Audit and Evaluation of the Patent Cooperation Treaty (PCT) Operations and Customer Relations
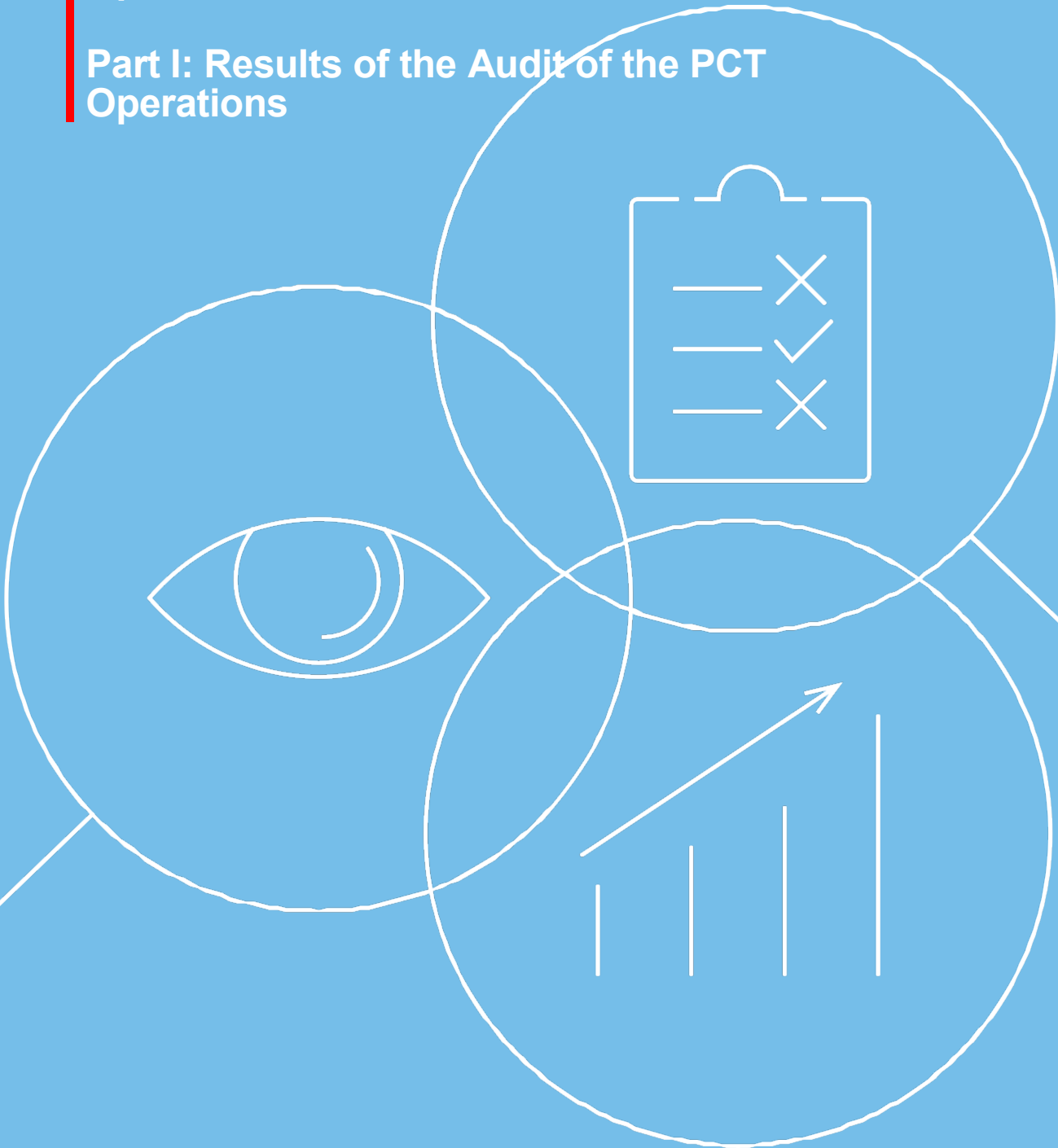
Part I: Results of the Audit of the PCT Operations

WIPO
WORLD
INTELLECTUAL PROPERTY
ORGANIZATION

CONTENTS

LIST OF ACRONYMS

AIMS	Administrative Integrated Management System
EPO	European Patent Office
ERM	Enterprise Risk Management
FWA	Flexible Working Arrangements
IB	International Bureau
ICT	Information and Communication Technology
ICTD	Information and Communication Technology Department
IOD	Internal Oversight Division
IP	Intellectual Property
IPEA	International Preliminary Examination Authority
ISA	International Searching Authority
ISD	Information Systems Division
IT	Information Technology
OCR	Optical Character Recognition
PCT	Patent Cooperation Treaty
PTS	Patent and Technology Sector
RO	Receiving Office
SIAD	Security and Information Assurance Division
SLA	Service Level Agreement
WIPO	World Intellectual Property Organization
WMS	Work Management System

EXECUTIVE SUMMARY

1.   The Patent Cooperation Treaty (PCT) Operations Division, within the Patent and Technology Sector (PTS), is the operations hub of the international patent system established under the PCT system. The staff members in the Division are responsible for examining international patent applications and providing customer services related to applications.

2.   The Internal Oversight Division (IOD) notes that the PCT Operations Division embarked on a workforce transformation in 2022, aimed at, among others, transforming the workforce from being application-driven (process-focused) to an applicant/client-driven approach (needs-focused). Further, the Division implemented a Work Management System that facilitates its work through a web-based platform which provides relevant PCT statistics and access to relevant information and learning resources for staff members.

3.   While acknowledging these positive initiatives and actions, IOD also notes additional opportunities to further enhance governance, risk management and internal controls. The transformation of the PCT Operations Division and associated risks needs to be managed accordingly so that the process yields the envisaged benefits. Managing the transformation process and PCT pilot teams accordingly will help the Division in responding to the evolution of business demands, providing better quality services to the users, and better alignment with the areas of strategic focus.

4.   There are opportunities for the PCT Services to enhance its tools and systems. For example, transitioning to a web-based version of eDossier will enhance the security and maintainability of the system. IOD notes that there is currently a project underway to make improvements to the eDossier. The planned improvements are part of the Resilient and Secure Platform - Software Transformation Project scheduled to be completed in 2025. The PCT Services uses the Optical Character Recognition (OCR) service to extract and repurpose data on patent applications from original paper filings, scanned electronic filings, and PDF filings. The current process and procedure of processing patent application files using the OCR Quality checker, an application, within the OCR Service, is repetitive, strenuous and time-consuming. Further, the OCR has some technical limitations. Going forward, PCT Services should work towards decreasing the number of filings that require the use of the OCR Quality checker. This will require PCT Services to intensify its engagement and outreach campaigns with specific Receiving Offices (RO) and Intellectual Property (IP) Offices.

5.   In light of the challenges and delays in semi-automating the work distribution using the planning tool, the PCT Operations should review the business case for the continued investment of resources in developing this tool. The Functional Development and Support Section, within the PCT Operations Division, plays a critical role in bridging the gap between the business areas and IT solution providers. However, the section does not have adequate staff members with the required internal systems' knowledge and skill required to translate business needs into Information Technology (IT) solutions. Going forward, staff profiles and resources should be reviewed and aligned with the needs of the Section.

6.   The PCT Information Systems Division can enhance its client orientation and internal service management model by developing a feedback mechanism that would systematically and consistently capture internal clients' feedback. This practice can provide relevant information to be incorporated during the refinement of the IT Operating Model, following stage four of the planned Information and Communication Technology (ICT) transition (incorporation of PCT IT systems), and can also serve as a good practice going forward.

7.   Finally, IOD is cognizant of the ongoing ICT reorganization and the work of the ICT Transition Task Force, which aims to shift the responsibility for IT systems underpinning the PTS to the Information and Communication Technology Department (ICTD), tentatively by January 2024. IOD notes that the resulting new IT Operating Model includes establishing a central demand management process. IOD emphasizes the need to incorporate an internal agreement or commitment, to among others , help clarify roles and responsibilities, establish mutually acceptable and optimal service levels, and set the basis for continual improvement, which will further support internal service management practices in the Organization.

1.   BACKGROUND

8.   PTS administers the PCT[1] and the Organization's programs relating to the law of patents, as well as their full practical application. The PCT Services assists applicants in seeking patent protection internationally for their inventions, helps patent offices with their patent granting decisions, and facilitates public access to a wealth of technical information relating to those inventions. By filing one international patent application under the PCT, applicants can simultaneously seek protection for an invention in a large number of countries. In addition, the applicants pay a fee for services rendered by the Organization in the application process.

9.   Further, the PCT system generates revenue through processing and publishing applications for applicants seeking patent protection internationally. Applications are made either through any of ROs[2] around the world, or directly to RO of the International Bureau at (WIPO) Headquarters. WIPO charges a set of fees for applications, which include, among others, international filing fees, handling fees, and fees for additional pages. For an overview of the PCT system and brief description of the application process refer to Annex II of this report. In 2021, 153 states were members of the PCT, and applicants from 129 countries filed PCT applications at 83 ROs. Despite such a broad geographical spread, most filing activity was concentrated in a small number of economies. Further, in 2021, women accounted for 16.5 per cent of all inventors listed in PCT applications and men the remaining 83.5 per cent. The share of women inventors increased by one percentage point in 2021 as compared to 2020.

10.   The number of international patents filed through the PCT system rose to over 278,000 in 2022, compared to an estimated 277,500 in 2021 i.e., slight increase of 0.3 per cent in patents filed. In 2022, digital communication, computer technologies, and semiconductors saw the fastest rates of growth whereas in 2021 growth was strongest in pharmaceuticals and biotechnology as health-related technologies were prioritized.

11.   Total revenue of the Organization for 2021 was 475.1 million Swiss francs, representing an increase of 1.5 per cent compared to the 2020 total revenue of 468.3 million Swiss francs. The largest source of revenue during 2021 was PCT system fees, accounting for 76.2 per cent of total revenue.

12.   The main driver for revenue from these fee-based services is the international demand for intellectual property titles. Other external factors that may have influenced the Organization's revenue from its fee-based services include research and development investment levels, technological confidence levels, and exchange rate fluctuations.

Composition of 2021 WIPO Revenue[3] (in millions of Swiss francs)
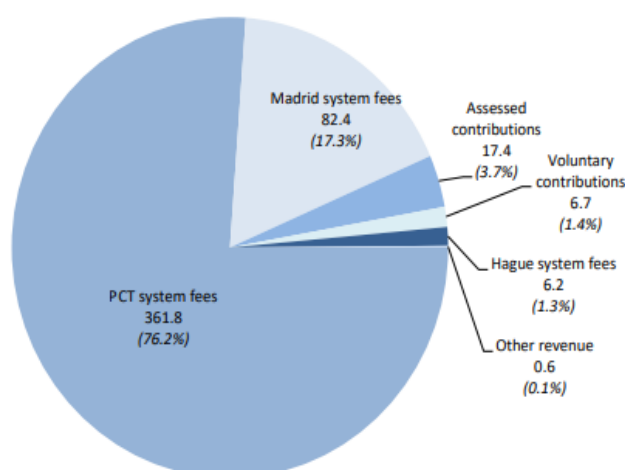
Source: WIPO Financial Statements, 2021

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[1] https://www.wipo.int/treaties/en/registration/pct/summary_pct.html.
[2] There were a total of 117 ROs as of December 2022, and 119 as of February 2023.
[3] Revenue is recognized and accounted for in accordance with the International Public Sector Accounting Standards.

13.   Given the amount of revenue that the PCT system generates, it is crucial that the Organization maintain an internal control environment that provides reasonable assurance that the people, processes, procedures, tools and systems are adequate and working properly. This ensures that the PCT Services continues to meet or exceed its performance targets and expected results.

2.   ENGAGEMENT OBJECTIVES

14.   The objectives of the Part I (audit) were to:

(a)   Review the governance and structure, risk management and compliance, as well as the effectiveness of internal controls in PCT Services; and

(b)   Assess the adequacy and effectiveness of tools and systems used to support the PCT Services.

3.   ENGAGEMENT SCOPE AND METHODS

15.   The scope of the engagement covered the period of 2021 and 2022. However, for analytical review, corroborative purposes and gaining specific insights, the period covered was in some instances extended beyond the stated scope. The audit part of this engagement was conducted from September 2022 to February 2023.

16.   The engagement included, among others, a review of both the past and the current status of services with a view to identifying prospective measures and enhancements to further support the achievement of the PCT Services' expected results and relevant strategic pillars. The approach and methods were: (i) interviews with relevant internal stakeholders; (ii) review and analysis of documents and records; (iii) walkthroughs; and (iv) test of controls.

17.   The engagement was performed in accordance with, among others, the International Standards for the Professional Practice of Internal Auditing (the Standards) issued by the Institute of Internal Auditors.

4.   OUTCOMES

18.   The objectives and outcomes of Part I are summarized below.

S/n	Objective(s)	Outcome(s)
(a)	Review the governance and structure, risk management and compliance, as well as the effectiveness of internal controls in the PCT Services.	IOD notes the transformation of the PCT Operations workforce and the envisaged benefits and highlights some challenges that need to be addressed, for an effective transformation.
		Equally, risk mitigation measures of the PCT Services should be aligned with the risks identified and captured in the ERM system.
		Having the PCT Operations staff systematically and consistently participate in providing ePCT first-level services will help in transforming the workforce into being more client-

		oriented, promote collaboration and efficient use of resources.
		As part of the reorganization of IT systems, which includes shifting the responsibility for IT systems underpinning PTS to ICTD, IOD notes that an IT Operating Model including a central demand management process is being established for the ICT reorganization.
		IOD points to the need to ensure that the Model also includes essential elements of a service agreement or commitment to, among others, help build services to support current and future needs of the PCT Services, establish mutually acceptable and optimal service levels, clarify roles and responsibilities, and set the basis for continual improvement.
(b)	Assess the adequacy and effectiveness of tools and systems used to support the PCT Services.	There are opportunities for the PCT Services to enhance its tools and systems. For example, transitioning to a web-based version of eDossier will enhance the security and maintainability of the system.
		In addition, implementing an automated solution for assigning work in the PCT Operations Division will result in a systematic, transparent, and harmonized work distribution, as well as cost and labor savings.
		Equally important, the PCT Services needs to develop a plan of action that will help decrease the number of international filings that require the use of the OCR Quality checker.
		Further, the PCT Services can enhance its client orientation and service management model by developing a feedback mechanism that will systematically and consistently capture internal clients' feedback.

5.   POSITIVE DEVELOPMENTS

19.   IOD noted some positive developments in the PCT Services.

Area	Positive Development
PCT applications filed	Overall, PCT filings have grown every year since 2010. In 2021 the applications grew by a 0.9 per cent, while 2022 experienced a growth of 0.3 per cent.
Transformation of the PCT Operations Workforce	In 2022, the PCT Operations embarked on a workforce transformation aimed at, among others, transforming the Operations Division workforce from being application-driven (process-focused) to an applicant/client-driven approach (needs-focused).
PCT Operations Division – Work Management System	Development and deployment of the Work Management System (WMS). Since 2020, the system has facilitated the work of the PCT Operations Division through a web-based platform that compiles relevant statistics and provides access to information and learning resources.

6.   OBSERVATIONS AND RECOMMENDATIONS

20.   To enhance the governance and efficient and effective management of the PCT Services and customer relations, IOD made the following observations and recommendations.

(A)   GOVERNANCE, RISK MANAGEMENT AND INTERNAL CONTROLS

21.   IOD notes the following areas in which the relevant governance, risk management, and internal controls for the PCT Operations can be further enhanced.

(i)   Transformation of the PCT Operations Division Workforce

Current Work force Analysis

22.   The PCT Operations Division is the operations hub of the international patent system established under the PCT system. The staff members in the Division are responsible for examining international patent applications and providing customer services related to applications. In December 2022, the Division had a workforce of 178 staff members and 10 non-staff members (fellows). Further, the Division had a higher proportion of women (57 per cent) compared to men (43 per cent). Figure 1 below shows the relevant data of the Division's workforce.

Figure 1: Structure and Composition of the PCT Operations Division

Director	P 4	P 2 – P 3	G 6 – G 7	G 4 – G 5	Non - staff
1	4	23	74	76	10
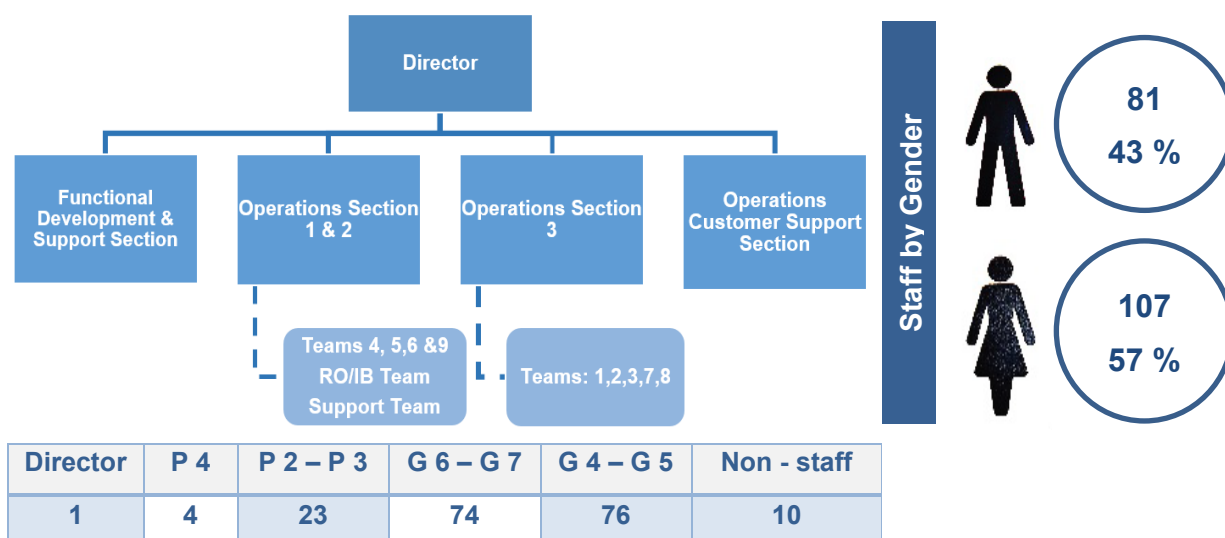
Source: Prepared by IOD based on data from PCT/Human Resources Management Department.

23.   Most of the staff members in the PCT Operations have been working in the Division for over two decades. As of December 2022, 71 per cent (126) of the Operations staff were 51 years and above. In more detail, 58 per cent (103) of the staff were in the 51- 60 age bracket, while 13 per cent (24) were above 60 years. Notably, 10 per cent (17) of the current workforce are expected to retire in the next four years (2023 - 2026). Figure 2 below shows the age distribution and the number of staff expected to retire in the coming years.

**Figure 2: PCT Operations Division Age Distribution and Retirement Projections**
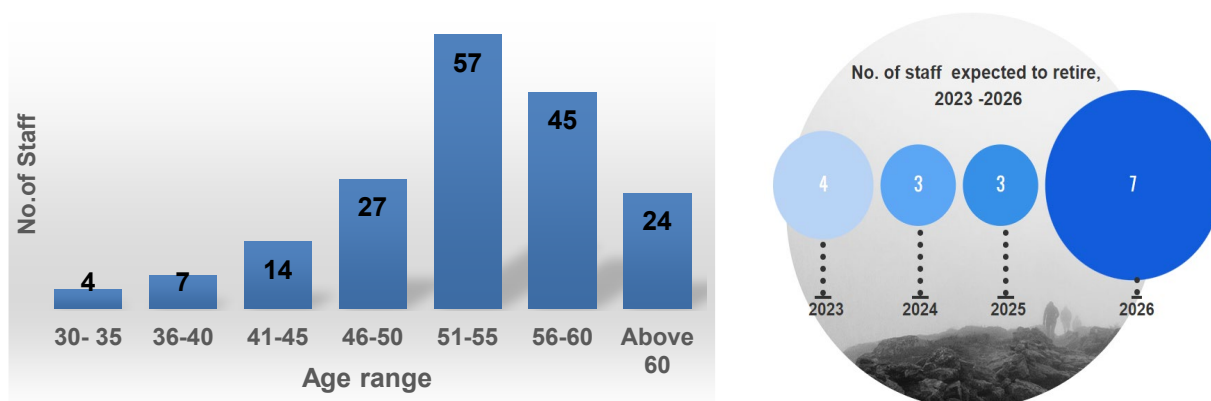
Source: Prepared by IOD based on data from Human Resources Management Department.

24.   In addition, an analysis[4] of certified sick leave[5] data showed that the PCT Operations Division had an average of 19.9 certified sick leave days per staff who took sick leave during 2022, compared to 18.6 days for the Patents and Technology Sector and 15.3 days for the Organization during the same period. A total of 123 PCT Operations Division staff members took certified sick leave in 2022, with 55 per cent (68) taking less than 10 sick leave days, of which 46 per cent (31) took less than five sick leave days. IOD further notes that 14 staff members were on certified sick leave for days ranging from 30 to 50 in 2022, compared to 13 staffs in 2021. Six staff members were on sick leave for days ranging from 101 to 200 in 2022. Finally, there were two staff members on certified sick leave for a period ranging from 201 to 220 days in 2022 and 2021.

25.   An analysis of the work rate in the Division showed that 16 per cent of the workforce was working at a rate of 50 to 80 per cent in 2022. Further, in the coming years 2023 -2026, 10 per cent (17 staff members) of the existing workforce are expected to retire. Figure 3 below shows the relevant selected data on certified sick leave and work rate.

Figure 3: PCT Operations Division - Certified Sick Leave and Work rate
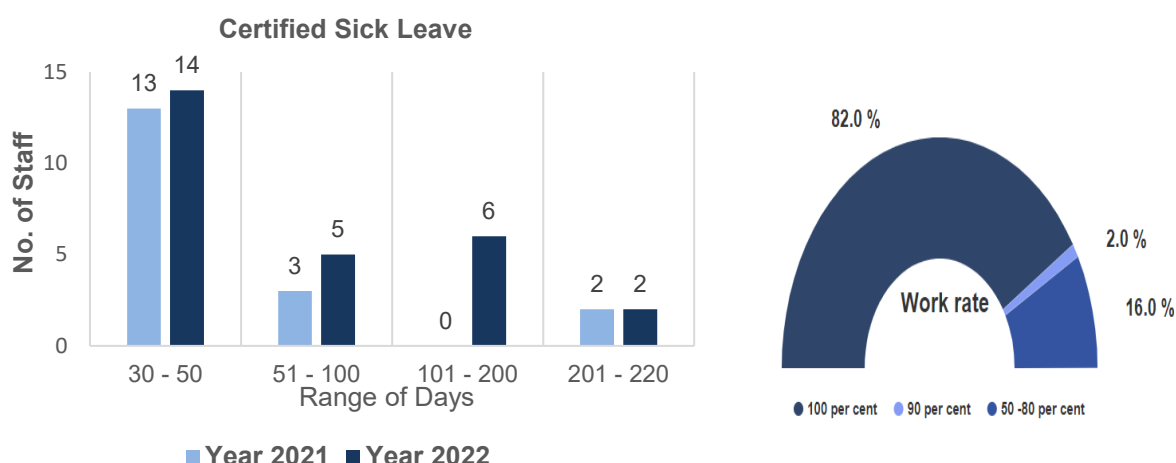
Source: Prepared by IOD based on HRMD Business Intelligence dashboards.

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[4] Staff absence data on the HRMD Business Intelligence platform.
[5] According to the WIPO Staff Regulations and Rules, staff members who are absent for a period exceeding three or more consecutive days are required to produce a certificate from a duly qualified medical practitioner, to the effect that he/she is unable to perform his or her duties and stating the probable duration of absence.

26.   IOD discussions with responsible staff members (supervisors) revealed that the Division maintained the productivity levels despite the prolonged absence of some staff members in some teams and other challenges by redistributing the work to other teams and engaging additional personnel (non-staff members). Further, the discussions revealed that the redistribution of work has the potential to negatively affect staff morale due to high volumes of work.

27.   To meet the changing business needs, provide high-quality services, and overcome some of the workforce challenges highlighted above, in the last quarter of 2022, the PCT Services embarked on a transformation of the Operations workforce.

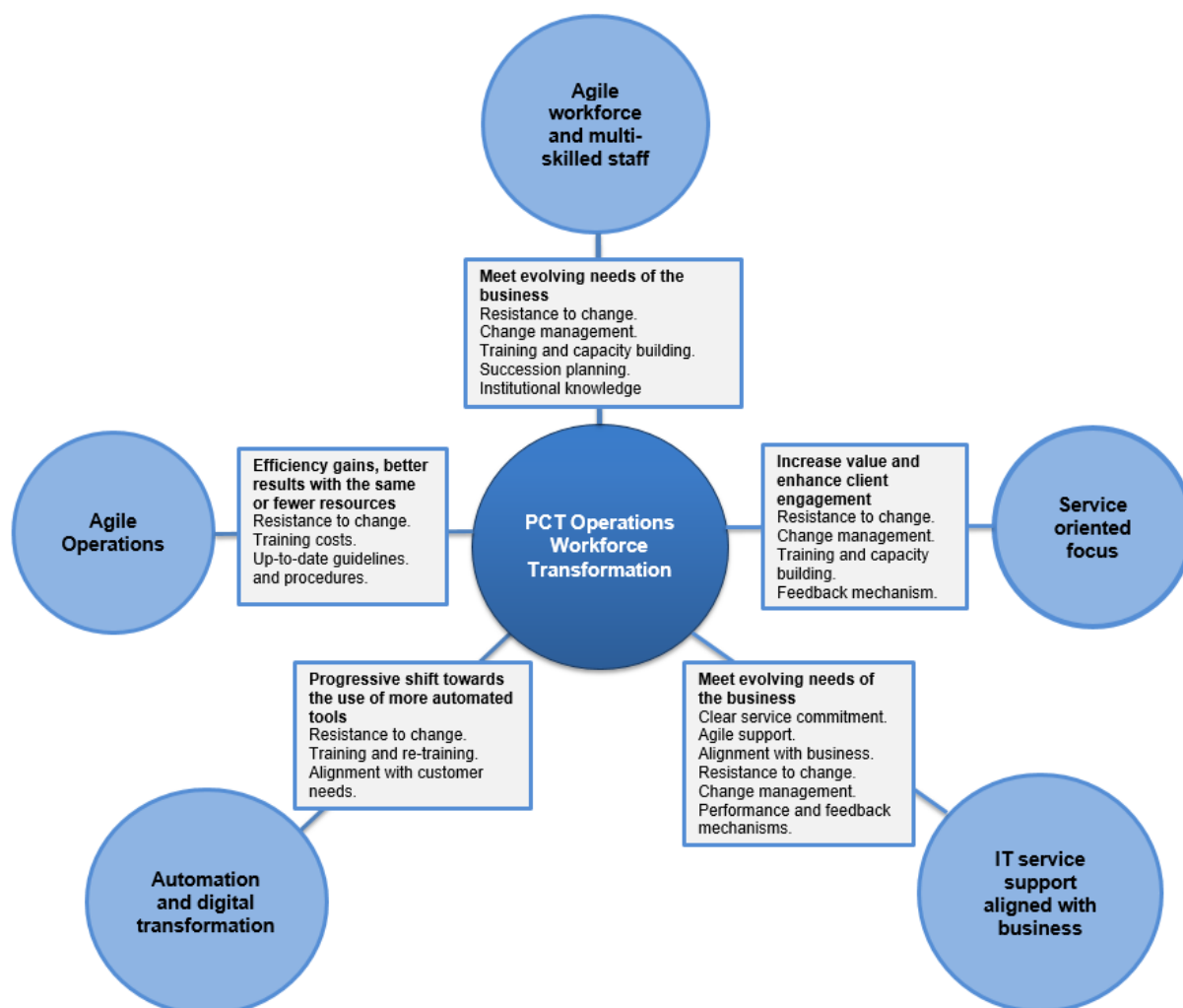*PCT Operations Division Workforce Transformation*

28.   WIPO's Medium-Term Strategic Plan (2022-2026) acknowledges that in the past decade, IP offices have recognized the need to go beyond providing basic registry services. Many offices are evolving into innovation agencies to support the development of national innovation ecosystems and reach a broader community of users. This evolution will require a new mind-set, new skills, a fresh approach and new digital solutions.

29.   Further, according to the PCT Operations 2022 Work plan priorities, the Division is planning to transform the workforce from being application-driven (process-focused) to an applicant/client-driven approach (needs-focused) i.e., examiners will no longer only check formalities, but will also be client advisors delivering increased value to users. This will be done by establishing a future organizational model starting with two PCT Operations Pilot teams.

30.   The Pilot teams will have new (additional) duties and responsibilities that are knowledge (operations, legal, IT/ePCT) and customer-centric (client advice and public relations). Each team will be comprised of 16 persons with a mix of professional and General Service staff. If the Pilot teams succeed, two or more teams will be established in the succeeding years, so that in five years, the current 10 teams will be transformed into new teams. As of December 2022, PCT Services was running the selection process to fill the positions of the two Pilot teams.

31.   To achieve the expected outcomes of the workforce transformation, the PCT Operations Division needs to appropriately manage the associated challenges. These challenges include, but are not limited to, resistance to change, succession planning, loss of valuable institutional knowledge and change management processes. Figure 4 below provides a visual depiction of the workforce transformation's expected outcomes and anticipated challenges.

Figure 4: PCT Operations Workforce Transformation - Expected Outcomes and Challenges

Source: Prepared by IOD based on PCT Operations Workforce Transformation documents.

32.   The PCT Operations Division anticipates that the transformation of the workforce will help respond to the evolving business demands, provide better quality services to the users, and better align with the WIPO Strategy House[6].

(ii)   Information Security

This Section has been withheld for security reasons.

Recommendations

1. This recommendation has been withheld for security reasons

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[6] The Strategy House provides a framework for the Organization to respond to the needs of all stakeholders within the context of the fast-changing external environment. Further, it outlines the Organization's Vision, Mission, Strategic Pillars and Foundation.

(iii)   Risk Management – Significant Exposure to Single PCT Filing Country

33.   One of the key risks related to PCT Services, as outlined in the ERM system, is significant exposure to a single PCT filing country's change in filing volumes, which may have a material impact on the overall change in WIPO's application volumes.

34.   A review of the PCT applications by region and origin shows that three countries accounted for 64.7 per cent of the applications made in 2021 i.e., China (25.1 per cent), United States of America (21.5 per cent) and Japan (18.1 per cent).

35.   Therefore, a material change in the applications made by any one or all three countries may negatively impact the overall PCT application volumes and associated fees, more so if there are no corresponding increases in applications from the other countries/regions to offset the decrease in the application volumes.

Distribution of PCT applications by region and origin, 2021
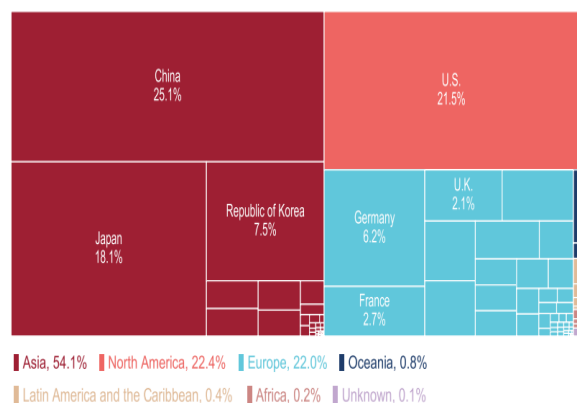
Source: WIPO Statistics Database, March 2022

36.   In response to the above-mentioned risk, the Organization has outlined the following actions: (i) improve translation technology; (ii) enhance automation; and (iii) have adequate resources in the filing country's language. While the outlined actions may, to some extent, help address the identified risks, they are less than optimal solutions.

37.   Going forward, PTS should develop and outline more holistic and expansive risk responses to better manage this organizational risk and update the ERM system with these responses. For instance, the PCT Business Development Division should work with other relevant areas to outline more concrete strategic risk responses. These responses should include measures that will contribute in increasing the PCT filings in both developed economies and emerging markets and consolidating the existing markets while lessening the dependence on one or two key markets.

Recommendations

2.   The Patents and Technology Sector should review and update the risk pertaining to significant exposure to a single PCT filing country's change in filing volumes, including other related risks in the Enterprise Risk Management system. The risk responses outlined should align with the risks identified.

(Priority: Medium)

(iv)   Reconciling Published Applications with the PCT Fees

38.   According to the PCT RO Guidelines, WIPO processes and publishes an international application based on the indication, on the prescribed PCT form, by RO that it has collected the applicable PCT fees. Further, the current practice by the Organization allows RO to remit the fees collected to WIPO at a later date e.g., on a monthly basis. Further, in line with the International Public Sector Accounting Standards, revenues generated from the fees charged by PCT are recognized when the application process is complete i.e., when the patent application is published.

39.   A review of the reconciliations of published applications and fees remitted by the ROs to WIPO showed that some PCT fees have remained unremitted from June 2019 to December 2022.

Unremitted PCT fees (June 2019-Dec. 2022)

Currency	Amount
Swiss Francs	617,287
US Dollars	203,769
Euro	11,419
Norwegian Krone	11,170
South African Rand	6,744
Singapore Dollar	1,721

Source: Prepared by IOD based on PCT Operations Division data

40.   The unremitted PCT fees relate to published applications where the RO confirmed that the applicant paid the required fees and thus WIPO is awaiting the remittance of the fees and those that are yet to be reconciled with the RO due to incomplete information or lack of supporting documents.

41.   The PCT Operations have made follow-ups with the respective ROs that have confirmed receiving the fees but have not yet remitted them to WIPO. Various reasons have been forwarded, including some external factors beyond the controls of the ROs. As a result, some PCT fees have remained unreconciled for over three years. IOD notes that in the long run, as both the internal and external environments change, it will become increasingly challenging to trace the relevant payment details for the published applications whose accompanying PCT fees are yet to be remitted to WIPO by ROs. Therefore, the PCT Operations should work with relevant stakeholders in finding a timely and conclusive solution, especially for the PCT fees that are not supported by any information from ROs, and where ROs have not responded to WIPO inquiries.

(v)   Workflows between PCT Operations and Finance Division – PCT Fee data

42.   In May 2019, IOD made a recommendation as part of the audit of the PCT Netting Pilot (IA 2019-06) aimed at enhancing the workflows between the PCT Operations Division and the Finance Division, including improving the accessibility of relevant accounting data from the PCT systems by the Income Section in the Finance Division.

43.   The recommendation requires the Finance Division to work with the PCT Operations and other internal stakeholders to put in place a process to support the work of the Income Section. This process can either be through direct access to the PCT data or by enhancing the application data in the Administrative Integrated Management Systems (AIMS). Essentially, the enhanced process will enable the Finance Division to have complete information related to all PCT fee types (i.e., supplementary search fees, filing fees, search fees, and handling fees). Further, it is essential to develop a mechanism to automate the current manual tasks undertaken in netting operations to enhance efficiency.

44.   In September 2022, the Finance Division informed IOD that Phase II of the Treasury Risk Management System Project, a Capital Master Plan Project, includes an automated solution that will address the audit recommendation, among others. The Division expects to develop, test and deploy the proposed automated solution by December 31, 2023.

45.   Implementing the recommendation highlighted above will enhance the efficient and seamless flow of the relevant PCT fee data between the PCT Operations and the Finance Division.

(vi)   PCT Netting Process - Fee Transfer Service

46.   The International Bureau (IB) processes claims from the International Searching Authorities (ISA) for foreign exchange gain/losses under the PCT Rule 16.1(e). IB

implemented the PCT Netting process in February 2018 to, among others, help IB reduce foreign exchange risk exposure, improve cash management and streamline the workflows.

47.   The PCT Netting process transitioned into the Fee Transfer Service in January 2019. From 2019 to December 2022, there was a progressive increase in the number of participating ROs and ISA, the number of search fees processed, and the value of transactions processed through the service. The table below shows the relevant statistics for the Fee Transfer Service from January 2019 to December 2022.

Table A: Statistics on the Fee Transfer Service from 2019 - 2022

S/n	Details	2019	2020	2021	2022[7]
1.	Search Fees Processed	41,554	53,276	59,389	57,402
2.	Per cent of fees through Fee Transfer Service	68.9%	85.9%	95.2%	97.6%
3.	Value (in millions of Swiss francs)	83.4	95.4	97.3	93.3
4.	Participating ROs	35	48	69	80
5.	Participating ISAs	5	12	20	23
6.	Number of currencies – Inflow	13	13	14	13
7.	Number of currencies – Outflow	3	9	13	14

Source: WIPO Finance Division, September 2022

48.   IOD notes that an increase in the variables highlighted in the table above has helped in managing the volatility of foreign exchange gains and losses, and in reducing the administrative work associated with the claims across the participants of the Fee Transfer Service. The coverage of the Fee Transfer Service has been consistently increasing since the PCT Netting pilot, to the point where it covered approximately 98 per cent of the search fees in December 2022.

(vii)   Managing Foreign Exchange Loses and Gains

49.   WIPO receives revenue from fees in currencies and incurs expenses in currencies other than its functional currency, the Swiss franc, and is thus exposed to foreign currency exchange risk arising from fluctuations of currency exchange rates. Further, the Organization is also exposed to exchange risk arising from the currency differences between amounts payable to ISA pursuant to the Regulations under the PCT, and amounts received by national patent offices for international search fees from applicants for international patents.

50.   The PCT System has established rates of 1, 330 Swiss francs for the PCT filing fees and 200 Swiss francs for the International Preliminary Examining Authorities (IPEA) handling fees due to IB. The Regulations under the PCT allow ROs to transfer these fees in currencies other than Swiss francs using equivalent amounts established by IB and published monthly in the PCT Newsletter for each currency agreed by IB as meeting requirements for convertibility into Swiss francs. The rates[8] are established on the first Monday each October 1st using the foreign exchange rates published on XE rates.com and

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[7] Preliminary fees for 2022, final figures due for publication in mid-February 2023.
[8] The new prescribed rate is then published in the Gazette and becomes effective two months later. The two-month period provides time for all ROs and IPEA to notify applicants of the adjustment of the equivalent amounts.

modified during the next twelve months when a change of +/- five per cent for four consecutive Fridays.

51.   A review of financial information extracted from AIMS showed that, from 2019 to 2022, IB incurred net foreign exchange losses in four consecutive years. The losses arose from the use of the equivalent amounts mechanism i.e., the difference between the revenue that would have been collected by IB at the established rate[9] (in Swiss francs) and the amount actually collected using the equivalent amounts valued at the United Nations Operational Rate of Exchange at the date of receipt. In each of these respective years, the mix of currencies resulting in the net loss was different.

Figure 5: Net Foreign Exchange Losses from 2019 to 2022
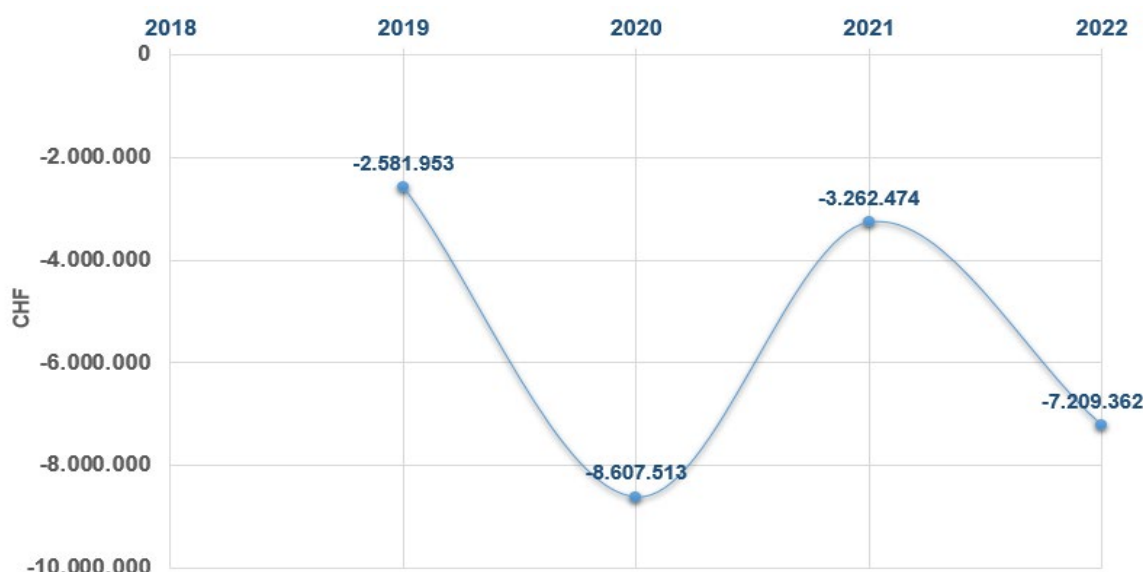
Source: Prepared by IOD based on Finance Division data

52.   For example, in 2022, the total foreign exchange loss was 9.92 million Swiss francs. The Japanese Yen (5.34 million Swiss francs) and the Euro currency (2.85 million Swiss francs) accounted for 54 per cent and 29 per cent of the total loss, respectively. The remaining 17 per cent (1.72 million Swiss francs) was attributable to the Chinese Yuan (13 per cent) and other currencies combined (four per cent).

53.   The total foreign exchange loss was offset by the foreign exchange gains which amounted to 2.71 million Swiss francs, with 99 per cent (2.69 million Swiss francs) of the gains attributable to the United States Dollar and one per cent to other currencies.

Foreign Exchange Loss/Gain per Currency on due Amount in 2022
(in thousands of Swiss francs)

Source: Prepared by IOD based on Finance Division data

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9   The established rates of 1, 330 Swiss francs for filing fees and 200 Swiss francs for IPEA handling fees.

54.   Enabling ROs to collect and applicants to pay the PCT filing and IPEA to handle fees in currencies other than Swiss francs simplifies the PCT procedures and reduces the risks of currency fluctuation for applicants. However, enabling the payment of the PCT fees in equivalent amounts of Swiss francs generally results in a revenue loss for the IB and in the receipt of currencies in excess of WIPO's business requirements.

55.   IB has some Euro currency-denominated expenditures, which can be settled with the Euro currency inflows along with requirements in Euros for transferring search fees collected through the WIPO Fee Transfer Service. This enables IB to use almost all the Euro currency received. However, IB does not have significant business requirements for other currencies. Therefore, the amount in excess of the requirements for these currencies must be sold. Depending on the market conditions, the amount may present a foreign exchange risk, which the Finance Division – the Treasury Unit attempts to mitigate.

56.   WIPO continues to use the mechanism for setting equivalent amounts, which is prescribed in the Regulations under the PCT, and must therefore estimate and account for the resulting currency gains or losses. However, the WIPO Fee Transfer Service calendar (formerly the PCT Netting), enables the Organization to forecast cash flows and plan more reliably for the resulting foreign exchange requirements on the scheduled date. This helps manage the foreign exchange losses from the sale of currencies in excess of requirements or the purchase of currencies required to meet business requirements.

(viii)   Participation of PCT Operations teams in ePCT First-Level Support

57.   The PCT Operations Customer Support Section coordinates the PCT operations customer support activities, provides ePCT customer support, promotes the use of ePCT through training materials, webinars, and general promotion activities, proposes new ePCT functionalities based on customer experience, and conducts ePCT testing. As of December 31 2022, the Section had five staff members.

58.   Further, the staff members taking part in the first-level support activities respond to issues raised by the customer that are categorized as easy to medium-complexity, while the Customer Support Section's staff handles the complex issues and all inquiries from users within the Organization. The issues dealt with in the first-level support include, but are not limited to, login issues, strong authentication, filing questions, and access rights issues. Some complex issues are usually technical and require investigation and coordination with IT and sometimes legal personnel.

59.   Based on the current practice, at least one or two staff members from the Operations Division are expected to actively and regularly take part in daily activities relating to ePCT first-level support. This practice was designed to, among others, enhance client orientation, collaboration and efficient use of resources. However, the participation of the Operations team members in providing first-level support is not systematic, well-coordinated, and consistent. As a result, there were periods, during the year under review, when the Operations team members were not available to take part in the first-level support activities.

60.   Going forward, it is imperative that the PCT pilot and existing Operations team members actively and regularly participate in ePCT first-level support activities. The knowledge and experience gained from participating in support activities will help in transforming the PCT Operations workforce to being more client-oriented and working collaboratively and efficiently. In addition, the current practice reinforces cross training, which in turn enhances workforce sustainability, mobility and agility, productivity, and helps create a collective success culture.

Recommendations

3. The PCT Operations Division should:

    (a) Improve the current mechanism to ensure the consistent and coordinated participation of at least one or two staff members in providing ePCT first-level support on a daily basis; and

    (b) Identify additional staff members who will actively and regularly participate in ePCT first-level support activities as part of their Development-related Objectives in their Performance Management and Staff Development System (PMSDS).

(Priority: Medium)

(ix)   <u>Draft Quality Control Manual</u>

61.   The PCT Operations Division has established processes and procedures for managing the workflows and quality of their work. While some guidelines, e.g., the PCT Processing Service Guidelines, are complete and updated, others, like the Quality Control Manual, are still in draft form.

62.   Over the last few years, there have been some changes in the PCT regulatory framework, procedures, and/or processes. Some of these changes have affected the quality management system that the PCT Operations has put in place. For almost a decade, the PCT Operations Division has collated and consolidated the minutes of meetings on quality control. The collated information was organized and integrated into a draft Quality Control Manual, which as of December 2022, was still under review.

63.   Going forward, it would be beneficial for the PCT Operations Division to complete the preparation of the Quality Control Manual. The draft manual has captured various and detailed practical experiences of staff in handling quality control issues and workarounds in processing international patent applications. A complete and approved manual will serve as a key how-to document, provide a framework for quality management, and set the expectations for the teams including the caliber of services and deliverables.

Recommendations

4. The PCT Operations Division should complete and issue the Quality Control Manual within a set timeline, and designate staff members to ensure that the Manual is regularly reviewed, updated and adhered to.

(Priority: Medium)

(x)   <u>Demand Management Process and Service Level Agreement-Consolidated ICT Services</u>

64.   The PCT Information Systems Division (ISD) provides all IT applications development and support activities for the portfolio of business applications supporting the PCT Services. Within its service management framework, the Division is responsible for, among others , providing support to the PCT Operations and other business areas, including configuration, release, incident, and problem management.

Central Demand Management

65.   In an organization-wide communication in February 2023, the Director General decided to consolidate the responsibility for the IT systems underpinning the Brands and Designs Sector, PTS, and the Administration, Finance and Management Sector to ICTD. The plan is to implement the reorganization in four stages, with the PCT IT systems scheduled to be consolidated under stage four, with a tentative date of January 2024.

66.   Prior to the Organization-wide communication, the Director General announced the creation of the ICT Transition Task Force, which would steer and report on the ICT reorganization and oversee dedicated Focus Groups for each impacted area. The Focus group's responsibilities included reviews of the current operating models and the definition of a roadmap for the anticipated new operating model based on a product-based delivery approach.

67.   IOD notes that the ICT consolidation process presents opportunities and potential threats that need to be managed to minimize the potential disruptions that may ensue and harness the opportunities it will provide. During the consultation stage of the ICT reorganization, one of the major concerns raised by the PCT business areas was the demand management process. Essentially, a central demand management process helps a service provider to better understand and anticipate the client's current and future business needs and then build the relevant IT services to support those needs.

68.   Following further inquiries by IOD on the matter, the ICT Transition Taskforce indicated that the new IT Operating Model will include a central demand management process, among others. Further, IOD's discussions with ICTD indicated that following the consolidation of The Hague IT systems (stage one), the timelines and modalities for subsequent stages will depend on the successful transition of the previous. This would enable lessons learned to be captured and implemented, and to enhance the consolidation process and related change management.

Service Level Agreement (SLA) within the Central Demand Management Process

69.   As part of its current service management framework and the future IT Operating model, the central demand management process needs to incorporate an agreement or commitment e.g., an internal SLA, to among others , help establish mutually acceptable and optimal service levels (performance metrics), clarify roles and responsibilities, and set the basis for continual improvement. This approach will help ensure that internal clients receive optimum IT support services and support the accountability framework.

70.   The ICT Transition Task Force concurs that a commitment should be defined and agreed between the business teams and the IT team delivering the business solutions. However, the Task Force raised concerns on the potential use of formal SLAs as a tool to enforce operational inflexibility, solely focused on performance metrics, or serving as a penalizing mechanism. IOD considers that regardless of the term used, an internal agreement or commitment of some form is required within the central demand management process. IOD positively notes that the documentation on the IT Operating Model frameworks shared with IOD highlights both service and value-based delivery models and also includes performance management metrics. Further, and based on the proposed transitioning process, the IT Operating Model will evolve at each stage and with the increased experience so that by the time stage four occurs, the Model would be quite developed. Finally, the Task Force and the PCT Focus Group will collaborate to further refine the Model and ensure that it is fit-for-purpose.

71.   IOD reiterates the importance of clearly documented understanding of roles, responsibilities and accountability within the framework of the IT Operating Model to further support internal service management. IOD plans to conduct a review of the ICT reorganization in 2024 to, among others, assess the management of the ICT Transition process, verify the expected benefits realized, and assess the operational efficiency and effectiveness of the IT Operating Model.

(B)   TOOLS AND SYSTEMS

(i)   Functional Development and Support Section - Staffing and Profile

72.   The Functional Development and Support Section supports the PCT Operations Division, analyzes the business processes, designs the relevant internal systems and tools, and ensures that the systems are developed and deployed. Further, the Section manages internal automation systems for operations, provides end-user support and coordinates training activities. The Section has a staff of eight people who carry out relevant support activities.

73.   IOD observed that the staff members in the Section have a good understanding of the PCT business needs. However, the Section does not have adequate number of staff members with the required internal system's knowledge and skills required to translate business needs into IT solutions. In addition, the situation is exacerbated by the movement of staff members from the Section to other assignments or projects (full-time or part-time). Second, the development of certain aspects of the internal systems and tools is often delayed by a lack of dedicated IT resources and other higher priority tasks.

74.   The Functional Development and Support Section plays a critical role in bridging the gap between the business areas and IT solution providers. Given the need to develop and deploy internal tools in response to increasing business needs, the Section needs to have adequate resources with the requisite mix of skills and knowledge to provide support to the business areas.

Recommendations

5.   The PCT Operations Division should review the profile of the staff in the Functional Development and Support Section, and the alignment of the resources in adequately meeting the required functional development (including aspects such as analysis and writing specifications) and support activities of the Section.

(Priority: Medium)

(ii)   The eDossier System

75.   The *eDossier* is an in-house developed and customized integrated software solution designed to provide examiners, translators and other users within the PCT Services with an automated platform to manage the PCT document work-flow and data of international applications filed in the different formats prescribed by the PCT.

Transitioning of the eDossier system

76.   In the last two decades, system upgrades have been made to the eDossier in response to, among others, the increasing business needs and changing risk landscape e.g., changes in relevant PCT regulations and rules, processes and procedures, and international application filing formats.

77.   IOD notes that there are opportunities to enhance certain aspects of the system. In particular, transitioning the system from its current state to a web-based application. This transition would enhance the system's security and maintainability whilst retaining the underlying technology that supports the system.

Change Management

78.   Further, to seamlessly transition to a more agile, easier-to-maintain, easy-to-use, user-friendly and secure web-based version of eDossier, the PCT Services will have to ensure that it implements a holistic change management approach. This will be key to managing the risks associated with change management e.g., resistance to change and ineffective communication. Therefore, the approach adopted by the PCT Services should facilitate the active engagement of internal stakeholders, who will be affected by the change. To gain the support of the system users, the approach should include open communication, mentoring, training and refresher training.

79.   The PCT Services informed IOD that the improvements to the eDossier will be made as part of the Resilient and Secure Platform - Software Transformation Project scheduled to be completed in 2025. The project aims at modernizing the applications landscape of the PCT application architecture by redesigning the three primary software components of the PCT IT landscape, namely ePCT, eDossier, and the PCT Publication systems.

(iii)   Recording Changes related to the PCT - Rule 92bis

80.   According to the PCT Rule 92*bis*.1, Recording of Changes by the International Bureau: "(a) The International Bureau shall, on the request of the applicant or the Receiving Office, record changes in the following indications appearing in the request or demand: (i) person, name, residence, nationality or address of the applicant, (ii) person, name or address of the agent, the common representative or the inventor."

81.   A review of the system and discussions with relevant staff on the current semi-automated process for recording changes associated with the PCT Rule 92bis.1 highlighted opportunities for process improvement. For example, one process improvement would be to configure the eDossier to allow for a change request by a client (e.g., change of email address, physical address) to be automatically replicated in the relevant and affected records. This would negate the need to change (manually) the individual records in the system and thus enhance the efficiency and accuracy of effecting changes related to the PCT Rule 92bis.1.

Recommendations

6.   The PCT Information Systems Division, in coordination with the PCT Operations Division, should implement an appropriate technical solution to enhance the efficiency and accuracy of making changes related to the PCT Rule92bis.1.

(Priority: Medium)

(iv)   Optical Character Recognition – Quality Checker

82.   The PCT Services uses the OCR service to extract and repurpose data on patent applications from the original paper filings, scanned electronic filings and PDF filings. The OCR Quality Checker is an application, within the OCR service, which is used to check and correct the quality of the OCR files. The OCR services were migrated in March 2022, and the OCR Engine in use is the latest version from the vendor.

83.   The use of the OCR service does not eliminate the need for human intervention to proofread (check, edit or correct) the extracted text. The PCT Operations indicated that they can correct about 90 per cent of these files to the set standard quality of 99 per cent per file. On average, the teams checked and corrected about 250 files per week (one week before publication).

84.   In the last three years, 2020 - 2022, the Operations teams processed 56,366 files (Quality less than 99 per cent). In these three years, the top three sources of these files, in descending order, were the United States, EPO and IB.

Statistics on OCR QC (Quality less than 99 per cent) from 2020 to 2022
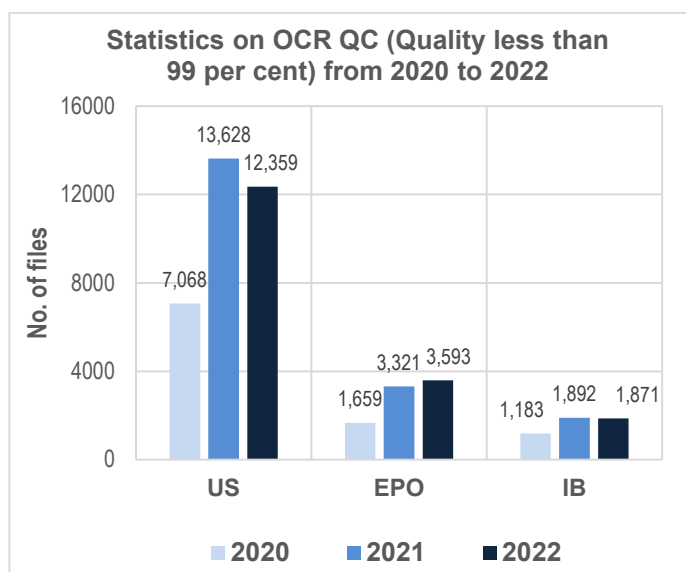
85.   The process and procedure for working on files with the OCR Quality Checker is repetitive, strenuous and time-consuming. Further, there is a risk that the quality of the output may decrease because of a loss of concentration, eyestrain, and/or fatigue. Inevitably, the challenges of using the tool have resulted in some patent examiners being exempted from using it on medical grounds.

86.   While there may be opportunities to enhance the technical capabilities of the OCR tool, e.g., integrating artificial intelligence with advanced methods of intelligent character recognition, the investment in such technology may be disproportionate to the benefits realizable if the investment in such technology is capital intensive.

87.   In view of the technical limitations of OCR, it would be more impactful and beneficial, in the long run, for the PCT Services to progressively work towards decreasing the number of filings that require the use of the OCR Quality checker. This will require the PCT Services to intensify its engagement and outreach campaigns with specific ROs and IP Offices. In the meantime, the examiners are expected to embrace the OCR tasks as part of their publication workload.

Recommendations

    7.   The PCT Operations Division should, in coordination with relevant stakeholders, develop a plan of action targeted at Receiving Offices, Intellectual Property Offices, and applicants to progressively decrease the number of international filings that require the use of the OCR Quality checker.

(Priority: Medium)

        (v)   Automating Work Assignment

88.   For several years, the PCT Operations Division supervisory staff have been using Microsoft® Excel spreadsheets to plan, monitor and track the distribution of work in their respective teams and maintain a calendar of other work-related events such as team members' absences, meetings, training and the time spent on various tasks. Over the years, each team supervisor has customized their sheets to facilitate the distribution of work.

However, the supervisory staff still have to extract and combine some elements from the different sheets to prepare consolidated statistics and/or reports. This task can be time consuming, laborious, repetitively manual and susceptible to input errors, leading to inefficiencies, among others.

89.   In recent years, there have been attempts to semi - automate this repetitive task by developing a customized tool. Specifically, in September 2022, a pilot version of the tool was launched into production. However, its use was discontinued a few months later to allow the development team to incorporate the user feedback on the features and functionalities.

90.   IOD discussions with relevant supervisory staff revealed that almost all of the supervisory staff, hitherto, were not convinced that the tool would enhance their operational efficiency and effectiveness. With the tool still under development, the Operations Division supervisory staff have resorted to using their tailor-made Microsoft® Excel spreadsheets.

91.   Further, IOD notes that progress in developing the tool has been slow. This has been attributed to a lack of dedicated IT resources, i.e., the developer assigned to the tool is regularly involved in other high-priority tasks within the PTS. While the tool may be viewed as an improvement on the current use of multiple customized Microsoft® Excel spreadsheets, there should be a cost-benefit analysis to determine whether the continued investment (resources, i.e., time, money, effort) in the tool is proportionate to the challenge that is being addressed and whether it will yield an impactful and optimal solution.

92.   Going forward, there are opportunities to implement an automated solution, based on clear and comprehensive requirements, which will enhance assigning work and result in a systematic, transparent, harmonized, and easier work distribution. The tool should facilitate the extraction and provision of timely and precise statistics/data on work assignment activities, and contribute to automating, to some extent, the current manual tasks.

Recommendations

8. The PCT Operations Division in coordination with the PCT Information Systems Division should:

   (a) Review the business case for developing the tool for planning; and

   (b) Explore and implement an automated solution for assigning work that delivers cost and labor-saving benefits, and integrates emerging technologies, e.g., artificial intelligence.

(Priority: Medium)

(vi)   <u>Customer Orientation - Feedback from Internal Clients</u>

93.   PCT ISD is an internal service provider to business areas in the PCT Services, such as the Operations Division, and the Translation Division. As a service provider and an integral part of the PCT Services, it is important for PCT ISD to regularly measure the level of satisfaction and quality of services that it provides to its clients through established feedback mechanisms. Further, the Division has a service management model for managing the lifecycle of service requests.

Managing Service Requests

94.   A review of service requests (tickets) in 2021 and 2022 showed that PCT ISD had a fairly high service request resolution rate. Notably, 100 per cent (3,102 tickets) and 99.75 per cent (2,740 out of 2,747) of the user support tickets were resolved in 2021 and 2022, respectively. Further, for software development (eDossier) service requests, 93 per cent

(160 out of 172) and 74 per cent (107 out of 144) were resolved in 2021 and 2022, respectively.

95.   Further analysis of the unresolved service requests for eDossier showed that, as at December 2022, almost half, 46 per cent of the tickets remained unresolved for over six months, with some dating back to March 2022. Similarly, 12 service requests created in 2021 remained unresolved as of December 2022.

96.   While resolving these tickets, which range in priority from minor to critical, and are at various stages of resolution, PCT ISD indicated that most of them will be resolved once an updated version of eDossier is released during 2023.

Internal Customer Feedback Mechanisms

97.   Internal service providers can measure the level and quality of services provided to clients through feedback mechanisms. Feedback can be gathered from both formal and informal sources, including surveys and key business-related measures. These feedback mechanisms help enhance and optimize the maturity of internal service management.

98.   In the last four years, from 2019 to 2022, PCT ISD did not seek customer feedback consistently, last surveying its internal customers in 2021. In the absence of comparative data on customer satisfaction, it is difficult to ascertain whether the service levels are improving or deteriorating.

99.   Going forward, there are opportunities for PCT ISD to enhance its customer service levels by, among others, establishing a consistent feedback mechanism. The quality of the feedback can be further enhanced by, for example, requesting brief feedback immediately after a service request is addressed or a complaint is resolved. This practice can provide relevant information to be incorporated during the refinement of the IT Operating Model, following stage four of the planned ICT Transition (incorporation of PCT IT systems), and can also serve as a good practice for capturing service feedback for the IT Operating Model.

Recommendations

9. The PCT Information Systems Division should, in coordination with relevant internal stakeholders, design and develop a structured and systematic feedback mechanism that captures the internal customers' feedback on an ongoing (e.g., real time) and/or regular basis.

(Priority: Medium)

ACKNOWLEDGMENT

IOD wishes to thank all relevant members of staff for their assistance, cooperation and interest during this assignment.

Prepared by: Bevan Chishimba, Internal Auditor.

Reviewed and Approved by: Alain Garba, Officer-in-Charge, IOD.

Note: Parts of the original report were withheld or redacted due to safety, security or privacy reasons.

TABLE OF RECOMMENDATIONS

No	Recommendations	Priority	Person(s) Responsible	Other Stakeholders	Management Action Plan	Deadline
1.	This recommendation has been withheld for security reasons	High	.	.		

No	Recommendations	Priority	Person(s) Responsible	Other Stakeholders	Management Action Plan	Deadline
2.	The Patents and Technology Sector should review and update the risk pertaining to significant exposure to a single PCT filing country's change in filing volumes, including other related risks in the Enterprise Risk Management system. The risk responses outlined should align with the risks identified.	Medium	Deputy Director General, Patents and Technology Sector. Senior Administrative Officer, Office of the Deputy Director General (PTS).	Senior Director, PCT Legal and International Affairs Department. Director, PCT Legal and User Relations Division. Director, PCT Business Development Division. Director, PCT International Cooperation Division. Director, PCT Information Systems Division. Director, PCT Translation Division. Director, PCT Operations Division.	▪ Enhance outreach to relevant industries and across different regions to promote/increase PCT filings. ✓ Ascertain the reasons for the change in filing volumes ✓ Address to the extent possible the reasons for the change in volumes. ▪ Review the procedures for PCT application and identify areas for streamlining and simplifying processes. Such as: ✓ Improve /enhance translation technologies to enable the Organization to keep up with the demand from the filing country; Ensure that the Organization has adequate resources in the filing country's language; Continue to enhance and increase automation. ▪ An initial review by the end of 2023. (ongoing work)	December 29, 2023.

No	Recommendations	Priority	Person(s) Responsible	Other Stakeholders	Management Action Plan	Deadline
3.	The PCT Operations Division should: (a) Improve the current mechanism to ensure the consistent and coordinated participation of at least one or two staff members in providing ePCT first-level support on a daily basis. (b) Identify additional staff members who will actively and regularly participate in ePCT first-level support activities as part of their Development-related Objectives in their Performance Management and Staff Development System (PMSDS).	Medium	Head of Service (1), PCT Operations Division. Head of Service (2), PCT Operations Division. Head, PCT Operations Customer Support Section.	PCT Operations Team Coordinators and Team Heads.	▪ Review and improve a way of scheduling to ensure smooth and efficient operation. ▪ Identify staff members and provide intensive training for ePCT first-level support.	September 29, 2023. December 29, 2023.
4.	The PCT Operations Division should complete and issue the Quality Control Manual within a set timeline, and designate staff members to ensure that the Manual is regularly reviewed, updated, and adhered to.	Medium	Head of Service (1), PCT Operations Division. Head of Service (2), PCT Operations Division.	PCT Operations Team Coordinators and Team Heads. Head, Functional Development and Support Section	▪ Set up groups to review the historical QC draft minutes (back to 2009) and finalize them as final versions. ▪ Follow up on all pending issues and provide concrete answers based on the action above. ▪ Based on the results above, update the consolidated QC minutes to make them accessible to all users.	September 29, 2023. December 29, 2023. March 29, 2024.

No	Recommendations	Priority	Person(s) Responsible	Other Stakeholders	Management Action Plan	Deadline
5.	The PCT Operations Division should review the profile of the staff in the Functional Development and Support Section, and the alignment of the resources in adequately meeting the required functional development (including aspects such as analysis and writing specifications) and support activities of the Section.	Medium	Director, PCT Operations Division. Head, PCT Functional Development and Support Section.	Senior Administrative Officer, Office of the Deputy Director General (PTS). Talent Business Partner, Human Resources Management Department.	▪ Review the profile of FDSS staff whose tasks are functional development and support work. ▪ Find and recommend suitable training for the above-mentioned staff on "Functional Analysis" and "Drafting specifications for system development". ▪ Review FDSS business needs, business requirements, and amount of work and propose staffing in FDSS including possible additional positions and recruiting staff with a suitable profile.	December 29, 2023. December 29, 2023. March 29, 2024.

No	Recommendations	Priority	Person(s) Responsible	Other Stakeholders	Management Action Plan	Deadline
6.	The PCT Information Systems Division, in coordination with the PCT Operations Division, should implement an appropriate technical solution to enhance the efficiency and accuracy of making changes related to the PCT Rule92bis.1.	Medium	Senior Portfolio Manager, PCT Information Systems Division.	Head, PCT Functional Development and Support Section. Head of Service (1), PCT Operations Division. Head of Service (2), PCT Operations Division. Examiner, Functional Development and Support Section.	▪ Review technical solutions in place and identify gaps to enhance the efficiency and accuracy of making changes under rule 92bis.1. ▪ Estimate, plan, and schedule implementation of improvements to the processing system. ▪ Implement and deliver an enhanced technical solution.	June 30, 2023. June 30, 2023. Dependent upon prioritization by PCT CAB (Change Advisory Board), expected by the end of Q4 2023.

No	Recommendations	Priority	Person(s) Responsible	Other Stakeholders	Management Action Plan	Deadline
7.	The PCT Operations Division should, in coordination with relevant stakeholders, develop a plan of action targeted at Receiving Offices, Intellectual Property Offices, and applicants to progressively decrease the number of international filings that require the use of the OCR Quality checker.	Medium	Director, PCT Operations Division. Head of Service (1), PCT Operations Division. Head of Service (2), PCT Operations Division.	Director, PCT International Cooperation Division. Head, Technical Cooperation Section, PCT International Cooperation Division. Director, PCT Business Development Division. Senior Counsellor, PCT Business Development Division. Head, PCT Operations Customer Support Section. Director, PCT Legal and User Relations Division. Head, PCT User Resources Section.	▪ Asses the status of paper and pdf filings that require OCR QC to identify target Offices and major applicants. ▪ Organize webinars and workshops (e.g., Docx converter) for target Offices and major applicants. ▪ Prepare communications such as PCT Circular for IP Offices, and PCT Newsletter for applicants (e.g., Practical Advice). ▪ Host expert meetings with Offices and users to identify barriers to XML/DOCX filing and potential solutions. ▪ Gain approval and implement legal changes to recognize DOCX filing and further encourage XML and DOCX use.	July 28, 2023. Begin by September 2023. By December 2023. Begin by December 2023. July 2025.

8.	The PCT Operations Division in coordination with the PCT Information Systems Division should: (a) Review the business case for developing the planning tool; and (b) Explore and implement an automated solution for assigning work that delivers cost and labor-saving benefits, and integrates emerging technologies, e.g., artificial intelligence.	Medium	Director, PCT Operations Division. Head, PCT Functional Development and Support Section. Functional Support Officer, PCT Functional Development and Support Section.	Head of Service (1), PCT Operations Division. Head of Service (2), PCT Operations Division. Director, PCT Information Systems Division.	▪ Review the business case and business requirements of the tool by carrying out a cost-benefit analysis for continuing to develop the tool and taking into account new pilot teams' work distribution arrangements to automate work distribution. Depending on the above result, the tool could be the basis for automated work distribution and tracking resulting in delivering cost and labor-saving benefits.	March 29, 2024.
					▪ In cooperation with PCTISD, explore technical solutions considering the integration of emerging technologies.	By June 2024.
					▪ Draft specification for system development.	By September 2024.
					▪ Estimate, plan, and schedule the implementation.	Dependent upon prioritization by PCTOD and PCTISD.
					▪ Implement, test, and deliver the automated solution.	Dependent upon prioritization by PCT CAB (Change Advisory Board) and available IT resources and testers.

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No	Recommendations	Priority	Person(s) Responsible	Other Stakeholders	Management Action Plan	Deadline
9.	The PCT Information Systems Division should, in coordination with relevant internal stakeholders, design and develop a structured and systematic feedback mechanism that captures the internal customers' feedback on an ongoing (e.g., real time) and/or regular basis.	Medium	Head, Production and Support Unit, PCT Information Systems Division		▪ Re-instate the annual PCTIS feedback survey (dropped during COVID). Survey launched, by the end of Q2 2023, the survey will be closed and results evaluated (against baselines taken prior to the pandemic). ▪ Real-time feedback introduced, in the form of links in all ticket closures. In place as of March, 2023. Results are to be evaluated and communicated monthly to PCT management.	June 30, 2023.

ANNEXES

| **Annex I.** | Risk Rating and Priority of Recommendations |
| **Annex II** | Overview of the PCT System |

[Annexes follow]

ANNEX I: RISK RATING AND PRIORITY OF RECOMMENDATIONS

The risk ratings in the tables below are driven by the combination of likelihood of occurrence of events and the financial impact or harm to the Organization's reputation, which may result if the risks materialize. The ratings for recommendations are based on the control environment assessed during the engagement.

**Table I.1: Effectiveness of Risks/ Controls and Residual Risk Rating**

		Compound Risk Rating (Likelihood x Impact)		
		Low	Medium	High
Control Effectiveness	Low	Low	Medium	High
	Medium	Low	Medium	High
	High	Low	Low	Medium

Table I.2: Priority of Recommendations

Priority of Recommendations	Residual Risk Rating
Requires Urgent Management Attention	High
Requires Management Attention	Medium
Routine in Nature	Low

[Annex II follows]

ANNEX II: OVERVIEW OF THE PCT SYSTEM
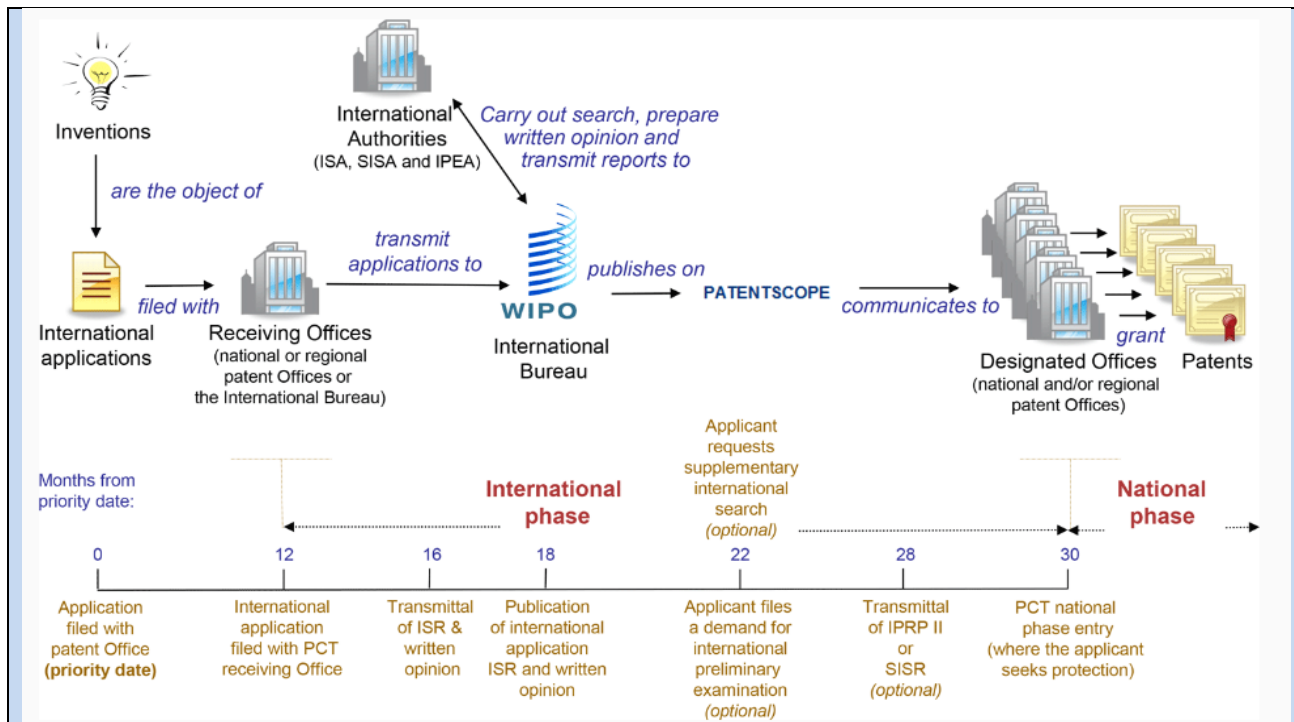
Source: WIPO website

Briefly, the PCT procedure includes:

Filing: you file an international application with a national or regional patent Office or WIPO, complying with the PCT formality requirements, in one language, and you pay one set of fees.

International Search: an "International Searching Authority" (ISA) (one of the world's major patent Offices) identifies the published patent documents and technical literature ("prior art") which may have an influence on whether your invention is patentable, and establishes a written opinion on your invention's potential patentability.

International Publication: as soon as possible after the expiration of 18 months from the earliest filing date, the content of your international application is disclosed to the world.

Supplementary International Search (optional): a second ISA identifies, at your request, published documents which may not have been found by the first ISA which carried out the main search because of the diversity of prior art in different languages and different technical fields.

International Preliminary Examination (optional): one of the ISAs at your request, carries out an additional patentability analysis, usually on a version of your application which you have amended in light of content of the written opinion.

National Phase: after the end of the PCT procedure, usually at 30 months from the earliest filing date of your initial application, from which you claim priority, you start to pursue the grant of your patents directly before the national (or regional) patent Offices of the countries in which you want to obtain them

[End of Annexes and of Document]

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