Europäisches
Patentamt

European
Patent Office

Office européen
des brevets

50 years
1973 / 2023

EUROPEAN
PATENT
CONVENTION

EUROPEAN PATENT OFFICE

Annual Review
2022

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Foreword

It was a year of accelerated momentum. Another year in which the culmination of previous years' measures yielded significant results, propelling us even closer to our goal of becoming a more modern and sustainable organisation. It marked our transformation from an Office navigating the uncertainty of the pandemic to an Office confidently operating in a changed landscape.

With this fresh momentum came exceeded targets. By the end of 2022, progress on the completion of our Strategic Plan 2023 was significantly ahead of schedule. In the same time we also managed a record number of filings — a clear testament to the increasing value that inventors attribute to the power of patent protection. These are the inventors who hold the key to a more sustainable future. They are also the creative minds who hold the key to economic growth in these uncertain times. A recent report co-authored by the European Patent Office (EPO) and the EUIPO found that IPR-intensive industries contribute nearly half of the EU's GDP.

But the European patent system's ability to deliver this kind of positive impact rests squarely on high-quality patents. And 2022 saw many initiatives launched in support to ensure the European patent system continues to be synonymous with quality. In our efforts to drive up the quality of our products and services, we have made ongoing investments in our staff, processes and tools.

In 2022 we met our examiner recruitment targets thanks to effective talent pipelines, and launched a new Pan-European Seal Young Professionals Programme to foster the next generation of IP professionals. Attracting top talent in an increasingly competitive market is vital to address the complexity of challenges emanating from emerging technology fields.

Our digital transformation journey has continued to reach new milestones, including the digitalisation of the backend of the patent grant process and improvements to our search and classification tool which, among other things, delivered gains in search

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performance — a key gatekeeper for quality. Critically, digitalisation has also been an enabler for our New Ways of Working pilot, giving staff unprecedented flexibility in their ability to balance their work at home with their work in the office.

While New Ways of Working offers staff flexibility, our new Patent Quality Charter offers a common vision. Drafted in full consultation with stakeholders, the Charter establishes a shared responsibility and a harmonised understanding of patent quality, emphasising its singular importance as our guiding principle. Ultimately, it has been designed to ensure that the delivery of our products and services consistently meets the highest standards for our users in a fast-changing digital environment.

All these developments couldn't have been possible without our staff and other stakeholders working together.

Serving as a powerful testament to the quality delivered by our Office is the continuing growth of our network.

Montenegro became the EPO's 39th Contracting State in October, and an invitation to accede to the European Patent Convention was extended to the Republic of Moldova in December, with a view to their becoming the EPO's 40th Contracting State. The growing membership enhances the sustainability of Europe's patent system by fostering collaboration, knowledge-sharing, and a wider reach.

These are the developments that will help to build an Office that is both current and future-proof, recognising that reinforcing patent quality is intricately linked to strengthening environmental, social, governance, and financial sustainability. Last year, we continued our journey to become a more sustainable organisation by reducing CO_2 emissions by more than 700 tonnes, while the launch of the Vienna Green Hub project helps pave the way to becoming carbon neutral by 2030. At the same time our financial sustainability achieved a solid financial footing with a coverage ratio of 70.7% of the gap between our assets and our liabilities.

All these developments couldn't have been possible without our staff and other stakeholders working together. We therefore sincerely hope that this Annual Review not only charts the progress being made together to create a more sustainable EPO, but also reflects the work being done to build a stronger patent system that reflects the aspirations of all. We can now say with some confidence that we are more robust, resilient and agile than at any other time in our history. With this in mind, we are well-positioned to make the launch of the upcoming Unitary Patent a success, and to build further on the 50 years of the European Patent Convention that we will celebrate later this year. There could be no tribute more fitting to the efforts of all those who have worked to build a truly beneficial and high-impact European patent system.

António Campinos,
President of the European Patent Office

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Executive summary

In 2022 the European Patent Office (EPO) took several important steps towards becoming a truly modern and sustainable IP office. Rebuilding after the pandemic, the Office embraced new ways of working, pursued its major IT transformation, and renewed its focus on patent quality. It also ramped up its environmental, organisational, financial and societal impact initiatives to maximise its positive impact on society.

Central to our accomplishments was the investment we made in our people. Under Goal 1 of the Strategic Plan 2023 (SP2023) – Build an engaged, knowledgeable and collaborative organisation – we reinforced our efforts to: attract, develop, and retain top talent; focus on diversity and inclusion; transform our approach to learning; foster engagement and a sense of belonging; and ensure that our working environment – physical and digital – is fit for the New Ways of Working (NWoW) pilot.

In 2022, we achieved our target for examiner recruitment, welcoming 77 new examiners from 17 different nationalities, with 36% of them being women. Through policy changes such as the NWoW pilot and improvements to our social package, for example on parental leave, we provided greater flexibility and family-friendly support, ensuring we remain an attractive employer. To nurture the next generation of IP professionals, we launched the new Pan-European Seal Young Professionals Programme, offering young graduates unprecedented learning opportunities in IP and bringing fresh ideas into the EPO.

Developing our staff and transforming the EPO into a learning organisation continued to be a key priority. The skills framework was further developed in 2022 as the basis for learning at the EPO, while tailored development programmes continued to be developed for specific roles. To support individual

To nurture the next generation of IP professionals, we launched the new Pan-European Seal Young Professionals Programme, offering young graduates unprecedented learning opportunities in IP and bringing fresh ideas into the EPO.

learning, we organised eight iLearn Days in 2022 around various strategic themes and consolidated all e-learning resources under the iLearn brand.

The EPO also continued to invest in peer-to-peer learning, and in 2022 more than 700 staff members took part in targeted peer-to-peer knowledge sharing activities. We also conducted over 500 Continuous Knowledge Transfer events with 20 000 participants. The Management Community was also launched to facilitate learning, peer-to-peer exchanges, and collaboration among managers.

The start of the NWoW pilot was a milestone of the EPO in its transformation from an office-based organisation to one based on extensive flexibility in where and how we work, building on the experience of the pandemic. The introduction of the pilot scheme was supported by new tools, like the Planning Tool, a new workplace booking tool, and the new modern responsive intranet, to help staff and managers stay connected and manage their working lives.

Staff engagement remained a key priority for the EPO, with a strong sense of belonging being more important than ever during this profound transformation in how we work. The EPO conducted a survey, "Together, stronger", in 2022 to monitor staff engagement levels, which showed positive trends in 10 out of 13 categories, including flexibility, agile culture, collaboration and diversity and inclusion.

Our buildings, as our professional homes, are a vital part of fostering a sense of belonging. In 2022, we completed various projects aimed at creating vibrant and energising workspaces and improving the environmental sustainability.

The EPO continued to focus on social dialogue, where several achievements were made in terms of improvements to policies, as a result of more than 100 meetings with staff committees and unions in 2022.

Operational excellence and efficiency in HR, financial, recruitment, and procurement processes underpin all our Goal 1 activities and achievements.

Under **Goal 2 – Simplify and modernise IT systems** – the EPO continued its digital transformation, releasing state-of-the-art tools and platforms and decommissioning obsolete solutions. A milestone was reached with the digitalisation of our backend patent granting process (PGP) through the implementation of the new digital file repository, allowing the decommissioning of the legacy digital archive tool. We also started to integrate digital exchanges with WIPO in our PGP process and ensured that our IT systems would be ready for the start of the Unitary Patent.

In 2022, we concentrated our efforts on ANSERA, the central hub for search- and classification-related activities. This resulted in improvements to stability, search algorithms performance, visualisation of results, user interface, and overall reliability. We supported ANSERA users with comprehensive training, learning materials, and informative demonstrations.

Looking to improve our interactions with users, after a seven-month pilot phase involving over 180

that permeate every area of the patent granting process, enabling us to deliver excellence.

In the framework of our biennial User Satisfaction Surveys (USS), we launched a new series of surveys on 1 September 2022 which ran until April 2023. This started with the interview-based USS on opposition services, which generated more than 530 responses by early October. This survey comprised a dedicated questionnaire on oral proceedings (OP) by videoconference (VICO) according to which 77% of respondents found OP by VICO to be good or very good. The 2022/2023 survey counted 7 000 respondents and reported high levels of user satisfaction in many areas.

We deploy robust quality checks that encompass comprehensive and rigorous assessments to identify potential improvements. In 2022, the outcome of our audit procedures show that 82.6% of our searches and 76.6% of grants had no findings. Our quality initiatives involve also engaging in dialogues with our users, as highlighted by the Stakeholders Quality Assurance Panels, and formulating an annual Quality Action Plan. The external ISO 9001 audit in September 2022 confirmed our certification under the ISO standards for quality management (ISO 9001), reinforcing our commitment to provide users with the highest quality products and services.

To promote consistency and completeness in our written communications, a new common structure for communications issued for European patent applications was piloted. The feedback received from users was largely positive, and we plan to expand the use of this common structure in 2023.

We deploy robust quality checks that encompass comprehensive and rigorous assessments to identify potential improvements.

In 2022 we undertook a comprehensive reorganisation of our operational units, leveraging our unprecedented digital transformation to connect them with each other. On 1 April, our examiner teams started working within eight technology communities, structured around the 14 EU Industrial Ecosystems and highlighting their contribution to the UN Sustainable Development Goals. This change is improving collaboration, consistency, timeliness, and quality across our operations.

external participants, we launched MyEPO Portfolio, a web-based online service offering a simplified approach to procedural submissions. Online services were further improved by introducing a new Central Fee Payment platform.

Following an external audit, the EPO received ISO 27001 certification of our information security management system in October 2022, highlighting the commitment to safeguard the confidentiality, integrity and availability of our

information. Pursuing the long-term sustainability of the Office, we completed two major projects: the decommissioning of the mainframe and migration of data centres.

Under **Goal 3** of our SP 2023 – **Deliver high-quality products and services efficiently** – we finalised the Patent Quality Charter, which officially came into effect on 1 October 2022. The Charter recognises the importance of providing users with the highest levels of legal certainty. It distils a set of principles

Under SP2023, we established an office-wide ecosystem of Communities of Practice to encourage best practices and consistency of approach in areas such as opposition, computer-implemented inventions network, artificial intelligence, additive manufacturing, and standard defining organisations.

Building on the successful outcome of a pilot which ran for more than two and a half years and encompassed more than 7 400 opposition oral proceedings by videoconference, the EPO decided at the end of 2022 to make videoconferencing the new standard for all first instance oral proceedings, including opposition, as of 2023. This decision was taken considering the valuable feedback received from our users and underlines our commitment to adapting to evolving needs while maintaining the highest standards of efficiency and accessibility.

Our commitment to timeliness remains strong with 86.1% of search, examination, and opposition standard files completed on time in 2022, continuing a positive trend. The thoroughness of our searches is evident from our examiners' ability to find highly pertinent documents in the world's most extensive prior art collection, which comprises 82 million

patent families, 146 million patent publications, and over one billion manual and automatic annotations. Despite the increasing workload, search timeliness shows 89.3% of the standard cases dealt with on time, with a mean duration of 4.9 months.

The IT Co-operation programme made significant strides in 2022, with notable accomplishments in the Front Office project, with over 100 filings in pilot offices by the end of the year.

Consolidation of timeliness continued also in the examination front. The number of files older than 36 months continued to decrease to just 14.3% during 2022, from a baseline of 19.1% in 2019. Furthermore, our processing time from filing to grant was 44.2 months for EP first filings and 78.6% of standard examination cases were dealt with on time, with a mean duration of 24.3 months.

In 2022, we reduced the opposition stock to 4 346 pending files, less than the pre-pandemic level of 5 000. We also made progress in opposition timeliness for standard cases, with 44.1% completed within 18 months and a mean duration of 19.6 months.

Continued growth under **Goal 4 – Build European patent system and network with a global impact –** saw the European Patent Organisation welcome Montenegro as the 39th member state in October. Furthermore, an invitation was extended to the Republic of Moldova to accede to the European Patent Convention (EPC), reflecting our commitment to expanding and strengthening our network.

Significant bilateral co-operation agreements between national patent offices and the EPO were signed. Notably, substantial preparations were made for the launch of the unitary patent, including a high-level conference held in Brussels in November. Additionally, the European Patent Network (EPN) held its 16th Annual Meeting on Co-operation in May, further fostering collaboration and dialogue within the network.

As one of many initiatives to further strengthen the EPN, we established a new secondment scheme to offer qualified employees of other organisations opportunities to work at the EPO for a defined period, creating a continuous exchange of knowledge, skills and expertise.

Under the convergence programme, Working Groups 5 and 6, focused on "Claim drafting and structure" and "Examination practice for computer-implemented inventions and artificial intelligence" respectively, concluded their work by adopting recommendations for a common practice. Building on this achievement, the Administrative Council decided to continue the exercise with six new convergence topics.

The IT Co-operation programme made significant strides in 2022, with notable accomplishments in the Front Office project, with over 100 filings in pilot offices by the end of the year. Other important initiatives included the Data Quality project, the successful launch of the Single Access Portal, and the third release of the web-based SEARCH system, which included extensive non-patent literature for the first time and had almost 200 examiners in 19 countries participating in the pilot by the end of 2022.

Stepping up our efforts in multilateral co-operation, we engaged extensively with Africa and hosted the IP5, a forum comprising the world's five largest intellectual property offices, in June. Additionally, we also signed work plans with the European Union Intellectual Property Office (EUIPO) and the World Intellectual Property Organization (WIPO), as further confirmation of our commitment to international collaboration. By the end of 2022, the EPO operated 85 international co-operation agreements, including four validation agreements and 12 reinforced partnership agreements, effectively expanding our reach to one-quarter of the world's population.

The modernisation of the European Patent Academy marked important milestones, with the second online European Qualifying Examination (EQE) and the inaugural European Patent Administration Certification (EPAC) examination, which attracted 510 candidates from 33 countries. In 2022, the Academy set up 2 230 hours of training in patent granting, technology transfer and patent litigation, with a remarkable participation of 23 556 individuals. The eLearning centre saw 17 359 additional regular user accounts, further expanding access to valuable training resources.

By the end of 2022, the EPO operated 85 international co-operation agreements, including four validation agreements and 12 reinforced partnership agreements, effectively expanding our reach to one-quarter of the world's population.

Public access to patent knowledge was enhanced through the PATLIB 2.0 project, through improvements to the European Patent Register, and by extending the technology platforms on Espacenet. A new, comprehensive data policy underpinning these initiatives will support our aim of empowering users to leverage patent information to make informed decisions and contribute to innovation.

In 2022, under **Goal 5 – Secure long-term sustainability –**, the EPO continued its efforts to shape a sustainable future with good progress in the implementation of the SP2023. The impact and benefits of these activities were monitored via a set of key performance indicators (KPIs) in the balanced scorecard, with the majority of KPIs showing solid improvements in 2022.

Advancing our goal of becoming a net zero organisation by 2030, we successfully reduced our overall emissions by approximately 713 t CO_2e compared to 2021. This reduction is equivalent to the emissions associated with the electricity production in 618 households over a year. A flagship environmental initiative, the Vienna Green Hub project, was launched in 2022. This project aims to

construct a building that will be carbon negative when in operation. The adoption and expansion of the MyEPO Portfolio platform has also resulted in substantial paper savings, with 52% of documents sent via online services in 2022.

As an important aspect of the EPO's long-term sustainability and crucial for our role as a responsible public institution, the highest standards of good governance continued to be pursued. The EPO achieved its objective of becoming 100% ISO-certified in 2022, with extension of the quality management system to all areas of the Office, as well as certifications for occupational health and safety management and information security management.

The EPO continues to monitor its financial situation and consolidate the implementation of the six financial sustainability measures adopted in 2020. The coverage ratio, a key indicator of the EPO's financial sustainability, has been consistently monitored and reached 70.7% in December 2022.

All of the EPO's activities ultimately aim to have a positive impact on society. The highlights of our 2022 studies, platforms, and events contributed to several of the United Nations Sustainable Development Goals (UN SDGs). An important milestone for maximising our societal impact was achieved in 2022 with progress in the preparations for the creation of a new Observatory on Patents and Technology. This observatory will be structured around technology intelligence, legal and innovation policies, and diversity and transformation, further strengthening our commitment to comprehensive and forward-thinking initiatives.

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Key achievements

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GOAL 1

BUILD AN ENGAGED, KNOWLEDGEABLE
AND COLLABORATIVE ORGANISATION

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Goal 1
Build an engaged, knowledgeable and collaborative organisation

In 2022 the EPO continued to invest in our people. We maintained efforts to attract, develop, and retain the best talent, transform our approach to learning, foster engagement and a sense of belonging, and ensure that our working environment – physical and digital – was fit for the new ways of working.

ATTRACTING, DEVELOPING AND RETAINING TALENT

Attracting talent through recruitment

The **talent marke**t and the overall economic situation in 2022 were affected by the pandemic and the economic uncertainties caused by the military aggression in Ukraine. In this environment, the competition for highly skilled people across Europe remained high, and the market continues to be talent-driven.

Overall, the Office received more than **4 500 applications for examiner positions,** which enabled us to build a robust pipeline of almost 200

suitable examiner candidates. This will be leveraged as business needs require and will optimise our ability in recruitment to adapt to the workload and market conditions. This **strategic pipeline approach** to recruitment has already shortened the time needed to recruit and helped us to maintain a presence in a competitive market.
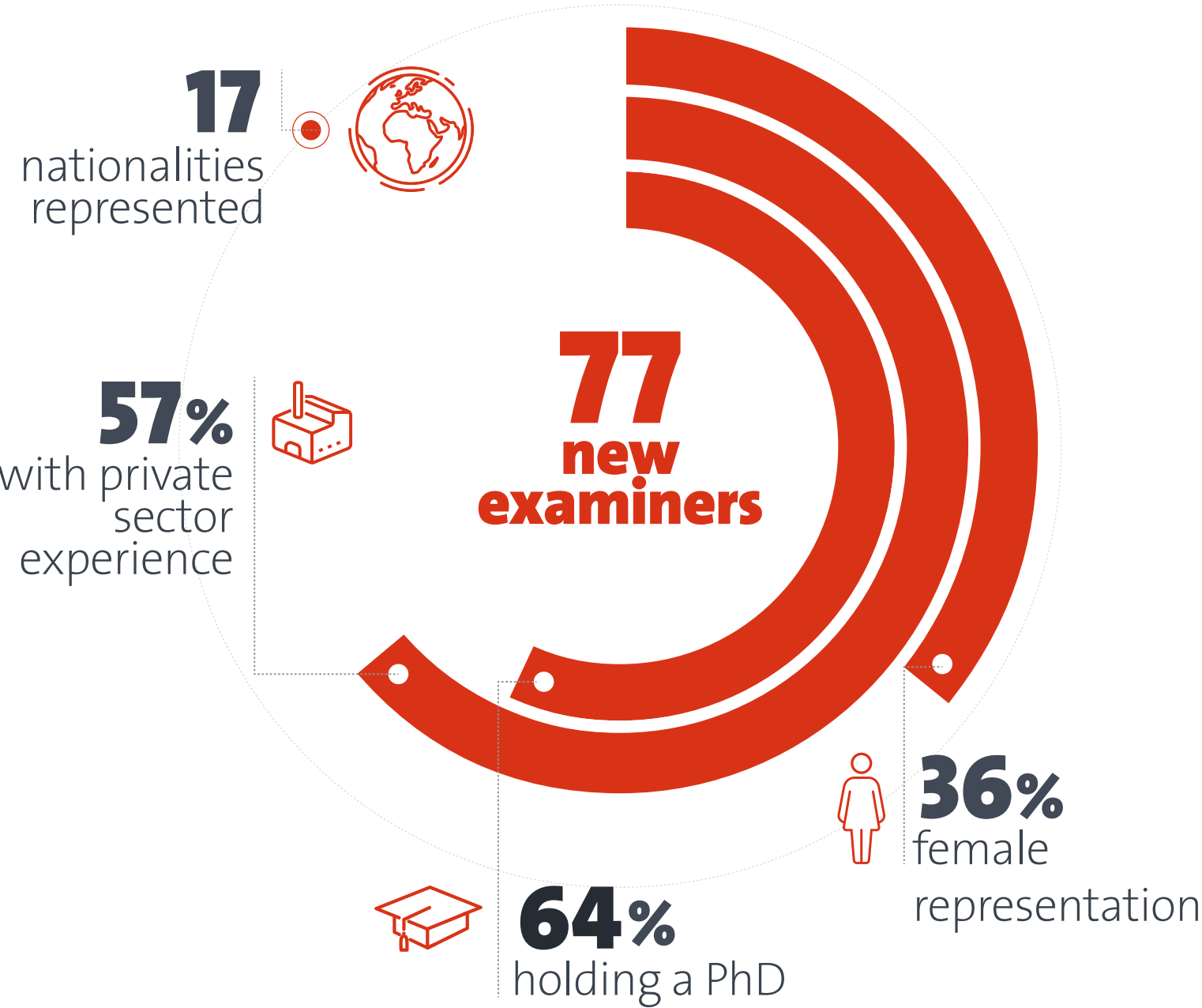
In this challenging context, the Office was successful in meeting its targets in examiner recruitment, while continuing to focus on

the **diversity and quality of new recruits.** In 2022, 77 new examiners were hired, 36% of them female, representing 17 nationalities; 64% of them hold a PhD and 57% have private sector experience. The Office continued to visit targeted career events to encourage applications from diverse groups, for example the Top Women Tech Summit focusing on female engineers and scientists, the MyAbility Programme focusing on candidates with disabilities, and the Sticks & Stones career fair focusing on the LGBTQI+ community.

Figure 1 – **Examiners recruitment in 2022 – key figures**

17 nationalities represented

57% with private sector experience

77 new examiners

64% holding a PhD

36% female representation

Source: EPO

Today's applicants look for flexibility and support to combine family obligations with work.

In the corporate areas, 32 new colleagues joined the Office, 72% of them female, representing 15 nationalities. Overall, the Office received **a total of more than 8 000 job applications in 2022,** an increase of almost 2 000 compared to 2021. Other than the fact that the EPO opened more positions in 2022, the active modern **employer branding** approach is also bearing fruit. For example, the examiner recruitment campaign on social media generated over nine million impressions and over 40 000 clicks.

Implemented policy changes, which contribute to our **attractiveness as an employer** and encourage diversity in applications, were an additional lever to position the Office. Today's applicants look for flexibility and support to combine family obligations with work. The **NWoW** pilot, including the possibility to work temporarily from abroad, and improved family-friendly benefits helped us to remain an attractive employer, as today's talent increasingly values flexibility and a good work-life balance. Finally, we also changed our **language policy** to make it easier for talent from underrepresented nationalities to apply to the Office and acquire the three official languages after joining.

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Attracting talent through external mobility

The Pan-European Seal Programme reached a milestone in 2022. Building on the success of the existing programme, the new **Pan-European Seal Young Professionals Programme** was endorsed by the Administrative Council and launched on 1 July 2022. The reformed programme was designed to foster the development of a new generation of IP professionals and strengthen tomorrow's European Patent Network. It offers young graduates unprecedented learning opportunities in IP, and for the EPO it brings in new perspectives to the organisation and contributes to a more diverse workforce in terms of gender and nationality. In 2022, 127 young professionals (61% of them women) representing 25 nationalities participated in the programme. The group comprises 88 new young professionals in the first year of the programme and 39 young professionals continuing to years two and three. In total 52 young professionals were allocated to the patent granting process (PGP) area, getting a direct insight into the core business of the EPO.

Figure 2 – **Pan-European Seal Young Professionals Programme hybrid inauguration ceremony in Munich**

Source: EPO

The group comprises 88 new young professionals in the first year of the programme and 39 young professionals continuing to years two and three.

The original one-year traineeship programme was extended to up to three years as a first employment experience. After an internal selection procedure by the end of the first year, 39 participants were offered the opportunity to stay at the EPO and complete a more tailored, two-year development programme.

Since the start of the programme in 2015, the EPO has welcomed 501 young professionals from 32 nationalities. An average of 62% of the young professionals have been women.

Figure 3 – **Pan-European Seal Young Professionals Programme 2022/2023 – key figures**

2022/23 EDITION FIGURES

25
nationalities
represented

127
Young professionals

61%
female
representation

Source: EPO

Developing staff through individual learning

The **skills framework,** initiated in fall 2021 was further developed to support professional development via learning, internal mobility, and identification of expiring/evolving/emerging (E3) skills. Over 80% of EPO staff now have a skills framework available and the rest should be completed in 2023. Skills are self-assessed and primarily based on learning needs. They are used to support discussions with line managers on individual development plans and assessing learning needs, which are made available according to the 70:20:10 model (encompassing learning on the job (70), peer-to-peer networks and knowledge sharing (20) and official training (10)). The skills framework enables increasingly tailored training for each individual in the EPO, and based on adapted learning, to ensure that staff get the right sort and right level of upskilling, when they need it. The skills profiles can also be useful in assessing suitability for internal job mobility and are closely linked to efficient workforce planning.

Figure 4 – **EPO Skills framework**

FUNCTIONAL SKILLS
Specific know-how in functional area

Example of skills for legal professionals

▐ Advocacy (oral and written)
▐ Legal risk management
▐ Literature and legal search
▐ Witness hearing
▐ Settlement
▐ Legal drafting

CROSS-FUNCTIONAL SKILLS
Transferable know-how
beyond a functional area

Example of common cross-funtional skills

▐ Negotiation
▐ Business writting
▐ Presentation and moderation

GENERAL SKILLS
Personal traits, general abilities and
behaviours portraying EPO values

General skills for NWoW

▐ Impactful communication
▐ Adaptability
▐ Inclusive relationships
▐ Healthy teleworking
▐ Resilience
▐ Digital fluency
▐ Self-mastery

FUNCTIONAL SKILLS

CROSS-FUNCTIONAL SKILLS

Skill Framework

GENERAL SKILLS

Source: EPO

Based on the skills framework and the 70:20:10 principle, one key priority is to provide all staff members with learning journeys. This ensures that our staff remain at the cutting edge of their fields, as well as boosting engagement. To this end, **tailored development programmes** have been designed and rolled out for specific roles, namely for examiners and formalities officers and for learning, legal, general administration, HR essential services, and customer engagement professionals. The rest will be completed in 2023. These learning journeys are normally three-year rolling programmes which will be validated against the E3 (expiring/evolving/emerging) skills and updated as frequently as these changing skills dictate. As various Communities of Practice (CoPs) were initiated (see under Goal 3 below), a tailored development programme was also launched in which all EPO staff could participate. To date, 150 staff have taken part in this programme. All in all, tailored development programmes covered approximately 87% of staff by the end of 2022.

In 2022, a series of **eight iLearn Days** were organised around various strategic themes, including digital transformation, NWoW, change, quality, and

sustainability. Throughout the year, 12 630 staff attended these events, which help colleagues to connect and develop crucial skills. In addition, access to the **iLearn portal** was improved with the aim of providing easier access to learning activities classified as per the 70:20:10 model for each function, enabling individuals to shape their own learning journeys. Moreover, various learning events and repositories have been systematically incorporated into the iLearn brand — making it the single point of access for all e-learning needs.

Creating peer-to-peer learning opportunities

The EPO has been investing heavily in peer-to-peer learning for over 20 years with the **Continuous Knowledge Transfer (CKT)** team at the forefront in keeping examiners and formality officers abreast of the latest technical, legal, and tool-related developments. Fostering collaboration and knowledge sharing and providing easy access to relevant knowledge — this is how we would like to manage knowledge, which is the key asset of our organisation. In 2022, CKT was given an official home as part of the newly created Knowledge Management Unit (KMU), to support their grassroots initiatives and deploy knowledge sharing to more business areas across the organisation. CKT activities had a high outreach and impact in 2022. More than 500 peer-to-peer events took place with almost 20 000 participants. Daily tips for all staff are published on the intranet and were consulted by around 5 000 individual staff members in 2022. Over 700 different staff members contributed to this peer-to-peer knowledge sharing, either with presentations or day tips.

People management skills were defined to reflect the managerial style we strive for, acknowledging the importance of managers as catalysts for engagement and change. These skills are consistently used for development of managers. One of the key development activities was the launch of the **Management Community.** This is a space for learning, sharing, and engaging managers via peer-to-peer exchanges, collaboration, and teamwork. By the end of 2022, 538 managers had signed up to it and attended meetings, such as Office Hours — sessions hosted by units or experts on specific topics; or used resources such

as manager briefing kits, community corner, various learning supports, news, posts and management calendar.

A new round of the mentoring programme for managers (LEAD) also took place with more than 130 managers involved as mentees and 70 internal, senior managers participating as mentors.

People management skills were defined to reflect the managerial style we strive for, acknowledging the importance of managers as catalysts for engagement and change.

With notice periods generally lasting around three months, we want to use this time to acquaint new recruits with the EPO and their new colleagues, and to provide varied learning resources to help them hit the ground running on their first day. We have therefore introduced the role of the "**onboarding** partner" to facilitate integration and development of new colleagues during their first six months. A pilot was also started to look at **offboarding** and, especially, to ensure the retention of EPO-critical knowledge when experienced staff leave. The ultimate goal is to create a virtuous cycle linking the leavers offboarding and sharing knowledge with the onboarding newcomers.
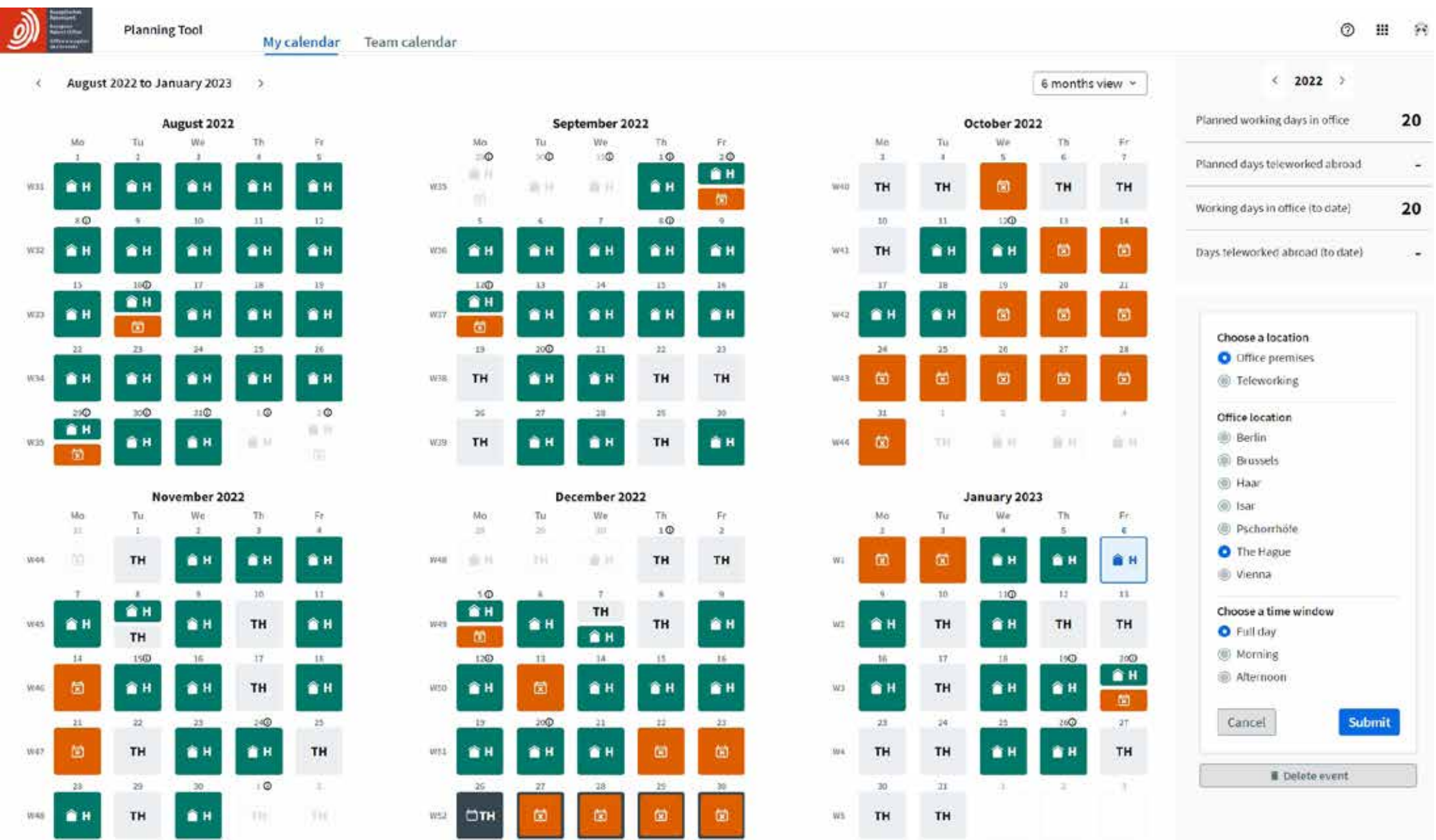
Offering an attractive social package

An important element for both attracting and retaining top people is offering a best-in-class social package. As a self-financed organisation, the EPO provides **welfare support** (social security, pensions, allowances, and remuneration) to current, former, and future staff members and their families. In 2022, several policy changes were implemented, including improved **family-friendly benefits**. The options for taking parental leave were made more flexible and medical coverage for children beyond the age of 18 was enhanced.

FOSTERING ENGAGEMENT AND A SENSE OF BELONGING

The introduction of the **NWoW** pilot represented a milestone for the EPO: in 2022 the EPO left behind the pandemic's emergency teleworking mode and opened a fresh chapter in its history. After more than four decades of operating as a principally office-based organisation, the NWoW guidelines came into effect for a two-year pilot, allowing greater flexibility regarding when and where we work. The pilot builds on the learnings and experiences that served the Office well during the pandemic. It provides staff with significant flexibility to balance their work and personal life whilst providing the tools and mechanisms for managers and staff to continue to get the work done and ensure there remains a continued sense of belonging for all colleagues. The pilot structure allows ample opportunity to finetune the scheme as needed. Initial results from the end of 2022 show that staff are making extensive use of the offered flexibility framework while delivering their high-quality work.

Making that shift to the new pilot scheme required the introduction of new tools and the modification of existing ones to fully support the new guidelines. One example is the new **Planning Tool** that has been introduced to record working locations and facilitate connections with team members. Additionally, to enable efficient use of our facilities, a booking tool was launched, allowing booking of shared workplaces, meeting rooms and charging stations for electric vehicles.
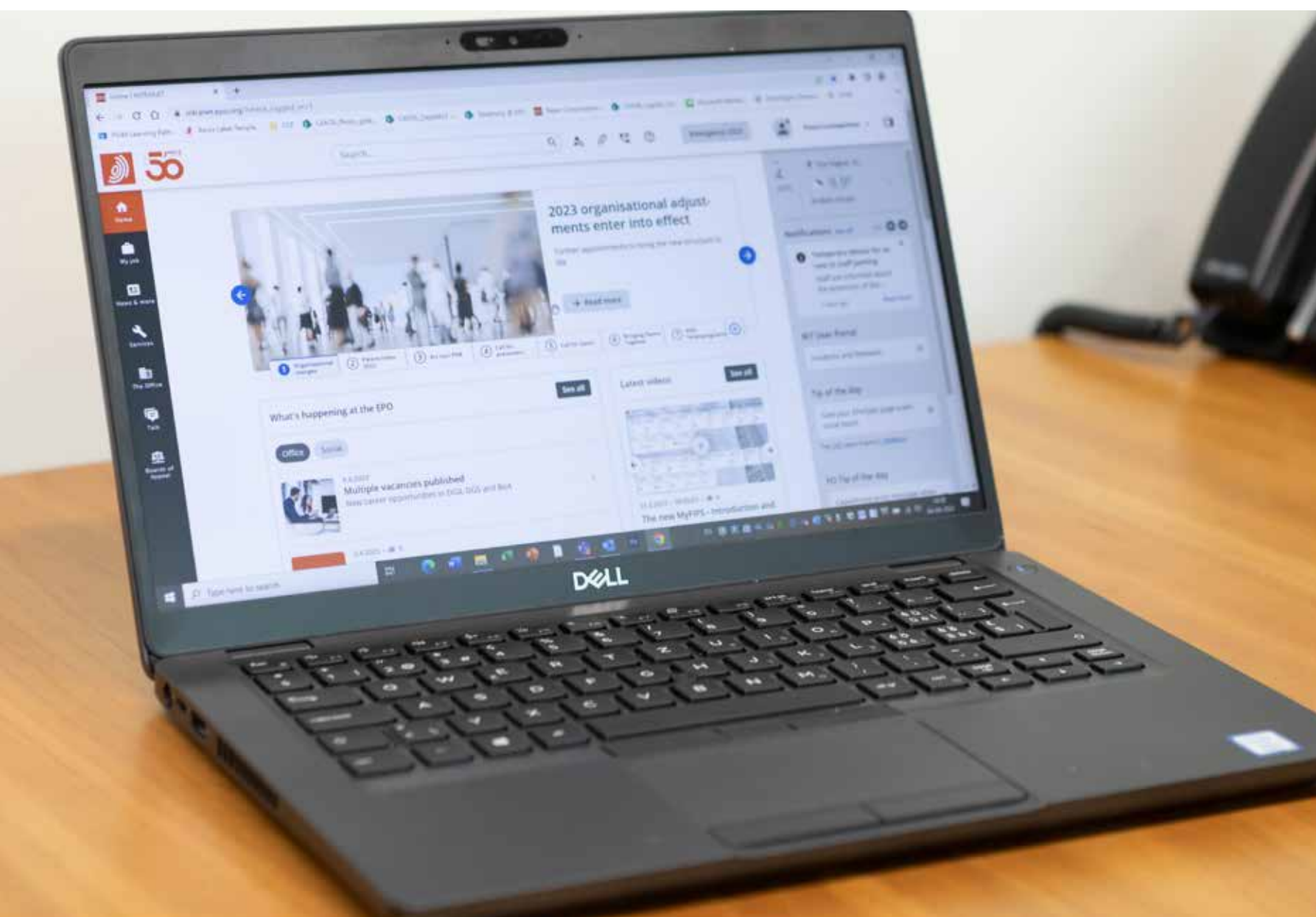
Figure 5 – **Planning Tool**

Source: EPO

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Figure 6 – **New intranet**

Source: EPO

A **new intranet** was made available with a modern, responsive design that supports access on all devices with content structured by user needs. It provides a new digital home for everyone and helps to ensure full support for the new ways of working pilot. The homepage provides a gateway to the latest news, videos, and upcoming events, as well as current topics of strategic importance and all EPO social media channels.

The **audio-video systems** were also modernised with new devices providing improved audio and video quality.

With the wide flexibility provided under the NWoW pilot, we needed to re-think how we make best use of our buildings as our professional homes. With a large proportion of staff often choosing to work remotely, empty spaces were created in the office buildings. The project **"Bringing our teams together"** aimed to create a working environment in which the staff that work predominantly from the office buildings can experience a vibrant office environment and those that come in less often can be close to their team members, thereby fostering a sense of belonging. The moves also enable a more sustainable use of our premises. In 2022, the project was completely rolled out in the Munich Isar building.

Figure 7 – **New Ways of Working scheme**

84% vs 2019 ▲ **+6%** Believe their work schedule allows sufficient flexibility to meet their personal/family needs

76% vs 2020 ▲ **+10%** Have what they need to work effectively remotely

79% vs 2020 ▲ **+23%** Managers feel positive about managing hybrid teams
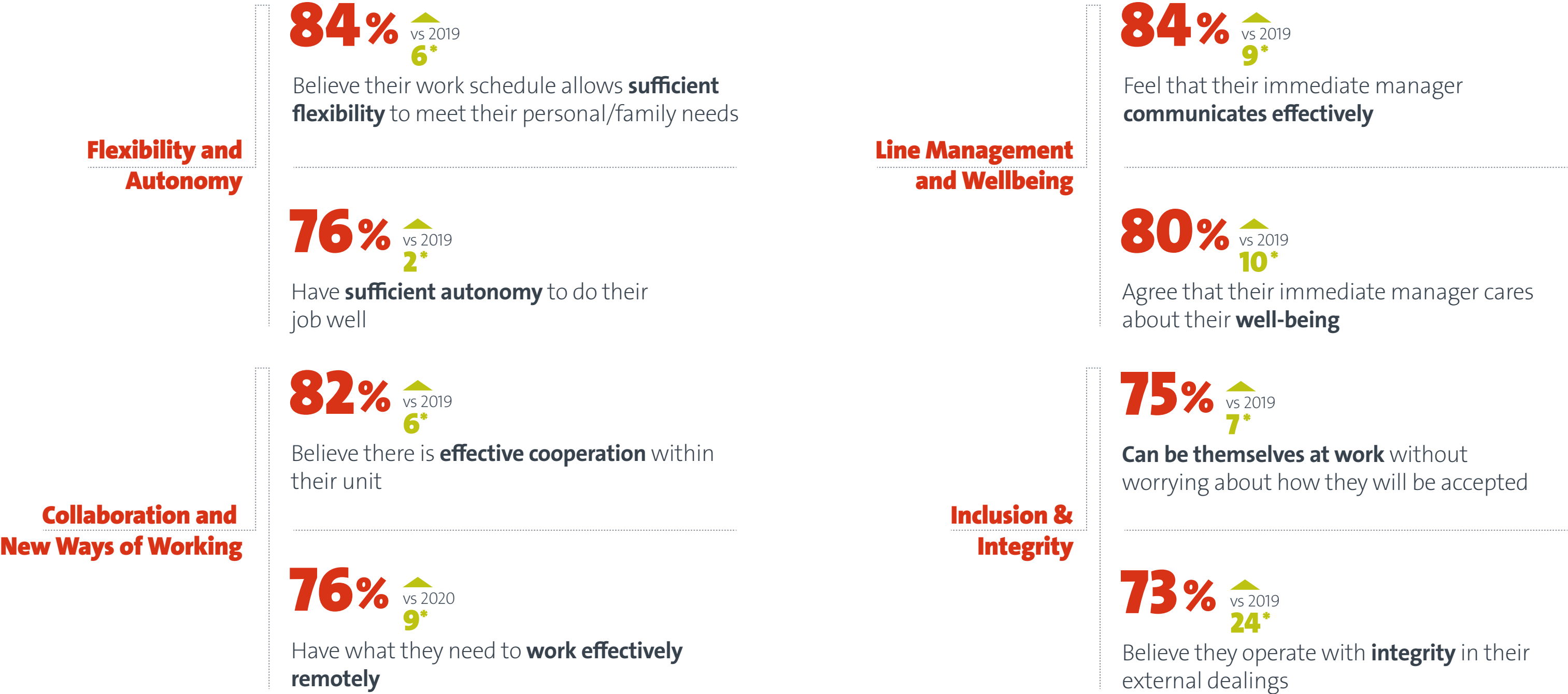
Source: EPO

Staff engagement is one of the EPO's priorities and underpins all of our efforts in Goal 1. With the deep transformation in our organisation stemming from the NWoW pilot, ensuring a strong sense of belonging in the EPO community is more important than ever. In 2022, we continued to monitor the levels of engagement, collaboration, and development among our staff through a staff engagement survey 2022 "Together, stronger" conducted in June. The survey received an 82% participation rate with 5 000 respondents and 15 000 open comments. The results provided valuable insights into various organisational aspects after a period of intense internal and external challenges.

The EPO has made many improvements, particularly in areas such as empowerment, D&I, creating a more agile culture, and enhanced collaboration.

Despite this challenging global context, the EPO improved in most aspects of the survey. The results showed positive trends in 10 out of 13 categories compared to the 2019 survey. The EPO has made many improvements, particularly in areas such as empowerment, D&I, creating a more agile culture, and enhanced collaboration. The survey emphasised increased flexibility, empowerment, and caring for each other's wellbeing. It also highlighted the line managers' efforts in managing their remote and hybrid teams, which were appreciated by their staff.

Figure 8 – **EPO strengths**

Flexibility and Autonomy

84% vs 2019 6*
Believe their work schedule allows **sufficient flexibility** to meet their personal/family needs

76% vs 2019 2*
Have **sufficient autonomy** to do their job well

Collaboration and New Ways of Working

82% vs 2019 6*
Believe there is **effective cooperation** within their unit

76% vs 2020 9*
Have what they need to **work effectively remotely**

Line Management and Wellbeing

84% vs 2019 9*
Feel that their immediate manager **communicates effectively**

80% vs 2019 10*
Agree that their immediate manager cares about their **well-being**

Inclusion & Integrity

75% vs 2019 7*
Can be themselves at work without worrying about how they will be accepted

73% vs 2019 24*
Believe they operate with **integrity** in their external dealings

Source: Willis Towers Watson 2022 report

The long period of pandemic restrictions had negatively affected coping with challenges and reduced energy levels. The results also showed that there was more to be done to develop connections between colleagues and a sense of belonging. Scores on the competitiveness of remuneration in comparison to the external market had declined.

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The survey was conducted just as the transition measures of the NWoW pilot entered into force, giving a good overview of changing trends in preferred ways of working towards increased interest in teleworking. The survey confirmed that actions and decisions taken during the pandemic, such as offering more flexibility, have borne fruit in many ways, with staff showing appreciation for flexibility and autonomy, and positive trends in being equipped and able to perform.

To follow up on the results of the survey, Office-wide priorities were defined around three areas: becoming more **Focused, Connected, and Supported.** These priorities will guide the follow-up measures across the organisation in 2023 towards enhanced simplification and prioritisation, fostering the sense of belonging, and improved support of staff by their managers. One of these activities will be the organisation of campus days and celebrations around the 50th anniversary of the European Patent Convention in 2023, to strengthen the connection and engagement of staff. Further details on the survey results can be found in the Engagement Report 2022.

A modern and successful organisation is one that **includes all of its staff.** Further to the actions already mentioned in the areas of recruitment, the social package and flexible working conditions, the Office also intends to update its rules and regulations to ensure that they include all staff and are fit for a modern forward-looking organisation. This work has started with a review of the EPO's Service Regulations for possible

Figure 9 – Isar daylight project

Source: EPO

amendments on substance or gender-neutral language. The first topics to be tackled are regulations around parenthood and partnerships.

CREATING AN ATTRACTIVE, SUSTAINABLE, AND HEALTHY WORKING ENVIRONMENT.

With the changes to our way of working, the importance of our buildings in fostering a sense of belonging and acting as a **professional home for staff** to connect and socialise has become even more important. In 2022, the EPO completed several projects to make our buildings more energising places to work.

The **Isar daylight project** was completed on time and within budget, with staff able to move back into the building in September. The project transformed the floors of our Munich Isar building into a vibrant and attractive working environment with corridors now flooded with daylight and spaces which encourage collaboration.

Figure 10 – **Vienna Green Hub**

Source: ATP Wien Planungs GmbH

In Vienna, the construction works for the **Vienna Green Hub** started, to provide our Vienna staff with a modern vibrant working environment fit for the NWoW. The building is designed to be carbon negative once in operation, meaning that more renewable energy will be created by photovoltaic panels and geothermal energy than the building is consuming. The energy will be stored first in our batteries to be used during the night, and then the surplus will be fed back to the local energy grid. This will even compensate for the carbon emissions caused by the construction by 2050 at the latest. The building will also be flexible and adaptable to our needs. In 2022, staff were relocated to a rented building so the construction work could begin.

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Next to these two building projects, progress has been made on the priority building works focusing on ensuring that our professional homes meet the highest **safety and sustainability** standards. The escalators in the Munich Isar building have been upgraded with a start/stop-mechanism with an energy saving corresponding to the average annual energy consumption of 35 households in Germany. Other priority building projects such as the renovation of the elevators in the PschorrHöfe and the upgrade of emergency doors in the Isar building progressed well. Following the results of a safety audit, upgrades of the fire safety installations in Munich Isar (smoke detectors) have been carried out. In terms of supporting **business continuity**, works have started in the main building in The Hague to move the Main Network Infrastructure room to the first floor. This will significantly increase the IT security resilience.

As also mentioned under "Fostering a sense of belonging", the **"Bringing our teams together"** project was first rolled out in the Munich Isar building. During 2023, it will be realised office wide. It supports a more sustainable usage of space by avoiding unused workplaces for the staff who choose to mainly work from home. With environmental sustainability at the forefront of our efforts, this reorganisation will help to reduce our energy consumption and carbon footprint. For example, when the Shell building is empty, the reduced energy usage will represent a yearly saving of 14GWh, corresponding to the consumption of over 1000 households.

SOCIAL DIALOGUE

The Office continued to foster social dialogue in 2022 on a wide range of topics as defined in the Social Agenda 2022 as well as other topics that arose during the year.

Discussions on priorities for the Office including the NWoW pilot, the Young professionals programme and the SNEs scheme concluded with tangible results. Other exchanges led to improvements for the benefit of staff encompassing more flexible parental leave and enhanced medical coverage for children aged 18 to 26 years. Following constructive exchanges with social partners, increased transparency was provided for the staff recruited under the New Employment Framework by implementing a consistent 5+5 policy with regard to the length of contracts and implementing a 12-month notice period for all. 2022 also saw the first full year of operation of the **education and childcare allowance reform**, which aims to be a fairer and simpler support scheme for staff with children in education. A new online self-service portal was launched for claiming education allowances, providing greater transparency and control over data.

At the request of the staff representatives, the Office agreed to set up a working group within the Central Occupational Health, Safety, and Ergonomics Committee to discuss the implementation of the findings of the study on the Office's **health services.** The resulting proposed improvements to the healthcare services including the implementation

of a seamless sick leave process will be implemented gradually during 2023. This new process means that a single health professional will now accompany a sick colleague through their entire sick leave and recovery process. A general tender on the occupational health services had a positive outcome and significantly reduced the number of health providers, simplifying the vendor management. The recertification of the occupational health services under ISO45001 reconfirmed the value of its quality and services.

A new online self-service portal was launched for claiming education allowances, providing greater transparency and control over data.

The Office has continued to implement the decisions of the ILO Administrative Tribunal (ILOAT) on Social Dialogue topics including regulations on staff committee elections and nominations by the Staff Committee to the Appeals Committee.

After several working group meetings culminating in a General Consultative Committee consultation, the **Handbook on workplace ethics** was published in November 2022 to promote shared values and positive behaviour including the 10 inclusive behaviours.

All of these achievements were the result of **more than 100 meetings with the staff committees and unions in 2022.**

OPERATIONAL EXCELLENCE AND EFFICIENCY

Operational excellence underpins all Goal 1 activities: with efficient and transparent processes, the EPO can provide the highest quality of services for staff and other stakeholders.

HR processes

The Office continues to strive for operational excellence and efficiency in all areas, including **human resources** (HR). The full, end-to-end, digitalisation of the recruitment process is an example where a hybrid digital/manual process has been rationalised into a seamless, more efficient digital experience offering better control of data quality. Additionally, in the area of talent management the Office has enhanced its digital systems to better follow-up on and manage increasing volumes of internal mobility in line with the Office's ambitions in this area.

A very practical change introduced in 2022 was the modernisation of the service regulations surrounding the electronic personal file of employees. Bringing this regulation up to date eliminated the need for printing, signing, and scanning documents into the file. This not only saves paper but also makes for a more efficient process.

2022 also saw the first full year of operation of the **education and childcare allowance reform,** which aims to be a fairer and simpler support scheme for staff with children in education. A new online self-service portal was launched for claiming education allowances, providing greater transparency and control over data.

The Office also made several improvements to the **occupational health services** for its staff. The regulatory basis for the implementation of the seamless sick leave process was adopted, meaning that a single health professional will now accompany a sick colleague through their entire sick leave and recovery process. A general tender on the occupational health services had a positive outcome and significantly reduced the number of health providers, simplifying the vendor management. The recertification of the occupational health services under ISO45001 reconfirmed the value of its quality and services.

Financial and procurement processes

The EPO aims to improve the efficiency and transparency of its financial and procurement processes. In 2022, we launched a **fully digitalised budget data collection process,** through the new budgeting system SAP Analytics Cloud. In the past, the data were collected via an email exchange process. The new budgeting process allows an enhanced collaboration across DGs, as well as the creation of a single true source and better traceability. Another milestone was the centralisation of

all payment methods (bank transfer, credit card, and deposit account) accepted by the EPO in the new **Central Fee Payment Portal.** This consolidation under one single portal led to a simplification of the EPO's revenue recognition processes. For users, the new portal offers a highly intuitive and user-friendly experience with a modern 'web shop' style interface. The full decommissioning of the old online fee payment was completed in September 2022.

In procurement, 2022 saw the implementation of a new tool for **digitalised contract management.** Approximately one third of the commercial contracts have been transformed into standard clauses and have been implemented in the new procurement tool iValua. This new tool now integrates in one environment the templates used for contract creation, the contract repository of running contracts, and the contract approval and contract signature workflow. These enhancements increase the efficiency of the overall process. Also contributing to this was the full digitalisation of the **contract signature** workflow through the implementation of an e-signature tool. This has allowed us to reduce the time required for contract initialling to just one day, and for contract signature to less than two days for internal EPO signature, compared with over a week before.

GOAL 2

SIMPLIFY AND MODERNISE IT SYSTEMS

Annual Review 2022

Goal 2
Simplify and modernise IT systems

The EPO continued its digital transformation journey in 2022, releasing state-of-the-art tools and platforms, while decommissioning obsolete legacy solutions.

DIGITALISATION OF THE PGP

A milestone was reached in 2022 with the digitalisation of our backend PGP via the new **digital file repository (DFR),** a digital archive storing all the relevant documents of a file and a tool allowing collaboration and sharing of intellectual work. DFR **integrates fully with the internal patent workbench** — the central hub for procedural workflows, end to end connecting seamlessly formality and examiner tasks — as well as with the external user area, MyEPO Portfolio, and other tools. This change enabled us to smoothly decommission the legacy digital archive tool (DI+), which is based on old technology, in our core business. Towards the end of the year, DFR was fully rolled out to all other areas of the organisation, including the Boards of Appeal (BoA). This gives everyone access to a single source of data, including annotations, and avoids cumbersome transfers between systems.

Figure 11 – **Digital File Repository**
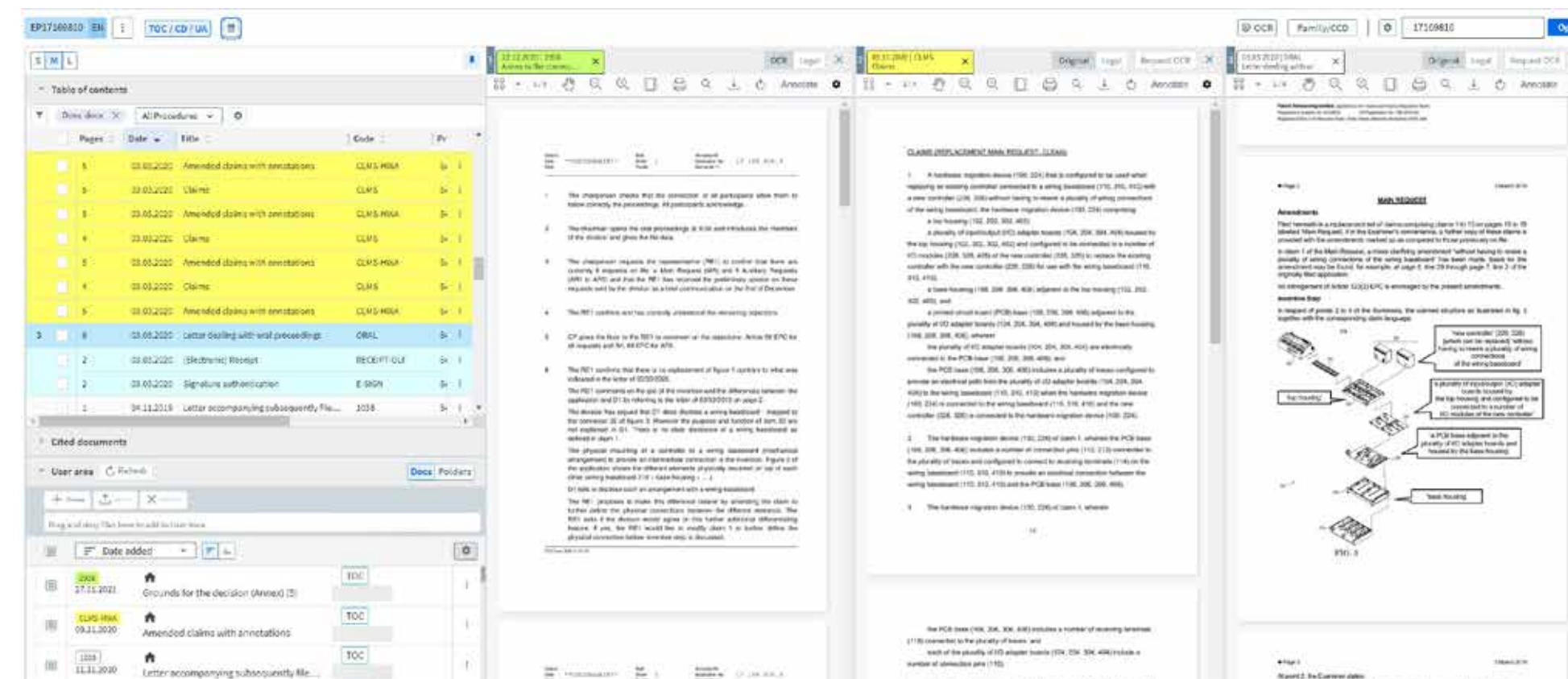
Source: EPO

Workload management functions were gradually integrated in the patent workbench, including the first release of the **digital file allocation (DFA).** The DFA contains the basic functionalities allowing allocation to be **performed from the patent workbench** and facilitating more efficient file distribution — getting the right file to the right examiner. This will replace the digital file marketplace, reducing complexity.

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In 2022 the integration of **digital exchanges with WIPO** in our PGP process started with the PCT Receiving Office (PCT-RO) and International search reports. The new process **moves away from image manipulation into structured data** for ex-officio corrections in the PCT-RO phase. The solution is **integrated with patent workbench**, relies on a modern platform and is ready to use with the ePCT application programming interfaces. We addressed the six main PCT data flows, which altogether represent two-thirds of the total volume of PCT data exchanged between the EPO and WIPO.

Concerning the **Unitary Patent**, we performed end-to-end user testing of new tools, focusing on their interoperability, and implemented necessary changes to the existing tools, so that our IT systems would be ready for the start of the Unitary Patent in 2023 (see "Unitary Patent package" under Goal 4).

Online Filing 2.0 had been launched in 2021. It incorporates and improves the features of the legacy online filing service (also known as CMS), **covers all procedures before the EPO** (including procedures before the BoA), and offers a more user-friendly interface. Following a transitional period when the two tools ran in parallel, the **CMS eFiling was decommissioned** on 1 January 2022, contributing to the optimisation of the toolset offered to our external customers.

To support the digital transformation in the EPO's PGP, the Administrative Council adopted a first package of **legal changes** in October. The power to decide on presentation requirements for documents is delegated to the President and a first decision of the President restates these requirements. The EPO may make documents cited in search reports available to the public via digital services instead of transmitting them, thereby reducing paper consumption significantly. A new regime for notification and the calculation of time limits will enter into force in November 2023. It will align the EPO's notification regime with the digital reality and the PCT system, with 99% of communications being delivered online, and will abolish the additional 10 days calculated for delivery by postal services. Importantly, the EPO will maintain its duty of proof and the safeguards familiar under the PCT will be introduced. Communication and training for the new system is ongoing.

In response to external users' expectations, a **digital patent grant certificate** was introduced, upgrading the certificate to a modern and more appealing design. The new design reflects the EPO's commitment to digitalisation, modernisation, innovation, and sustainability. Proprietors or representatives can also now quickly and securely download grant certificates from their Mailbox.

The EPO may make documents cited in search reports available to the public via digital services instead of transmitting them, thereby reducing paper consumption significantly.

IMPROVEMENTS TO CLASSIFICATION AND SEARCH

In 2022, we focused efforts in the core business area on **ANSERA**, our main tool for all search work, which led to improvements in its stability, performance of search algorithms, visualisation of results, user interface, and overall reliability. The ANSERA viewer received a series of performance improvements and saw the implementation of new functions. A new search navigation, which improves the ergonomics and usability, lists all search actions taken in a panel and examiners can easily switch between the respective document sets and continue from the last viewed position.

An additional function was introduced in ANSERA, called ATopUp. Regular **top-up searches** for European and PCT applications at the end of examination constitute an essential element in the quality assurance of the EPO grant procedure. ATopUp improves on our legacy top-up tools as it is fully integrated into ANSERA, offering ranked results and filtering capabilities from ANSERA itself, and enables examiners to detect earlier national rights prior to grant as required by the Unitary Patent procedure. This means we can make ATopUp our single top-up search tool and decommission the legacy tools in early 2023.

A new internal **machine translation** engine was introduced within our PGP tools, capable of translating unpublished documents from several languages into English. This improves both pre-classification and pre-search results as documents in other languages (French and German) can now be included in the pre-search results and get a pre-classification from our AI tool. Previously these documents were excluded from automatic processing and needed to be manually processed. Extension of AI-based machine translation services to Chinese and Japanese was a significant step, as 46% of the full-text patent data in our databases are in these two languages.

The Initial Search and Data Analysis Ecosystem (**EPyQUE**), allows internal users to explore prior art and other data in a rich collaborative way, and provides a replacement for preparations for personal search and data analytics.

We focused on **supporting our users** in adopting ANSERA and efficiently using its new features by providing a wide range of training opportunities, written and recorded learning materials and tool demonstrations during "unboxing events".

Figure 12 — **ANSERA search results view**
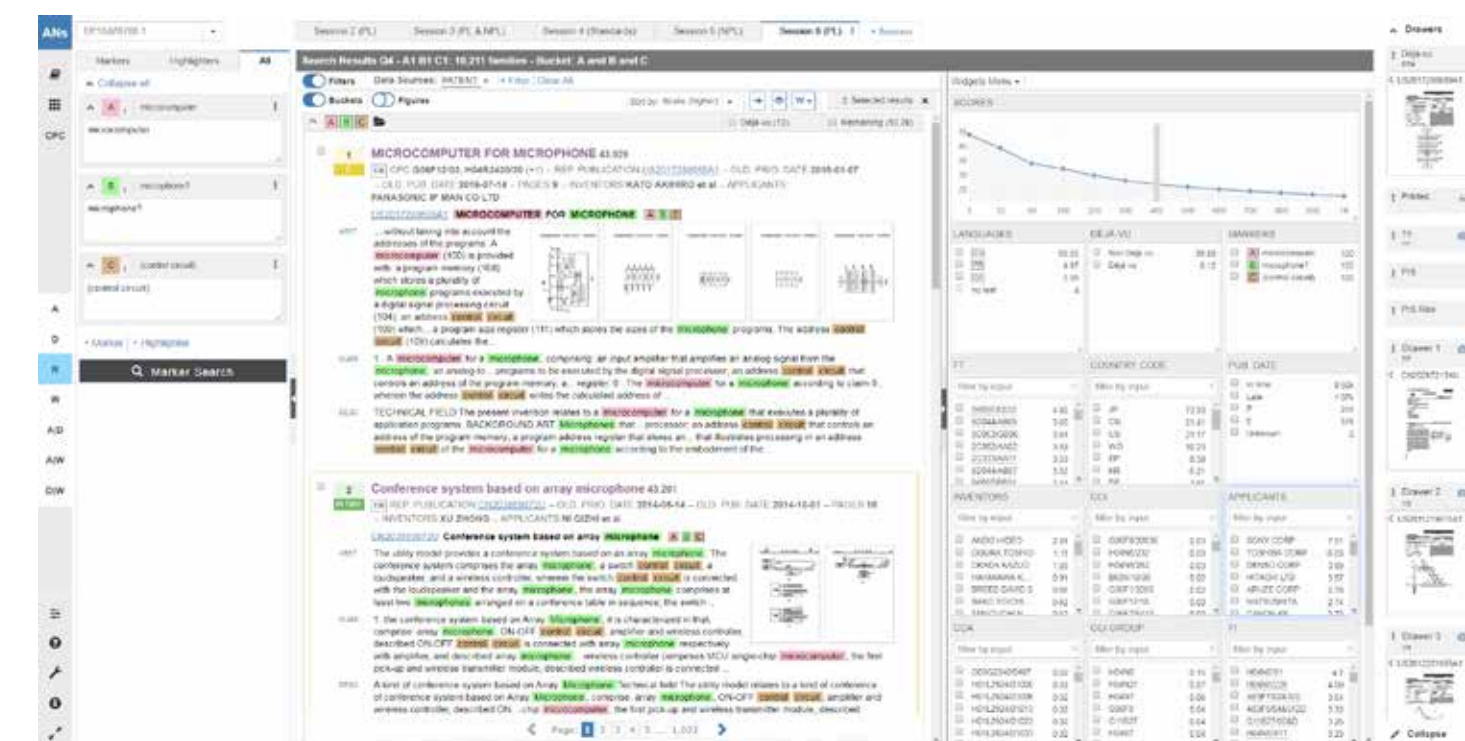
Source: EPO

In 2022 the **new classification tool**, Canopée, was fully integrated with and allowed classification of documents from ANSERA, without the need to switch to another application to perform normal classification tasks. In addition, Canopée offers an improved user experience and better performance and provides a foundation for achieving efficiency gains as well as improved quality and precision of classification due

to its readiness for integration with artificial intelligence (AI). The tool was adapted to offer AI-generated predictions for Cooperative Patent Classification (CPC) symbols, which examiners can accept, reject, or modify. This service will be operational early 2023.

Figure 13 — **AI-supported classification for examiners**
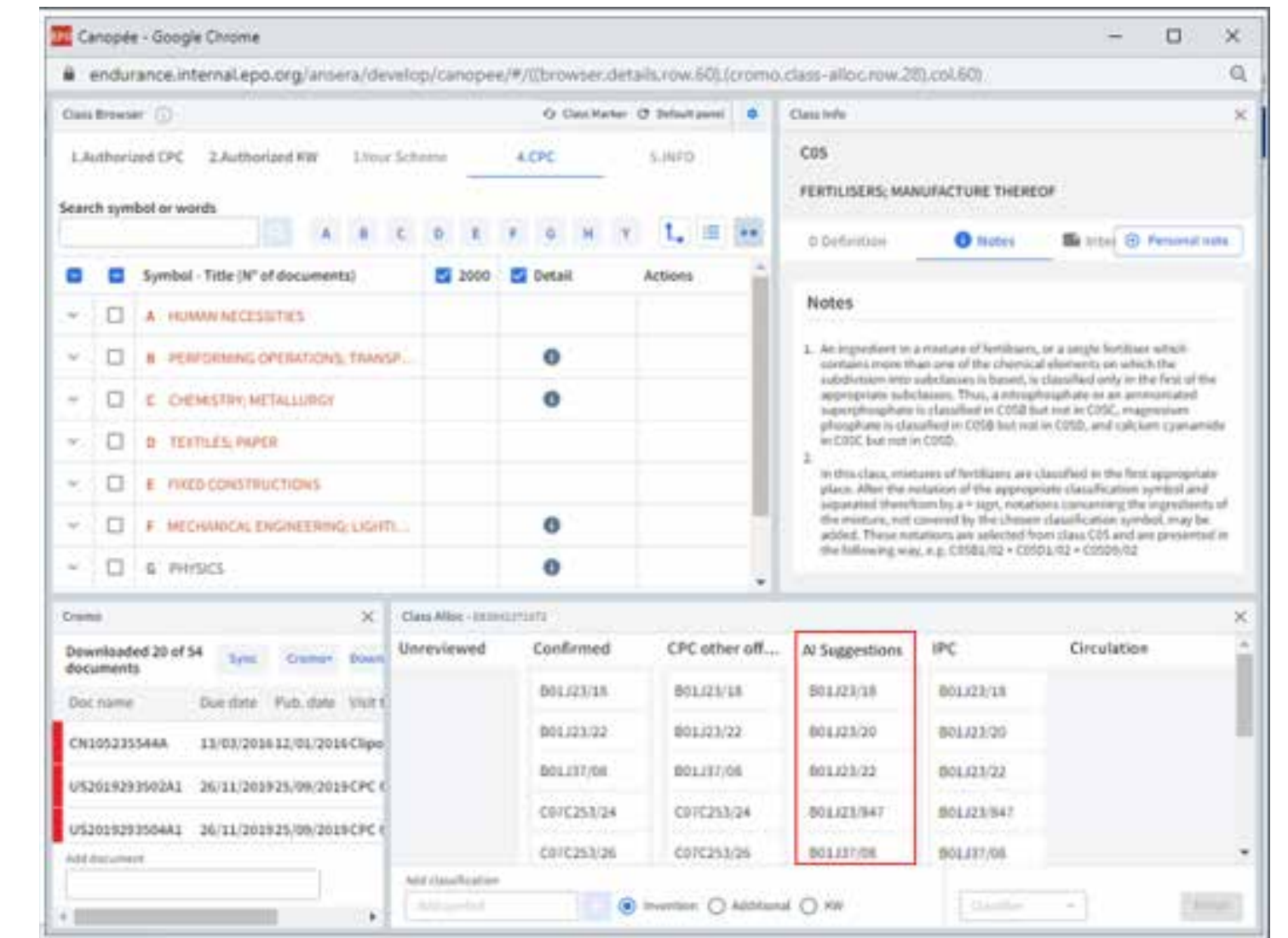
Source: EPO

The new classification tools (Classera/Canopée) complementing the new search environment will allow us to **decommission the legacy classification tools** in 2023.

Built in-house, our **AI-based pre-classification engine** was launched in 2021. Running in parallel to the legacy service, it demonstrated the ability to allocate files with greater accuracy, making the commercial product redundant. The contract with the external supplier of pre-classification symbols was terminated in 2022.
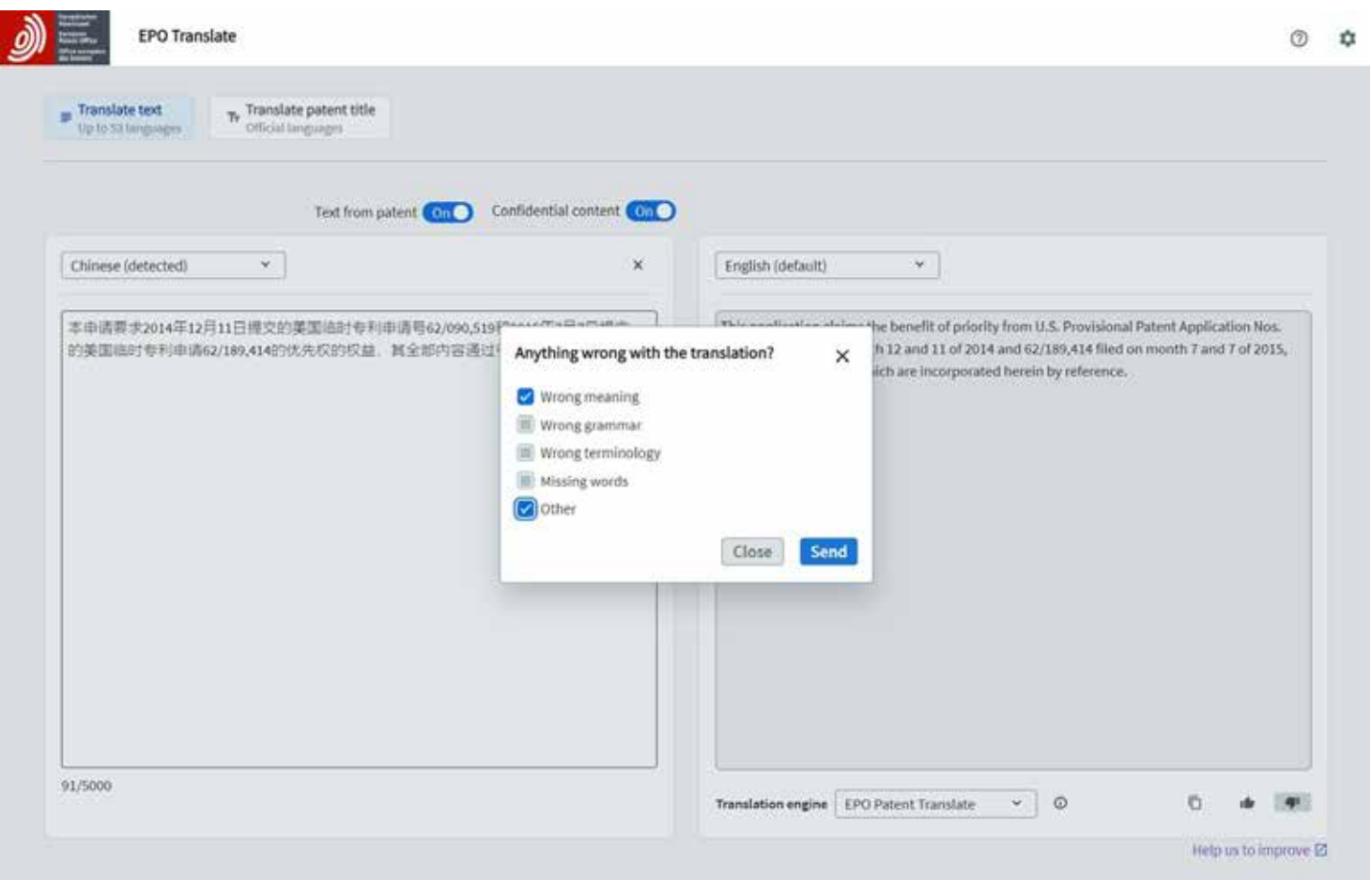
For the first time in 2022, the assignment of CPC symbols to new incoming documents in **Y02/Y04 (sustainable technologies)** was fully automated using an AI model. It replaced the semi-automatic classification based on examiner-maintained EPOQUE-preparations, improving timeliness and consistency of the classification, while ensuring high data throughput. In a similar way to the AI-assisted classification, the new tool makes suggestions to support reclassification for patent and non-patent literature. The solution is piloted for CPC reclassification in some revision projects.

In a similar way to the AI-assisted classification, the new tool makes suggestions to support reclassification for patent and non-patent literature.

EPO Translate was made available to all EPO staff and can translate between 56 languages, of which French, German, Dutch, Italian, Chinese, and Japanese are available for confidential translations. The new portal gives access to all machine translation engines of the EPO machine translation system. While some of these engines are specifically trained for processing patent text, EPO Translate also offers an engine for general language text translation. With the progress of machine translation, the Office has replaced the outsourced human title translations with in-house secure machine translation.

Figure 14 – **Feedback mechanism in EPO Translate**

Source: EPO

We delivered a priority-document **blockchain** prototype that includes a distributed system of computers and participants. Owning a working solution that allows the exchange of encrypted documents with external entities constitutes a major knowledge gain on the blockchain technology. Now we are waiting for partners willing to explore with us future applications, such as the exchange of priority documents.
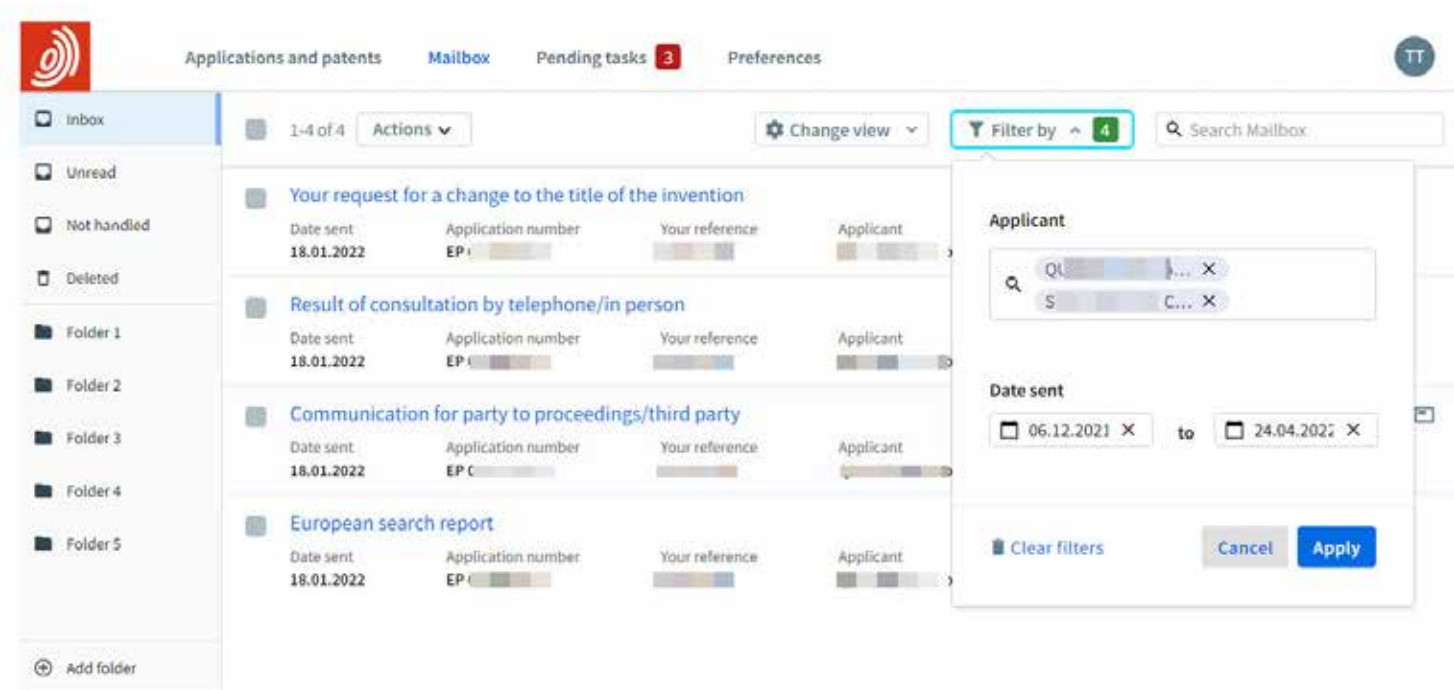
INTERACTING WITH THE USER COMMUNITY

Figure 15 — **MyEPO Portfolio user interface**

Source: EPO

A key aspect of the EPO's digital transformation is to improve our interactions with users, making interactions more efficient and helping to reduce paper consumption. After a seven-month pilot phase involving over 180 external participants, **MyEPO Portfolio** was launched on 1 June 2022. It is a web-based online service that offers a simplified approach in procedural submissions. Parties to proceedings and their representatives before the EPO can now use the **EPO Mailbox** to view their applications and documents and reply to EPO communications. International agents and non-European applicants in the international phase of the PCT can also access their communications via EPO Mailbox thanks to the first delivery of a second new pilot that was launched in November.

Usage of the Mailbox by companies continued to grow, reaching 1 306 active companies by the end of 2022, a 26% increase over the previous year.

Figure 16 — **Usage of Mailbox**

Contains all entries prior to 2012

■ Companies   ■ Active companies cumulated
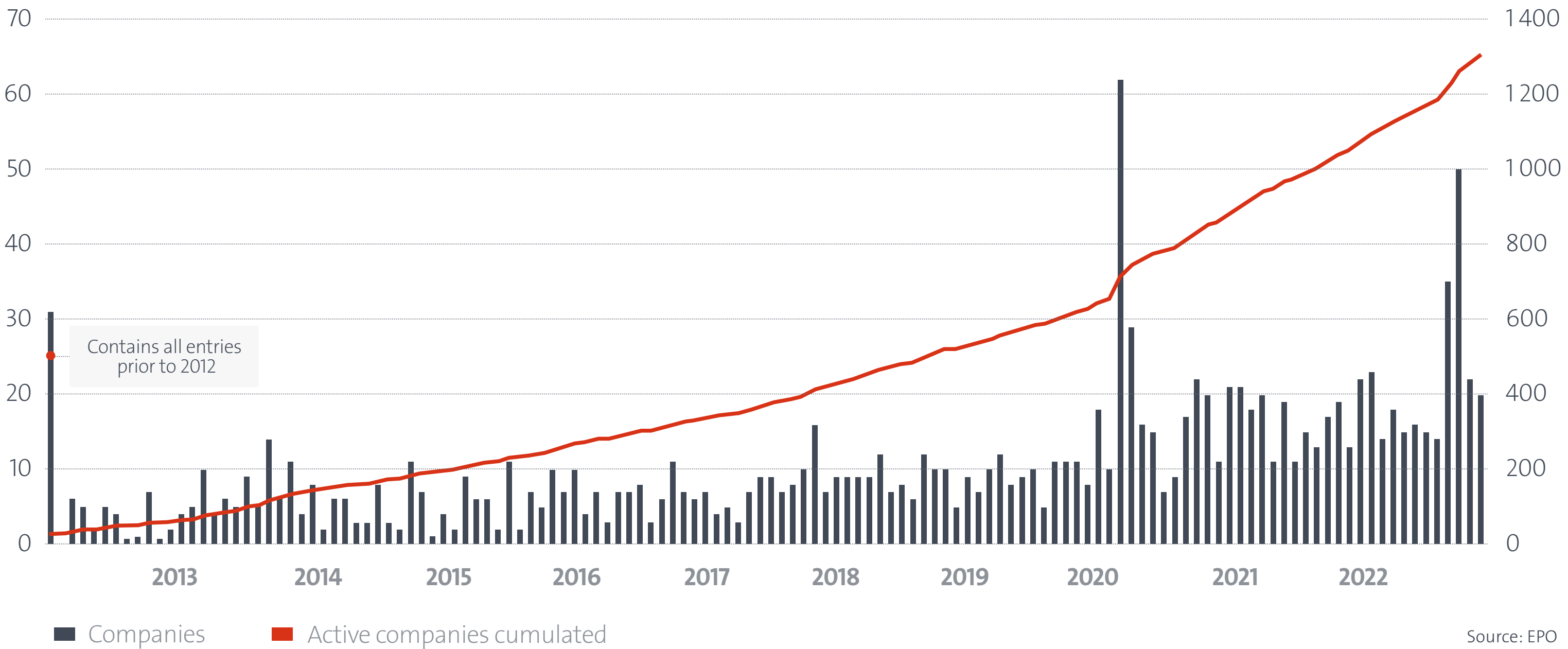
Source: EPO

With the ambition to improve the financial steering capacity of the Office, supporting the objectives of Goal 1, a new state-of-the-art controlling and accounting software tool has been implemented, providing the foundation for an end-to-end digital budget process.

Online services were further improved with a new **Central Fee Payment platform,** which also allowed for the decommissioning of the Online Fee Payment and Multipay tools. The Central Fee Payment is based on a standard e-commerce platform and makes available all payment methods via a single platform. It offers deposit account management, automatic debiting management, and the possibility to claim refunds. It is also future-ready with all the features required for the Unitary Patent.

The quality of customer care was improved with new state-of-the-art **Customer Relationship Management** technology introduced, integrating modern best practice processes from ServiceNow Customer Service Management and built-in integrations with collaboration tools and the IT service management solution which supports end-to-end delivery of IT services. This has created a platform for all first-line agents, formalities officers, and other case handlers to have all required information at a glance allowing them to focus on the user's enquiry and concerns with assistance and documentation from the tool, and ultimately provide a higher quality service to the user. After the implementation, the legacy toolset was decommissioned.

The EPO has also redoubled efforts to enable users to carry out a number of changes to their own portfolios by themselves. This will streamline selected client data changes, making application management more agile for our users.

DIGITALISATION OF CORPORATE SERVICES

The EPO's digital transformation encompasses not only the PGP, but also its **corporate services.** In 2022, core **HR processes** continued to be simplified and digitalised, supporting the objectives set in Goal 1. The recruitment process was digitalised end-to-end with the introduction of revamped internal and external job portals. Other changes in the HR area included digital processing of medical certificates and a new self-service portal for reimbursement of education costs under the recently renewed regulations, providing greater transparency and control over data.

With the ambition to improve the financial steering capacity of the Office, supporting the objectives of Goal 1, a new state-of-the-art controlling and accounting software tool has been implemented, providing the foundation for an end-to-end digital budget process. The tool has been made available to all budget planning stakeholders, allowing us to replace manual spreadsheet-based submissions with digitalised workflows, and has been successfully used for the annual budget cycle 2023.

The roll-out of an office-wide **single point of storage and management for documents** started in 2022, with the aim of safeguarding the EPO's knowledge and history. Designed to manage administrative document repositories, the platform is being gradually extended to cover the various areas of the Organisation. The Office also prepared and adopted a **Retention Policy** for its documentation, supporting its sustainability agenda and extensive digitalisation. The policy provides a framework of general principles, rules, and conditions for the retention of several types of files and records at the EPO.

STRENGTHENING INFORMATION SECURITY

It is of utmost importance for the EPO that we can rely on the highest levels of information security to **safeguard our data in order to protect users and staff.** Building on the Information Security Policy framework approved in 2021, in 2022 we focused on embedding information security management best practices in our daily work. Following an external audit, the EPO received ISO/IEC 27001:2013 certification of our information security management system in October 2022. This certification confirms the EPO's ability to use a globally recognised method to manage information security risks and reinforces the trust our clients place in us.

In 2022 we continued to develop our **authentication systems.** A new Customer Identity and Access Management portal was deployed, providing a uniform and secure platform for external users to manage their accounts and preferences. This also enables alternative authentication methods, replacing the traditional EPO smartcards. This functionality is already available in the Central Fee Payment platform.

Cyber defences were expanded and enhanced in 2022 and campaigns to highlight the importance of user awareness of cybercrime continued.

MODERNISING INFRASTRUCTURE

Today, technology powers nearly every aspect of modern organisations. To keep up with the fast-paced digital landscape, IT infrastructure needs to be reliable, secure, and most of all flexible and accessible. In 2022 we completed two major projects which directly contribute to the long-term sustainability of the Office: **decommissioning of the mainframe and migration of data centres.** The outdated, expensive, and complex legacy mainframe was replaced by a modern system as a foundation of a fully digital PGP. The EPO Production data centre is now located in Luxembourg and all IT systems have been migrated.

Figure 17 – **EPO data centre in Luxembourg**
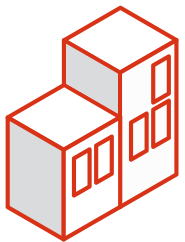
New state-of-the-art Tier IV facility
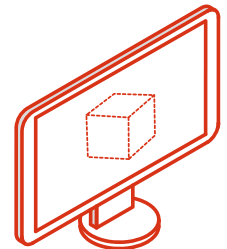
Highly secure and energy efficient

21.4 pB* of raw storage

498 servers

1 323 virtual machines

*pB = petabyte. Measure of memory or data storage capacity. It is a multiple of a byte, equal to 1 000 terabytes.

Source: EPO

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Following the completion of the mainframe re-platforming and data centre migration, we continued working on the availability and stability of our IT systems with a full understanding that any failure of our IT systems has a direct impact on our activities and on our ability to provide high-quality services to users. This resulted in achieving 97.04% availability at the end of 2022 and meeting the excellence target set in the BSC (96.5%).

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GOAL 3
DELIVER HIGH-QUALITY PRODUCTS AND SERVICES EFFICIENTLY

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European Patent Office
Office européen des brevets
Europäisches Patentamt

EUROPEAN PATENT CONVENTION

50 years 1973 / 2023

epo.org

Goal 3
Deliver high-quality products and services efficiently

QUALITY, SIMPLY DELIVERED ON TIME

Building on the professionalism and expertise of our highly qualified staff and our world leading databases and state-of-the-art tools, the EPO in 2022 continued to focus on the substantive quality of our products and services.

For the global patent system to remain effective and sustainable in the face of rapid geopolitical, economic, and technological change, it is vital that patent offices deliver **high quality, legally robust patents**. The European patent system – and its reputation for quality – is a success story built on the foundation of the European Patent Convention (EPC), which was signed 50 years ago this year. This year's Quality Report, which is an annex to this Annual Review, represents the most comprehensive and broadest analysis of our metrics, targets, performance and actions taken in quality during 2022.

Achieving quality is both a shared journey and a shared responsibility with our users – but we also need to agree what we are measuring and how – what is a quality patent? One of the objectives in SP2023 was to answer that question with our users. The **Patent Quality Charter** is the result, it has been in development since 2019 and came into effect on 1 October 2022. It is the product of collaboration between industry, EPO member states, and our staff in fora such as the Standing Advisory Committee before the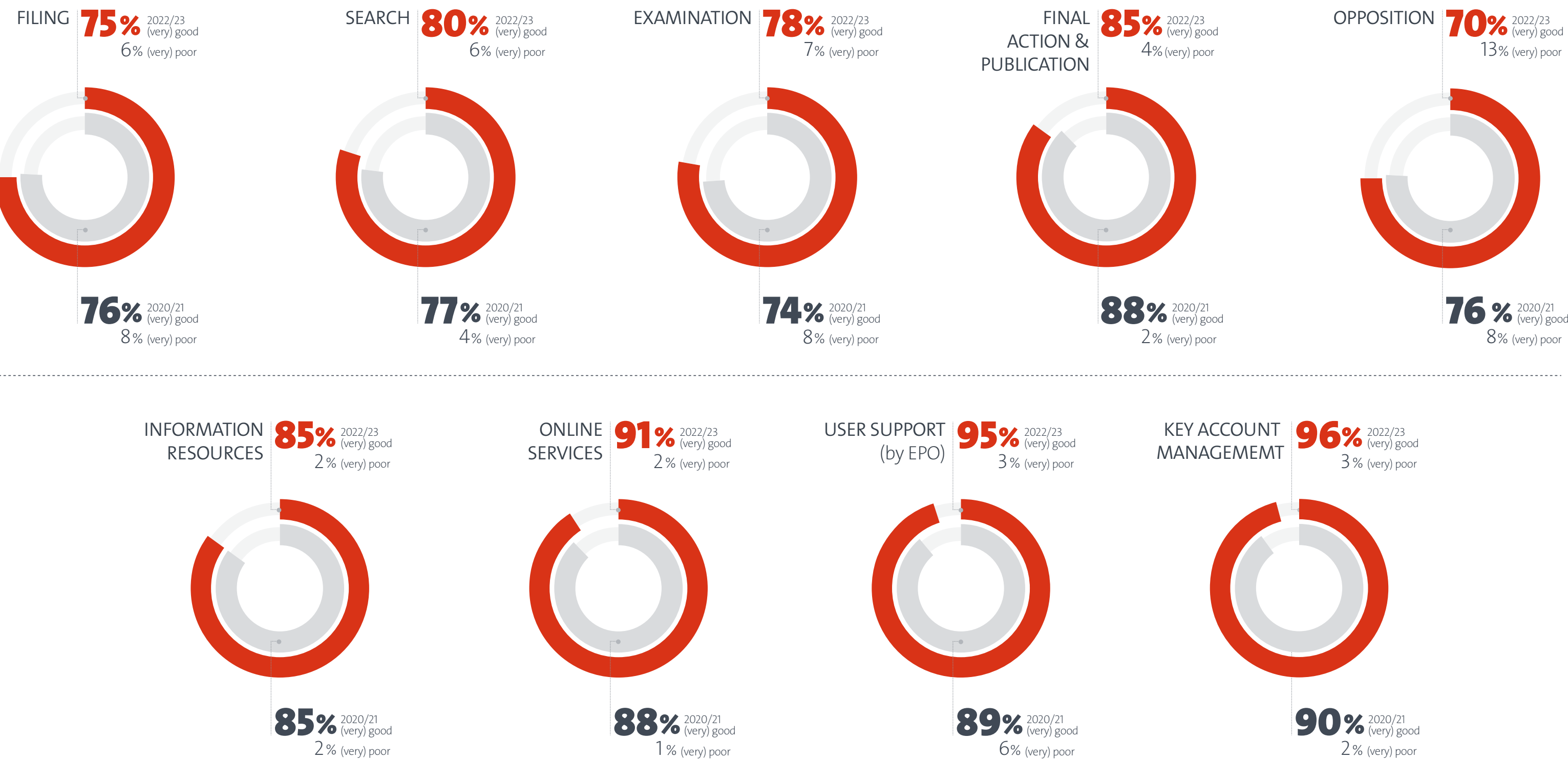 European Patent Office (SACEPO), and the Technical and Operational Support Committee (TOSC). The Charter recognises the importance of high-quality patents to industry and that users require the highest levels of legal certainty and timeliness. It sets out a set of principles that reflect how we will work with all users of the patent system to bring excellence to all areas of the patent granting process, fostering innovation, competitiveness, and economic growth to contribute to a more sustainable world.

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ASSESSING OUR QUALITY

What do our users say about the quality of our services? – Our independent User Satisfaction Survey (USS)

Figure 18 — **User Satisfaction Surveys 2022/2023 main results**

FILING
75% 2022/23 (very) good
6% (very) poor
76% 2020/21 (very) good
8% (very) poor

SEARCH
80% 2022/23 (very) good
6% (very) poor
77% 2020/21 (very) good
4% (very) poor

EXAMINATION
78% 2022/23 (very) good
7% (very) poor
74% 2020/21 (very) good
8% (very) poor

FINAL ACTION & PUBLICATION
85% 2022/23 (very) good
4% (very) poor
88% 2020/21 (very) good
2% (very) poor

OPPOSITION
70% 2022/23 (very) good
13% (very) poor
76 % 2020/21 (very) good
8% (very) poor

INFORMATION RESOURCES
85% 2022/23 (very) good
2% (very) poor
85% 2020/21 (very) good
2% (very) poor

ONLINE SERVICES
91% 2022/23 (very) good
2% (very) poor
88% 2020/21 (very) good
1% (very) poor

USER SUPPORT (by EPO)
95% 2022/23 (very) good
3% (very) poor
89% 2020/21 (very) good
6% (very) poor

KEY ACCOUNT MANAGEMEMT
96% 2022/23 (very) good
3% (very) poor
90% 2020/21 (very) good
2% (very) poor

Source: BERENT, EPO

In 2022 we both published the results of our previous independent USS and under this framework we also launched a new series of surveys on 1 September 2022, which ran until April 2023. This started with the interview-based USS on opposition services and ended with examination services. This survey comprised a dedicated questionnaire on oral proceedings (OP) by videoconference (VICO), according to which 77% of respondents found OP by VICO to be good or very good. In total, we had 7 000 respondents to the 2022/2023 User Satisfaction Surveys, 1 000 more than the 2020/2021 survey. The results allow us to assess areas of strength and in particular areas for improvement which will feed into our quality management process for 2023. We were able to maintain our **high levels of user satisfaction** and even improve in certain areas, such as examination with 78% rating the service as good or very good up from 74%. If those who rated the services as neither good nor poor are added, this rises to 93%. Our search services received a rating of 80% of good or very good and only 6% being dissatisfied with our search service. Further details of this latest survey are in the Quality Report and the full data will be published on our website.

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Strengthening our independent audit processes

In 2022 our independent Directorate Quality Audit (DQA) identified further ways in which our rigorous audit procedure could be improved. In October 2022 a **new digital process for sampling search files and files proposed for grant** was introduced. Directly integrated into the electronic workflow of the patent workbench, the sampling allows for more efficient auditing and improved randomness across all technology communities.

2022 saw the first full year of our toughest, broadest and deepest quality checks in our searches to date. Since October 2021, search audits focus not only on completeness and correctness of the search but also include the written opinion. Despite these enhanced and stringent criteria, **82.6% of our searches had no findings**, the rest mostly relating to formal issues or invalid objections which, whilst areas we want to improve, did not hinder their overall compliance with the EPC or PCT legislation. As in previous years, the percentage of cases where potentially more relevant prior art was found by the auditor remains low at 5.9%. In terms of examination we consolidated the progress made, with over **76.6% of grants showing no findings.** An in-depth presentation of our audit findings is detailed in the annexed Quality Report.

To leverage the learning opportunity from our audits, we reinforced the audit dialogue. In addition to the face-to-face meetings between auditors and divisions in controversial cases, colleagues from Principal Directorate Quality and Practice Harmonisation confidentially review all the findings to inform and to prioritise quality harmonisation actions.

Opposition quality audit in 2022 was still a post-process check. Out of 100 samples randomly selected out of the EPO decisions issued in 2021, **96 were found to be correct.** Eight cases presented minor reasoning deficiencies or formal inconsistencies that did not challenge the overall decision. In only four decisions did the auditors disagree with the decision taken by the opposition division, showing an improvement over the previous exercise carried out in 2018.

Stakeholder Quality Assurance Panels – Assessing quality with our users

Dialogue with our users is a very fruitful way of learning and continuously improving. In a new development in October 2022, the **Stakeholder Quality Assurance Panels (SQAPs)** performed the first joint panel assessment involving EPO experts and European patent attorneys from all technology areas. Focusing on grant stage, the panellists identified areas of convergence and divergence in interpretation, highlighted areas of good practice to encourage areas for learning and improvement. The findings were presented to the SACEPO working party on quality in November 2022. Overall the panellists found a high level of compliance with the EPC, areas for improvement in encouraging dialogue between the examining division and applicant during the examination stage and areas of disagreement over the practice of bringing the description in line with the claims. More information can be found in the annexed Quality Report under the section dedicated to SQAP.

Quality assurance

Having a well-structured quality policy and corresponding processes is of utmost importance to our quality landscape. Each year, in November, the President takes stock of the Office's quality performance and endorses objectives for the coming year. This results in a **Quality Action Plan,** published internally to ensure a common understanding of the Office's quality priorities. In 2023 the Quality Action Plan will focus on: shared journey, substantive quality, harmonisation, and learning.

Our rigorous approach to quality was confirmed by the external ISO 9001 audit in September 2022, reinforcing our commitment to provide users of the patent system with the highest quality of products and services.

Quality at every stage of the patent granting process

The EPO prides itself on delivering the highest standard of quality at every stage of the patent granting process (PGP).

A complete and accurate search report and written opinion

During 2022, following the unprecedented transformation to the way we work, we focused on getting the most fundamental of our products **right the first time.** This means, providing a complete and accurate search and comprehensive written opinion upfront in the procedure.
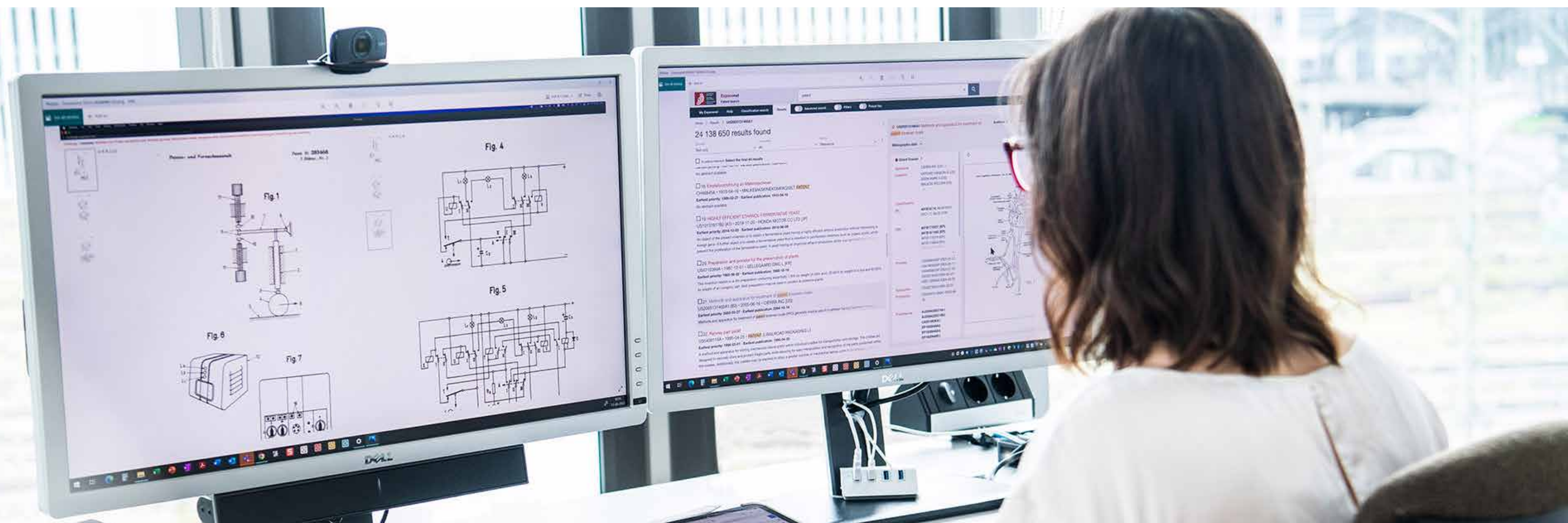
ANSERA has become our undisputed focal tool for search, incorporating dedicated functions for finding national prior rights, in the context of Unitary Patent protection. Additionally, it now integrates the classification functions thanks to Canopée and Classera (see Goal 2). This strengthens the convergence of our tool systems and the efficiency of the PGP.

Through ANSERA, examiners have access to continuously improving **technical documentation and databases** and by applying AI in pre-classification, our modernised classification tools provide AI suggestions to classifiers on relevant CPC classification. The thoroughness of our searches is evident in the ability of EPO examiners to find highly

pertinent documents, and also the diversity of types of prior art used. **EPO patent examiners have now access to the world's most extensive prior art collection.** It comprises 82 million patent families, grouping 146 million patent publications (up from 130 million in 2020) and over one billion manual and automatic annotations and enrichments for these documents. In terms of volume, this represents over 1 000 terabytes of information, roughly equal to 500 billion A4 pages of text. In 2022, the EPO's collection of standards-related documents grew to 4.6 million, up from 4.4 million in 2021.

Citations of non-patent literature in European search reports increased by 13% from 77 000 to 87 000 between 2021 and last year. Among those,

4.8% of EPO search reports contain at least one standards document, up from 4.4% in 2021. Among a number of technology specific databases, our examiners also have access to, and cite documents from, databases related to traditional knowledge and from the Community Plant Variety Office. Furthermore, the increasing importance of Asian prior art and the ability of EPO examiners to retrieve it are reflected by the fact that approximately **48% of EPO search reports contained at least one patent citation of Asian origin.** Full details of our search and citation practice can be found in the annexed Quality Report.

Further on this front, we also executed 330 bilateral harmonisation projects with the USPTO, which have led to 100 revision projects to improve the CPC and pursued the AI based classification of our backfiles. But all these measures would be of little value without a proper allocation of the searches upfront.

In 2022, the patent workbench was enhanced to incorporate the Digital File Allocation (DFA) functionality: this not only facilitates **allocation in digital environment,** it also looks for the most technically competent examiner and division from across our examining teams. At the same time, we fully rolled out the Digital File Repository (DFR). This ensures that all intellectual work is available end to end across the organisation, resulting in **optimum access to our resources** and allowing examiners to share information and work together on files strengthening our quality.

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Getting the file to the right division is only part of the equation. We must also ensure that the division works together on the file bringing their vast knowledge and expertise to the task and sharing that knowledge with their colleagues. On search, one of the issues identified by the DQA audit was that in some cases examiners raised objections that were not supported by the prior art – another topic was completeness of search. To address both issues, during 2022 we piloted a strengthened **engagement of the division at the search stage.** In this pilot the chairperson of the division was consulted on all searches. Those who took part expect fewer errors or invalid objections than for those files where no consultation took place. This collaboration at very early stage was appreciated and increased the ownership of quality. Dialogue in the division, upfront, leads to a smoother and more efficient examination process later on and, given the success of this pilot, it will be rolled out to all teams and all searches during 2023.

The EPO aims to deliver a complete and comprehensive search reports enabling applicants to make informed decisions. In 2022, **84.5% of EPO search reports identified at least one document that was prejudicial to the novelty or inventive step** of at least one of the claims. Only 14.7% of searches did not cite any document which was particularly relevant for novelty or inventive step. Positive search opinions are issued when the examiner identifies no reason, formal or substantive – not just novelty and inventive step, but also e.g. clarity – that would prevent the grant of a patent once the application has entered the examination phase

before the EPO. In 2022, the rate of positive search opinions remained stable at around 7%.

The EPO aims to deliver a complete and comprehensive search reports enabling applicants to make informed decisions.

A thorough and consistent examination

An effective dialogue between examining divisions and applicants/representatives is key to a smooth examination process. This dialogue takes place in several forms including telephone conversations and oral proceedings. However, a major part of the communication takes place in written format. It is therefore very important that **our written communications are of the highest quality** to support mutual understanding of the points raised.

To further promote consistency and completeness of our written communications, in 2022 we piloted a **common format for communications issued for European patent applications.** The communications were structured according to a defined set of headings arranged in an order designed to be logical and helpful. Following

positive feedback from users who received these communications, the use of the common structure will be expanded in 2023 to all examination teams.

Another area of focus for us in 2022 was the topic of added subject matter. To address this a **new tool was developed to assist the examining division in assessing the compliance of the application** with regard to **added subject-matter** and integrated in the patent workbench. Furthermore, an evaluation to identify best practices to perform added matter checks was carried out. This has led to improvements in the processes and the development of new job aids, which are now available to all examiners – although it is not possible to make a direct link, we see a reduction in the findings of our DQA on this non-compliance, which is positive. We hope to further improve our compliance with this article of the EPC throughout 2023.

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In addition to the checks of the amendments made by applicants, it is essential to ensure that **no additional prior art has become of relevance during examination.** This has become of particular importance in view of the introduction of the Unitary Patent, for which national prior rights may be relevant. To improve quality further, in 2022, ANSERA was improved to include an extended top-up search functionality to assist examiners with the identification of national prior rights. This additional service is provided free to all applicants.

Consistency and harmonisation in examination practice

In our many meetings with users and user associations in 2022 the topic of **consistency of practice and internal harmonisation** was raised. The meetings indicated that our quality was second to none but that consistency could be improved. In the present technology landscape, with increased multi-disciplinarity cutting across traditional areas, improving consistency and harmonisation can be challenging. To address this and to improve consistency we took several concrete measures in 2022.

As part of the response to feedback from our users requesting increased consistency of practice, we undertook the most thorough ever **reorganisation of our operational units** in 2022. Our unprecedented digital transformation enabled us to bring neighbouring technical fields

from different sites together under one manager. This reorganisation, based on the UN Sustainable Development Goals (SDGs) resulted a new structure of eight technology communities.

Eight categories – or **technology communities** – were identified, as shown in the diagram below. Each of these technology communities matches one or more industrial ecosystem(s) and the SDGs.

Figure 19 – **EPO Technology Communities**

Source: United Nations, EPO

As part of the response to feedback from our users requesting increased consistency of practice, we undertook the most thorough ever reorganisation of our operational units in 2022.

Giving a new home, reflecting technology development to our operational teams, has been an important step to ensure internal harmonisation and consistency across traditional areas. A new **practice harmonisation dashboard**, detailed in the annexed Quality Report, was introduced in parallel to our organisational improvements, in order to provide an overview of consistency of practice across units and technical areas. Such an overview of certain aspects of examination practice fosters a dialogue to address the possible reasons for a variation in practice, and whether it is appropriate. In 2023, the dashboard is to be provided anonymously to examiners to facilitate the dialogue with the line manager.

But we know that quality and consistency reach far deeper than organisational changes and tools: essentially, they depend on people. At the same time, we observe that inventions are increasingly complex and multi-disciplinary. As a knowledge based organisation we have a rich and sometimes complex network of experts and groups across our organisation. Under SP2023, we sought to bring a clearer structure to these networks and groups and we established an **office-wide ecosystem of Communities of Practice** (CoPs). These foster the EPO as a learning and knowledge-based organisation by connecting people. The aim of all CoPs is the efficient dissemination and embedding of knowledge. Where appropriate, CoPs encourage best practices and consistency of approach. CoPs include opposition, Asian Patent Expert Group, computer-implemented inventions (CII) network, artificial intelligence (AI)/machine learning network, additive manufacturing, formalities officer connect, internet search network, unity, standard defining organisations, and parameters.

A fair and impartial opposition procedure

Opposition proceedings are traditionally dealt with by specifically trained and experienced examiners. Considerable efforts were made in 2022 to further develop their skills, in particular those of chairpersons, with a focus on **dealing effectively with the new format of oral proceedings** (OP) **by videoconference** (VICO). As such, specific training material and guidance documents were developed to address, for example, general aspects of OP by VICO relevant to all legal or examiner opposition division members, specific procedures for chairpersons, and taking of evidence and hearing of witnesses.

In addition to our DQA audits, in oppositions, **a new approach for operational quality checks** has been introduced in 2022 placing a greater focus on targeted checks in specific areas by relevant experts, to detect any issues that may impact their quality. Quarterly quality round tables are now held with opposition directors and quality experts to identify learning points and follow-up actions. Furthermore, 87% of users rated the opposition services as good to very good in the most recent User Satisfaction Survey, confirming our internal findings.

On 1 April 2022, our examiner teams started working within one of these technology communities. The principle is simple: bringing together teams working on the same technology from across the three EPO examining sites. This change is **improving collaboration, consistency, timeliness, and quality,** and will help to facilitate better usage of patents in finding solutions to societal challenges.

As to the **outcome of opposition proceedings**, the proportion of patents revoked, amended, or upheld (roughly one-third each) over recent years is highly consistent, as shown in the graph below.

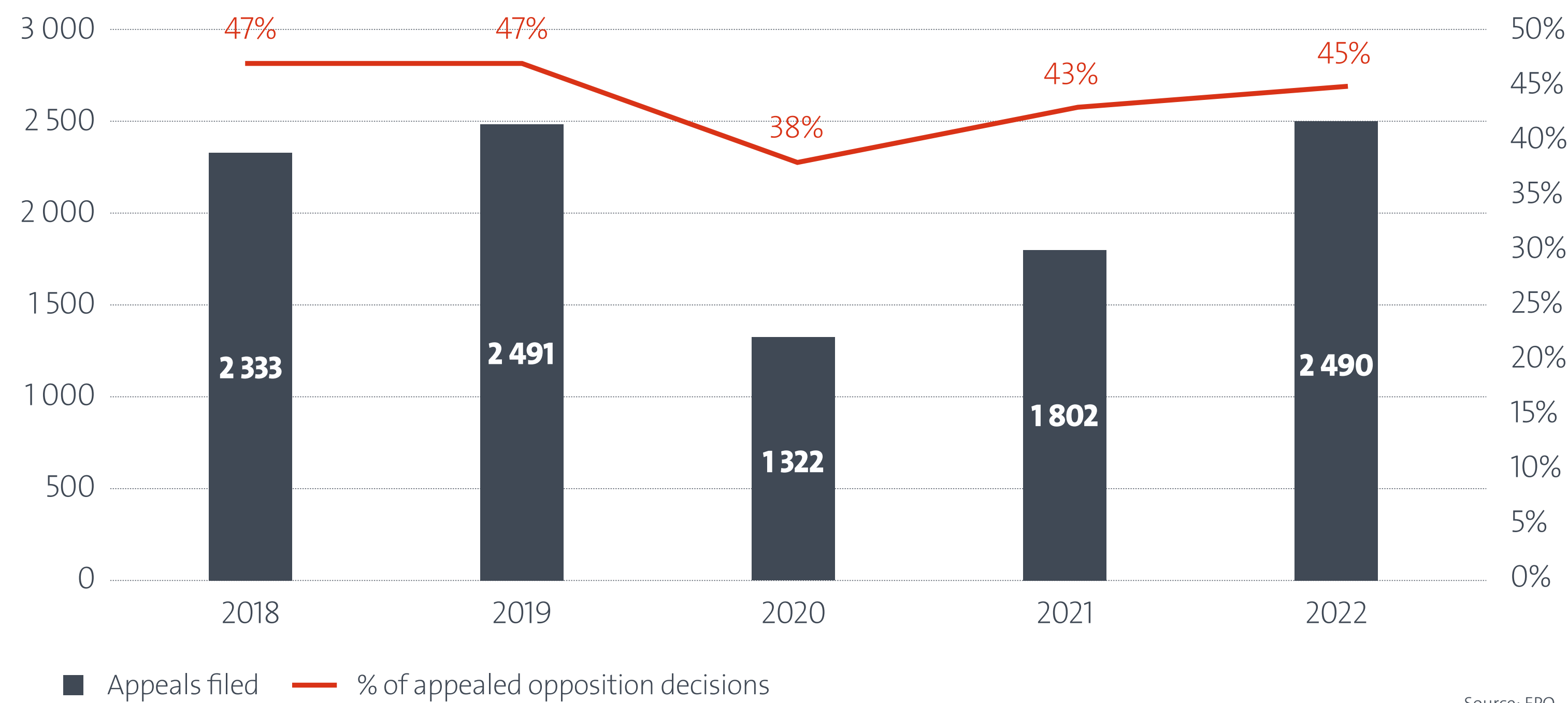Figure 20 – **Outcome of opposition proceedings**
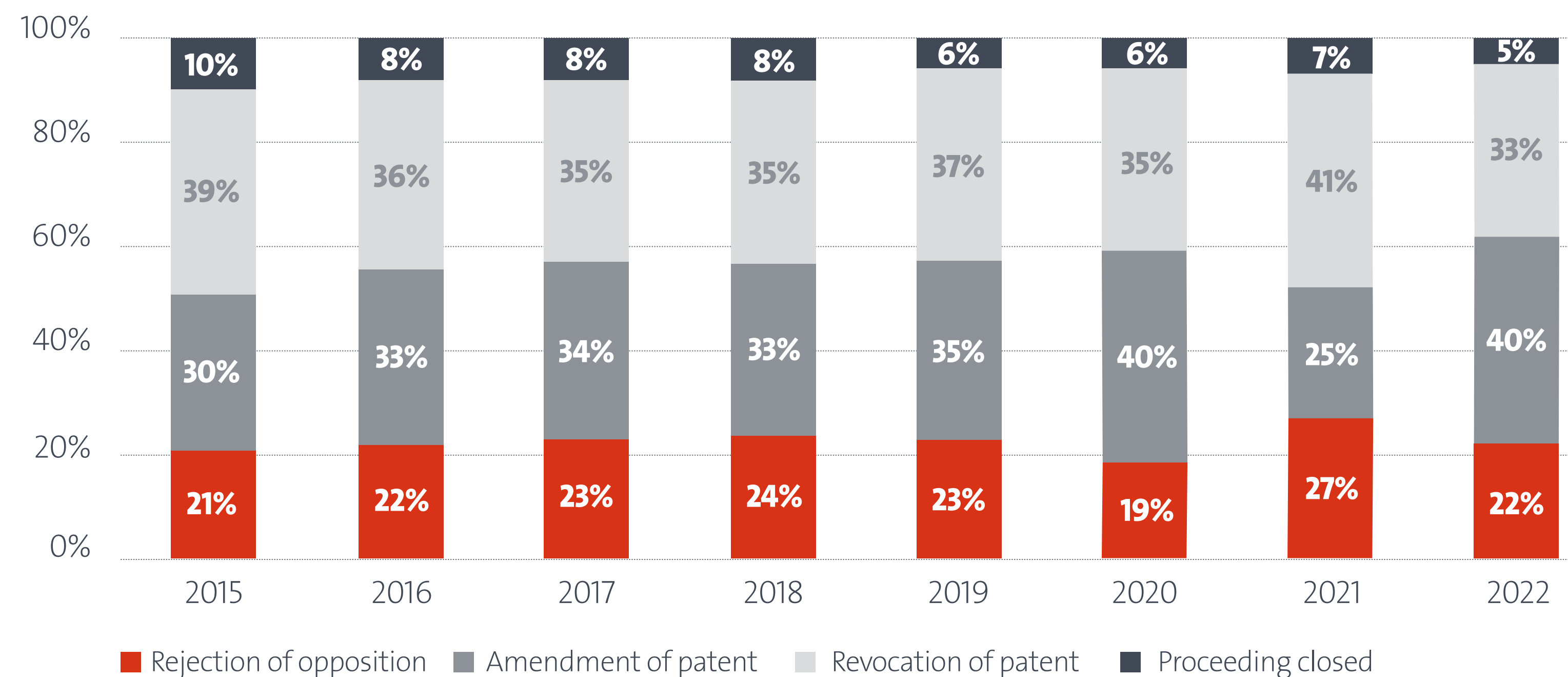
The fluctuation of outcome breakdown observed in 2020 and 2021 is mostly because in 2020 only a limited number of (the most straightforward) cases were finalised, due to the pandemic, which influenced the mix of cases dealt with in 2021 (and partly in 2022).

	2015	2016	2017	2018	2019	2020	2021	2022
Proceeding closed	10%	8%	8%	8%	6%	6%	7%	5%
Revocation of patent	39%	36%	35%	35%	37%	35%	41%	33%
Amendment of patent	30%	33%	34%	33%	35%	40%	25%	40%
Rejection of opposition	21%	22%	23%	24%	23%	19%	27%	22%

■ Rejection of opposition ■ Amendment of patent ■ Revocation of patent ■ Proceeding closed

Source: EPO

The **appeal rate on opposition decisions remained stable in 2022, at about 45%.** This represents only a very small proportion of grants in absolute terms and concerns files that are usually considered to be of high commercial and strategic interest.
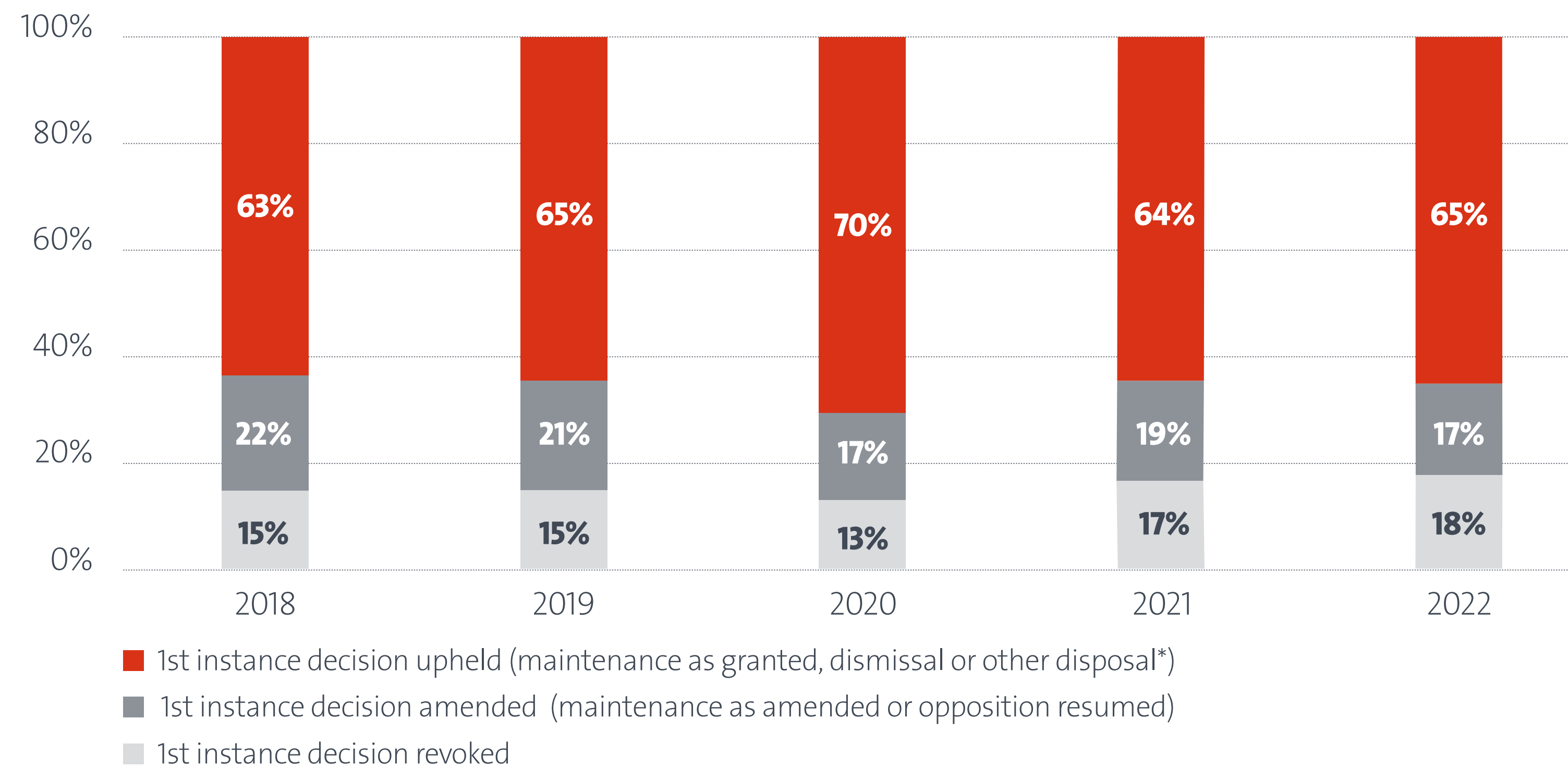
Figure 21 – **Appeals on opposition decisions**

Appeals filed ■   — % of appealed opposition decisions

Source: EPO

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We also see a high degree of **consistency in the outcomes of appeal proceedings,** as shown in the graph below.

Figure 22 – **Outcome of appeals on opposition proceedings**

■ 1st instance decision upheld (maintenance as granted, dismissal or other disposal*)

■ 1st instance decision amended (maintenance as amended or opposition resumed)

□ 1st instance decision revoked

*Other disposals are e.g. withdrawal, inadmissibility

Source: EPO

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Opposition by videoconference

Building on the successful outcome of a pilot which ran for more than two and a half years in which more than 7 400 OP by VICO were conducted, in November 2022 the EPO decided to make **videoconferencing the new standard for all first instance oral proceedings** including opposition, as of January 2023[1]. Throughout the pilot, user feedback was extensively gathered via several fora and through dedicated surveys, and was taken into consideration to continuously improve platform, procedures, level of service and user experience. User feedback showed a steadily increasing positive uptake (in the survey of Q3 2022, 77% of respondents had a (very) good experience with OP by VICO, an improvement over 2021). Users also appreciated the extensive training opportunities offered by the EPO to gain proficiency with this new format, like several well-attended online events.

Main benefits:

▌**Improved transparency and access to justice,** with 20 times more public observers than for on-site oral proceedings and more participants per party.

▌**Flexibility,** enabling us to involve the best qualified examiners independently from their location and treat files in a more timely manner, which supported a swift reduction of our stocks. Users as well gained more flexibility and better use of their resources.

▌**Higher sustainability,** through elimination of travel for all parties.

▌**Improved user experience,** through technical advances like private breakout rooms for confidential deliberations, additional audio channels for interpretation into more languages, high-quality video feeds for improved appreciation of participants facial expressions and body language.

▌**Suitability for complex cases,** e.g. involving many parties, or for hearing witnesses (138 witnesses in 63 OP in 2022), or for inspections (10 cases in 2022).

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* Upon request, in-person proceeding are possible in case of serious reasons. Most such requests were received between end of 2020 and begin 2021, and in 2022 there were only 14. In most cases, the competent divisions decided to maintain VICO, and all those proceedings were successfully conducted. The only two cases conducted on-site involved inspection of objects whose features could not be thoroughly evaluated by a camera.

TRAINING AND CONTINUOUS LEARNING

Following the development of a skills framework for formalities officers a similar framework was established for examiners in 2022. To make full use of these skills frameworks, the objective setting for 2023 emphasised that each staff member should have an **individual development plan** drafted after dialogue between staff members and line managers and regularly revised. Learning has an important place in the development journey of each staff member, and during 2022 we continued revamping our learning offer.

In 2022, the "Quality Week" was reorganised in "Quality days" under the umbrella of the iLearn days series. Addressing both formalities officers and examiners communities, three **iLearn–Quality days** were organised by Principal Directorate Quality and Practice Harmonisation together with the EPO Talent Academy. Over 6 000 visits were registered for sessions dealing with different aspects of PGP, ranging from search and examination to opposition and classification, including tools presentations and Boards of Appeal (BoA) lectures. To ensure that all learning resources are easily accessible, including procedural and legal texts, a new tool – **Empowering Learning, Inspiration and Sharing (ELIS)** – has been developed. It provides our examiners, formalities officers and other staff a unified gateway to Single Legal Source, IT support, and special advice from experts.

Learning from BoA outcomes is also an important element to ensure consistency in our first instance practice. With the aim of monitoring the harmonisation and alignment of DG 1 practice with the decisions of the BoA and understanding how they can improve first instance practice, **four BoA lectures** were organised in 2022 in the framework of the iLearn day series. They covered a relevant range of topics such as added subject-matter, oral proceedings by VICO, sufficiency of disclosure and its relationship with clarity and conciseness as well as inventive step and late submissions in opposition.

Figure 23 – **iLearn Quality day event**

Source: EPO

To make full use of these skills frameworks, the objective setting for 2023 emphasised that each staff member should have an individual development plan drafted after dialogue between staff members and line managers and regularly revised.

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QUALITY OF INCOMING APPLICATIONS

Well drafted applications and a transparent dialogue between applicants and examiners are key to the complete search reports and written opinions, thus ensuring a strong basis for robust patents. In the framework of SP2023, we used the latest development in AI technology and data mining to give us greater insight into the quality of incoming applications, and how it can help a more effective examination, resulting in solid patents. These developments also helped us to better understand how drafting **quality of incoming applications** can have a positive impact on the patenting procedure and grant rates, as detailed in the annexed Quality Report.

DIALOGUE WITH OUR USERS

2022 saw many initiatives focusing on our users, with the aim of improving the EPO's products and services based on their feedback. A highlight was the **annual User Day** on 28 and 29 November, which attracted a record number of 4 500 viewers. Participants included representatives from industry, patent law firms, SMEs, research institutes, and the general public. The event included updates on a wide range of EPO topics and featured lively panel discussions on the Unitary Patent, quality and timeliness, the eight technology communities, and

new approaches to environmental sustainability. During the event, EPO experts updated users on the latest developments in the Office's digital user services, including MyEPO Portfolio which was launched in June 2022 and Online Filing 2.0, described above under Goal 2. External speakers from industry, patent law firms and SMEs took part in most of the panel discussions and break-out sessions.

User meetings were also key to strengthen dialogue and mutual understanding. The EPO organised **17 meetings between senior EPO management teams and key applicants** that were responsible for filing a total of 14 760 applications in 2021. These meetings are valuable fora for discussing strategic and operational topics, filing strategies, new technologies, and applicants' plans. They have also enabled detailed discussions on EPO quality, consistency, timeliness, and how to improve incoming application quality.

User consultations on EPO online services took place at the SACEPO Sub Committee Working Party on e-Patent Process (eSACEPO) which was attended by 26 external members from Europe, China, Japan, Korea, and the United States. Users provided feedback on a wide range of topics including OP by VICO, MyEPO Portfolio, Online Filing 2.0, IT co-operation,
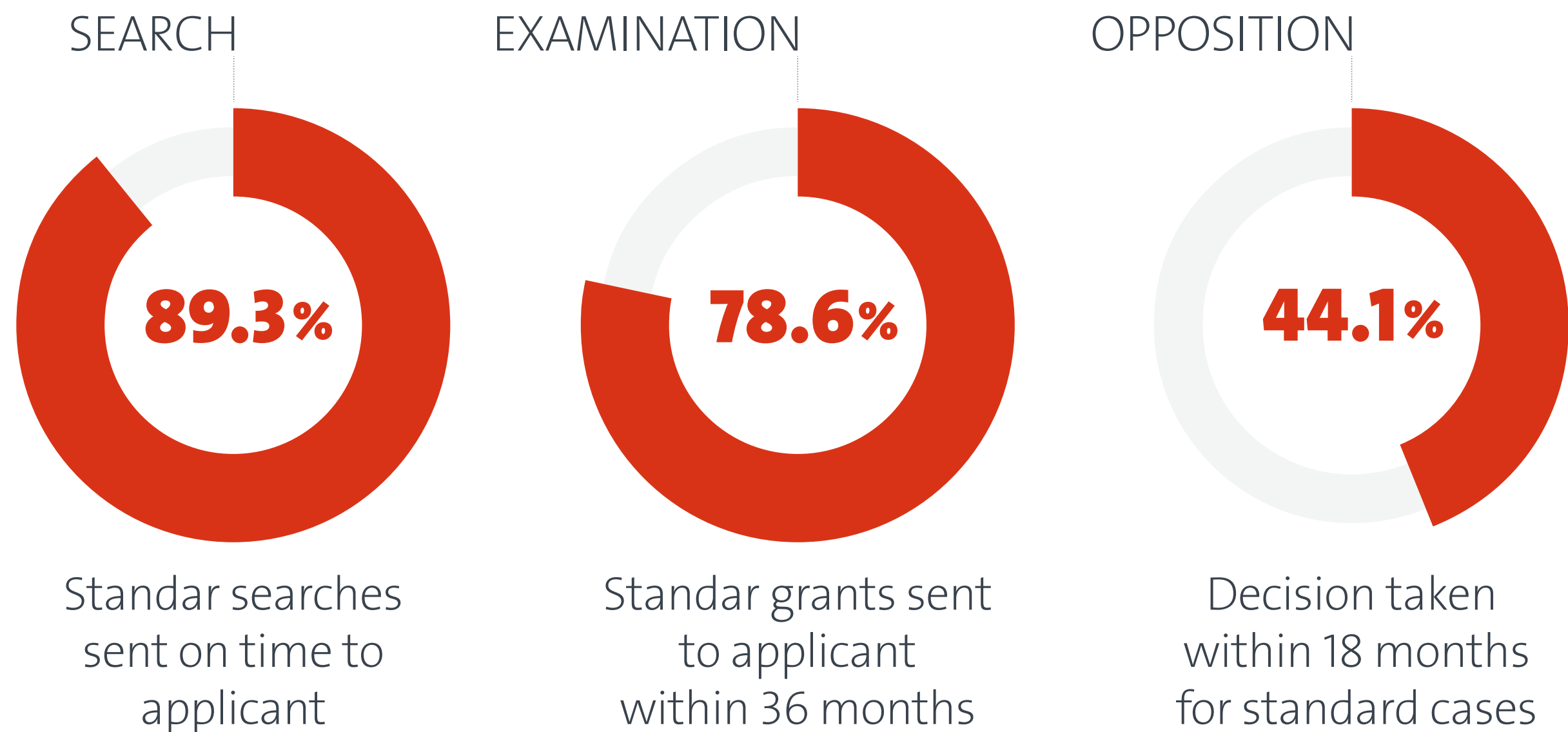
Central Fee Payment, and Patent Knowledge-related initiatives. Similar topics were discussed during the epi's Online Communication Committee meeting.

At the beginning of 2022, we rolled out a **new Customer Service Management solution to handle all customer enquiries and complaints.** During 2022, the EPO received about 5 400 customer enquiries each month. Almost half the enquiry cases were submitted by e-mail, followed by phone and then contact webform. In total more than **65 000 cases were closed in 2022 – 95.8% within the given time limit,** up from 94.8% in 2021.

A total of 265 complaints and official feedback cases were filed in 2022, slightly down from 275 in 2021. All complaints were thoroughly analysed and received a timely reply within 20 days in 86% of cases. 57% of complaints in 2022 were partially or fully justified.

TIMELINESS AS AN ESSENTIAL ELEMENT OF QUALITY

Figure 24 — **Timeliness achievements in 2022**

SEARCH

89.3%

Standar searches
sent on time to
applicant

EXAMINATION

78.6%

Standar grants sent
to applicant
within 36 months

OPPOSITION

44.1%

Decision taken
within 18 months
for standard cases

Source: EPO

Timeliness is an important aspect of quality and legal certainty: overall, **86.1% of search, examination, and opposition standard files were produced on time** in 2022.

Taking stock of the growing data collection, and despite the increasing workload, search timeliness (standard cases) remained strong in 2022, with 95% of searches and written opinions (p95) being despatched within 8.6 months.
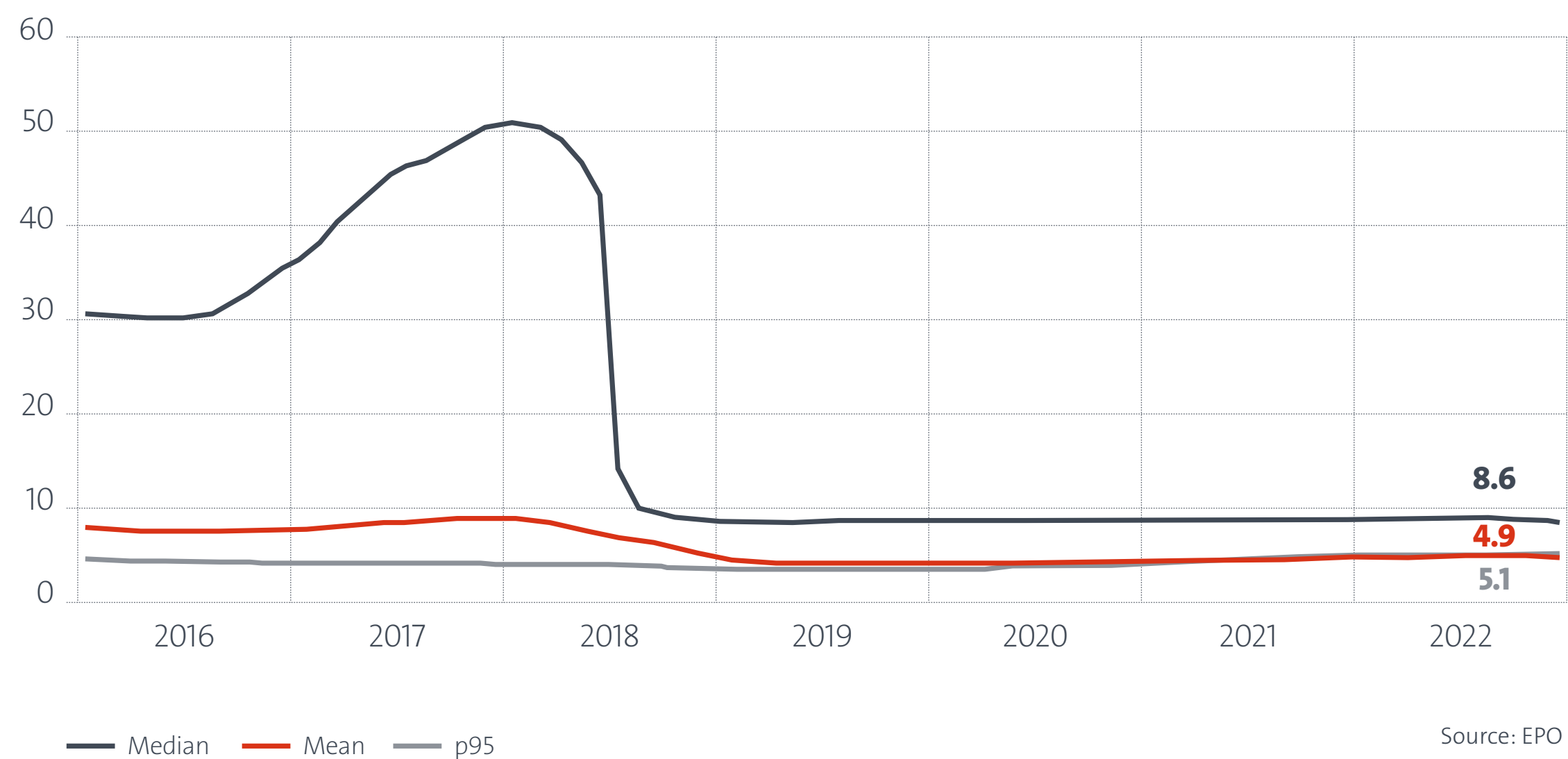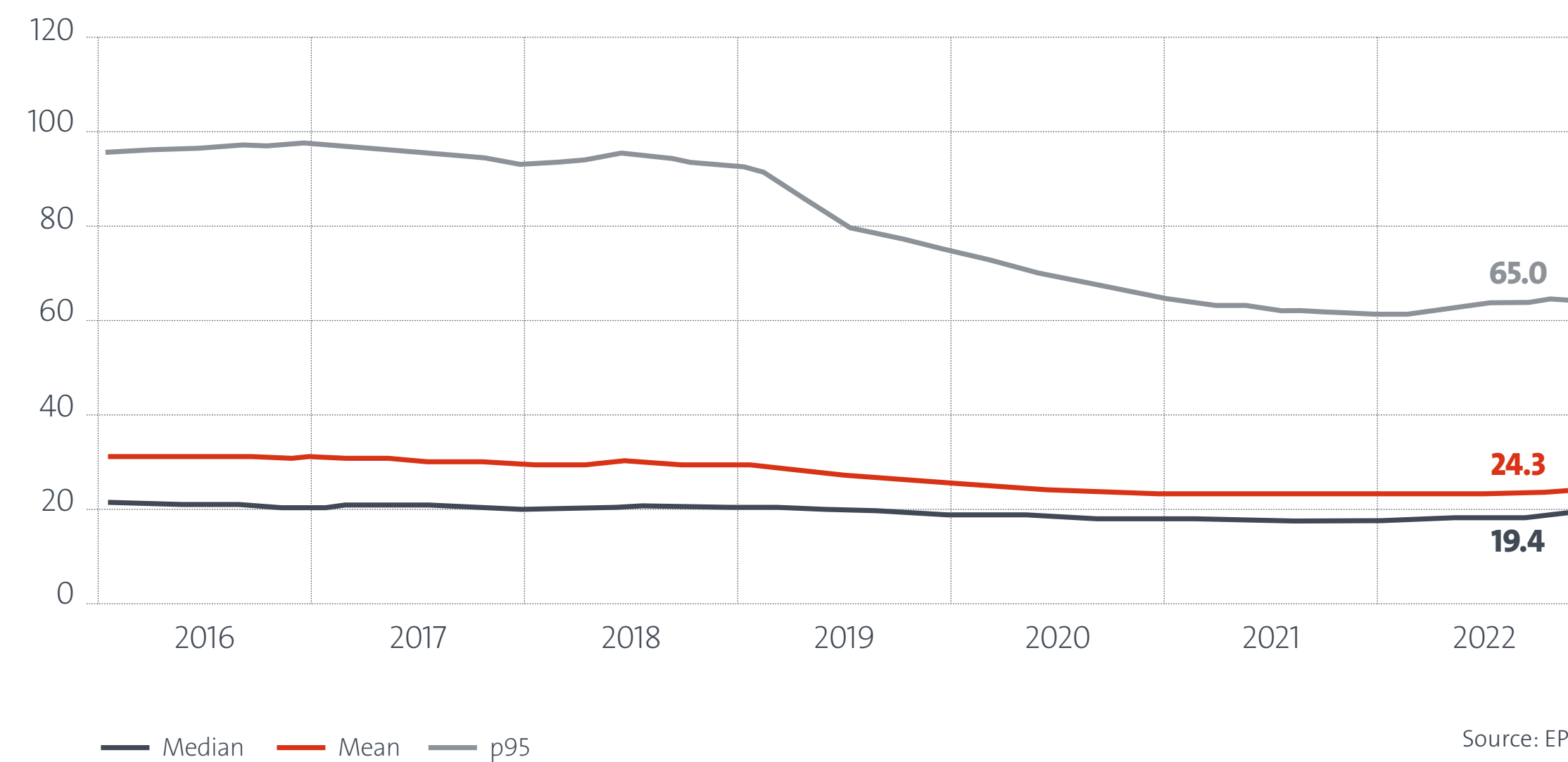
Figure 25 — **Duration of search (in months)**

Source: EPO

— Median — Mean — p95

Figure 26 — **Duration of examination (in months)**

Source: EPO

— Median — Mean — p95

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Examination timeliness is also an important element of our quality policy: in standard cases, timeliness slightly deteriorated in 2022 as we focussed on the increasing search workload. **78.6% of standard cases were finalised within the 36-month target starting from the valid examination request**, with a mean duration of examination of 24.3 months.

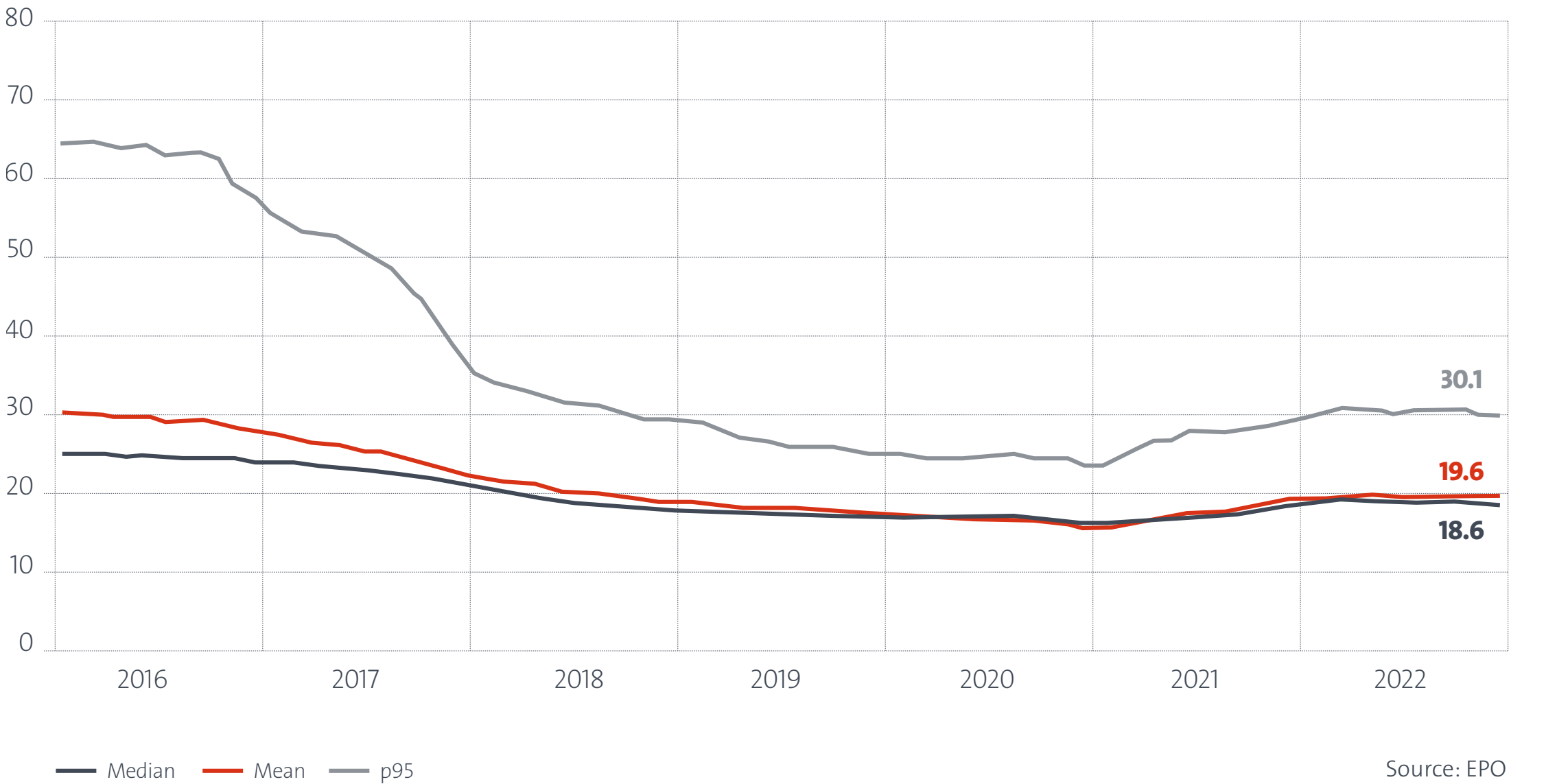Figure 27 – **Timeliness of grants production and stocks**

Source: EPO

Legend: Finished on time | Finished late | Stock on time | Stock late
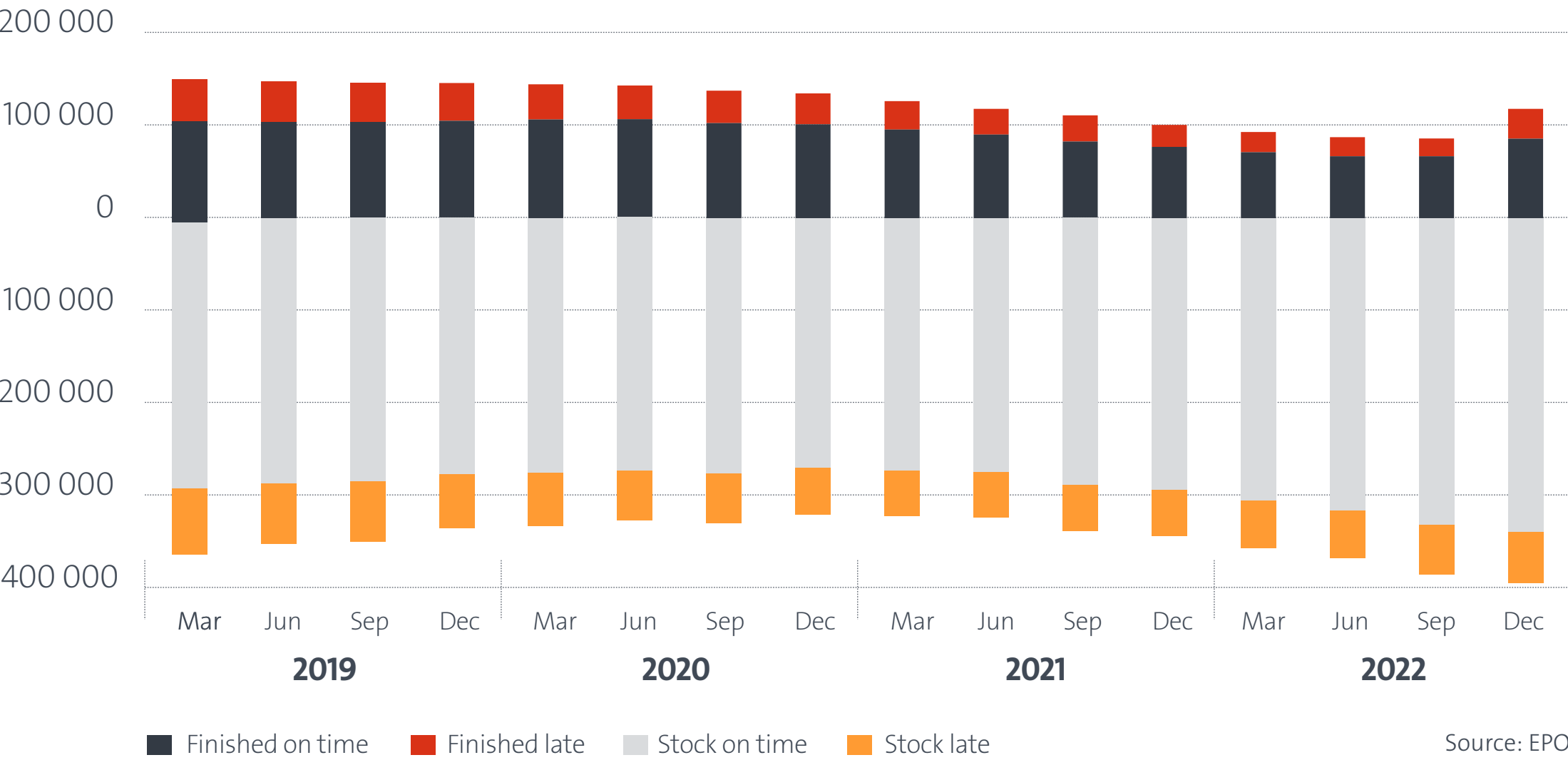
In 2022, we managed to keep the **number of old files under control**, with only 14.3% of the examination stock older than 36 months compared to 19.1% in 2019.

As the result of targeted action in 2022, we finished the year with only **5 024 old examination files** pending **with a valid examination request from before 2017** that could be processed by examiners (i.e. not awaiting applicants' action) and there were only 1 649 actions pending in examination for more than 30 months.

Overall, our processing time from filing to grant in 2022 was 44.2 months for EP first filings.

Figure 28 – **Duration of opposition (in months)**

30.1
19.6
18.6

Source: EPO

Legend: Median | Mean | p95

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In 2022, we managed to **reduce the opposition stock** to 4 346 pending files, less than the pre-pandemic number of 5 000. With the shift to VICO for oral proceedings in opposition, the opposition timeliness (standard cases) is slowly improving again as we deal with the backlog caused by the pandemic. 44.1% are completed within 18 months, with an overall mean duration of 19.6 months.

INCREASING DEMAND FOR OUR SERVICES

Figure 29 – **EPO search workload and forecast**

■ Actual search workload   ▨ Financial study   — Search workload forecast   Source: EPO
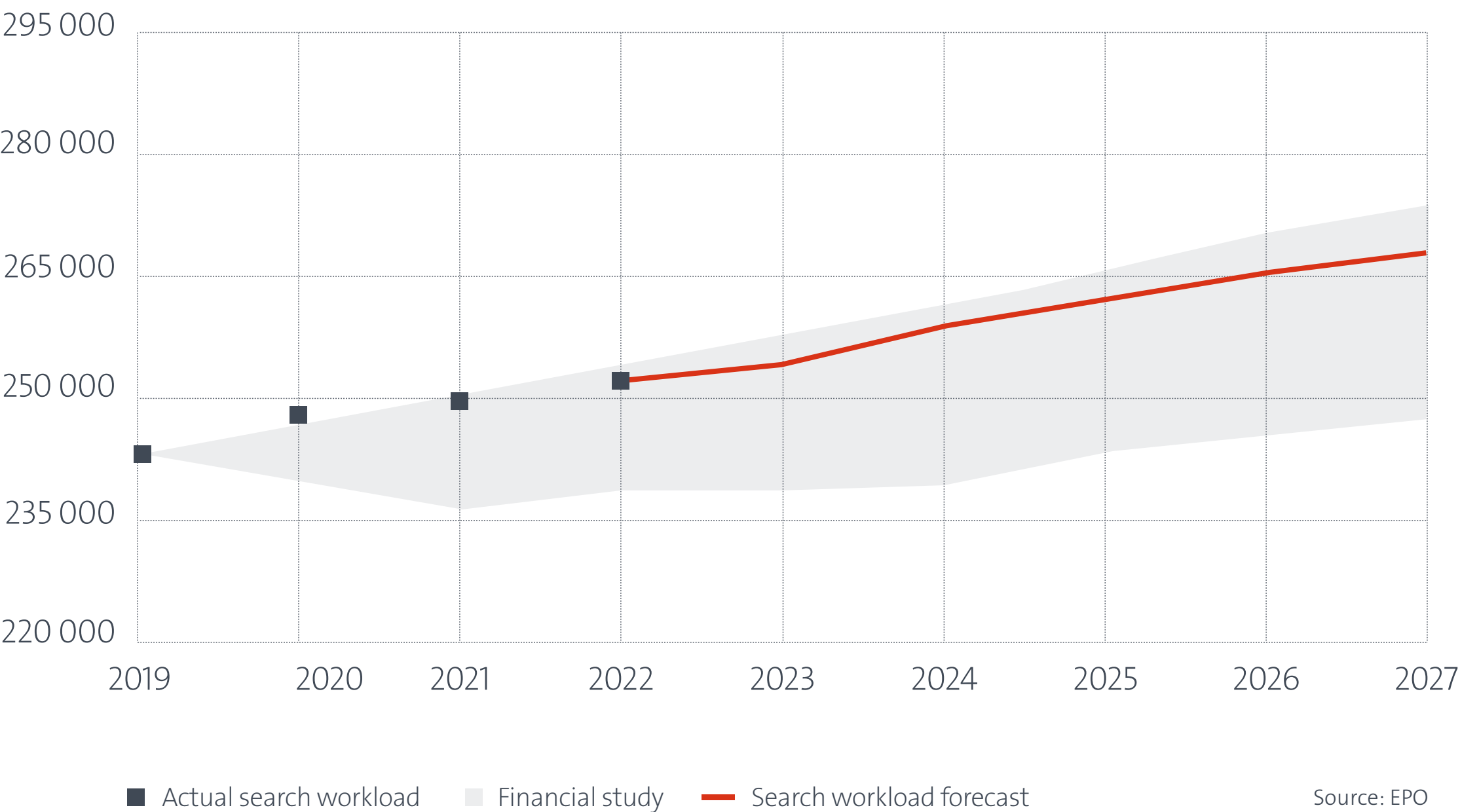
In 2022, we received **193 460 European applications** (Euro-direct and PCT regional phase). This is **2.5%** (about 4 600 applications) **above the corresponding 2021 figure.** The main drivers were China (+15%, about 2 500 applications) and the United States (+3%, +1 500 applications). Overall, the EPO search workload increased by 1% versus 2021 (2 769 more searches).

PRODUCTION STATISTICS

In 2022, our production was 2.3% below budget (-8 403 products): +5% versus plan for searches but -3% versus plan for oppositions, -7% versus plan for refusals and -12% versus plan for grants. The overall **production gap is mostly explained by our focus on the higher search workload and our reduced activity in examination,** with 7 772 withdrawals fewer than planned. Consequently, we only published 81 755 patents in 2022.

Figure 30 — **Figure 30 — EPO published patents**
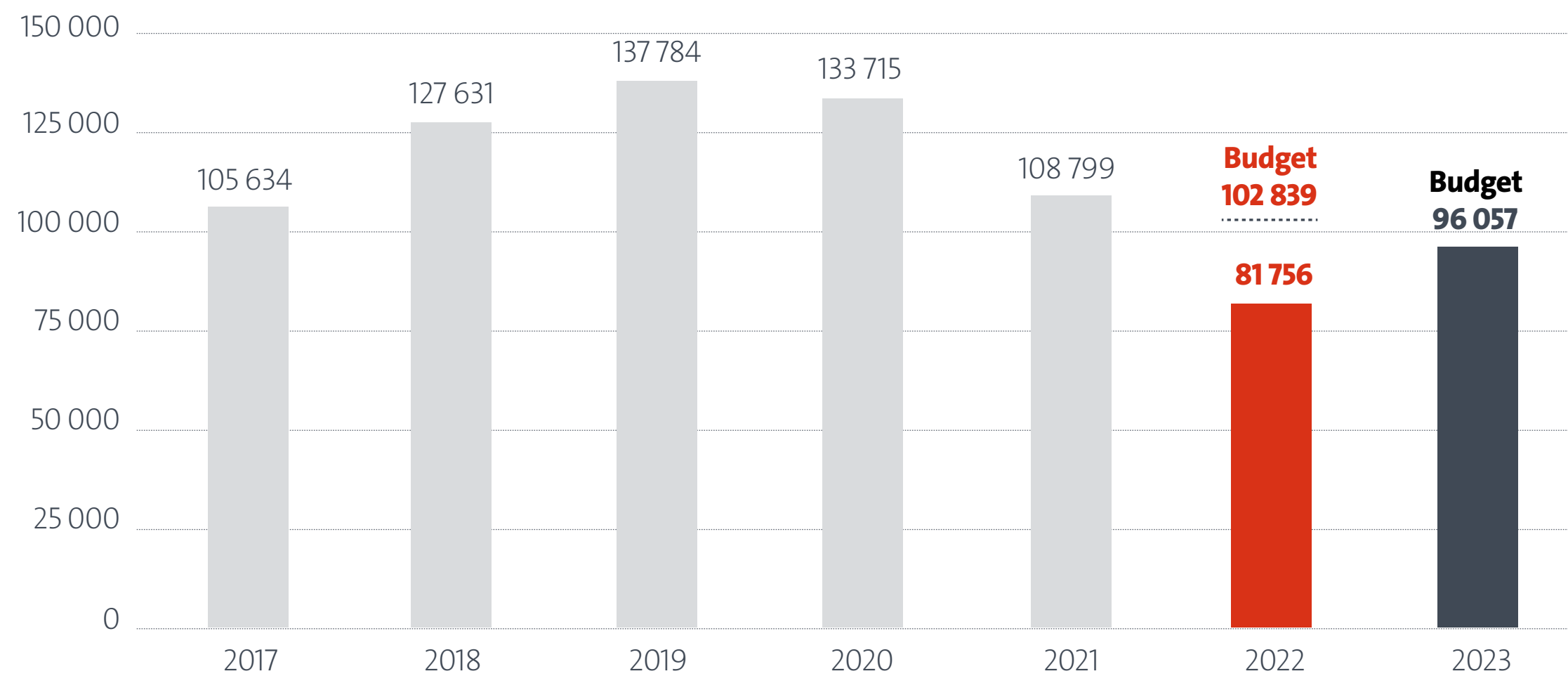
Source: EPO

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

MAXIMISE THE IMPACT OF CO-OPERATION

European co-operation is at the core of Goal 4. In a competitive environment, the strength of the European patent system is key to ensuring the region remains a globally attractive market with a robust IP rights system. Close co-operation between the EPO and its members is beneficial not only for maintaining a strong European market, but crucially provides a high-quality and accessible patent system for users.

The European Patent Organisation is growing, a sign of a thriving network and an endorsement of the quality of the European patent system and its long-term sustainability. In 2022 the European Patent Organisation was delighted to welcome **Montenegro as the 39th member state** of the European Patent Convention. This means that as of 1 October 2022, European patent applications have included the designation of the new contracting state Montenegro. The EPO has now also taken over the functions of a PCT receiving office and acts as a PCT International Search and Examination Authority on behalf of

Montenegro. In December 2022, the Administrative Council decided to extend an invitation to the Republic of Moldova to accede to the EPC. It is expected that, in due course, Moldova will become a contracting state to the EPC.

2022 also saw an increase in the **bilateral co-operation agreements** signed and implemented between national patent offices and the EPO. The increased engagement and involvement of national offices could be seen across the network, ensuring that projects were well on track for completion by the end of SP2023. These agreements are reviewed each year to allow national offices to tailor projects to their needs and to ensure implementation of Goal 4 is tracked and measured.

In addition, 2022 was the second year in which the new policy on **working agreements on search co-operation** applied. The success of this policy in supporting small entities to access the IP system was reflected in the growing numbers of search requests: in total, the EPO performed 28 947 national searches on behalf of the 15 offices that have signed a working agreement on search co-operation. This is an increase of 6% compared to 2021. Moreover, a total of 2 232 search fee reductions were granted under the small entities support scheme, which is 20% more than in 2021. Austria became the 16th contracting state to sign a working agreement on search co-operation in December 2022, following approval from the Administrative Council for Austria and Portugal to join the project in June.

Figure 31 – **EPO President delivers a keynote speech at the 9th Annual IPR Conference in Copenhagen, held by the Danish Patent and Trademark Office**

At the heart of promoting the European patent system are the joint outreach efforts to foster innovation. In particular in 2022 significant efforts were made to prepare for the **launch of the Unitary Patent system.** Working hand-in-hand with national patent offices (NPOs), the EPO shared information and promotional materials on the Unitary Patent. Financial support for translating these materials into national languages was offered to ensure maximum spread and dissemination of information to users and patent professionals across the network. Joint outreach events are another communication channel that ensures a direct dialogue with different target groups and 2022 saw a surge of interest from member states in organising them. A number of these events focused on the Unitary Patent and a total of six were supported by the EPO either financially or with expertise (i.e. the provision of speakers). Further efforts were made on the technical level, with platforms for EPO and NPO examiners to discuss patenting procedures organised with four offices in 2022.

Source: EPO

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An important forum for the European Patent Network (EPN) in 2022 was the **16th Annual Meeting on Co-operation** in May. The high level of participation from member states allowed for a meaningful review of accomplishments of the second year under the co-operation framework and to collect feedback on flagship initiatives such as the EPO Patent and Technology Observatory, the Mobility Package, and the certification for European paralegal and administrators (EPAC).

Another milestone in 2022 was the creation of the **EPN Dialogue**, as part of the EPN responsive network co-operation initiative. This forum was an important step for the EPN, ensuring that in times of crisis the network can react in a responsive and co-ordinated way. In this spirit the EPO called for the 1st EPN Dialogue meeting in April 2022 to co-ordinate a response to the war in Ukraine. The meeting was attended by 38 nominated experts from member states' national offices. The swift arrangement and high level of engagement ensured the EPN could rapidly agree on how best to support the Ukrainian patent office and Ukrainian applicants. It also provided a platform to share the measures, and their impact, taken by member states against Russian and Belarusian individuals and entities in response to Russian aggression.

The importance of close dialogue in 2022 was also visible in the establishment of a further platform to support the smooth implementation of the Unitary Patent.

Making best use of existing digital tools, member states agreed on the establishment of the **EPN Online Forum Ukraine** to keep the EPN informed and up to date. This digital platform was integrated into the Single Access Portal and designed to centralise and disseminate evidence-based public information on measures taken in support of Ukraine.

The importance of close dialogue in 2022 was also visible in the establishment of a further platform to support the smooth implementation of the Unitary Patent. The **Unitary Patent exchange platform** provided a digital forum for the centralisation and distribution of documents and technical specifications. By bringing together member states in a continuous and open exchange, the platform helped push forward implementation by reducing differences, identifying

issues, and providing collective solutions. To focus discussion and drive progress forward, the forum was divided into five key areas of implementation: IT, legal, financial, communication and training, and procedural and operational.

Consideration was also given to the level of support necessary to accelerate initiatives such as the EPO's use of cloud computing technology in the new and improved Search tool and the implementation of the Front Office project and to facilitate the early uptake of the Unitary Patent.

A further avenue to bolster the EPN was the establishment in 2022 of the **seconded national experts (SNEs) scheme,** which will offer employees of national offices and other organisations who have expertise in a particular field the opportunity to work at the EPO for a defined period. This will allow up to 70 external experts at any given time to be temporarily seconded to the Office based on agreements with other public administrations, institutions, or intergovernmental organisations. The aim is to offer opportunities for a learning experience and create a continuous exchange of knowledge, skills and expertise. As such, it also reinforces the EPO's commitment to supporting professional mobility.

Following the approval of the Administrative Council in June 2022, the Office launched the first round of publications for SNEs in January 2023, targeting initially the national offices of our member states. We are expecting the first batch of around 22 SNEs to join the Office in the second semester of 2023.

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CONVERGENCE OF PRACTICE

The **convergence programme** is one of the pillars of the Office's strategic plan and aims at reducing the complexity of the existing European patent system – where diverging practices between national offices and the EPO sometimes result in inefficiencies and extra costs for companies and inventors seeking patent protection in Europe. Work on this programme has once again been pursued by the national offices and the EPO in 2022. Working Groups 5 and 6 ("Claim drafting and structure" and "Examination practice for computer-implemented inventions and artificial intelligence") managed to conclude their work by adopting recommendations for a common practice. The Committee on Patent Law then gave a unanimous favourable opinion on these two recommendations and the Administrative Council subsequently approved them in March 2023.

Given the recognised benefits and the positive feedback from contracting states and users, the Administrative Council decided to continue this successful exercise with six new convergence topics.

This paved the way to the start of the new work cycle at the beginning of 2023, with the setting up of two new Working Groups dealing with the first pair of topics "Allowable features in drawings" and "Issuing and accepting electronic priority documents".

The Council also approved WIPO's request to join the Working Groups as observer, in addition to the representatives of epi and BusinessEurope, who have been participating since 2021.

IT CO-OPERATION

By the end of 2022, the IT Co-operation programme had substantially delivered on its planned scope.

The focus remained on the **Front Office project**, where the work with pilot offices and on core functionalities progressed well in 2022. Filing of national patents, subsequent actions, supplementary protection certificates, ePCT and EP 1001 were all embedded in the Front Office and implemented in Spain and Lithuania, which had jointly received over 100 filings by the end of the year. Both Greece and North Macedonia had begun their implementation projects, and a further six countries were committed to implementing the project in 2023.

The **Data Quality project** completed the development of automated web interface routes to support the exchange of high-quality patent data, whether for prior art or search report work, and substantial progress was made in extending the patent collections available.

The third release of the **web-based SEARCH system** stemming from ANSERA was made available to national offices in member states, including extensive non-patent literature for the first time. By the end of 2022, almost 200 examiners in 19 countries were participating in the pilot phase, providing valuable feedback. The system was fit to replace EPOQUENET in some 75% of offices by December, though development was ongoing. The tool was deployed onto a high-performance, high-availability, cloud platform meeting the latest security standards enabling greater efficiency and scalability. This technology enables the tool to be made available more rapidly than its predecessor.

Single Access Portal is the one-stop shop covering all digital interactions with our partner offices. In 2022 it was launched and continued to evolve with new features, including a dedicated site for SACEPO, a PATLIB module and the National Offices Service Desk to enable NPOs to contact the EPO and its helpdesks. With the new features, the portal replaced the National Office Centre.

Figure 32 – **Single Access Portal**
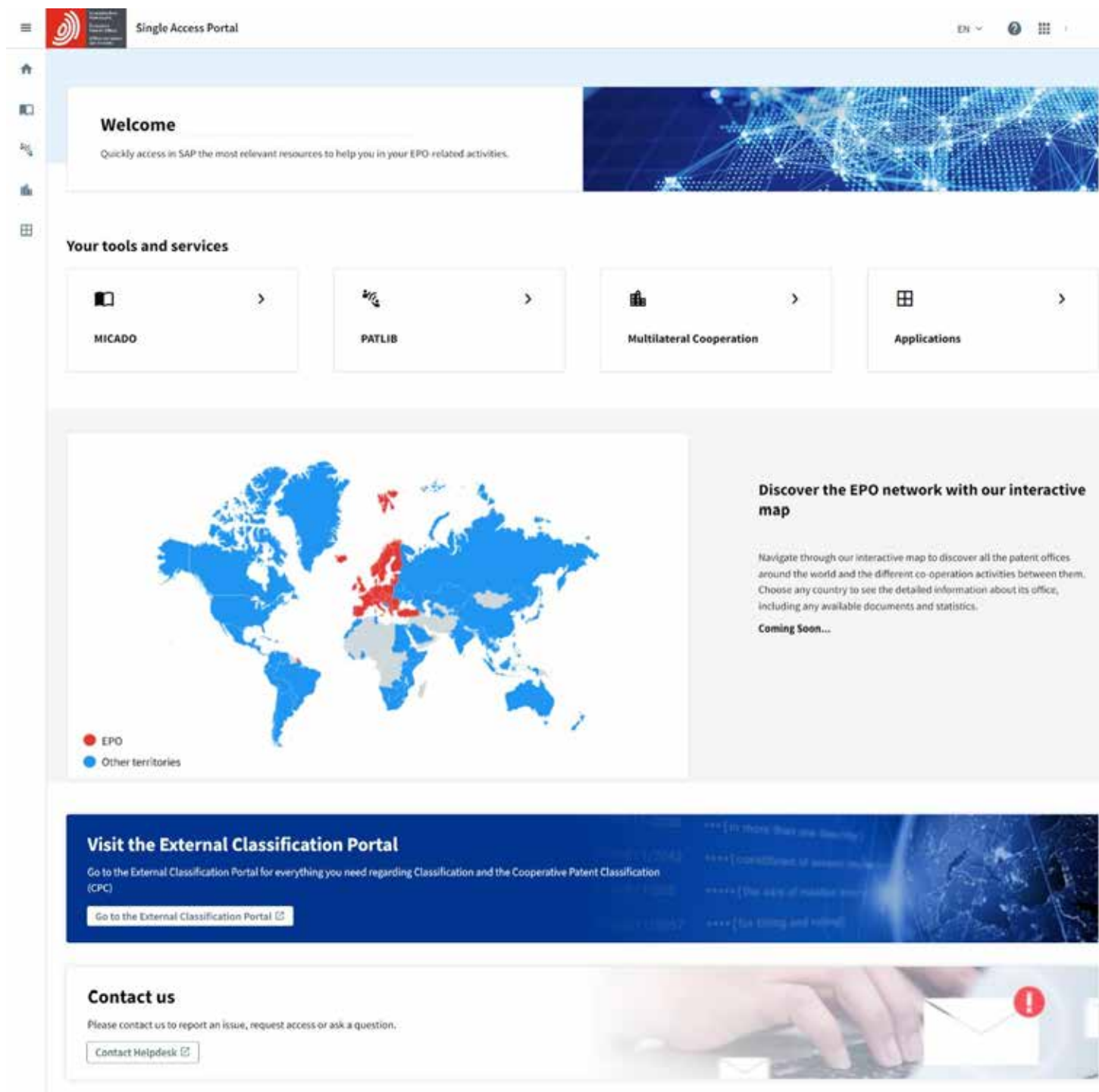
Source: EPO

The **MICADO II** pilot was launched in December as part of central hub for EPN collaboration, where detailed documentation on IT co-operation projects can be consulted, posted, and exchanged. The new MICADO for accessing the documents of the EPO's Administrative Council also entered the pilot phase with some delegations, and a full roll-out of the service is scheduled for 2023.

The EPO is continuing to promote the use of CPC worldwide and in particular in our member states. The **external classification portal** was made available via the Single Access Portal and aims to offer a hub for cooperation on classification.

Information security and cloud solutions are a core part of the EPO's work in IT co-operation. An **information security working group** was launched in 2022 to communicate on measures to manage services in the cloud securely.

UNITARY PATENT PACKAGE

For several years, the Unitary Patent package implementation works have been underway and in 2022 reached the final stage.

On 18 January 2022, **Austria deposited its ratification instrument** of the Protocol on Provisional Application of the Agreement on a Unified Patent Court (UPC), triggering the start of the provisional application phase and the final implementation phase of the Unitary Patent package.

As a consequence, participating members states met three times in the framework of the **Select Committee** to update and finalise the legal and financial framework for the start of the Unitary Patent.

Several workshops of the **Communication Correspondents Network** successfully took place to exchange views among communication experts of the national offices, the UPC, the European Commission (EC), and the EPO on communication-related aspects of the Unitary Patent package. The EPO has also updated its widely used communication products related to the Unitary Patent package, including its webpage, the Unitary Patent guide, and PowerPoint presentations, and made available on its webpage several webinars on the Unitary Patent and interviews with UPC experts.

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Since 1 September 2022, the EPO has carried out **systematic top-up searches** at the final stage of examination to inform applicants about any earlier national rights in the EPC contracting states found to be of prima facie relevance. First results show that in the vast majority of all cases no such national rights could be found.

On 21 October 2022 the President delivered an opening address during the **Venice Judges' Forum**, elaborating on the preparations underway for the imminent arrival of the Unitary Patent and UPC.

On 17 November 2022 a high-level **curtain raiser conference** on the Unitary Patent system took place in Brussels. The conference was attended by more than 1 000 participants. At that event, the EPO President and the President of the UPC's Court of Appeal Klaus Grabinski signed an agreement providing notably for the exchange of data between the European Patent Register and the UPC's Register and for support from the EPO for the UPC's training framework.

The efforts made in 2022 are now bearing fruit, as can be seen from the milestones in 2023. First, since 1 January 2023 applicants can file early request for unitary effect and request a delay in issuing the decision to grant a European patent. In the first four months of 2023, more than 5 000 such requests were filed with the EPO. These **transitional measures** will contribute to the early uptake of the Unitary Patent.

The EPO has also updated its widely used communication products related to the Unitary Patent package, including its webpage, the Unitary Patent guide, and PowerPoint presentations, and made available on its webpage several webinars on the Unitary Patent and interviews with UPC experts.

Figure 33 – **Conference on the Unitary Patent system in Brussels; EPO President António Campinos and President of the UPC's Court of Appeal Klaus Grabinski signing agreement on data exchange**

Source: Photo on the left by EPO, photo on the right by Johan Liénard

Second, due to the impressive progress in the final implementation works of the UPC, **Germany deposited the ratification instrument** related to the UPC Agreement on 17 February 2023. The Agreement will hence enter into force on 1 June 2023, which is also the date of the start of operations of the new Unitary Patent scheme.

Finally, on 22 February 2023 the **working arrangement between the EC and the EPO** regarding the unitary patent under Article 14 Regulation (EU) No 1257/2012 was concluded. The agreement will strengthen the cooperation between the two institutions.

DEFINE AND PRIORITISE CO-OPERATION ACTIVITIES

An important aspect of co-operation is the efficient use of resources. By building closer ties with other European institutions, the EPO is better able to identify opportunities for joint activities and common practices that unlock synergies or avoid the duplication of efforts.

Early in 2022, a **bi-annual EPO-EUIPO work plan 2022-2023** was signed, covering a range of co-operation activities in the area of training, exchange of information and practices, in co-operation within the communication correspondents' network and the Pan-European SEAL programme.

The EPO and the **EC** agreed on the terms of the working arrangement implementing **enhanced co-operation in the creation of unitary patent protection.** The agreement aims to establish a close co-operation in particular on the issue of renewal fees and their impact on the budget of the European Patent Organisation.

The EPO and the **European Innovation Council and SMEs Executive Agency (EISMA)** carried out a pilot activity in which EPO experts provide a non-binding opinion on the technological novelty, inventive merit, and proposed future IP strategy of EIC transition proposals. The pilot initiative aims to leverage the EPO's expertise and unique position in the European innovation ecosystem.

The EPO and the **European Institute of Innovation and Technology (EIT)** signed a Memorandum of Understanding on 28 April 2022, followed by a first Annual Working Plan in May. The agreement aims at supporting innovators and entrepreneurs in turning their ideas into products with the broader objective of increasing patent valorisation and commercialisation in Europe.

The EPO and the **Community Plant Variety Office (CPVO)** prolonged their cooperation arrangement for a further five years.

### BROADEN THE EUROPEAN PATENT SYSTEM AND NETWORK IMPACT

Expanded network coverage

For the EPO to maintain its position as a key player in IP, it must continuously – and sustainably – reinforce its global impact and the reach of its network. By the end of 2022, the Office operated a total of **85 international co-operation agreements,** including four validation agreements and 12 reinforced partnership (RP) agreements. In addition to the 44 countries in which EPO patents can be validated, there are an additional 42 countries where, through a RP or Patent Prosecution Highway agreement, corresponding EPO search and examination results are re-used in the national or regional phase.

The **geographical coverage KPI,** which measures the total population reached by EPO products, grew to 2.12 billion, a 5% increase compared to the previous year (2.022 billion). This is almost a quarter of the world's population.

Figure 34 – **KPI measuring geographical coverage of the European patent system**

Source: EPO
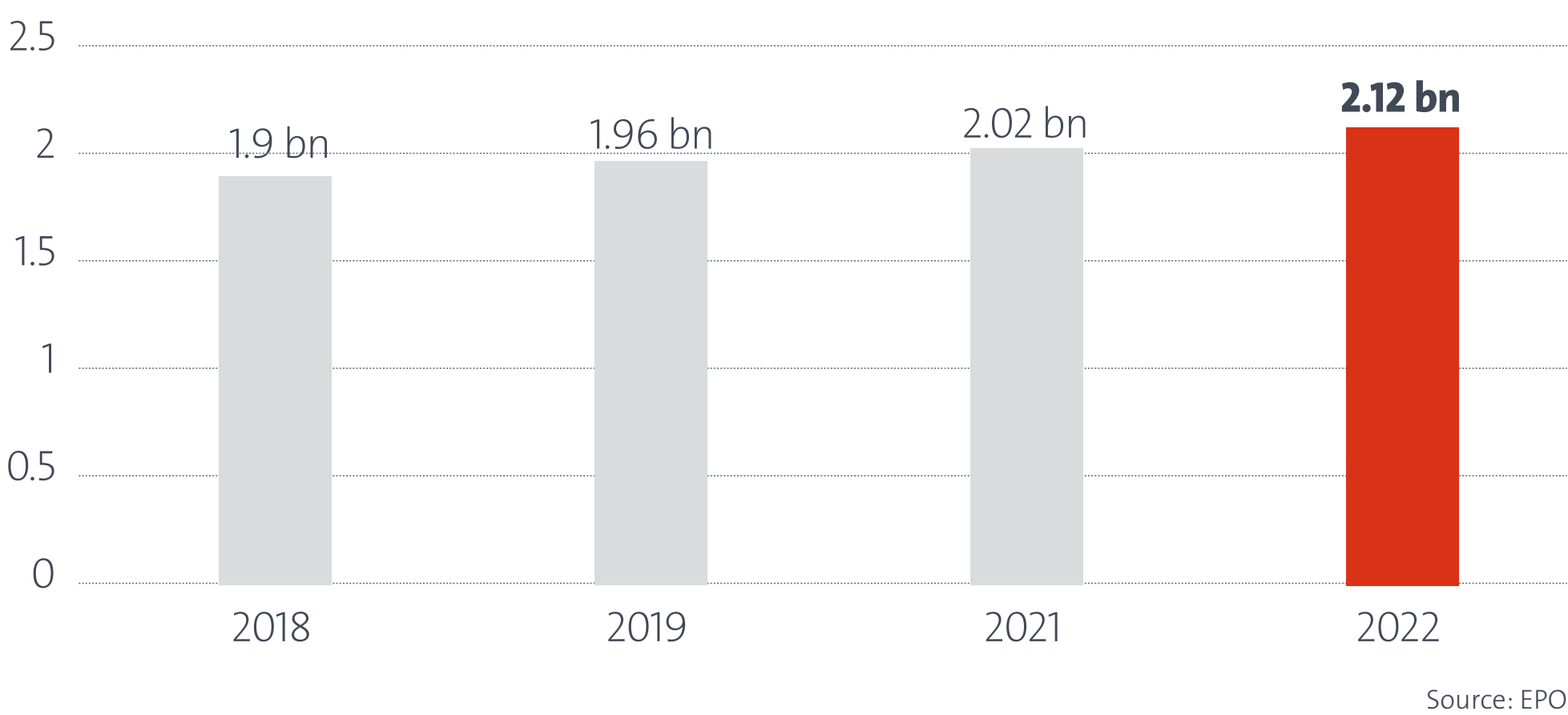
Validation agreements

The EPO continued its **support to all four validation offices,** by enhancing their examination capacity as well as providing train-the-trainers schemes to IP operators.

A key instrument is the use of the validation package – a budget aimed at modernising the infrastructure of the offices and at supporting investments in the field of IT, notably in **Morocco** and **Tunisia**. This enables the delivery of state-of-the art services to users and optimises interoperability between IP offices, in turn fostering sustainability inside the global patent system.

The validation agreement with **Cambodia** reached its fifth anniversary in January 2022 and was automatically extended. Concerning the State Agency on Intellectual Property of the Republic of **Moldova** (AGEPI), measures now aim at preparing for Moldova's accession to the EPC, a process on which co-operation activities will focus over the next months.

Progress also continued toward a possible validation agreement with the **Organisation Africaine de la Propriété Intellectuelle (OAPI)**. Co-operation activities with OAPI are detailed under "Focus on Africa", below.

Reinforced partnerships

Our RP agreements enable partner offices to enhance and expedite the processing of subsequent applications through the **re-use of EPO work results** in their patent grant processes. In 2022 the participating offices reported a total of 32 121 re-use cases, bringing the total since the launch of the programme in 2021 to 131 148.

In 2022, the Office entered into RP agreements with **Peru and Ukraine;** support has been intensified progressively. In terms of regular re-use of EPO work results, the co-operation agreements with Mexico, Malaysia, Indonesia, and the African Regional Intellectual Property Organisation (ARIPO) are now fully operational. The implementation of the re-use process has commenced with the IP offices of Saudi Arabia, Peru, and Colombia.

In the scope of the RP agreement with ARIPO, the two institutions launched the **Regional Patent Examination Training programme (ARPET).** This programme enhances the competencies of examiners in ARIPO Member States and Observer States Angola and Ethiopia.

EPO as International Search Authority for China

In December 2020, the EPO and the **China National Intellectual Property Administration (CNIPA)** launched a two-year pilot to enable nationals and residents of the People's Republic of China to select the EPO as their International Searching Authority (ISA) for applications filed in English under the Patent Cooperation Treaty (PCT). By the end of 2022, over 300 companies had participated, submitting a total of around 2 000 files. A one-year extension of the pilot up until December 2023 has been agreed between both Offices and discussions will be pursued in 2023 to further extend this pilot. In terms of digital notification, progress is expected in 2023 with the launch of the new PCT Link service, which will support international users, including from China, in their interactions with the EPO as ISA and International Preliminary Examining Authority (IPEA).

Focus on Africa

With its enormous potential for industrial development and IP, the African continent deserves a special place in the Office's co-operation strategy.

In March 2022, the EPO President and the Director-General of ARIPO launched the **University IP Outreach Training Programme** by setting an initial pilot with 25 universities from ARIPO member states and Angola, Ethiopia, and Nigeria. The pilot focused on establishing a basic understanding of IP and on training in the use of search tools. With

time, the programme will be rolled out to more universities, including those from Portuguese-speaking African countries.

In December 2022, the EPO President visited South Africa, Zimbabwe, and Cameroon. In South Africa, he met with local patent attorneys to discuss co-operation between the EPO and the **Companies and Intellectual Property Commission (CIPC),** the latest developments regarding the Unitary Patent and the pilot conducted with the national office on substantive search and examination procedure.

Figure 35 – **Study visit for OAPI examiners at the EPO**

Source: EPO

In Zimbabwe, the EPO President and the Director-General of ARIPO jointly opened a seminar on the future of the **Knowledge Transfer to Africa** initiative and the extension of PATLIB to the continent, further described under "Improve access to patent knowledge" below.

In Cameroon, the President spoke at the 62nd regular session of the **Administrative Council of OAPI** and discussed a potential Validation Agreement with its members. With the candidate organisation pursuing the introduction of search and substantive examination procedures, the Office is training OAPI examiners in advanced patent examination.

Technical co-operation

On 1 March 2022, in the wake of Russia's invasion of Ukraine, the EPO froze all co-operation activities with **the patent office of the Federation of Russia as well as the Eurasian Patent Organisation (EAPO)**. As a result, as of 17 May 2022 the EPO stopped receiving new incoming patent publication data from Russia and the EAPO in its prior-art databases, and informed EPOQUE Net users about the effects on data coverage.

Technical co-operation with the **Association of Southeast Asian Nations (ASEAN)** offices proceeded with the completion of the ASEAN Common Guidelines for Patent Examination, which were approved and adopted by the ASEAN Working Group on IP co-operation in December 2022.

In the context of regional IP activities, the Office contributed to the **IP Key projects** in the ASEAN region and in Latin America. Virtual workshops took place on EPO examination practice, including specific technical areas, such as CII and AI.

The EPO also participated in the **EuroClima+ programme** of the European Union by taking part in a three-day capacity building event on green technologies for patent examiners in Latin America and the Caribbean.

The EPO is spearheading an initiative to establish a **sustainable platform** to ensure that CPLP countries co-operate systematically and in a coordinated manner on IP matters.

Also in 2022, the EPO together with WIPO organised a training session for the national institutes of industrial property of **Brazil (INPI) and Chile (INAPI)** on the PCT. More than 150 examiners were trained in the ISA/IPEA responsibilities on the updated PCT International Search and Preliminary Examination Guidelines and practice. The **co-operation with WIPO** was renewed with the signature of a new annual work plan comprising activities in the area of the PCT system, data exchange, classification, automation procedures and patent information. Most of these activities are progressing according to plan and delivering benefits which further develop the international patent system.

The EPO also enhanced its **technical cooperation with the USPTO** across a wide variety of areas, exchanging best practices in training, quality management, and the use of AI for classification and other digital transformation endeavours.

CPC

During 2022, **Peru, Belgium, Monaco, Italy, and Luxembourg adopted the CPC** as their internal classification system, bringing the total to 37 offices. A new EPO-CNIPA CPC MoU and work plan were signed, and the Polish patent office started exchanging CPC data with the EPO. Having signed an agreement with the EPO the previous year, OMPIC began to put the classification system in place to its full extent. Moreover, intense discussions between EPO experts and their USPTO counterparts have led to harmonisation of classification practice between the EPO and USPTO in 258 CPC subclasses, which represents 40% of the entire CPC classification scheme.

In addition, the EPO was actively involved in **revision of both the CPC and IPC schemes** in conjunction with our partners in the IP5 and IPC: 195 CPC revision projects were published and four releases of the CPC scheme took place in 2022. Our participation in IP5 and IPC revision activities resulted in 52 IPC revision and maintenance projects being adopted for the 2023 edition of the IPC scheme (IPC2023.01).

Several **CPC trainings and workshops** were performed throughout the year, allowing for direct online interaction between EPO experts and examiners of CPC offices. CPC was introduced for **EP publications** in January 2022. Inputs received from usability testing and CPC Working

Group sessions resulted in the creation of a classification portal suited for their needs: the External Classification Portal, launched within the Single Access Portal, with its two first services: the contact information service and CPC reclassification service. A series of additional services were developed in 2022 (such as CPC coverage reports and widget, an AI-powered CPC text categoriser, and CPC News) and were tested by CPC Working Group members. A quality monitoring service as well as a CPC statistical mapping service between the CPC, FI and IPC systems will complement the offer of the External Classification Portal in 2023.

Figure 36 – **Trilateral alliance celebrates 40 years of co-operation: WIPO Deputy Director General Lisa Jorgenson, EPO President António Campinos, Under Secretary of Commerce for Intellectual Property and Director of the USPTO Kathi Vidal, JPO Commissioner HAMANO Koichi**

Source: EPO

Multilateral co-operation

The Office stepped up its efforts in multilateral co-operation with the **IP5 and the Trilateral Offices** (the EPO, the JPO, and the USPTO). These aim to promote technical and procedural convergence and drive co-ordinated responses to global challenges in IP.

In June 2022, the EPO hosted the **annual IP5 high-level events,** which took place virtually. Progress was celebrated, for instance on the implementation of a Global Alerting system of patent prosecution changes, on the launch of new projects in the scope of the IP5 NET/AI Roadmap, and in formalising the so-called IP5 safe format of allowable features in drawings among the IP5 Offices.

The IP5 Heads of Office also met with the representatives of the **IP5 Industry,** at a separate fully digital event which focussed on the role of IP in promoting the UN Sustainable Development Goals. The meeting marked ten years of working together with IP5 Industry, showcasing the accomplishments of the IP5 Co-operation and the value of continued exchanges with the users.

In 2022 the **Trilateral Offices** celebrated 40 years of co-operation with a conference organised by the USPTO on the theme of enhancing access to the innovation ecosystem for SMEs to drive economic growth. The Trilateral Offices agreed to pursue the simplification and streamlining processes to improve efficiency and reduce costs for all innovators, particularly smaller enterprises, micro-entities, and start-ups.

Figure 37 – **Meeting with AIPPI in Munich**

Source: EPO

CONSTANT DIALOGUE WITH THE USERS

Regular input from user associations and iterative exchanges with practitioners from both industry and the patent profession remain indispensable to ensure progress towards fulfilling our quality aspirations as described under Goal 3.

In 2022, the Office held **15 bilateral meetings with user associations** both in Europe and abroad, including the epi, BusinessEurope, the Associacion Intellectuelle pour la Protection de la Propriété Intellectuelle (AIPPI), the IP5 and Trilateral Industry groups, and numerous other leading national and international associations.

User consultations within the **SACEPO** framework continued throughout 2022, with a total of nine meetings of its main body and the dedicated SACEPO Working Parties. Emphasis is increasingly placed on dialogue and interaction with user representatives as well as on actions taken by the EPO in response to input from users.

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STRENGTHENING THE PCT

Multiple initiatives are ongoing to improve the EPO's services and products under the PCT for the benefit of both applicants and offices, with much progress in 2022.

Digitisation of PCT data flows between WIPO and the EPO saw the completion of the main six flows which, altogether, represent two thirds of the total volume of PCT data exchanged between the two offices. The remainder will be dealt with at a later stage.

The **PCT fee transfer service** streamlines the collection and transfer of international search fees from the receiving offices to the ISA via WIPO. The service has been gradually extended to most PCT receiving offices since 2016 and covered over 98% of all search fees due to the EPO by the end of 2022.

During 2022, the EPO-led Task Force on **PCT Minimum Documentation,** which includes experts from most ISAs, presented a consolidated package of changes aiming to update the scope and requirements of what must be looked at by the authorities when performing the international search. The proposed Rule changes were endorsed by the PCT Working Group and will be presented for adoption by the PCT Assembly in July 2023.

The IP5 Pilot Group on **Collaborative Search & Examination** worked intensively on the preparation of the final pilot report to the IP5 Heads of Offices, including the collection of remaining data from all five national phases. After a thorough evaluation, the Pilot Group recommended not to implement this scheme – for the time being and in its present form – into the PCT framework.
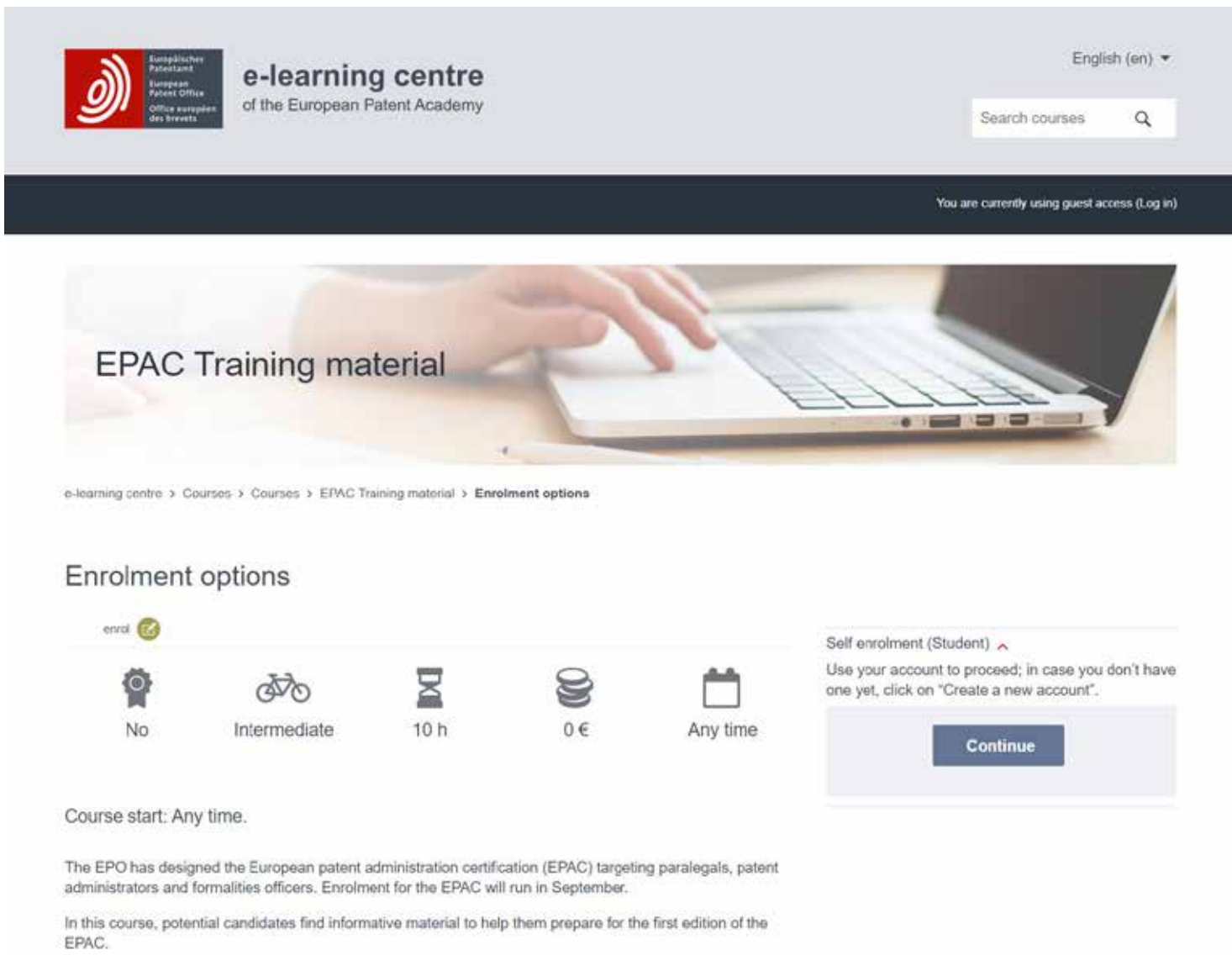
MODERNISATION OF THE EUROPEAN PATENT ACADEMY

Certification

The second **online European Qualifying Examination (EQE)** took place in March with a battery of improved functions that gained great acceptance by candidates: about 2 500 candidates took papers, and 885 candidates completed the EQE and could reinforce the profession. The EQE reform process, which aims at revising the original concept to better meet the demands of the profession and industry, continued with six new modules and nine sample papers, discussed in a widespread consultation for full transparency. As the next step, the reform will be tabled in the Administrative Council.

2022 saw the introduction of the first ever **European Patent Administration Certification (EPAC)** examination. This was a success in terms of expansion of the geographical outreach of the European patent system: it attracted 510 candidates from 47 nationalities, located in 33 countries in Europe and beyond. The responses from interested circles were very positive: the examination was seen as high-level and challenging. The smooth launch of EPAC opens up an opportunity to make use of the EPO certification platform for further certifications.

Figure 38 – **EPAC dedicated training on e-learning centre of the European Patent Academy**

Source: EPO

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Co-operation

The European Patent Academy has reached users from almost all countries. In 2022, it set up **2 230 hours of training** in patent granting, technology transfer, and patent litigation, and the number of participants in training stood at 23 556, with 17 359 further regular user accounts in the eLearning centre. The overall satisfaction level reported by users is already higher in digital format than in pre-pandemic times.

The design of training has been made participatory. A **member states working group** of 37 experts in education coming from 19 national offices met in May and June 2022 under the new structures of the Academy. The goal was to collect the training needs for staff of NPOs for 2023 and co-create the Academy training catalogue.

During 2022, the Academy offered training for the Offices participating in the pilot for the new Search tool based on ANSERA, with over 100 participants. Alongside this course, CPC training for national offices delivered 16 new technical-field specific recordings. Other priority thematic areas of training have been the unitary patent and UPC, training for the PATLIB network, CII, and oral proceedings by VICO.

The **Academic Research Programme** call, fostering collaborative research and expanding the IP research network, granted five awards over a period of three years and research projects started in 2022. 32 research scheme proposals were received to cover these two streams. Relying on the analysis of a team of peer reviewers, a scientific committee integrating experts from all the DGs of the Office makes recommendations for the final selection of projects.

Modularity

Three initiatives stand out when it comes to modularity: the **Modular Intellectual Property Education Framework,** the **Course Builder,** and the **patentability and patent proceedings** for patent litigation experts. The Modular Intellectual Property Education Framework, aiming at the integration of Academy content in university programmes, was completed in 2022. Two high-quality 75-hour courses mixing synchronous and asynchronous delivery are ready to be integrated in official masters and PhD programmes of science, technology, law, and economics schools, starting in March 2023.

The Academy has started developing EPO/university **co-labelled certificates.** The aim of this initiative is to increase the impact, ease of diffusion, and inclusion of developed content in official educational programmes. The content will be included in official programmes and made freely available worldwide.

Digitalisation

Under SP2023 we have developed the first iteration of a new, **central IP catalogue of training activities** at a European level, collecting upcoming learning opportunities from the EPO, EUIPO, and participating NPOs. With a strong focus on the user journey, the e-knowledge portal integrates search, authentication, registration, and consumption of IP training. It will be embedded in the new epo.org website and launched in 2023.

> **During 2022, the Academy offered training for the Offices participating in the pilot for the new Search tool based on ANSERA, with over 100 participants.**

Similarly, a prototype has been designed and developed to concentrate all EPO training materials on a single **document repository.** It will be interlinked via the Single Access Portal with the training offered to national offices. "Patent enforcement in Europe", a comparison tool for national patent enforcement practices across Europe, was released

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in a new interactive digital format. The tool enables users to search and compare specific patent enforcement measures and procedures between different EPO contracting states.

IMPROVE ACCESS TO PATENT KNOWLEDGE

PATLIB 2.0

Through the PATLIB 2.0 project, the EPO intends to promote the development of the **patent information (PATLIB) centres,** encouraging them to expand their knowledge and capabilities, particularly in technology transfer. By supporting the PATLIB centres in their endeavours, the Office provides a growing platform to enhance the effectiveness of the patent system and champions its commitment to enhancing the economic and societal value of patents.

As in previous years, the landmark event for the network was the organisation of a **PATLIB conference** in co-operation with the European Commission. The 2022 edition of the conference attracted 1 332 registrations from 83 countries.

Figure 39 – **PATLIB2022**

Source: EPO

Other achievements of the PATLIB 2.0 project during 2022 include an improved **public online directory of PATLIB centres,** and the introduction of digital service packages to expand the learning opportunities for the centres.

In line with the Office's increased focus on the region, a proof-of-concept was also concluded for the new **Knowledge Transfer to Africa** initiative. This initiative aims to transfer IP-specific knowledge from the PATLIB network to African universities, the ultimate objective being to strengthen the capabilities of the participating African institutions and ensure they can run services independently. 17 universities in 10 African countries were nominated by the regional and national patent offices to participate in the first phase of the initiative, and 16 members of the PATLIB expert network selected to support the mentoring, training, and twinning activities.

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Patent information tools and services

An indispensable tool for IP professionals, the **European Patent Register** is the most complete and up-to-date source of publicly available procedural information on European patent applications as they pass through each stage of the granting process.

In 2022, the Register saw several improvements, including downloadable sequence listings and adaptations to reflect Montenegro's accession. In terms of post-grant information, Hungary has been integrated in the **Federated Register** service, which now covers 34 national offices. San Marino became the 38th state to connect its own national register via **deep linking.**

In preparation for the launch of the Unitary Patent, a new **Unitary Patent Register** has been developed along with the technical implementations of all necessary data and associated tools and services.

Technology platforms on Espacenet

With its **Espacenet database,** the EPO hosts the largest collection of patent literature in the world, which it makes available not only to examiners but also to inventors, researchers, and the general public.

As part of its mission, the Office is fully committed to helping users and society benefit from the EPO's patent information products and services. An important element of this commitment — reflected also under the societal impact theme of Goal 5 — is to facilitate targeted access to curated data of high social relevance.

With this in mind, the Office introduced a new **"Clean energy" platform** into Espacenet, with datasets spanning three technology fields and more than 50 related search concepts. Similarly, the previously launched **"Fighting coronavirus" platform** was expanded to cover four technology fields and some 350 search concepts; it now also includes video interviews with leading scientists in vaccine research, diagnostics, and therapeutics.

Patent knowledge news and events

In order to better disseminate patent knowledge to practitioners, the Office doubled down on its online presence.

A new, fully digital **Patent Knowledge Week** event attracted more than 1 650 registrations. It covered a wide range of topics including the unitary patent, patent knowledge for SMEs and start-ups, patent analytics and visualisation, the role of patents in sustainable development, and an overview of the EPO's support services for different types of users.

Frequent sharing of online content was central to the dissemination approach: in 2022 we published 58 articles in **Patent Knowledge News,** generating close to 74 000 total views, and released 10 new **Patent Knowledge Nuggets** videos on the EPO's YouTube channel, sharing insights on Espacenet, the Unitary Patent in the Register, patent analytics, and our patent insight reports.

Figure 40 – **Patent Knowledge Week – 4 to 7 October 2022**

Source: EPO

REVIEW OF EPO DATA POLICY

A **revised data policy** document developed in consultation with the member states was welcomed first by the TOSC members and, following the support of this board, by the delegations of the Administrative Council in December where it was unanimously approved.

By developing the policy in close liaison with stakeholders, and anchoring it in the broader societal context, the EPO aims to foster its role as a key distributor of **comprehensive and accessible high-quality patent data,** facilitating access to **non-patent literature (NPL),** and improving the performance and accessibility of **examiner search tools.**

The data policy defines **clear rules** for the acquisition of worldwide patent and NPL data, access to this data through the common prior-art search tool, and dissemination to end users – including specific conditions for EP and non-EP patent data.

Acquisition and dissemination processes have been set up such that the EPO and the national offices can continue to make this data available to the public under patent information policies and programmes, either directly or via patent information centres and libraries. This will ensure **barrier-free public access** to the information contained in patent documents, especially for SMEs, universities and research centres, industry, and bodies involved in filing patent applications, granting patents, and disseminating patent information.

With the policy now in place, the next step will be the development of a follow-up proposal for a **pricing policy** in close consultation with the stakeholders.
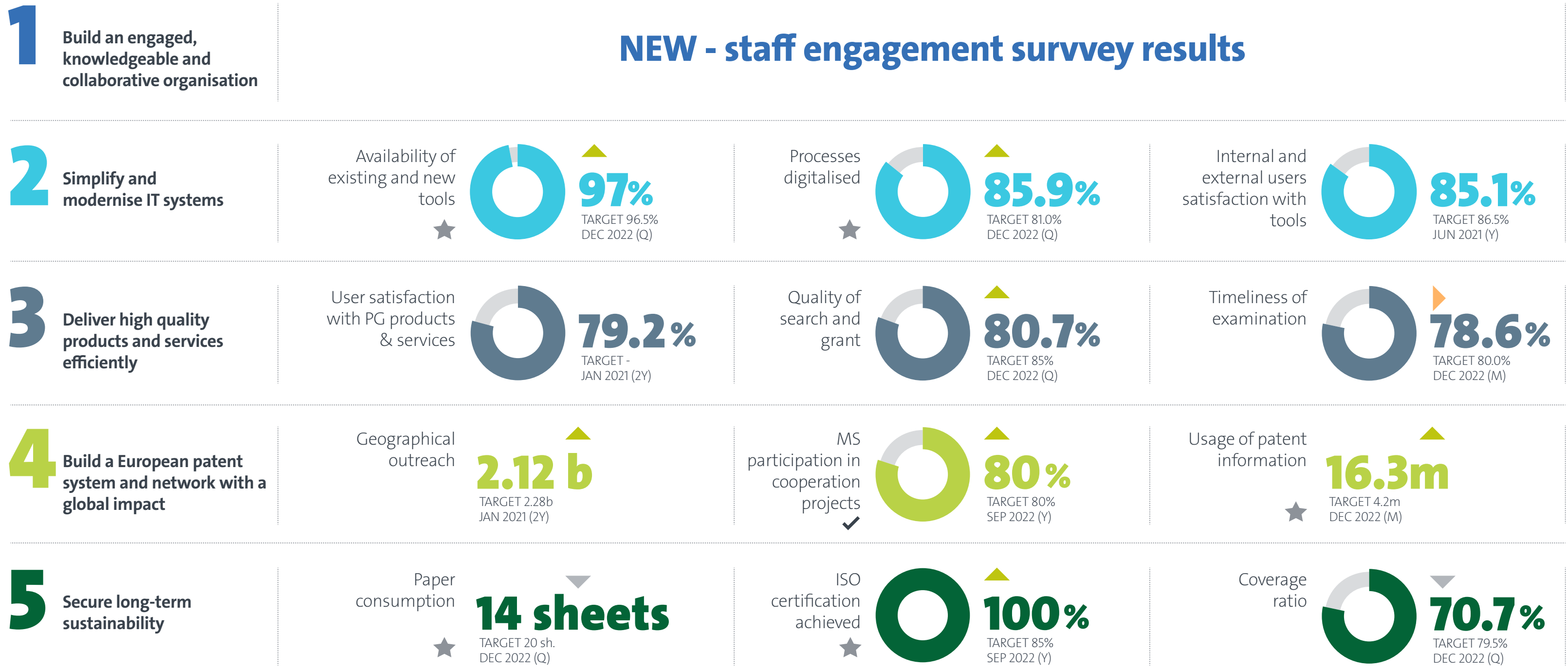
GOAL 5

SECURE LONG-TERM
SUSTAINABILITY

Annual Review 2022

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Goal 5
Secure long-term sustainability

In 2022, the EPO continued its efforts to shape a sustainable future with good progress in the implementation of the Strategic Plan 2023 (SP2023). We monitored the **impact and benefits** of our activities under SP2023 via the **balanced scorecard key performance indicators (KPIs).**

Figure 41– **Balanced Scorecard with end of 2022 figures**

1 Build an engaged, knowledgeable and collaborative organisation

NEW - staff engagement survvey results

2 Simplify and modernise IT systems

Availability of existing and new tools
97%
TARGET 96.5%
DEC 2022 (Q)

Processes digitalised
85.9%
TARGET 81.0%
DEC 2022 (Q)

Internal and external users satisfaction with tools
85.1%
TARGET 86.5%
JUN 2021 (Y)

3 Deliver high quality products and services efficiently

User satisfaction with PG products & services
79.2%
TARGET -
JAN 2021 (2Y)

Quality of search and grant
80.7%
TARGET 85%
DEC 2022 (Q)

Timeliness of examination
78.6%
TARGET 80.0%
DEC 2022 (M)

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

Geographical outreach
2.12 b
TARGET 2.28b
JAN 2021 (2Y)

MS participation in cooperation projects
80%
TARGET 80%
SEP 2022 (Y)

Usage of patent information
16.3m
TARGET 4.2m
DEC 2022 (M)

5 Secure long-term sustainability

Paper consumption
14 sheets
TARGET 20 sh.
DEC 2022 (Q)

ISO certification achieved
100%
TARGET 85%
SEP 2022 (Y)

Coverage ratio
70.7%
TARGET 79.5%
DEC 2022 (Q)

Source: EPO

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Figure 42 – **Detailed indicators derived from the staff engagement survey**

Agile culture	**65.2%** ▲ 2022	Communication	**31.7%** ▲ 2022	Empowerment	**61.9%** ▲ 2022
External reputation	**65.7%** ▲ 2022	Inclusion and diversity	**64.5%** ▲ 2022	Line management	**71.9%** ▲ 2022
Management	**27.2%** ▲ 2022	Service focus	**51.5%** ▲ 2022	Sustainable engagement	**59.4%** ▼ 2022
Remuneration	**46.2%** ▼ 2022	Well-being	**68.1%** ▼ 2022	Working effectiveness	**55.5%** ▲ 2022
Training and talent development	**58.8%** ▲ 2022	STAFF ENGAGEMENT SURVEY RESULTS			

Source: EPO

The EPO's success starts with **engaged, knowledgeable and collaborative people.** In 2022, the three balanced scorecard KPIs relevant to staff engagement, training and development, and collaboration were expanded into a dedicated dashboard showing the results from the 2022 staff engagement survey to emphasise their importance. These results showed improvements in 10 out of 13 categories compared to the 2019 survey. Positive areas included empowerment, diversity and inclusion, collaboration, agility and flexibility.

Alongside engaged people, our digital transformation is another pillar of our success. In terms of **simplifying and modernising the EPO's IT systems,** 2022 saw good progress in important KPIs on the availability of our tools – reaching an excellence level of 97% – and on the digitalisation of our processes – improving to 85.9% by the end of 2022.

These are the building blocks for the **quality of our products and services.** At the end of 2022 we achieved 80.7% compliance in the quality of our searches and grants, while 78.6% of examinations were delivered on-time.

The EPO does not operate in isolation: **strengthening our network of partners** across the globe is key for the long-term sustainability of both the EPO and the **European patent system.** Towards that goal, the EPO's geographical reach grew to 2.12 billion people worldwide and the outreach of our patent information resources increased significantly to more than 16 million users. All this was achieved in close cooperation with our member states, whose participation in co-operation projects was at to 80% in 2022.

All of these goals contribute to **securing the EPO's long-term sustainability:** environmental sustainability, organisational impact, financial sustainability and societal impact. In terms of the top KPIs in these areas, environmental indicators like paper consumption

continued to show significant improvements in 2022, building on gains made during the pandemic, and we achieved our central objective for good governance: 100% coverage of our operations by ISO certification. The key indicator for the EPO's financial sustainability, the coverage ratio, was impacted by global negative trends in the financial markets during 2022, ending the year at 70.7%.

ENVIRONMENTAL SUSTAINABILITY

The EPO has committed to become a net zero organisation by 2030, translating our ambition into meaningful and measurable actions, and recognising the urgency of the climate crisis. Our aim is to contribute to the world's transition to a lower carbon future and the global achievement of the UN SDGs.

Actions to reduce the EPO's environmental footprint

In 2022, with the aim of progressively addressing all our emissions, direct and indirect, originated along the value chain, we have extended the scope of the emissions reported according to the **Greenhouse Gas (GHG) Protocol** Corporate standard to three additional Scope 3 categories. These are "Capital goods", "Waste generated in operations" and "Transportation and distribution".

The EPO's gross GHG reported emissions show great progress towards our 2030 goal reduction. We closed 2022 with a historically low level of emissions: below 4 000 t CO_2e. Compared to 2021, our overall emissions were reduced by around 713 t CO_2e, equivalent to the emissions associated with the electricity production in 618 households in the Netherlands for a year. Reductions achieved were primarily the result of the implemented Action Plan 2022 combined with the **energy savings** from temperature adjustment in all EPO buildings, in response to the emergency plan calling for 15% voluntary energy savings by the EC. These energy savings were met.

Other measures to **make our buildings more sustainable** included introducing a start/stop automation control in the escalators in the Munich Isar building and improving the thermal insulation of incoming district heating in our Isar and PschorrHöfe buildings. All of these measures counterbalanced the emissions increase due to the reopening of our premises when COVID-19 restrictions eased and the extension in scope of GHG reported emissions.

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In line with our commitment to a healthy circular ecosystem supporting UN SDG12 (responsible consumption and production), we organised **donations of office furniture** to employees and local charities at our sites in in Munich, Vienna, and Berlin. In addition, with the new e-waste service, we could reuse and repair around 50% of our 4 200 decommissioned devices and recycle the rest.

With the launch of NWoW in September 2022, our employees are offered a hybrid working environment with flexibility on where they choose to work. With this new reality, it is our environmental responsibility to adapt our buildings and reorganise workspaces in a more sustainable manner, reducing energy needs and related emissions, while keeping our buildings vibrant and strengthening our sense of belonging.

The NWoW scheme also offers the possibility to optimise the time spent commuting or avoid it entirely when working from home. When travelling, we promote **sustainable mobility,** recognising and respecting that we all have different needs that evolve in time according to our personal situation. For employees who still need to drive to work, a transition to more sustainable solutions is supported by offering the possibility to charge electric vehicles at the office premises for free. To this end, in 2022, 8% of our parking spaces were equipped with chargers for electric vehicles, and it is planned to extend the capacity to 20% of total parking spaces by the end of 2023.

In 2022, we also launched the **Vienna Green Hub** project to construct a carbon negative building (in operation), the flagship of many initiatives towards achieving carbon neutrality by 2030.

Paper consumption

Progress in digital transformation continued to contribute to a significant reduction in the EPO's paper consumption. In 2022, printing reached a **record low** of 17.5 million sheets, constituting a decrease of over 30% compared to 2021. The corresponding 7.8 million sheets saved equals a pile of paper standing at 506 metres – 4.7 times the height of the EPO's Main building in The Hague.

With the **"on demand" printing of examination and search files,** which gives examiners control over which file they want to receive, doing away with unnecessary printing of paper files, the number of requested search and examination files went down by 29% from 2021 to 2022 (from 28 400 files to 20 250 files), and only in around 10% of the searches and 9.4% of examination files do examiners work with a paper file.

Given the enormous reduction in demand and volume, around 160 000 paper files in the Munich central file stores located in the Isar building and Pschorr Höfe Part VIII could be moved to an off-site location allowing the vacated on-site space to be used for other purposes.

While reducing our stocks, in 2022 we only procured 13 million sheets of paper, about 110 million fewer sheets than in 2019 when SP2023 was launched, a reduction of over 89%.

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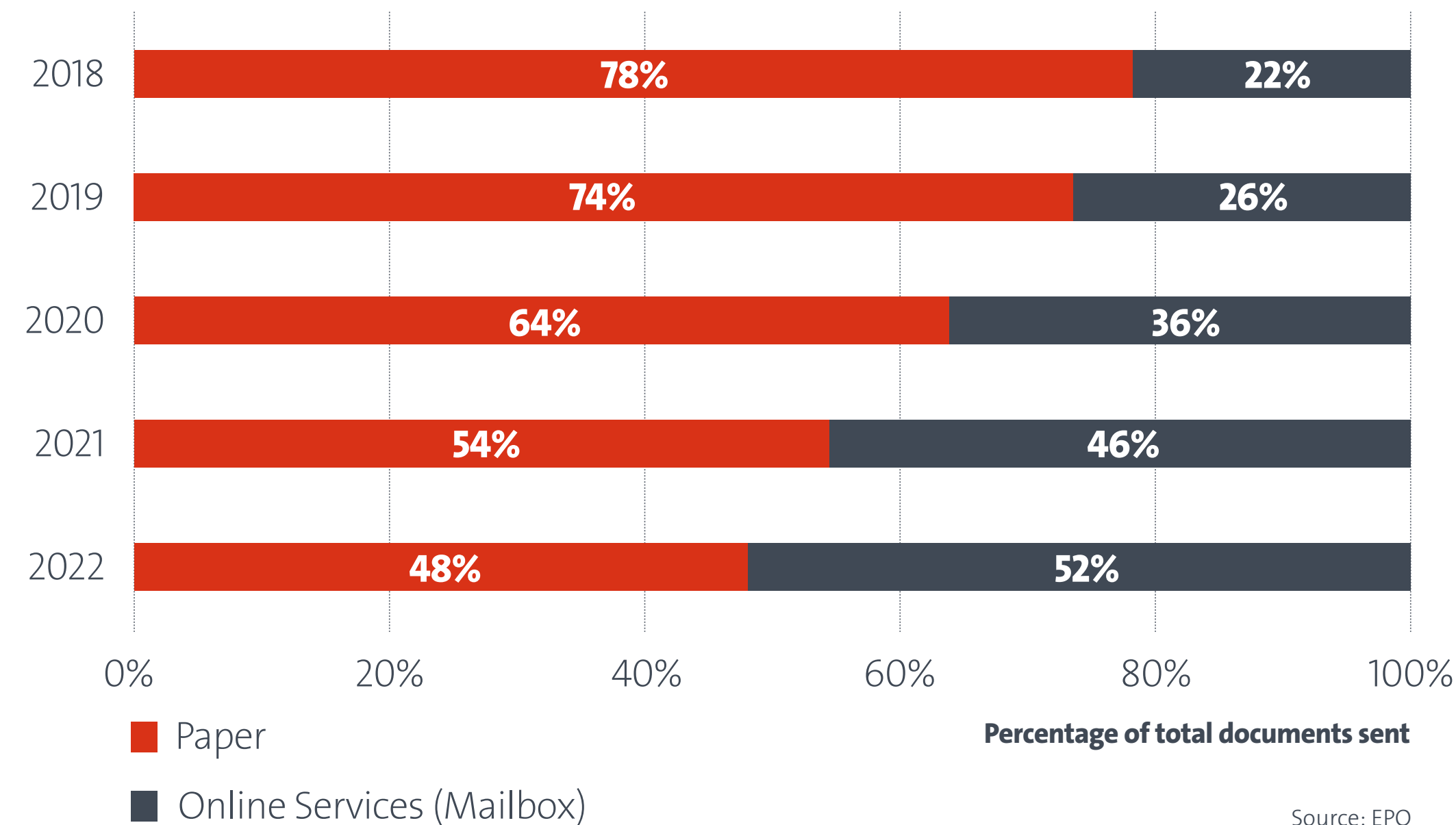
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The progressive adoption of **MyEPO Portfolio**, our web-based online service for parties to proceedings before the EPO, and the extension of its functionalities, will contribute further to this endeavour. Since 2018 we have progressed from sending 78% of documents on paper to sending 52% via online services (Mailbox) in 2022, saving a significant amount of paper.

Figure 43 – **Reduction of paper communications**

In 2022 we only procured 13 million sheets of paper, about 110 million fewer sheets than in 2019 when SP2023 was launched, a reduction of over 89%.

■ Paper
■ Online Services (Mailbox)

Percentage of total documents sent

Source: EPO

Sustainability of ICT

As a knowledge-intensive organisation, Information and Communication Technology (ICT) sustainability is an essential aspect of the EPO's environmental performance. We strive to choose environmentally friendly options and find sustainable and efficient ways to operate them.

To this end, we adopted **eco-design** best practices in the development of digital services, starting with the new intranet and the new external website, which were successfully audited. We also launched a **carbon footprint dashboard** to monitor the carbon footprint of the Google Cloud service used by the EPO; we plan to gradually extend the scope to other cloud service providers in 2023.

Outlook

Since 2009, the EPO has been certified as complying with the Eco-Management and Audit Scheme (EMAS) at Munich Isar, Munich PschorrHöfe, The Hague, Vienna, and Berlin and this was re-confirmed in 2022. In 2023, we will continue our work to become a net zero organisation by 2030 with an action plan of measures for positive changes. We will further extend the scope of the emissions reported according to GHG Protocol Corporate standard to additional Scope 3 categories including goods and services we purchase, and strengthen our green procurement, in line with our commitment to a safer, smarter, and more sustainable world.

Organisational impact

Good governance, both internal and external, is another important aspect of the EPO's long-term sustainability and vital for a public institution that delivers benefits for society at large. The EPO aims to ensure that we meet the highest standards of organisational governance, with clear best practices and guidelines applied consistently. External certifications and ISO standards help us to continuously improve our activities and achieve operational excellence.

Aiming to increase the consistency and effectiveness of our internal processes, not only those regulating the patent granting activities, in 2022 we achieved our KPI of 100% ISO certification, by extending the scope of our **quality management system (QMS)** to services such as finance, procurement, human resources, legal affairs, international co-operation, infrastructure, and IT. Our ISO 9001 certification now covers effectively the entire Office, extending our commitment to excellence to all areas of our work. As a responsible employer, we set up an **occupational health and safety management system (OHSMS)** which in 2020 obtained a certification under ISO 45001. In September 2022, external auditors reconfirmed the OHSMS effectiveness with a regular surveillance audit. In 2022, the EPO also achieved certification

for its **information security management system** that is aligned with the most up-to-date best practices and fulfils the requirements of ISO 27001 (see Goal 2 for further details).

Learning also from the experience gathered during the pandemic, the EPO put in place a structured **business continuity management system (BCMS),** launching a dedicated framework and portal in December 2022. The BCMS allows the Office to respond more effectively to threats and disruptions, with the safety and well-being of staff as the highest priority. It includes specific business continuity plans to resume EPO business processes in a controlled way in case of disruption.

External governance

Modernising the EPO's external governance is a crucial element in ensuring the EPO's long-term sustainability, one of the main objectives of the SP2023. Extensive preparatory work on identifying areas of improvement for the EPO's external governance started in 2021 and was continued throughout 2022, aiming at **enhancing the transparency and efficiency** of the set-up of the Organisation, adjusting the Council's **Rules of Procedure,** and modernising the Council's **technological infrastructure.**

In February 2022, the Chairperson of the Council launched a **consultation process** with the Contracting States, inviting delegations to provide their feedback on an orientation paper putting forward specific ideas on how to modernise the EPO's governance. The feedback received from the delegations was analysed and taken into account, and a summary presented to the Administrative Council in June 2022. In October 2022 the Council approved a roadmap for the modernisation of the EPO's external governance (CA/C 15/22) which envisaged a number of steps, divided into three "baskets" in line with the priorities identified by the delegations.

In November and December 2022 work on the preparation of measures proposed under **Basket I** focusing on strategic, governance-related amendments to the EPO's legal framework and policy issues in various fields commenced, facilitated by the active involvement of the Board of the Administrative Council. Detailed proposals were discussed by the Board in November 2022. The feedback indicated the need to refine the proposals for submission to the Council for its opinion in March 2023.

In parallel to the preparatory measures undertaken for Basket I, the measures foreseen under **Basket II** have already started to be implemented in the second half of 2022. These measures are predominantly operational in nature and focus, among other things, on modernising the Council's technological infrastructure.

FINANCIAL SUSTAINABILITY

Securing the EPO's financial sustainability is fundamental for the Office's overall long-term sustainability as a self-funded organisation which aims to have a lasting positive impact on the patent system and society. The EPO continues to monitor its financial situation and consolidate the implementation of the **six financial sustainability measures** adopted in 2020.

The **coverage ratio,** the main KPI for the EPO's financial sustainability, has been subject to constant monitoring and reached 70.7% as at December 2022. The coverage ratio is the ratio between the financial assets of the EPO (Reserve Funds for Pensions and Social Security (RFPSS), EPO Treasury Investment Fund (EPOTIF), cash) and its long-term liabilities (pension and social security debt). It went down from 87.9% in December 2021 to 70.7% in December 2022 due to a reduction in financial assets (EUR 2.1 billion losses in the value of assets following the deterioration of the financial markets in the course of 2022) and an increase in liabilities. The increase in liabilities is mainly driven by the increase in pensions owed to staff and pensioners due to the high (on average 10.8%) salary and pension adjustment decided in the December 2022 meeting of the Administrative Council.

The six financial sustainability measures have been regularly monitored:

▌ The **New Salary Adjustment Method** is expected to generate a gain of about EUR 2 billion over the long run by introducing a cap over the Eurozone inflation (cap of 0.2%). Thanks to the introduction of the cap, the pension owed to staff and pensioners could be re-evaluated downward and reduced by about EUR 1 billion as of December 2022. However, the high Eurozone inflation in 2022 led to a one-off significant increase of the salary and pension tables, which in turn increased the liabilities by about EUR 1.2 billion and compensated for the gain realised. In other words, the measure has all in all brought a positive effect of EUR 1 billion so far but the extraordinary macro-economic circumstances in recent years beyond the reach of the Office, such as the exceptionally high inflation, have unfortunately eliminated the impact at this stage.

▌ The adaptation of the **contribution rates to pensions** follows the regular biennial funding studies which have led to a 3.3% increase as of 2020, with a positive financial impact of EUR 28 million by the end of 2022. A further 0.9% increase in the contributions to the pension and social security schemes, as of 1 January 2023, has been implemented.

▌ The **biennial inflation-based fee adjustment** of 3% for procedural fees except PCT introduced as of 1 April 2022, has so far generated about EUR 21 million additional income. A further adjustment, for an exceptional increase of 5%, was decided in 2022 and will take place as of 1 April 2023 to partially cover the historically high level of inflation. This will avoid a double-digit fee adjustment in April 2024.

▌ **Digitalisation of the end-to-end PGP** is well underway (see Goal 2) and significant benefits are expected for users (overall impact EUR 1.2 billion). As of the end of 2022, the EPO estimated such benefits at EUR 0.7 billion.

▌ As regards the **investment of part of the annual cash surplus in EPOTIF** (overall impact EUR 1 billion), a total of EUR 250 million was transferred to EPOTIF in 2021 and EUR 80 million in 2022.

▌ Finally, as regards the one-off **investments of part of the annual cash surplus in the RFPSS** (overall impact EUR 0.8 billion), EUR 150 million was transferred to the RFPSS in 2021 and a further transfer of EUR 196 million was executed for 2022.

Figure 44 – **United Nations Sustainable Development Goals in focus in 2022**

Source:
United Nations

Beyond the six measures evaluated above, in the EPO investment funds activities, a study was performed in 2022 to identify possible options for the integration of **ESG criteria in the investment process of the RFPSS,** with a parallel implementation of consistent criteria for the EPOTIF. The implementation is expected to start in late 2023.

SOCIETAL IMPACT

All of the EPO's activities ultimately aim to have a positive impact on society. Innovation provides solutions to humanity's greatest challenges, contributing to the **United Nations Sustainable Development Goals (UN SDGs) and a safer, smarter, and more sustainable world.** The EPO reaches out to all its stakeholders: inventors, investors, policy makers, researchers, scientists, and the public at large. We share patent knowledge across the globe, giving easy access to state-of-the-art patent data to help innovators to solve puzzles and take innovation further. In 2022, our studies, events and platforms contributed to eight UN SDGs, and the main communications on our sustainability activities received almost 316 000 visits.

An important milestone for maximising our positive impact on society was achieved in 2022 with significant progress in the set-up of the new Observatory on Patents and Technology. The Observatory will contribute to a deeper and more comprehensive understanding of important issues related to the future of innovation and technology, and their impact on the patent system. Building on rich feedback gathered from an online public consultation, the concept was refined in close collaboration with the EPO's member states. The comprehensive proposal for the set-up and blueprint of the Observatory (CA/47/22) was received positively by the EPO Administrative Council in June 2022.

The Office then laid the groundwork for an efficient and inclusive new Observatory, starting to build up the Observatory network and gather ideas and topics across the Office for the first **biennial workplan** proposal. Guided by a number of specific principles (evidenced-based approach, transparency, diversity, inclusiveness, collaboration, and subsidiarity), the Observatory's activity will be structured along **three streams:** technology intelligence, legal and innovation policies, and diversity and transformation. A new **external consultation** was planned for early 2023, ahead of the Observatory's official start in the second half of 2023.

Studies

The EPO published a number of studies in 2022 contributing to various UN SDGs, often in partnership with other organisations.

Looking at **UN SDG 5: gender equality,** our study on **"Women in inventive activity"** highlighted the need for change, as fewer than one in seven inventors in Europe are women. A series of virtual roundtables on "Women and IP innovation" were organised with outstanding women inventors and patent professionals discussing enhancing women's contributions to innovation. This campaign reached 42 481 viewers on social media.

In partnership with the International Renewable Energy Agency (IRENA), a patent insight report on **"Innovation trends in electrolysers for hydrogen production",** was published revealing the patent filing trends. Linked to **UN SDG 7: affordable and clean energy,** it reached over 22 000 users.

The fourth edition of our joint study with the EUIPO on **"IPR-intensive industries and economic performance in the European Union"** showed that intellectual property fosters 82 million jobs in the EU, contributing to **UN SDG 8: decent work and economic growth.** It reached about 22 680 users on social media.

Figure 45 – **EPO's publications relevant to UN SDGs**

Source: EPO

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Two studies provided useful insights towards **UN SDG 9: industry, innovation, and infrastructure.** First, a joint study by the EPO and the European Investment Bank (EIB), **"Deep tech innovation in smart connected technologies",** identified the unique obstacles that small businesses face in developing advanced digital technologies in the European Union. Despite impressive patent activity, Europe's small deep tech businesses still lag behind their US counterparts. This study reached about 15 514 users on social media.

Second, a new joint study by the EPO, the European Space Agency (ESA) and the European Space Policy Institute (ESPI) revealed a rapid growth of patent filings in **space-borne sensing and green applications.** This study highlighted the use of space-borne sensing as an indispensable tool for effectively implementing green policies and objectives. This report reached nearly 15 000 users.

Finally, the study on **"The European patent system and the grace period"** addressed how users respond to the grace period for patents. It found that European EPO applicants generally manage to comply with the novelty requirement, although universities experience more frequent issues than other entities due to pre-filing disclosures. This study reached some 15 262 users on social media and reinforces **UN SDG 16: justice, strong institutions.**

Platforms

The EPO's **Espacenet platforms** contain easily accessible smart searches, combining keywords and classifications, to help innovators and decision-makers to quickly identify the most important inventions and documents among millions, in the pursuit of solutions. This initiative also reflects the patent system's broader role of encouraging investment in scientific and technological breakthroughs for the benefit of all.

Our **Fighting Coronavirus Platform,** launched in 2020, was updated in 2022 for the second time, with the addition of 42 new smart searches, offering a total of 350 search strategies to academics, innovators, and researchers, reflecting the rapidly changing technology landscape in the struggle against the pandemic. This platform was accessed almost 78 000 times since its launch and contributes to **UN SDG3: good health and well-being.**

We also launched our new **platform on Clean Energy technologies** in 2022, aiming to help innovators develop green tech solutions to safeguard our planet. With an initial selection of 60 ready-made smart searches, innovators are enabled to quickly navigate a large number of patent documents in a targeted manner, in order to build upon existing green innovative solutions and contribute to **UN SDG 7: affordable and clean energy.**

Aside from these platforms, the EPO continued to share **patent knowledge** extensively worldwide with academics, inventors, researchers, and scientists via our patent information tools: Espacenet, the European Patent Register and the European Publication Server. **Free access to user-friendly patent tools** brings patent knowledge to millions who are guided to develop novel inventions for the benefit of humankind. Continuously accessible patent tools also contribute to the quality of education (UN SDG 4), decent work and economic growth (UN SDG 8), and to industry, innovation, and infrastructure (UN SDG 9).

Events

The EPO also organises events to reach out to our stakeholders and promote the benefits of innovation for society.

To address the global challenge of ridding the planet of plastic waste, the **first ever public coding competition** was launched in November, aiming to develop creative and reliable AI models for automating the identification of patents related to **green plastics,** and making the know-how in patents concerning green plastics more readily available to innovators everywhere. This initiative, contributing to **UN SDG 12: responsible production and consumption,** was followed by over 1 300 viewers.

With a hybrid ceremony for the 2022 **European Inventor Award,** the breadth and depth of innovation was once more honoured, celebrating winners shining a path forward to a more promising future. Young inventors were also celebrated, with the inaugural **Young Inventors Prize.** The event promotes the benefits of innovation and inventors for the good of society and the economy in Europe.

Figure 46 – **European Inventor Award 2022 – key figures**

Source: EPO

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Quality Report 2022 (CA/40/23 Add. 1)

Social Report 2022 (CA/40/23 Add. 2)

Engagement Report 2022 (CA/40/23 Add. 3)

Environmental Report 2022 (CA/40/23 Add. 4)

IT Report 2022 (CA/40/23 Add. 5)

Data Protection Report 2022 (CA/40/23 Add. 6)

Communication Report 2022 (CA/40/23 Add. 7)

Co-operation Report 2022 (CA/40/23 Add. 8)

European Patent Academy Report 2022 (CA/40/23 Add. 9)

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