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INTRODUCTION TO THE COMMERCIALIZATION OF INVENTIONS  
AND RESEARCH RESULTS

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**I. COMMERCIALIZING NEW TECHNOLOGIES**

- a) Normal definition:  
To move a new technology from its creator organization into the marketplace.
- b) Simple definition:  
“Turning ideas into dollars”

How can you create a new invention, change it into a product, determine the market size and competition, introduce it to the biggest opportunity and make a lot of money for all involved?

**II. TECHNOLOGY COMMERCIALIZATION CREATES:**

- New jobs;
- Benefits to society;
- Economic development;
- Enhanced global competitiveness;
- Increased corporate revenues and profits;
- A stronger and healthier America.

**III. TABLE**

Year	New Product Introductions
1986	12,436
1987	14,254
1988	13,421
1989	13,382
1990	15,879
1991	15,401
1992	15,886
1993	17,363
1994	21,896
1995	20,808
1996	24,496
1997	25,261

(Source: Marketing Intelligence Services, Ltd.)

#### **IV. CHARACTERISTICS OF A NEW PRODUCT**

a) Technological:

- Technical feasibility:
  - Research and development;
  - Design and engineering.
- Manufacturing feasibility:
  - People;
  - Machinery;
  - Raw materials.

b) Marketing:

- Consumer wants and needs:
  - Pre-condition of selling.
- Commercial feasibility:
  - Can be sold profitably.
- Marketing feasibility:
  - Selling skills;
  - Advertising and promotion skills;
  - Warehousing, distribution, transportation.

MAKING creates utility, usefulness and value;  
SELLING creates wants, needs and awareness.

#### **V. NEW PRODUCT: COMMERCIALIZATION ALTERNATIVES**

- Sell rights;
- License;
- Engage product development company;
- Develop product or company:
  - Alone;
  - Team of principals;
  - Contract for services;
  - Corporate partner.

## **VI. TECHNOLOGY VALUE CAN BE MEASURED BY...**

- Intellectual Property:
  - Patents;
  - Trademarks;
  - Copyrights;
  - Trade secrets.
  
- Know-How:
  - Experience;
  - Specific knowledge;
  - Education.
  
- Market value:
  - Earnings record;
  - Market share competitive advantage;
  - Successful patent defense.
  
- Special criteria:
  - Create jobs;
  - Eliminate jobs;
  - Meet regulatory requirements;
  - Technology improvements;
  - Replaces an “older way” of doing it.

## **VII. TECHNOLOGY COMMERCIALIZATION**

- New jobs;
  
- Benefits to society;
  
- Economic development;
  
- Enhanced global competitiveness;
  
- Increased corporate revenues and profits.

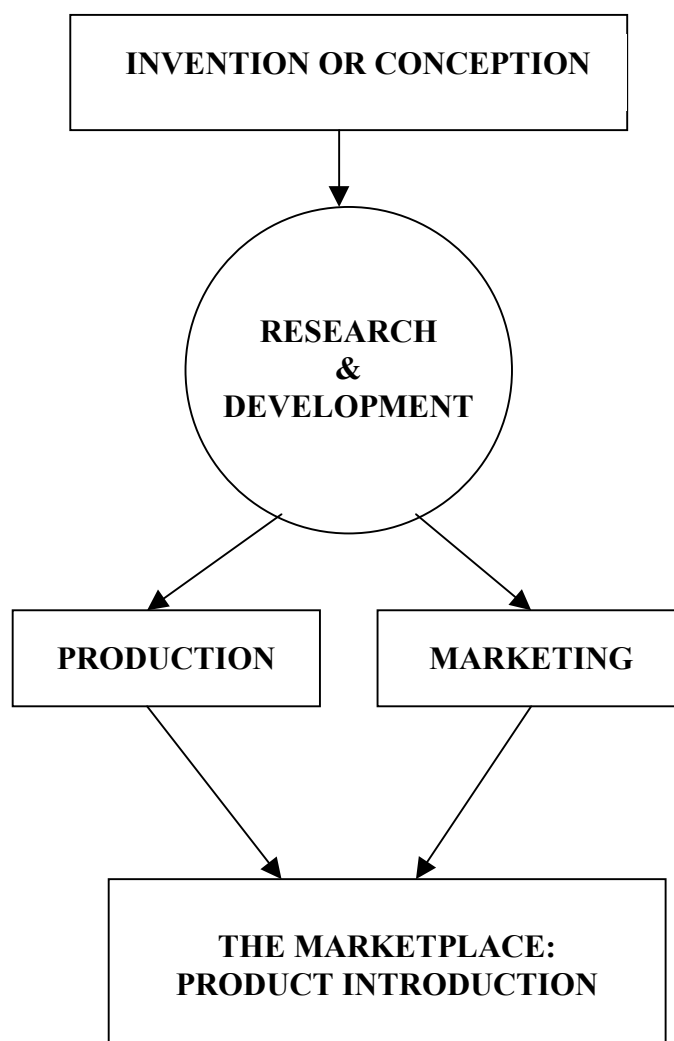
## **VIII. BEFORE YOU ATTEMPT TO MAKE MONEY**

- Product development should be complete:
  - a) Invention does what it is intended to do;
  - b) Manufacturing process has been incorporated into the detail design;
  - c) Prototype has been properly tested.

- Profit margin must be acceptable:
  - a) Unit price (established from product costs):
    - Direct labor and materials;
    - Production volume;
    - Overhead.
  - b) Unit price (what the market will bear):
    - Market research;
    - Mark up along distribution channel.
- Market size must be adequate:
  - a) Reasonable market share;
  - b) Target market supports production volume.

## IX. PRODUCT DEVELOPMENT PROGRESSION

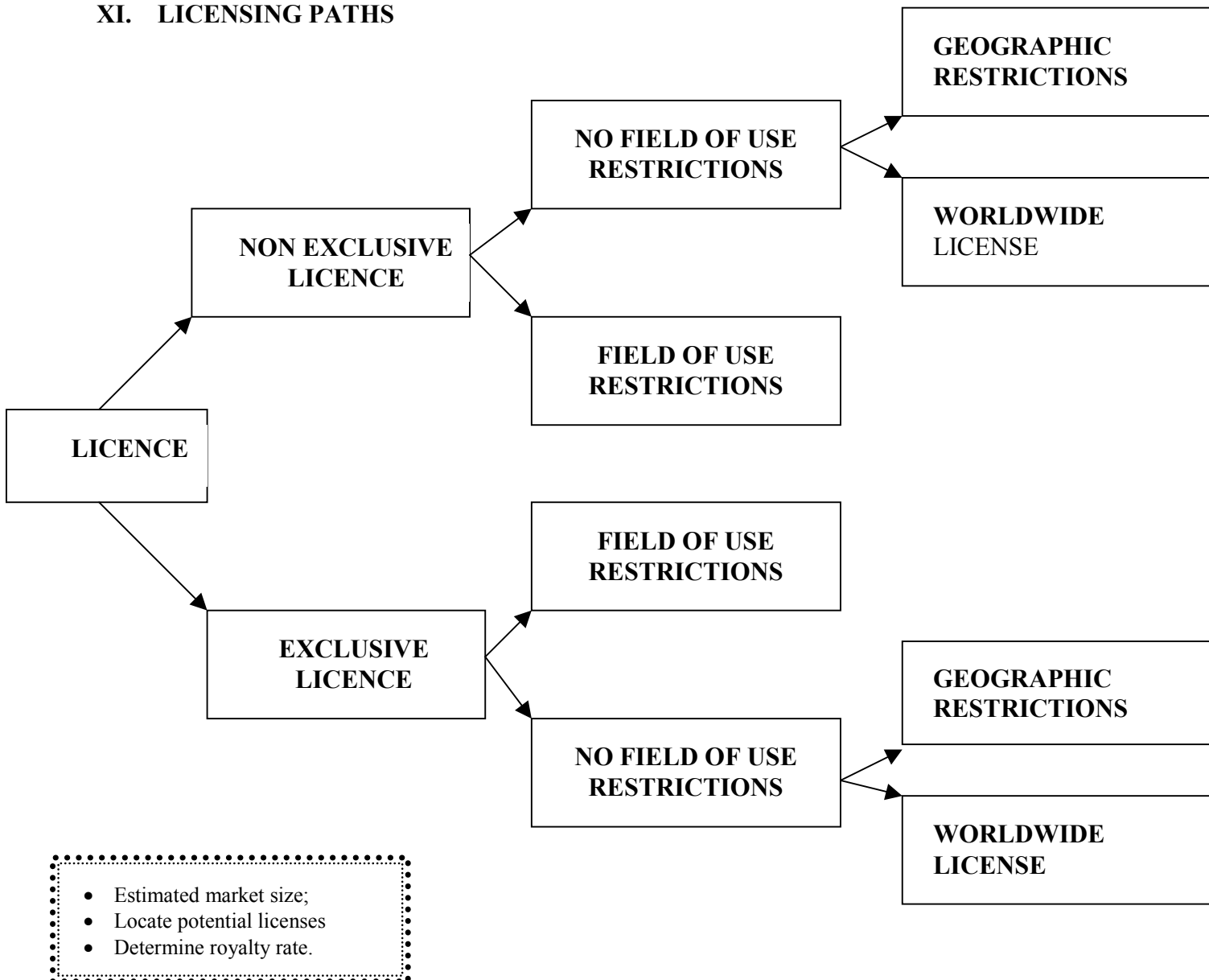
- Idea;
- Conceptual design;
- Research prototype.
  - a) Product design;
  - b) Product prototype;
  - c) Pilot production;
  - d) Test marketing;
  - e) Redesign;
  - f) Manufacturing;
  - g) Marketing.



**X. THE LICENSING PROCESS**

- Invention disclosure assigned;
- Invention review:
  - Technical risk;
  - Market risk.
- Strategy Formulation:
  - Patenting;
  - Marketing.
- Find a product champion;
- Negotiate the license;
- Monitor diligence terms.

**XI. LICENSING PATHS**



## **XII. SUCCESSFUL LICENSES HAVE:**

- Enthusiastic & cooperative inventors;
- A counterpart product champion at the licensed company;
- Continuing contact and a productive working relationship;
- Fair terms that are changed if circumstances justify a change;
- Based on mutual trust.

## **XIII. LICENSING DIFFERENCES DEVELOPED PRODUCTS VS RESEARCH RESULTS**

### a) Developed Products

- Low risk-product exists and markets known;
- Focus on manufacturing and marketing;
- Patent position known, patents important, license fees relatively high;
- Company to company, licensing-legal / contracting activity (LES)

### b) Research Results

- High risk-no product and far from market;
- Focus on product definition;
- Patent position iffy, patents less important, license fees relatively low;
- University to company, licensing-marketing / collaboration activity (AUTM).

## **XIV. DEAL PRICING FACTORS**

- Useful life, age and strength of patent rights;
- Degree of sustainable technical advantage;
- Overall quality of licensee support;
- Degree of product completion and readiness;
- Use flexibility and breadth of scope allowed;
- Time to payback and net profitability;



- Overall size of profits to be generated;
- Follow-on rights;
- Required performance guarantees;
- Relative strengths of licensee and licensor.

**Rule of Thumb:** The royalty rate is whatever you can negotiate, based on who is more needy.

## XV. DEAL NEGOTIATION POINTS

DEAL POINT	LICENSE WANTS	LICENSOR WANTS
Contract type:	Option	Fixed license
Royalty rate:	Low	High
Royalties on:	Profits from base tech only	Sales from all derivatives
Scope:	Global & exclusive	Niche & non-exclusive
Buy out:	Low \$	None or high \$
Performance guarantees:	None	Many
Support:	More is better	Little to none
Transferability:	Assignable	Non-assignable

**Rules-of-Thumb for Negotiations:** Win-win; give to get; be soft on people, hard on issues.

## XVI. FINANCIAL ANALYSIS: IS THE DEAL WORTH DOING?

Expected Profits less: Investment & Costs <hr style="border-top: 1px dashed black;"/> = Expected Worth
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**Rule of Thumb:** There are 1000's of new product ideas that could be investigated. Companies want to spend all of their new product development efforts concentrating on viable products, wasting none on bureaucratic delays or pursuing losers. To a business, time is "money". Therefore: **When in doubt, reject!** Move on to more fertile prospects.

## XVII. CONCLUSION

Intellectual property will be the currency of the next century and it is an exhaustible resource.