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*Experts in protecting  
and commercializing  
all aspects of IP  
- patents, trademarks  
and designs*

# DanSeed Symposium 2019

19 March 2019

# Who are we?

- One of Denmark's best-regarded IP consultancies
- Experts in protecting and commercializing intellectual property – patents, trademarks and design
- An international profile with offices across Europe and a huge global network of cooperation partners
- Offices in Copenhagen, Aarhus, Madrid, Munich & Oslo
- Well-established business with more than 50 years' experience and 80 dedicated employees



**Copenhagen // Aarhus // Munich // Oslo // Madrid**



# What is intellectual property?

## What is a patent?

- Prohibition right: prohibits others from exploiting your invention commercially
- Legal text written by the inventor/patent attorney and defined in a **patent claim**.
- Duration: 20 years from date of filing
- **Very broad protection possible**



# The purpose of a patent

With a patents it is possible to **prevent**  
**any commercial exploitation** of the  
invention;  
manufacture, sale, marketing, use, etc.





# Pros and cons of a patent

## Advantages:

- › protects product, method/process and/or use of a product
- › protects R&D investment
- › provides time for development
- › prevents any commercial exploitation of the invention
- › may generate cash by licensing/selling patent
- › 'bargain chip' in business conflict

## › Drawbacks:

- › Relative expensive
- › Patent application published after 18 months





# Countries in the European patent convention



# Patent activity – ”plant patents”

- Source: Report published by No Patents on Seeds!, 2018
- Maybe not the most objective source?

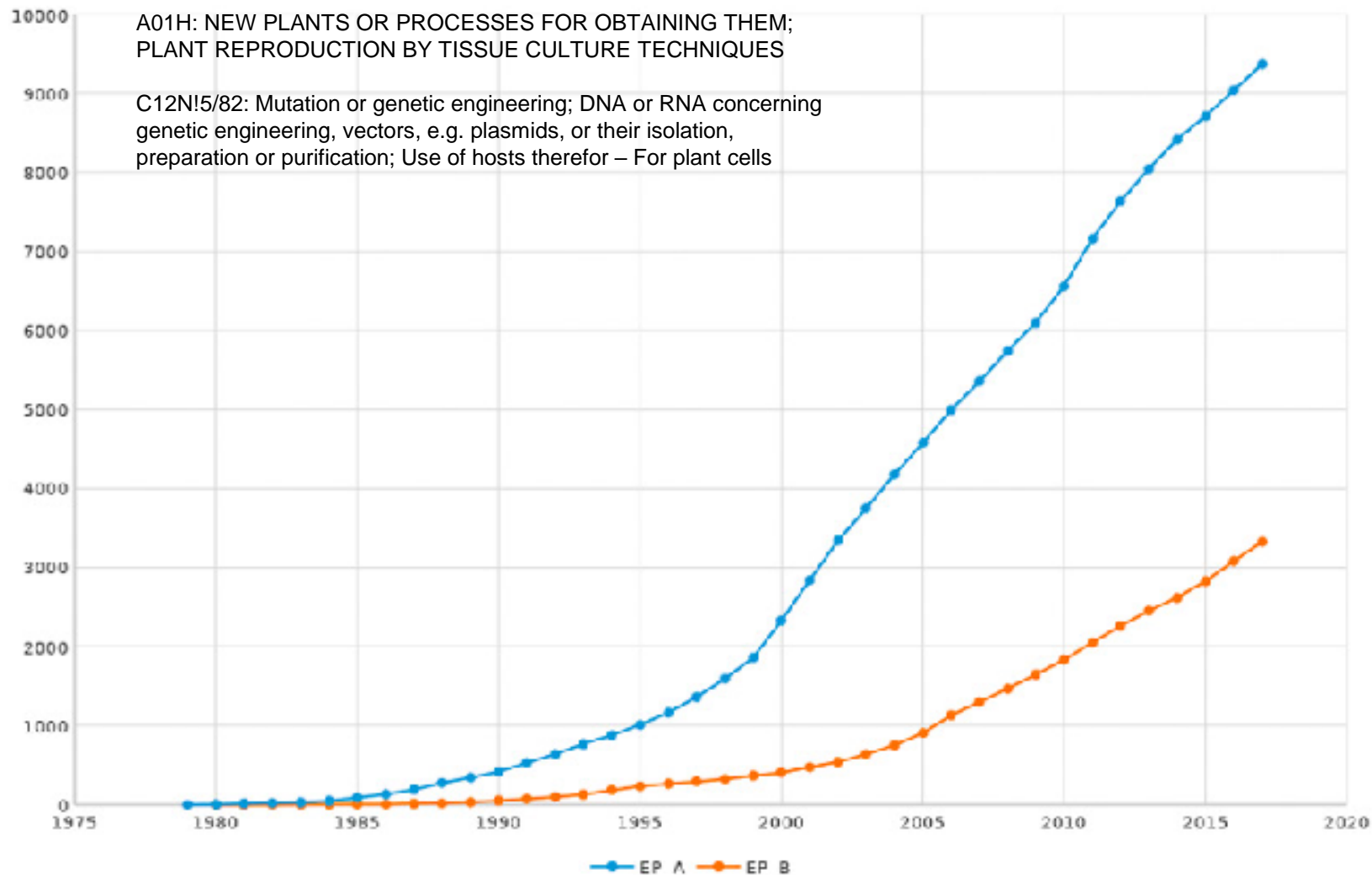


Figure 1: Number of patent applications and patents granted on plants at the European Patent Office in Munich (accumulated) Research according to official classifications (IPC = A01H or C12N001582).



# Patentability criteria

Article 52(1) EPC:

*European patents shall be granted for any inventions, in all fields of technology, provided that they are:*

- > new,*
- > involve an inventive step and*
- > are susceptible of industrial application.*

# What is NOT a patentable invention in Europe?

Article 53 EPC:

European patents shall **not** be granted in respect of:

- > inventions the commercial exploitation of which would be contrary to "ordre public" or morality; such exploitation shall not be deemed to be so contrary merely because it is prohibited by law or regulation in some or all of the Contracting States; (→R28; cloning)
- > plant or animal varieties or essentially biological processes for the production of plants or animals; this provision shall not apply to microbiological processes or the products thereof; (→R27; biotech)
- > methods for treatment of the human or animal body by surgery or therapy and diagnostic methods practiced on the human or animal body; this provision shall not apply to products, in particular substances or compositions, for use in any of these methods.



# What is (was) NOT a patentable invention in Europe?

## Rule 28 - Exceptions to patentability

### R. 28(2)

- Under Article 53(b), European patents **shall not be granted** in respect of plants or animals **exclusively obtained by means of an essentially biological process**.

# News from EPO

## 5 February 2019

- *"Today, the EPO was informed that in case **T1063/18** regarding the patentability of plants a decision has been issued by the competent Technical Board of Appeal. The written decision can be accessed on the website section of the Boards of Appeals of the EPO.*
- *The case is related to a decision by an Examining Division of the EPO to refuse a European patent application related to pepper plants on grounds that the invention could not be patented under Rule 28 (2) EPC. The decision of the EPO to refuse the patent application was appealed by the patent applicant.*
- *The Technical Board of Appeal set the EPO's decision aside and remitted the case back to the patent examiners for further consideration. **The Technical Board of Appeal stated inter alia that Rule 28(2) EPC "could not be interpreted in such a way that it was not in conflict" with Article 53(b) EPC as interpreted by the Enlarged Board of Appeal in decisions G 2/12 and G 2/13"***



R. 28(2)

- > Under Article 53(b), European patents **shall not be granted** in respect of plants or animals **exclusively obtained by means of an essentially biological process.**

- > **plant or animal varieties** or essentially biological processes for the production of plants or animals; this provision shall not apply to microbiological processes or **the products thereof**

# EPO's Guidelines For Examination writes.

Typical formulations of subject-matter not excluded from patentability under [Art. 53\(b\)](#):

***A mutant of a plant carrying a heritable exchange in a nucleotide sequence effected by technical means, e.g. UV mutagenesis or CRISPR/Cas.***

***A transgenic plant carrying transgene X.***

***Progeny of a mutant or a transgenic plant which carries the mutation/the transgene.***

***---***

***A seed of a wild-type plant covered with a chemical which inhibits fungal growth.***



# After T1063/18

Typical formulations of subject-matter (likely) not excluded from patentability under [Art. 53\(b\)](#):

—

***A plant X carrying a heritable exchange in the nucleotide sequence Y***

***Progeny of the plant X which carries the mutation in the in the nucleotide sequence Y***

**Must still be novel and inventive!**

# Status 2019 on specific cases

## **Carlsberg patent: EP2373154 (MMT)**

Granted after opposition, **Appeal filed Feb 2019.**

Limited to specific mutations

Oral proceedings in opposition held **before** T1063/18,

T1063/18 will certainly be debated in the appeal proceedings

## **Carlsberg patent: EP2384110 (LOX)**

Granted after opposition. **Appeals filed Feb 2019**

Oral proceedings held **before** T1063/18

Limited to specific mutations.

## Carlsberg patent EP2575433 (LOX1, LOX2, MMT)

Under opposition

Arguments filed based on the T1063/18 decision:

First, in response to point 3.4 of the communication by the Opposition Division, we refer to T 1063/18, wherein the Board found that R. 28(2) EPC is in conflict with Art. 53(b). As stated in Art. 164(2) EPC,

*"In case of conflict between the provisions of this Convention and those of the Implementing Regulations, the provisions of this Convention shall prevail."*

In other words, only the conditions laid down in Art. 53(b) must be fulfilled.

As outlined in detail below, the claims of the patent are in compliance with Art. 53(b). Art. 53(b) stipulates that

*"European patents shall not be granted in respect of [...] plant or animal varieties or essentially biological processes for the production of plants or animals"*

None of the granted claims are directed to a plant variety or to an essentially biological process for the production of plants or animals. Claim 1 is directed to a method for preparing a barley based beverage from a mutant barley plant. Claim 7 is directed to a mutant barley plant characterised by three mutations. Claim 12 is directed to a malt composition comprising a mutant processed barley plant. Claim 13 is directed to a beverage preparable from a mutant barley plant.

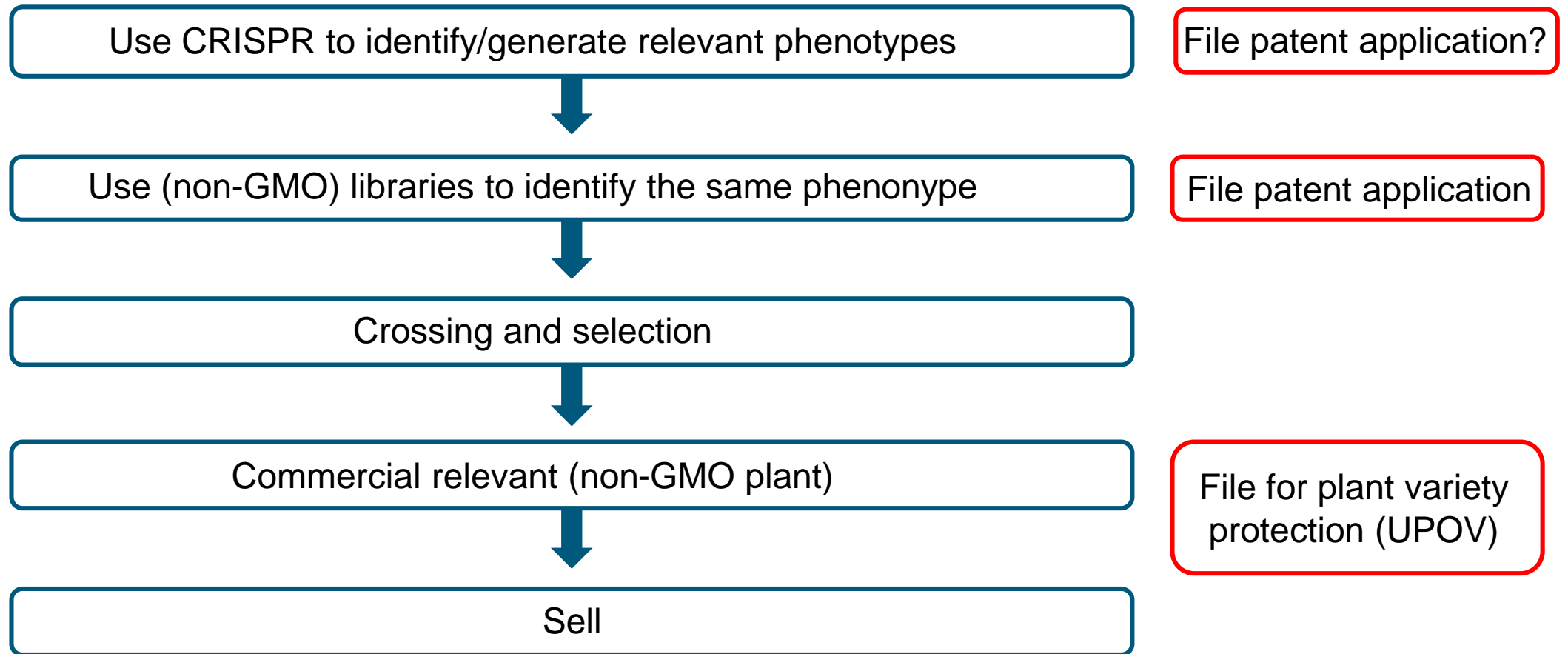
# Summary on patents on plants

The legal situation for plant-patents is unclear.... and will certainly evolve, however:

- Patents can be obtained for plants
  - **Certainly for plants not exclusively obtained by means of an essentially biological process**
  - **(Currently) also for plants exclusively obtained by means of an essentially biological process**
  - **Presume that the law will evolve towards excluding patents on plants exclusively obtained by means of an essentially biological process**
- Patents can also be obtained from
  - Seed coatings
  - Flour or oil produced from plant X
  - Seek legal advice if you are in doubt (which you likely are...)
- Check out our latest article "The battle of the plants continue" on LinkedIn (Camilla Kiørboe, Jakob Lohmann or Plougmann Vingtoft). The article historically summarize the main events leading to T1063/18.



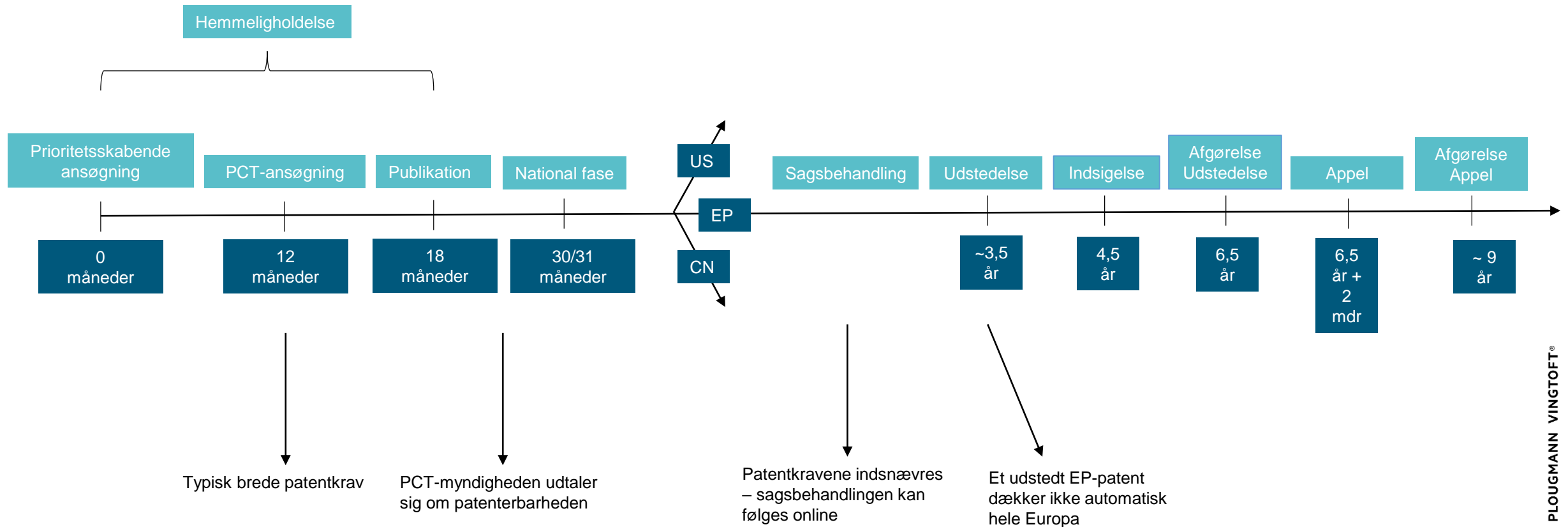
# Strategy to avoid GMO?



# What to do

- Ignore that patents can protect plants and that it may influence your business?
- Develop a strategy taking the patent system into consideration
  - e.g. through continuous surveillance of new patent applications published in this area

# Et "typisk" patentforløb – hvor er usikkerhederne?



Questions?





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