



Commercialization of Intellectual Property

Dr Gail E. Evans

Queen Mary IP Research Institute University of London

**TEAM OF SPECIALISTS ON INTELLECTUAL PROPERTY
Committee on Economic Cooperation and Integration
United Nations Economic Commission For Europe
First session: 23-24 November 2006, Geneva**



TOS-IP Mandate & Goals:

**We are asked to address the issues related to the role of IPRs
ECE member States:**

- **The primary goals are:**
 - **To improve local innovation systems**
 - **To help in commercializing intellectual property**
 - **To improve the climate for investment.**
- - With particular reference to transitional economies.**

In light of these goals this presentation is structured as follows:

- **Innovation & Business-University Collaboration**
- **Technology Transfer**
- **The Strategic Management of Intellectual Property Assets**
- **Value transference, functional differentiation and sustainable differentiation**
- **IP Administration**
- **Maintenance & policing of intellectual property**
- **IP Assessment & Management Services**
- **Public funding of R&D: The European FP7 Programme**
- **Summary of Tasks for TOS-IP**

Commercialization: Who is TOS-IP's Target Audience



■ Knowledge-based Industries: e.g. biotech, healthcare, information technology, entertainment, food

■ Business/SMEs

■ PROs/Technology Transfer Offices

■ Invention Assessment & Management Services

■ Single & employee inventors

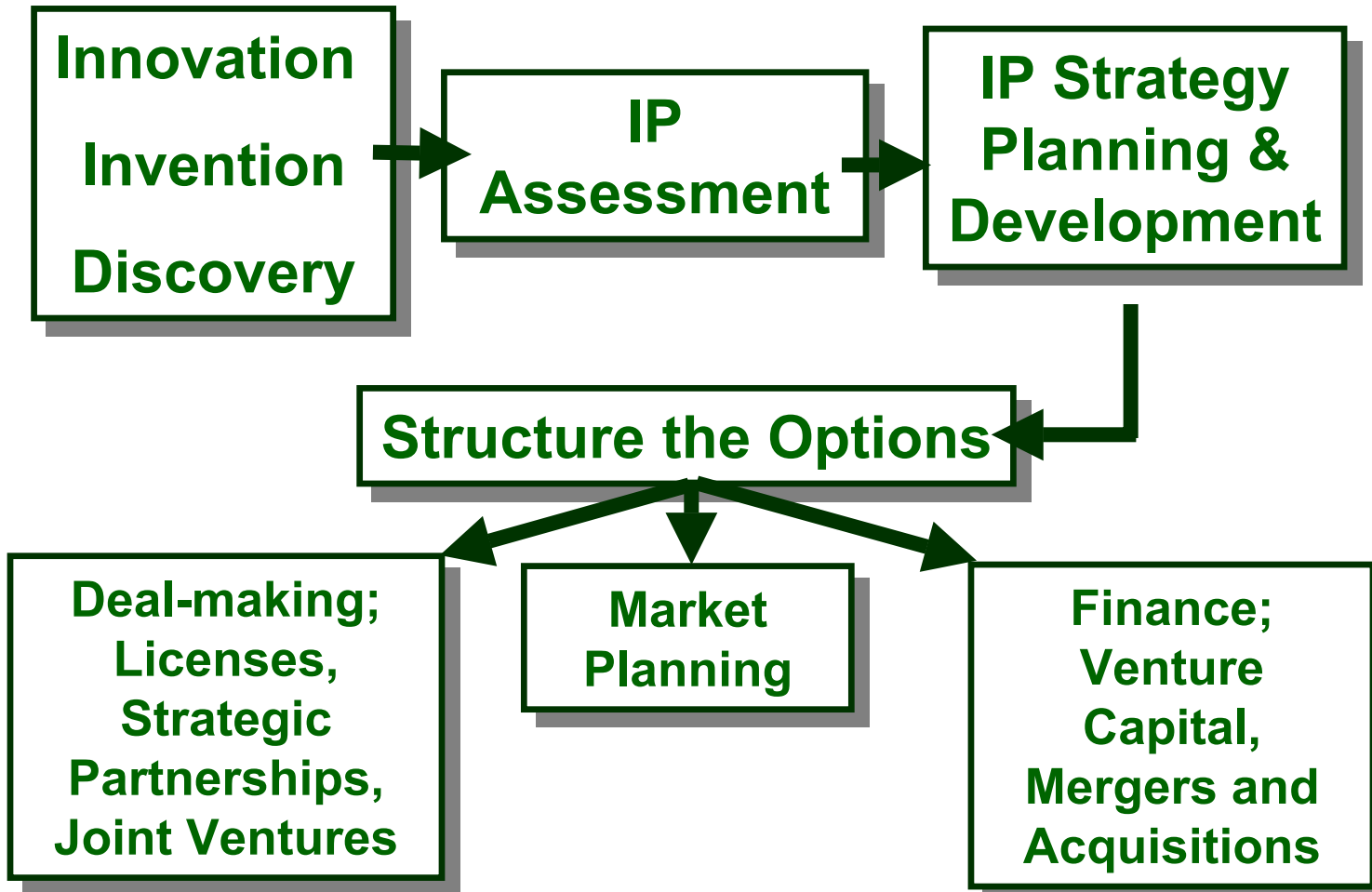
Commercialization: What are the issues for TOS-IP?



The issues involve IP awareness raising:

- How to identify intellectual property
- IP strategy & asset management
- How to obtain/register intellectual property
- How to find invention assessment services & a commercial partner
- How to police/enforce your intellectual property
- Best practice in the workplace especially:
 - ❖ Record-keeping
 - ❖ NDAs
 - ❖ Employment contracts
 - ❖ IP ownership options

The Technology “Value Chain”



Framework of Innovation Governance

The activation of the technology value chain may be seen as part of the framework of innovation governance.

Innovation: noun

- 1 the action or process of innovating.***
- 2 a new method, idea, product, etc.***

Oxford English Dictionary

We innovate when new ideas or creations are put to use (products, services, processes).

Innovation & business-university collaboration: **PROs & public/private partnerships**

- **Issue for transitional economies and for Europe:**
- **Less than one in five businesses in UK interact with universities: Why?**
 - Lack of R&D intensive businesses in the UK
 - Lack of financial incentives for collaboration
 - Management and governance
 - Complex IP and overheads negotiations
 - Difficult for smaller businesses to find out “who does what” in universities.
 - » Lambert Review of Business-University Collaboration, 2004
- **Task for TOS-IP: to explain how innovations and the innovative process can be by-products of research and scholarly activity in a university or research institute.**

Technology Transfer

B. technology transfer: noun:

- the transfer of new technology from the originator to a secondary user.

Oxford English Dictionary

Technology transfer is defined as the transfer of results of basic and applied research to the design, development, production, and commercialization of new and improved products, services or processes. That which is transferred is often not really technology but rather a particular kind of knowledge that is a precursor of technology. The transfer process emphasizes the value and protection of the intellectual product of the researchers.

Gary Matkin, *Technology Transfer & the University*, 1991

Intellectual Property Assets

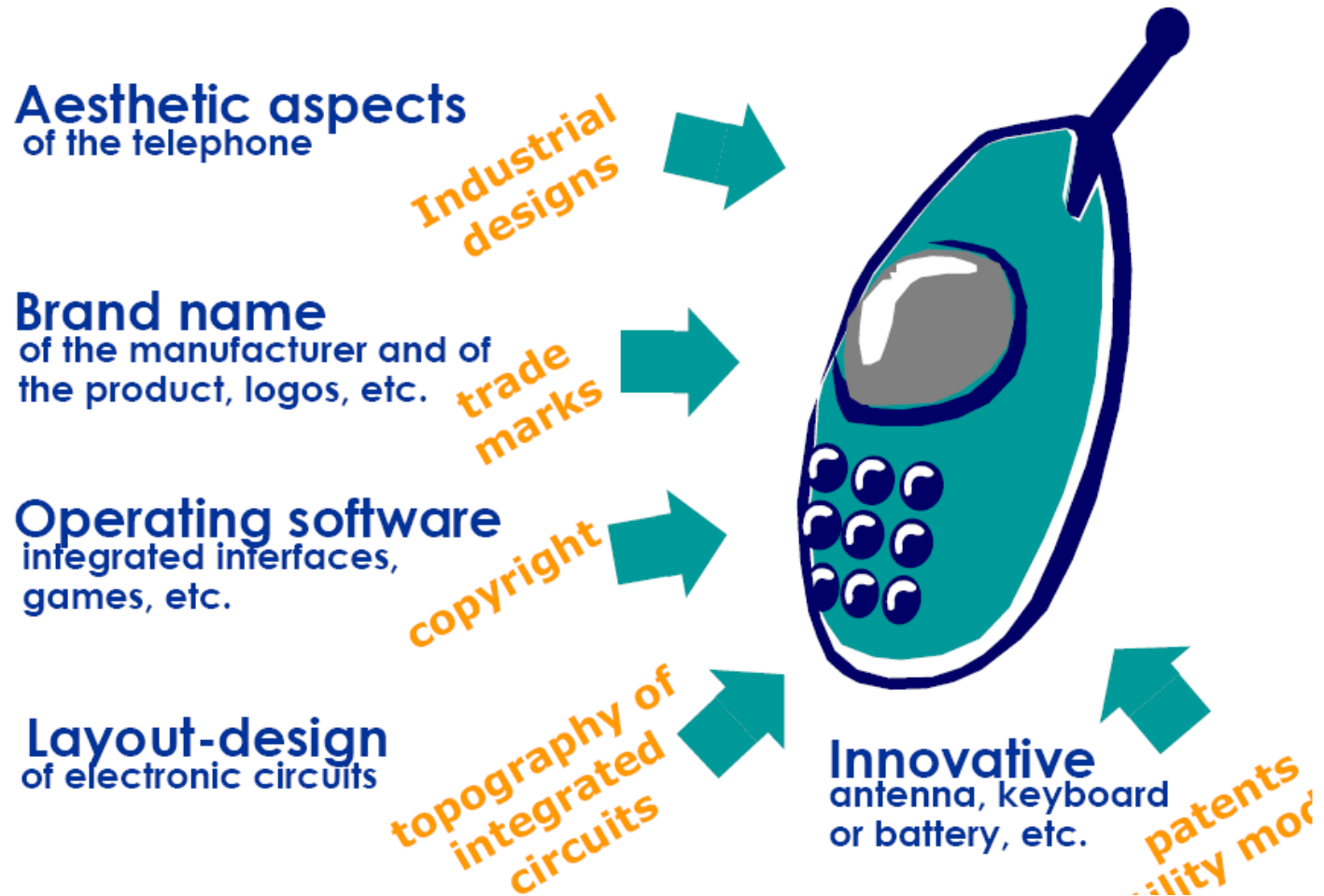
IP categories growing:

Patents; Trademarks; Copyrights; Designs; also Trade Names; Geographical Indications; Integrated Circuit Mask Works; Trade Secrets/confidential information & Database Rights (EU).

Tasks for TOS-IP:

- **Explain how the results of research or other creative work can be protected by law.**
- **Explain the value of IP depends on how much legal protection, know how, and secret knowledge can be combined to provide a competitive advantage.**

The Intellectual Property Thicket



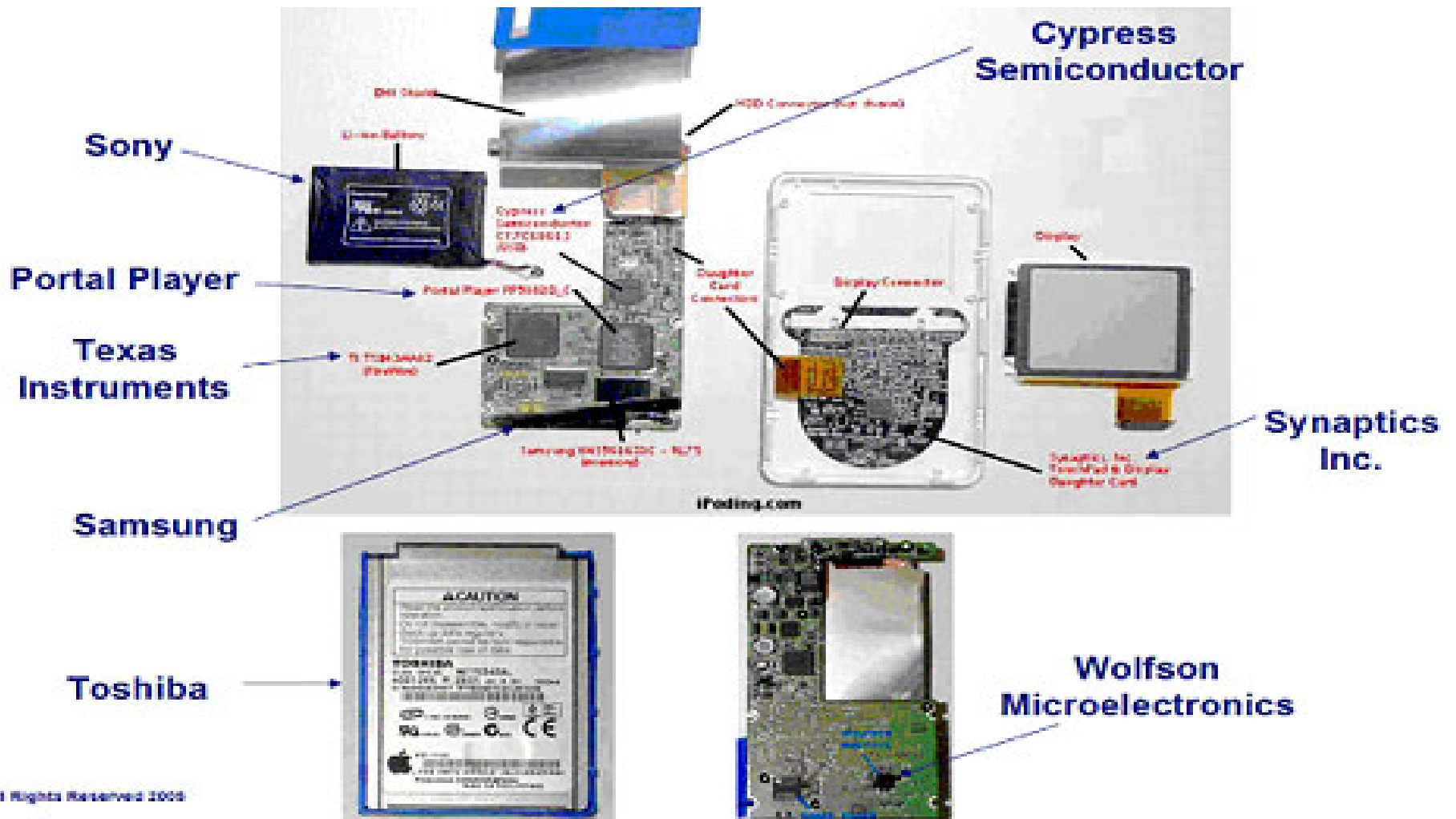
The Strategic Management of Intellectual Property

Tasks for TOS-IP:

- **Explain the basic strategy:**
 - **Patents: the core component: virtually absolute right to exclusive use for 20 years.**
 - **With trademarks: identifies the unique source of goods/services: indefinite term with use**
 - **And copyrights- protects creator from others copying original works: life of author + 70 years (EU & US)**
- **Explain that since valuable IP tends to be in a “thicket” of protection, a strategy and a management plan for the creation, policing and enforcement of IP is essential.**

How the Apple Corporation uses the IP thicket for value transference

Exhibit 1: iPod Teardown & everyone else's technology...



All Rights Reserved 2006

J. Conley, Trademarks, Not Patents: The real competitive advantage of the Apple iPod, 2006.

Strategic Planning, Value Transference & the IP Thicket

Value transference: the strategic use of multiple IP regimes at specific points across the product lifecycle, in order to realize sustainable differentiation.

- **Tasks for TOS-IP:**
 - Explain how value transference is achieved by using patents early in the lifecycle to secure functional differentiations — such as new combinations of storage or battery technology (utility patents), and/or unique ornamental attributes (design patents).
 - Explain the accompanying need for sustainable differentiation: how the company needs to build an association between patented aspects of the product, and a cognitive touch point of the user experience: achieved via the strategic use of trademarks in respect of the critical design elements.

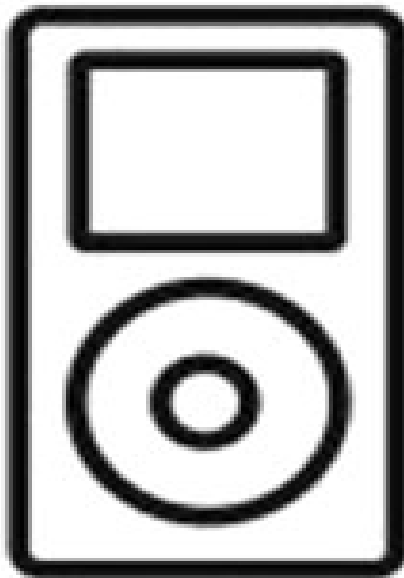
J. Conley, Trademarks, Not Patents: The real competitive advantage of the Apple iPod, 2006.

- **When done correctly, value transference helps to mitigate the enormous cost reduction pressures inherent in markets with short product life cycles.**

Apple has reinforced the market for the 'ipod' by registration of a shape mark (USPTO) that includes critical design elements:

Exhibit 5: AND the latest IPR maneuver iPod TM application serial #78661217, Filed 6/29/2005

Markets protected by this Trade Mark?



- Portable and handheld digital electronic devices for recording, organizing, transmitting, manipulating, and reviewing text, data, audio and video files; computer software for use in organizing, transmitting, manipulating, and reviewing text, data, audio and video files on portable and handheld digital electronic devices;
- a full line of electronic and mechanical accessories and computer software for portable and handheld digital electronic devices for recording, organizing, transmitting, manipulating, and reviewing text, data, audio, image, and video files;
- docking stations; stands; battery chargers; battery packs; electrical connectors, wires, cables, and adaptors; wired and wireless remote controls; headphones and earphones; stereo amplifier and speaker base stations; automobile stereo adapters; audio recorders; radio receivers; radio transmitters; image scanners; video viewers; media readers; computer application software for recording and organizing calendars and schedules, to-do lists, and contact information; computer game software; computer software for clock and alarm clock functionality; carrying cases, sacks, and bags, all for use with portable and handheld digital electronic devices for recording, organizing, transmitting, manipulating, and reviewing text, data, audio, image, and video files

Strategic Planning, Value Transference & the IP Thicket

Tasks for TOS-IP:

- **Explain how the ‘IP thicket’ is interconnected:**
 - **How copyright can support trademarks: how copyright may cut in where the use of the logo may be considered a non trademark use: e.g. the case of *Arsenal Football Club v. Reed*.**
 - **How trademarks work with patents to maintain consumer loyalty and exclusive marketing after the expiration of the patent. Unlike patents, trademarks have the advantage that they can last indefinitely. Most over-the-counter brands are based on patent-expired products and brand reputation. This is the main driving force in competitive performance, rather than product exclusivity.**

IP Management & Corporate Governance - 1

Tasks for TOS-IP:

- **Explain the importance of constructing an IP strategy from the beginning of research through each cycle of product development:**
 - Patent pooling
 - IP ownership
 - How may the invention may be better exploited (e.g. licensing in or out of technology)?
 - Consider registering trademarks during product development, for better leveraging of brand equity.
- **Explain the need to identify IP by means of audits of own and third party IP.**
- **Explain the need to insure the IPR against risk of being sued as part of risk assessment:**
- **Explain the need to protect IP by means of staff record keeping.**

IP Management & Corporate Governance - 2

- **IP Evaluation: based on the results of the audit explain the need to undertake a cost-benefit analysis.**
- **Patents:**
 - **Disclosure v Keeping Confidential**
 - **Cost of registration (selection of markets in which to register)**
- **Confidential Information (Trade Secrets)**
 - **Risk of disclosure**
 - **Cost of maintaining confidentiality**
- **Industrial Designs and Trademarks**
 - **Expense of searching, registration and maintenance**
- **Copyright**
 - **Lack of registration formalities**
 - **Proof of creation**

IP Management & Corporate Governance - 3

Explain the need to secure ownership of IPRs:

- **Consider the ownership capacity of an institution**
 - **Under its constitution**
 - **Under its operating agreement**
 - **Under legislation: concerning business establishment and exercise of rights.**

- **Securing ownership of IP in PROs:**
 - **Employee intellectual property: under contracts of employment**
 - **Visitors/students: under NDAs.**
 - **Under the IP policy of the organization.**

IP Management & Corporate Governance - 4

Maintenance & policing of IP:

- ***Obligation to Disclose***
 - Imposed by contract upon employees and visitors
 - Use of disclosure forms to evidence creation of IP
- ***Obligation of Confidentiality***
 - Imposed by contract upon employees and visitors
 - To preserve novelty of patents and trade secrets
- ***Notice before publication:*** may require prior approval to ensure that it does not adversely affect the plans for patenting.

IP Management & Corporate Governance - 5

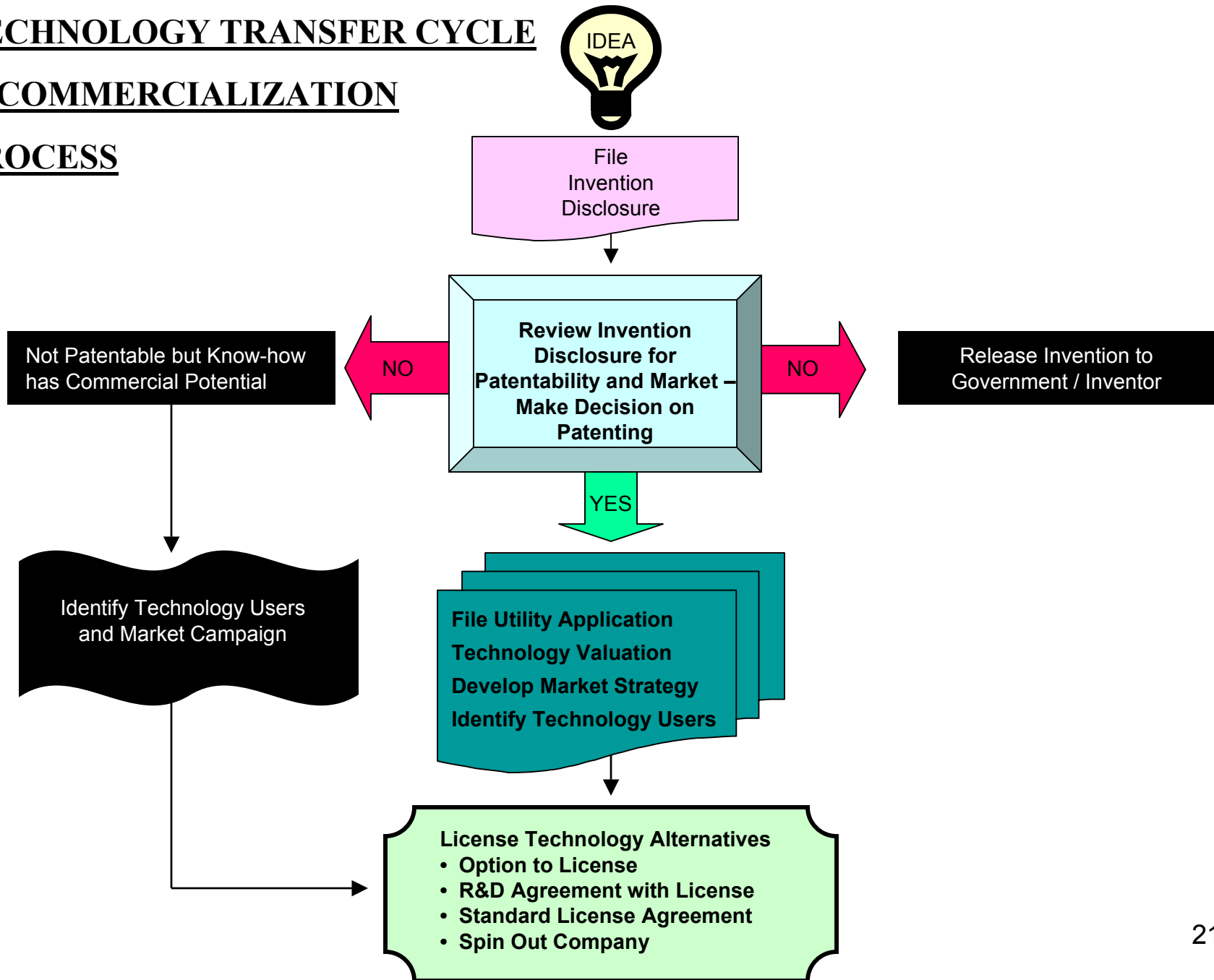
Is there a need to establish a technology transfer office? Explain the role of the TTO:

- Helps inventors develop the necessary documentation for patents and other kinds of protection.**
- Personnel interact with industry to set up collaborative research agreements, to inform them of new inventions, and to negotiate license agreements.**
- Advises venture-capital groups of new inventions**
- Facilitates start-up of new 'spin-off' companies, some of which may establish themselves in a Business and Technology Centre or 'incubator'.**
- Works with the principal investigator to benefit the university and the inventor, both of which receive licensing revenues.**

TECHNOLOGY TRANSFER CYCLE

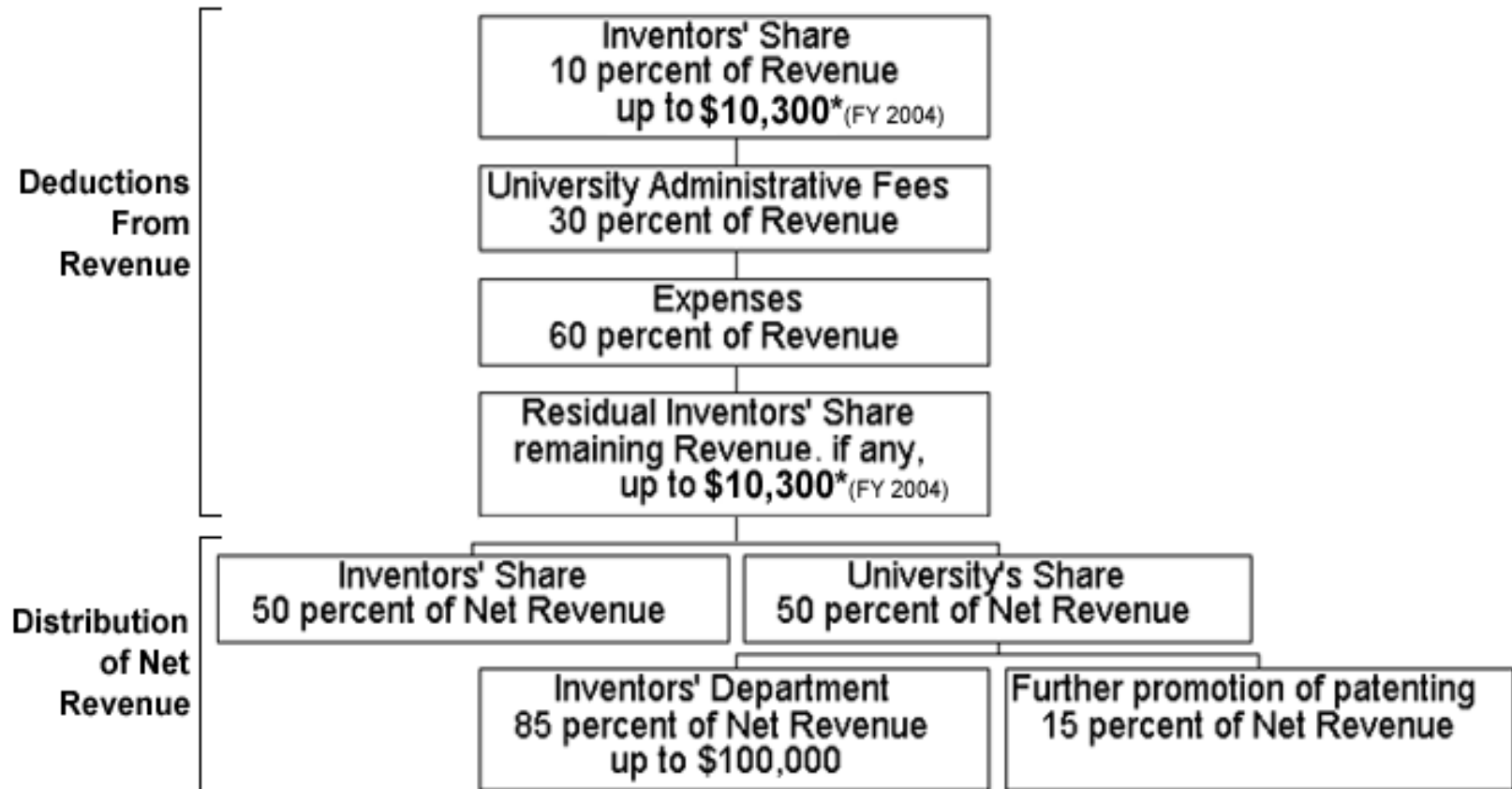
& COMMERCIALIZATION

PROCESS



University Revenue Sharing

Royalty Distribution Policy (effective 7/1/2002)



*Note: Threshold amount determined by University Chancellor, \$10,300 for FY2004

IP Management & Corporate Governance - 6

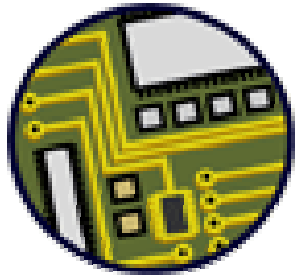
- **Alternatively explain how SMEs may refer to IP Assessment & Management Services who will at low cost:**
 - **Evaluate commercial opportunities for innovation**
 - **Develop commercialization strategies**
 - **Structure and implement the strategies**
 - **Launch new products and services.**

Use www to arrange marriages between inventions & commercial entities

FREE eMARKET SERVICE



E-market registration



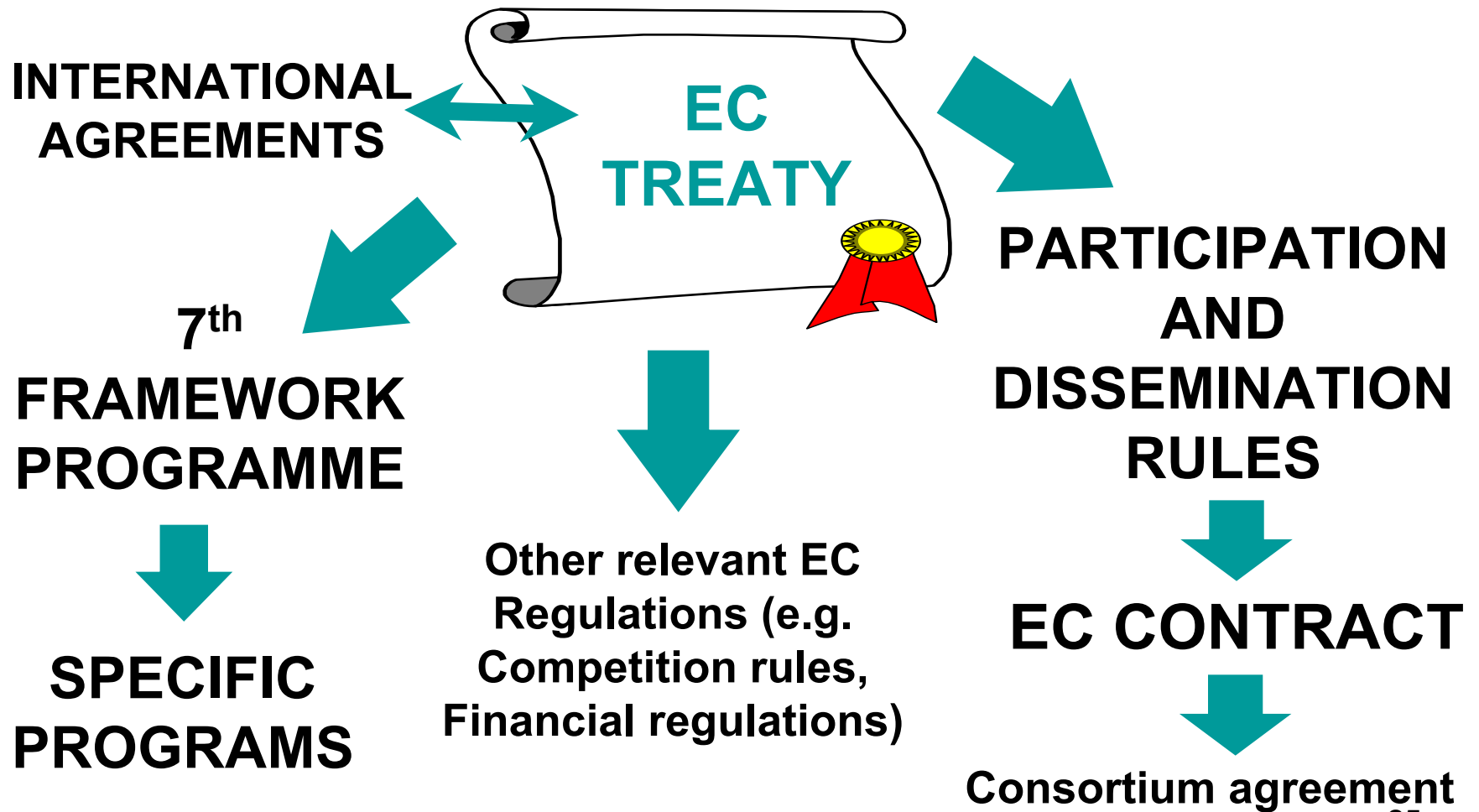
Submit a technology



Submit a profile

- E.g ‘www.knowledgeexpress.com’ or ‘www.abettermousetrap.co.uk’ offer subscription information services for use in technology transfer, IP licensing, and business development.
- They offer searchable databases that provide corporate profiles, licensable technologies, patents and royalty rates.
- They offer a free information service to promote or search profiles and licensable technologies from organizations worldwide.

Innovation Governance: European Legal Framework



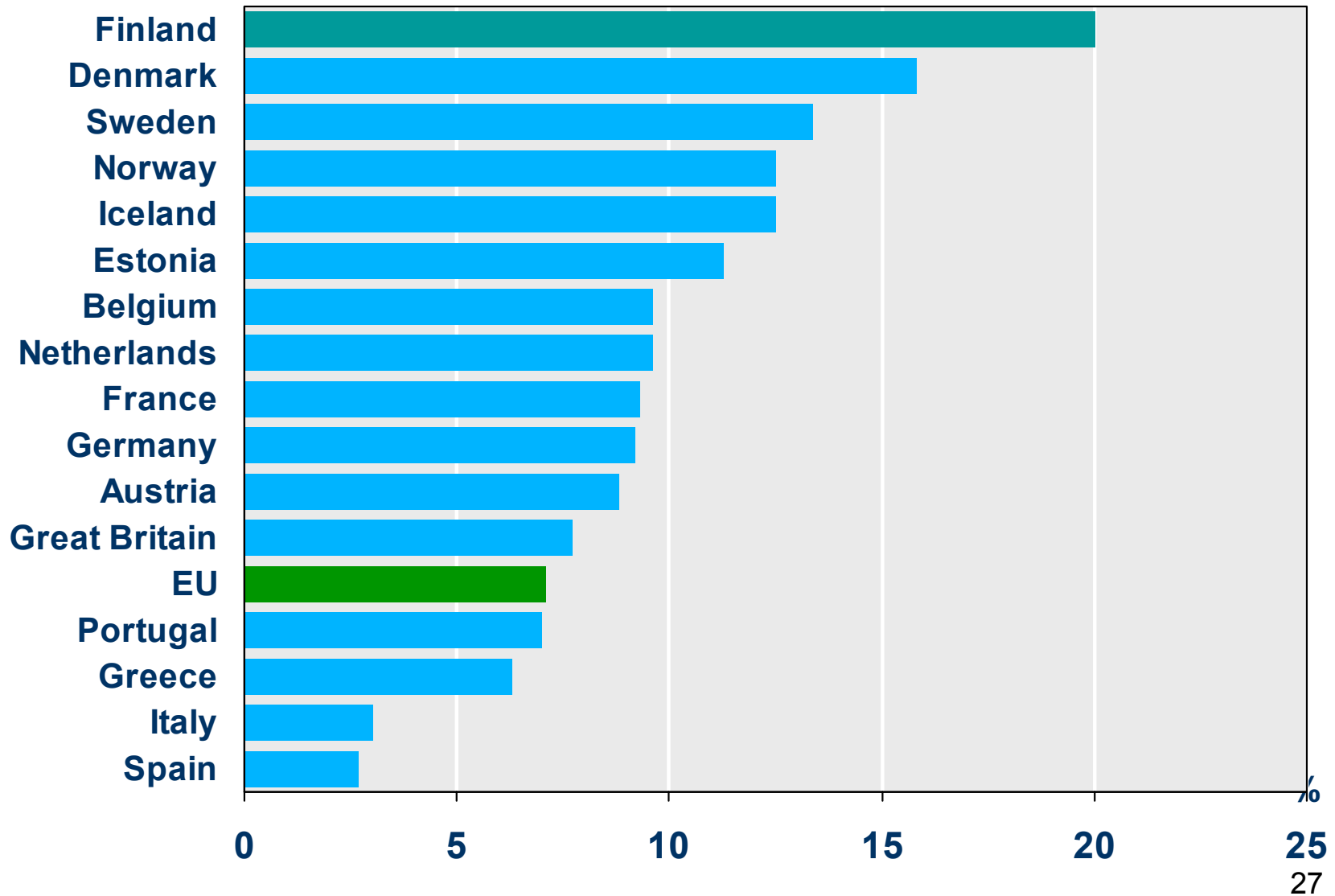
Innovation governance: **The European FP7 Programme**

- **The Seventh Framework Programme (FP7) for funding R&D for the period 2007 – 2013 provides PROs & SMEs with opportunities for commercialization of innovations.**

Tasks for TOS-IP:

- **Need to prepare researchers and TT officers for participation in FP7 by explaining the consortium agreement and the model contract with the EC.**
- **The basic rules for IP management between the consortium partners is a progressive model that facilitates growth.**
 - **E.g. Knowledge remains the property of the participant who generates it except where it is the joint property of several participants.**
 - **Obligatory access rights are limited to participants of the same project.**

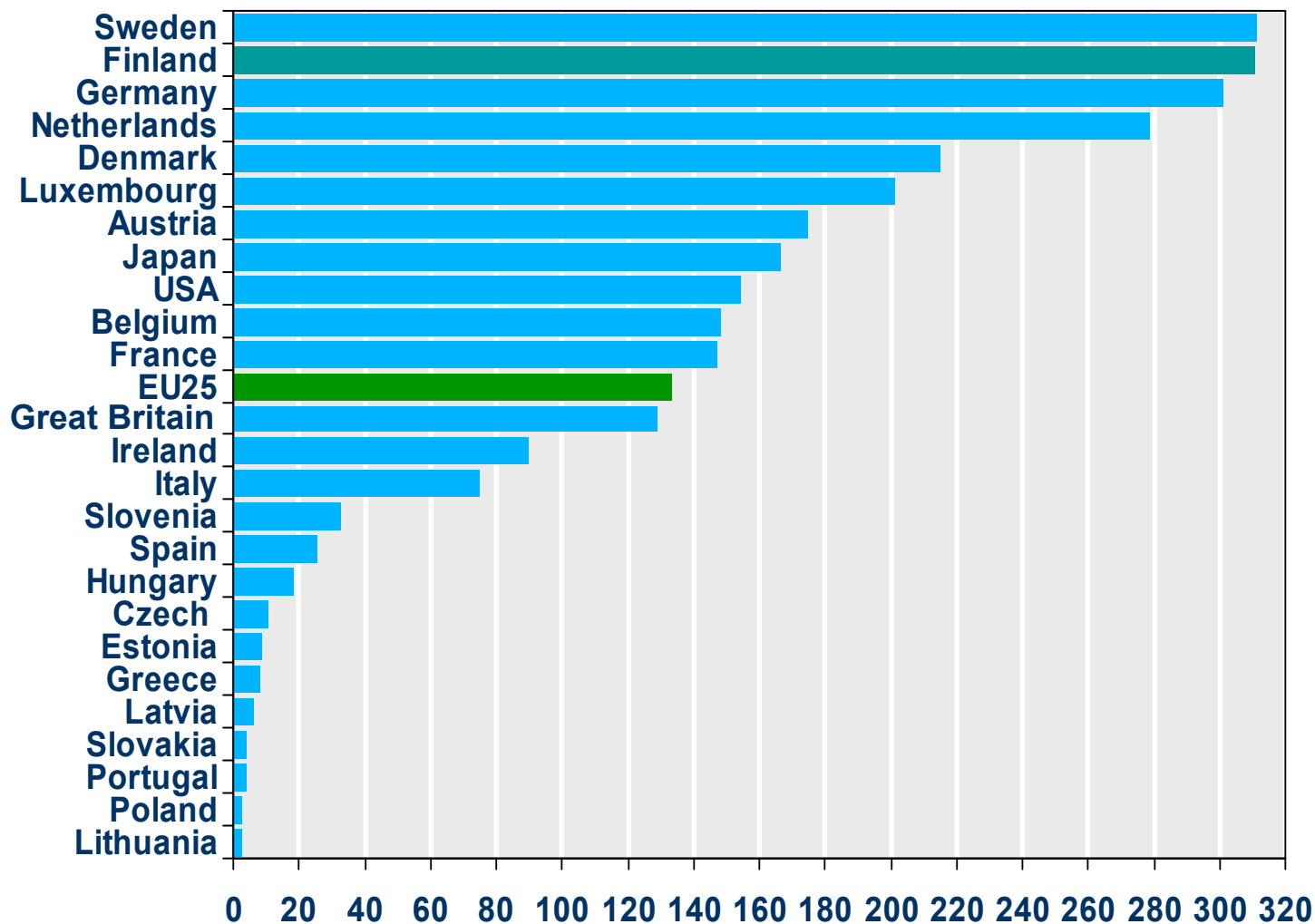
SMEs Participating In Innovation Cooperation indicate that there is work for TOS-IP



Source: European Innovation Scoreboard 2004

European applications for patents (EPO) provide stronger evidence of the need for TOS-IP

Applications per million inhabitants in 2002



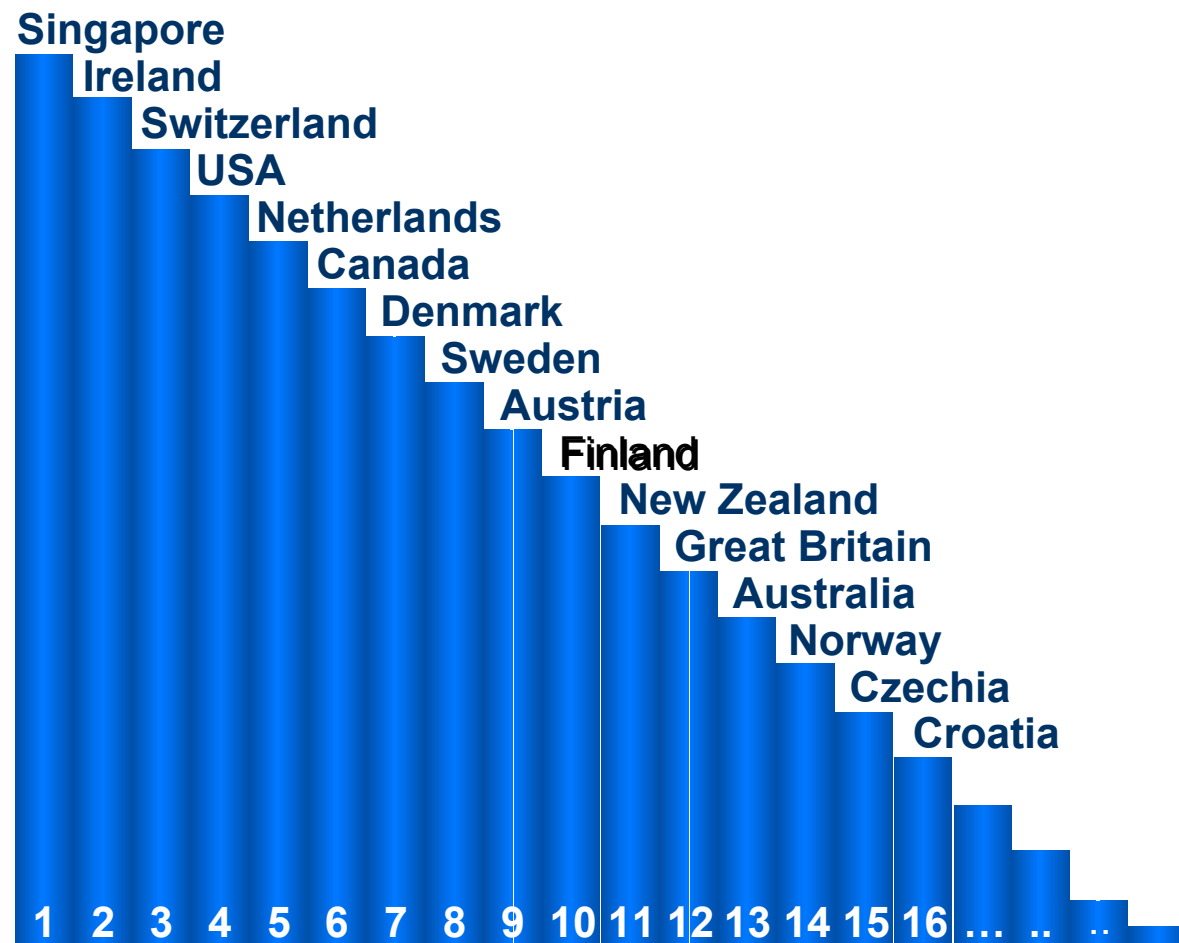
Commercialization: Summary of Tasks for TOS-IP



- To explain the nature of intellectual property a valuable corporate asset
- To explain the nature of intellectual property as a strategic business tool
- To explain how IP management is a major area of business competence as an integral part of innovation, technology, marketing, finance, corporate governance and industrial strategy.
- To explain how PROs & SMEs must actively manage IP as the key to building and sustaining competitive advantage.

TOS-IP will work to increase global competitiveness of UNECE members

Ranking in 2005



Globalisation index measures the economic integration, technical connections, personal contacts and political cooperation in the country.

Thank You!