

Management of Innovation

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Outline

- Innovation
- Protection of innovation
- New product definitions
- Business strategies
- Management strategies
- Entrepreneurship
- Marketing concerns



Invention versus innovation



- While **invention** depends on creativity and brain storming
- Successful **innovation** requires integrating new acquaintance with multiple business functions

Innovation is the creation of new ideas/processes which will lead to change in an enterprise's economical or social potential (P. Druker, "The Discipline of Innovation", Harvard Business Review, 1998, 149)

Trade Secret versus Patent





Trade secrets

- Any confidential information which can be used in a business to afford economical advantages
- Provides an enterprise with a competitive edge and cover:
 - Technical and Scientific information
 - Financial information
 - Commercial information
 - Negative information



Technical and Scientific information

- Product information
- Manufacturing information
- Know-how necessary to perform a particular operation
- Designs, drawings and patterns
- Test data, laboratory notebooks
- Computer codes



Financial information

- Internal cost structure
- Pricing information
- Salary and compensation plans
- Price lists



Commercial information

- Customer lists
- Business plan
- Marketing strategy
- Supplier arrangements
- Customer profile
- Sales methods
- Customer buying preferences and requirements

Negative information



- Details of failed efforts to remedy problems in the manufacturing of certain products
- Dead-ends in research
- Unsuccessful attempts to interest customers in purchasing a product

Legal Requirements to protect a trade secret



- The information must be a **secret**
 - Price list on a website is not trade secret
 - General known among persons within circles of this field
- It must have **commercial values** because of its secrecy
 - Actual or potential trade value
 - Confers some economical benefits to the holder
- Owner must have considered **reasonable steps** to maintain its secrecy
 - Proper Trade Secret management programs
 - Reasonable is “case by case”

Not under Trade Secret Law



- Inventions: People who discover the secret independently without using illegal means or violating agreements or state law
- Reverse engineering: Taking apart an object or product to see how it works in order to duplicate or enhance the functionality of object or product

Trade Secret Protection Does not give Exclusivity Right

9 Trade Secret Protection Strategies

- Identify trade secret
- Develop a protection policy
- Consider employees
- Restrict access
- Mark documents
- Physically isolate and protect
- Maintain computer secrecy
- Restrict public access to facilities
- Consider Third parties

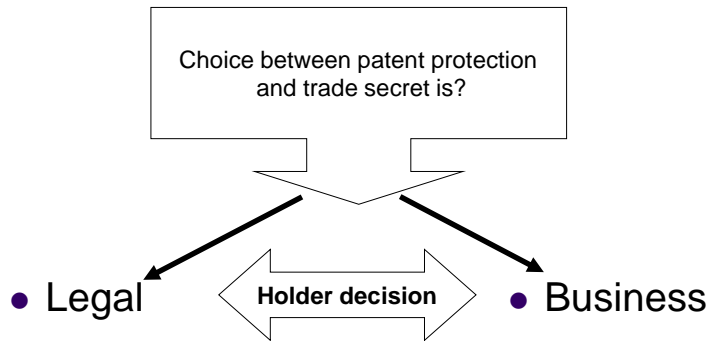




Protecting Inventions

- Trade Secrets

- Patents



Trade secret or Patents

- Trade Secrets

- Patents

- **No registration costs**

- (costs to keep secret)

- **Can last long**

- (limited to economic life)

- **No disclosure**

- but practically is disclosed (If leak out, TS is lost)

- **Fees**

- (registration and maintenance)

- **Limited in time**

- (generally 20 years but it can be invalidated)

- **Disclosure**

- After 18 months is published and if IP is not allocated, TS is lost



Trade secret or Patents



- Trade Secrets

- Patents

- **Only protection against improper use**
- **large subject matter**
 - Protection of virtually anything kept in secret by a business that gives competitive advantages
- **More difficult to enforce**
 - no defined laws in every country
 - disability of safeguard TS during litigation
- **Exclusive rights**
 - Monopoly to exploit the invention
- **Subject matter limited**
 - Requirements: new, commercial use, inventive
- **Power tool**

Strategies to be taken for innovation

- **Defensive/Passive Strategy**
 - Keeping secret
 - Non-disclosure of technical knowledge
 - Due Diligence
 - Search and evaluation of IPs of third parties
 - Publication
 - Preventing patents of third parties
- **Active Strategy**
 - Application strategy
 - Which technology and where to patent? 1- Market, 2- Place of presence of competitor, 3- Enforcement systems (legal, time and costs)
 - Enforcement plan
 - Litigation and Monopoly
 - Cooperative strategies

Pro's and Con's of innovation



Pro's	Con's
Competitive position	High Costs/longer time
Financial reimbursement	Market judgement
Reputation	Technical performance
Exclusive market	Manufacturing expertise

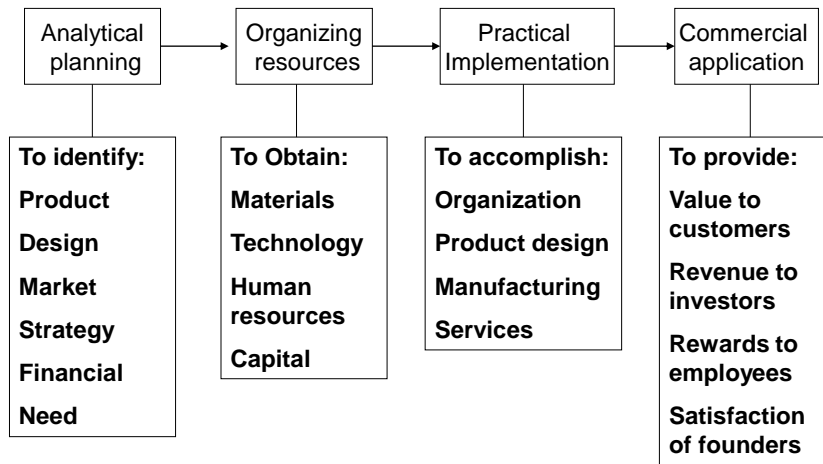
Innovative mentality



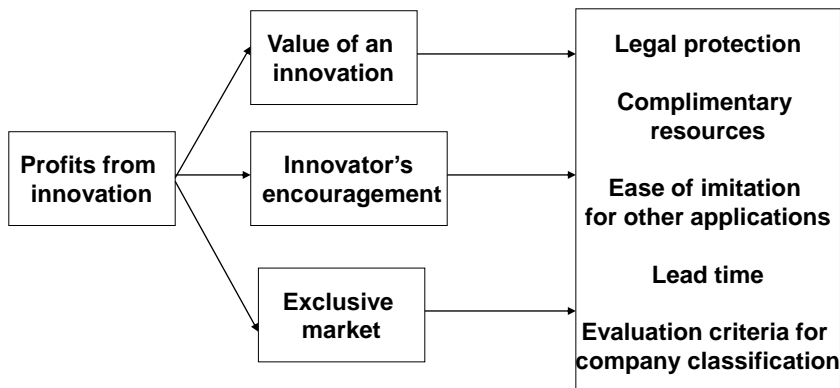
- Improving competitiveness through a perceived positive differentiation on one of the following issues:
 - Quality
 - Design
 - Performance
 - Price
 - **Uniqueness**
 - **Novelty**



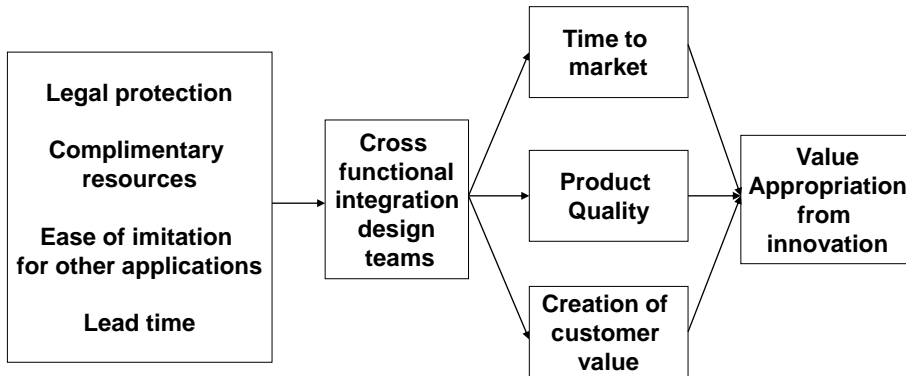
The innovation process



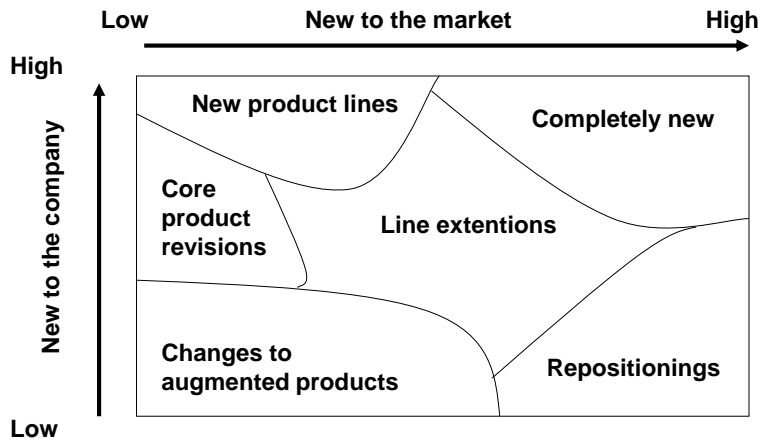
Profitability of innovation



Giving value to innovation



Types of new products



Product Development Category



	Old Product	New Product
Old Market	Market penetration	Product development
New Market	Market development	Product diversification

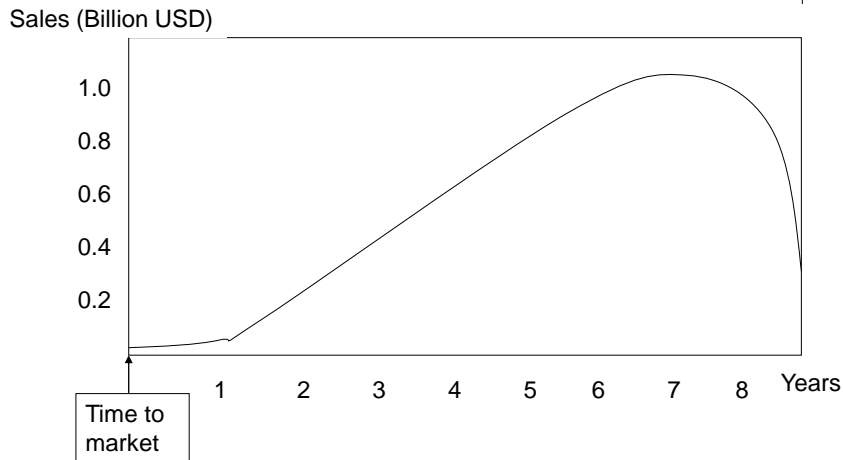
New product development



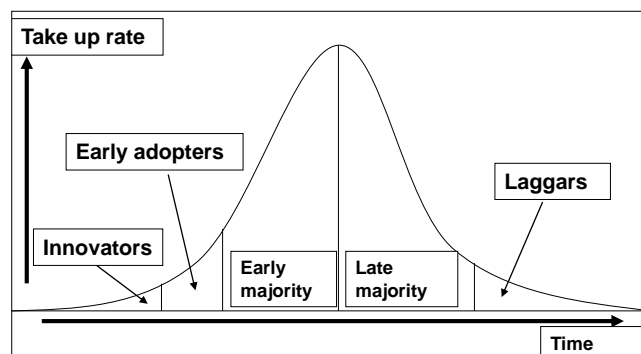
- Idea generation
- Idea screening
- Concept Research and Testings
- Business feasibility
- Beta Testing and Marketing testing
- Technical implementation
- Commercialization



Product life cycle



Diffusion of innovation

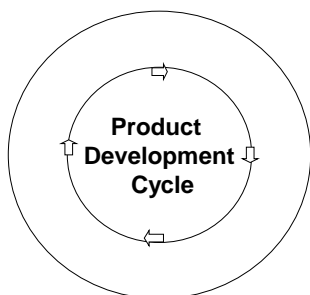


- Innovators: Venturesome, greatest need
- Early adopters: opinion leaders, needs driven
- Early majority: deliberats
- Late majority: skeptics
- Laggards: traditionalists, suspicious

Business Models Emerge

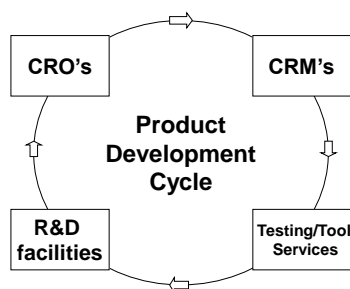


Before...



One integrated Company

Now...

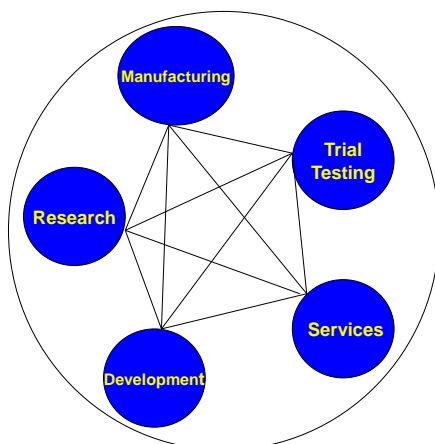


Many Distributed Companies

New Regional Model Emerge

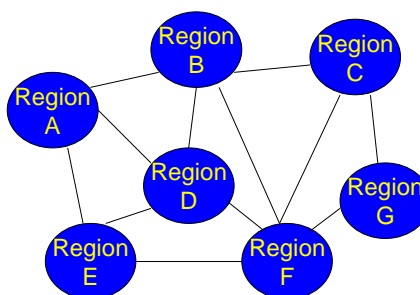


Before...



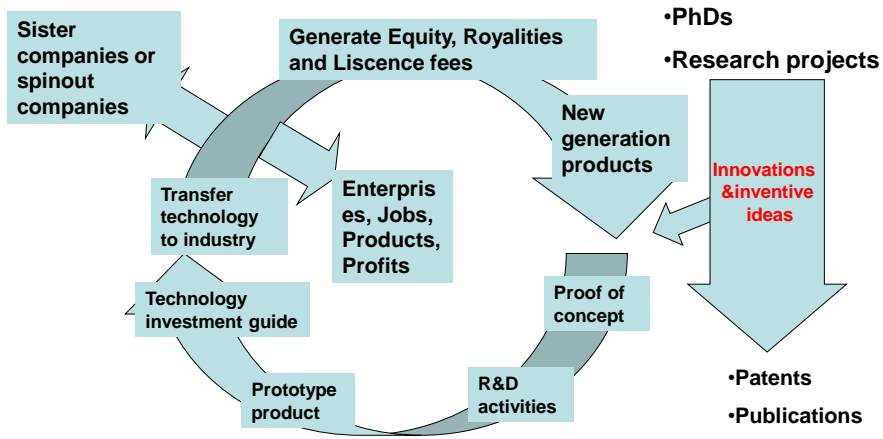
Self-contained regional clusters

Now...



Specialized Network regions

Commercialization Model



Strategic investment is the foundation of a successful commercialization model

Investors desires



- Novelty
- Unencumbered or encumbered by reasonable conditions (Equity, royalties)
- Protection (NDA, Patents, Designs, Copyrights)
- Freedom to operate
- Evidence of commercial interest and clear path to the market

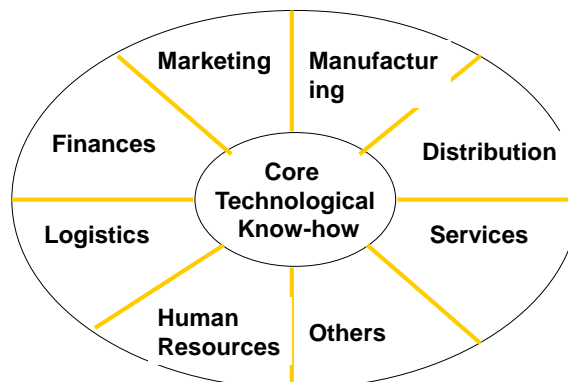


Innovation ingredients

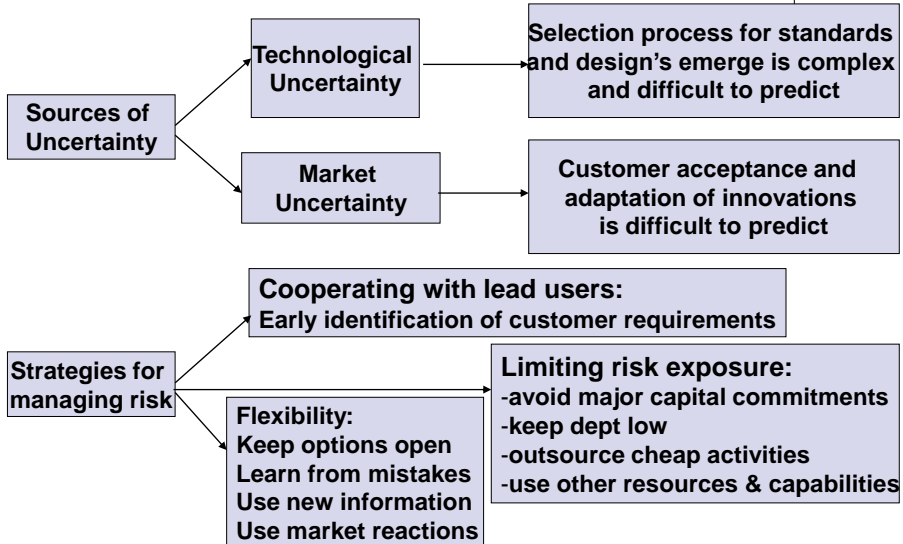
- Intellectual Capital
- Human Capital
- Financial Capital
- Proximity
- Social Network Capital



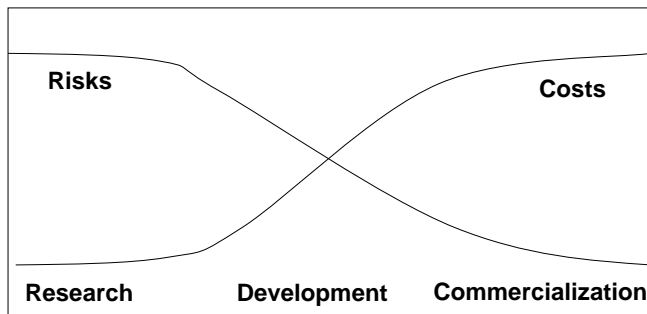
Complementary Resources



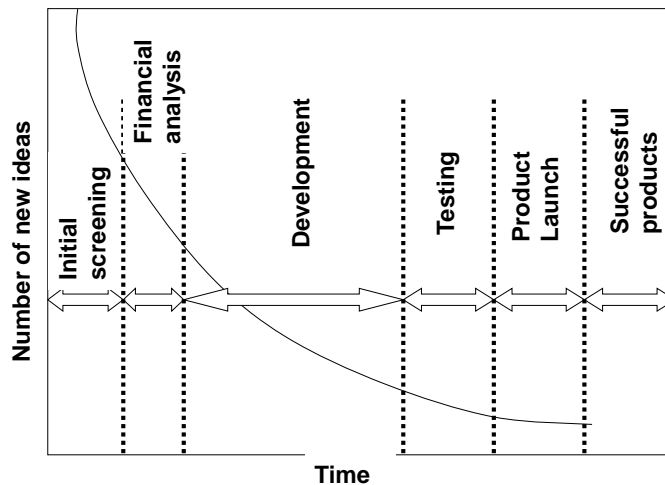
Uncertainty & Risk Management in Technical Based Industry



Innovation Risk



Mortality of new ideas

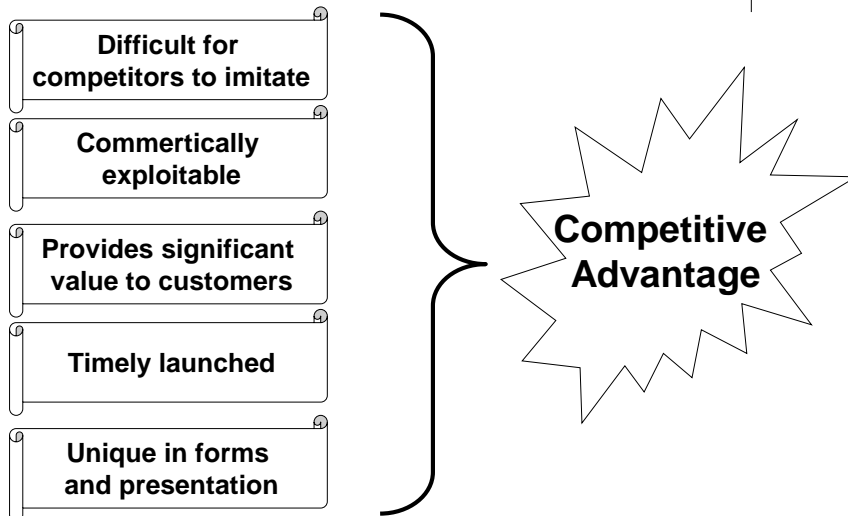


The “Right” innovative idea



- The right product is one which will come to the market at the right time (i.e., when the market needs it) and is better and/or less expensive than its competitors
- To have a right product, one must:
 - Predict a market need
 - Envisage a product whose performance and capabilities will meet that need
 - Develop the product on a desirable time frame
 - Sell the product at the right price

Competitive advantages of innovation



Strategic innovation and entrepreneurship



- **Entrepreneurship is concerned with:**
 - The discovery of profitable opportunities
 - The exploitation of profitable products
- **Companies which encourage entrepreneurship are:**
 - Risk takers
 - Committed to innovation
 - Proactive in creating opportunities rather than waiting to respond to opportunities created by others

Entrepreneurship

- **Creativity:** heart of entrepreneurship, enabling entirely new ways of thinking and working
- **Identify opportunities:** small or big that no one else has found out
- **Ability to apply that creativity:** good entrepreneurship can effectively marshal resources to a single end
- **Drive force:** Should believe in the abilities to make changes and force of will and passion to achieve success
- **Focus on creating value:** to do things better, faster and cheaper
- **Take risks:** cutting across accepted boundaries and going against the status quo.

Success of Entrepreneurial



- Coordination and fitting amongst the following three elements:
 1. **People (entrepreneur or entrepreneurial team)**
 2. **Access to resources (labor, land, capital and knowledge)**
 3. **Opportunities (Marriage of Market and Products/services)**

Factors determining success of a new product in the market



- Functional advantages
- Competitive price
- Attractive design
- Easy access
- Consistent quality
- Good after-sales services
- **Reputation of Brand**

Collective&Individual Marks



- Individual Mark: Holder is an individual or enterprise and focus is enterprise as a source of the good or service
- Collective Mark: Holder is an association and focus is on the good or service





Certification Mark

- Certification mark: Holder is controlling institution and focus is on specific characteristics
- Specific functions:
 - Distinction function
 - Guarantee function
 - Securing function
 - Informing customers
- Control Concerning:
 - Geographical origin
 - Production process
 - Specific nature
 - Other characteristics



Function of Marks

- Origin function
 - Allows identification of the enterprise offering a good or service
- Quality function
 - Consumers relates certain quality with a mark
 - Encourages the holder maintain the quality standard
- Communication function
 - “Mark image”
 - Can become a carrier of additional information

Business approach to individual and collective marks

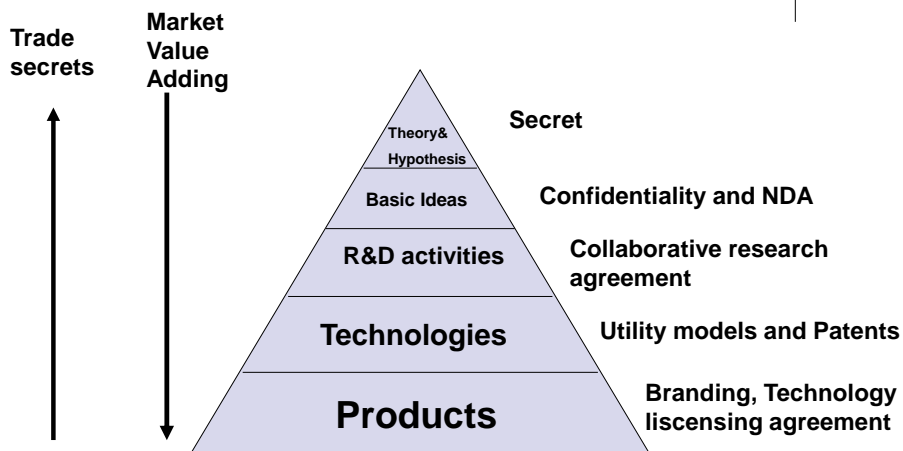
- **Individual marks**

- Full direct control
- Reflects “goodwill” of an individual enterprise
- Subject of direct investment
- Becomes individual asset of an enterprise
- No limits to assignment and licensing

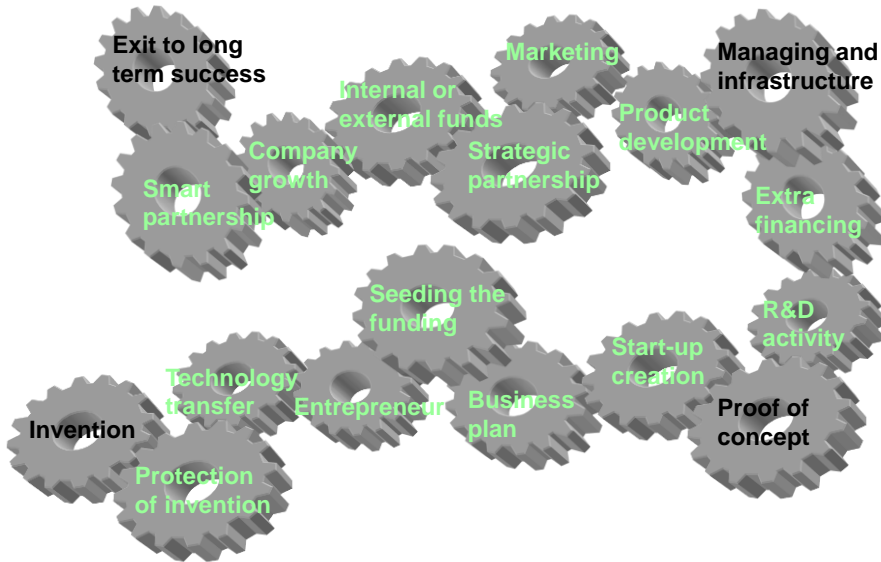
- **Collective marks**

- No direct control
- Forms rather an additional marketing instrument
- Not necessarily subject of direct investment
- Useful starting point when setting up a business
- Specific rules for assignment and licensing

Level of protection of IP



Climbing towards Success



Innovation within Pharmaceutical R&D



- Due to large number of projects, time is a limiting factor to go towards innovation within Pharm R&D
- Innovation with respect to Pharmaceutical dosage forms is easier than NCE; however, it needs dedicated people
- We need to be open for investment for some proof of concept studies and take reseanable risks to be able to succeed

Take home message...



- Innovation desires:
 - Time
 - Risk
 - Investment
 - knowledge

**And all can be achieved by good
*management of innovation***

Thanks for your attention

