Management

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



## 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*

## 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

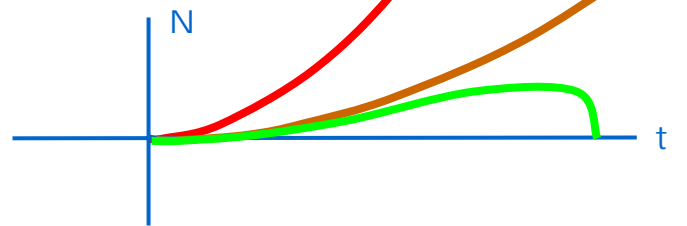
### The business development scenario:

*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



## QUESTIONS?

- Join 42799
- Starting Tuesday 10 April 2012
- 7 afternoons on business formation

Mail [johe@man.dtu.dk](mailto:johe@man.dtu.dk) to register