



Europäisches
Patentamt
European
Patent Office
Office européen
des brevets

The European Patent Office and Technology Transfer

A brief overview



Overview of the presentation

- The EPO
- The European Patent Academy
- Some Figures
- EPO and Tech Transfer: Today and Tomorrow

The EPO: some information

- Second-largest intergovernmental institution in Europe (about 7000 staff)
- Not an EU institution
- Self-financing, i.e. revenue from fees covers operating and capital expenditure



Today ... an area with some 700m inhabitants

38 European member states

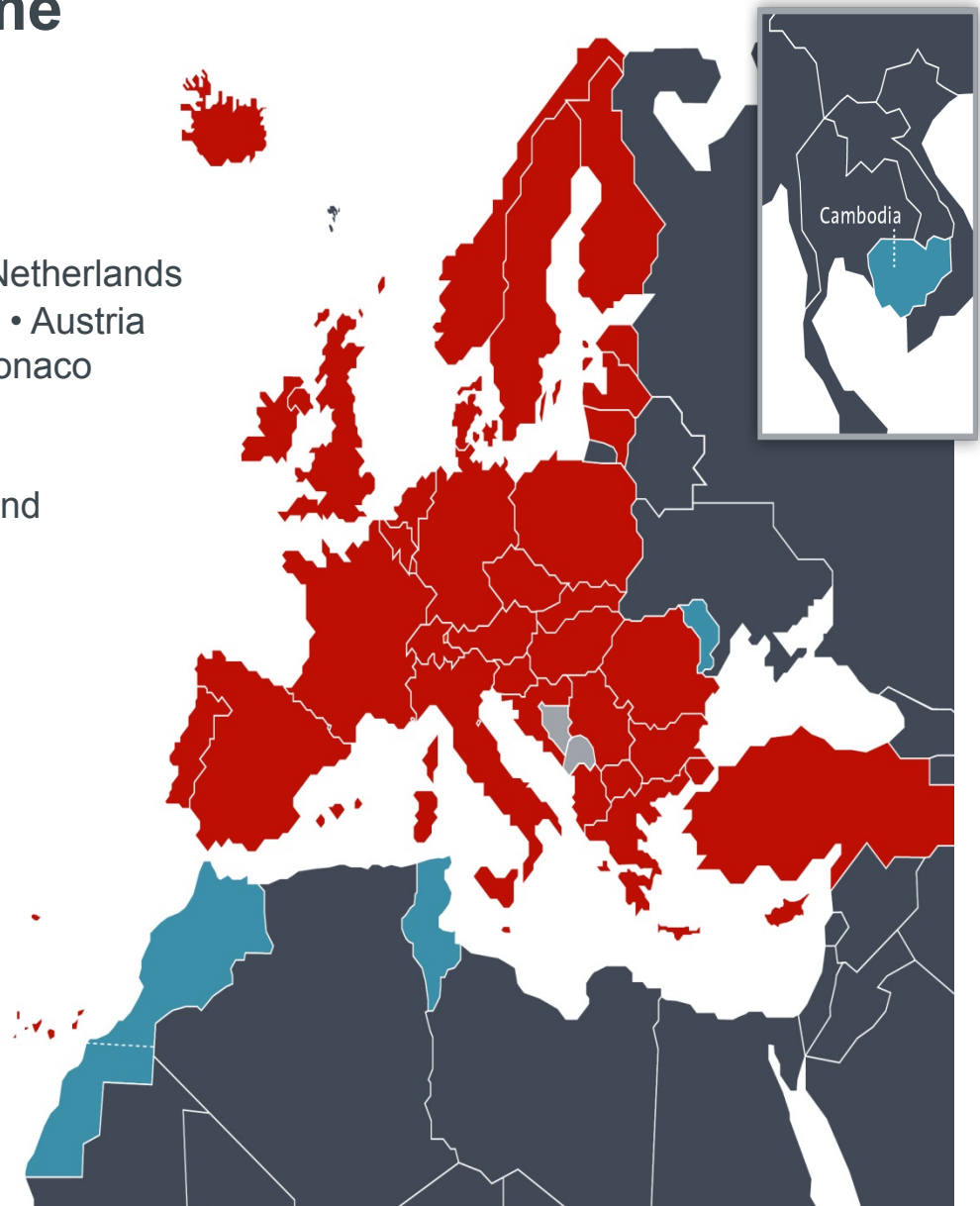
Belgium • Germany • France • Luxembourg • Netherlands
Switzerland • United Kingdom • Sweden • Italy • Austria
Liechtenstein • Greece • Spain • Denmark • Monaco
Portugal • Ireland • Finland • Cyprus • Turkey
Bulgaria • Czech Rep. • Estonia • Slovakia
Slovenia • Hungary • Romania • Poland • Iceland
Lithuania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

Two European extension states

Bosnia and Herzegovina • Montenegro

Four validation states

Republic of Moldova • Morocco • Tunisia
Cambodia

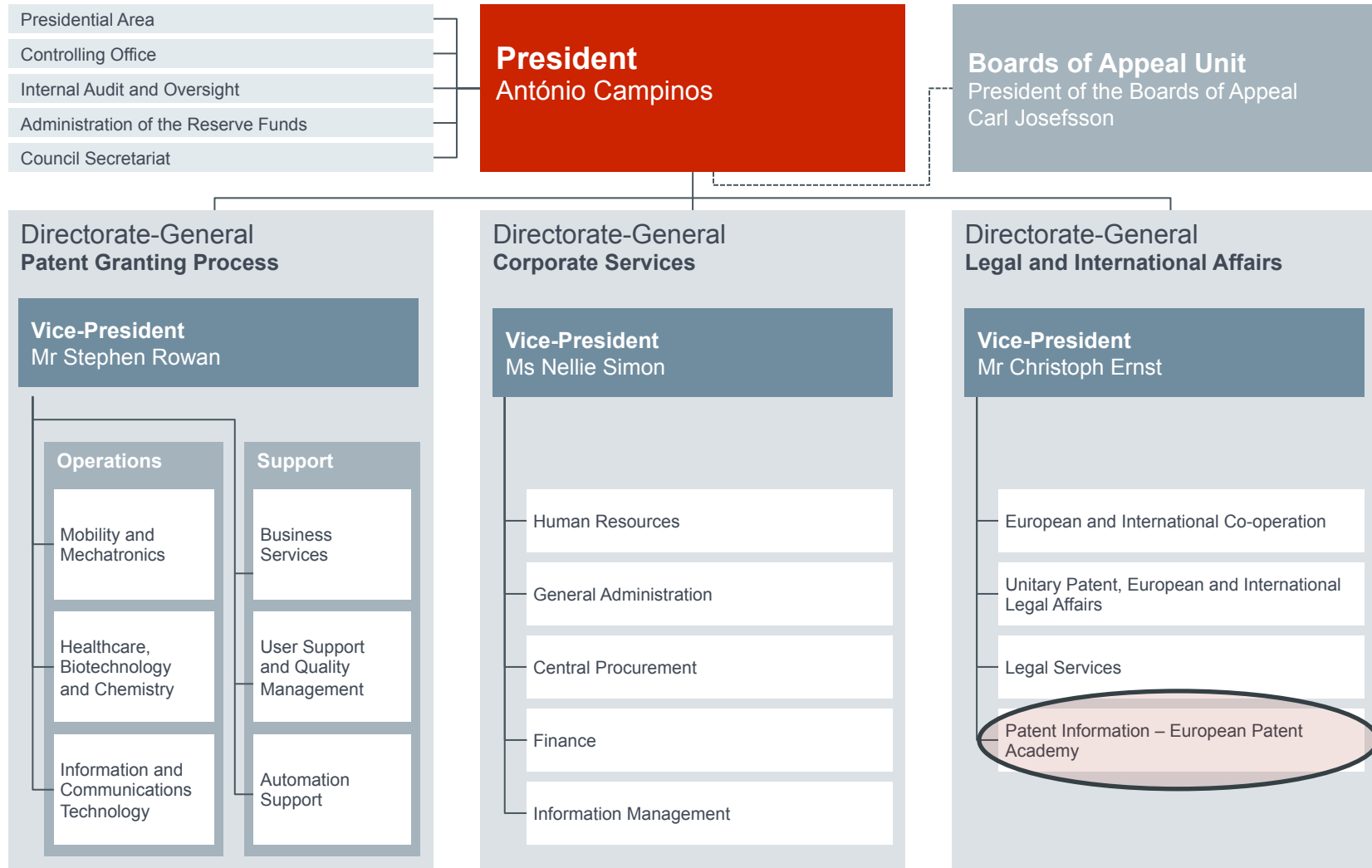


Our mission

We are proud to deliver high-quality patents and efficient services that foster innovation, competitiveness and economic growth.



Structure of the European Patent Office



Objectives of the European Patent Academy

(...)

(a) to foster the development and harmonisation of education and training in the field of European and international patent-related intellectual property law and practice in the present and future member states of the European Patent Organisation for the benefit of the European patent

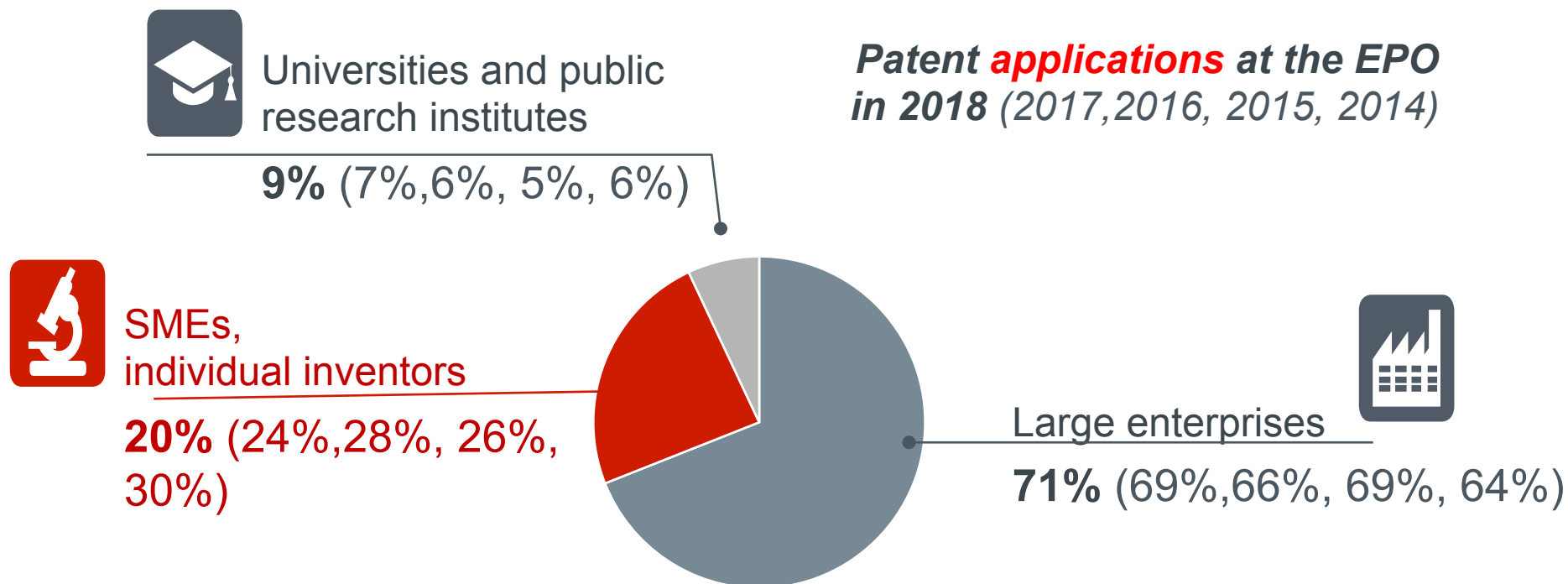
(...)

(d) to contribute to Europe's innovation capacity by improving the expertise and skills of the users of the European patent system.

Tasks of the European Patent Academy

- (...)
- e) increase awareness of the European patent system by supporting **European patent-related intellectual property lectures at universities** and encourage patent-related research activities;
- f) (...)
- g) support innovation in Europe by promoting and participating in **education and training projects designed for industry and patent system users in the areas of intellectual property creation, strategy, evaluation and management**;

Universities and PROs are important actors for innovation in Europe



The evaluation is based on a representative sample of patent applications treated by the EPO in 2016. It refers to the European Commission definition of SMEs (2003/361/EC). Data available in government and commercial databases as well as on company internet sites are analysed to allocate the applicant to one of the four categories. Depending on the company policy, the cross-ownership criteria can be difficult to evaluate. To ensure that the results remain statistically significant, no analysis per country or industrial sector is provided.

Top countries for European patent applications¹

TOP40

	2018	Change		2018	Change		2018	Change
1 United States	43 612	2.7%	15 Spain	1 776	6.3%	29 Cayman Islands	367	52.9%
2 Germany	26 734	4.7%	16 Chinese Taipei	1 767	8.9%	30 Puerto Rico	365	31.3%
3 Japan	22 615	3.9%	17 Finland	1 728	-3.8%	31 Barbados	332	95.3%
4 France	10 317	-2.8%	18 Canada	1 596	5.5%	32 Saudi Arabia	264	88.6%
5 P.R. China	9 401	8.8%	19 Israel	1 456	4.9%	33 Czech Republic	242	17.5%
6 Switzerland	7 927	7.8%	20 Australia	978	16.3%	34 Russian Federation	229	13.4%
7 R. Korea	7 296	13.0%	21 Ireland	801	21.4%	35 Portugal	220	46.7%
8 Netherlands	7 140	1.4%	22 India	710	4.7%	36 New Zealand	194	-3.5%
9 United Kingdom	5 736	7.8%	23 Norway	610	14.9%	37 Brazil	161	-2.4%
10 Italy	4 399	0.9%	24 Turkey	572	-37.2%	38 Greece	120	17.6%
11 Sweden	4 050	7.1%	25 Poland	534	19.7%	38 Hungary	120	26.3%
12 Denmark	2 390	14.4%	26 Singapore	523	20.2%	40 Hong Kong	112	2.8%
13 Belgium	2 360	9.7%	27 Luxembourg	455	-14.6%			
14 Austria	2 292	3.8%	28 Liechtenstein	429	12.9%			

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.

Top EPO applicants 2018 – global

TOP50

	2018		2018		2018
1 Siemens	2 493	18 Valeo	784	35 ABB	571
2 Huawei	2 485	19 Alphabet	779	36 Bayer	559
3 Samsung	2 449	20 Nokia	738	37 SABIC	557
4 LG	2 376	21 Continental	691	38 Toshiba	545
5 United Technologies	1 983	22 Hitachi	658	39 Guangdong Oppo Mobile Telecom.	523
6 Royal Philips	1 617	23 Mitsubishi Electric	655	40 Mitsubishi Heavy Industries	512
7 Qualcomm	1 593	24 Hoffmann-La Roche	651	41 Airbus	509
8 Ericsson	1 472	25 3M	635	42 Unilever	502
9 General Electric	1 307	25 Honeywell	635	43 DSM	500
10 Robert Bosch	1 286	27 HP	626	44 Fraunhofer-Gesellschaft ²	468
11 Sony	1 278	28 Dow Chemical	623	45 Philip Morris	457
12 BASF	1 256	29 Toyota Motor	608	46 Merck	432
13 Intel	1 057	30 CEA ¹	597	47 Safran	423
14 Johnson & Johnson	982	31 Boeing	596	48 BOE Technology	419
15 Microsoft	975	32 Medtronic	593	49 Nestlé	382
16 Canon	816	33 Procter & Gamble	580	50 Apple	375
17 Panasonic	815	34 Philips Lighting	573		

Source: EPO. Status: 21.1.2019.

¹ Commissariat à l'énergie atomique et aux énergies alternatives.

² Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V.

Top applicants at the EPO in 2018 from Italy¹

TOP 10

1	G.D	54
2	PIRELLI & C.	51
3	CHIESI FARMACEUTICI	37
4	CAMPAGNOLO	36
5	TELECOM ITALIA	34
6	PIAGGIO & C.	31
7	DE'LONGHI	25
8	ANSALDO ENERGIA	23
8	LEONARDO	23
10	FONDAZIONE ISTITUTO ITALIANO DI TECNOLOGIA	19

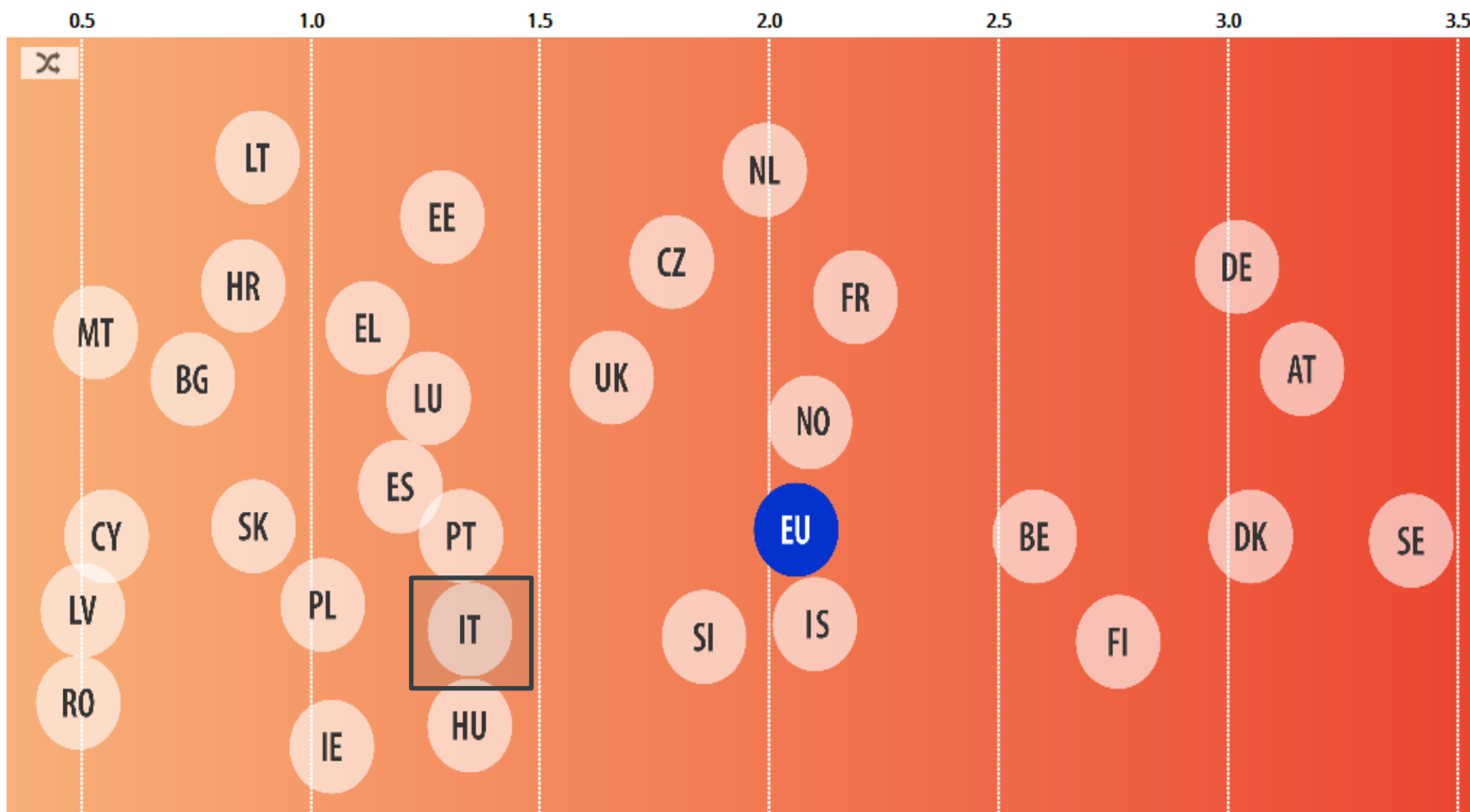
Source: EPO. Status: 21.1.2019.

¹ 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.

Nr EP applications PROs

Applicant	Rank.	Nr Appl.
▪ CEA (2018) (Comm. à l'Energie Atom. et Altern.)	30	597
▪ Fraunhofer Inst. (2018)	44	468
▪ CNR (2010-2018)	n.a.	~130
▪ CNR (2002-2011) (dati Osserv. Unioncamere, 2013)	n.a.	117

R&D expenditure 2017 (% GDP) (Source: Eurostat)



IT= 1.35%

EU₂₈=2.06%

EPO Activities:

- Support to/cooperation with universities, NPOs, TTOs and research institutions
- On-site workshops
- On-site IP courses
- On-line workshops
- Dedicated support (IP masters, summer schools...)
- Meetings/Conferences with stakeholders

Products – e-learning offer

e-learning centre at the EPO: <https://e-courses.epo.org>

Some topics:

- Obtaining a patent
- Guide for Applicants
- Patent information search tools
- Benefits of availability of technical information
- Patents in business
- Commercialisation
- Legal aspects: e.g. Litigation

Activities - EPO Research programme

- Financial support to high quality research projects (100.000€)
- Encourages more academic research on the role of patents in the European economy
- Yearly selection of new projects
- Selection process involves review process by external academic scholars
- Open to scholars from various disciplines: economics, law, management, and data sciences

EPO and universities/TT-1

- ❖ **EPO experts as speakers in workshops and seminars for students and/or researchers** (e.g. Kaunas university (LT), University of Bologna (IT), University of Alicante (ES), Democritus University of Thrace (GR), CNAM Paris (FR), Sabanci University (TR) to mention but a few...)
- ❖ **Participation in and support to TT events such as :**
 - Netval Summer School/Conference
 - ASTP Yearly Conference
 - “IP days” in various universities (e. g. TU Munich, ETH Zürich, S. Anna Pisa...)
 - Innovation competitions (e.g. ESTIA (FR))

EPO and universities/TT-2

❖ EPO events focused on TT

- TTO Advisory Workshops (Munich, Athens)
- Progress Conference (Zürich 2017, Athens 2018)
- the next edition (2020) of both events is in preparation

❖ Reinforcing cooperation with TT and TTO associations like ASTP, Netval, Praxis Auril

EPO and universities/TT-3

❖Pan-European Seals Programme

❖Patlib 2.0 /Porto Conference

**❖Ongoing cooperation activities with the European
Commission**

Consolidating an EPO university/TTO network

- **Work plans/MoU: With whom?**
 - i. Established European, national, regional networks:
e.g. ASTP
 - ii. Active universities participating in PanSeal programme
 - iii. Universities with a long standing cooperation with the European Patent Academy

Future projects

- **Developing technology transfer cases studies**
 - *illustrating IP strategy*
 - *explaining role of TTO*
 - *training material*
- **A European guide on commercialising research results?** (in cooperation with TTOs and EC ?)
- **Financing Proof of Concept?**
- **Scholarships?**

Possible future EPO initiatives? Proposals from Universities and TTOs/1

- A sponsorship by the EPO of universities' innovation award
- One (or more!) EPO-sponsored PhD(s)
- A kind of “Praktika Extern” programme, whereby an EPO expert spends a period of time (1-2 weeks) as search- and patent-expert at the TTO
- Dedicated online courses
- IP-promoting videos and games: The EPO could support and sponsor them

Possible future EPO initiatives? Proposals from Universities and TTOs/2

- A kind of “Praktika Intern” programme, whereby someone from the TTO spends a period of up to 1 week at the EPO
- An EPO “Key Account Manager” to act as single point of contact for queries from the TTO relating to patent practice and procedure as well as general technical questions
- EPO could finance researchers who want to move to TT or other patent-related careers (e.g. for them to attend a TT/IP course).
- TTO-related case studies by the EPO

From the EPO strategic plan 2023

- “The Office will create a hub for technology transfer in collaboration with member states within the framework of a second generation of PATLIB centres, offering new services in the area of technological transfer and supporting universities, research centres, inventors and SMEs. This renewed PATLIB 2.0 network will provide a platform for patent offices and other network players to address their service offering to reinforce the effectiveness of the patent system. “



Thank you!

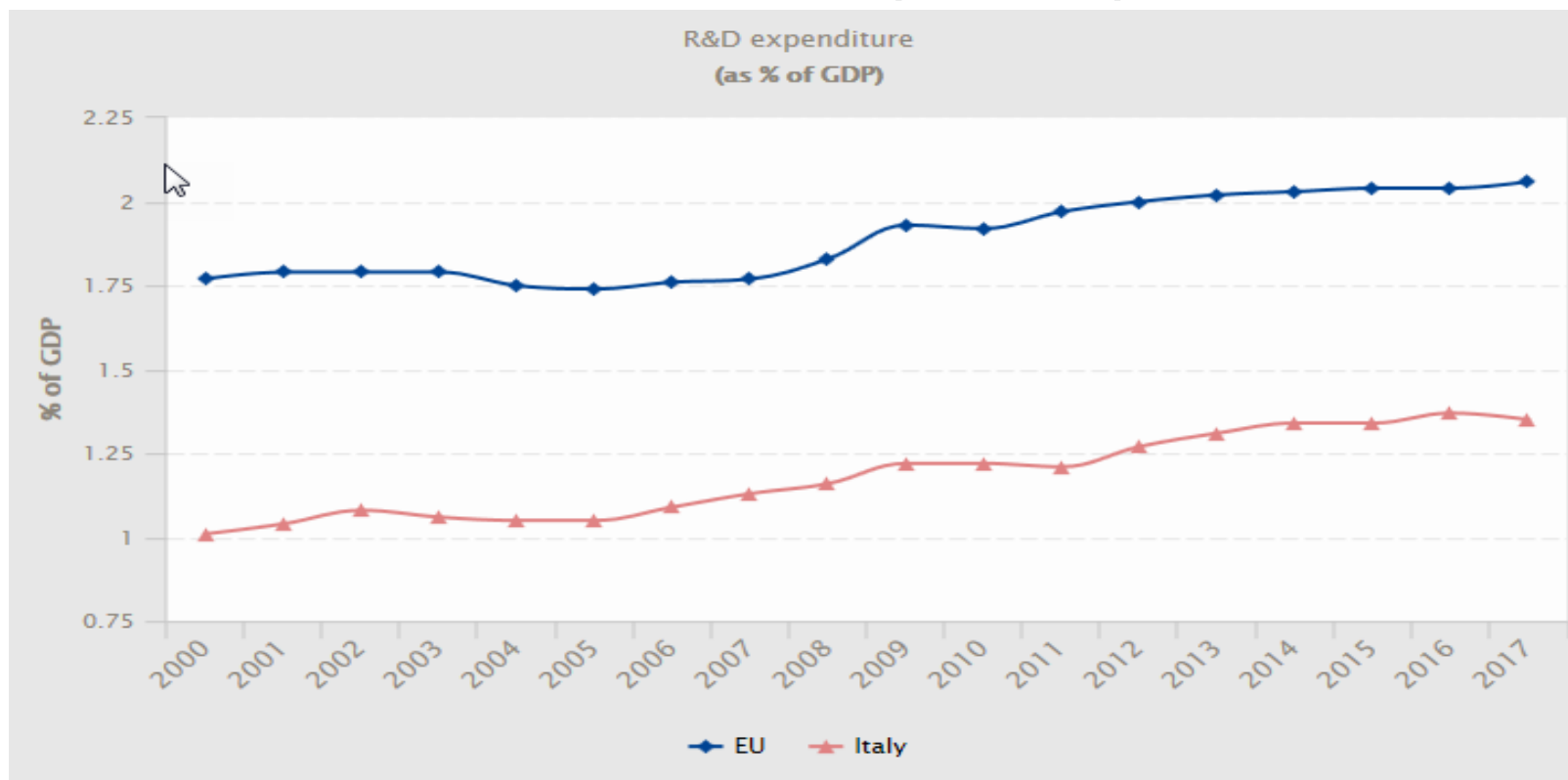
The presentation is largely based on material prepared together with Giovanna Oddo, Programme Area Manager “Academia”

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Many thanks also to my colleague Ilja Rudyk,
EPO, Senior Economist

R&D expenditure 2000-2017 (% GDP) (Source: Eurostat)

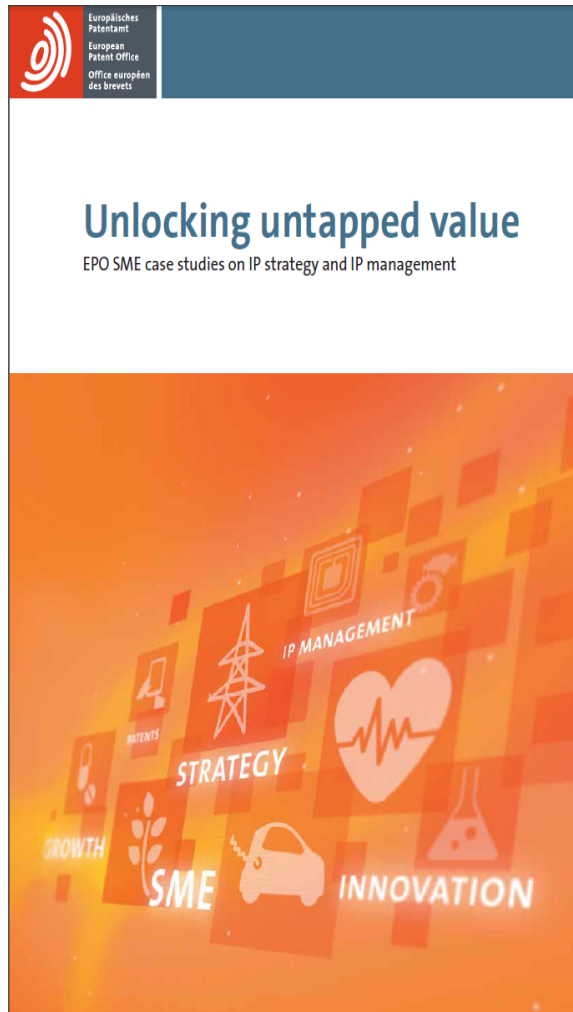


	2000	2004	2008	2012	2016	2017
IT	1,01	1,05	1,16	1,27	1,37	1,35
EU28	1,77	1,75	1,83	2,0	2,04	2,06
IT/EU	0,57	0,60	0,63	0,63	0,67	0,65

Activities – Some of the training packages on offer

- IPR workshop for researchers: “From research to business”
- IP workshop based on CMR case studies
- Study visit scheme
- Online IPR course for researchers

...The EPO SME case studies: How to make use of patents?



Demonstrate that European SMEs:

- Can create **strategic value** from patents
- Need to know **when and how to use patents** to support their business
- Will benefit from the **Unitary Patent** and Unified Patent Court