



Europäisches
Patentamt
European
Patent Office
Office européen
des brevets

The European Patent System

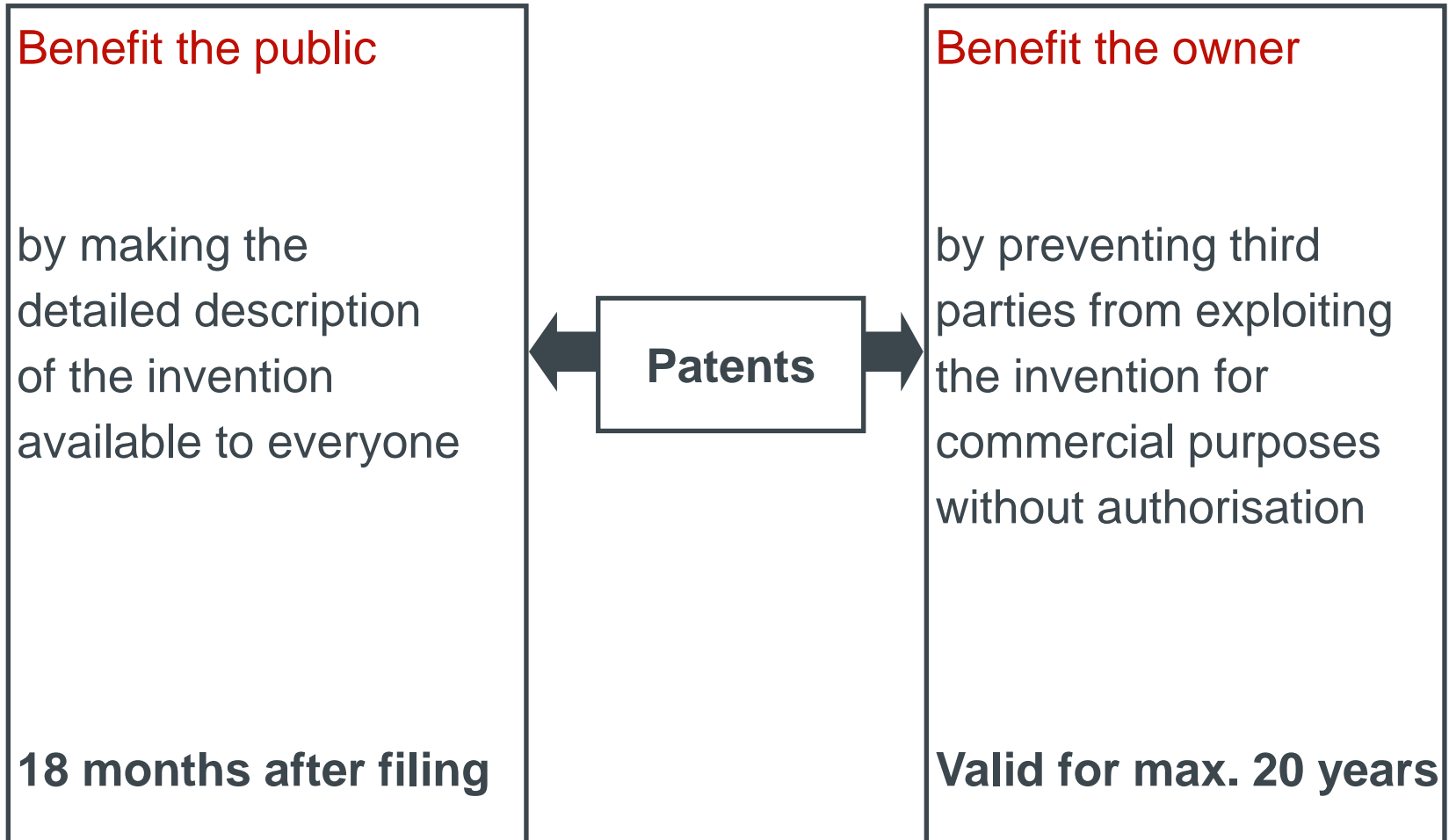
Procedural and substantive law aspects



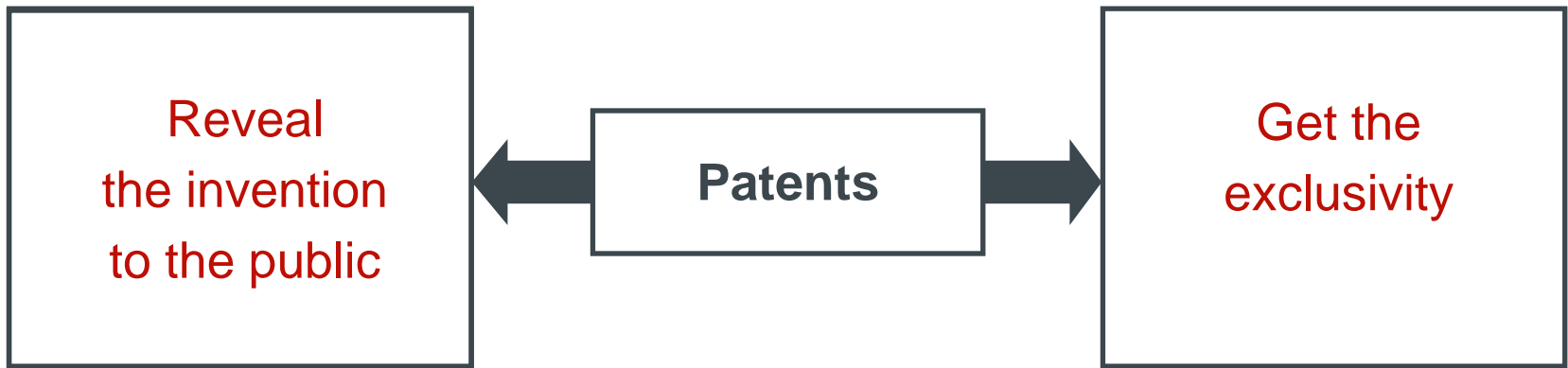
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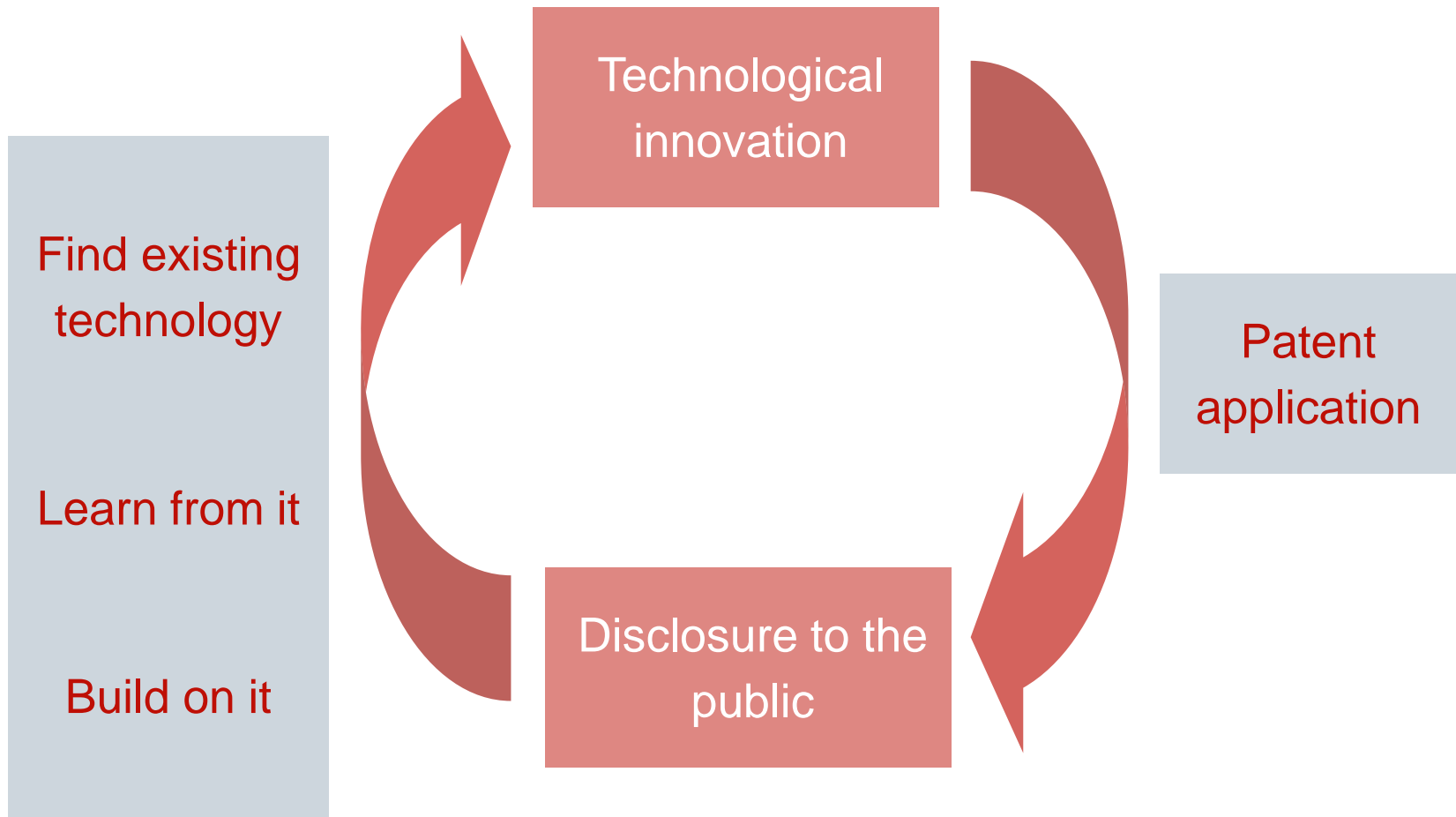
The basic principle of the patent system



A simple contract



A fair system driving knowledge transfer and innovation



The public can use patent documents to



- **find out** what technology already exists and build on it
- **keep track** of what other inventors and companies are doing
- **avoid** infringing other people's patent rights
- **check out** where an invention is patented, and where it is not

All patent documents are accessible free of charge on epo.org

Espacenet

over 100 million patent documents, easily searchable

Patent Translate

Automatic translation between English and 31 other languages, including Chinese, Japanese, Korean and Russian.

The screenshot shows the EPO website homepage. At the top left is the EPO logo and name in German, English, and French. To the right are search options for 'Site search' and 'Patent search', with a search bar and a 'Search' button. Further right are language options (Deutsch, English, Français) and links for 'About us | Media' and 'Service & support | Contact'. Below this is a dark navigation bar with links: Home, Searching for patents, Applying for a patent, Law & practice, News & issues, and Learning & events. The main content area features a large banner for 'Access the EPO website anywhere, anytime' with a 'Visit the mobile site' button and a 'Mobile website' link. To the left of the banner is a menu for 'Searching for patents' with sub-links: European patent register, European publication server, Espacenet - patent search, GPI - advanced search, Patent Translate, and Patent information tour. Below this menu are links for 'Applying for a patent' and 'Law & practice'. At the bottom, there are four promotional tiles: 'East meets West 2015 - Forum on Asian patent information' with a 'Register now' button; 'The EPO will recruit 150 engineers and scientists in 2015' with a link to 'Apply now for our Spring Selection Events'; 'Business opportunities and validation of European patents in Morocco' with a link to 'Register for Focus Morocco'; and 'Online services and software' with a search dropdown and a 'Go' button.

Key facts about Espacenet

The logo for Espacenet, featuring the word "Espacenet" in a bold, sans-serif font. The "E" is red, and the rest of the letters are dark grey. The logo is set against a light grey rectangular background.

- Most visited area of our website, with around **20 million visits every year**
- A **worldwide collection** of patent data
- For **beginners and experts**
- Automatic translation of documents **between English and 31 other languages**, including Chinese, Japanese, Korean and Russian.

An incentive for economic growth



- Makes the latest technological knowledge available to the public
- Inspires further innovation
- Prevents duplication of R&D
- Helps identify new partners and allows licensing
- Gives patent holders time to recoup their development costs

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Our mission



As **the patent office for Europe**, we support **innovation**, competitiveness and **economic growth** across Europe through a commitment to **high quality** and efficient services delivered under the European Patent Convention.

Our history

1973



5 October 1973

Diplomatic Conference in Munich

Signature of the European Patent Convention (EPC) by 16 countries



1977



2013

Entry into force of the EPC in 7 countries
Foundation of the European Patent Organisation
Foundation of the European Patent Office

Celebration of 40 years of the EPC

More on epo.org

Seven founding states in 1977

Belgium • Germany • France
Luxembourg • Netherlands
Switzerland • United Kingdom



... 17 member states in 1992 ...

Belgium • Germany • France
Luxembourg • Netherlands
Switzerland • United Kingdom
Sweden • Italy • Austria
Liechtenstein • Greece • Spain
Denmark • Monaco • Portugal
Ireland



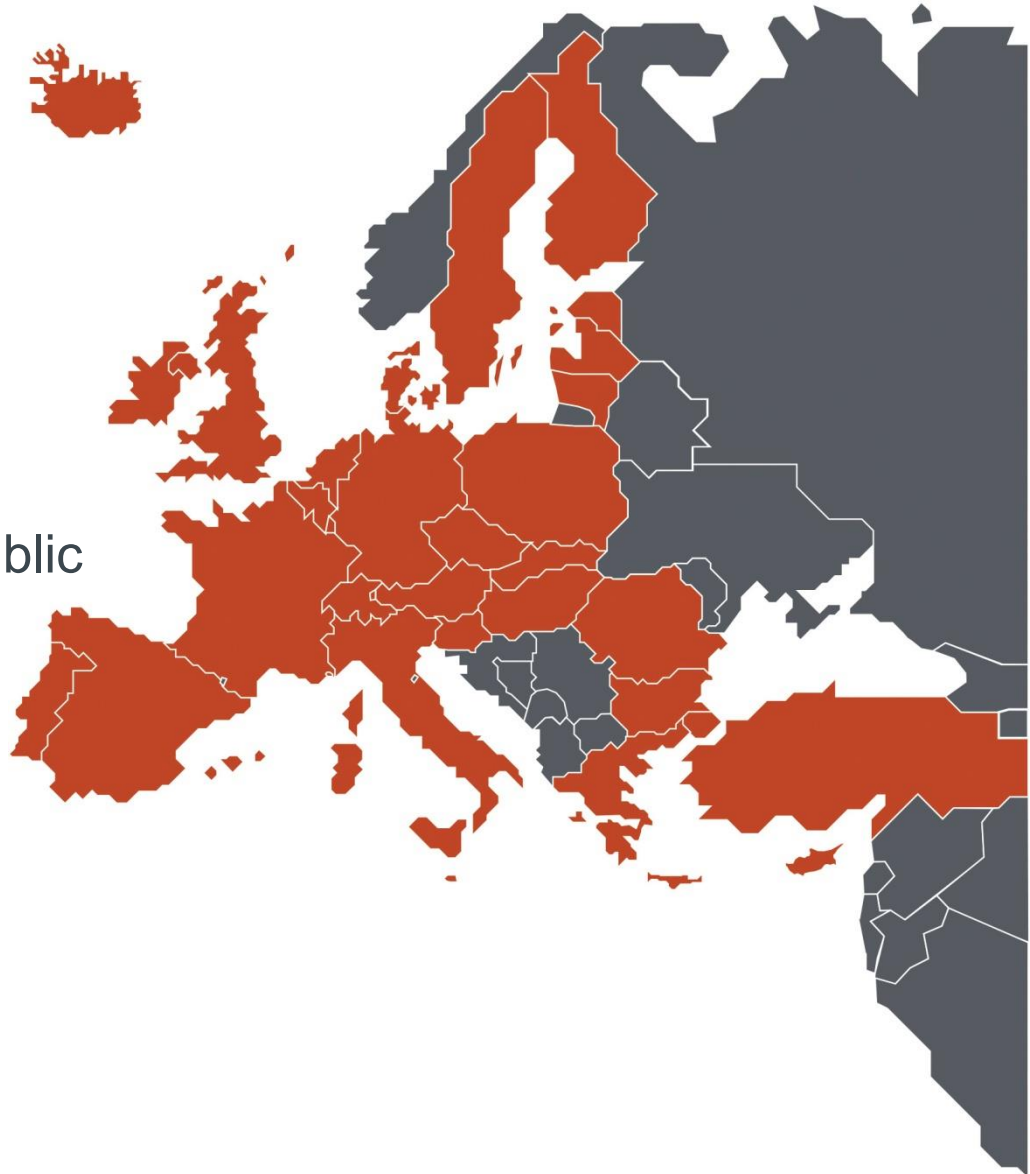
... 25 member states in 2002 ...

Belgium • Germany • France
Luxembourg • Netherlands
Switzerland • United Kingdom
Sweden • Italy • Austria
Liechtenstein • Greece • Spain
Denmark • Monaco • Portugal
Ireland • Finland • Cyprus
Turkey • Bulgaria • Czech Republic
Estonia • Slovakia • Slovenia



... 32 member states in 2007 ...

Belgium • Germany • France
Luxembourg • Netherlands
Switzerland • United Kingdom
Sweden • Italy • Austria
Liechtenstein • Greece • Spain
Denmark • Monaco • Portugal
Ireland • Finland • Cyprus
Turkey • Bulgaria • Czech Republic
Estonia • Slovakia • Slovenia
Hungary • Romania • Poland
Iceland • Lithuania • Latvia
Malta



Today....

38 European member states

Belgium • Germany • France • Luxembourg
Netherlands • Switzerland • United Kingdom
Sweden • Italy • Austria • Liechtenstein
Greece • Spain • Denmark • Monaco
Portugal • Ireland • Finland • Cyprus
Turkey • Bulgaria • Czech Republic
Estonia • Slovakia • Slovenia • Hungary
Romania • Poland • Iceland • Lithuania
Latvia • Malta • Croatia • Norway
Former Yugoslav Rep. of Macedonia
San Marino • Albania • Serbia

2 European extension states

Bosnia-Herzegovina • Montenegro

2 Validation states

Morocco
Republic of Moldova



Our status



- **Second-largest intergovernmental institution** in Europe
- Not an EU institution
- **Self-financing**, i.e. revenue from fees covers operating and capital expenditure

Structure of the European Patent Organisation

European Patent Organisation

Administrative Council

The legislative body

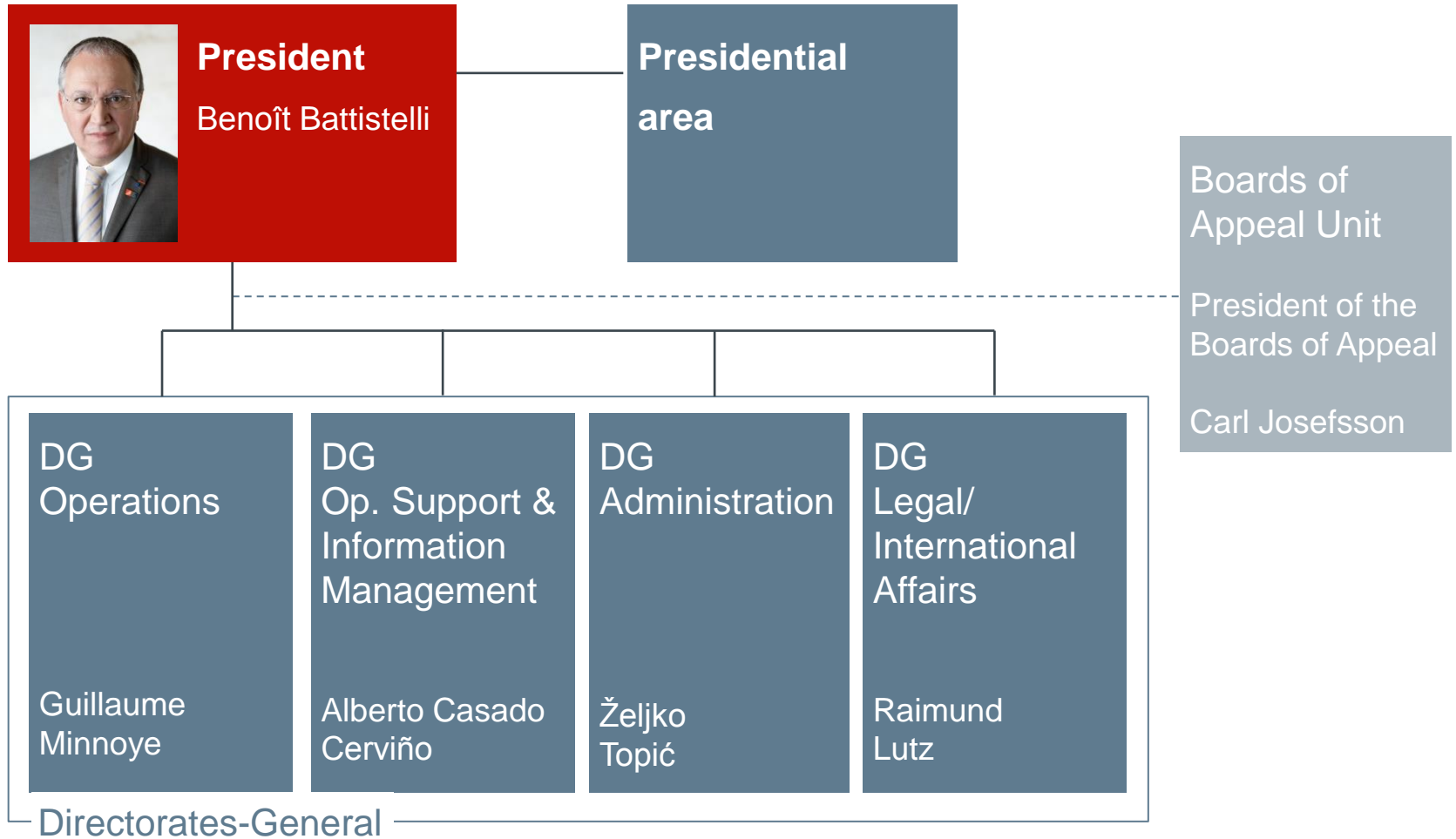
- is made up of representatives of the member states
- supervises the activities of the Office
- appoints the President
- votes on the Office's budget
- supervises the activities of the Boards of Appeal Unit

European Patent Office

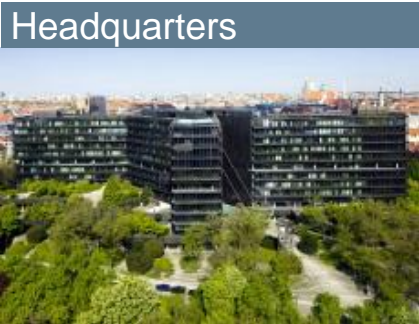
The executive body

- is responsible for searching, examining and publishing patent applications
- is responsible for holding opposition proceedings
- The Boards of Appeal Unit is responsible for appeal proceedings

Structure of the European Patent Office

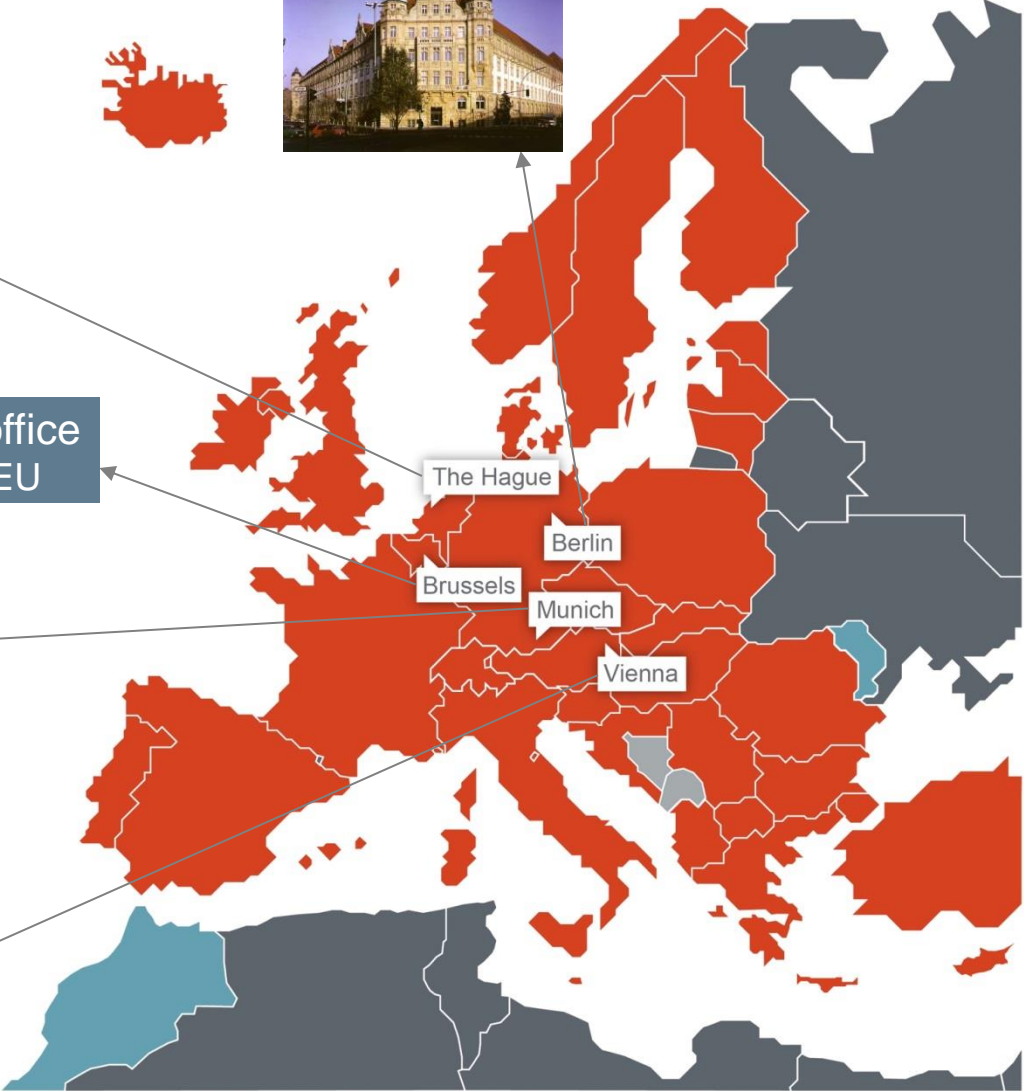


Our five locations in Europe



Headquarters

Liaison office with the EU



Our staff



Munich

3 772

The Hague

2 682

Berlin

247

Vienna

96

Brussels

4

Total

6 801

Around 60% are patent examiners

Source: EPO data on 31.12.2016

A multicultural working environment



- Over 30 different nationalities
- Three languages for working in and for communicating with applicants:
 - English
 - French
 - German

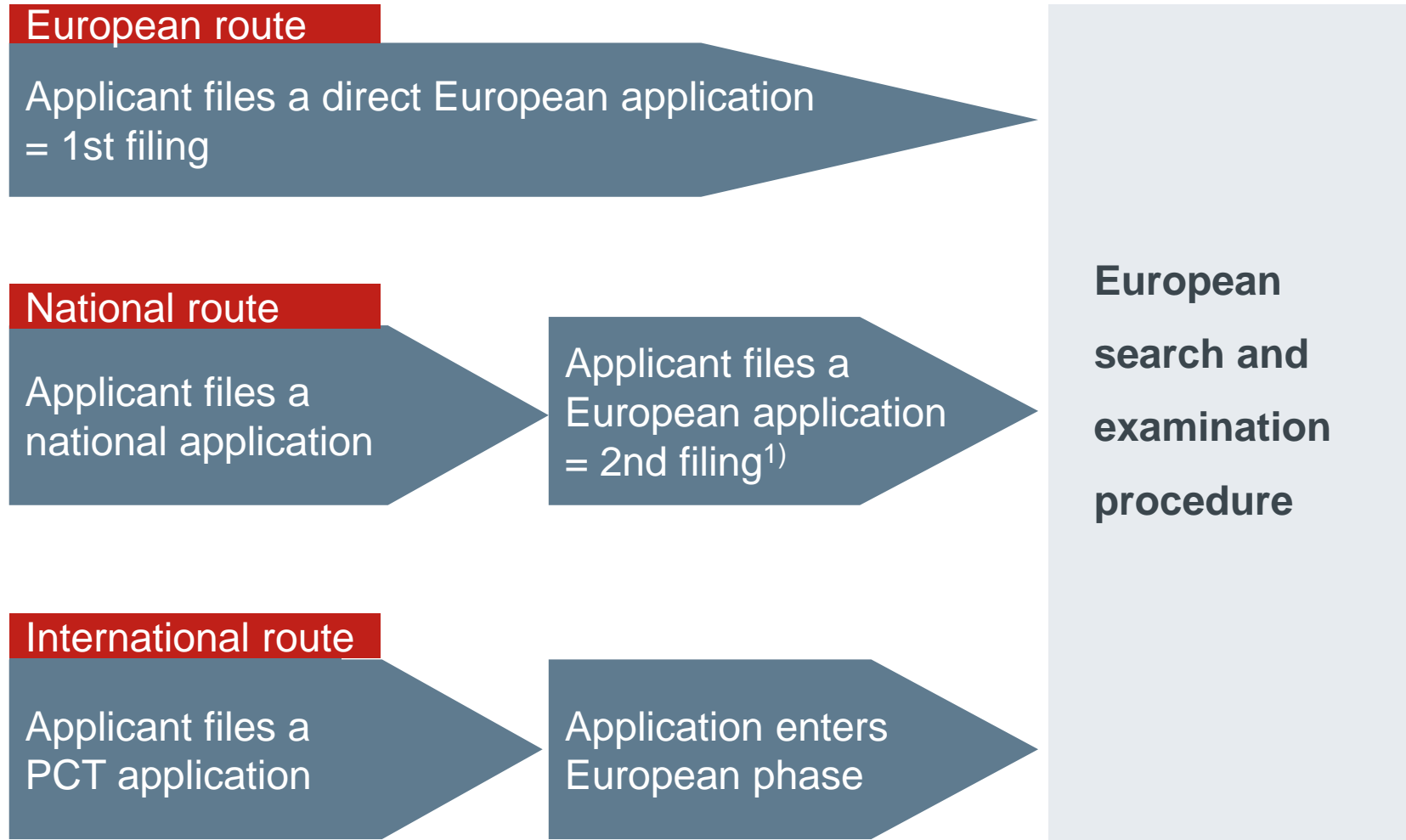
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Three possible routes to file a patent

Route	National	European	International
Via	National offices	European Patent Office or national offices	International Bureau or European Patent Office or national offices
Valid in	One country	Up to 38 countries + 2 extension states + 2 validation states	Up to 148 countries
In brief	Applications are filed with the relevant national office and are valid for that state only	One single application in DE/EN/FR for all EPC contracting states Same legal effects as national patents	An international patent procedure, not an international patent After the international phase, applicants can choose to enter the national/regional phase in various states

Three ways to start the European procedure



¹⁾ By claiming priority of an earlier application filed with a national office within 12 months.

The role of the EPO in the European grant procedure



- **We provide patent protection**
 - for up to 38 EPO member states, 2 Extension and 2 Validation states
 - based on a single application
 - in one of the three official languages (English, French, German)
- **We are also responsible for**
 - limitation and revocation proceedings by patentees
 - opposition proceedings by third parties
 - appeal proceedings before the boards of appeal
- The EPO makes **all patent documents available to the public**

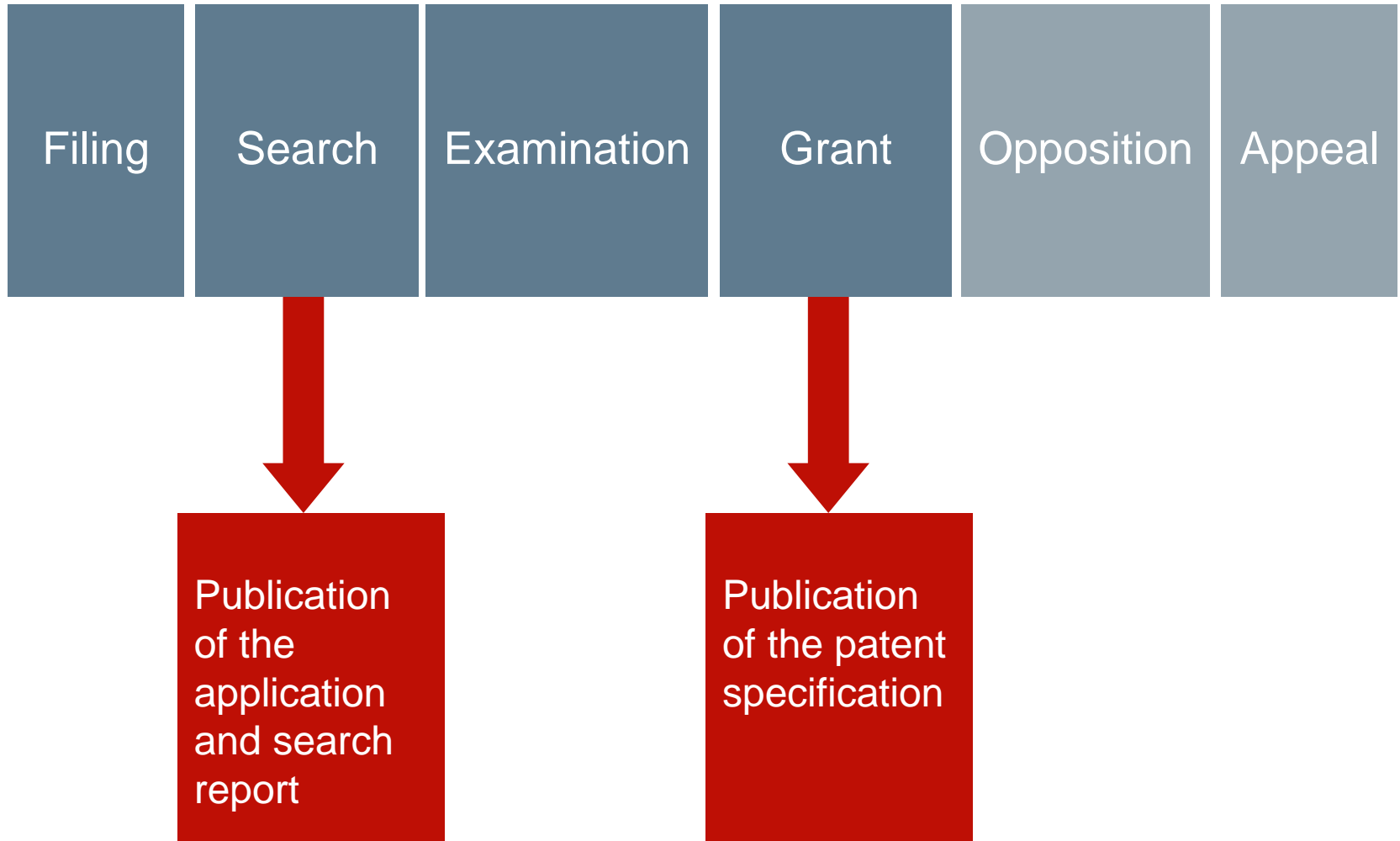
The EPO also processes international (PCT) applications



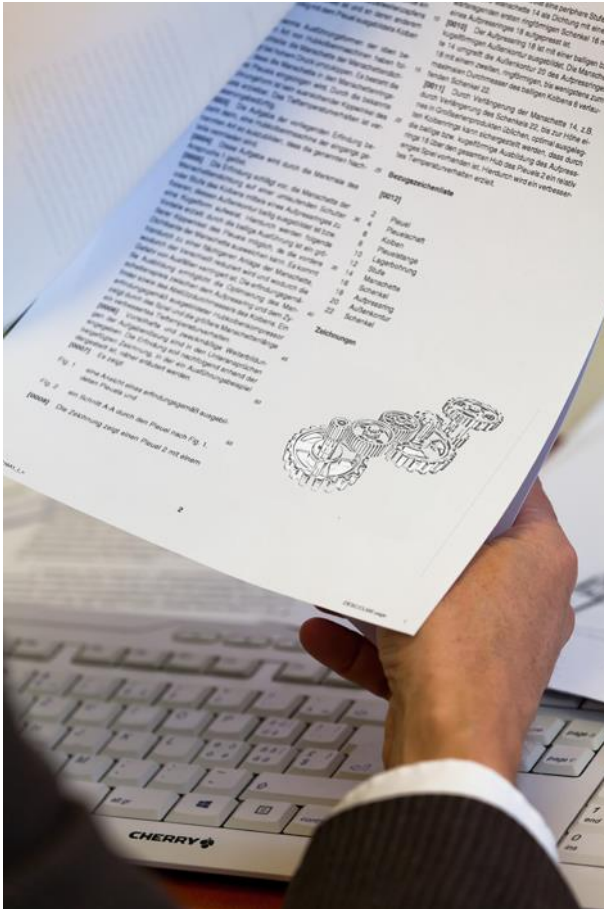
- We act as a **receiving office for international applications (PCT)**
- We carry out approximately:
 - **38%** of all international search procedures
 - **56%** of all international preliminary examinations
- The EPO delivers the international search report **within 3 months***

* From the date of receipt of the application by the International Searching Authority.

Basic steps in the European grant procedure

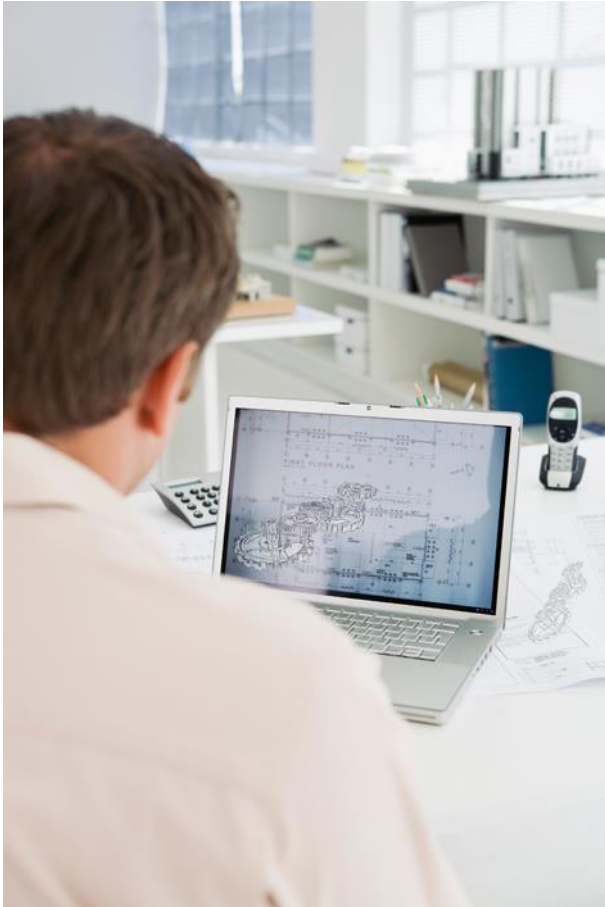


Filing



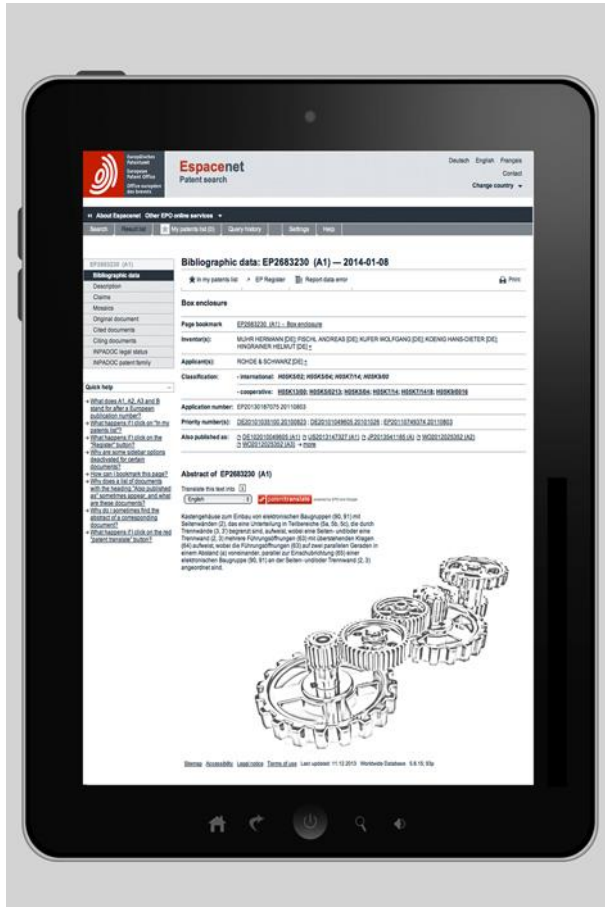
- The applicant prepares a **description** of the invention, one or more **claims** and (optional) **drawings**.
- The application is filed **online**, by **fax** or by **post**.
- The patent office checks the documentation for compliance.
- A **date of filing** is allocated.

Search



- Examiners search for the state of the art at the date of filing.
- They search in databases containing **millions of patent and non-patent documents**.
- They use the results of the search to determine whether an invention is **new** and **involves an inventive step**.
- They then issue a **search report** and a **preliminary opinion on patentability**.

Publication



- Patent applications are published on Espacenet, **18 months after the date of filing** (or earliest priority date).
- The **search report** is also published.
- Third parties can **submit observations** at any time prior to grant.



Over 90 million patent documents accessible to the public on epo.org/espacenet

Examination



- Applications are examined by a panel of **three expert examiners**.
- The examiners check that the scope of protection is limited to **what is actually patentable**.
- They take into account the search report and the **requirements for patentability** of the EPC.

Outcome



- If the requirements of the EPC are met, the patent is granted.
- If not, the application is refused (with the possibility of appeal).
- All granted European patents are published.

 For information on the legal status of applications go to epo.org/register

Opposition



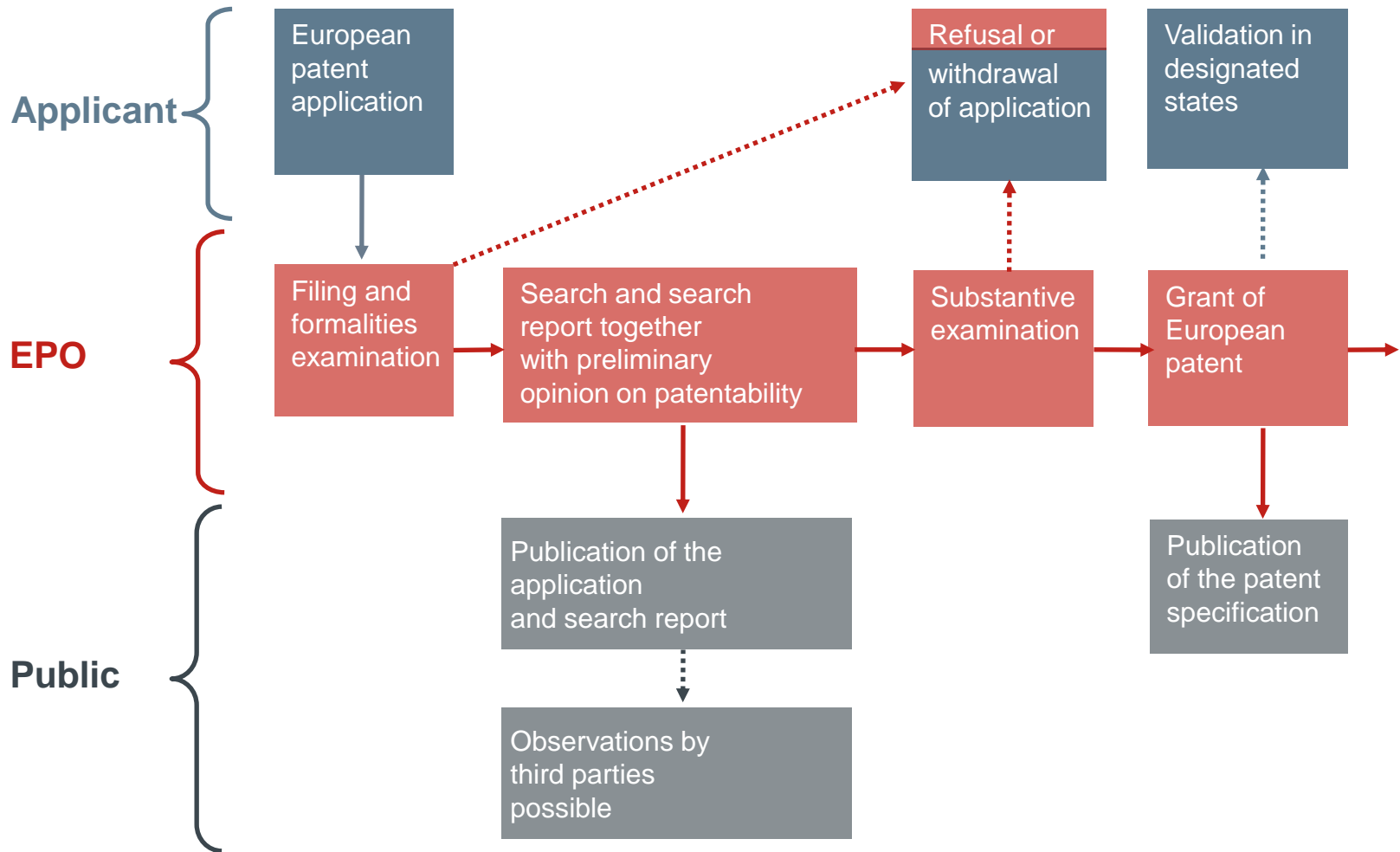
- Any person may **oppose a European patent** within nine months of its publication.
- In **70% of opposition decisions, the patent is upheld** either as granted or in amended form.

Appeal

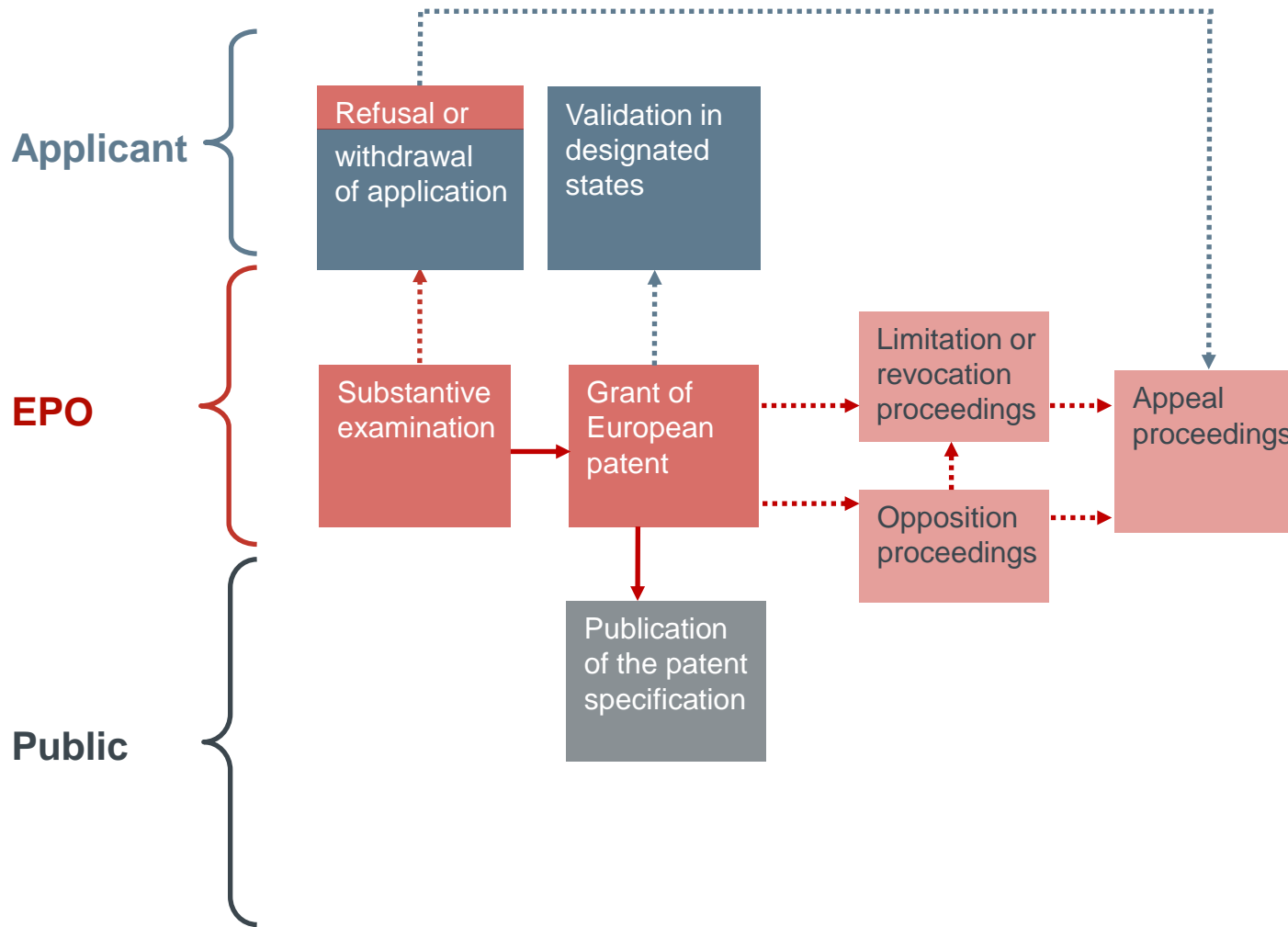


- Appeals against decisions taken during grant and opposition proceedings are decided on by the EPO's independent boards of appeal.
- They can be filed **within two months** after the date of notification of the decision.
- The **grounds for appeal** must be provided **within four months** of that date.

The European grant procedure in more detail (1)



The European grant procedure in more detail (2)



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Patentability

Patents are granted for inventions in all fields of technology



To be patentable, inventions must

- be **new**
- involve an **inventive step**
- be **industrially applicable**

They must relate to a product, process, apparatus or use.

Excluded from patentability under the EPC¹⁾

- Discoveries
- Scientific theories
- Mathematical methods
- Computer programs
- Aesthetic creations
- Business methods
- Methods for playing games
- Methods for performing mental acts
- Presentations of information

If claimed
"as such"



¹⁾ See Article 52 EPC and the case law of the boards of appeal.

Exceptions to patentability as defined by the EPC¹⁾

- Plant or animal varieties; “conventional” breeding processes & plants or animals exclusively obtained thereby
- Inventions whose commercial exploitation would be **contrary to "ordre public" or morality** (e.g. processes for cloning of human beings)
- **Methods for treatment of the human or animal body by surgery or therapy and diagnostic methods**



¹⁾ See Article 53 and Rule 28 EPC.

Exceptions to patentability in biotech

- Processes for cloning human beings
- Processes for modifying the germ line genetic identity of human beings
- Uses of human embryos for industrial or commercial purposes
- Processes for modifying the genetic identity of animals which are likely to cause them suffering without any substantial medical benefit to man or animal, and also animals resulting from such processes
- The human body and the simple discovery of one of its elements

Patentable biotechnological inventions

- Biological material which is isolated from its natural environment or technically produced even if present in nature (e.g. nucleic acid molecules, proteins, cells etc.)
- Plants or animals if not confined to a particular variety (e.g. transgenic plants or animals)
- Microbiological processes and products (e.g. bacteria, yeast, viruses)

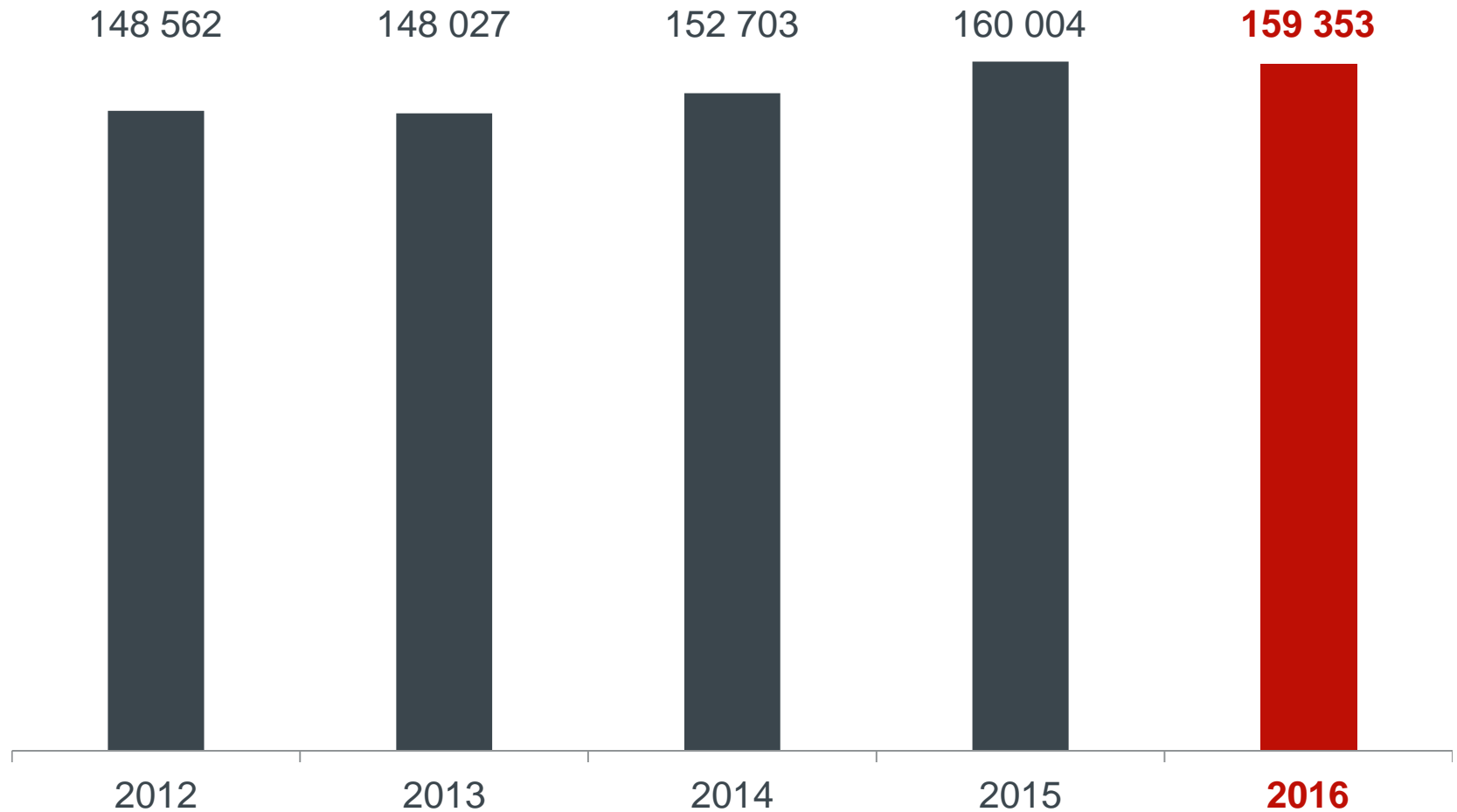
Patentability of gene sequences

- In principle patentable if isolated from the human body or otherwise produced by means of a technical process
- Inventions often form the basis for many life-saving medicaments
- No patents are granted for genes without a known activity, or for unidentified gene fragments
- Activity of the gene must be described and must not be obvious
- Patents for human genes do not confer any rights to the human body!

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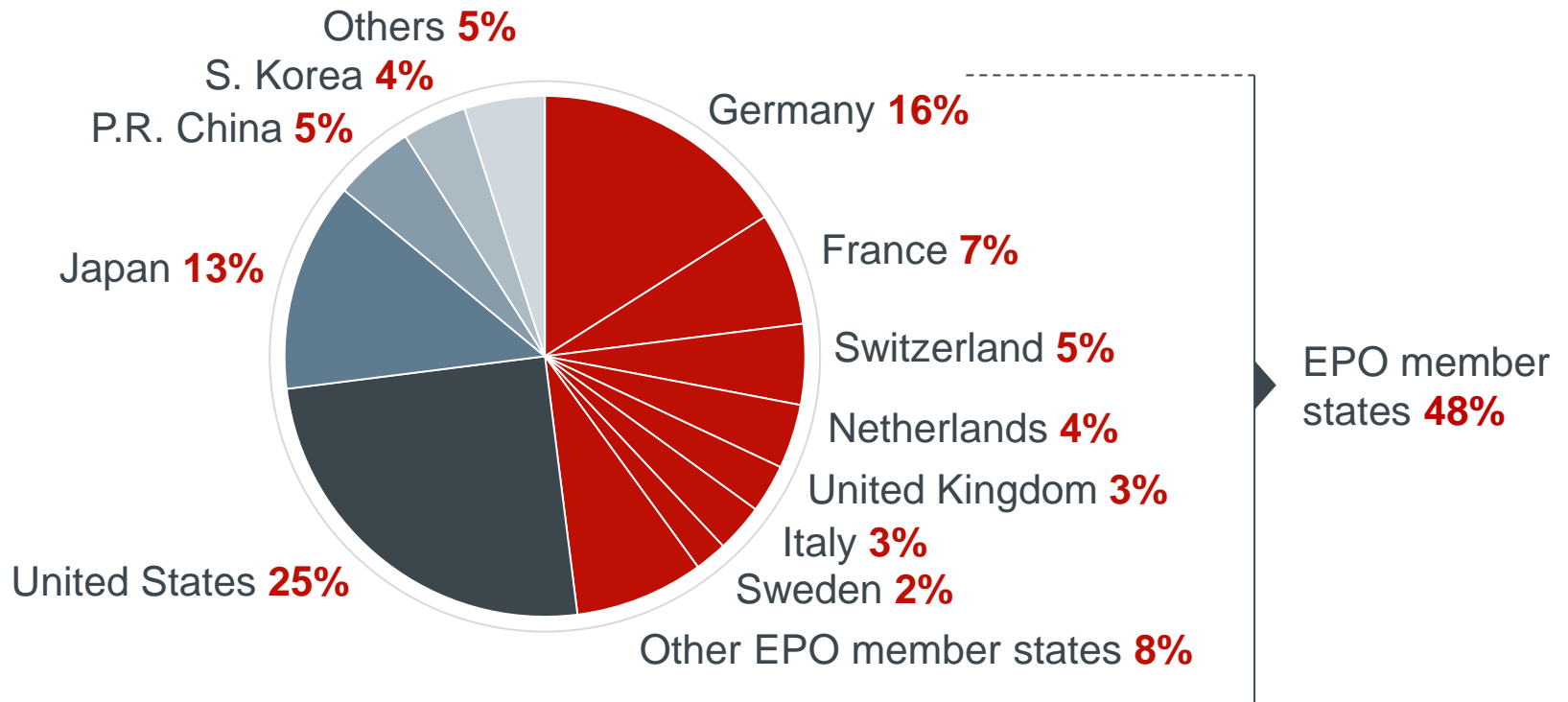
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Total European patent applications in 2016



Applications are the files for which applicants have decided to request a European patent from the EPO. They are a direct measure of the explicit interest of innovating firms to assert their patent rights on the European technology market (Direct European applications and international (PCT) applications entering the European phase).

Origin of European patent applications in 2016



Analysis based on European patent applications filed with the EPO (Direct European applications and international (PCT) applications entering the European phase).

Statistics are based on the first-named applicant.

EPO: the 38 member states of the European Patent Organisation, including EU28

Technical fields with the most applications in 2016

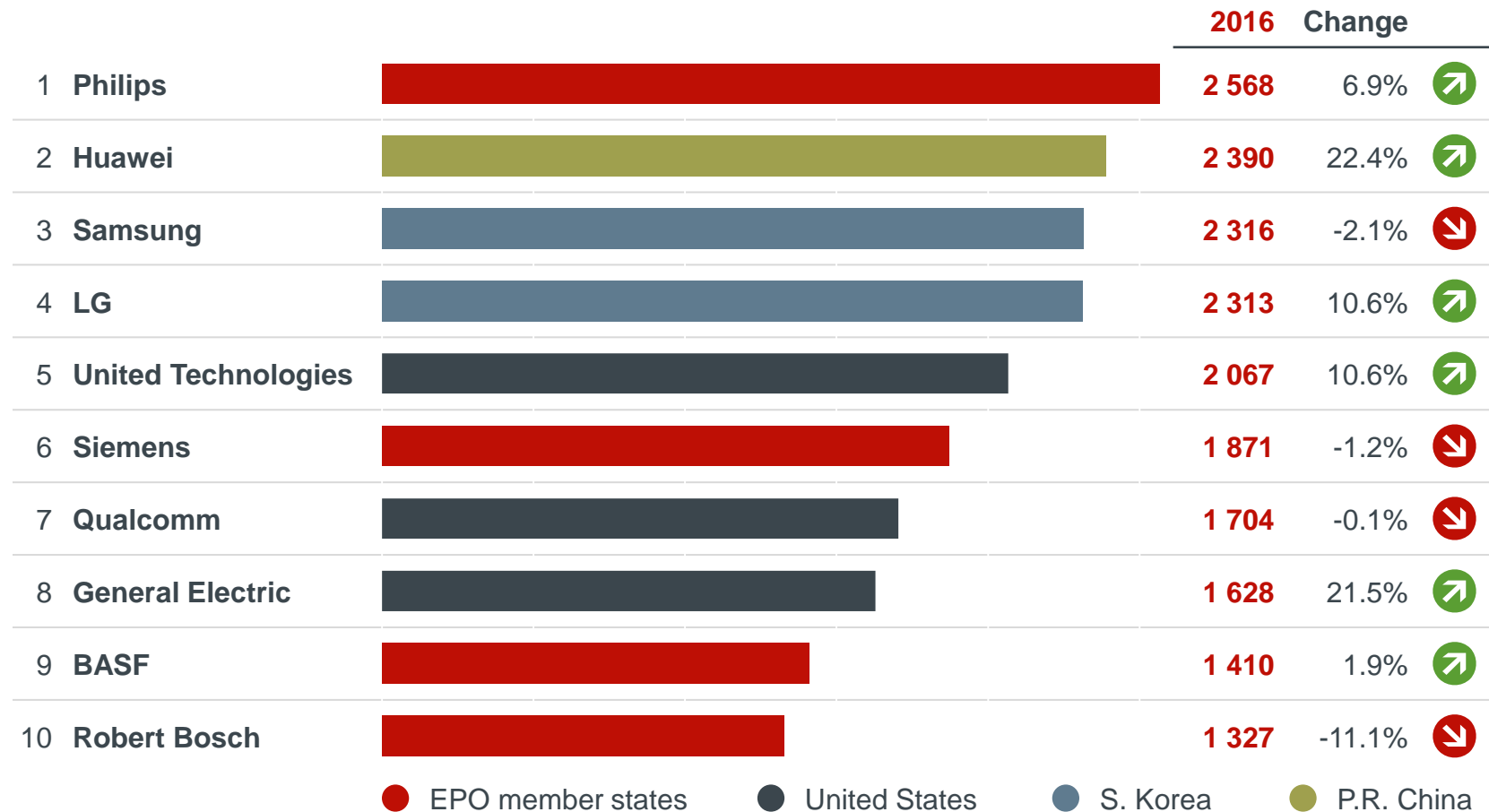
TOP 10

		2016	Change	
1	Medical technology	12 263	- 2.1%	⬇️
2	Digital communication	10 915	- 1.2%	⬇️
3	Computer technology	10 657	2.9%	⬆️
4	Electrical machinery, apparatus, energy	10 293	5.1%	⬆️
5	Transport	8 402	3.6%	⬆️
6	Measurement	7 442	- 3.8%	⬇️
7	Engines, pumps, turbines	6 301	- 0.5%	⬇️
8	Organic fine chemistry	6 189	- 4.0%	⬇️
9	Pharmaceuticals	5 754	- 5.0%	⬇️
10	Biotechnology	5 744	0.3%	⬆️

Analysis based on European patent applications filed with the EPO (Direct European applications and international (PCT) applications entering the European phase).

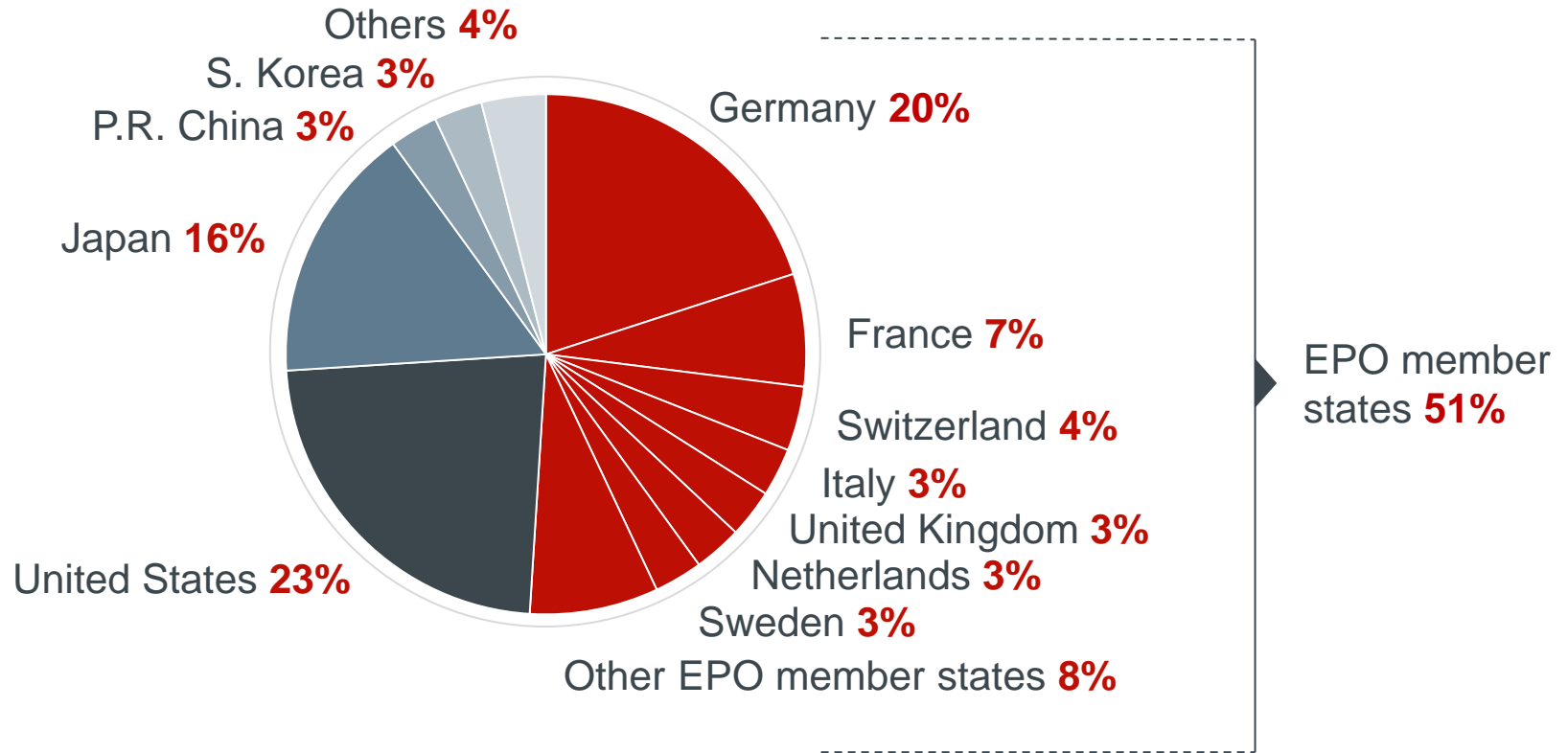
Top EPO applicants in 2016

TOP 10



Analysis based on European patent applications filed with the EPO (Direct European applications and international (PCT) applications entering the European phase). Statistics are based on the first-named applicant.

Granted patents in 2016



Analysis based on granted patents published in 2016. Statistics are based on the first-named patentee.

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