

## Patent application strategy

when, where, what to file?



Dominique Winne

Examiner (ICT)

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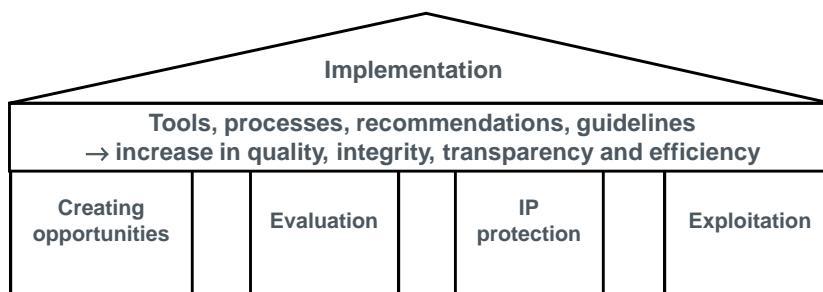
### Contents

§ IP strategy

§ When, where, and what to file

§ Relevant aspects for filing strategy

## The four main pillars of IP management



- § Awareness creation
- § Teaching & training
- § IPR support
- § Technology scouting
- § Micro/seed-funding
- § Innovation awards

- § Business strategies
- § Licence agreements
- § Spin-outs
- § Assignments/sales

## IP strategies for universities and businesses

### § Universities

- teaching
- fundamental and applied research
- technology transfer (i.e. no in-house production and sales)

### § Businesses

- own development, manufacturing and/or sales of products and services
- commercialisation of technologies (out-licensing, IP sales)

## IP strategy approaches

### § Developing and protecting IP

- particularly relevant to university activities
- also relevant to businesses

### § Creating a competitive advantage by optimising and using IP

- relevant to university spin-out companies
- relevant to businesses

## Developing and protecting IP

Strategic objective	Tactic
<b>"Monopolising" the technology</b>	<ul style="list-style-type: none"> <li>– Publish and ensure wide access, or</li> <li>– Protect with patents and other IP forms, or</li> <li>– Maintain as secret know-how</li> </ul>
<b>Managing the IP filing strategy</b>	<ul style="list-style-type: none"> <li>– Maintain application for a limited duration</li> <li>– Decide which territories should be protected</li> </ul>
<b>Enhancing the status of the technology</b>	<ul style="list-style-type: none"> <li>– Develop complementary technologies</li> <li>– Create portfolio of related patents &amp; other IP</li> </ul>

## Creating a competitive advantage

Strategic objective	Tactic
<b>Creating a "monopoly"</b>	<ul style="list-style-type: none"> <li>– Be aware of IP landscape (competitors)</li> <li>– Ensure freedom-to-operate</li> <li>– Police infringers</li> <li>– Defend "monopoly"</li> </ul>
<b>Managing competitors</b>	<ul style="list-style-type: none"> <li>– Create defensive patents</li> <li>– Trade IP for cross-licensing deals</li> </ul>
<b>Securing finance</b>	<ul style="list-style-type: none"> <li>– Build IP portfolio to attract investment</li> </ul>
<b>Monetising the IP portfolio</b>	<ul style="list-style-type: none"> <li>– Consider out-licensing, sale of IP, spin-outs</li> </ul>
<b>Sourcing new IP</b>	<ul style="list-style-type: none"> <li>– Use collaborations, in-licensing, acquisitions</li> </ul>

## Technology transfer

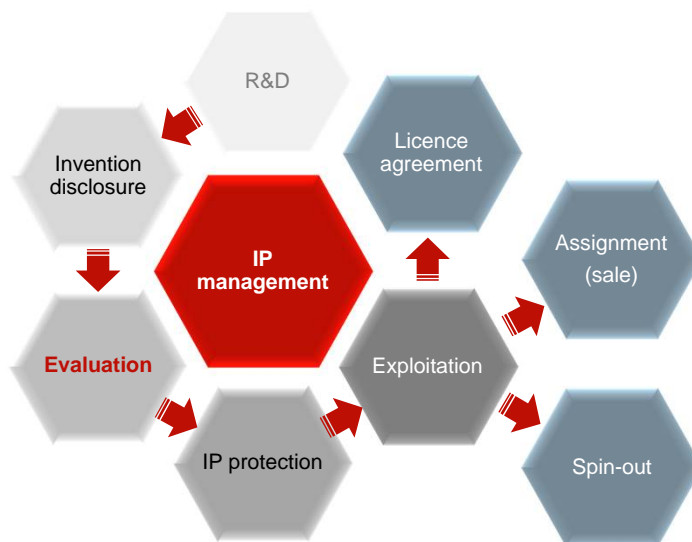
### § University objective

- to make innovative research results and technologies available for wider use by means of technology transfer

### § Possibilities for technology transfer

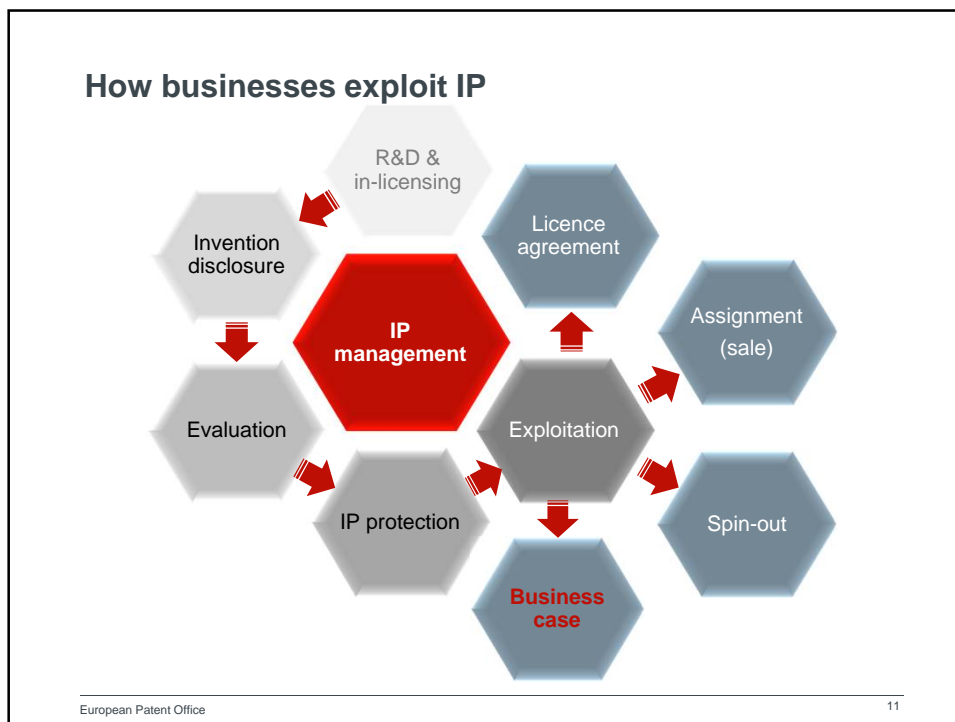
- publications, people and artefacts
- collaborations
- contract research
- licensing
- sale
- spin-outs

## How universities can exploit IP



## Evaluating IP

- § Legal status
- § Technology
- § Market conditions



## Licensing IP

- § Intellectual property rights
- prevent others from using your inventions and creations
- § Licences (contractual agreements)
- allows others to use your inventions and creations
  - in accordance with specific terms and conditions
- § Requirements for a legal contract
- mutual exchange of a bargain
  - consideration (payment) exchanged for something of value (IP)



## Benefits of licensing

Licensor	Licensee
§ Create new source of revenues	§ Gain access to new technologies, turn-key products and processes and new markets
§ Access new territories and markets	§ Reduce or avoid R&D costs and associated risks
§ Influence market acceptance for technology and products	§ Provide competitive advantage and IPR protection
§ Create production and supply partnerships	§ Increase asset value of business

## IP and spin-outs

§ Decision to set up university spin-outs and new technology start-ups relies mainly on:

- A demonstrated technology
- Good commercial potential
- Validly protected IP position
- Strong management skills and expertise

§ Investment

- Start-ups generally lack positive cash flows.
- Value lies in IP assets.
- Investors base decision on strength of team and IP to protect future earnings.

### Before filing for a patent consider...

1. Is there a market for the invention? Can you exploit the market directly or via a license?
2. Is it likely that a competitor arrives at the same invention? (and, possibly, patents it himself?)
3. Are licenses of other patents required to commercialise the invention?
4. Is it easy to reverse engineer?
5. Is it easy to design around it?
6. Will it be easy to identify violation of patent rights?
7. Are you ready to invest time and financial resources for enforcing the patent?
8. Is there a benefit, if the patent is added to the balance sheet?

### Example - freedom to operate

§ **Company A** develops a mobile phone with a **telescopic antenna**

§ The phone should be for sale in **country X**

§ A *freedom-to-operate search* is carried out before filing **patent application A**





### Example - freedom to operate

§ **Patent B** from **company B** is found

§ Claim 1 of patent B reads:

*A **mobile telephone handset** comprising a **casing** characterised in that it comprises an **extensible antenna**.*

§ The invention has all features of this claim

§ Selling/producing/distributing the invention in country X would infringe patent B

§ A **license from company B** is required to **commercialize** the invention in country X

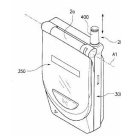


FIG. 1

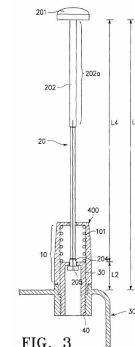


FIG. 3

### Example – trade secret?

§ A biochemist discovers a **naturally occurring yeast** previously unknown to the brewing industry.

§ Unexpectedly, its use in beer-making is more effective than any conventional brewer's yeast - bringing production **cost savings of 5%**.

§ The **brewing process must be adapted** to employ this different yeast.

§ The **final beer** tastes as good as any other, and gives **no clue as to how it was made**.

### Example – trade secret?

§ The yeast is naturally occurring, its **discovery** cannot be patented.

§ A **novel process** including the yeast could be patented.

§ However

if patented • it will be published

**how to identify violation** of the patent by rival brewers?

§ Violation and infringement is a matter of **national law – check the details!**

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§ IP strategy

§ **When, where, and what to file**

§ Relevant aspects for filing strategy

## When to file?

§ The sooner the better!

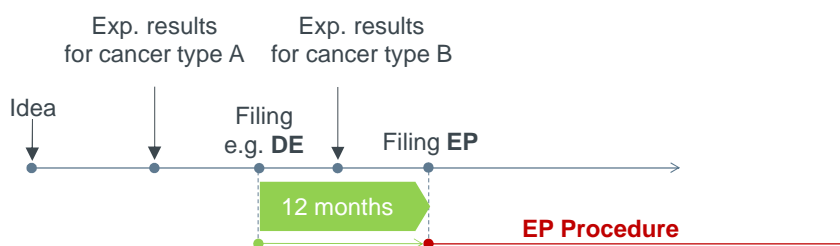
earlier filing date • less disclosures in the state of the art

§ However:

- There must be **enough information to disclose** the invention
- **No information can be added** to the application **after filing!**

## Example - when to file

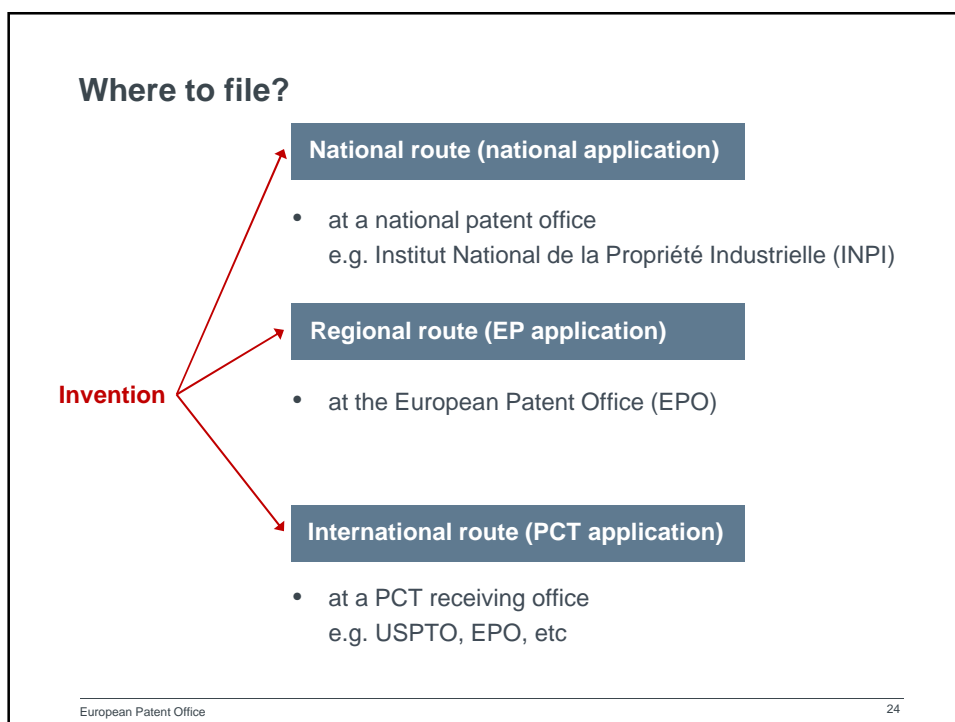
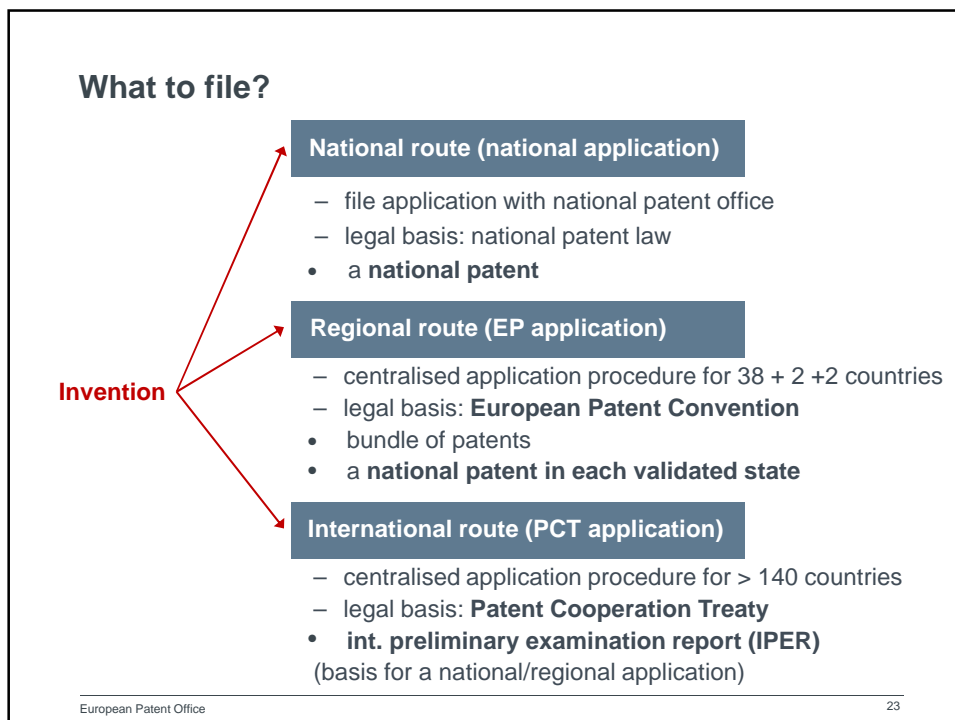
§ Invention: a drug to treat cancer

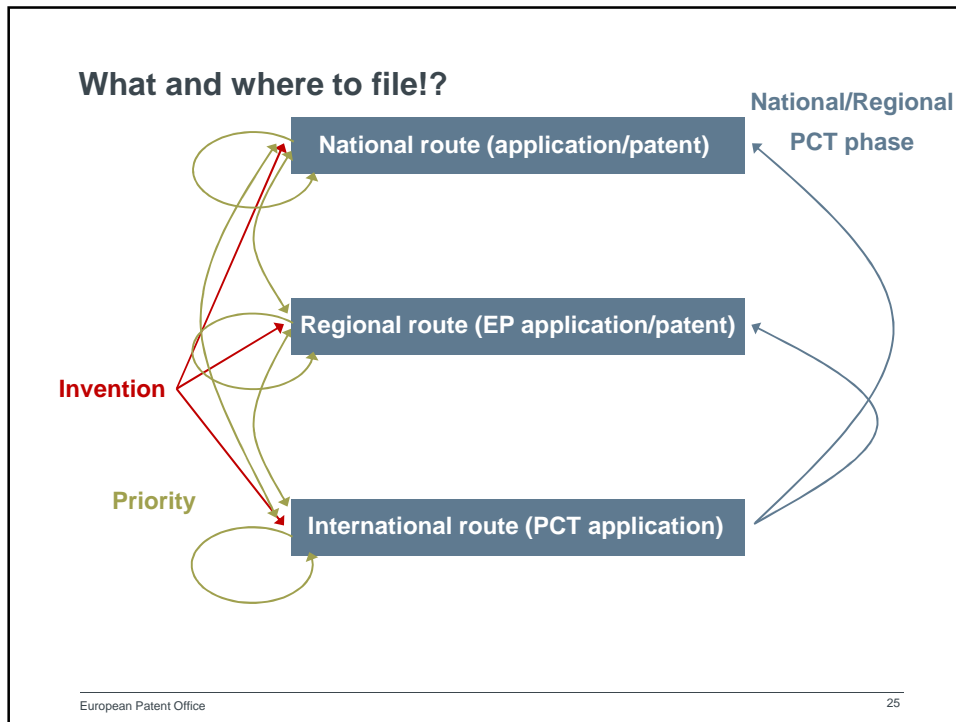


§ Claim 1 covers any cancer type

§ However, at the filing date it was only known that it worked for type A!

- **invention only disclosed for cancer type A**





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- § **Relevant aspects for filing strategy**

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### In which countries is protection needed?

- Where can it be produced? • e.g. **ES**
- Where can the competition produce? • e.g. **DE**
- What are the most important markets? • e.g. **US, CN, DE, FR**



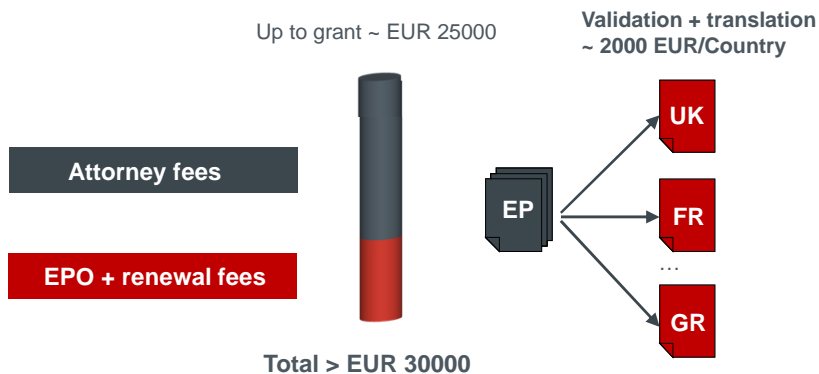
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### Patenting costs from filing to grant (EP)\*

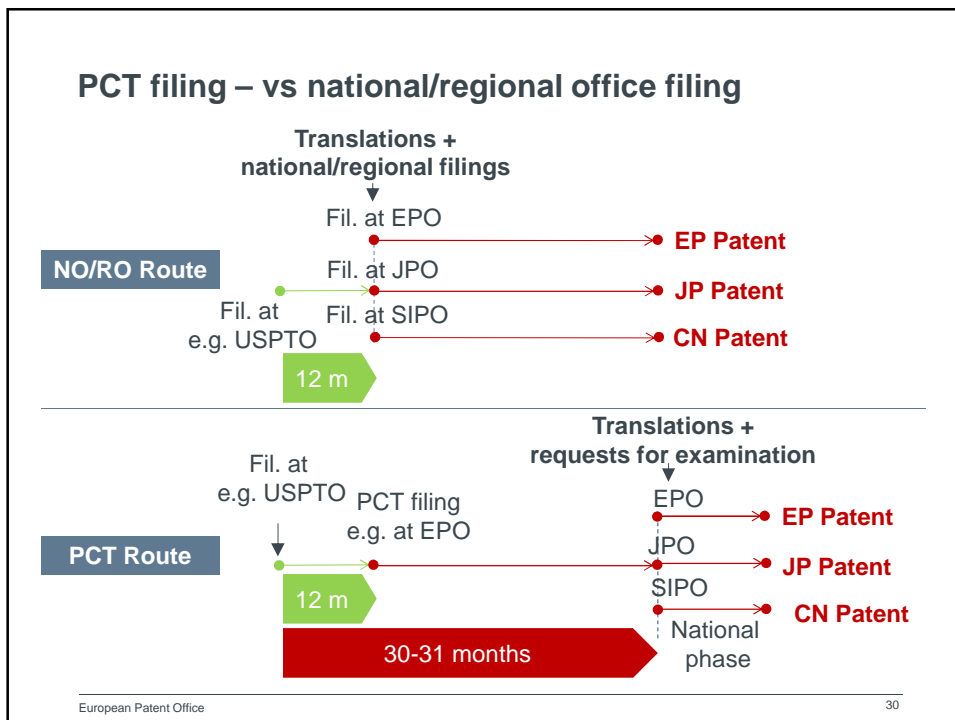
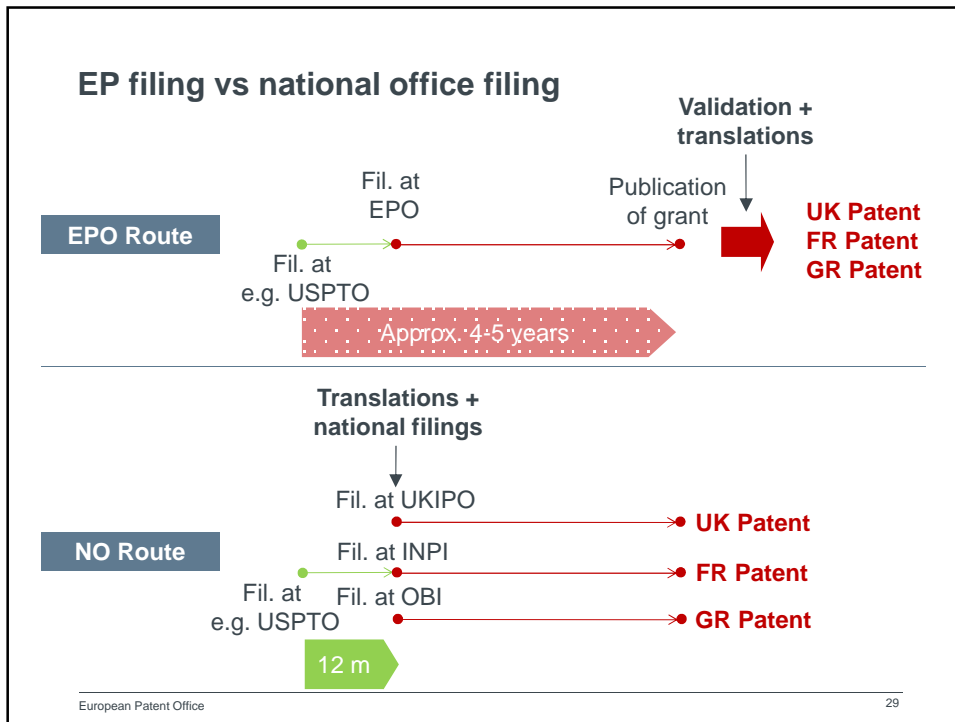
\* Actual costs depend very much on the specifics of the individual case.

- § EPO fees ~ EUR 4600
- § Renewal fees from 3<sup>rd</sup> year on EUR 470 (3<sup>rd</sup>), 585 (4<sup>th</sup>), 820 (5<sup>th</sup>), etc
- § Attorney fees ~ EUR 10000 – 30000



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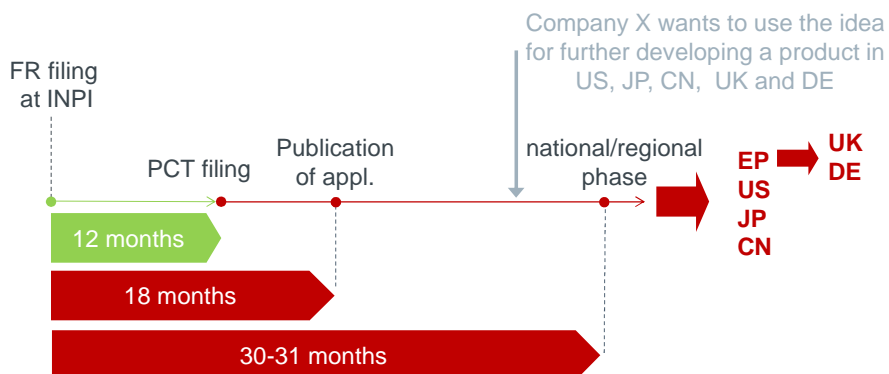
### Example – a fast patent in Europe

- German private inventor
- Invention **only relevant for the European market**
- Patent needed fast, to find investors



### Example – delay expensive decisions

- French researcher in a public institution
- **Not sure of the commercial interest** of the idea
- Needs time to find out whether to patent, and if yes, where





## Summary

- § There are several ways to get protection in different countries (NO, RO, PCT), each with advantages and disadvantages:
- § The route chosen can increase or slow down the procedure (PCT vs NO)
- § The route chosen can affect overall costs (EP vs NO)
- § Protection should be sought in the markets most relevant for the invention
- § A patent may not be the most suitable protection for your idea!

Thank you for your attention!