« Protéger vos idées »

"Photos : Dreampict.com"

Conférences et Séminaires Unitec

25 mai, 2023

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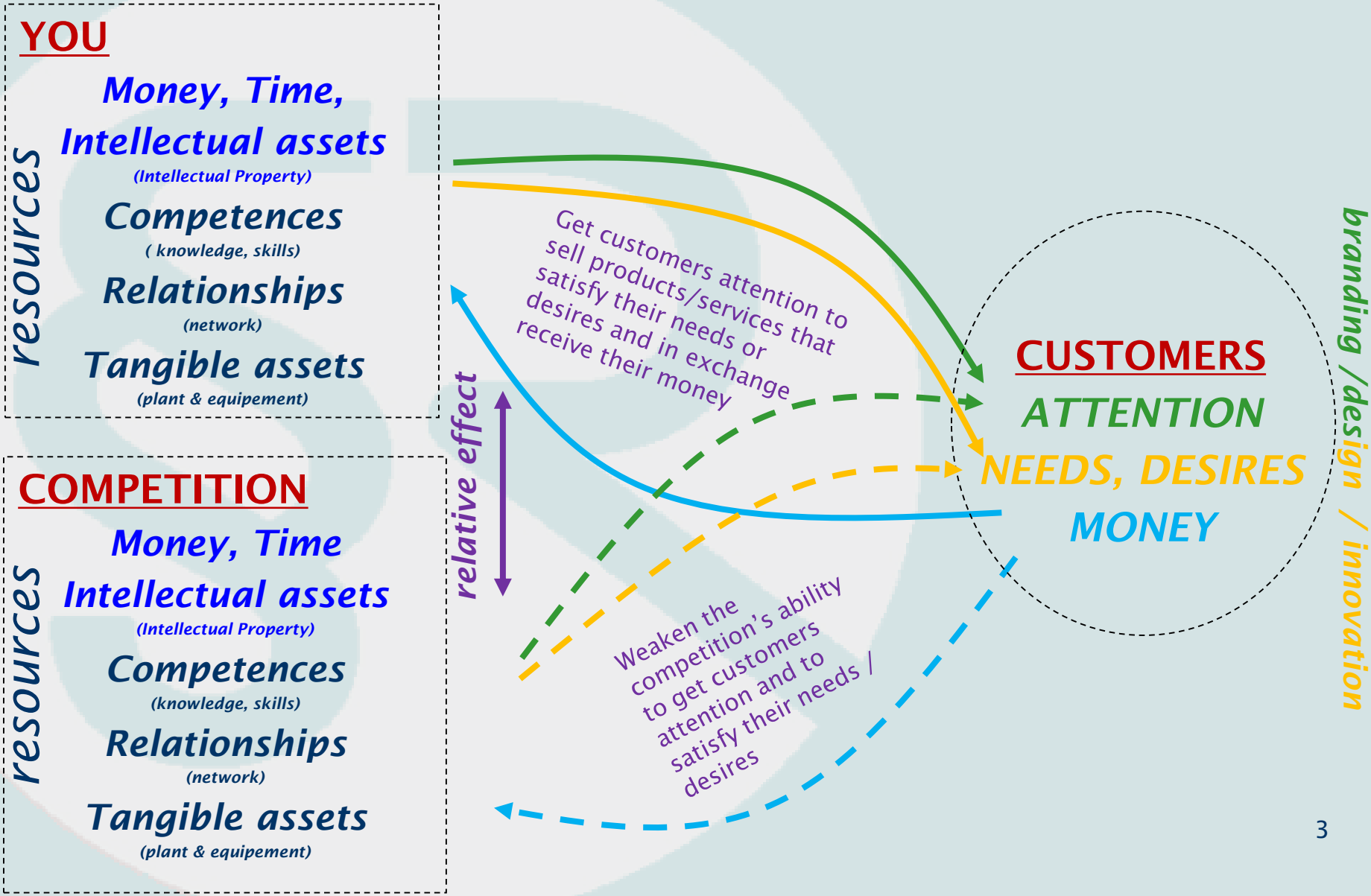
Accredited representative before the UPC

The reason for IP protection

IP Assets- strategic function



IP Assets- strategic function

Responding to CUSTOMERS perceived NEEDS, DESIRES

differentiated products

patents, designs, copyright, know-how

innovating

branding

«The business has two – and only these two – basic functions: marketing and innovation. Marketing and innovation produces results, all the rest are costs.»
Peter Drucker in Management: Tasks, Responsabilities, Practices

trademarks, company names, domain names

Getting CUSTOMERS ATTENTION

reputation / goodwill /trust

The IP tools available

Intellectual Property Rights

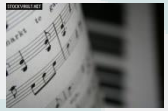
Objects of protection

Designs

Visual appearance not dictated solely by functional characteristics

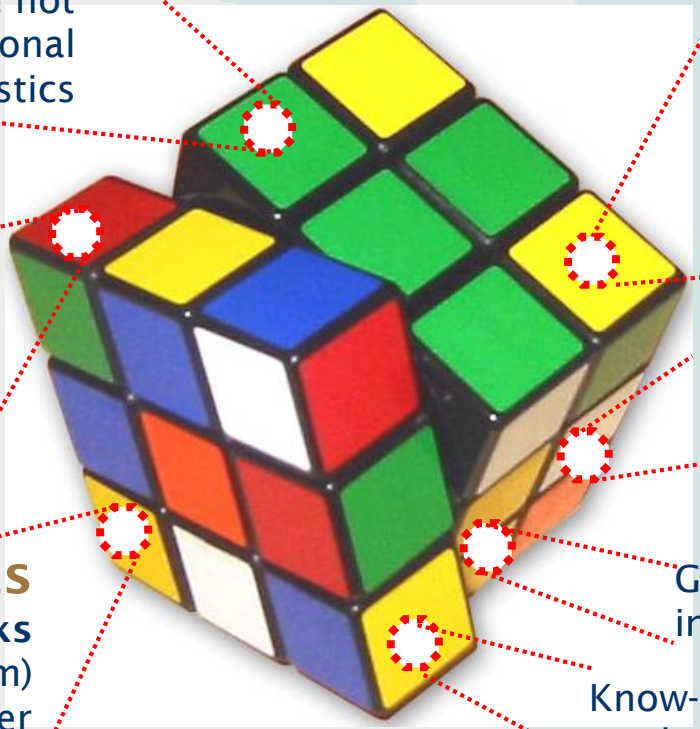
Patents

Invention or technical solution (exception US, AU) to a problem



Copyrights

literary/artistic works (code of computer program) having an individual character (form not content)



Trade Mark

Distinctive sign (name, slogan, logo, sound, colour …) used to distinguish products/services of its owner compared to others on the market

Other signs

Corporate name, domain names

Geographical indication

Know-How
Trade Secret

Offering

IP – overview

branding innovating

REGISTRATION REQUIRED	NO REGISTRATION REQUIRED
PATENTS → new and non-obvious technical inventions	**COPYRIGHT** →literary/artistic works / computer programs (protects form not content)
DESIGNS → new and original visual appearance of object	**UNREGISTERED DESIGN RIGHTS** → EU (3 years)
	PRIOR USE RIGHTS
TRADEMARKS → distinctive sign distinguishing goods or services of one enterprise from another	UNREGISTERED TRADEMARK/NAME RIGHTS (through use)
OTHER SIGNS (company name, domain name)	• Passing off (common law countries UK, CA, AU…) • Trade Dress (US) • Unfair competition

IP – overview

branding innovating

NO REGISTERED PROTECTION POSSIBLE (WITH EXCEPTIONS)
KNOW HOW → kept secret through contracts, employment law, and internal policies (secure storage and access, administration of access rights, fragmentation of key information, in house control of key processes and products «divide and rule»)
IDEAS, CONCEPTS → prior to conceiving the technical means to achieve the desiderata, such ideas and concepts are not patentable
BUSINESS & MARKETING METHODS →non patentable (with some exceptions in US, AU)
ODOURS → distinctive smell of goods / design feature (exceptions are olfactory marks allowed in some countries e.g. US)
SOUNDS → as a design feature (exceptions are sound marks allowed in certain forms in many countries)

Nature of intellectual property rights

Patents, Trademarks, Designs, Copyright:

→ exclusive right to prohibit the commercial exploitation of the protected right (**Negative right)**

→ exclusive right to dispose of protected right (license, sell, mortgage) **(Positive right)**

Limitations of protection:

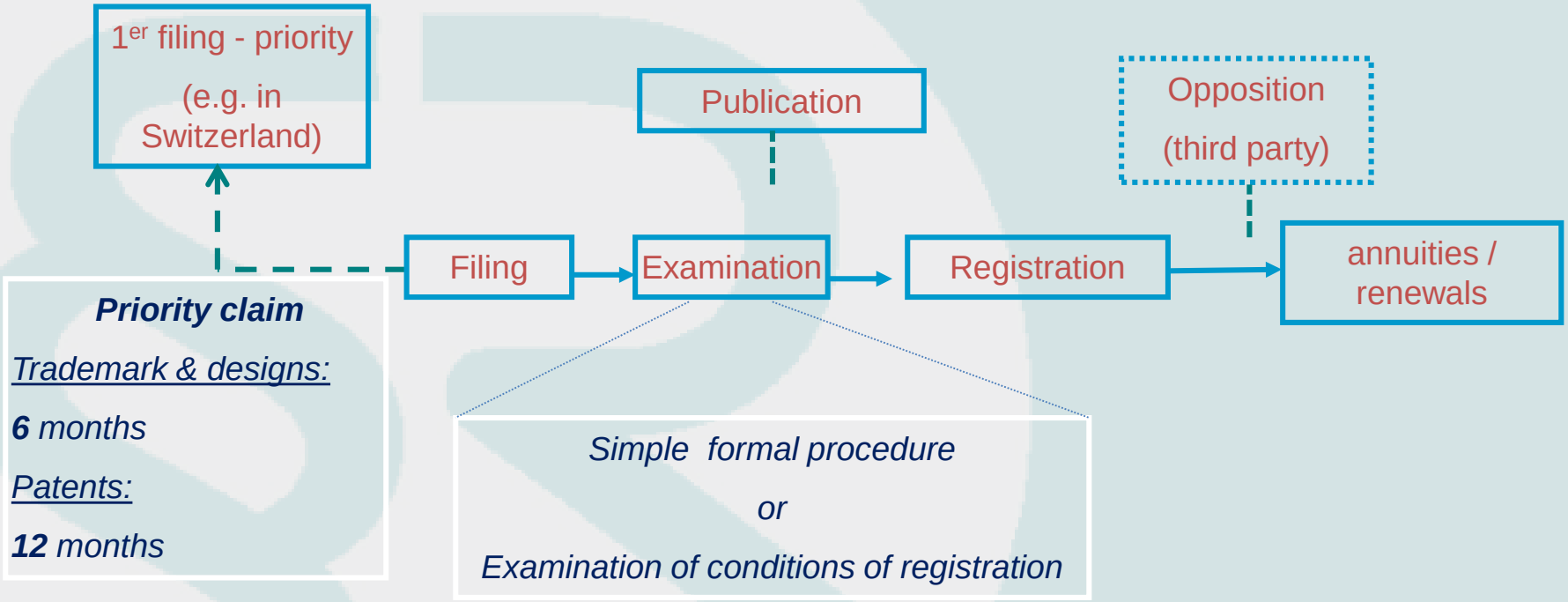
→ **Territoriality**

→ Duration of protection (designs, patents, copyrights)

Design	Trade mark	Patent	Utility Model	Copyright
Max. 10/14/25 years from filing	Renewable every 10 years	20 years from filing	7-10 years from filing	70 years from creator's death (software 50 years)

→ **Trademarks: requirement to use**

IP rights – General Procedure of registration

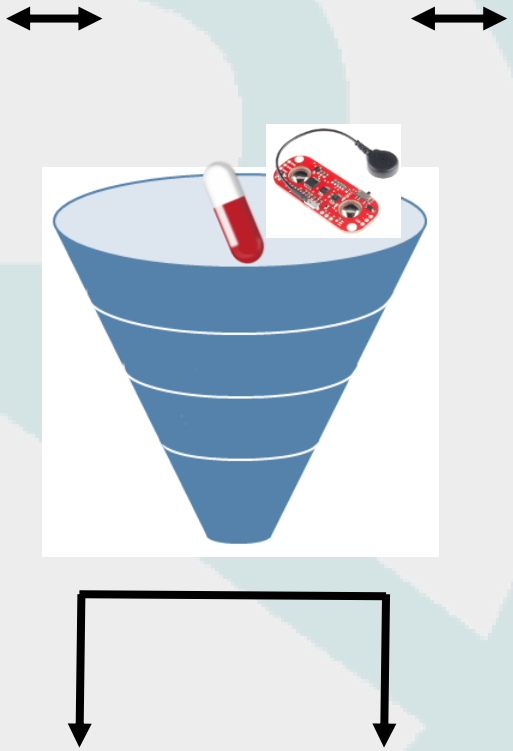


Technological innovations- How to create a competitive advantage?

Identification of key elements influencing buying decision

What Are You Selling ? (USP)

- *Know-how*
- *Product*
- *Technology to be integrated*
- *Device/Kit*
- *Method*
- *Research tool*
- *Biomarkers*
- *Data set*
- *Goodwill & established reputation in a therapeutic field*
- *…*



Who is Buying ?

- *Apparatus constructors*
- *Software distributors*
- *Standard consumers*
- *On-line users*
- *Patient*
- *Doctor*
- *Hospital*
- *Heath insurances*
- *Private/academic labs*
- *Pharma companies*
- *…*

What to Protect

When to protect

Patents - principles

Patentability criteria

Novelty

Not accessible to public before filing date (in writing, oral, use..)

Inventive activity

Non-obvious over the prior art at the time of the filing date

Indications of non-obviousness:

- *surprising technical effect*
- *technical advantage over the solutions of the prior art*
- *first solution to a problem*
- *solution going against a prejudice in the field*

Industrial Applicability

Patents-Principles

Excluded subject-matter

- ~~Discovery~~
- ~~Scientific theory~~
- ~~Mathematical method~~
- ~~Artistic creation~~

What could be protected ?

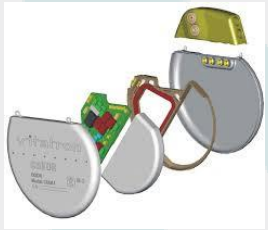
Examples

→ **New technologies** *(novel)*

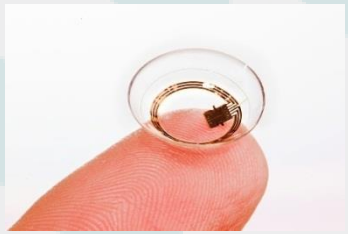
OR

→ **Known technologies from other fields and adapted for use in new products:** *might be patentable if the technical solution developped for the new use is novel & inventive over prior art.*

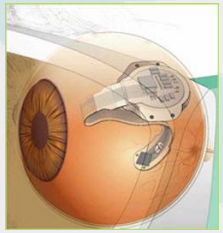
- → *The new function does not make it novel but technical means to achive this new function might be patentable*



Pace makers



Intraocular pressure sensors



Retinal Implants

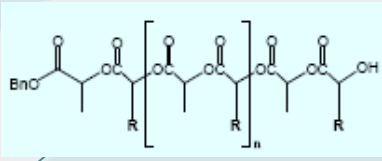
Wireless brain interface

Health monitor

Telemetry cardiac monitor

What could be protected ?

Examples



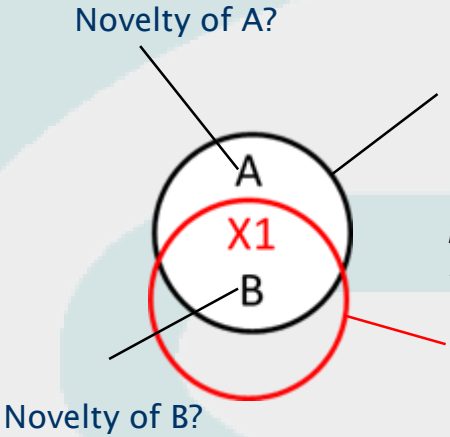
- New Chemical entity (NCE)
- Isolated natural product
- New use
- Delivery systems
- Formulations….

- New sequences (proteins, peptides, nucleotides , etc..)
- Antibodies, chimeric proteins
- New medical use
- Methods of detection….

- Medical devices
- Image processing
- Detection kits…

Selection patent (composition of matter)

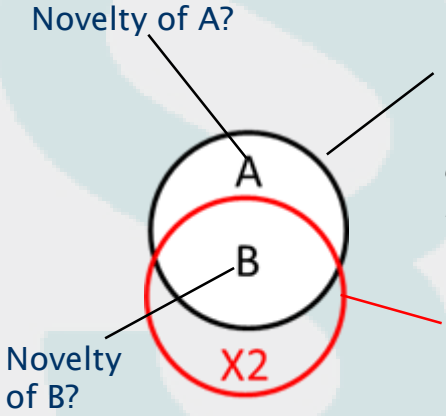
Genus vs. specific



Novelty of the genus?

The genus (black) is <u>not</u> novel (covers species X1 disclosed specifically in the prior art) but species A and B are novel per se since not disclosed in the prior art. Potential difficulty to find a novel genus grouping A and B in a single Invention. Non-obviousness should also be supported (might be more difficult for B)

Prior art



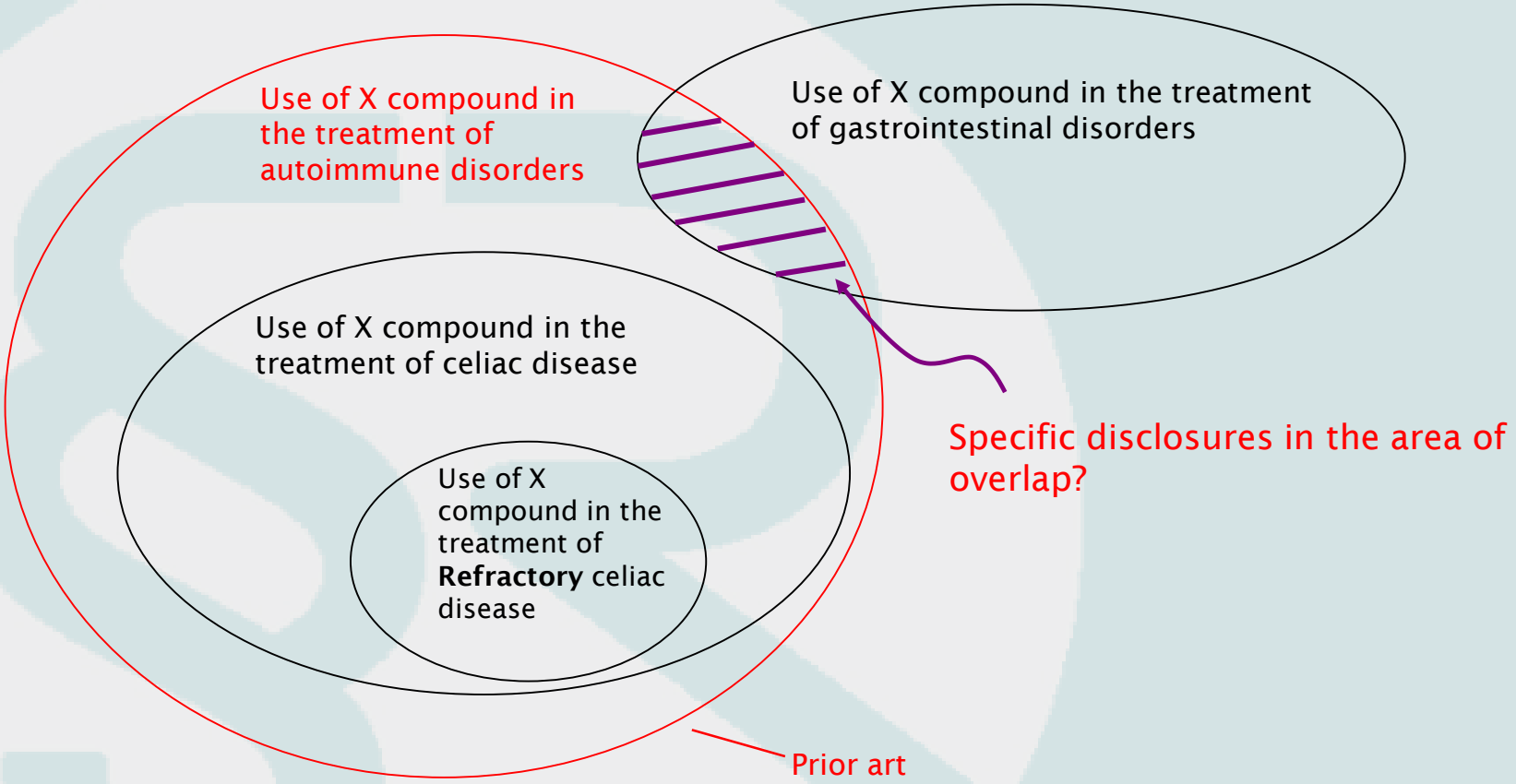
Novelty of the genus?

The genus (black) is novel (does not cover species X2 specifically disclosed by the prior art) and species A and B are novel since not disclosed specifically in the red prior art.
B is generically covered by genus of the prior art (red) which would impact freedom of use of B but not necessarily patentability (depends on how non obvious the black genus would be).

Prior art

Selection patent (use/method)

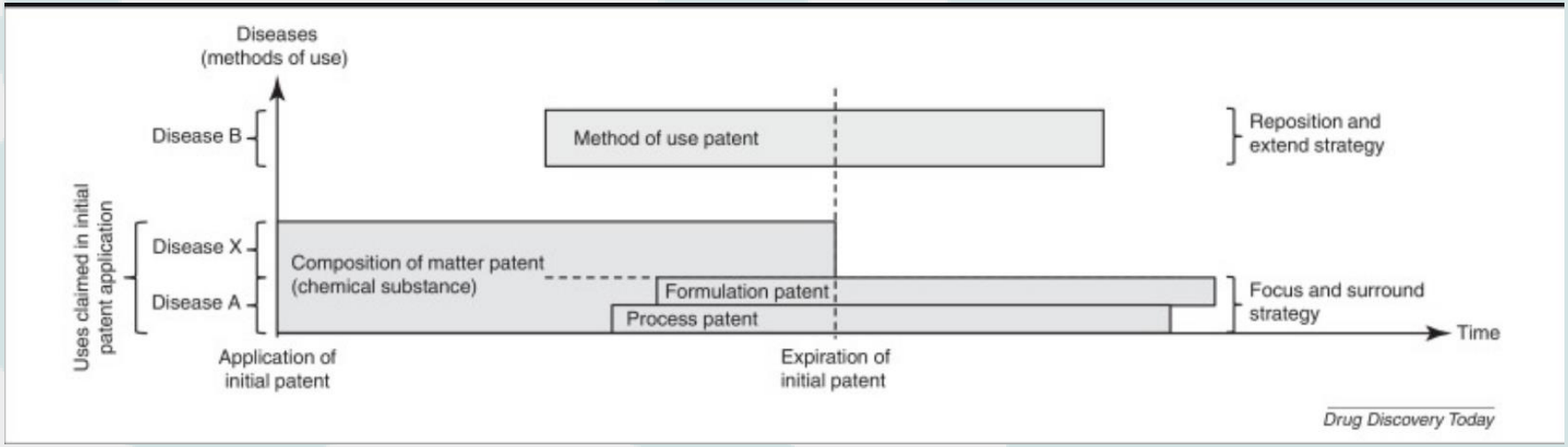
Genus vs. specific



The claimed scopes (black) are novel as long as not specifically disclosed in the prior art. Non-obviousness should also need to be supported. It will depend on the nature of the specific dislosures in the area of overlap

Patent life extension

Further medical uses, formulation, combinations, therapeutic regimen, scale-up methods of productions & new intermediates, chemical scope expansion etc..



State of the art, prior art

Sources of patent and non-patent information

Further free Databases

CH: http://www.swissreg.ch/
US: www.uspto.gov/patft/index.html
WO: www.wipo.int/pctdb/en/search-struct.jsp
JP: https://www.j-platpat.inpit.go.jp/
PubMed, PubChem, Scirus …
http://www.see-the-forest.com/QuickSearch2.act
http://www.sumobrain.com/
https://www.freepatentsonline.com/
https://www.lens.org/lens/

http://www.wipo.int/edocs/pubdocs/en/patents/434/wipo_pub_l434_11.pdf
https://ipo.org/wp-content/uploads/2017/03/Free-Search-Tools-Bulletin_-20170301.pdf

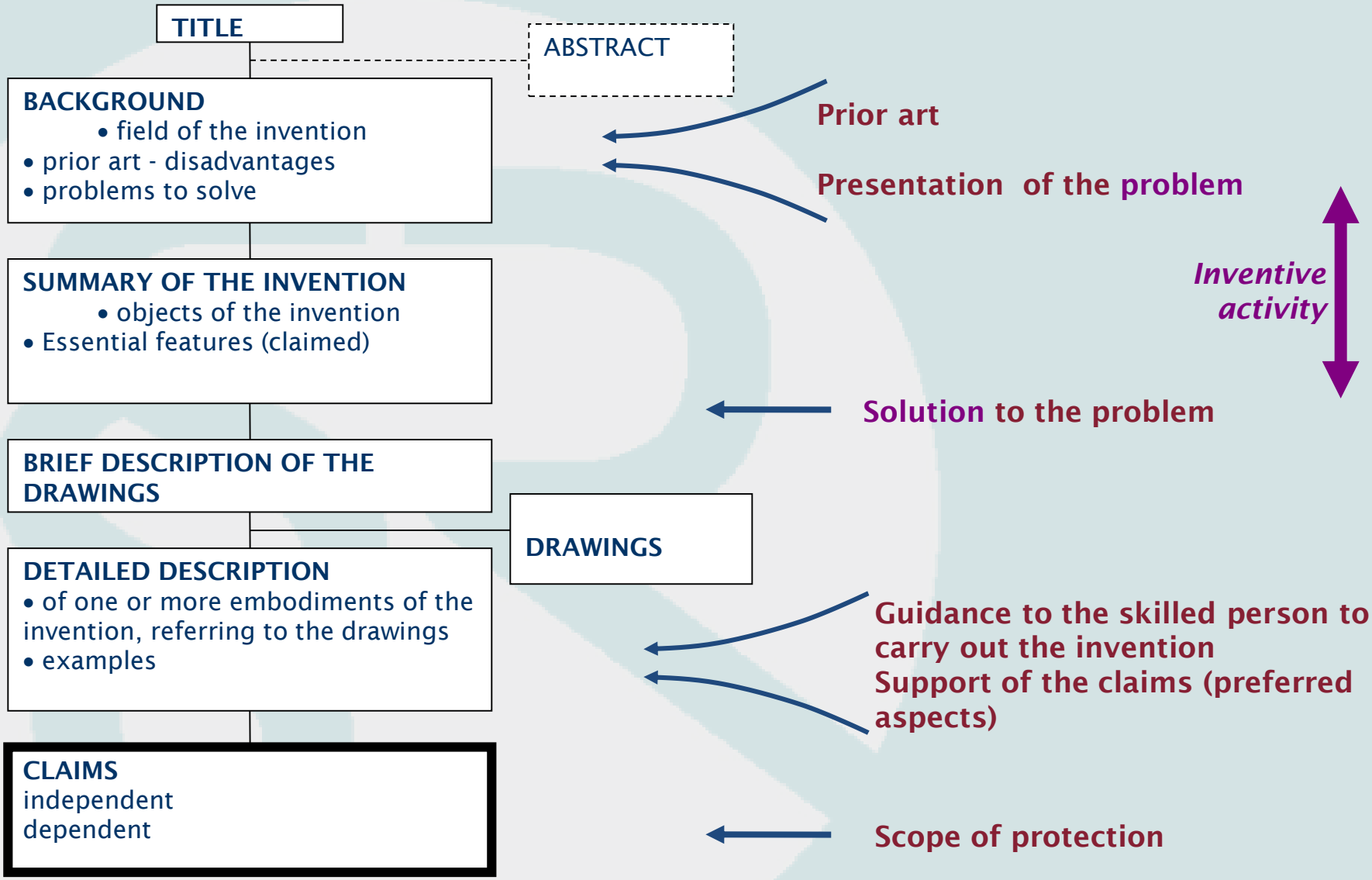
Professional Databases (subscription/use fees)

Patbase
Derwent
Delphion
STN
…

→ **No disclosure for patent application the first 18 months !**

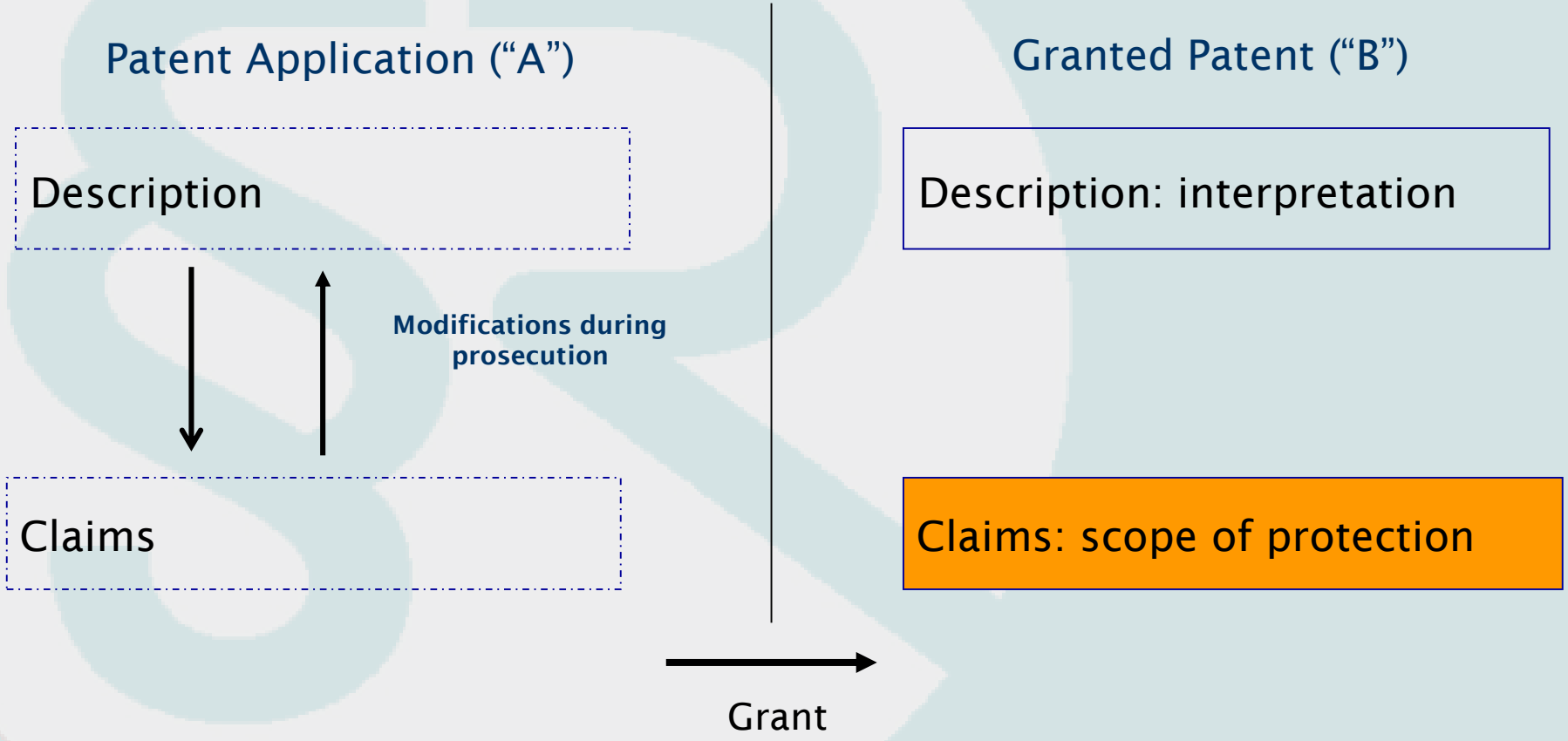
Patents – understanding how to read a patent specification

Patent Structure



How to read a patent

Patent application and Patent (granted)



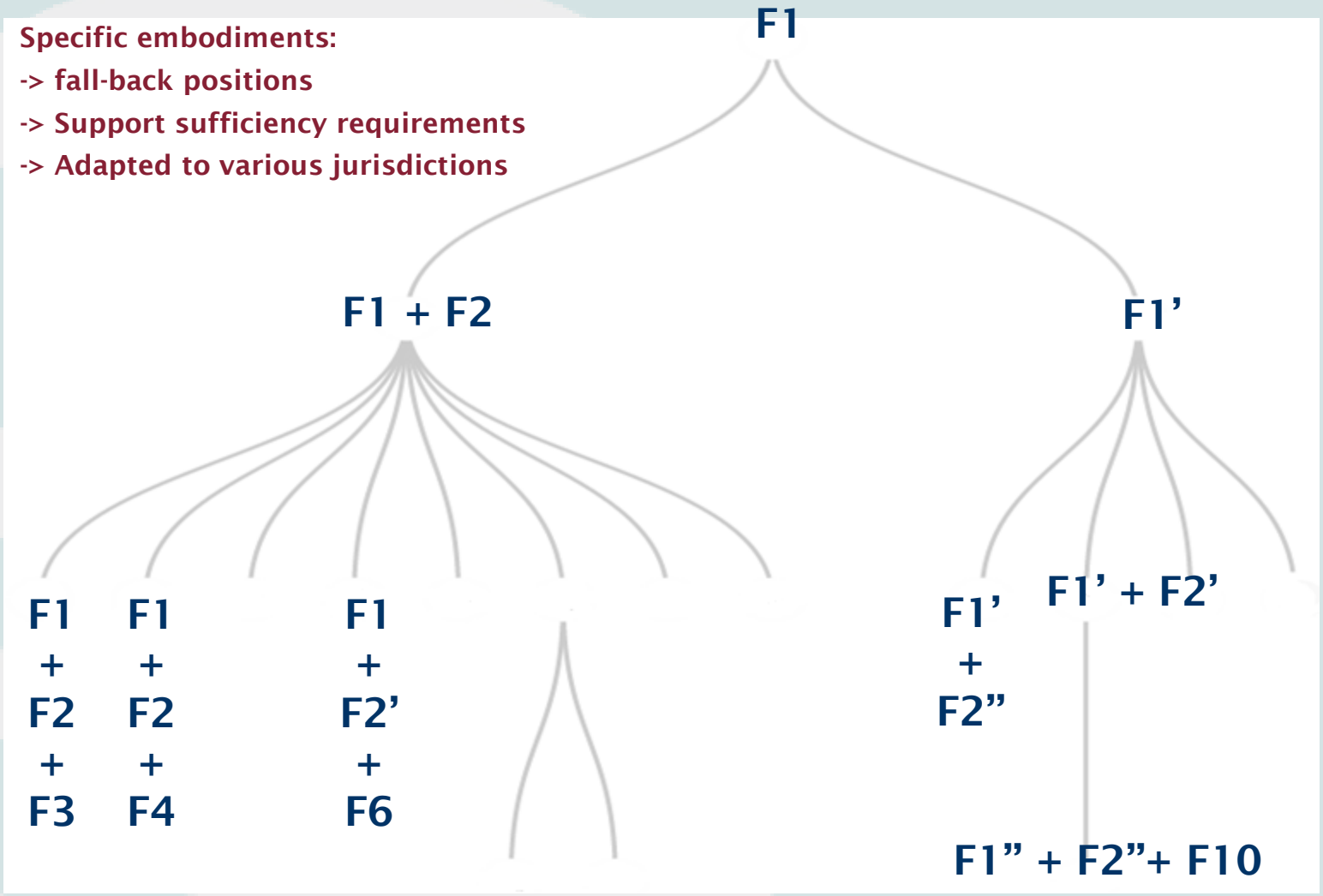
Drafting strategy of (priority) patent applications
Structure & Anticipation

Specific embodiments:

-> fall-back positions

-> Support sufficiency requirements

-> Adapted to various jurisdictions



Timing
& Development Efforts

Patent Protection - Timing

Importance of Timing

Balance between:

- **A late filing** when you have extensive experimental data (increased risk of being scooped by prior art)

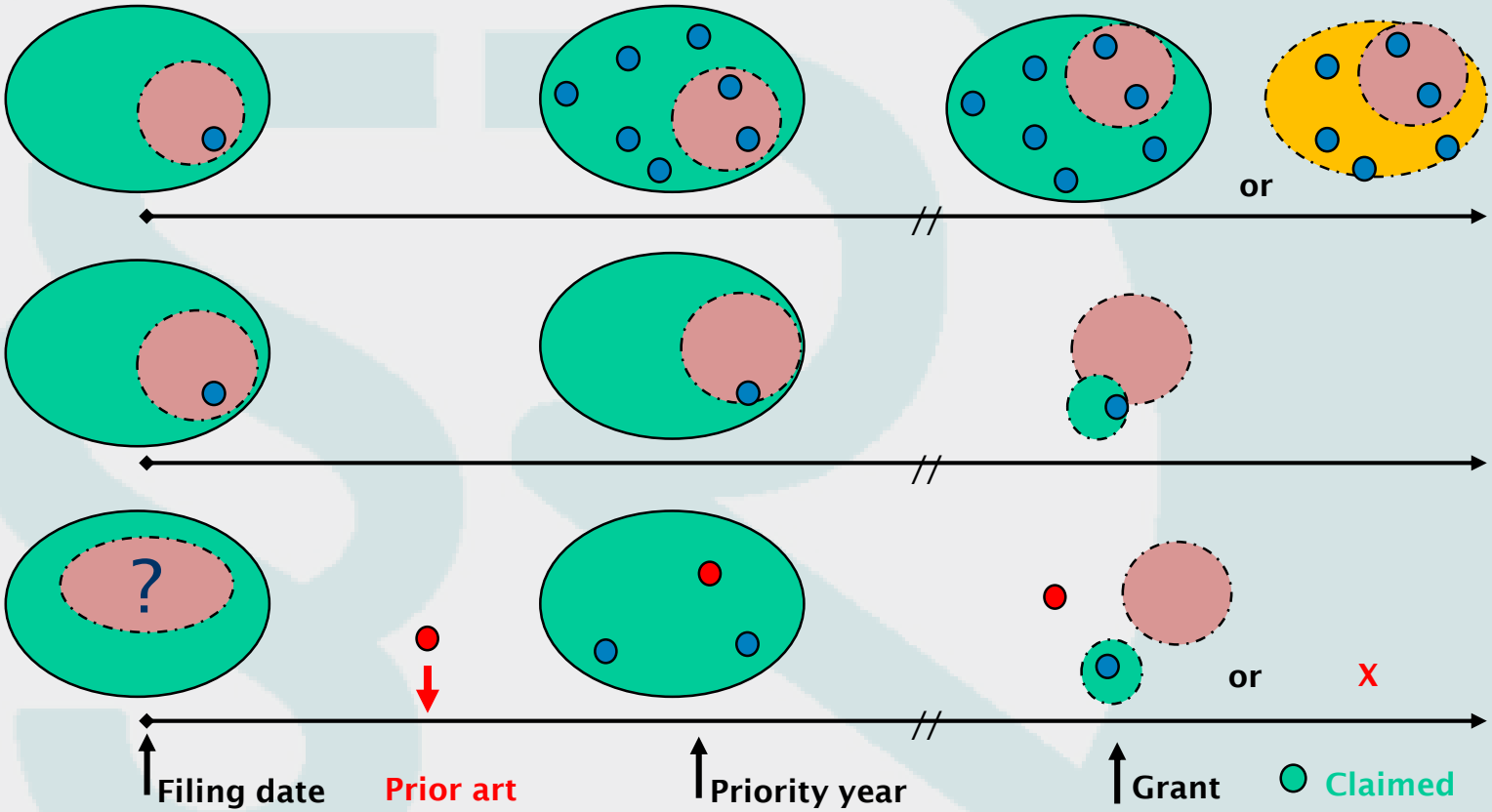
- **A too early filing** which will expose your patent application to enablement and sufficiency objections from Examiners (would lead to impossible or very narrow patent protection) & starts the clock for future patent costs

-> Filing a patent application not earlier than having at least few data supporting the invention & if the applicant believes to be in a position, within a year from this filing date, to provide at least some further data for supporting a scope economically reasonable for the patent application

Effective Patent Protection

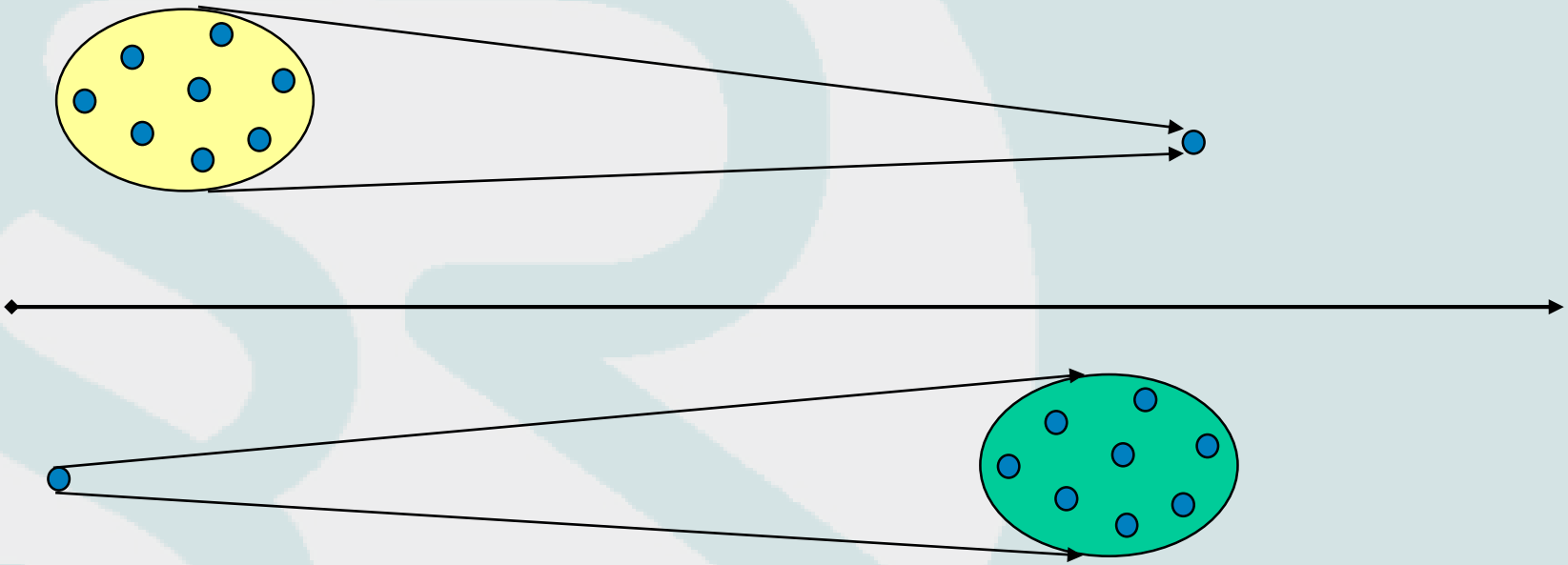
When to file?

Influences scope of protection



Effective Patent Protection

development process: converge to the best solution



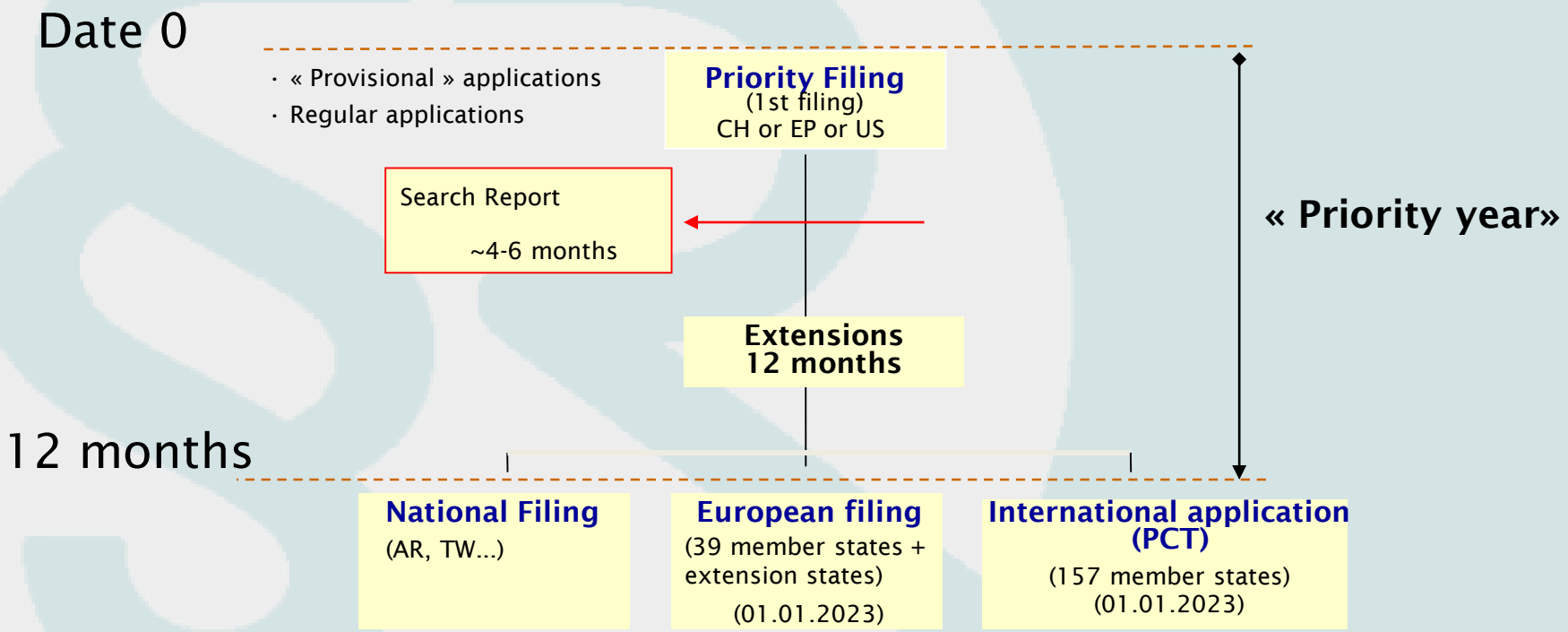
patent protection process: expand to include alternative solutions → increase potential scope of protection

Claimed

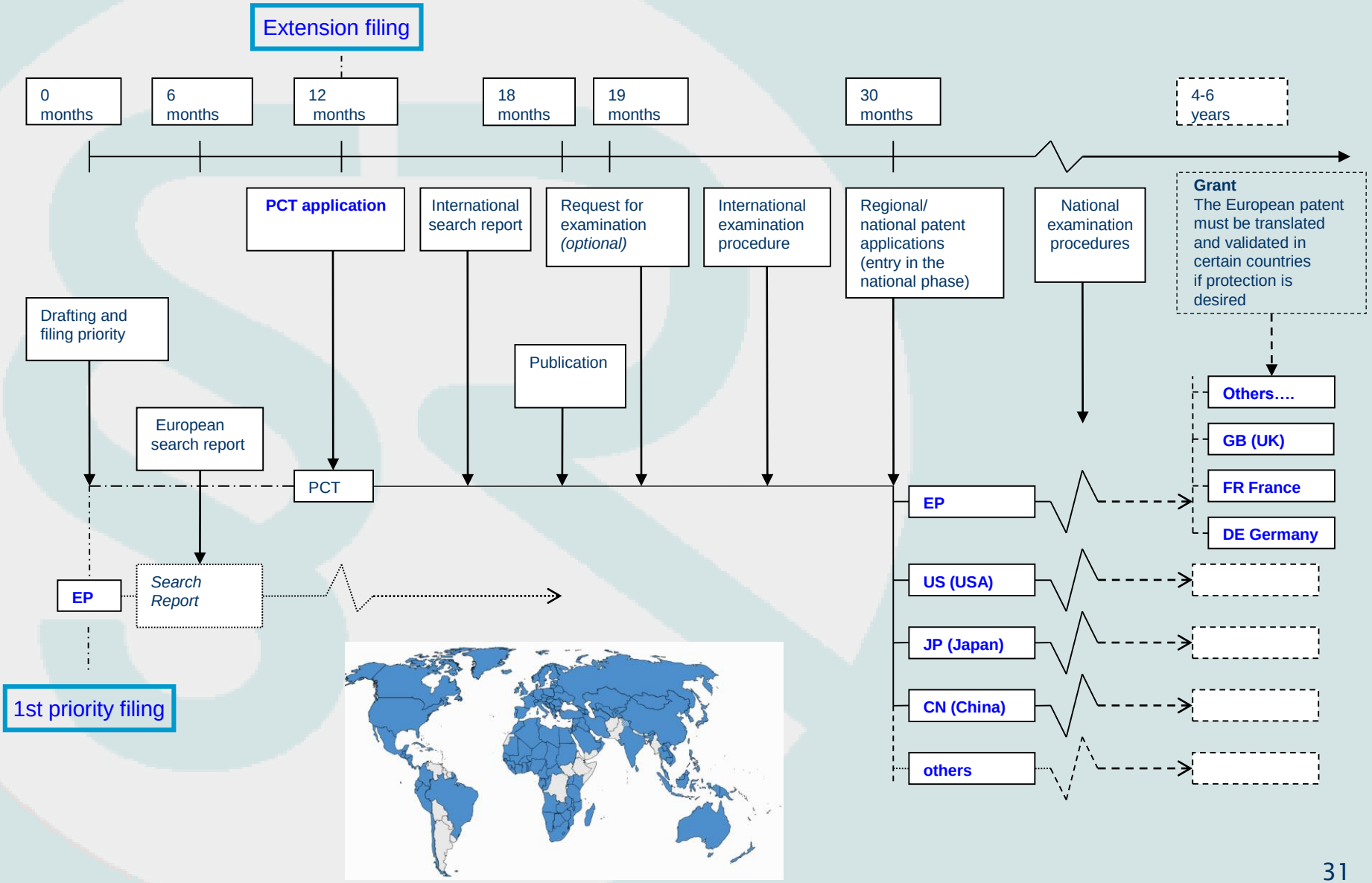
Examples

Different Patenting Routes

First Filing or « Priority » Filing



Patent filing strategy



European Patent protection

«Classical» EP

Filing → Examination → Allowance

unchanged

validations

- Germany
- France
- Italy
- Sweden
- Switzerland
- Spain
- Poland
- UK

For the next 7 years: unchanged

EP with unitary effect

Filing → Examination → Allowance

unchanged

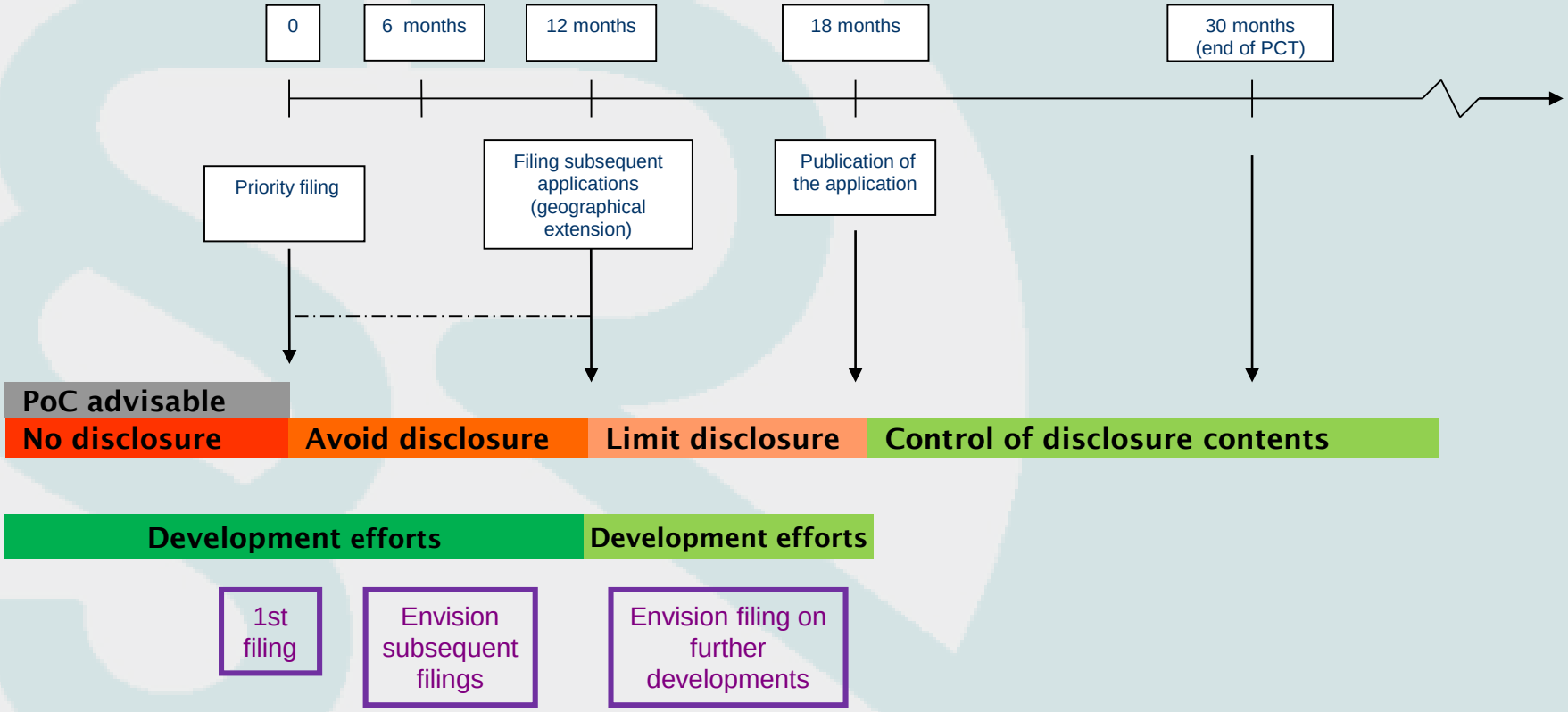
validations

- Unitary Patent
- Switzerland
- Spain
- Poland
- UK

NEW as of 1st June 2023

Effective Patent Protection

Development efforts and control of disclosures



Patents – ownership issues

Importance of the Chain of Title

Inventors are at the beginning of the chain and therefore inventorship determines ownership

Employee (service activity) ← **Inventor** → **Under contrat (consultant, service provider)**

↓ **Employer**

↓ **Depending on contract terms**

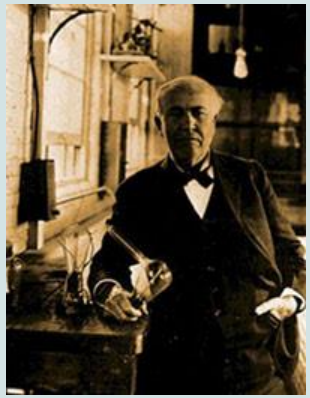
Patent filing – who is the inventor?

Collaborator

moral,
financial,
human support

Seniority

Inventor



- Conceive the idea of a new apparatus, a new treatment, a new molecule, a new method of manufacture

√

- Confirm the initial hypothesis by routine experiments requiring only common knowledge in the field

Ø

Costs and benefits of Patents

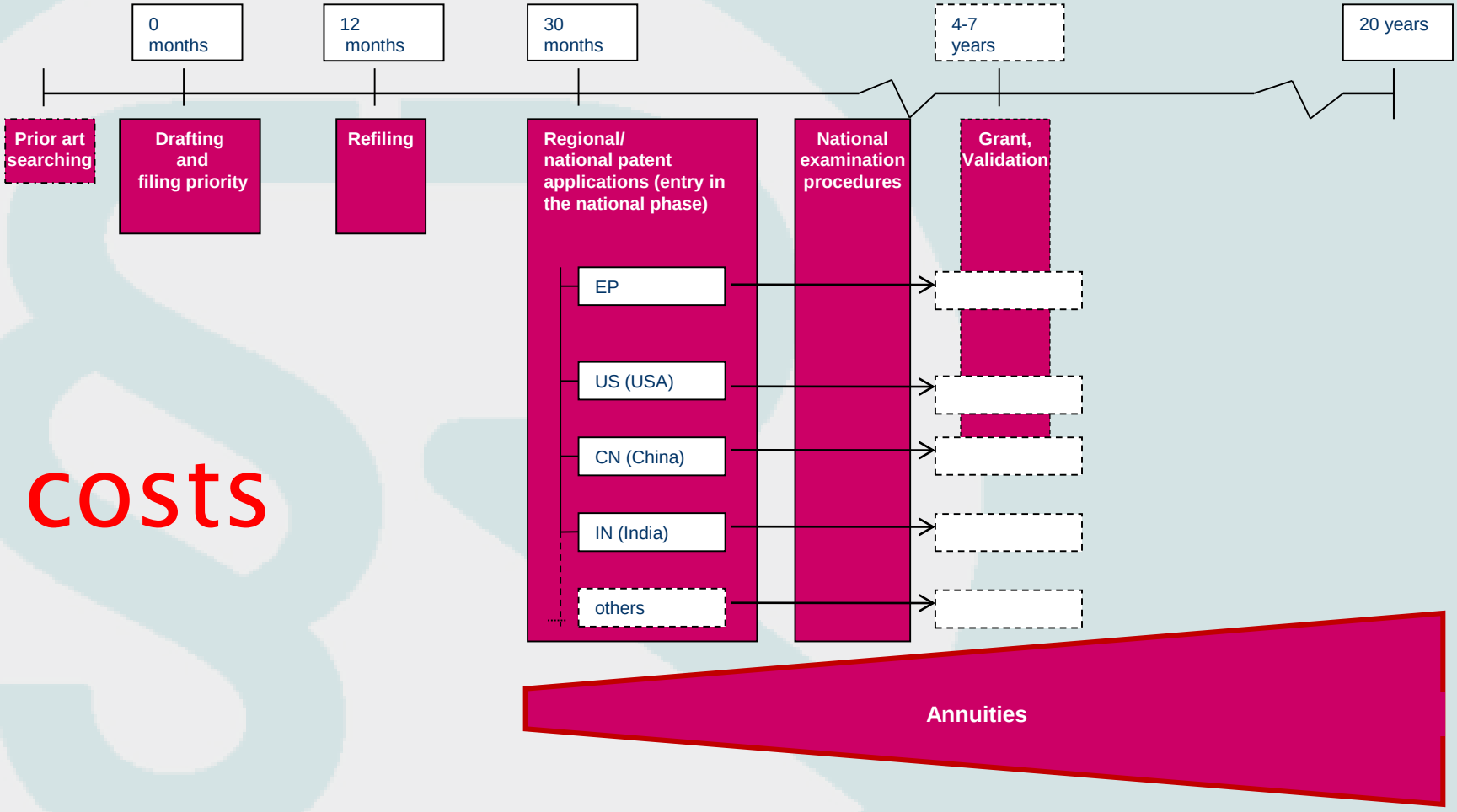
IP – strategy

benefit

Effects
➢ Protection against infringement in countries of protection
➢ Positive image (innovation)
➢ Strengthens collaboration with 3rd parties
➢ Enables licensing & allows control and valorisation of created joint IP
➢ Ensures a certain freedom to operate *(e.g. manufacturing/distribution sites)*
➢ Increases intangible assets
➢ Ensuring an entry point of negotiation

Consequences
Increased margin and/or sales ***(i.e. increased sales price and/or market share)***
Direct revenue from IP
Increased company value

IP – strategy – Cost evolution during patent life



costs

IP – strategy – Cost evolution during patent life

1. **Geographical scope of protection**
2. **IP portfolio management (internal & external)**
3. **filing strategy & filing routes**
4. **Quality of drafting**
5. **prosecution difficulties**
6. **rapidity of examination procedure**
7. **inventiveness, nature & complexity of technology,.....**

Patent filing strategy & Costs

Extension filing

0 months | 6 months | 12 months | 18 months | 19 months | 30 months | 4-6 years

PCT application

International search report

Request for examination *(optional)*

International examination procedure

Regional/ national patent applications (entry in the national phase)

National examination procedures

Grant
The European patent must be translated and validated in certain countries if protection is desired

Drafting and filing priority

Publication

European search report

PCT

EP

Search Report

1st priority filing

EP

US (USA)

JP (Japan)

CN (China)

others

Others….

GB (UK)

FR France

DE Germany

CHF 6'000-10'000 Accrued

13'000-18'000

36'000-42'000

42'000-60'000

60'000-100'000

Preparing to file a patent application and follow-up

Getting ready for filing a patent application

1. Invention Disclosure

- Description of the invention
- Details on research funding origin – rights ownership
- Potential development and value (applications, various aspects, in/out development)

2. State of the art

- Brief description of the background of the invention or starting point of the invention
- Results of prior art searches (if available) in patent and non-patent literature

CH: http://www.swissreg.ch/
EP: https://worldwide.espacenet.com/advancedSearch?locale=en_EP
US: http://patft.uspto.gov/l
WO: https://patentscope.wipo.int/search/fr/search.jsf
JP: https://www.j-platpat.inpit.go.jp/web/all/top/BTmTopEnglishPage
PubMed, PubChem, Scirus, EBI …

- Identify disclosures (made or planned): reference, dates and copies of content (to be updated as long patent applications are pending)

3. Main differences/advantages/competitive advantage

4. Clearing chain of rights

-Details on research funding origin – rights ownership
-Identity of the inventors & respective contributions *(see record keeping)*
-External collaboration involved (MTA, R&D agreements, visiting scientists, copyright material, use of protected material or processes)

Enhancing protection

Alternative or Complementary protection

- ***Utility model (only available in some countries – DE, AT, JP, ES…)***
  - validity: *generally* same or similar substantive requirements as a patent (novelty, inventive step)
  - often simplified or no substantive examination
  - lower cost
  - shorter duration (usually 10 years or less depending on country)
  - not available in many countries
  - not all technologies (in particular pharmaceutical, chemical & biotech) can be protected via a utility model
  - methods (processes) cannot be claimed
- ***Design***
  - only protects **external appearance**
  - therefore very limited scope of protection (for technical inventions)
  - low cost and easy to enforce
- ***Preserve secret know-how***
  - difficult to implement esp. in view of employee mobility
  - needs a policy and procedures (*need to know basis / divide and rule / information repository /access rules*)

Design basics

Definition

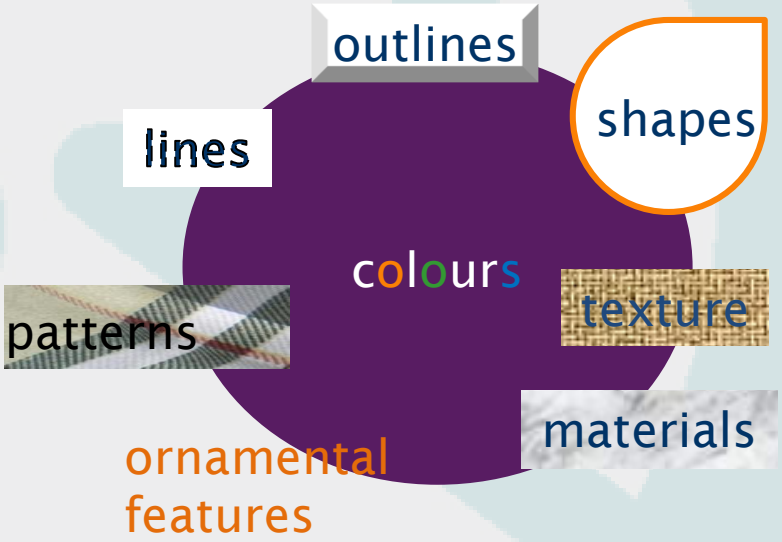
Visual appearance

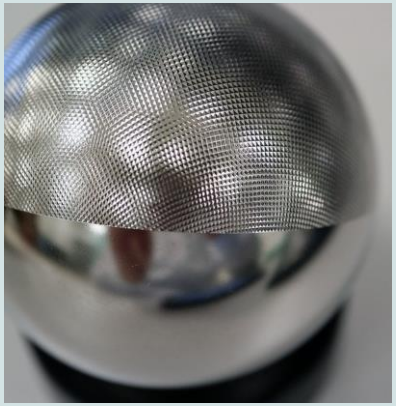
not dictated solely by functional characteristics:

→ tactile, sound and olfactory features cannot be protected

→ must have an **element/characteristic** that is **« useless »** or at least not unique for the technical function

Design basics





Freedom of use

Freedom to Operate ≠ Patentability

Freedom to Operate ≠ Patentability

Example

Patentable

Fœtal heart rate monitor

FTO?

Third party's rights?
(even from other fields)

- → **Freedom to operate (FTO) search and analysis are crucial before commercialization**
- → **It might be complex and needs to performed once the product is defined**

Freedom to Operate

STEPS

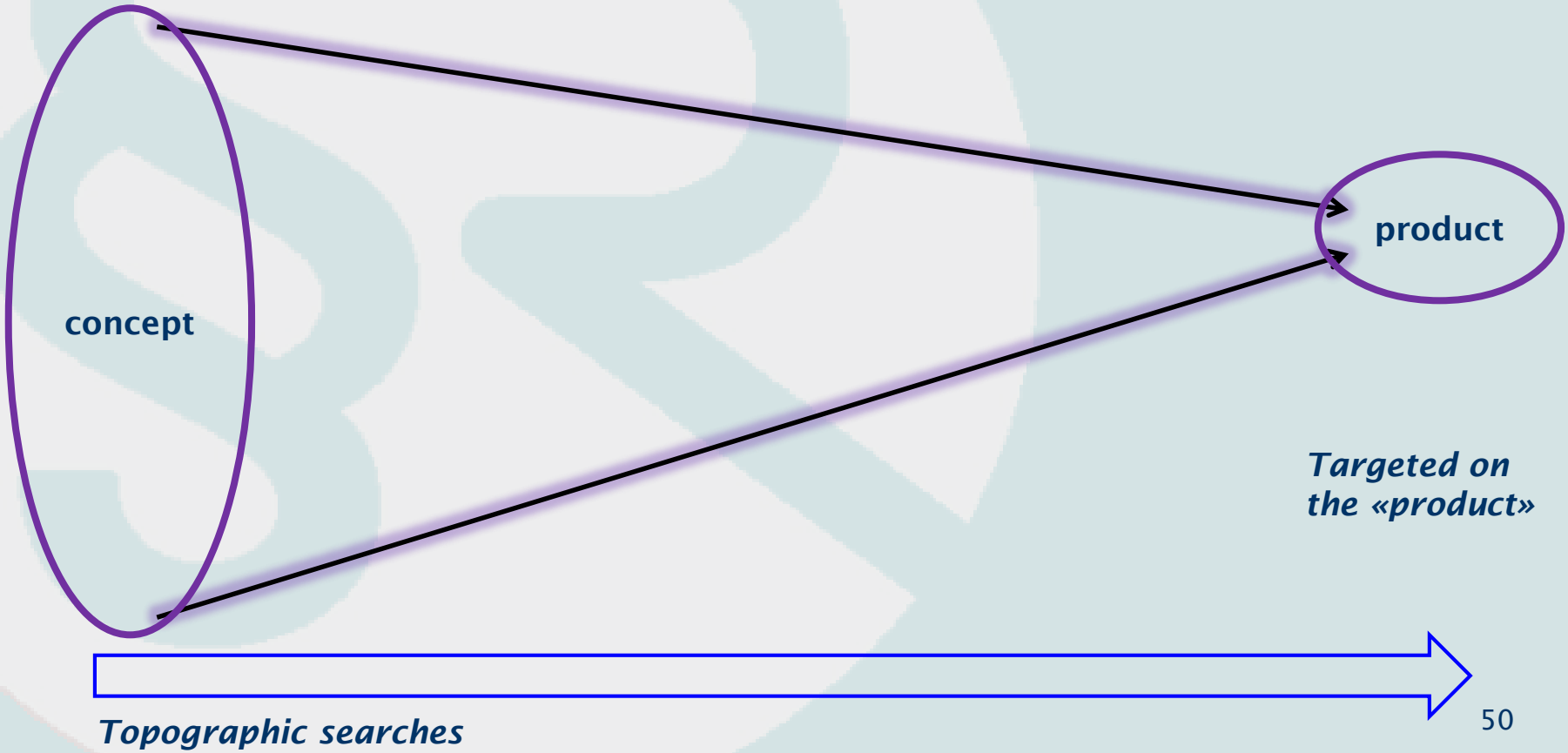
1. Analysis of the key characteristics of the products / processes
   - Which aspects are innovative and potentially protected?
   - Which brands are important
2. Identification of third party rights
   - Conduct searches
3. Analysis
   - Analysis of the scope of protection in relation to the characteristics of the product
4. Actions
   - Monitoring / Validity study / Opposition / Product modification

Freedom to Operate

Scope of the analysis

Depend on

- **The field**
- **stage of development**



Analysis

Analysis of the scope of protection in relation to the characteristics of the product

- ***Territorial nature:***

The patent may not have been granted / continued in the territory of interest

The scope of protection may cover the product in one territory and not another

Commercialization may be unlikely in the protected territory

- Risk delimitation

- ***Limited duration of patents***

Patent protection has a maximum term of 20 years, provided that the patent is "continued in force" (payment of maintenance fees on time). 25% of all patents granted by the European Patent Office (EPO) are kept in force until the end of the maximum term of protection

- Possible expiration before placing on the market and exemption for research purposes may exist for the territories of interest

- ***The scope of patents has limits***

If the application is pending: the scope of protection may be limited.

- Study of the procedural history in the patent family to determine the chances of obtaining and the possible scope

“Simple can be harder than complex: You have to work hard to get your thinking clean to make it simple”.

Steve Jobs

- Q & A -