



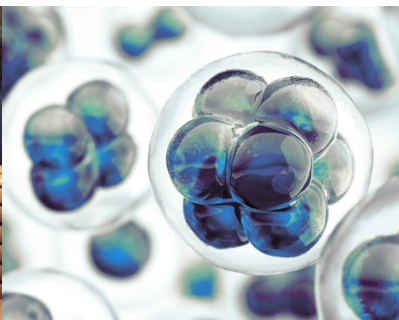
Europäisches
Patentamt
European
Patent Office
Office européen
des brevets

The European Patent Office

An introduction to the EPO and the European patent system



Nicholas Körnig



Administrator International Co-operation



October 2019

The EPO at a glance



Our mission

We provide patent protection for inventions in up to 40 European countries on the basis of one single application

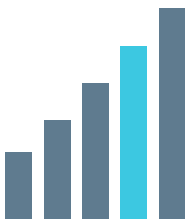


Our locations:

Munich (headquarters),
The Hague, Berlin,
Vienna and
Brussels














2nd largest
intergovernmental
institution in Europe



Self-financing:

Budget of **EUR 2.4bn**
without any public funding



7 000        employees, of which around **4 300**     highly
qualified patent examiners working in all fields of technology

Our history

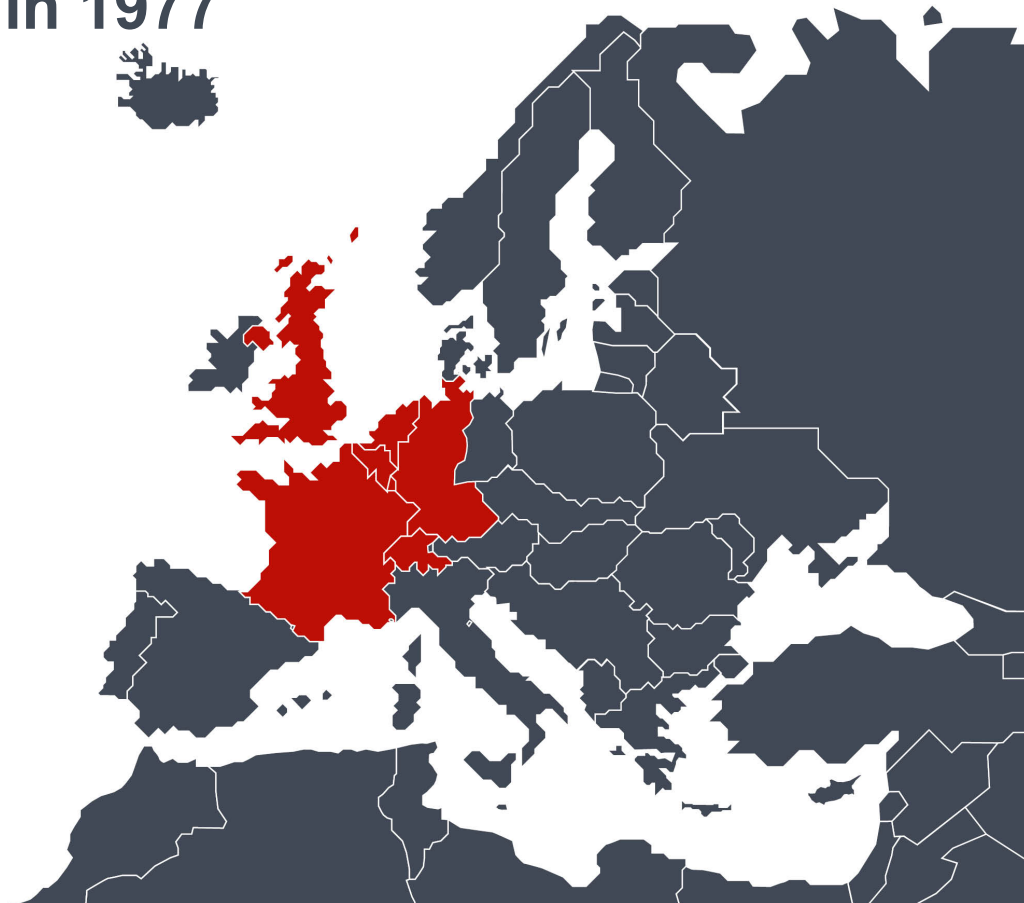


Seven founding states in 1977

Belgium • Germany • France

Luxembourg • Netherlands

Switzerland • United Kingdom



Today ... an area with some 700m inhabitants

38 European member states

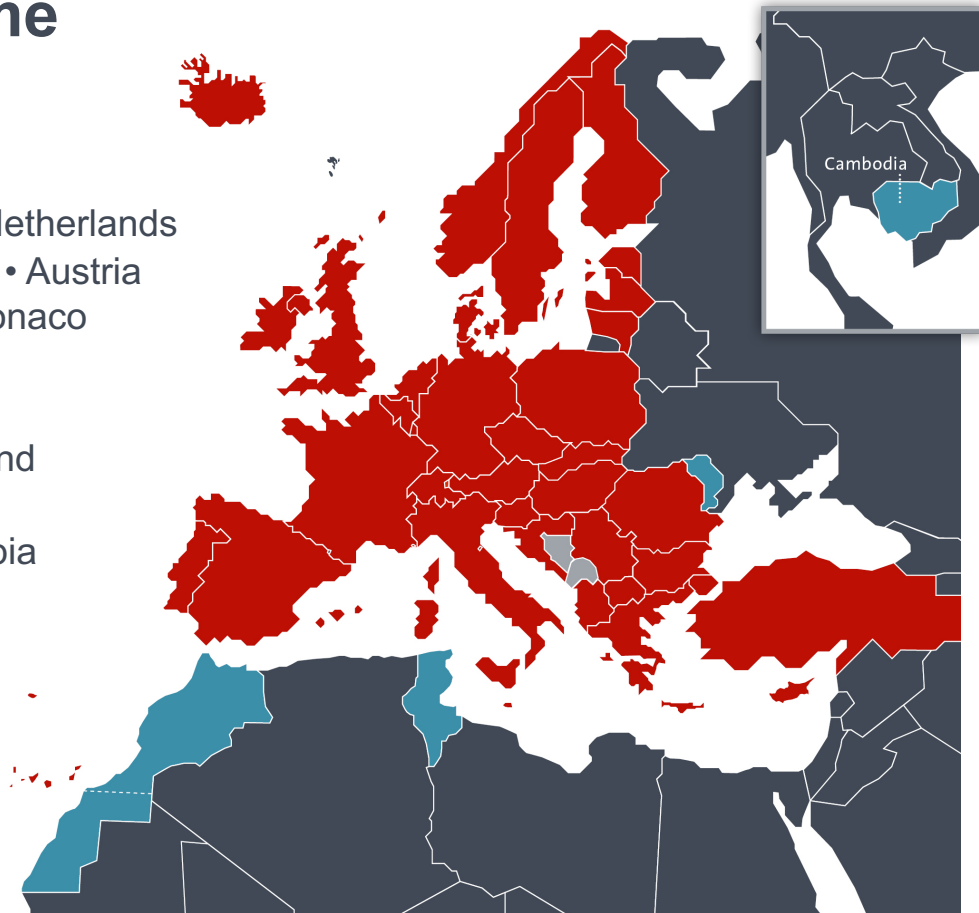
Belgium • Germany • France • Luxembourg • Netherlands
Switzerland • United Kingdom • Sweden • Italy • Austria
Liechtenstein • Greece • Spain • Denmark • Monaco
Portugal • Ireland • Finland • Cyprus • Turkey
Bulgaria • Czech Rep. • Estonia • Slovakia
Slovenia • Hungary • Romania • Poland • Iceland
Lithuania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

Two European extension states

Bosnia and Herzegovina • Montenegro

Four validation states

Republic of Moldova • Morocco • Tunisia
Cambodia



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

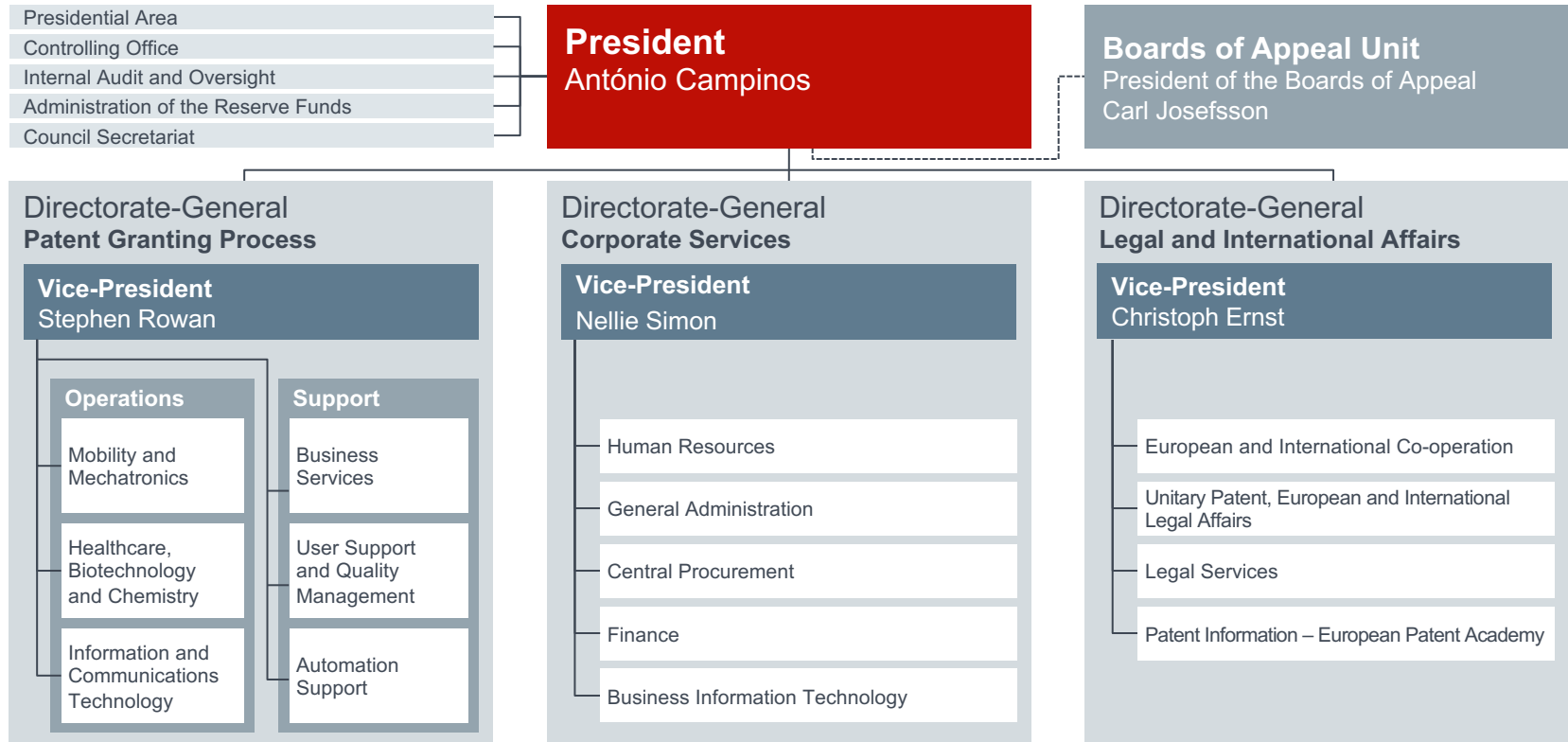
- is made up of representatives of the member states
- supervises the activities of the Office
- appoints the President
- votes on the Office's budget
- supervises the activities of the Boards of Appeal Unit

European Patent Office

The executive body

- is responsible for searching, examining and publishing patent applications
- is responsible for holding opposition proceedings
- appeal proceedings are the responsibility of the Board of Appeal Unit
- the members of the boards of appeal are independent in their decision-making

Structure of the European Patent Office



Our five locations in Europe



Our staff

Munich	3 734
The Hague	2 643
Berlin	227
Vienna	88
Brussels	4
Total	6 696

64% are patent examiners



Source: EPO data on 31.12.2018.

A multicultural working environment

- 35 different nationalities
- Three languages for working in and for communicating with applicants:
 - English (EN)
 - French (FR)
 - German (DE)



The role of the EPO in the European grant procedure (1)

We provide patent protection:

- in up to 38 EPO member states, two extension and four validation states based on a single application
- in one of the three official languages (English, French, German)

We make all patent documents available to the public.



The role of the EPO in the European grant procedure (2)

We are also responsible for:

- limitation and revocation by patentees
- opposition by third parties
- appeal proceedings before the Boards of Appeal



Importance of IPR-intensive industries for EU economy

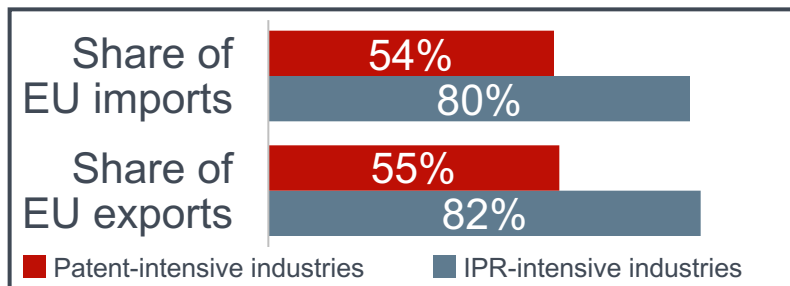
Contribution to EU GDP



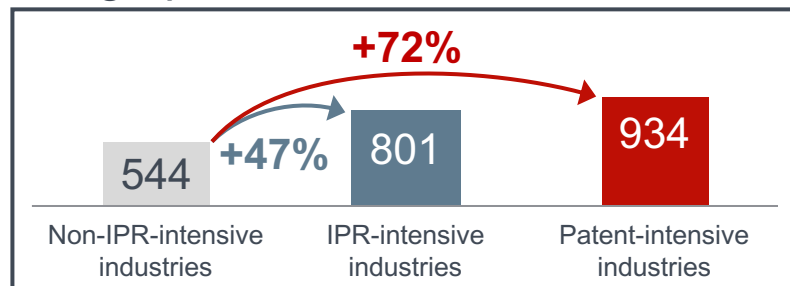
Share of EU employment



Contribution to EU trade



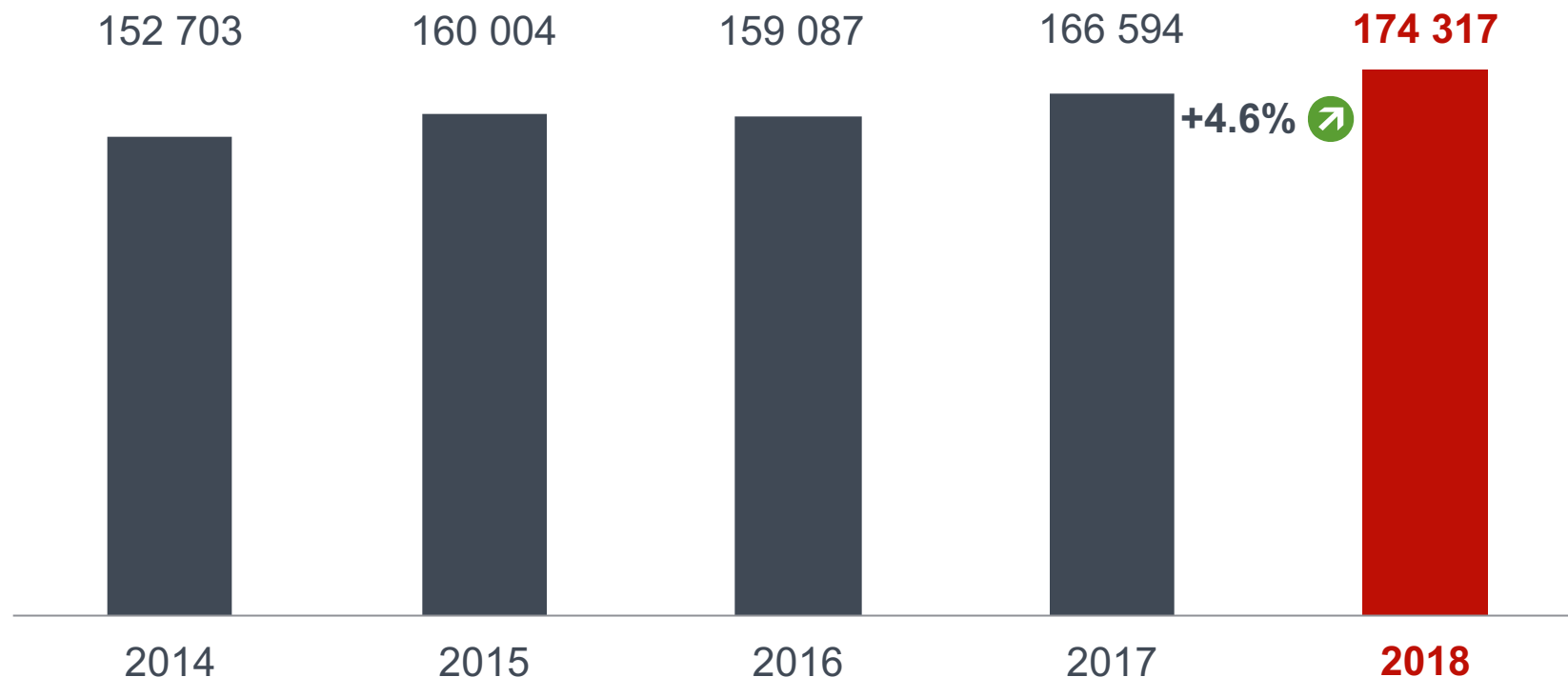
Wage premium



Source: IPR-intensive industries and economic performance in the European Union – Joint Report 2019 from the EPO and EUIPO- Data 2014-2016.

Note: IPR: IP rights: trade marks, patents, designs, copyrights, geographical indications and plant variety rights.

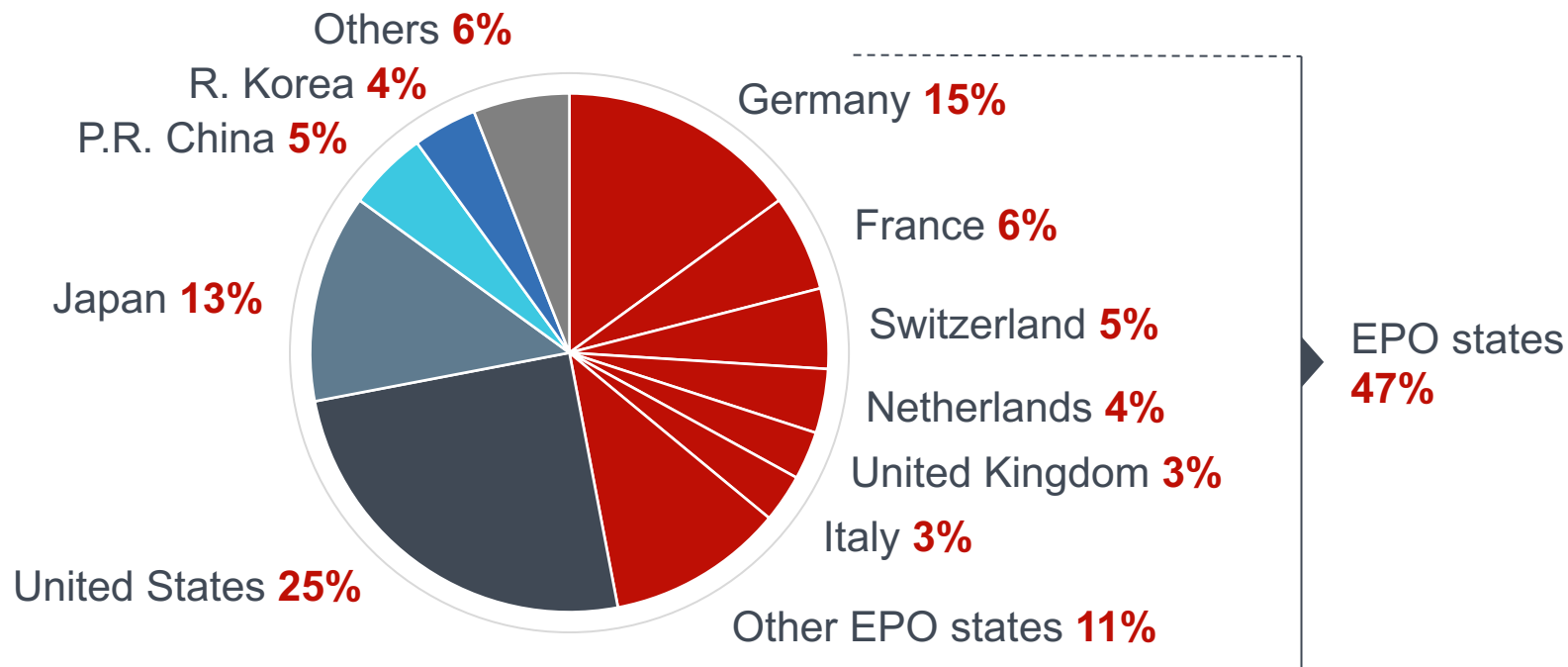
Total European patent applications in 2018



Source: EPO. Status: 21.1.2019.

European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

Origin of European patent applications¹ in 2018



Source: EPO. Status: 21.1.2019.

¹ European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.
The geographic origin is based on the first-named applicant principle.

Note: Sums may vary slightly due to rounding.

Leading fields of technology

TOP 10

			2018	Change	
1 (=)	Medical technology		13 795	5.0%	
2 (=)	Digital communication		11 940	0.7%	
3 (=)	Computer technology		11 718	3.3%	
4 (=)	Electrical machinery, apparatus, energy		10 722	4.7%	
5 (=)	Transport		9 039	5.9%	
6 (=)	Measurement		8 744	9.3%	
7 (=)	Pharmaceuticals		7 441	13.9%	
8 (+1)	Biotechnology		6 742	12.1%	
9 (+1)	Other special machines ranging from agriculture to 3D printing		6 379	10.9%	
10 (-2)	Organic fine chemistry		6 233	- 3.6%	

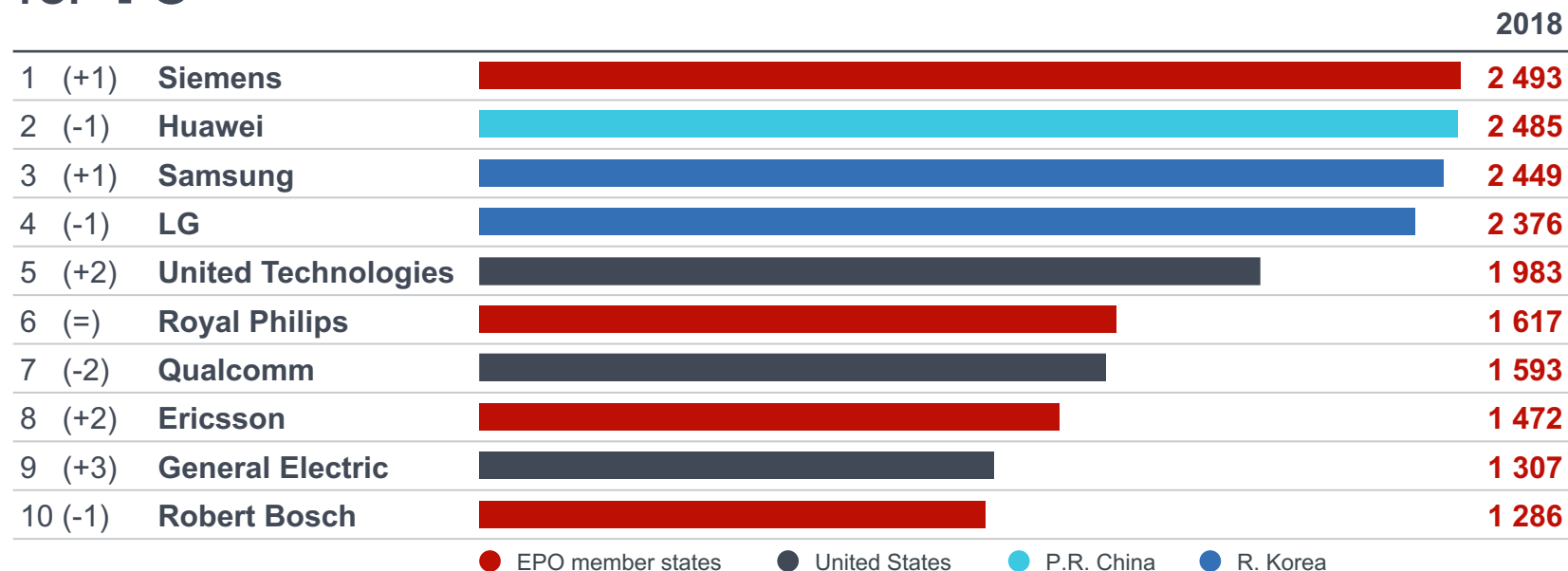
Source: EPO. Status: 21.1.2019.

European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

The definition of the fields is based on the WIPO IPC technology concordance.

Top applicants in 2018

TOP 10



Source: EPO. Status: 21.1.2019.

This is the ranking of the main consolidated applicants at the EPO in 2018 (first-named applicant principle). It is based on European patent applications filed with the EPO, which include direct European applications and international (PCT) applications that entered the European phase during the reporting period. Applications by identifiable subsidiaries, not necessarily located in the same country, are allocated to the consolidated applicants. The countries refer to the country of residence of the headquarters.

A sustainable office committed to excellence

EPO Strategic Plan 2023

MISSION

As the Patent Office for Europe, we are proud to deliver high-quality patents and efficient services that foster innovation, competitiveness and economic growth.

TRUST
FAIRNESS
RESPECT
ADAPTABILITY
COLLABORATION
COMMITMENT TO EXCELLENCE

ENGAGED AND EMPOWERED
DIGITAL TRANSFORMATION

MASTER QUALITY

PARTNER FOR POSITIVE IMPACT

SECURE SUSTAINABILITY

VISION

We will empower and motivate our staff to set worldwide standards in intellectual property. Our Office will be effective and transparent, respond to the needs of our users and be agile in managing the changing demands and conditions of a dynamic global patent system. Our work will contribute to a safer, smarter and more sustainable world.

Our strategic goals

1

Build an engaged, knowledgeable and collaborative organisation

2

Simplify and modernise EPO IT systems

3

Deliver high-quality products and services efficiently

4

Build a European patent system and network with a global impact

5

Secure long-term sustainability

Three ways to start the European procedure

European route

Applicant files a direct European application = 1st filing

National route

Applicant files
a national application

Applicant files a European
application = 2nd filing¹

International route

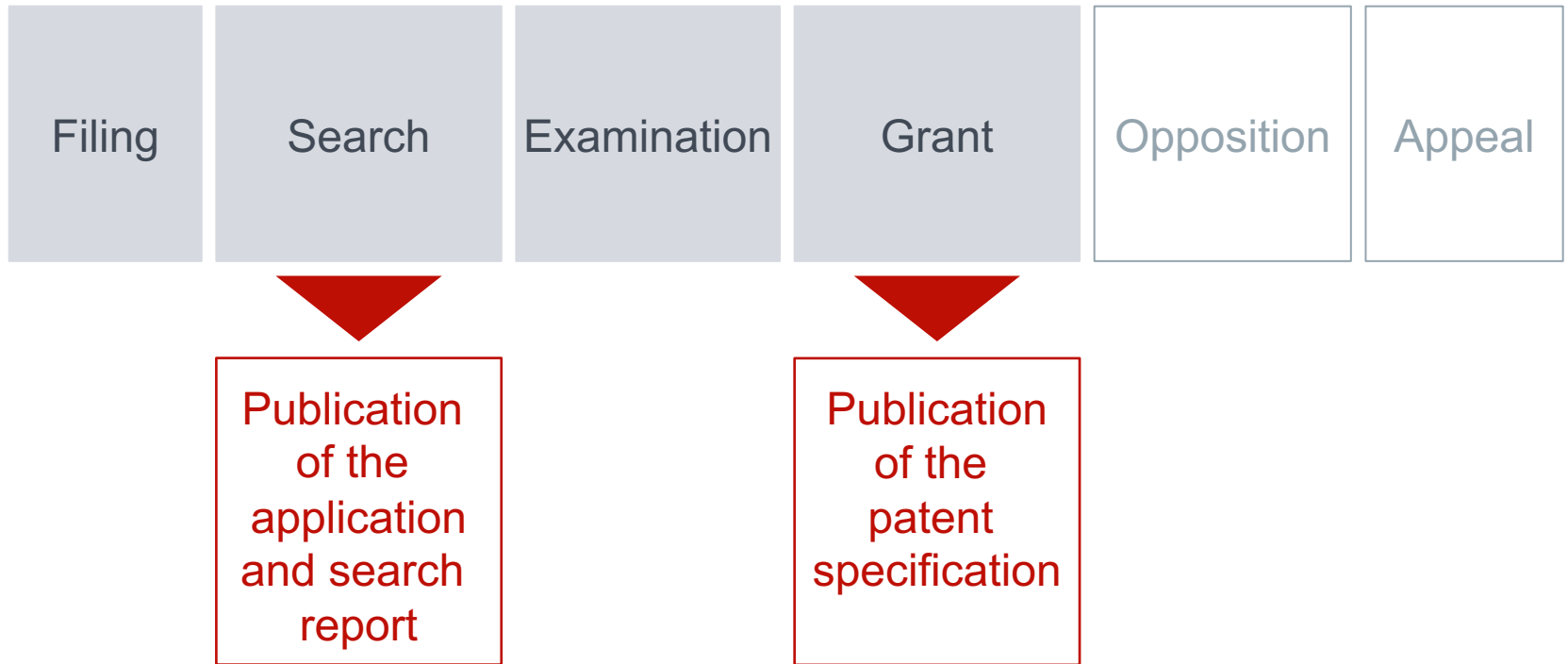
Applicant files
a PCT application

Application enters
European phase

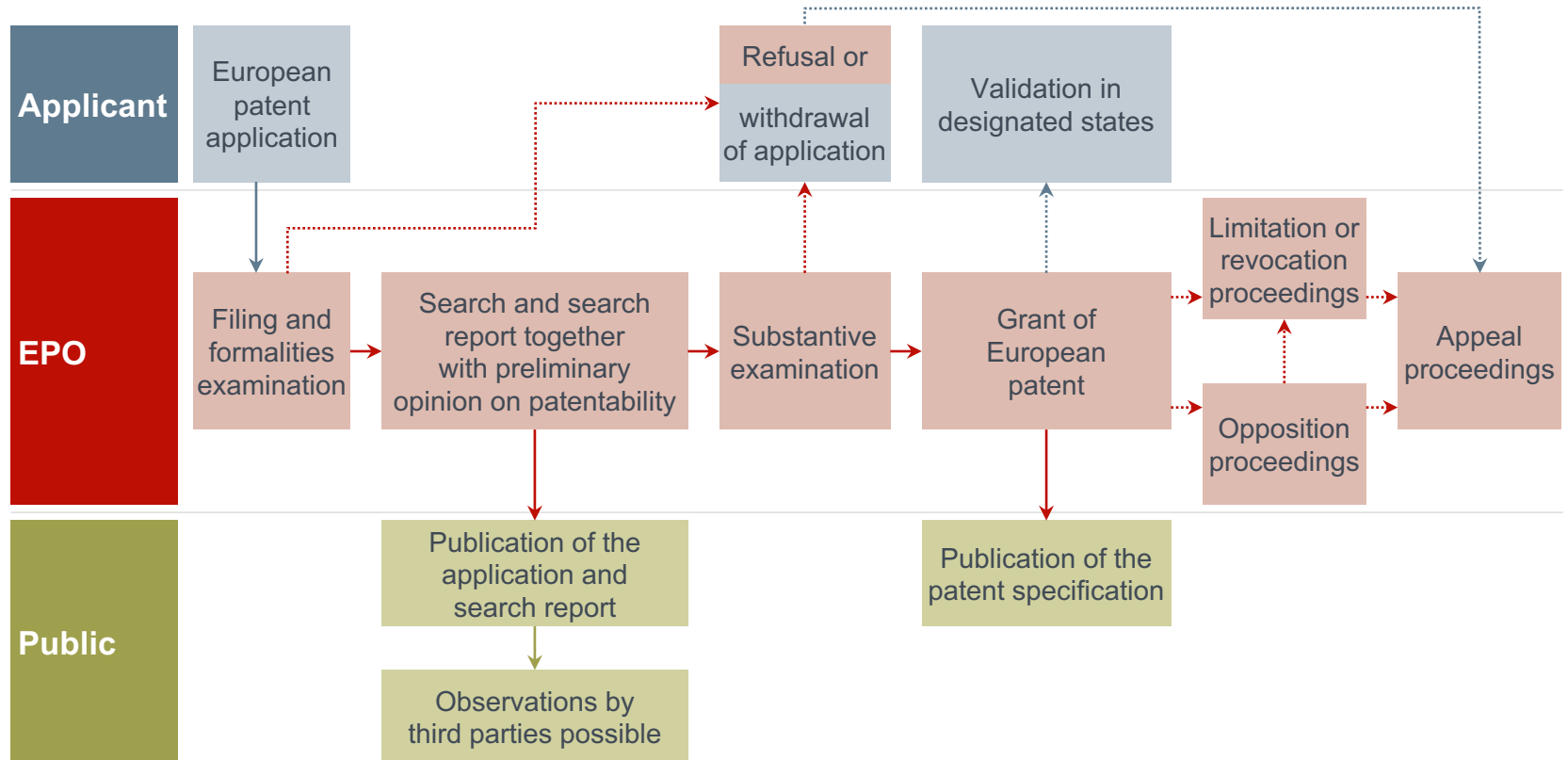
**European
Search and
Examination
Procedure**

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

Basic steps in the European grant procedure



The European grant procedure in more detail



Quality patents



Highly **skilled and trained** examiners



State-of-the-art databases and tools



Thorough work and review processes at all steps



Timely delivery in accordance with user expectations



ISO 9001-certified Quality Management System

State-of-the-art databases and search tools

- ▶ **World's largest collection of documents**

 - 1.3 billion records of patent and non-patent literature
 - Full coverage of Asian patent literature: 50 million records
 - Machine translation from 31 languages into English
 - Standards documentation: around 3.4 million documents
- ▶ **EPOQUE search tool: a benchmark used by examiners worldwide**

 - In 48 patent offices, including Australia, Brazil and China
- ▶ **CPC¹ becoming the new world standard for classification**

¹ Classification system for patent documents jointly developed by the EPO and the US Patent and Trademark Office.

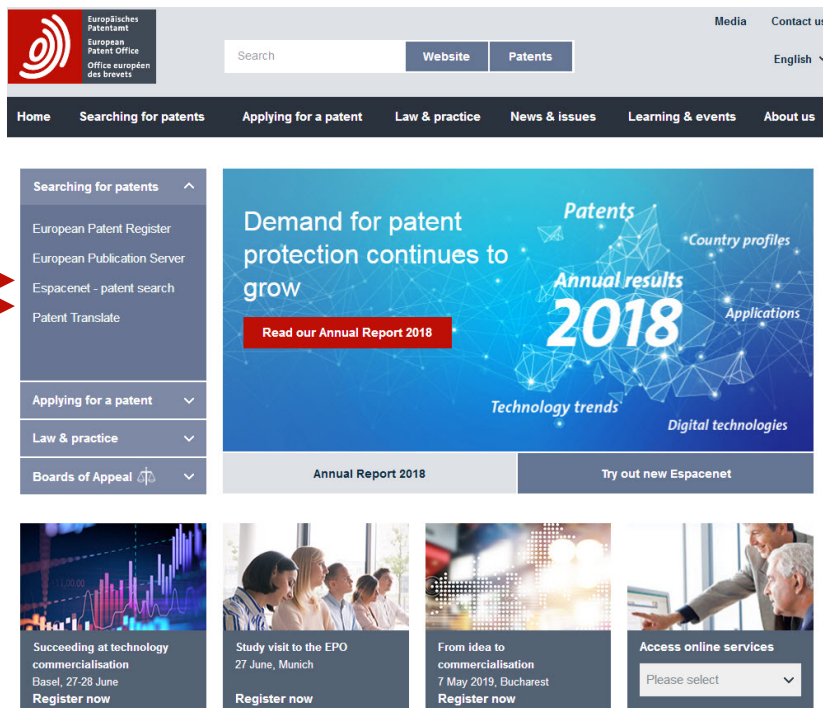
All patent documents are accessible free of charge on epo.org

Espacenet

Over 110 million patent documents, easily searchable

Patent Translate

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



Thorough work and review processes at all stages

Search

- Report supplemented by a written opinion on patentability

Examination and grant

- Three specialised examiners check every file
- Search topped up; third-party observations considered

Opposition

- Filed by any person and examined by three specialised examiners, at least two of whom have not been involved in the grant

Appeal

- Heard by an independent second-instance judiciary: Boards of Appeal

Speeding up our work processes

Search reports

Delivering search reports within **6 months** of receipt

Actual¹ Search timeliness: **4.4 months**



Examination time

Reducing examination times to just **12 months** on average by 2020

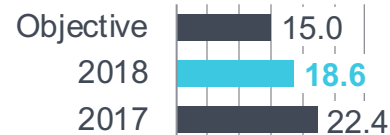
Actual¹ Examination timeliness: **22.3 months**



Opposition time

Completing oppositions in **15 months** on average, while ensuring the parties are heard

Actual¹ duration of oppositions: **18.6 months**



¹ Source: EPO data – Quarter 4 2018.

Objectives of the Unitary Patent package



Simplified
and broader
patent
protection
in Europe at
lower cost



Provides better value with reduced complexity



Facilitates access to patent protection for
SMEs, universities and public research centres



Makes Europe more attractive for innovation
and investors



Boosts Europe's competitiveness

Cost efficiency thanks to simplification

Classic European patent

Fragmented post-grant administration
procedure at national level

National patent offices
with their own:



- Translation requirements
- National validation fees
- Procedures, particularly deadlines
- Renewal fees
- Currencies

Requiring your own local attorney



Unitary Patent

One-stop-shop at the EPO
for all post-grant administration

One office



- No more translations¹
- No additional fee for obtaining a Unitary Patent
- One procedure, particularly deadline
- One renewal fee
- One currency (€)

¹ after an initial transition period when translations will be required, but for information purposes only with no legal effect.

Reduced costs and new business opportunities



- **More flexibility for trade and investment in the EU single market**
- **Enhanced opportunities for licensing and technology transfer**

¹ Direct costs of the renewal fees + associated indirect costs arising from validating and maintaining a European patent in all countries.

When will it start?

- The EPO is **ready to deliver the Unitary Patent**
- **Minimum of 13 states** – including United Kingdom, France and Germany – must ratify the Agreement on a Unified Patent Court (UPC) before the unitary patent system comes into effect
- **16 states including France and United Kingdom have ratified the UPC Agreement so far:** Austria, Belgium, Bulgaria, Denmark, Estonia, Finland, France, Italy, Latvia, Lithuania, Luxemburg, Malta, Netherlands, Portugal, Sweden, and United Kingdom
- Start of the new system is **currently expected for 2020**

The EPO also processes international applications (1)

For international (PCT) applications,
we act as a:

- Receiving Office (RO)
- Designated Office (DO)
- International Searching Authority (ISA)
- Supplementary International Searching Authority (SISA)
- International Preliminary Examining Authority (IPEA)



The EPO also processes international applications (2)

We carry out approximately:

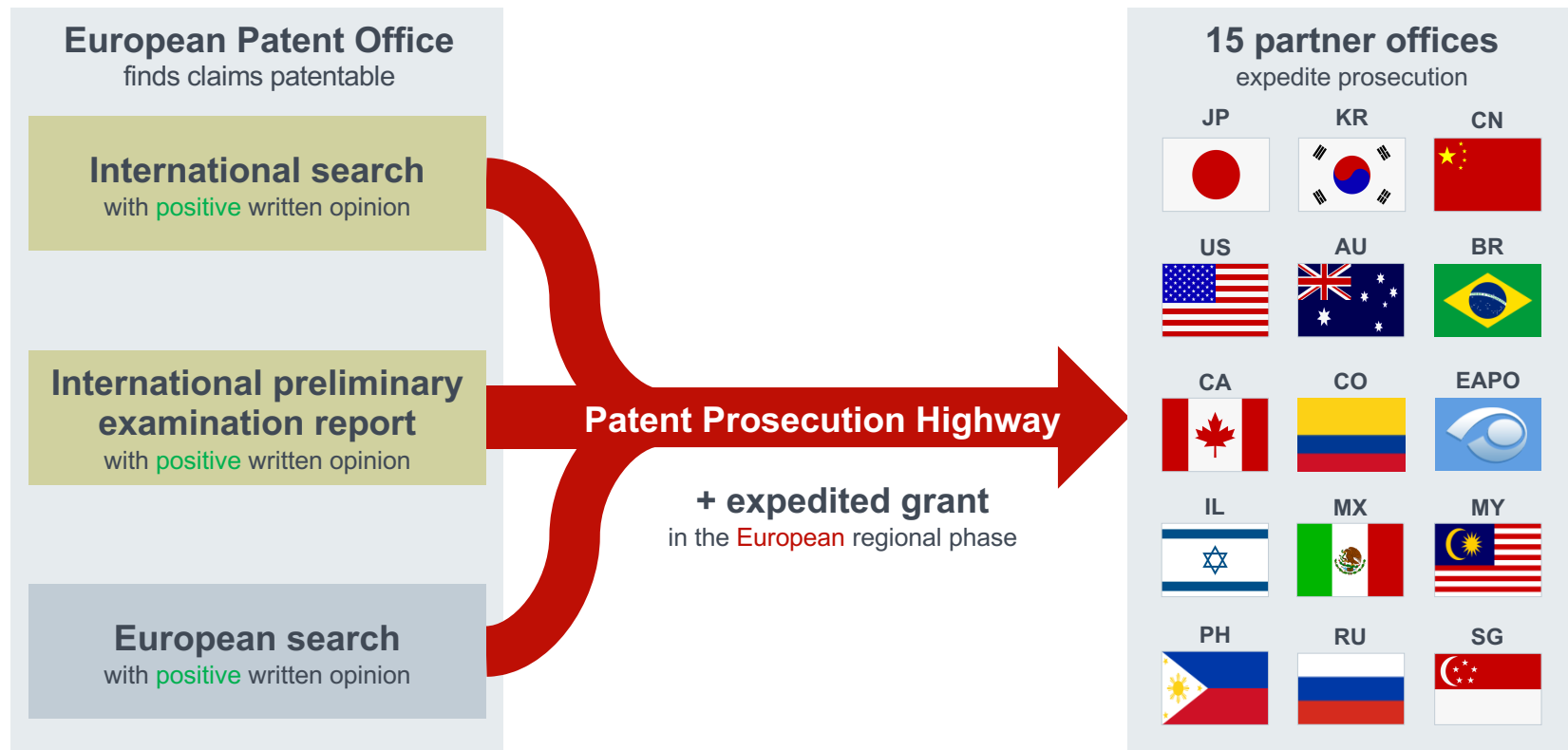
- 34% of all international search procedures
- 63% of all international preliminary examinations

We deliver the international search report accompanied by a written opinion **within three months**.¹



¹ From the date of receipt of the application by the International Searching Authority.

The EPO's PPH agreements



International Co-operation at the EPO

- **Strategic Objective:**

- To broaden the European patent system and network impact for the benefit of applicants and for fostering innovation globally

- **Three possible frameworks**

- Validation agreements
 - Reinforced Partnership agreements
 - Technical cooperation agreements

Bilateral co-operation: one policy, three options

Technical Co-operation

MoU on Bilateral Co-operation

Work Plans under the MoU on Co-operation

MoU on PPH

MoU on CPC

EPOQUE Net agreement

- Strengthen data exchange (QaS)
- Facilitate work-sharing (PPH)
- Expand the use of CPC

Reinforced Partnership

MoU on Reinforced Partnership

- Increase NPO efficiency through use of EPO work products & tools
- Raise quality of national grants
- Release resources at the NPO, e.g. to support domestic innovation

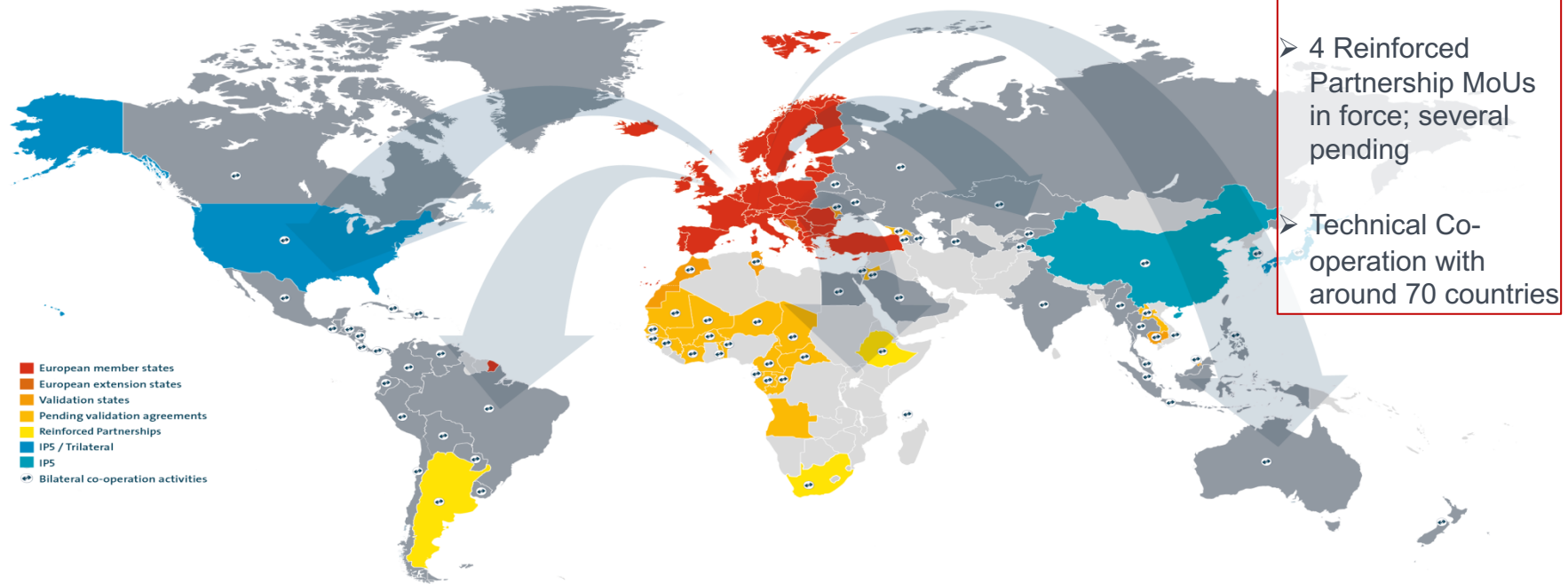
Validation

Validation agreement

- Support applicants' global IP strategy
- Increase legal certainty in validation countries
- Focus NPO resources on development of national innovation ecosystem

Map of EPO international co-operation

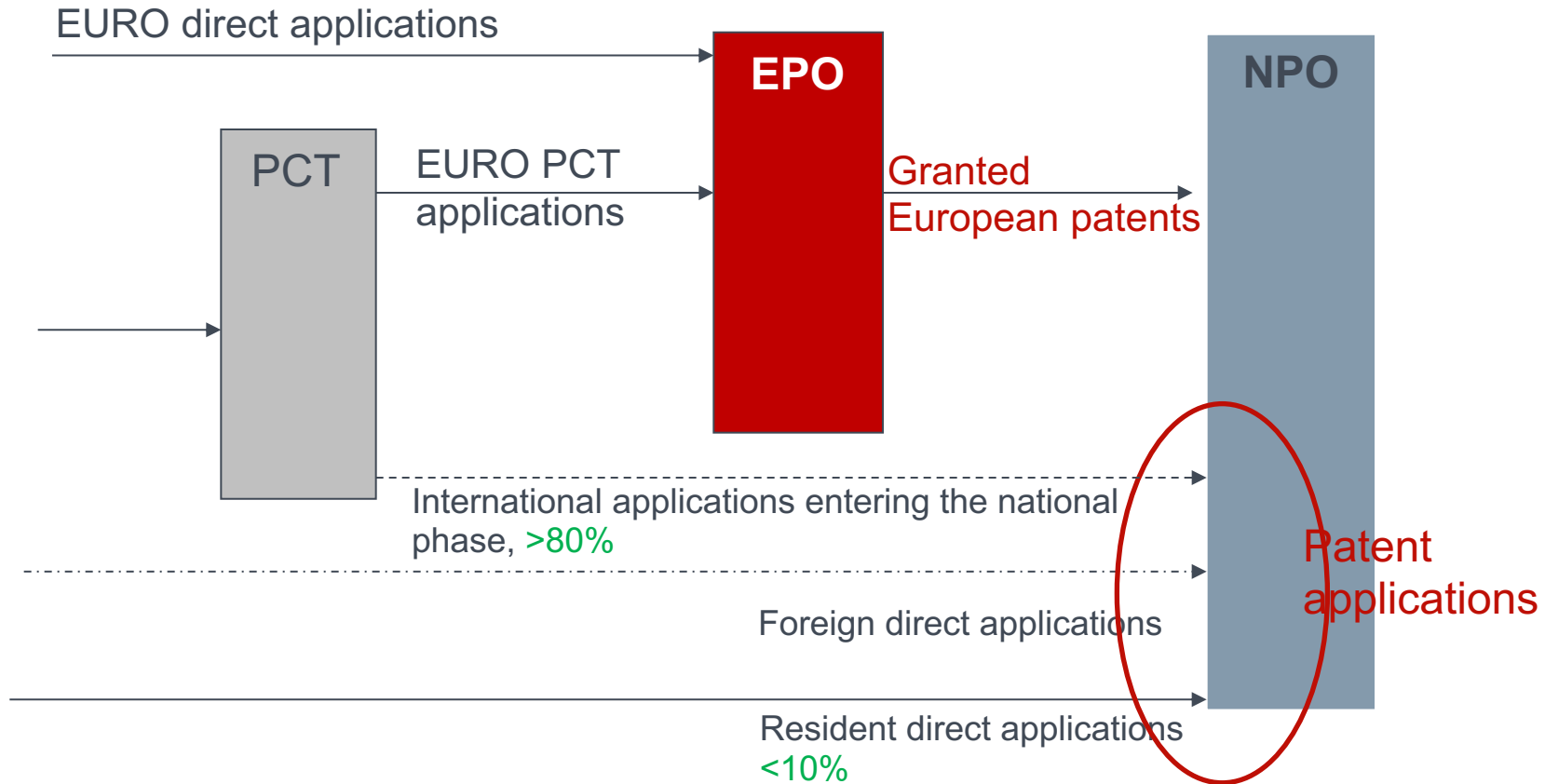
International co-operation activities



Common patent examination challenges for IPOs

- Foreign applications :
 - **the legal certainty** matters for applicants and local industry:
registration vs. examination: thorough search and examination
 - Complex applications: pharmaceuticals, multi-disciplinary fields of increasing complexity
- Resident applications, national first filings:
 - **reliable** indication on patentability within **6-9 months of filing date**
 - strong need for services to applicants

Validation on-demand: the pivot of the new system



Current status of validation agreements

» European member states (38)

» European extension states (2)

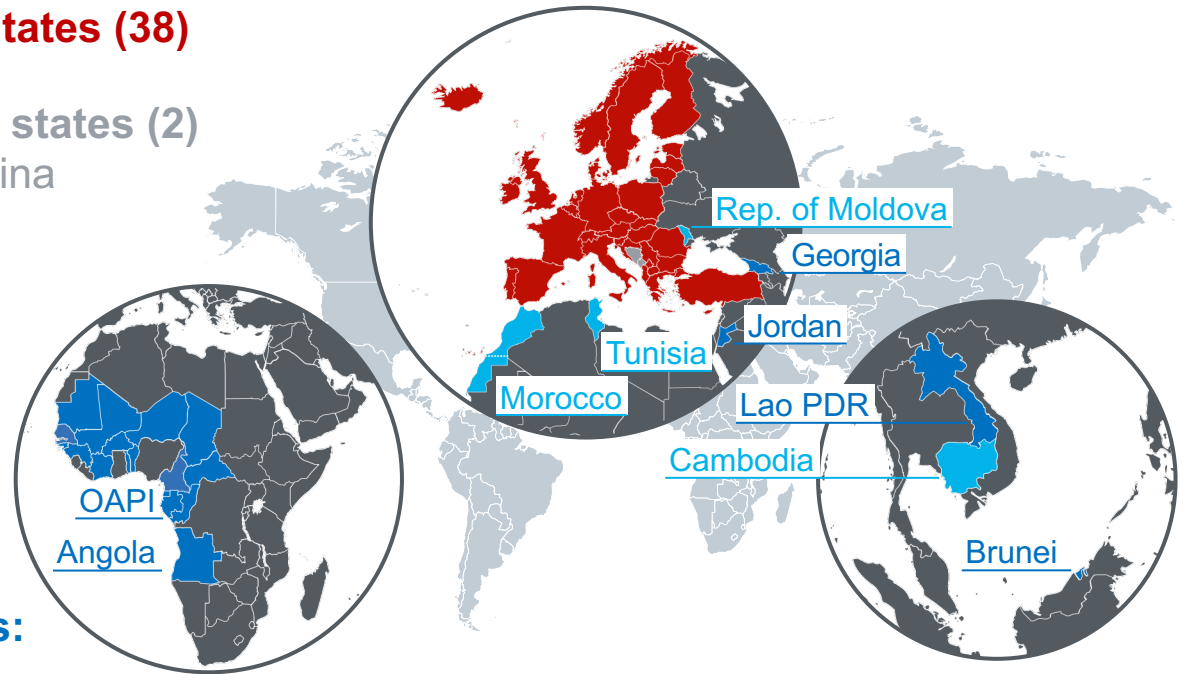
Bosnia and Herzegovina
Montenegro

» Validation states (4)

Cambodia
Republic of Moldova
Morocco
Tunisia

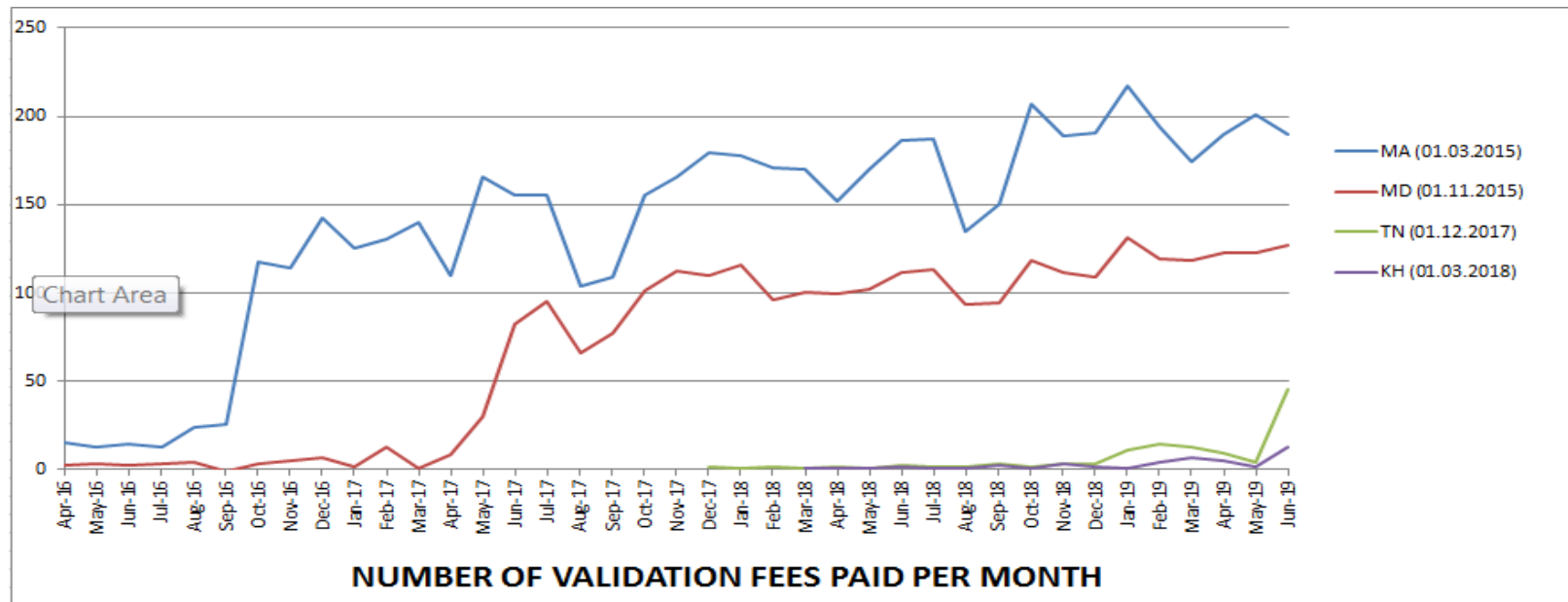
» Pending agreements:

Angola, Brunei
Darussalam, Georgia,
Jordan, Lao PDR, OAPI*



* 17 countries

Sustained use of the validation system by applicants



	Average last 12 m	Fee	Annual transfer to NPO (75%)
Morocco	185,4	240 €	400000 €
Moldova	115	200€	207000 €

Co-operation measures

- Same technical co-operation framework as EPO member states with the most preferential conditions among the NMSs
- Development of the national patent system to enable technology transfer and comprehensively foster local innovation
- Development of the national patent office and capacities for local innovation support activities
- Support to the development of a national patent attorney profession
- Starter package for NPOs of validation states in place since April 2019
- Training of NPO examiners to process first filing

Reinforced Partnership: objectives and purpose

- Reinforced Partnership builds on Technical Co-operation and seeks to establish a **long-term partnership** in patent-related areas of mutual interest
- It supports innovation and bilateral trade by **increasing the substantive patent search and examination capacities** of the partner office, *inter alia*, by:
 - developing advanced capabilities and skills for the **substantive and timely examination of national first filings**
 - **increasing efficiency and quality in the examination of second filings** by making efficient use of EPO tools and work products
 - releasing IPO resources to **effectively support the national innovation ecosystem** and its users

Reinforced Partnership: basic principles (1)

RP is a flexible co-operation concept which is adapted to the specific needs and situation of the partner office. It is implemented through a comprehensive and tailor-made technical co-operation programme comprising, for instance:

- (1) training in patent search and examination for the timely and efficient examination of both **resident and non-resident applications**
- (2) preferential access to supporting tools and services, including discounts on specialised EPO tools such as EPOQUE Net
- (3) support in other areas of the partner office's interest, including patent examiner exchanges, IP awareness raising and user support activities

Reinforced Partnership: basic principles (2)

- Under the RP the utilisation of EPO work products is **office-driven and standardised** rather than applicant-driven and selective (e.g. PPH)
- It is therefore particularly effective in supporting the NPO to **increase its search & examination capacities** by avoiding unnecessary duplication of work
- The utilisation of EPO work products is embedded in the NPO's patent grant procedure and its examiners are encouraged to rely on them to the **maximum extent practicable**, i.e. if there is no major divergence in the respective patent laws & practices and the respective applications correspond
- In other words, the **RP does not require any legislative amendments**, but the closer the alignment of the national patent law with the European Patent Convention the greater the benefits of the utilisation of EPO work products

Reinforced Partnership: an expanding network

- First MoU on RP signed with the Companies and Intellectual Property Commission (CIPC) of South Africa in June 2018
- Within this framework, a comprehensive technical assistance project has been launched which assists the CIPC to establish substantive search and examination in line with the objectives of SA's National IP Policy
- Further MoUs on RP were signed with IPO Ethiopia in April 2019, with INPI Argentina in July and with MyIPO on 1 October
- Further MoUs on RP are in the pipeline - the EPO is in advanced negotiations with several large IPOs in Africa, Latin America and SE Asia

Technical Co-operation: objectives and purpose

- Since its early days, the EPO has been offering technical co-operation to other patent offices mainly in developing and emerging countries
- The objective has been to foster innovation and bilateral trade by supporting the development of efficient national or regional patent systems
- Technical co-operation activities such as patent data exchange and the use of common tools such as the Cooperative Patent Classification (CPC) and EPOQUE Net facilitate technical harmonisation and ensure mutual access to the world's prior art

China: Comprehensive Strategic Partnership

- Full access to Chinese patent data by examiners and users: 3,5 million Chinese patents are CPC classified by CNIPA
- Machine translation: CN-EN is one of the most used MT
- EPO / CNIPA coordinate positions internationally and lead high level projects: Global Dossier; public access to file inspection of CNIPA-EPO patent families; RSS and e-mail alerting function
- Joint Working Groups on Quality, patentability of CII inventions or emerging technologies
- Joint awareness campaigns on how efficiently filing in Europe and China

Latin America, South East Asia

▪ Latin America

- Exchange of EPO best practices in patent search and examination, including CPC; Co-operation with IPKey LATAM for patent related components
- LATIPAT: 3 M bibliographic and 2 M image records.
- Exploratory talks on Reinforced Partnership

▪ ASEAN

- Regional co-operation on common patent examination guidelines, in co-operation with IPKey SEA and on a regional training programme for examiners, in co-operation with IP AU and IPKey SEA
- Exchange of EPO best practices in the examination of ICT and in using EPOQUE NET

Asia, Australia and Canada

- **India:** patent related awareness raising and promotion of the European Patent system, with EBTC and the Ministry of Electronics and Information Technology
- **South Korea:** bilateral co-operation in the areas of CPC, data exchange and work sharing
- **Gulf region:** training of examiners at the GCC PO and the Saudi NPO; Data exchange in the frame of the ARABPAT programme
- **Australia:** co-operation on PPH, CPC, EPOQUE Net, data exchange; multi-lateral co-operation in the area of training.
- **Canada:** co-operation on PPH, CPC EPOQUE Net, data exchange

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