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Foreword

COVID-19 changed everything. In decades to come, we may well look back on last year as a defining moment in the EPO's history and a ground-breaking period of rapid transformation. Throughout the year, the Office's top priorities were to protect the health and safety of staff and users, play its part in mitigating the spread of the virus and ensure business continuity.

This was largely possible thanks to a huge acceleration in digitalisation. As the year progressed, a new working environment began to emerge, characterised by homeworking, digital workflows and collaboration in dispersed teams. Fortunately, the vision of a fully digital patent granting process was firmly anchored in the EPO's Strategic Plan 2023 (SP2023) published back in July 2019, putting the Office in a solid position to cope with the changes triggered by the pandemic.



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And the plan delivered impressive results. Thanks to the rapid rollout of laptops and new digital tools, staff were able to successfully tackle a rising workload and keep the patent granting process going (see "Managing the COVID-19 pandemic" on p. 8 for further details). The pandemic — and particularly the shift to a more flexible approach to where and when we work — also prompted a major and ongoing rethink of the Office's building investment programme and inspired initial reflections on a post-pandemic "new normal" based on two Office-wide staff surveys.

Although our vision of a "new normal" is still taking shape, co-operation within the European patent network will remain crucial to the EPO. Communications and data protection will assume a growing importance in tomorrow's working environment, and these topics are covered in two new annex reports to this Review. We've also reorganised our Quality Report with a new five-pillar approach that offers a comprehensive view of our drive for quality in all aspects of our operations.

This Annual Review features a host of achievements, driven by the surge of determination and ingenuity that defined the

EPO's response to the crisis. In many ways, it's a tribute to the unwavering commitment of EPO staff, and their ability to deliver high-quality products and services under exceptionally challenging circumstances. As you read this report, I trust you'll agree that we're moving faster than ever towards our goal of achieving excellence.

Satonie Canring

António Campinos, President of the European Patent Office

Thanks to the rapid rollout of laptops and new digital tools, staff were able to successfully tackle a rising workload and keep the patent granting process going



Executive summary

2020 marked a turning point for the EPO. Despite the multiple challenges created by the pandemic, performance remained high. Thanks to the resilience, flexibility and real commitment to deliver shown by its staff, the EPO successfully tackled a slightly higher workload than in 2019, while also achieving steady improvements in timeliness. To support staff in mastering the incoming workload, the EPO also leveraged digital tools to improve efficiency.

Looking through the lens of the COVID-19 crisis, the EPO revisited its Strategic Plan 2023 (SP2023) at the end of July 2020. Based on lessons learnt from year one of the plan's implementation, some projects were reprioritised and a pipeline approach was adopted to streamline their deliverables. The plan is structured around five goals that will ultimately create a smarter and more sustainable organisation.

In goal 1 of SP2023 to build an engaged, knowledgeable and collaborative organisation, there was a clear focus on promoting internal job mobility, and especially partial mobility. New development programmes were set up for project managers, quality auditors and diversity and inclusion promoters, coupled with an "Advanced Leadership" programme for EPO managers. To reflect the growing importance of continuous learning, the EPO also launched a new online training portal (iLearn), giving all staff remote access to learning resources. It also welcomed a record intake of 77 new Pan-European Seal trainees last September. Lastly, the EPO conducted two Office-wide staff surveys in 2020 to gauge how staff were coping with the crisis and gather their views on the "new normal".

With the pandemic pushing the EPO to go digital faster, goal 2 projects aiming at simplifying and modernising IT systems moved ahead at full steam in 2020. On top of rapidly rolling out laptops and homeworking hardware, the Office started developing software by delivering minimum viable products (MVPs) in rapid, frequent iterations with incremental improvements. This agile approach proved highly effective in driving digital transformation forward. Digital workflows and annotation tools were progressively integrated into the Patent Workbench, establishing it as the single interface for interactions between examiners and formalities officers. The EPO also started decommissioning its mainframe, enhancing cybersecurity and developing in-house Albased models for pre-classification. In parallel, it developed an ambitious business change realisation plan, to reach out to staff and ensure that change management activities were fully aligned with the IT solutions delivered and operational needs.

Goal 3 of SP2023 focuses on delivering highquality products and services, but with a new, user-centric focus. Maintaining close contact with users proved crucial in 2020. In practice, this meant holding regular virtual meetings

with user associations, enlarging the SACEPO framework and tripling the size of the SACEPO Working Party on Quality, which was reorganised into regional groups to ensure better global coverage. Last year also saw the launch of two new platforms: a Digital File Marketplace and a Digital Talent Marketplace. The file marketplace platform ensures transparent exchanges of files between examiner teams and, coupled with digital "pull" file allocation, maximises effective workload rebalancing. The platform also enhances quality by promoting collaboration between technically skilled examiners from different teams across the organisation.

Looking at the bigger picture, the Digital Talent Marketplace makes it easier for examiners to switch specialist fields and acquire new expertise. From a talent management perspective, this tool puts the EPO in a stronger position to respond to emerging trends in patent applications. Together, these initiatives are part of a tireless drive to improve quality and timeliness, which also depends heavily on collaboration. With teams dispersed and largely teleworking in 2020, promoting collaboration became more crucial than ever. In response, the EPO extended its "Enhancing Collaboration"

(ECo) project to 65 examiner teams and eight formalities teams. By empowering teams to take ownership of their own work practices, the project boosted motivation and engagement levels.

2020 was another strong year for the EPO in terms of its goal 4 commitment to build a European patent network with a global impact. In June 2020, the Administrative Council of the European Patent Organisation unanimously approved the new co-operation framework between the organisation and its member states. Intensive discussions in 2020 on a new policy for working agreements on search cooperation with member states culminated in its approval by the Administrative Council in December. The new policy introduced a single search fee for all member states with a working agreement and financial support for national searches for applications filed by certain types of applicant (SMEs, universities and natural persons). The Council also approved the first-ever common practices under SP2023's convergence programme, marking a historic milestone on the path to a more robust IP system. On the IT front, solid progress was made towards developing a new electronic European Qualifying Examination (e-EQE)

and facilitating closer technical co-operation between member states too.

Despite the pandemic, the EPO continued to expand its geographical reach in 2020. In November the Office signed a reinforced partnership (RP) agreement with the Superintendence of Industry and Commerce of Colombia. On 1 December 2020, the EPO and the China National Intellectual Property Administration (CNIPA) officially launched a two-year pilot enabling Chinese applicants filing their international applications in English with the CNIPA or the World Intellectual Property Organization (WIPO) as receiving Office to select the EPO as their International Searching Authority (ISA). This makes the EPO the first patent office outside of China that can be designated as an ISA for Chinese applicants.

Lastly, 2020 saw major strides towards **goal 5** of SP2023, which focuses on securing the EPO's **long-term sustainability**. In terms of financial sustainability, progress was made with the Council's approval of a bundle of six measures to address the coverage gap identified by the EPO's latest Financial Study and a new salary adjustment method. In terms of the EPO's environmental footprint, 2020 saw an

impressive 86% reduction in CO_2 emissions from duty travel. The rapid switch to digital workflows triggered by the pandemic also led to huge paper savings, with consumption falling by 58.6 million sheets in 2020.

The full implications of the rapid transformations witnessed in 2020 were still emerging as the year drew to a close. But they will undoubtedly shape the EPO's vision and steer its course as the organisation moves towards the "new normal".

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Managing the COVID-19 pandemic

For the EPO, coping with COVID-19 created a host of unforeseen operational challenges that called for swift decisions and effective action. From the outset, its top priorities were to protect the health and safety of staff and users, play its part in mitigating the spread of the virus and ensure business continuity.

The EPO's response to the pandemic was coordinated by a crisis response team of senior executives and managers responsible for key areas such as health and safety, IT, buildings and communications. This crisis response team had been set up at the very beginning of 2020 so that, by the time a global pandemic was declared in March, the EPO was ready to spring into action with quick-fix solutions such as banning duty travel to high-risk areas. But it soon became apparent that the pandemic's spread called for more extensive measures with far-reaching implications.

Two factors were crucial to the EPO's success in implementing changes: flexibility and

digital transformation. As an employer, the EPO adopted a more flexible approach by abolishing core business hours, extending IT system availability, allowing staff to work in other member states and introducing more flexible rules on parental leave. However, the pandemic also demanded agility from staff, who swiftly embraced new workflows and successfully juggled rapid workplace changes with home schooling and other personal commitments.

To help relieve the pressure on staff trying to strike a healthy work-life balance during a pandemic, the EPO launched a number of initiatives. Staff were offered a wealth of online



Communication too undoubtedly played a key role in coping effectively with the pandemic

training resources (iLearn) on topics such as working effectively in a digital environment, managing dispersed teams and facilitating online meetings. This was complemented by enhanced support from the EPO's Health and Safety team focused on both physical health (by promoting microbreaks, active breaks and online physiotherapy) and psychosocial wellbeing (including sessions on mindfulness and resilience as well as parenting and home schooling during lockdown).

Communication too undoubtedly played a key role in coping effectively with the pandemic. In March, a "Corona corner" was set up on the intranet to create an online hub for

all information related to the crisis and to encourage staff working remotely to share their experiences. New features were added throughout the year, with video messages of support from senior executives and staff reaching out to each other in increasingly creative ways.

In April, the intranet area was renamed "Strong Together" to reflect the sense of community it fostered. A month later, in an Office-wide survey on coping during the crisis, 78% of staff reported that the EPO was doing a good job of keeping them informed. And, by the end of 2020, "Strong Together" was the EPO's most-visited intranet page, with a total of 200 000 visits.

But although staff's response to the pandemic was tremendous, ensuring business continuity would not have been possible without digital transformation.

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Digital transformation – towards a paperless patent granting process

Fortunately, digitalisation was already deeply embedded in the EPO's Strategic Plan 2023 launched back in 2019, putting the Office on solid footing to respond effectively to the pandemic. But the events of 2020 pushed us to go digital far faster than initially anticipated.

In practice, this meant rolling out a total of 5 800 laptops to create a mobile workforce. To support staff working remotely, the Office also delivered over 4 700 monitors, 1 900 chairs and 750 desks to employees' homes in 2020. But creating better homeworking ergonomics was just the beginning.

The large-scale shift to teleworking called for new digital workflows in search and examination and digital annotation tools to support transparent collaboration between examiners and formalities officers. It also accelerated the launch of the Office's new Patent Workbench, which is now the main digital platform covering all key steps in the patent granting process. In other words, the EPO achieved in a matter of months what had been in the pipeline for decades, marking a huge leap forward.

But going digital not only created efficiency gains. It also encouraged more users to take advantage of the EPO's online services. Electronic Mailbox registrations, for example, soared by 30%, with over 1100 new users signing up in 2020. Another major development was the large-scale switch to oral proceedings via videoconferencing (ViCo).

Although the EPO first launched oral proceedings by ViCo in examination way back in 1998, last year was ground-breaking. A total of over 2 600 oral proceedings (in examination and opposition) were conducted by ViCo in 2020, compared with less than 900 (examination only) in 2019.

A pilot on conducting oral proceedings in opposition by ViCo was also launched in May. Unfortunately, uptake of the pilot was slow. This left the EPO with a backlog that was almost 2 000 pending opposition cases higher than usual by the end of 2020 — and was perceived by some as a denial of justice. So, after a full assessment, the Office decided to extend the pilot until 15 September 2021 and make ViCo the default option for opposition.

Figure 1: Oral proceedings by ViCo at the EPO – screenshot from a mock session



Source: EPO

In addition to supporting business continuity, using ViCo technology also makes oral proceedings more transparent and accessible to users. In July 2020, over 1700 users attended oral proceedings in a case at the Enlarged Board of Appeal on assessing the inventiveness of computer-implemented simulations. Using digital tools to conduct the oral proceedings effectively gave users across the globe far greater access.

Going digital isn't just about making the Office's services more efficient; it's also about expanding their reach and making them more user-friendly. The same principle applies to the EPO's digital events and training seminars. A major online event on artificial intelligence organised in December had an impressive impact, with a total of over 7 500 participants and post-event views.

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Figure 2: Timeline of EPO's COVID-19 response in 2020

Enabling homeworking Distribution of office equipment. Number of staff able to work from home rose from 3 100 to 6 000	Oral proceedings Oral proceedings in examination via videoconference Opposition Pilot on oral proceedings via videoconference launched or 20 May 20 Jun 20	The EPO hosts its first online event: "3D printing and its impact on IP", with 2 000 attendees. Administrative Council, SACEPO, IP5 and meetings with users all now take place virtually Jul 20 Aug 20 Sep 20	Oral proceedings 1800 videoconference held by 28 October	ces ec 20
Duty travel Sharp reductions, complete stop in March Electronic	renewal fees strative Council d that fees due on/ March could be to 31 August 2020 With	consultation account managers acted 308 companies auge their satisfaction actions taken	Oral proceedings The "Zoom" platform is added. Interpretation possibilities tested	Mailbox Now includes the opposition procedure

and other systems' availability extended. New

staff able to work almost entirely at home

electronic workflow established; around 80% of

Source: EPO

Supporting users

Videoconferencing also enabled the Office to maintain close contact with users in 2020. Staying in touch is always important, but in times of crisis it's crucial. Regular exchanges via online meetings helped the Office tailor its responses to the needs of users from around the world. Thanks to videoconferencing, the IP5 offices were also able to meet remotely and work multilaterally to co-ordinate their strategic responses to COVID-19.

One of the topics frequently discussed at these meetings was the widespread disruption caused by the pandemic, and the adverse effect on the global innovation ecosystem was one of the topics to emerge at these meetings. So, to ease the financial burden on applicants when the coronavirus crisis first struck, the EPO allowed them to delay their payment of renewal fees for up to three months (ending on 31 August 2020) at no extra cost.

In response to disruptions caused by COVID-19, the Office also published notices drawing attention to the legal remedies available under the European Patent Convention (EPC) and the Patent Cooperation Treaty (PCT) in cases of non-observance of time limits. In addition, it announced a general extension of periods for all parties and their representatives until

2 June 2020 – in view of the general dislocation in services and public life in Germany, where the EPO's headquarters are located.

The EPO also tried to help mitigate the impact of COVID-19 by leveraging the power of patent information. At the beginning of July 2020, the Office launched its "Fighting coronavirus" platform. The platform aims to offer scientists and decision-makers support in their search for solutions to combat the virus by helping them to identify key documents and innovations in a wide range of relevant technical fields. In November, the Office released its final set of search strategies covering technologies for the "new normal", including new materials, devices, sensors and even smartphone apps that help to reduce the spread of infection.

Sustainability — a silver lining

If there can be any upside to a global pandemic, for the EPO it was the sustainability gains from going digital. The Office's CO₂ emissions from business travel, for example, fell by 86% in 2020 versus 2019. Thanks to homeworking and ondemand printing of search files, the Office's paper consumption also plummeted last year, with a huge saving of 58.6 million sheets of paper in 2020. By the end of the year, 97% by volume of examiner and formalities officer actions were being handled digitally. In terms of the EPO's environmental footprint, these are very positive outcomes that the Office will seek to consolidate in the future (for further details, see the Environmental Report).

Figure 3: EPO's COVID-19 response in figures



1100+ new Mailbox users



2 600+ oral proceedings conducted via videoconferencing



8 700 pieces of homeworking equipment distributed



113 200+ hours of online training completed



58.6 million sheets of paper saved

Source: EPC

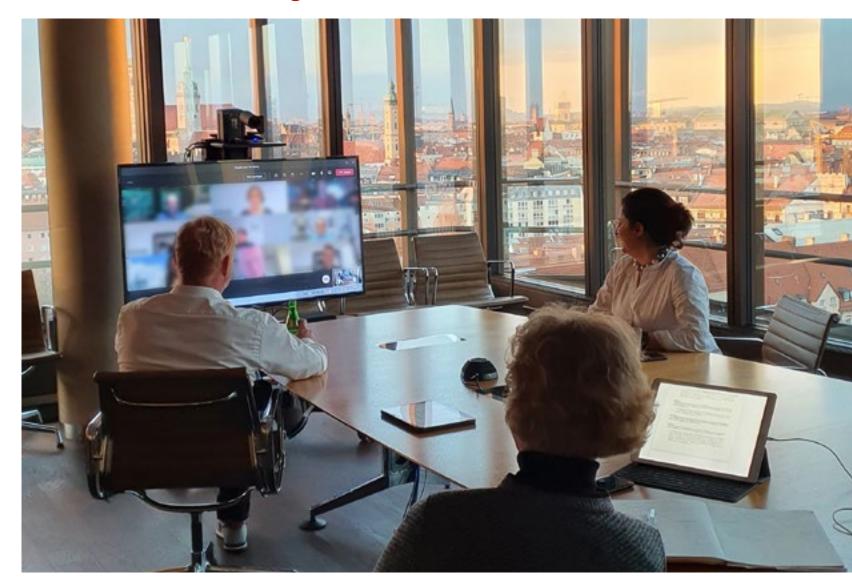
Towards the "new normal"

Finding high-impact responses to the crisis meant listening to staff and inviting them to share their experiences. To gain first-hand feedback, the EPO's President participated in virtual team meetings with over 1 350 staff during the course of 2020. To gather and analyse large-scale staff feedback in a structured way, the EPO also conducted two Office-wide staff surveys in 2020.

The first survey was conducted in May with a view to gaining a clearer understanding of how staff were coping with the crisis. A total of 85% of staff said they felt they had received the support they needed during the crisis. Their requests for additional resources resulted in the Office launching a host of online training sessions (iLearn) on topics ranging from working effectively in a digital environment to managing dispersed teams and facilitating online meetings.

In September 2020, the Office conducted a second Office-wide survey to ask staff for their views on topics such as teleworking and the future of our office buildings. Over 5 500 colleagues (86% of staff) participated in the "Towards the new normal" survey, contributing over 40 000 comments. The insights gained from the survey inform a strategy document that started taking shape at the end of 2020 and explores how the lessons learned in 2020 can be turned into opportunities for the future.

Figure 4: EPO President and senior executives meet staff at virtual team meetings



Source: EPO



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Build an engaged, knowledgeable and collaborative organisation

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Simplify and modernise IT systems

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Deliver high-quality products and services efficiently

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Build a European patent system and network with a global impact

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Goal 1

Build an engaged, knowledgeable and collaborative organisation

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Attract and develop talent

Goal 1 is about building a talented and engaged staff community. In response to the pandemic and its economic impact, the Office adopted a cautious approach to recruitment in 2020, pending greater certainty over future patent filing trends. External recruitment was heavily restricted as of May in favour of a stronger focus on internal job mobility, and especially partial mobility (allowing staff to divide their time between two positions).

In response to the pandemic and its economic impact, the Office adopted a cautious approach to recruitment in 2020

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Promoting internal job mobility

Thanks to internal job mobility and the Digital Talent Marketplace, the Office largely managed to meet its business needs in 2020 via the rebalanced allocation of talent. Internal mobility was supported by unprecedented training efforts, creating a host of new development opportunities for staff. As part of this new upskilling dynamic, 48 staff members trained as formalities officers and 136 examiners began working in a new technical field.

In 2020, the development programme for Business Information Technology (BIT) was completed and new programmes were set up for project managers, quality auditors and diversity and inclusion promoters. These initiatives were complemented by an "Advanced Leadership" programme for EPO managers, as well coaching and mentoring for aspiring line and project managers.

To reflect the growing importance of continuous learning, the EPO also launched a new online training portal (iLearn) in 2020. The portal gives all employees remote access to learning resources and support with managing their individual learning journeys. Over the course

of the year, EPO staff participated in 111 067 hours of instructor-led courses (75% as virtual sessions), 11 734 hours of internal e-learning courses and 18 236 hours of external online learning courses. In terms of performance management and goal-setting, the Office continued to pursue a holistic approach highlighting the importance of collaboration.

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Filling the external talent pipeline

Despite its successful internal recruitment drive, the Office still needs to maintain its position as an employer of choice. Recruiting the right talent remains crucial to its sustainability as a leading knowledge-based institution, and so the EPO is continuously looking for innovative ways to engage with the best and the brightest.

To this end, the EPO started organising virtual job fairs and building sustainable candidate pipelines in the examining, IT and legal areas in 2020, to facilitate more flexible recruitment and shorter lead times.

Following a talent pipeline approach, vacancies developed a targeted media plan. in IT attracted 1 400 applications from

IT professionals. A total of seven candidates were hired and 56 candidates entered a sustainable talent pipeline for the future. The Office also conducted an in-depth analysis of the various channels used to attract talent (social media platforms, job boards, etc.) and developed a targeted media plan.

In addition, the Office developed new branding content to promote the benefits of the EPO as an employer in an authentic way, including employee stories posted on social media and a new style of vacancy notice featuring an augmented reality experience. The EPO also continued to digitalise its recruitment and onboarding activities in 2020.

Figure 5: Augmented reality in an online vacancy notice





Source: EPO

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Pan-European Seal Programme

The Pan-European Seal Professional Traineeship Programme is about creating the next generation of IP professionals across Europe. The EPO's framework for strategic co-operation with European universities and the European Union Intellectual Property Office aims to foster an awareness of IP's benefits among the best and the brightest.

Despite the pandemic, in 2020 the programme continued to offer high-achieving graduates a one-year traineeship and valuable on-the-job training in a multicultural and diverse professional environment.

The number of trainees who joined the Office for the 2020/21 programme was a record 77 graduates from prestigious universities in 19 countries. Female trainees accounted for 66% of the cohort. In view of the pandemic, trainees were onboarded remotely, and many

continue to work from their home country or from Munich on a voluntary basis.

By the end of 2020, the programme spanned 34 European Patent Organisation member states and two extension states with some 82 member universities. Spread across Europe, these universities possess a track record for excellence in technical, science and engineering fields.

Figure 6: Pan-European Seal Programme 2020/21

2020/2021 edition figures





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Pan-European Seal trainees allocated within our five areas 30 universities represented

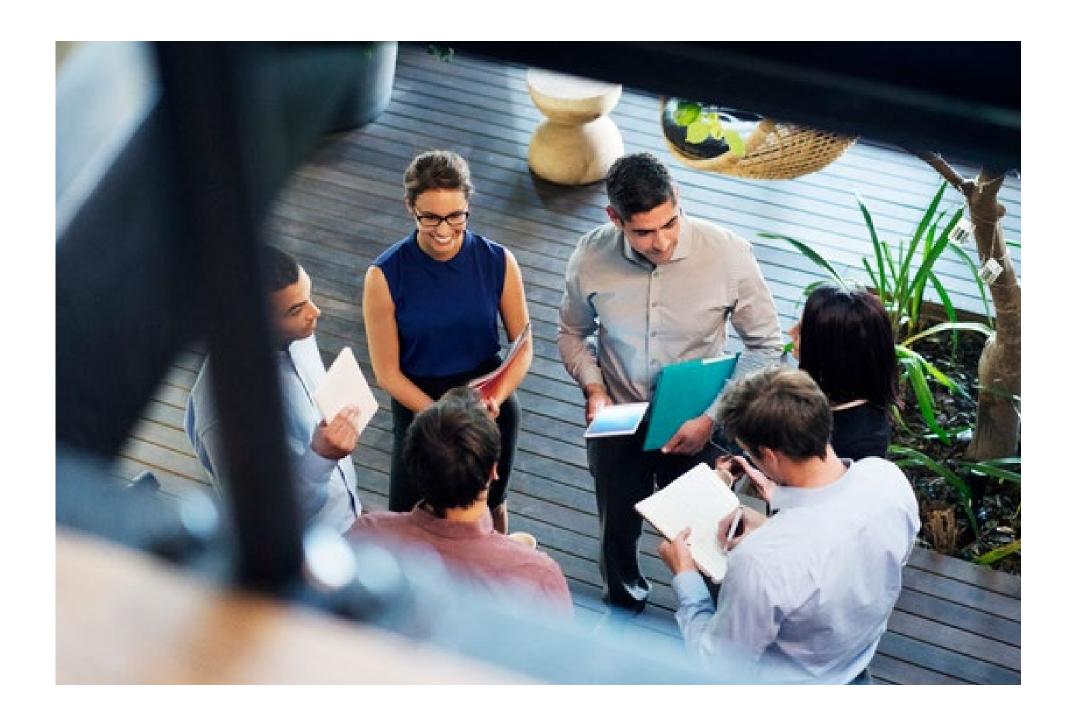
nationalities represented

19

Source: EPO

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The Pan-European Seal Programme 2.0, adopted in 2020, features:

- a new trainee development plan
- an extended external programme partnership
- a new trainee administrative framework
- an improved recruitment strategy

Expanding the programme via new partnerships with leading technical universities and forging closer links with current member universities is a key step towards the broader integration of IP in technical and scientific education curricula. By giving young graduates a solid knowledge of IP protection and its economic added value, the EPO aims to help fast-track the commercialisation of research results. For the EPO, fostering the professional growth of young people is a matter of social responsibility. It's about investing in human capital today for a brighter future tomorrow.

Building investment programme

Before the pandemic struck, the Office had drawn up an ambitious plan to invest in its premises. The Building Investment Programme (BIP) was approved in principle by the European Patent Organisation's Administrative Council at the end of 2019, with the agreement that each project would be presented to the Council for financial approval. The programme aimed to improve the sustainability of EPO buildings, maintain the value of real estate assets and create a modern and healthy working environment for staff.

These goals still stand. But insights gained from the way the EPO worked in 2020 suggest that the pandemic has already permanently changed attitudes to the physical working environment and the services and functions delivered by and in our buildings. The key findings of the "Shaping the new normal" survey conducted in autumn 2020 suggested that the Office needed to rethink its building policy.

Firstly, the survey results show that the traditional approach of working five days a week from the Office premises — on which the former BIP was based — is a thing of the past. They also suggest that the number of staff using the buildings

will fluctuate significantly compared with the pre-pandemic era. In the survey, only 23% of staff expressed their desire to work from EPO buildings mainly or on a full-time basis in the future. Around 30% of staff wish to telework 3-4 days per week and 23% wish to telework 1-2 days per week. Moreover, 22% of staff want to telework on a full-time basis, while only 6% of staff expressly stated that they are not interested in teleworking at all.

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Around half of staff expressed an interest in working from another EPO location periodically

Secondly, the survey reveals that around one third of the staff surveyed would like to be able to work from an alternative EPO location to their current duty station. Around half of staff expressed an interest in working from another EPO location periodically. This desire for mobility will require a more flexible approach to office space management in the future.

Thirdly, the survey asked staff about their primary motivation for using our buildings. Nearly 90% of participants expect to come to the office for informal exchanges and meetings, while 75% will use the office to work collaboratively. Two thirds of staff declared their intention to use the office

for high-concentration tasks and/or to make use of onsite equipment. Half of staff plan to make use of onsite social facilities and services such as canteens and sports facilities and to participate in Amicale activities. This diverse range of motivational drivers calls for a mix of spaces that can accommodate both collaborative and high-concentration tasks as well as social interactions.

Overall, the survey results suggest that EPO buildings need to physically embody the Office's efforts to support flexibility, collaboration and community. So the focus of the BIP in 2020 was to start adapting the programme's content to the new reality.

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Diversity and inclusion

In 2020 the EPO continued its journey towards a workplace where everyone feels welcome and respected. The Office marked its commitment to full inclusiveness by adopting a disability policy and publishing guidelines on gender-neutral language.

Raising awareness is another key pillar of diversity and inclusion (D&I). As a followup to the Inclusion Weeks organised at the beginning of March, the Office published a list of ten inclusive behaviours in July, identifying positive actions to create an inclusive culture at the EPO and complement the values of trust, fairness and respect embedded in the Strategic and transgender (LGBT+) community. Plan 2023.

In 2020, the EPO celebrated several special events including International Women's Day and — for the first time in the Office's history Christopher Street Day. This was marked in Munich and The Hague by the site managers, who raised the rainbow flag to show the Office's support for the lesbian, gay, bisexual

Figure 7: Raising the rainbow flag at the EPO



Source: EPO

In April, the Office also launched a new disability inclusion policy. The policy is guided by the principle that individuals are to be treated according to their unique needs and that everyone should be enabled to fully participate at work on an equal basis with others. Another milestone in 2020 was the creation of a D&I promoters network to raise awareness and engage with staff on D&I topics. In 2020, the Office trained close to 500 managers in D&I, along with confidential counsellors and staff representatives.

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Strengthening corporate culture

A strong corporate culture and effective communication are crucial to managing the kind of rapid changes seen in 2020. To improve its performance, the EPO's Principal Directorate Communication was reorganised into a Channel Management and a Content Creation team, replacing the directorates previously focused on internal and external communications.

In addition to providing vital information and handling queries on COVID-19's impact on the EPO, the principal directorate also launched new initiatives including online videos, a podcast series and social media posts on the pandemic. Emphasis was placed on engaging EPO staff, with 45 pandemic-related news items published on the EPO intranet, resulting in over 42 000 views. Similarly, external communication efforts were also ramped up, with 28 news items posted on the EPO website, garnering over 430 000 views.

The second milestone of 2020 was the setup of the Communication Intelligence Network (CIN), which comprises 25 staff from across the organisation. The CIN aims to strengthen corporate culture by developing and implementing an intelligent, agile and collaborative way of communicating in the Office. After an internal recruitment process, a network filled with energetic staff from all areas of the EPO started informal exchanges at the end of 2020.

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Promoting hot topics

Communication campaigns were run during 2020 to promote several key developments. The topics covered ranged from a new pilot agreement with the China National Intellectual Property Administration and the launch of oral proceedings in opposition via videoconferencing to the EPO's new approach to quality and a series of case law lectures with the Boards of Appeal.

To raise staff awareness of the wider impact of patents, a "Talk innovation" podcast channel was launched last September. By the end of the year, the new channel featured 19 episodes that had generated a total of around 5 700 plays. The most popular episode, with 426 downloads, was "António Campinos reflects on 2020", while the top episode on social media was "Inventors revisited: The great vaccine race — Rino Rappuoli". The social media campaign promoting the podcast episodes reached about 360 000 users.

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Increasing transparency and efficiency in financial processes

In 2020, the EPO launched a fees management project and defined its future financial steering model under the programme "Finance 360". The programme primarily aims to improve cost awareness and increase accountability. To this end, the new role of finance partners was defined across different areas of the Office to progressively empower managers to take ownership of financial topics in their areas.

In 2020, the EPO also launched five projects in the areas of procurement, sourcing, budgeting and organisation to improve process efficiency. Towards the end of the year, work started on the contract model review, as well as the definition of the future financial reporting process.

In December, the fees management project delivered its first product: the centralised payment service for patent fee payment by bank payers. This will make the payment process more user-friendly by displaying the full list of fees due for payment by applicants, facilitating the internal reconciliation process.

Fostering social dialogue

Over 100 meetings (statutory and non-statutory consultations) took place with staff representatives and unions in 2020, despite the pandemic. A wide range of topics were discussed, both at a technical level with experts, as well as with the President and senior management.

This led to tangible results in several areas. They included a bundle of measures to ensure the Office's long-term financial sustainability, a new salary adjustment procedure, a disability policy, improvements in performance management (related to the recognition of PhDs as work experience and a one-off automatic career step advancement for some staff) and the EPO healthcare and long-term care insurance schemes. Changes to the process of sick leave verification were introduced with effect from 1 January 2021 as well.

Ahead of staff representative elections in June 2020, the EPO also reviewed its social democracy framework. After discussions with the staff representatives, the Administrative

Service Regulations in March. These were complemented by a revision of Circular 355 in April. The Staff Committee elections were successfully completed with a participation rate of just over 58%, and 48 staff representatives were elected.

In line with the EPO's commitment to move away from a culture of litigation towards one of greater dialogue, over 663 cases were proposed for settlement over the last 24 months. There was a positive outcome in 52% of the cases involving individual appellants with up to three pending cases. Recurring appellants, however, have shown less willingness to resolve litigation, with a success rate of 33%. The initiative to reconsider litigation in favour of reaching Council adopted the changes to the EPO's amicable solutions remains a priority in 2021.

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Goal 2 Simplify and modernise IT systems

Patent granting process

Although solid progress towards a fully digitalised end-to-end patent granting process and workflows had already been made by early 2020, the pandemic accelerated those efforts. By April 2020, a minimum viable product (MVP) for a paperless search and examination workflow was delivered to support examiners, formalities officers and line managers in the core processing steps for European patent search and examination files.

This agile methodology of delivering an MVP in rapid, frequent iterations proved to be a highly effective way of driving digital transformation forward. By the end of 2020, 97% by volume of workflows with a basic functionality had been digitalised. This meant that examiner and formalities officer actions, as well as preparations for oral proceedings, were no longer paper-based and could be carried out remotely.

These workflows were progressively integrated into the Patent Workbench, the EPO's single digital platform for the patent granting process, establishing it as the single interface for interactions between examiners and formalities officers in the future. Staff were also offered extensive training and support

to help them adapt to the new tools. Another crucial development was the introduction of digital annotations of patent applications and related prior-art documents. In a teleworking world, digital annotations are critical to new ways of working that promote collaboration and efficiency in the patent granting process.

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Search

In 2020, the EPO continued to improve its internal patent information search engine, ANSERA (Another Search ERA), particularly in terms of its usability and performance. Application documents, examiner notes and specialist databases are now searchable in ANSERA. In 2020, the tool was also enhanced to offer digital highlights and sticky notes, as well as improved support for sketches on drawings, marking of objections and the tagging of relevant claimed features.

Application documents, examiner notes and specialist databases are now searchable in ANSERA

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Artificial intelligence

Last year the EPO launched its first set of projects on the artificial intelligence (AI)-based processing of patent text and images, covering computer vision, natural language processing and machine translation. As part of one of these projects, for example, the EPO's Data Science team built new pre-classification AI models to provide an in-house alternative to outsourced software used to define which team should work on incoming applications.

In September 2020, a machine learning code challenge was run for internal staff to demonstrate their coding and AI skills. The challenge was to automatically apply climate change mitigating technology classification symbols (Y02/Y04) to patent documents.

Over 40 teams took part, and the winners were invited to work on new projects with the Data Science team. One of the core technologies made available for this challenge was an inhouse BERT model¹ trained solely on millions of patent documents.

By the end of the year, an in-house machine translation system for translating German and French documents into English had also been built, tested and deployed by the Data Science team. Run in the EPO's Luxembourg data centre, it can be used to translate unpublished patent documents.

Promoting in-house IT development not only gives the EPO tailormade tools and software solutions, it also reduces dependency on external providers, accelerates development cycles and creates new opportunities for multitalented staff to shine.

Bidirectional Encoder Representations from Transformers (BERT) is a Transformer-based machine learning technique for natural language processing pre-training developed by Google.

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New online user engagement

2020 saw the launch of several initiatives aimed at enhancing EPO users' online experience. They include projects to revamp the epo.org website, enhance customer care and introduce a new "user area" portal. Work on the EPO's Online Filing 2.0 service also continued with a pilot for European patent (EP) and Patent Cooperation Treaty (PCT) filings with external users in the second quarter of 2020. After integrating user feedback, a second pilot was launched that added EP and PCT subsequently filed documents.

A design concept for the epo.org website was developed to provide more user-friendly access to online content and services on different screen sizes ranging from desktop to mobile devices. Users from both the patent industry and non-specialist groups were involved in validating and improving the concept.

The new user area portal will make it easier and more convenient for applicants and representatives to work with their application portfolio, filing and electronic notifications. Inspired by user feedback, a design prototype was created that will be tested and shaped by a focus group.

As part of our continued drive to improve customer care, a state-of-the-art customer service management tool will also help the EPO improve its handling of enquiries and complaints.

Ultimately, all of these projects — and many more in the pipeline — aim to make it simpler and faster for applicants to file patents with the EPO and boost user satisfaction with EPO products and services.

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Digital administration

The EPO's digital administration efforts were hugely accelerated in response to the COVID-19 crisis. Creating a fully mobile workforce involved rolling out 5 800 laptops for all staff over the course of 2020, as well as completing the rollout of Windows 10 and Microsoft Office 365.

The need to support oral proceedings requiring simultaneous interpreting also prompted the EPO to look for an alternative technical platform to its existing setup. After a thorough security assessment, Zoom was selected as a platform for oral proceedings in opposition. Zoom not only allows for simultaneous interpreting, but also enables remote attendance by the general public.

Early in 2020, the EPO's SAP environment was redeployed to SAP's private cloud. As a result, the SAP relational database that was running on the EPO's mainframe DB2 was moved to the latest technology, SAP HANA. Another step towards cloud-based services was the migration from Skype for Business to Microsoft Teams (MS Teams). Functionalities were expanded to enable effective remote working and improved communication and collaboration, and MS Teams is now the default platform for all internal video meetings, messaging and calling, as well as working collaboratively on documents.

These digital communication and collaboration tools will become increasingly important as the Office takes its first steps towards the "new normal".

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Information security

Cybersecurity is an area that assumed even greater importance in 2020, requiring significant investment by the EPO to ensure a safe working environment for staff members connecting to the Office's IT systems remotely.

In 2020, a highly privileged account management system was implemented to manage control over highly privileged access across the IT environment. This system helps to prevent any damage arising from external attacks, as well as securing confidential data from unauthorised users.

Enhanced cyberdefence capabilities were also implemented on all EPO workstations to protect staff from cyberattacks such as phishing. To assess the quality of its systems, the Office also simulated ISO 27001 certification in 2020.

This system helps
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Two key steps were taken: its virtual private network (VPN) was expanded with 4 000 extra licences and an additional 10 Gb internet connection was installed to the newly equipped data centre in Luxembourg

Infrastructure

Last year the EPO started decommissioning its IBM mainframe, completed the preparation of its Luxembourg data centre and started re-platforming related systems. In view of the EPO's increasing reliance on its IT infrastructure, this is a crucial part of boosting the reliability and availability of the EPO's IT systems and ensuring business continuity.

After the outbreak of the pandemic in early 2020, it became clear that the Office would need to expand its infrastructure to support teleworking. Two key steps were taken: its virtual private network (VPN) was expanded with 4 000 extra licences and an additional 10 Gb internet connection was installed to the newly equipped data centre in Luxembourg.

This represented a tenfold increase in the capacity of the lines in Munich and The Hague. It also allowed all EPO traffic to and from the internet to be routed via the new data centre.

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Vreword Key achievements in 2020

Goal 3

Deliver high-quality products and services efficiently

Workload and production

Demand for patents remained high in 2020, despite the pandemic. The EPO received 180 250 European patent applications last year, which was just 0.7% below the 2019 figure. A total of 106 786 Patent Cooperation Treaty (PCT) applications were filed (+1% versus 2019), while direct European patent (EP) applications decreased by 3.1% to 73 464 compared with 2019. Growth in applications from China and Korea over the course of 2020 did not compensate for growing weakness in filings from Europe, Japan and the USA.

The highest growth in applications was seen in pharmaceuticals (+10.2%) and biotechnology (+6.3%). The Office's total incoming search, examination and opposition workload of 417 590 increased by 1% versus 2019. More specifically, the EPO received 248 100 search requests (+3.0%) in 2020, as well as 166 111 requests for European examination (+2%). Examiner output reached 401 996 search, examination and opposition products in 2020, which was just 1% below the pre-pandemic plan.

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Figure 8: Number of products delivered by examiners from 2018 to 2020



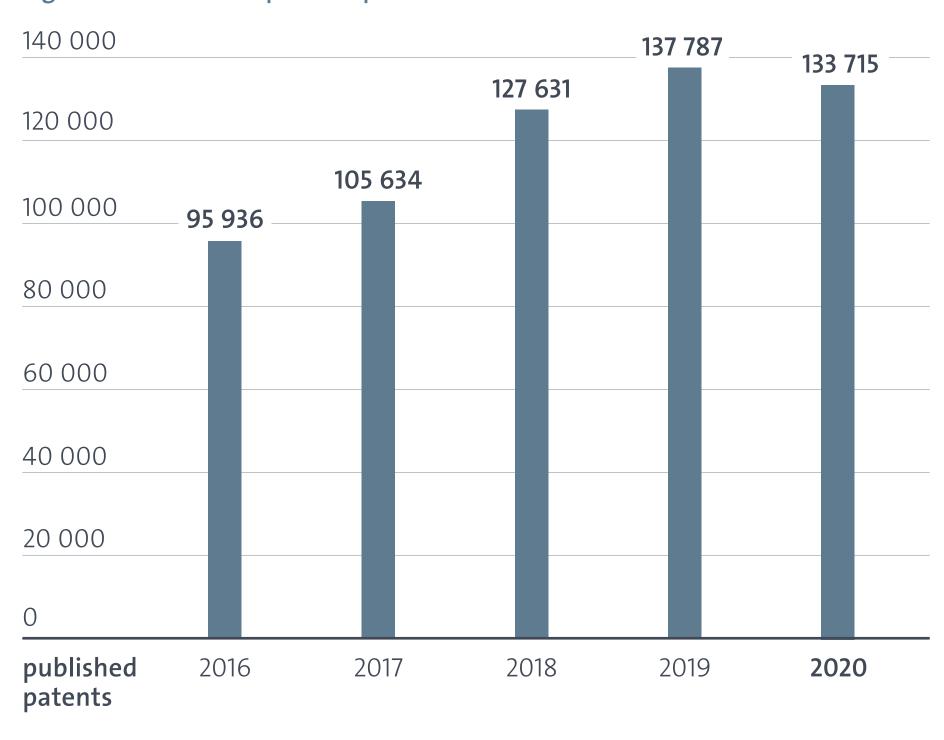
Source: EPO

The EPO's pending workload at the end of 2020 represented 11.7 months of work, while overall stock levels fell by 1% compared with 2019 despite the pandemic. By the end of the year, the examination stock (80% of total stock) was 4% lower than in 2019.

Due to the cancellation of in-person oral proceedings as of March 2020 and the slow uptake of a pilot for online oral proceedings in opposition launched in May, year-end opposition stock was 34% higher than in 2019. In parallel, the age of the opposition stock increased from 8.6 months in 2019 to 12.8 months at the end of 2020.

The EPO published 133 715 European patents in 2020, -3% compared with 2019, but well above its 120 000 target. Based on the expected decline in the number of patent applications in the mid-term, the EPO will continue to reduce its examination backlog and balance examiner capacity to match incoming workload forecasts.

Figure 9: Number of patents published in 2016 – 2020



Source: EPO

Timeliness

The improvements in search timeliness seen in recent years were consolidated in 2020, with the mean time for search completion at 4.5 months. The timeliness of our different search products can be broken down as follows:

- 2 First filings are applications not claiming any earlier priority under the Paris Convention, and second filings are those claiming such an earlier priority.
- Euro-PCT bis searches are the supplementary searches conducted under Article 153(7) EPC for PCT applications entering the European regional phase where the EPO was not the International Searching Authority.
- 4 National searches are the searches conducted for national applications filed in 13 European Patent Organisation member states. They are performed on behalf of the corresponding member state.

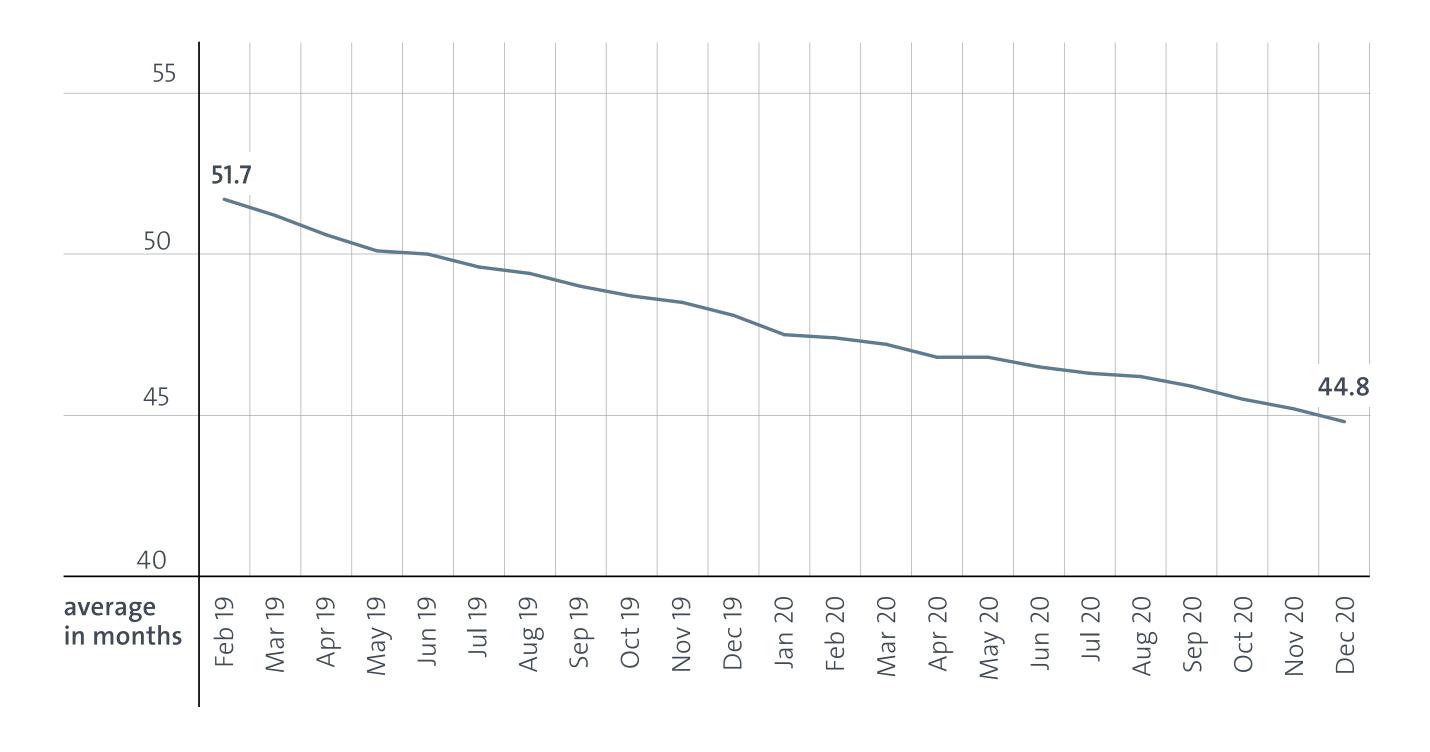
- EP first filings²: 5.7 months from priority
 (duration target: 4 to 6 months from priority)
- EP second filings: 4.8 months from date of receipt (duration target: 6 months from date of receipt)
- PCT first filings: 8.2 months from priority date
 (duration target: 4 to 9 months from priority)
- PCT second filings: 2.7 months from date of receipt (duration target: 6 months from date of receipt)
- Euro-PCT bis³: 4.4 months from formalities done
 (duration target: 6 months from formalities done)
- National first filings⁴: 8.2 months
 (duration target: 4 to 9 months from priority)
- National second filings: 5.2 months(duration target: 6 months from date of receipt)

Longer-term timeliness improvements are expected in examination as the Office continues to reduce its backlog. In 2020, the mean time for issuing the intention to grant was 25.4 months from the valid examination request, while 65% of intentions to grant were issued within 28 months of the valid examination request (75% within 36 months). The overall time to grant for EP first filings was 44.8 months on average, from filing to the intention to grant.

Opposition timeliness improved in 2020, with the mean time for an opposition division to issue its decision standing at 15.5 months from the expiry of the opposition period. However, this figure mainly relates to standard cases (only one opponent, no legal member, no oral proceedings rescheduled) that were either finalised before the COVID-19 outbreak or did not require in-person oral proceedings, and as such does not accurately reflect the bigger picture.

In fact, the widespread cancellation of in-person oral proceedings in opposition due to the pandemic and the slow uptake of the pilot for opposition oral proceedings by ViCo left the EPO with an opposition backlog that was 2 000 cases higher than usual at the end of 2020. Against this background, overall opposition timeliness can be expected to deteriorate as these oral proceedings are rescheduled as videoconferences in 2021.

Figure 10: Evolution of overall time to grant for EP first filings



Source: EPO

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Quality, simplicity and timeliness

In 2020, the EPO continued to review its work practices to ensure that quality, simplicity and timeliness are built into its systems. This was achieved by adopting a five-pillar approach to quality focused on design, support, values, metrics and partnership (see the annexed Quality Report for more details).

Getting the right file to the right examiner and division at the right time is central to the Office's commitment to excellence. Last year the Office launched a "pull" file system as a pilot with 74 examiner teams. Instead of direct allocation by stock managers, examiners were empowered to decide when to request their next search file. This resulted in improved timeliness and higher engagement, leaving examiners able to concentrate efforts on the most urgent searches in their technical area.

To cater for mid-term fluctuations in workload, a Digital File Marketplace was created. The Office's existing Digital Talent Marketplace at a "cruising speed", effectively was also improved to rebalance structural capacity based on business needs. In the Digital File Marketplace, teams exchange skills and

files transparently, successfully building on initiatives under the "Enhancing Collaboration" project. Examiners from different teams form mixed examining divisions to support timeliness and quality through in-division coaching and collaboration.

The new Digital Talent Marketplace is a forum supporting flexible resourcing via professional mobility. It empowers staff to seek new opportunities on their individual development journey at the EPO. Together, these two platforms, coupled with "pull" file allocation, are enabling the Office to continuously move at a "cruising speed", effectively balancing workload and capacity fluctuations while enhancing timeliness and quality.

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Collaboration and knowledge sharing

By empowering teams to take ownership of their own work practices, the "Enhancing Collaboration" (ECo) project launched in 2020 boosted staff motivation and engagement levels. Participation in ECo was extended to 65 examiner teams and eight formalities teams by the end of the year.

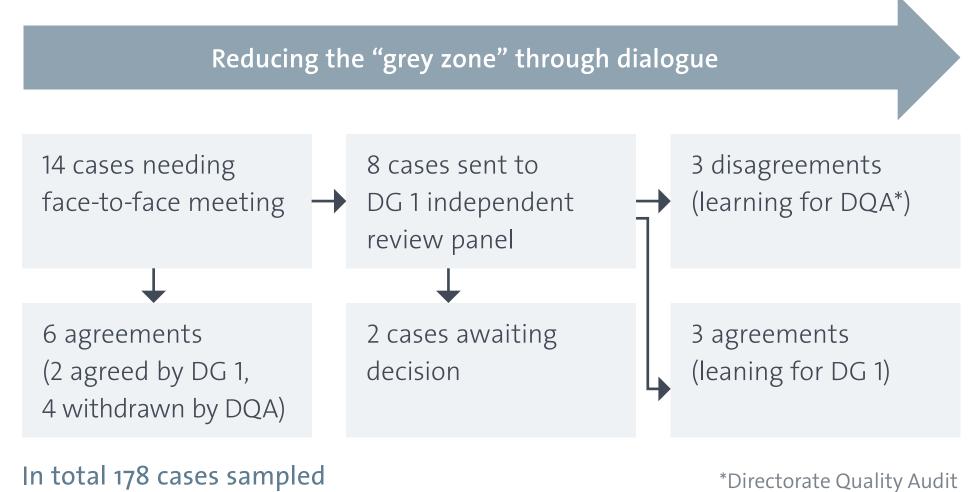
A key development was online "search jams", where examiners learn from each other by searching a file together. A total of 15 peer-to-peer online seminars were held, in which some 25 collaboration methods were presented. An "Eco Store" online platform now offers descriptions of the best-practice collaborative approaches, covering all phases of the patent granting process across all technical fields. A first series of online lectures from Boards of Appeal chairpersons was also well attended, with the lecture on clarity attracting over 1100 simultaneous views.

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Optimising oversight

In 2020, the EPO redesigned its search and grant audit processes to include face-to-face meetings between examining divisions and auditors in cases of disagreement with the audit notes. As a result, this "grey zone" of disagreement has decreased, with agreement levels rising from approximately 90% (in Q3 2020, 12-month rolling figure) to approximately 96% (as measured in Q4 2020). This new approach not only builds trust between examiners and auditors, but also creates learning opportunities, ultimately moving both sides towards a common understanding of quality standards.

Figure 11: Forging a common understanding of quality with face-to-face dialogue



Source: EPO

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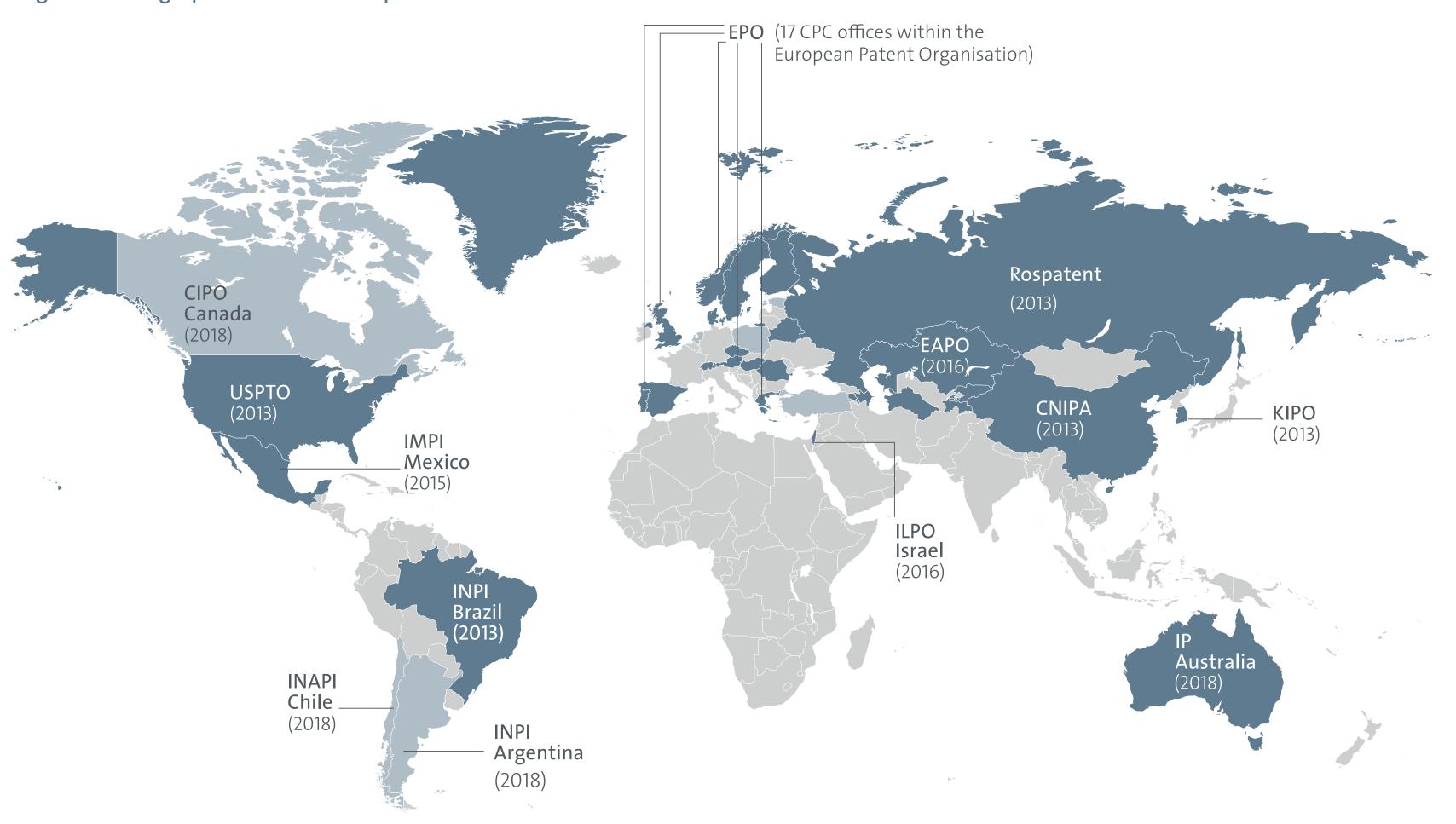
Mastering the prior art

In 2020, several enhancements were made to the EPO's classification tools to ensure swift and complete document classification. Workload management and quality control mechanisms were further improved, bringing the classification backlog into the "excellence" area. The EPO also saw a steady decrease in the number of classification-related incidents reported to the IT Service Desk last year.

In parallel, preparations started on several projects to bring artificial intelligence (AI) into all aspects of classification. A first important milestone will be the replacement of the current external service by an internal AI engine for preclassification. Work started on integrating all classification tools into the ANSERA search tool, and a new tool enabling partial reclassification was built for rollout in the first quarter of 2021.

Within the framework of the Cooperative Patent Classification (CPC) with the United States Patent and Trademark Office, a major new harmonisation exercise was launched in 2020. At the same time, the CPC revision backlog was brought down to virtually zero. A streamlined CPC revision process was also defined to reduce the time from request to publication to just nine months.

Figure 12: Geographical reach of Cooperative Patent Classification



Overall, 2020 was a strong year for the EPO in terms of quality. Our staff's tremendous response to the pandemic, coupled with the rollout of new digital tools and workflows, delivered tangible results on multiple fronts. The EPO increasingly started dealing with the right file in the right way and at the right time, classifying documents as they came in and addressing older files. Timeliness improved, as did the objective quality of the EPO's products and services measured by internal grant audit compliance rates. Going forward, the EPO will make every effort to consolidate these gains and translate them into added value for its global community of users.

Offices in the CPC whose data is loaded in EPO's databases

Offices implementing the CPC

Source: EPO

Goal 4 Build a European patent system and network with a global impact

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Improving access to patent information

In 2020, over three million users per month accessed the EPO's broad range of patent information services, marking a 10% increase in uptake. The enriched version of the Espacenet patent search service makes the EPO's patent information easily accessible to users, with advanced functions such as a dynamic query builder, an enhanced result list, an improved legal status overview and a responsive design.

Espacenet features over 120 million patent documents from all over the world. Access is free. It is complemented by a range of other services including the European Patent Register, the European Publication Server, Patent Translate, Global Patent Index and PATSTAT.

During 2020, work on the Strategic Plan 2023 programme "From patent information to IP knowledge" began in earnest. The programme's goal is to take users on a journey starting at patent information and ending with in-depth IP knowledge, enabling them to take informed IP-related decisions every step of the way. The programme will make the EPO's information easier to access, expand its supply of high-quality data for users and enhance links with legal status and other key information.

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European Patent Academy

The European Patent Academy plays a vital role in ensuring that European patent system users have the knowledge and skills to operate effectively and foster Europe's innovation potential. In 2020, the Academy adjusted its working methods, educational formats and products to ensure growth and maximise its future impact.

While the pandemic was a challenge, it also spurred the Academy to bring innovation and learning together. Thanks to its experience in designing and implementing online education, the Academy was able to swiftly transform face-to-face activities into online formats.

Building on the pillars of co-operation, certification, modularity and digitalisation, the Academy developed a fully-fledged educational proposal in 2020. The new blueprint for the European Patent Academy promotes a modular approach to learning journeys. It aims to broaden target audiences, introduce new subjects, put co-operation with institutions and private stakeholders at the centre and promote certification and qualification.

In 2020, the Academy began developing separate, incremental learning modules structured into learning paths that lead to certification and co-

labelling. The ultimate goal is to transform the Academy into a benchmark for excellence in IP training and set new standards in IP training and certification.

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The shift to online training has been rapid. In 2020, visits to the Academy's e-learning centre doubled compared with 2019. November 2020 saw a new record of 28 000 monthly visits. Its digital offering was also enlarged with new products, including a series of podcasts.

Experimenting and finding solutions tailored to stakeholders' needs largely defined the Academy's activities last year. The Search, Examination and Opposition Matters conferences, for example, were successfully digitalised by opening up virtual discussion areas coupled with online plenaries and, in the case of Examination and Opposition Matters, programming the event twice a year.

Together with trialling new formats, close contact with stakeholders was also crucial in 2020

Study visits also went virtual, former onsite courses were redesigned and migrated online and the Academy also supported professional representatives with a series of online seminars on oral proceedings held by videoconference in opposition.

Together with trialling new formats, close contact with stakeholders was also crucial in 2020. Regular and ad hoc exchange meetings with partners and the negotiation and implementation of memoranda of understanding allowed the Academy to finetune programmed actions and design new activities.

Drawing on the expertise of EPO examiners and the Boards of Appeal, events based on debate and exchange, peer-to-peer discussions, advanced seminars, and large conferences were newly developed in digital formats to satisfy

the needs of the Academy's target groups. The Academy also jointly developed a new series of SME case studies with the Chief Economist unit, and further advanced and expanded the Academic Research Programme.

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A consultation with European Patent Organisation member states on the Academy's training programme, its implementation and perceptions of its work also took place in 2020. Almost 85% of the national offices participated in the consultation and showed a strong interest in the areas of search and examination, IP management and legal issues. These offices also backed the Academy's evolution towards online, modular and structured training, citing efficiency gains, increased flexibility and a broader reach as the main benefits.

Enhancing co-operation with international organisations and European institutions

Effective co-ordination with other IP offices, international organisations and European institutions is paramount, especially in times of crisis. Co-operation clearly benefits users and helps to avoid any duplication of efforts. In 2020, the EPO continued to reach out to international partners in a wide range of areas.

The EPO's annual work plan with the European Union Intellectual Property Office for 2020 focused on promoting a holistic approach to IP training and awareness, as well as producing joint economic studies with cutting-edge, factbased analysis for European policymakers. Last year the EPO also signed a new annual work plan with the World Intellectual Property Organization, covering classification, the Patent Cooperation Treaty, IT and technical infrastructure, data exchange and training and technical assistance.

In addition to work plans with partner patent offices, the EPO also signed memoranda of edge business intelligence on the very latest

Energy Agency (IEA) and the European Space Policy Institute, a think tank of the European Space Agency, and renewed its memorandum of understanding with the International Renewable Energy Agency. These agreements created the framework for joint patent intelligence studies on a broad range of emerging and rapidly developing technologies.

As the patent office for Europe, the EPO is positioned at the forefront of technical progress. Thanks to its unique access to the world's largest collection of patent and nonpatent literature, the EPO can produce cuttingunderstanding (MoUs) with the International technological trends. By teaming up with

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In autumn, the first EPO-IEA joint landscaping study was published on battery technology, where patenting is growing four times faster than average

experts in fields such as energy and space, it can leverage its patent information to provide insights into emerging trends that will help innovators in the sector get ahead of the technology curve.

In autumn, the first EPO-IEA joint landscaping study was published on battery technology, where patenting is growing four times faster than average. The study, which offered users unique insights into this hot topic, generated extensive top-tier media coverage, with over 1000 media reports in the first week after its release. The highlights video generated 8 400 views and the related social media campaign reached 33 000 Twitter users.

Lastly, the EPO started working with the European Commission to formalise a bilateral MoU. The focus will be on harnessing the synergies between the two institutions to support the European innovation ecosystem and drive a recovery from the pandemic.

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Strengthening the European patent network (EPN)

Detailed preparation of the new co-operation framework with European Patent Organisation member states culminated in its unanimous approval by the Administrative Council in June 2020. This positive outcome was largely thanks to feedback gathered via the Co-operation Consultation Day held on 8 April and the Annual Meeting on Co-operation with Member States on 29 April. The latter meeting also offered a platform for discussion on how to jointly address crises and unexpected events with a global impact such as the pandemic.

The EPO made solid progress with its co-operation activities in 2020, implementing activities particularly in the areas of IT, search and training. The following initial outcomes were presented to and approved by the Administrative Council in December:

- a new policy for the working agreements on search co-operation signed by 13 countries to date, (Belgium, Cyprus, France, Greece, Italy, Latvia, Lithuania, Luxembourg, Malta, Monaco, the Netherlands, San Marino, United Kingdom)
- convergence of practice projects (examination of unity of invention and designation of the inventor).

Some projects have transitioned from the previous to the new co-operation framework, including:

- language training
- agreements on search co-operation, including the extension of the existing agreement with the United Kingdom and the mandate from the Administrative Council to conclude agreements with Albania and Croatia
- IP pre-diagnosis services provided in Serbia,
 Slovakia and Turkey, in fulfilment of previous arrangements

The EPO also supported several events, not least a high-level IP conference marking the Croatian EU presidency and the centenaries of the Latvian and Serbian national patent offices.

Strengthening the EPN: knowledge

The EPO is constantly seeking to reinforce the EPN's cohesion by creating a level playing field in terms of IP capabilities and patent quality in the European Patent Organisation member states. In 2020, the Office launched seven new projects covering learning platforms, data collection, partner networks and support for users and patent professionals.

A key dimension of patent knowledge is certification for patent professionals. After cancelling the European qualifying examination (EQE) in March 2020 due to the pandemic, the EPO immediately began exploring alternatives to a physical presence examination. In close co-operation with the Institute of Professional Representatives before the EPO, it successfully developed a new concept for a fully digital EQE and started testing software solutions in house, with a view to holding the first digital examination in spring 2021.

The EPO's candidate support programme (CSP) once again sponsored candidates from member states, providing a small number of qualified patent professionals to help them prepare for the EQE. Nine new students enrolled for the academic year 2020/21, bringing the running total accepted on the CSP to 187 students.

But knowledge is not just about training professionals; it's also about making patent information understandable and accessible to everyone. A key pillar of the EPO's strategy for promoting the spread of patent information is its network of patent information centres or PATLIBs (patent libraries). PATLIBs aim to help innovators commercialise their ideas successfully and to promote technology transfer, and the majority are technology transfer offices in universities (40%).

In September 2020, the Office conducted a survey of all 330 PATLIBs (participation rate: 94%) with a view to mapping and rating the different levels of service provided. The EPO also completed a study on technology transfer in Europe that will inform efforts to harmonise this process across Europe.

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Strengthening the EPN: convergence of practice

Last year marked a historic milestone in the convergence programme, which aims to align administrative practices more closely between the EPO and Europe's national IP offices to simplify the European patent system. In December 2020, the very first common practices — in the areas of examination of unity of invention and designation of the inventor — were endorsed by the Administrative Council.

The common practices were developed in working groups made up of representatives from member state patent offices. Users were consulted throughout the process, particularly via the Standing Advisory Committee before the EPO (SACEPO). Member states and user representatives were also given in-depth progress updates at a special event held in September.

The common practice on the examination of unity of invention covers the information to be provided to applicants as minimum reasoning are entered in the patent register. Inventors' full addresses are not published in the register.

when raising non-unity objections. According to the other common practice, relating to the designation of the inventor, inventors are not formally notified by patent offices of their designation in a patent application. Instead, they can obtain information about their designation from the applicant, through inspection of the patent register or via file inspection. Moreover, only the family name, given name(s), country and place of residence of designated inventors are entered in the patent register. Inventors' full addresses are not published in the register.

While the implementation of the common practices is voluntary, it is hoped that as many offices as possible will implement them due to the positive network effects. Some states are already aligned with one or even both common practices, while others have indicated that they intend to proceed with implementation as soon as possible, which may imply changing the law or amending their guidelines or internal instructions.

Strengthening the EPN: work-sharing

Work-sharing co-operation, supported by effective tools, has multiple benefits. It can help to prevent unnecessary duplication of work, promote the increased harmonisation of practices, foster efficiency and lead to the development of new products and services for industry, SMEs, research centres, universities and individual inventors.

The new policy on the working agreements on search co-operation introduced two key elements: a single search fee for all member states with a working agreement and financial support for national searches of applications filed by certain types of applicant (SMEs, universities and natural persons). The new policy entered into force on 1 January 2021.

Preparatory work also started on the launch of the "IP Outreach to foster innovation" activity. This aims to support European SMEs and researchers in better understanding the benefits and the impact of proper IP protection. This project will help the member states' offices to raise IP awareness and provide individual, personalised support services targeting SMEs, public research centres and universities.

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Strengthening the EPN: IT co-operation

In 2020, the Office initiated a broad range of project working groups to facilitate technical-level co-operation between experts from national offices and user associations. A total of 33 member states and three international organisations participated in the IT co-operation working groups. As with its internal IT projects, the EPO follows a minimum viable product approach based on the incremental delivery of ever-more advanced versions of the product. This agile "build-and-learn" way of working already started delivering positive results in 2020.

The working group discussions covered the front office (covering e-filing and associated services), data quality, search, quality management and process mapping, a modular back office, the Cooperative Patent Classification (CPC) and a single access portal. The single access portal was prepared to facilitate electronic submission of bilateral agreements.

On the front office side, the Office demonstrated proof of concept on a generic first filing from creation of a draft to receipt at a generic national patent office (NPO) backend server. The co-operative search project conducted an analysis of NPO use cases focused on technical subjects, including security, data location and data segregation.

The quality management and process mapping project delivered maps and metrics for search, examination, publication and post-grant processes relevant for all member states involved. The data quality project conducted work on data transfer technologies aimed at favouring application programming interface web services. This project quickly led to improvements in the timeliness and quantity of patent data transferred to and from the Office to NPOs participating in the pilot.

Moving to the modular back office, a model project blueprint was developed that is designed to benefit any NPO planning to implement a back office in the future. A knowledge network was also set up for this technical IT infrastructure.

The CPC project launched an implementation survey and prepared the web page outlines for a new classification portal in consultation with end users at NPOs. A business model for CPC practices was created and the process of translating specifications for a CPC text categoriser into software requirements began.

Work on the IT co-operation programme in the first half of 2020 culminated in several demonstrations and proofs of concept, which started in September and were positively received by national offices and user associations.

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Strengthening the EPN: co-operation framework

In June 2020, the Administrative Council unanimously approved the new co-operation policy between the European Patent Organisation and its member states under the Strategic Plan 2023. As a first step, the EPO held a series of bilateral co-operation meetings with member states' NPOs in the autumn to update them on preparations for implementing the new co-operation policy.

The EPO subsequently shared a model bilateral co-operation agreement with the NPOs in a call for interest, enabling them to indicate their interest in the co-operation projects on offer. Meanwhile, consolidating feedback from the NPOs, the EPO drafted implementation guideline FAQs and kicked off the preparations for implementing the co-operation agreements.

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Expanding the EPO's geographical reach

Despite the pandemic, the EPO continued to expand its geographical reach in 2020. In November the Office signed a reinforced partnership (RP) agreement with the Superintendence of Industry and Commerce of Colombia. Under this form of co-operation, partner countries outside Europe can systematically re-use the EPO's search and examination results when granting national patents. Such partnerships aim to further integrate and strengthen the global patent system by helping partner offices increase their capacity, productivity and quality through the systematic use of EPO work products, tools and practices.

Last year the EPO also advanced the implementation of the other eight RP agreements signed to date, enhancing the attractiveness of this new co-operation model globally. The standardised reuse procedure, implemented with multiple RP offices already, is to collect re-use data. This is discussed at expert review meetings, where the EPO gets direct feedback from its partners, which is used as a basis for drafting internal instructions for examiners on how to re-use available EPO work products.

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Figure 13: Reinforced partnership agreement signed with Colombia



Source: EPO

The re-use scheme with the Mexican Institute of Industrial Property (IMPI) was launched early in 2020 and quickly produced impressive results. According to IMPI, its timeliness/productivity has increased by 200% thanks to its RP with the EPO. The EPO supported the re-use of its procedures with special training for RP offices throughout the year. Over ten online seminars were organised on several topics related to search and substantive examination, with a focus on computer-implemented inventions, biotech/pharma and EPOQUE Net.

The clear benefits of RP co-operation are encouraging a growing number of national offices to express an interest in the RP cooperation programme. In 2020, negotiations were either launched or continued with several other national patent offices.

In the area of validation, the EPO took a major step towards concluding an agreement with the African Intellectual Property Organization (OAPI) in 2020, when OAPI's Administrative Council approved the revised Bangui Protocol in December 2020, making provision for the introduction of the validation system. Cambodia also offered to support the EPO in promoting validation among interested offices in Southeast Asia. Lastly, Ethiopia confirmed its interest in transitioning to the validation system once it has revised its patent law and joins the Paris Convention and Patent Cooperation Treaty.

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Fostering multilateral co-operation

The EPO's multilateral co-operation activities aim to improve the global patent system by promoting technical and procedural convergence between the world's major IP offices. Seeking joint responses to global challenges through trilateral (EPO, Japan Patent Office, United States Patent and Trademark Office) and IP5 co-operation (China National Intellectual Property Administration, EPO, Japan Patent Office, Korean Intellectual Property Office, United States Patent and Trademark Office) is clearly the way forward for the EPO, which is an organisation founded on the principle of co-operation. Closer alignment with the design (ID5) and trade mark (TM5) co-operation frameworks will help to promote a strong pro-IP agenda and improve outreach to stakeholders. This will be paramount to supporting innovators in the post-COVID-19 era.

Spurred by the global pandemic, the EPO and its IP5 partner offices stepped up their efforts towards full digitalisation of the IP5 cooperation framework. As a result, starting in February 2020 all working-level meetings were held virtually and joint projects continued to deliver results. The IP5 offices also worked towards full transparency on their measures taken in response to COVID-19, publishing a special section with a compilation of useful links on the IP5 website.

Last year the IP5 offices also advanced their co-operation in the area of new emerging technologies (NET) and artificial intelligence (AI). Created at the initiative of the EPO, the new interdisciplinary IP5 task force met for the first time in Berlin in January 2020 to scope areas of potential future co-operation. This was the first milestone towards developing a comprehensive IP5 NET/AI roadmap, which will form the basis of joint IP5 initiatives.

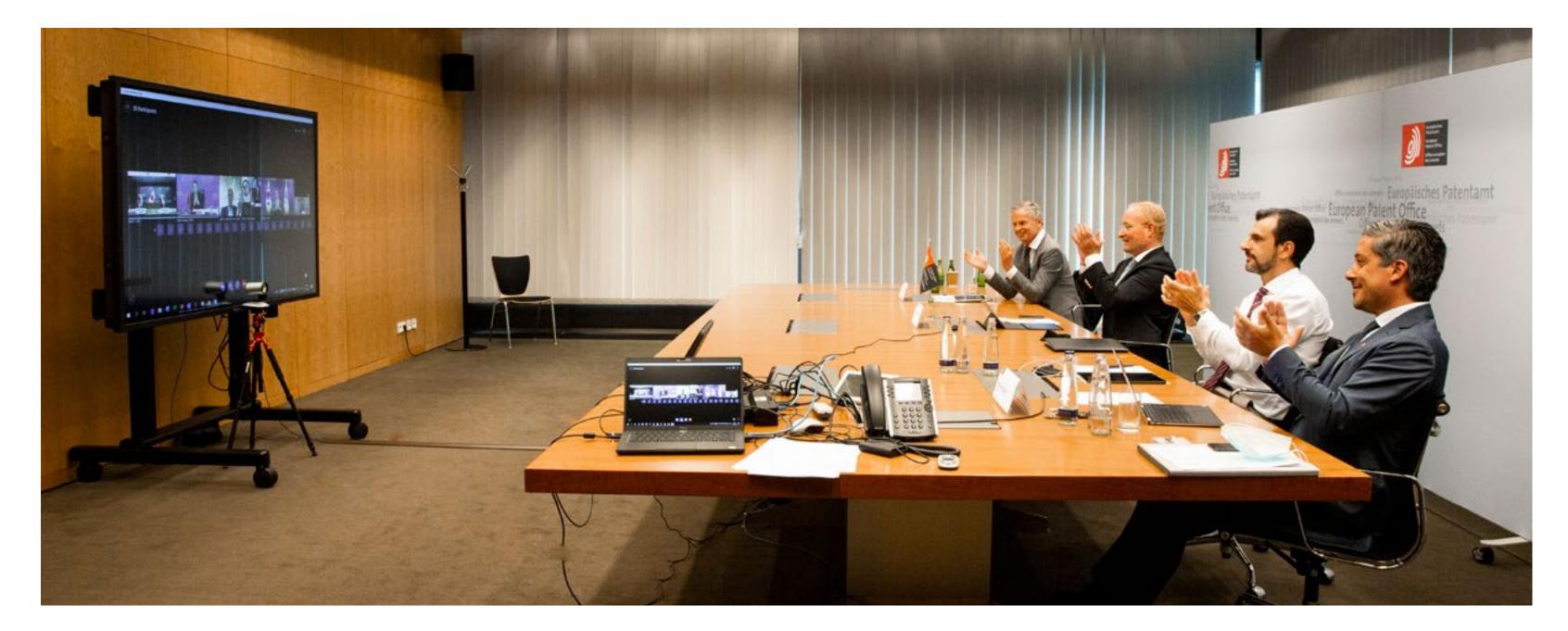
Figure 14: EPO and KIPO host first IP5 task force meeting on NET/AI in January 2020 in Berlin



Together with its partner offices, the EPO started to flesh out a concept to harness synergies. This will help the offices in their endeavours to promote a comprehensive IP agenda in response to the needs of users who handle large IP portfolios with bundles of global IP rights.

Source: EPO

Figure 15: IP5 heads meet for their 13th annual meeting



Source: EPO

Convergence of practice between IP offices can bring major gains in the quality and validity of patents, as well as the predictability of the legal process, benefitting offices and users alike. After successfully concluding a first round of harmonisation in the areas of unity of invention, citation of prior art and written description/sufficiency of disclosure, the IP5 offices worked with industry associations to identify new priority areas for procedural alignment in 2020.

Lastly, the EPO hosted the 38th Trilateral Conference, held as a virtual event for the first time in December 2020. Based on input from a meeting with Trilateral industry associations, the Trilateral heads of office agreed on a new vision statement and new Trilateral objectives, as well as a new framework for future Trilateral meetings.

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Partnership and dialogue with users

In the past, the EPO has always actively and frequently engaged with user representatives from all IP5 regions, and particularly with representatives of European user associations. Regular meetings offer an opportunity to discuss and consult with users on key matters related to a rapidly evolving European and global environment.

In 2020, the Office's user interactions moved to a new level. As the pandemic unfolded, the EPO reached out to users with increasing frequency. By swiftly adopting videoconferencing, the EPO was able to maintain close contact with users in virtual meetings and at online events. Frank exchanges proved a strong basis for finding the best possible joint solutions for European patent system users in an unprecedented time of crisis.

Bimonthly meetings with BusinessEurope and the Institute of Professional Representatives before the EPO were part of this intensified dialogue. Discussing the challenges posed by the pandemic and its impact on users with key business associations and the patent profession

enabled the EPO to tailor its support measures to meet users' needs and secure business continuity.

The "Partnership for Quality" meetings with user representatives from the IP5 regions held in 2020 touched on a range of procedural matters. They included safeguards introduced during the pandemic, the EPO's Quality Report, timeliness, oral proceedings by videoconference, the Guidelines for Examination in the EPO, electronic signatures and recent developments with the unitary patent and Unified Patent Court.

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Improving the quality of Patent Cooperation Treaty services and products

The Patent Cooperation Treaty (PCT) is key at the EPO. The EPO issued over 80 000 international search reports in 2020, corresponding to a third of the global total. Euro-PCT applications entering the European phase account for 60% of all EPO filings, and grants based on such applications represent 65% of the total. The PCT programme aims to ensure that the EPO continues to provide high-quality products and services for the benefit of its users and stakeholders.

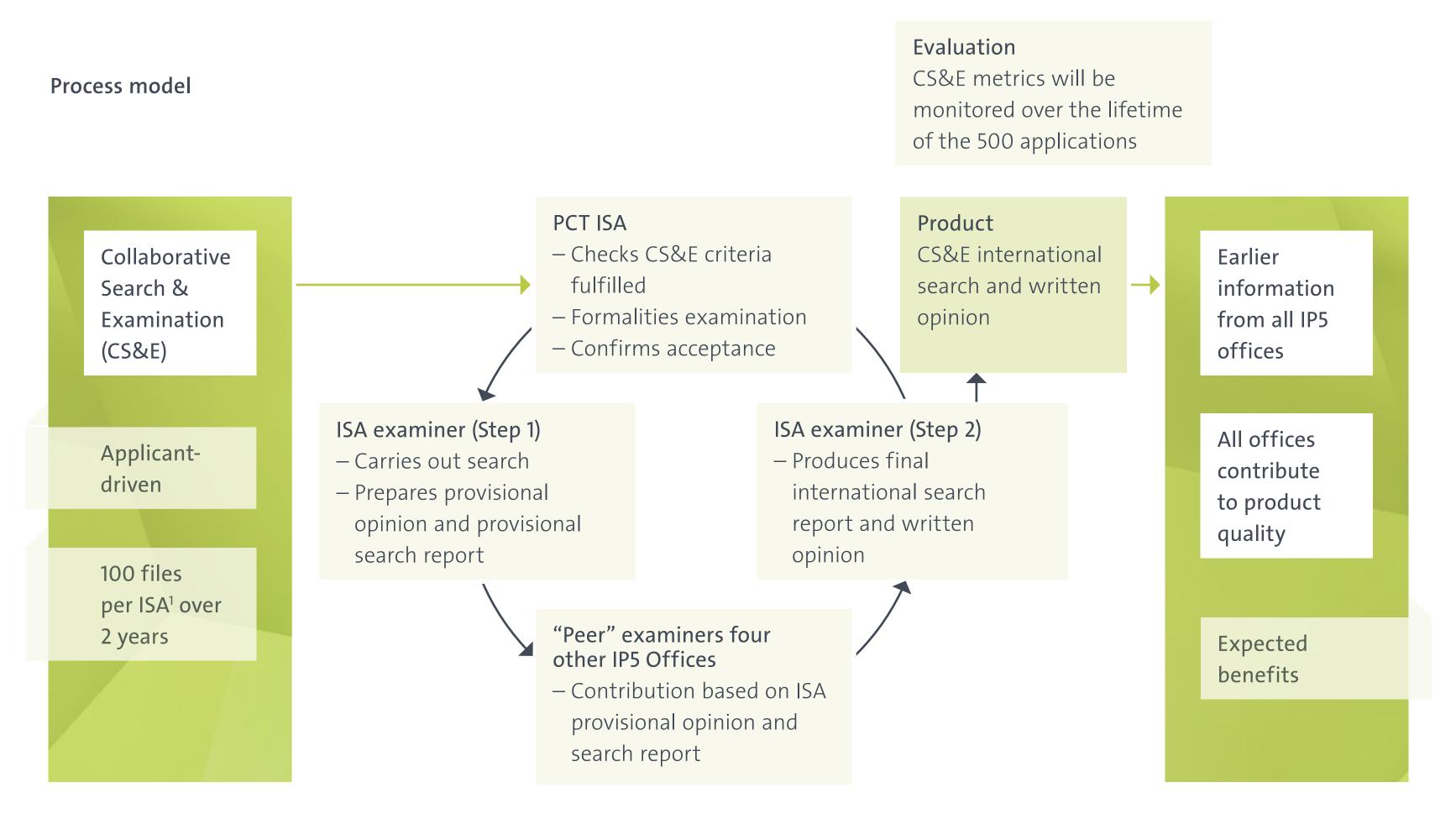
Solid progress was made towards improving PCT minimum documentation in 2020, with a view to updating Rules 34 and 36 PCT by 2023. The task force set up by the Meeting of International Authorities and led by the EPO convened for the second time in December 2020. Most authorities participated in the meeting, which focused on the legal and technical requirements for the inclusion of patent collections and non-patent literature.

In June 2020, the operational phase of the IP5 pilot on PCT collaborative search and examination led by the EPO came to an end. A total of 468 files were accepted and their corresponding search reports issued in the pilot (100 for the United States Patent and

Trademark Office, the Korean Intellectual Property Office and the EPO, 93 for the China National Intellectual Property Administration and 75 for the Japan Patent Office). The pilot has now entered a two-year evaluation phase aimed at assessing the results based on a set of quality and operational indicators. The pilot will also gather feedback from participants with a view to making recommendations to the IP5 heads in June 2022.

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Figure 16: IP5 pilot on PCT collaborative search and examination



The PCT paperless service launched in 2016 ensures the electronic transmission of search copies and documents from receiving Offices to the EPO as International Searching Authority (ISA) via the World Intellectual Property Organization (WIPO). By the end of 2020, all but one of the receiving Offices having selected the EPO as ISA had joined the new service.

In addition to saving patent office resources, this service also benefits PCT users by supporting the EPO's efforts to issue international search reports on time for the A1 publication at 18 months (97% in 2020). Its rollout should be concluded by early 2021.

The new PCT fee transfer service launched in 2020 has led to major efficiency gains in the financial operation of the PCT system. By the end of last year, 53 receiving Offices were already transferring search fees to the EPO as ISA via WIPO, representing around 97% of all search fee transactions. The EPO will continue to work closely with WIPO to further extend the service to more receiving offices in 2021.

¹ ISA = International Searching Authority

Source: EPO

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Broadening the impact of the European patent system and network

In November 2019, the EPO signed a historic agreement with the China National Intellectual Property Administration (CNIPA). Thanks to this agreement, Chinese applicants filing their international applications in English with the CNIPA or the World Intellectual Property Organization (WIPO) as receiving Office can select the EPO as their International Searching Authority (ISA). This makes the EPO the first patent office outside of China that can be designated as an ISA for Chinese applicants. Both offices officially launched the two-year pilot on 1 December 2020.

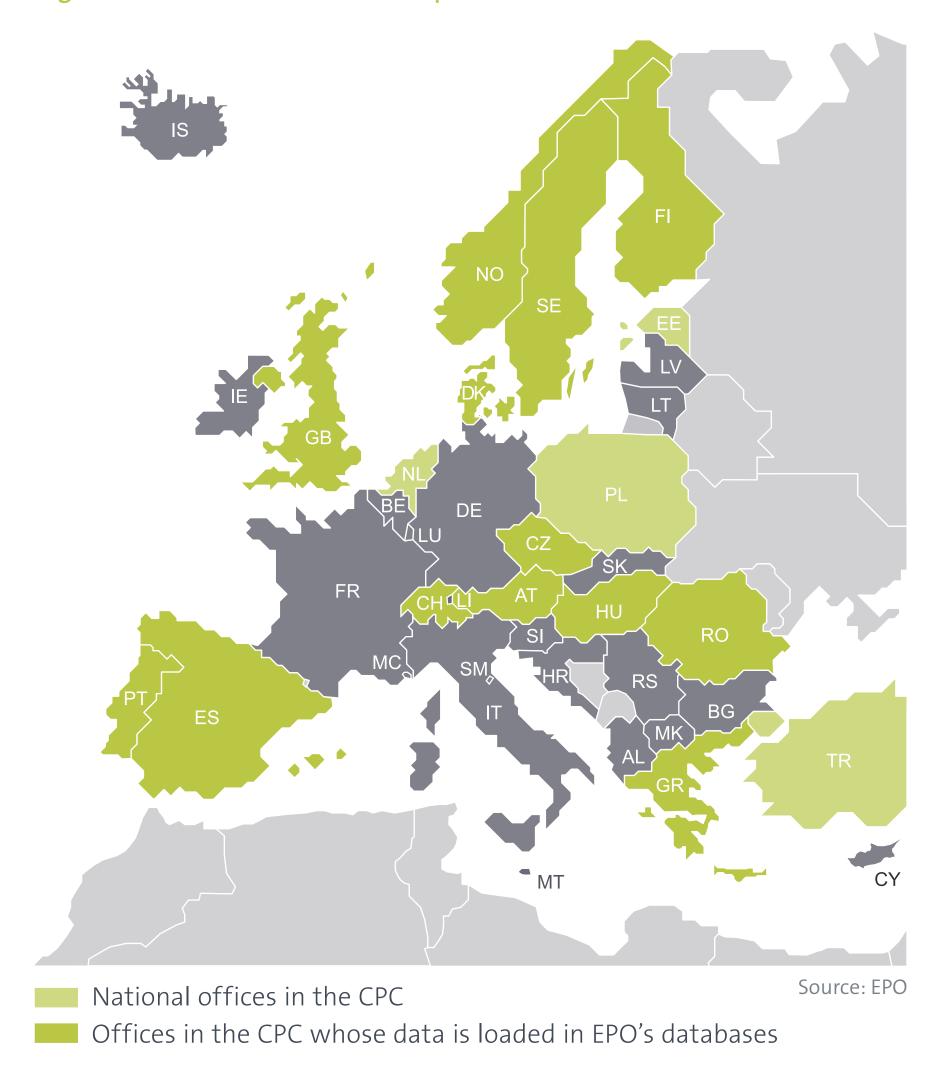
As access to Chinese patent documentation is of high relevance for all stakeholders, the EPO extended the memorandum of understanding on data exchange for another three years and reached a breakthrough, loading into the EPO databases all pre-2010 CNIPA citations. The EPO also agreed to the delivery of consolidated legal status information for EP and CNIPA patents, with a view to providing real-time online access to legal status data.

In 2020, the EPO signed work plans with Moldova, Georgia and Jordan, either to develop new co-operation projects with existing validation states or to prepare for new validation agreements. A harmonised package of actions was devised to support the development of offices that already have validation agreements with the EPO. The aim is to foster outreach and awareness at a national level, to offer training

for stakeholders and to develop digitised tools for data management and data exchange.

The number of patent offices classifying in the Cooperative Patent Classification (CPC) increased to 30 last year with the addition of the Romanian office. This group had the opportunity to gather in Geneva in February 2020 to mark the EPO-United States Patent and Trademark Office (USPTO) 7th CPC Annual Meeting with national offices classifying in the CPC. They were joined by representatives of the German office, the Moroccan office, the Japanese office and WIPO who attended as observers. This was an excellent opportunity for the participants to gain insights into implementing the world's most refined patent classification system, and to learn from the experiences of their peers.

Figure 17: Member states and Cooperative Patent Classification



The EPO continued to support its partners with online CPC training activities in 2020. With a better understanding of the EPO's classification practice, our partner offices can achieve better results in terms of consistency, benefitting all searchers using the CPC. The EPO and USPTO maintained a steady pace in revising the CPC scheme with definitions to keep the system up to date and fit for purpose. The backlog of revision projects was slashed to virtually zero after the summer. This lays the foundations for the faster, more efficient implementation of changes in the system in the future (see p. 47 "Mastering the prior art" for further details).

Via the EPO Patent Prosecution Highway (PPH) network, which comprises 16 partner offices worldwide, European applicants can obtain patents more quickly and efficiently elsewhere through a fast-track procedure allowing for the re-use of the EPO's high-quality work products. Since early 2020, and in view of growing participation figures and positive user feedback, the EPO is gradually implementing the PPH programme as a permanent procedure.

To date, EPO PPH working arrangements with 12 partner offices are operating on a nontrial basis. This includes the Eurasian Patent Office and the offices of Canada, China, Israel, Japan, Korea, Malaysia, Mexico, the Philippines, Russia, Singapore and the USA. The remaining four trials, with Australia, Brazil, Colombia and Peru, are expected to be completed and exit the pilot phase in the coming years.

Lastly, the Office participated in the Global Intellectual Property Challenges Forum (IP20+) on the margins of the G20, organised by Saudi Arabia in October. The Forum's objective was to identify the priorities of the international community in responding to emergency situations, as the COVID-19 pandemic. Closer co-operation between the EPO and the Saudi Authority for Intellectual Property is under advanced discussion.

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Goal 5 Secure long-term sustainability

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Governance and transparency

One of the initiatives of the EPO's Strategic Plan 2023 (SP2023) is to strengthen its governance. In 2020, the EPO focused on improving strategic alignment across the Office, streamlining decision-making processes and adapting priorities to the pandemic, all while increasing transparency.

Firstly, the Office streamlined its governance bodies and integrated its quality management more closely with its strategic and operational management bodies. Specifically, the Quality Board worked more closely with the Management Advisory Committee and the DG 1 Executive Operations Committee. An extensive review to improve the effectiveness, efficiency and timeliness of management workflows was also conducted last year.

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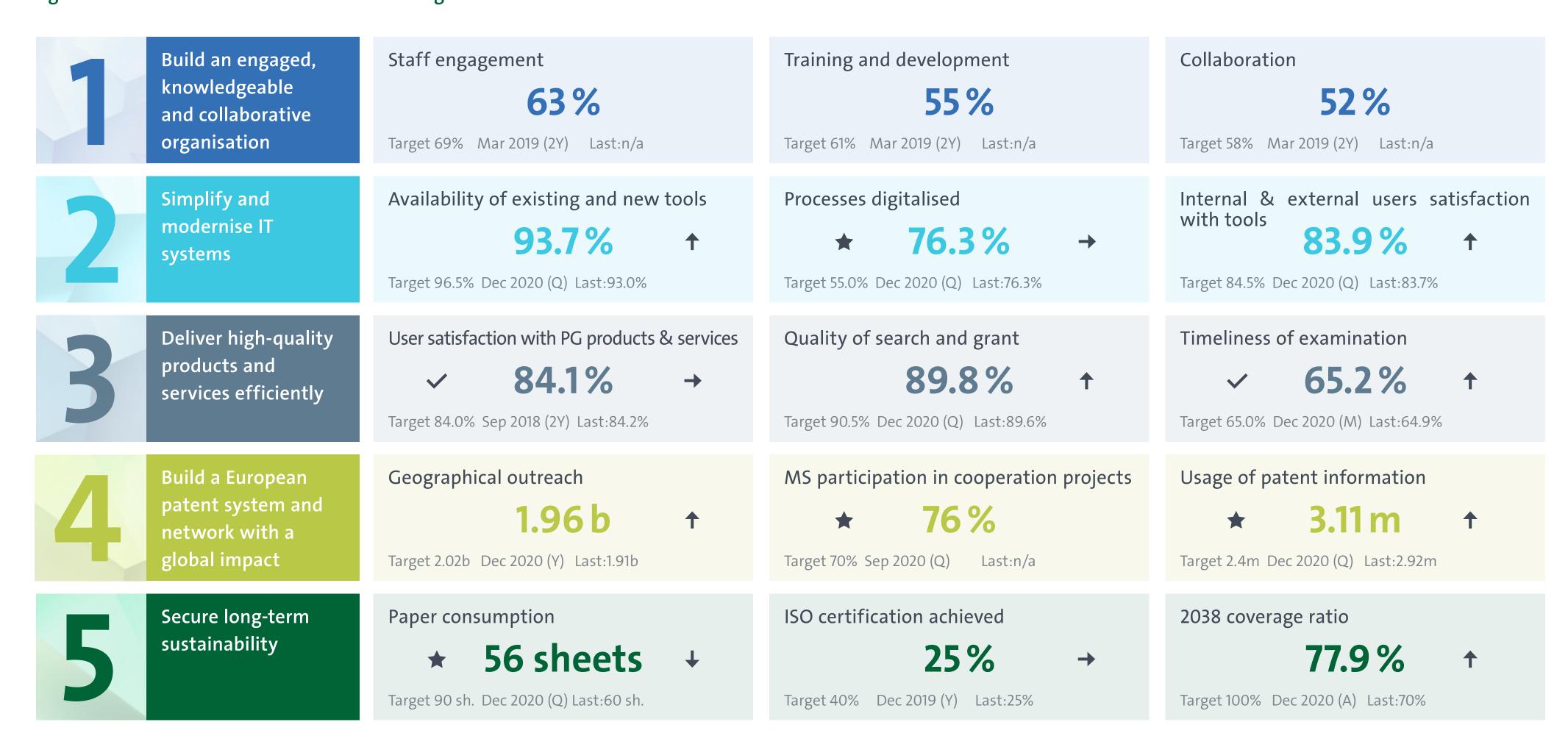
Tracking progress with SP2023

The balanced scorecard (BSC) key performance indicators help senior management to monitor progress with implementing SP2023, evaluate its impact and fine-tune actions, if necessary. In 2020, the Office cascaded the BSC down to a directorate-general and principal-directorate level in a bid to more closely align efforts to achieve strategic goals.

The balanced scorecard (BSC) key performance indicators help senior management to monitor progress with implementing SP2023

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Figure 18: Balanced scorecard with end 2020 figures



Source: EPO

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The Office obtained ISO45001 certification for its occupational health and safety management

Almost all SP2023 programmes and projects were formally approved and launched in 2020. Implementation priorities were reviewed throughout the year in light of the pandemic and a comprehensive development programme and support network was set up to grow staff project management skills and promote collaboration and peer-to-peer knowledge transfer. A year after the launch of SP2023, a lessons-learnt exercise was carried out on its implementation. This led to a shift towards pipeline-based delivery planning, consolidation of the project portfolio and a streamlined project management methodology.

To achieve excellence, the EPO also continued its journey towards implementing best management practices in 2020. The Office obtained ISO45001 certification for its occupational health and safety management and gained ISO9001 recertification for the patent process. The crisis triggered by the pandemic demonstrated that both the quality and the occupational health and safety management systems were working effectively, providing a solid framework for timely and effective reactions.

Applying the best practices of the ISO9001: 2015 standard to all areas of the Office is vital for efficient governance. Against this background, the EPO set up projects to extend the ISO9001 quality management system to the entire Office last year. A more structured form of reporting was also implemented in 2020. This not only increased transparency; it also fostered a deeper stakeholder understanding of how the efforts, actions and performance of the Office have unfolded during SP2023 implementation. This reporting included an annual work plan, annual review and regular reports to the Administrative Council.

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Internal audit

Principal Directorate Internal Audit and Professional Standards continued to work independently and without interference in 2020. Its staff enjoyed full access to all documents and resources required to conduct their work, in conformity with the regulations in place.

Directorate Internal Audit (IA) successfully reduced the backlog of internal audits by delivering 18 audit reports. In 2020 the roles and responsibilities of all parties involved in the internal audit process were clearly defined and communicated to the EPO's senior management.

With audits conducted of the EPO's quality management system and its occupational health and safety management, IA contributed significantly to the Office's ISO9001 recertification and its initial certification under ISO45001. Based on a significantly simplified process to follow up on internal audit recommendations, IA expects to observe an increase in the ratio of recommendations implemented in 2021.

In line with international standards for internal auditing, IA underwent a highly successful independent external validation of its services. Certified compliance with the criteria of the German Institute of Internal Auditors reached 93% in 2020. This marks a 6% increase versus the previous external assessment.

The 2021 IA Annual Programme is based on senior management input and an independent risk assessment. It addresses audit subjects across the entire SP2023 and covers the Reserve Funds for Pensions and Social Security requirements. Based on the achievements of 2020, IA is set to further increase its efficiency and effectiveness and to establish itself as a value-adding service within the EPO.

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Risk and process management

To boost transparency and create a continuous improvement loop, the EPO set up a corporate exception handling procedure and register in 2020. The aim is to record all exceptions to rules and procedures in finance, procurement and HR. It will serve to facilitate reviews and highlight potential adaptations required of the Office's internal legal and financial framework.

In 2020, the EPO also launched a corporate risk management framework featuring a single corporate risk register. Risks are now properly documented and managed, with mitigating actions agreed in a structured fashion. The framework will become fully operational in 2021.

Finally, the Office started to combine all these initiatives into a holistic, integrated management approach. This aims to promote a culture of continuous improvement and reduce the duplication of resources or conflicting objectives across the Office.

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External governance

Strengthening the EPO's external governance is central to the EPO's long-term sustainability. In 2020, the SP2023 external governance programme began to conceptualise ideas for enhancing the transparency and efficiency of the setup of the European Patent Organisation, for adjusting the Administrative Council's Rules of Procedure, and for modernising the Council's technological infrastructure. Once implemented, these improvements will reinforce relations between the European Patent Organisation and its member states, as well as other important external stakeholders.

In 2020, the SP2023 external governance programme began to conceptualise ideas for enhancing the transparency and efficiency of the setup of the European Patent Organisation

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Data protection

In 2020, the EPO's Data Protection Office (DPO) was mandated to create and implement an enhanced and modern data protection framework for the EPO. This meant raising data protection standards at the EPO to safeguard the rights and freedoms of staff, customers, external stakeholders and partners.

Digital transformation — and especially teleworking — requires a different approach to privacy and security than working from centralised offices with in-person meetings. With the revision process initiated in 2020, the EPO's new data protection rules will be enshrined in its Service Regulations. This will fully align the EPO's data protection framework with best-in-class counterparts in international organisations and European data protection legislation.

To promote a culture of transparency and accountability, the DPO conducted an Office-wide campaign in 2020 to raise awareness of privacy and data protection among staff and management. The campaign aimed to foster a deeper understanding of personal data processing, as well as related checks and risks, and how to mitigate them through appropriate safeguards.

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The number of requests for advice submitted to the DPO in 2020 more than doubled versus 2019

A key element of implementing the new framework is the EPO's new network of Data Protection Liaisons (DPLs) set up last year. The DPLs serve as the first point of contact for the Office's operational units, ensuring the DPO's timely involvement in any processing of personal data. The new DPLs underwent intensive training in 2020 and are already active in ensuring compliance within their respective areas.

Another milestone reached in 2020 was the DPO's introduction of a procedure to investigate and address security incidents that may impact personal data. In 2020, the DPO tackled several personal data breaches that occurred either due to human error or to a bug detected in IT systems. Remedial actions and preventive measures were defined by the DPO and implemented to address each breach and to avoid any recurrence in the future.

The DPO also continued to offer Office-wide support on processing personal data last year. The number of requests for advice submitted to the DPO in 2020 more than doubled versus 2019. This demonstrates a growing awareness of the importance of compliance and accountability in the area of privacy and data protection.

Lastly, in 2020, the EPO strengthened its cooperation with other international organisations and the European Data Protection Supervisor. Several initiatives were launched within the DPO's network of international organisations to foster synergies, the harmonisation of policies and procedures and the dissemination of best practices.

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Financial sustainability Financial Study Phase I and II

In 2019, the EPO commissioned a Financial Study conducted by the external consultants Mercer and Oliver Wyman. The study was published in 2019 in two phases: Phase I — Development of four scenarios; and Phase II — Developing measures to address the funding gap. After a careful analysis of the different parameters and global economic developments, the Office considered that the "Base 2 — Economic Cycle" scenario (assuming a global economic recession) was the most appropriate.

According to this scenario, the Office was facing a funding gap of EUR 3.8 billion over the next 20 years. On the basis of a sensitivity analysis evaluating the risk of a persistent low interest rate environment, the Office proposed to retain a EUR 2.0 billion buffer, bringing the coverage gap to be closed to EUR 5.8 billion. In view of the global economic downturn caused by the pandemic, the "Base 2" scenario has already become reality.

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The bundle of financial measures

In 2020, the EPO focused its efforts on selecting an appropriate bundle of financial measures to close its funding gap. A package of six measures was submitted to and validated by the Budget and Finance Committee and the Administrative Council.

The six measures are:

- moderating the salary adjustment procedure to up to 0.2% above eurozone inflation while including a redistribution clause and a nominal guarantee
- increasing pension contributions
- adjusting procedural fees by inflation biennially
- digitalising the patent granting process
- investing operational cash surpluses into the EPO Treasury Investment Fund (60%)
- investing operational cash surpluses into Reserve Funds for Pensions and Social Security (40%).

The bundle is expected to have a positive impact of EUR 6.4 billion on the coverage gap, leaving some room for manoeuvre if some measures fail to deliver the savings expected.

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Implementation of these financial measures got underway in 2020. The new salary adjustment procedure was elaborated in consultation with staff representatives and unanimously approved by the Administrative Council in June. Its subsequent implementation took place in December 2020, which marked the end of the previous salary adjustment cycle and the beginning of a new six-year cycle.

The increase in the contribution rate to the Reserve Funds for Pensions and Social Security (RFPSS) was adopted as of 1 January 2020. The inflation-based fee adjustment was also integrated in the EPO's budget for 2021 (and in estimates for 2022-2025). The digitalisation

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A comprehensive communication campaign on the Financial Study was also conducted in 2020 via multiple channels

measure remained in the investment phase throughout 2020 and is ongoing.

As for surplus cash transfers, a total of EUR 125 million was approved for transfer to the RFPSS by the Administrative Council, and transfers to the EPO Treasury Investment Fund are taking place in line with cash generation from the EPO's operations. The implementation of the other measures is monitored in the course of the EPO's regular financial management processes.

A comprehensive communication campaign on the Financial Study was also conducted in 2020 via multiple channels. It covered the proposed bundle of measures, the timeline for their implementation and the EPO's new salary adjustment method. A working group was set up with staff representatives to discuss the envisaged changes to the salary adjustment

method. The Office also held extensive consultation rounds on the proposed financial measures to gather feedback from staff, staff representatives and external stakeholders. Changes to the salary adjustment method proposed by staff representatives were evaluated and presented to staff. Various deep-dive explanatory videos provided full transparency on the new method and were complemented by a lengthy list of FAQs and a special mailbox for staff input. The aim of this extensive communications campaign was to raise awareness of the EPO's long-term financial sustainability among staff.

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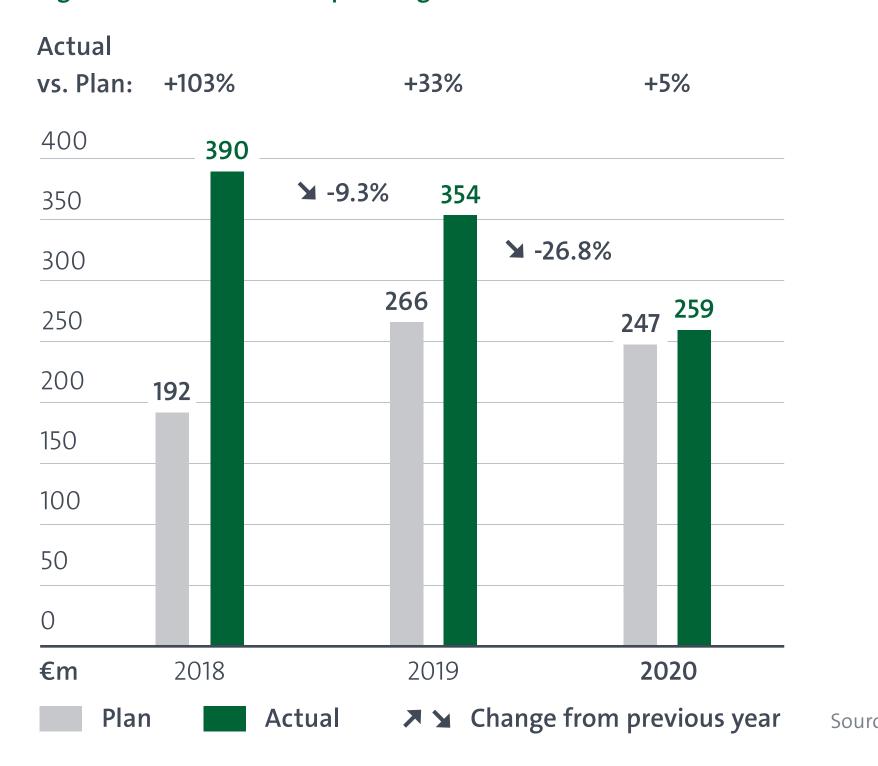
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Budget and finance

In 2020, the EPO achieved a standardised operating result of EUR 259m, which is EUR 95m (26.8%) below 2019, primarily due to higher staff costs.

Figure 19: Standardised operating result 2018 – 2020



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On the income side, despite the challenges in 2020, the EPO was able to maintain high levels of production. As a result, income from procedural fees was only slightly below that of the previous year (EUR -3m or -0.3%) in 2020. In terms of renewal fees, internal renewal fees are down by EUR 34m, reflecting the evolution of the EPO's stock, while national renewal fees are up by EUR 16m, driven by the increased number of grants in recent years. The total operating income in 2020 was EUR 1 986m, slightly below that of the previous year (EUR -36m or -1.8%).

Figure 20: Standardised operating income 2018 – 2020



Source: EPO

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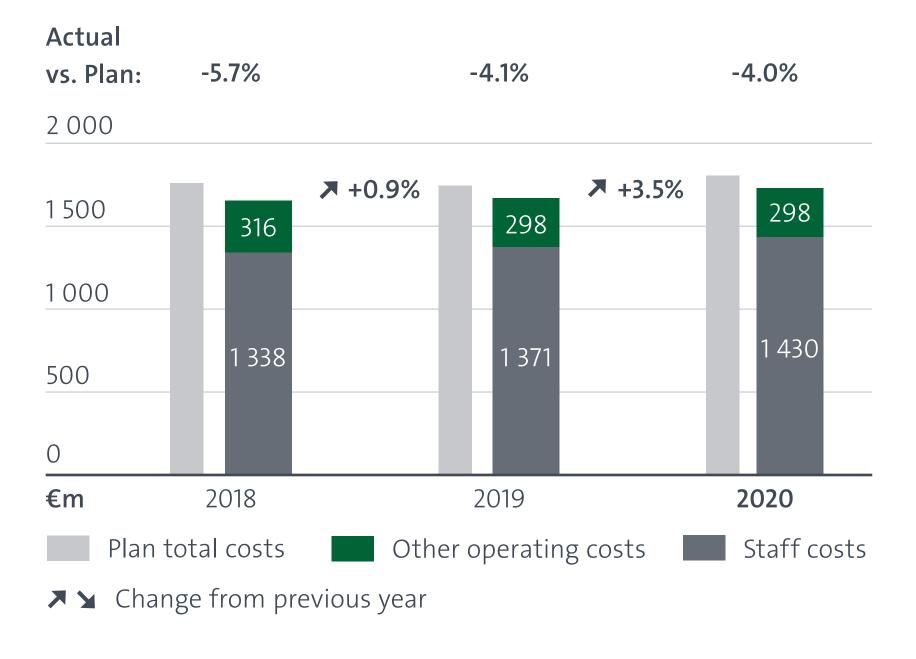
Annual Review 2020

On the cost side, higher current service costs and the fact that many staff postponed leave led to an increase in staff costs. Staff costs rose by EUR 59m last year compared with 2019, while non-staff costs remained at the previous year's level. Non-staff costs remained unchanged, as lower costs due to cancellation of travel and switching to online meetings offset investments in IT equipment and other COVID-19-related cost increases.

The budget surplus for 2020, after investments in the capital section, amounted to EUR 349m, exceeding forecasts but remaining below the 2019 figure.

Moving on to IFRSs, the operating result for 2020 was a loss of EUR 537m, marking a deterioration versus 2019. This was primarily due to an increase in the current service cost for employee benefits resulting from a lower discount rate applied in 2020.

Figure 21: Standardised operating cost 2018 – 2020



In 2020, the EPO generated a financial profit of EUR 221m, mainly resulting from gains on Reserve Funds for Pensions and Social Security assets (EUR 423m) and the EPO Treasury Investment Fund (EUR 133m), reduced by the interest cost on the defined benefit obligation (EUR 337m).

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The value of the Reserve Funds for Pensions and Social Security assets at the end of the year was EUR 10 343m and the EPO Treasury Investment Fund closed the year at EUR 3 138m. The EPO's total assets amount to EUR 14 729m.

The equity of the EPO increased by EUR 0.8bn in 2020, primarily due to high actuarial gains resulting from the impact of the new salary adjustment method. At the end of 2020, the EPO's negative equity amounted to EUR -16.9bn.

Source: EPO

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EPO Treasury Investment Fund

Despite the turmoil in global financial markets caused by the pandemic, the EPO Treasury Investment Fund (EPOTIF) achieved a profit of EUR 133m in 2020. This represents an annual return of 4.4%. In the two and a half years since its launch, EPOTIF has generated an annualised return of 4.6%, which is slightly above the long-term target of 4%. During this period, the total profit generated by EPOTIF amounted to EUR 361m and contributed to the EPO's long-term financial sustainability. The results achieved to date validate the EPO's investment strategy of focusing on long-term returns regardless of short-term market volatility.

In 2020, the EPO transferred EUR 50m from its cash surplus to EPOTIF, taking total transfers since inception to EUR 420m. In June 2020, the Administrative Council decided to invest 60% of the Office's annual cash surplus in EPOTIF.

The investment model of using an external administration company (KVG) and the internal governance framework implemented in 2019 has proven robust during the pandemic. In the

review performed by external auditors in July 2020, the EPOTIF setup was once again certified to be of high professional quality.

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At the time of EPOTIF's launch, the Office committed to the Budget and Finance Committee to review the EPO Investment Guidelines within three years. The review is scheduled to be completed by the end of the second quarter of 2021.

Key achievements in 2020

Environmental sustainability

The EPO is fully committed to promoting sustainability and reducing its environmental footprint, with the overarching goal of going CO_2 -neutral by 2030. In 2009, the Office adopted the Eco-Management and Audit Scheme as the framework for minimising its environmental impact and fostering a sustainable work environment for staff. In 2020, initiatives launched by the EPO under SP2023, and accelerated by developments related to the pandemic, delivered some impressive early wins.

The digitalisation of workflows in the EPO's core processes, for example, led to a dramatic drop in paper consumption. In 2020, the EPO used 58.7 million fewer sheets of paper than in 2019, representing a significant decrease of 47.5%. An 80% decrease in duty travel during 2020 also resulted in a drastic reduction in CO2 emissions. This was largely due to the pandemic, but accelerated a positive trend proactively supported by changes to the EPO's travel policy in favour of online meetings. Similar trends were seen in the generation of waste, which decreased by 39.8% compared to 2019.

In addition, a series of awareness-raising activities including digital seminars and the Global Digital Clean-up Day involved staff in fostering "greener IT" and "green by IT" solutions at the EPO.

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Societal impact

Public trust in the EPO and its services

As a public institution, the EPO provides services for civil society, users and partner offices and organisations. To this end, it is essential that the EPO provide tools and products that are readily available, recognisable and usable. But it is equally important that the public can fully rely on the services and information offered under the name of (or associated with) the EPO, and that the EPO ensures that its name and position — and the trust it is afforded — are not used for unauthorised purposes or by other parties. To preserve the public's trust in the EPO and its services, the Office initiated the "IP strategy" project under SP2023 in 2020.

As a global standard-setter in IP, the EPO also has an active role to play in raising awareness of patents and their positive impact on the economy and society. The "Outreach and awareness" programme aims to inform and inspire the general public, younger generations and the local communities of the EPO's host cities. With this programme, the Office aims to:

- broaden the scope of the European Inventor
 Award by reaching out to a larger audience
- leverage the power of patent statistics by pulling resources together and offering new ways to make them accessible to the public
- strengthen and digitalise the EPO brand to enhance visibility and consistency

- contribute to building a sustainable future in the Office's host cities via local partnering and social engagement
- strengthen the pan-European network of communication professionals working in IP offices
- promote cultural diversity and social responsibility through a strong commitment to the arts and the Office's art collection

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Key achievements in 2020:

Raising awareness of patenting trends with the Patent Index:

The Patent Index was launched mid-March with a media campaign in European Patent Organisation member states and the other IP5 regions. Despite the media focusing heavily on COVID-19, the response was overwhelmingly positive. The index generated around 1 600 media reports, with an equivalent advertising value of EUR 4.7 million, and over 2 500 000 users were exposed to social media messages (+ 211% on 2019).

- Promoting revisited Alumni inventors' stories:

As an alternative to the in-person 2020 European Inventor Award event, which was postponed due to the pandemic, a series of topical new inventor stories was launched in the autumn. These featured former award finalists and winners talking

about developments in their inventions and career, and their contributions to the fight against coronavirus. Around 30 videos and 14 podcasts episodes were produced and actively promoted via social media.

– Building a stronger brand:

Consultations with internal and external stakeholders were completed via a survey and interviews. Their findings will help the EPO to revitalise the EPO brand and make it fit for digital channels.

Aligning communication activities and practices among IP offices:

Communication Correspondents Network held its first online meeting aimed at developing a joint activity plan for 2021 and sharing experience with crisis communication. Over 40 communications colleagues from across Europe participated in the meeting.

Staying committed to local communities:

Despite the cancellation of many events planned with local partners, the Office supported the digital TEDxYouth Munich event held in May and entitled "Unstoppable". The event covered key issues such as sustainability, diversity and entrepreneurship, and reached out to around 20 000 users via social media. The Office supported the city of The Hague, as well at the first virtual JustPeace Festival in September, which attracted 12 000 visitors online.

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– Chief Economist studies:

The Chief Economist unit published four studies in 2020, all during the second half of the year due to the pandemic. Three of those studies document recent technology trends in additive manufacturing; batteries and electricity storage technologies; and technologies of the Fourth Industrial Revolution. The study on batteries (published in September) was the first EPO study produced in collaboration with the International Energy Agency, with which the EPO signed a memorandum of understanding in 2020. The other two studies were launched to mark EPO conferences in July and December. The last study, published in November 2020, was a Patent Commercialisation Scoreboard for universities and public research organisations, showing that these institutions commercialise around one third of their European patents.

– Observatory:

One of the initiatives outlined in SP2023 is the creation of an EPO Observatory. On top of producing empirical analyses, reports and studies, the Observatory will also operate as an exchange platform for economic and technology discussion, bringing together public and private stakeholders to debate developments in innovation. In 2020, a benchmarking study was conducted to shape the scope of activities and potential structure of the Observatory. The study mapped both the EPO's current "knowledge products" and the landscape of external "observatories" already operating in Europe, with a special focus on their activities, stakeholders and partnerships. Based on the study's findings, the EPO is now working on a concept outlining how the Observatory can provide the best value for stakeholders and support policymakers in their decision-making on innovation and patent-related IP matters.

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Quality Report 2020 (CA/40/21 Add. 1)

Social Report 2020 (CA/40/21 Add. 2)

Engagement Report 2020 (CA/40/21 Add. 3)

Environmental
Report 2020
(CA/40/21 Add. 4)

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