

Program and Budget Committee

Twenty-Eighth Session

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SUPPLEMENTARY CAPITAL MASTER PLAN PROJECTS

Document prepared by the Secretariat

Background

1. The Assemblies of the Member States of WIPO, each as far as it is concerned, at its Fifty-Seventh Series of Meetings, October 2 to 11, 2017¹:

“(i) Approved from the CF Unions, PCT Union and Madrid Union Reserves the funding of the projects presented in the Capital Master Plan 2018-2027 for the biennium 2018/19 in document A/57/9, amounting to a total of 25.5 million Swiss francs.

“(ii) Noting that the 2014/15 biennial surplus of the Madrid Union is not fully utilized for the CMP projects 2018/19, decided to earmark the remaining balance amounting to 1.1 million Swiss francs for future CMP 2018-27 cross-cutting projects that benefit all Unions. It was understood that this decision was taken on a one-time ad-hoc basis.

“(iii) Noted that these decisions were without prejudice to the discussions referred to in paragraph 2.”

2. The Member States approved in 2017 the funding from the Reserves for projects presented in the Capital Master Plan (CMP) 2018-2027 for the biennium 2018/19. The CMP 2018-27 is understood to be a living document and therefore will need to recognize new opportunities that emerge for the Organization as it undertakes its program of work in

¹ Document A/57/11 ADD. 3

any given biennium. The Secretariat has identified, in the course of 2018, opportunities that may be classified into two categories. The first category arises from the rapidly evolving Information Technology (IT) landscape and in particular cloud technology, which enables the Organization to remain agile and to adapt to a changing external environment. The second category stems from real estate market opportunities to consolidate the WIPO campus in order to ensure it remains fit for purpose and supports business continuity. Projects in both categories would be cross-cutting and to the benefit of all Unions of the Organization.

3. This document includes: (i) a proposal for two high-priority cloud technology projects; and (ii) the context and need for future projects related to the premises infrastructure, which would require further work to be undertaken by the Secretariat to make concrete proposals in 2019. This document also provides an update on the Status of approved CMP Projects and other special projects financed from the Reserves, as well as relevant financial information in accordance with the Revised Policy related to Reserves to facilitate Member States' decision.

Status of CMP Projects Approved by the Assemblies of the Member States of WIPO in 2013 and 2017 and Other Special Projects Financed from the Reserves

4. Regular reporting on the status of implementation of the individual CMP projects approved by the Assemblies of the Member States of WIPO in 2013 (A/51/16) and 2017 (A/57/9) and other special projects financed from the Reserves is included in the annual and biennial WIPO Performance Reports (WPR) submitted to the Program and Budget Committee (PBC). The progress of each project as at end 2017 is included in the WPR for 2016/17², Appendix XI.

5. Table 1 provides an update on the status of budget utilization as at end 2017 and the projected balance as at end 2018 for each project financed from the Reserves.

² Document WO/PBC/28/7

Table 1: Status of CMP projects and other ongoing special projects financed from the Reserves

(in thousands of Swiss francs)

	Total Project Budget	Cumulative Expenditure to Dec 31, 2017	Remaining balance in Special Project Reserve Dec 31, 2017	Expenditure July 19, 2018	Encumbrances July 19, 2018	Projected Special Project Reserve Dec 31, 2018
<i>CMP as approved in A/51</i>						
Security enhancement	700	221	479	-	-	479
Enterprise Content Management (ECM)	2,068	1,338	730	195	470	64
PCT building renovation	6,000	1,064	4,936	697	2,705	1,535
AB building basement renovation - Phase I	960	793	167	42	122	3
AB building windows replacement	300	94	206	-	-	206
Geneva lake water cooling system	750	263	487	-	-	487
Safety and fire protection	400	332	68	-	-	68
Sub-total CMP (A/51)	11,178	4,104	7,074	934	3,298	2,843
<i>Other special projects</i>						
Madrid System Database of Acceptable Indications of Goods and Services	1,200	1,124	76	-	27	49
Enterprise Resource Planning (ERP) project	25,341	20,876	4,465	848	893	2,724
ICT Capital Investment project	5,180	5,005	175	-	-	175
Sub-total Other special projects	31,721	27,005	4,716	848	920	2,948
Sub-total Reserve funded projects	42,899	31,109	11,790	1,782	4,218	5,791
<i>CMP as approved in A/57</i>						
Global IP Platform Integration (GIPPI) - Phase I	4,547	-	-	327	669	3,550
PCT Resilient and Secure Platform - Phase I	8,000	-	-	122	956	6,922
Madrid IT Platform	6,000	-	-	-	-	6,000
Conference Registration System	930	-	-	-	-	930
Multi-Media Studio	1,700	-	-	-	-	1,700
PCT building additional works	1,950	-	-	129	1,180	641
Electrical Systems and Mechanical Installations (AB building) - Electricity and Energy	1,300	-	-	-	7	1,293
Electrical Systems and Mechanical Installations (AB building) - Elevators Phase I	430	-	-	-	-	430
Fire systems	220	-	-	-	11	209
Security equipment	400	-	-	-	34	366
Sub-total CMP (A/57)	25,477	-	-	578	2,859	22,040
Total Reserve funded projects	68,376	31,109	11,790	2,360	7,077	27,831

6. At the end of 2017, the balance of the Special Projects Reserve amounted to 11.8 million Swiss francs. Following the completion and closure of four CMP projects (Geneva Lake Water Cooling System, AB Building Windows Replacement, ICT Capital Investment and Safety and Fire Protection projects), a total of 0.9 million Swiss francs in the Special Project Reserve will no longer be required and will therefore be returned to the Accumulated Surpluses. The Special Projects Reserve as at December 31, 2018, is projected at 27.8 million Swiss francs.

Supplementary CMP Projects' Drivers

7. The Supplementary CMP Projects will form part of the Organization's long-term Capital Master Plan for 2018-27, presented to the Member States in document WO/PBC/27/9, which encompasses the capital investments required over a 10-year period in the areas of premises, safety and security and ICT initiatives to remain fit for purpose and strengthen and guarantee the business operations of the international registrations systems. The two Supplementary CMP Projects are: (i) Establishment of a long-term capability for WIPO to utilize cloud service providers and migration of legacy applications; and (ii) Migration of email to the cloud.

8. The Supplementary CMP Projects are driven by the need for the Organization to ensure a flexible and agile ICT infrastructure that allows services to be delivered to a global user base and quickly updated to respond to changing demand. This will necessitate the

establishment of a long-term capability to utilize cloud services, which is expected to result in considerable efficiency gains in the medium and long term, greater organizational resilience and improved security of information assets and systems and increased diversity of service providers, thereby reducing risks. The results of initial pilot studies on the migration of applications to cloud service providers, carried out at WIPO in 2017, demonstrate enhanced resilience and information security, increased flexibility to adjust to demand and improved customer experience worldwide. Furthermore, the migration of email to the cloud will reduce the overall cost of the Microsoft services, including email, by over 30 per cent.

Proposal for Reserve Funding for Supplementary CMP Projects

9. The Supplementary CMP Projects and their estimated one-time cost proposed for funding from the Reserves are summarized in Table 2.

Table 2: Supplementary Capital Master Plan projects	
<i>(in thousands of Swiss francs)</i>	
Cloud technology projects	Total
Establishment of a long-term capability for WIPO to utilize cloud service providers and migration of legacy applications	2,095
Migration of email to the cloud	912
Total Cloud technology projects	3,007

10. The total estimated one-time cost of the proposed supplementary projects amounts to 3.0 million Swiss francs. There are no operating/recurring costs for the projects in the biennium 2018/19. A detailed description of each of the proposed projects to be financed from the Reserves is included in Annexes II and III.

Revised Policy Related to Reserves

11. At its twenty-third Session, the PBC reviewed and recommended to the Assemblies a Revised Policy related to Reserves³. The purpose of the revised policy is to further strengthen financial and risk management, provide enhanced guidance to the Secretariat on the ongoing management of the Reserves, including target levels and liquidity, and clarify the requirements for reporting on Reserves. The revised policy includes a set of revised principles on the use of the Reserves and Working Capital Funds (RWCF) included in Annex I of this document.

Status of the Utilization of Reserves

12. The first principle (Principle 1) set out for the use of the Reserves pertains to the availability of amounts above the reserve target level. The balance of Reserves in excess of the mandated reserve target level and the Special Projects Reserve is estimated at 118 million Swiss francs at the end of 2018. The calculation of available reserves excludes: (i) actuarial gains/losses; (ii) the Working Capital Funds and Revaluation Reserve Surplus

³ Please see documents WO/PBC/23/8 and WO/PBC/23/9.

as per Principle 2 of the Revised Policy on Reserves; and (iii) the projected Overall Result after Reserve Expenditure for 2018.

Table 3: Assessment of the Reserves available above the target

(in millions of Swiss francs)

Total Reserves ¹ , ending balance 31.12.17	179.0
Actuarial gains/(losses) as at 31.12.17	-138.7
Total Reserves¹, ending balance 31.12.17 - actuarial gains/(losses) excluded	317.7
<i>of which:</i>	
Accumulated Surpluses, ending balance 31.12.17	306.0
Special Projects Reserve, ending balance 31.12.17	11.8
Special Projects Reserve no longer required ²	-0.9
Approved CMP projects 2018-19	25.5
Proposed Supplementary CMP projects	3.0
Total estimated Special Projects Reserve, incl. Supplementary CMP projects	39.3
Total Reserves excluding Total estimated Special Projects Reserve	278.4
RWCF Target 2018/19³	160.4
Balance of Reserves in excess of reserve target level⁴	118.0

¹ Excluding Working Capital funds (WCF) and Revaluation Reserve Surplus

² To be returned in 2018 to the Accumulated Surpluses resulting from the following closed projects: (i) Geneva lake water cooling system (487,276 Swiss francs); (ii) AB building windows replacement (206,237 Swiss francs); (iii) ICT Capital Investment project (174,941 Swiss francs); and (iv) Safety and fire protection (67,885 Swiss francs)

³ Reserve target is based on targets for the Unions determined in the Revised Policy on Reserves i.e. 22.1% of the total 2018/19 biennial budget of 725.9 million Swiss francs

⁴ Does not take into account the projected Overall Result after Reserve Expenditure for 2018

13. As illustrated in Table 3, the proposed funding of 3.0 million Swiss francs for the Supplementary CMP Projects can be accommodated without affecting the required target level of Reserves, as the projected balances can prudently accommodate the expenditures under the proposed projects.

14. It should be noted that, as the Organization's financial statements are prepared on an IPSAS basis, expenditure on IT projects will be capitalized where it meets the required recognition criteria. For each project, a determination will be made on whether capitalization is allowable under IPSAS as detailed information on the costs and scheduled implementation becomes available. Where a project is capitalized, the expenditure is recognized over the useful life of the resulting asset once the project has reached completion and is available for use. In these cases, the impact of the expenditure of the capitalized portion of the project on the Organization's reserves is therefore deferred over a longer period through an annual amortization, as opposed to an immediate impact as the project is implemented.

Allocation of Proposed Supplementary CMP Projects to the Unions

15. The Supplementary CMP projects proposed for financing from the Reserves are allocated to the Unions based on: (i) the Union methodology described in the approved Program and Budget 2018/19 (Annex III); and (ii) the extent to which they directly or indirectly benefit the Union(s):

Establishment of a long-term capability to utilize cloud service providers and migration of legacy applications

- some applications directly benefit specific Unions—these costs are allocated as direct union expenditure
- the cost of applications benefiting the Finance and Business Solutions Divisions will be allocated as indirect administrative and indirect union expenditure respectively (*capacity to pay principle*)

Migration of email to the cloud

- indirectly benefits all Unions
- cost allocated as indirect administrative expenditure to all Unions (*capacity to pay principle*)

16. Table 4 provides an overview of the allocation of the costs of the proposed projects by Union. As far as the first project is concerned, some applications would directly benefit all Unions, excluding Lisbon; and the applications related to the Finance and Business Solutions Divisions will indirectly benefit all Unions. The second project would indirectly benefit all Unions. As the Hague and Lisbon reserve balances were in deficit at the end of 2017, the costs allocated as indirect administrative and indirect union are allocated to the Contribution-financed (CF), the PCT and the Madrid Unions. The positive balance of reserves for these Unions in excess of the 2018/19 target illustrates that the Unions are not being negatively affected by the proposed Supplementary CMP Projects.

Table 4. Assessment of the Reserves available above the target by Union
(in thousands of Swiss francs)

	<i>CF Unions</i>	<i>PCT Union</i>	<i>Madrid Union</i>	<i>Hague Union</i>	<i>Lisbon Union</i>	Total
Total Reserves ¹ , ending balance 31.12.17	14,014	163,783	32,054	(29,209)	(1,593)	179,049
Actuarial gains/(losses) as at 31.12.17	(7,248)	(103,461)	(24,339)	(3,102)	(544)	(138,694)
Total Reserves¹, ending balance 31.12.17 - actuarial gains/(losses) excluded	21,262	267,244	56,393	(26,107)	(1,049)	317,743
<i>of which:</i>						
Accumulated Surpluses, ending balance 31.12.17	20,524	258,446	54,146	(26,107)	(1,056)	305,953
Special Projects Reserve, ending balance 31.12.17	738	8,798	2,247	-	7	11,790
Special Projects Reserve no longer required ²	(57)	(550)	(329)	-	-	(936)
Approved CMP projects 2018-19	250	18,167	7,061	-	-	25,477
Proposed Supplementary CMP projects	47	2,099	580	281	-	3,007
Total estimated Special Projects Reserve, incl. Supplementary CMP projects	978	28,513	9,559	281	7	39,338
Total Reserves excluding Total estimated Special Projects Reserve	20,284	238,731	46,835	(26,388)	(1,056)	278,406
RWCF Target 2018/19³	17,291	106,784	32,552	3,736	-	160,363
Balance of Reserves in excess of reserve target level⁴	2,993	131,946	14,283	(30,124)	(1,056)	118,042

¹ Excluding Working Capital funds (WCF) and Revaluation Reserve Surplus

² To be returned in 2018 to the Accumulated Surpluses resulting from the following closed projects: (i) Geneva lake water cooling system (487,276 Swiss francs); (ii) AB building windows replacement (206,237 Swiss francs); (iii) ICT Capital Investment project (174,941 Swiss francs); and (iv) Safety and fire protection (67,885 Swiss francs)

³ Reserve target is based on targets for the Unions determined in the Revised Policy on Reserves i.e. 22.1% of the total 2018/19 biennial budget of 725.9 million Swiss francs

⁴ Does not take into account the projected Overall Result after Reserve Expenditure for 2018

Note1: The methodology used for the allocation of income and expenditure by Unions is based on the methodology used for the preparation of the Program and Budget 2018/19.

Note2: The Madrid Union has assumed the financing of the Hague Union's contribution of 3 million Swiss francs to the IT Modernization Program of the Madrid and Hague international registration systems. The amount will be reimbursed by the Hague Union to the Madrid Union as soon as the level of reserves of the Hague Union Reserve Fund so allows. In accordance with the decision of the Assemblies of the Member States of WIPO at their 55th Series of Meetings in 2015, the Contribution-financed Unions have assumed the financing of the deficit of the Lisbon Union in the biennium 2016/17 amounting to 75,550 Swiss francs. The amount will be reimbursed by the Lisbon Union to the Contribution-financed Unions as soon as the level of reserves of the Lisbon Union so allows

Impact on Cash Flows and Liquidity Levels of the Reserves

17. WIPO's available cash and the liquid element of its reserves are both more than sufficient to fully finance the level of cash outflow proposed in the Supplementary CMP Projects, and the balances of the existing CMP and other special projects financed from the Reserves.

Impact on cash flow

18. After setting aside the operational reserve target of 22 per cent of the Program and Budget (157.0 million Swiss francs for 2016/17 and 160.4 million Swiss francs for 2018/19) and the reserves established for the ASHI liability funding (Strategic Cash amounting to 124.4 million Swiss francs), the balance of Core Cash, including the Special Projects Reserve, is as follows:

	Jun 30, 2018	Dec 31, 2017
Total Cash and Investments	568.3	543.8
Operating Reserve (RWCF target 2016/17 and 2018/19)	160.4	157.0
Strategic Cash	<u>124.4</u>	<u>124.4</u>
Core Cash*	283.5	262.4

*Core Cash includes the Special Projects Reserve

19. The balance of cash and investments increased by 24.5 million Swiss francs between December 31, 2017, and June 30, 2018. The cash generated by the Organization in the first six months of 2018 has enabled it to comfortably absorb the full repayment of its loans with the Foundation for Buildings for International Organizations (FIPOI). WIPO repaid the remaining balance of 16.9 million Swiss francs on these loans in January 2018, in accordance with its strategy to limit the impact of current negative Swiss franc interest rates. The Organization retains sufficient liquidity available for cash requirements.

20. In accordance with WIPO's Investment Policy, the Core Cash balance is invested while ensuring that sufficient cash is made available to meet contingencies should it be required. In addition, WIPO's cash balances are replenished on an annual basis with operating surpluses.

Liquidity levels of the Reserves

21. The liquid portion of WIPO's net assets has been defined as the excess of its current assets over its current liabilities after certain adjustments are made based on IPSAS requirements. The position of the liquid portion of the net assets has moved from 357.8 million Swiss francs at the end of 2016 to 240.7 million Swiss francs at the end of 2017.

22. During 2017, the Organization made significant investments as part of its revised Policy on Investments. In the 2017 financial statements, WIPO has reclassified the portion of cash invested for the Core and Strategic reserves to non-current assets, since the Organization plans to hold these reserves in investments which exceed a one year timeframe in order to

maximize return while preserving capital. The Strategic cash is invested for the longer term, resulting in a reduction of liquid reserves. The Core Cash has been invested in such a way as to ensure that the funds remain available should they be required to meet any contingencies. Therefore, for the calculation of reserve liquidity, the Core Cash investments are considered liquid. However, it is important to note that the Core Cash is invested with the objective of generating a positive return over rolling five year periods. Accessing these funds in the short-term could incur investment losses.

23. Other adjustments made for elements included in current assets and liabilities based on IPSAS requirements, resulting in an estimation of the liquid portion of the net assets, are as follows:

- (i) The current asset inventories represent the value of publications printed but not distributed or sold. Since most of this element will not result in the receipt of cash, it is not included in the current assets for the purpose of the calculation of the net liquid balance; and
- (ii) Advance receipts, net of the current asset Accounts Receivable PCT, represent the portion of PCT and Madrid/the Hague fees already received by WIPO in cash but for which publication has not been completed. In accordance with IPSAS, these funds are considered advance “unearned” receipts and are not reflected in revenue until the publication date. However, unlike other liabilities, advance receipts represent deferred revenue already received in cash, which will form part of WIPO’s revenue and surplus within a period of 12 months or less. Therefore, the cash portion of advance receipts are not considered an offset to WIPO’s liquid assets, since they do not result in any outflow of cash resources.

Table 6: Evolution of Net Liquid Reserves
(in millions of Swiss francs)

	Dec 31, 2017	Position after adjustments Dec 31, 2017	Dec 31, 2016 (restated)	Position after adjustments Dec 31, 2016 (restated)
Current Assets	341.1		604.4	
Core Cash non-current investments		174.2		-
Accounts Receivable PCT		(50.8)		(46.4)
Adjustment for inventories		<u>(1.3)</u>		<u>(1.5)</u>
Net liquid current assets		463.2		556.5
Current Liabilities	505.3		468.3	
Adjustment for advance receipts		<u>(282.8)</u>		<u>(269.6)</u>
Net liquid current liabilities		222.5		198.7
Net current assets*	(164.2)		136.1	
Liquid portion of net assets		240.7		357.8

*As per the Financial Statements

24. As mentioned above, WIPO Reserves are replenished on an annual basis with operating surpluses. These are projected to total 65 million Swiss francs (budgeted Operating Result before Reserve Expenditure) for the 2018/19 biennium.

Compliance of Supplementary CMP Projects with Reserve Policy Principles

25. The above sections provide an analysis for the use of the Reserves as per the principles contained in the Revised Policy related to Reserves. The principles are reproduced in Annex I for ease of reference. The below paragraphs provide a synopsis of the analysis for each of the principles.

Principle 1

26. The balance of the Reserves (excluding actuarial gains/losses, WCF and Revaluation Reserve Surplus) as at end 2017 amounted to 317.7 million Swiss francs. The balance of the Reserves (excluding actuarial gains/losses, WCF and Revaluation Reserve Surplus) after excluding the estimated Special Projects Reserve (actual, committed and hereby proposed) amounts to 278.4 million Swiss francs, which is, therefore, well above the RWCF target level for 2018/19 of 160.4 million Swiss francs.

Principle 2

27. The calculation of the available Reserves excludes the WCF and Revaluation Reserve Surplus (refer to Tables 3 and 4).

Principle 3

28. The proposed projects are one-time, key capital improvement projects related to IT. Please see the descriptions of the projects and their drivers in Annexes II and III.

Principle 4

29. The full life cycle costs of the project, estimated benefits and an indication of annual recurring costs are provided for each project in Annexes II and III, where relevant.

30. In addition, the cash flow and liquidity level of the reserves are sufficient to fully finance the proposed Supplementary CMP Projects (please see paragraphs 17 to 24).

Principle 5

31. The proposed Supplementary CMP Projects are planned for implementation in the biennia 2018/19 and 2020/21.

Future Opportunities for Premises Infrastructure Enhancements

32. The context and needs for the future projects are described in the paragraphs below. The Secretariat will carry out further detailed work including needs assessment, market analysis and feasibility studies in order to make concrete proposals in 2019 as appropriate.

33. The WIPO Secretariat continues its efforts to ensure adequate premises infrastructure for all WIPO personnel (staff and non-staff), as well as for business continuity purposes. In this context, the Secretariat has identified a potential need for additional office space primarily resulting from an increase of the headcount on the WIPO campus in response to the continuous growth in demand for WIPO services. Additionally, significant pressure on existing office space is created due to the increased need for small to medium meeting rooms as well as the safety requirements under Swiss law for printers and other shared equipment to be placed in specific technical rooms. Furthermore, the rental contract of one of WIPO's rented premises, expiring at the end of 2019, will need to be renewed. The cost of this rental is expected to increase by nearly 94 per cent as of 2020.

34. There is therefore a major opportunity to undertake a comprehensive needs assessment, analysis and due diligence, including an analysis of buying as compared to renting and optimizing existing premises, to ensure that the most cost-effective solution is selected and proposed to WIPO Member States for approval in 2019.

35. WIPO, as an employer of approximately 1,200 staff members from about 120 different countries, needs to remain attractive in the competitive field of intellectual property, where demand for competent and experienced resources is high and overall benefits, including non-wage compensation, are becoming a key differentiator for potential employees. Younger employees in the Geneva region are facing increasing pressure to find cost-effective solutions for day-care services, as demand for such services and pre-schools is extremely high. Given the limited range of tools that the Secretariat can use to make the overall compensation package more competitive, offering day-care services would be seen as attractive to existing and potential staff, in particular women.

36. The Secretariat is therefore considering the provision of day-care services to its staff. In the larger framework of the social responsibility of WIPO, as an employer of choice, work-life balance and well-being are central to the human resource strategy. The Secretariat intends to consult with the Host Country and local authorities to examine potential options for day-care services, which could include the establishment of a day-care center or the use of day-care services, which may be or become available in the vicinity of the WIPO Campus.

37. The following decision paragraph is proposed.

38. The Program and Budget Committee recommended to the Assemblies of WIPO, each as far as it is concerned, to approve, from the WIPO Reserves, the funding of the two Supplementary CMP Projects amounting to a total of 3.0 million Swiss francs, and to take note of the future opportunities for premises infrastructure enhancements.

[Annexes follow]

ANNEX I Revised Policy Related to Reserves

Principles on the use of the Reserves and Working Capital Funds (RWCF) as per the Revised Policy related to Reserves⁴ are as follows:

PRINCIPLE 1: Proposals for the use of the RWCF should only pertain to the amounts available in the RWCF exceeding the target level required by WIPO's Policy on Reserves. This is applicable both at the level of individual Unions as well as at the level of the Organization as a whole.

PRINCIPLE 2: The calculation of the available reserves will be based on the information on the RWCF levels contained in the most recent financial statements and must take into due consideration the actual, committed and planned expenditures from reserves for the financial period(s) during which the proposed project will be implemented. The Revaluation Reserve Surplus (which arises from the revaluation of the land on which the new building has been constructed) and the Working Capital Funds (which were established through Member States contributions) will be excluded from the calculation of the amounts available in excess of the RWCF target.

PRINCIPLE 3: Proposals for the use of available Reserves should be limited and for one-time projects for capital improvements and exceptional circumstances, as decided upon by the Assemblies of the Member States and of the Unions, each as far as it and its available reserves are concerned. Capital projects would typically be identified in a long-term capital master plan and may be defined as projects related to construction/refurbishment and Information and Communication Technology that are needed to keep an Organization's facilities and systems fit-for-purpose through significant expansion or additions.

PRINCIPLE 4: Proposals for the use of the Reserves should be prepared in a comprehensive manner with information on full life cycle costs of the projects, estimated benefits (which may be both financial and qualitative in nature), recurring expenditures that the Organization will be committed to budgeting for as part of the regular budget in subsequent biennia, and the impact on cash flows and liquidity levels of the Reserves.

PRINCIPLE 5: Proposals for the use of the Reserves may be for projects and initiatives that are outside the biennial financial period of the Organization and may cut across, or last for, more than one biennia.

[Annex II follows]

⁴ Document WO/PBC/23/8 and WO/PBC/23/9.

ANNEX II Establishment of a Long-term Capability for WIPO to Utilize Cloud Service Providers and Migration of Legacy Applications

Project objectives and expected benefits

Starting in 2017, the Secretariat has investigated options for improving the cost effectiveness, resilience, security and agility of providing ICT infrastructure to support a wide range of business services. A landscape survey of service providers was conducted in 2017 and a tender process was started in 2017 and completed in 2018 to contract cloud service providers for ICT infrastructure and related services. The strategy is to sign contracts with multiple service providers so that risk can be diversified and the most appropriate service provider can be used for each service.

There are currently more than 100 ICT applications maintained by the Secretariat, of which around 60 provide services to external users such as the Global IP systems (PCT, Madrid and Hague), online databases, platforms for data exchange, public-private partnerships and other applications. At present, these are almost exclusively hosted by the UN International Computing Centre (UN-ICC) at two data centers in Geneva.

Initial pilot studies have shown that the Secretariat can derive significant benefits from migrating applications to cloud service providers. Some examples of measured benefits include:

- Pilot applications which had budgeted 60,000 Swiss francs for provision of ICT infrastructure from UN-ICC can be hosted on cloud service providers for less than 10,000 Swiss francs per year. Similar studies for larger applications indicate cost savings of more than 50 per cent for ICT infrastructure expenditure;
- For critical applications, resilience can be significantly improved by utilizing multiple physical locations (regions or availability zones) within cloud services, rather than a single point of failure at a UN-ICC data center. This will make applications effectively immune to failures in electricity supply, internet connectivity, natural and man-made disasters; and
- Services that have global users can be significantly improved by global distribution of all or part of the application in multiple regions. Response times and availability will be greatly improved.

The Secretariat is managing the risks of security and compliance by building specific provisions into the contracts and by implementing security controls that will enable a very high level of control of data location, access, encryption, etc.

The proposed project will have the following overall business objectives:

- **Cost optimization:** Cost savings are expected on support, maintenance and management of ICT infrastructure. Costs can also be optimized by right-sizing the resources allocated in the cloud, for example by automatically scaling resources up and down to follow demand patterns;
- **Increased agility and flexibility:** More responsive and nimble provision of ICT infrastructure for new applications, one-off needs (e.g. resources for AI) and for unplanned changes in demand; and
- **Improved service delivery to external stakeholders:** By distributing services worldwide on the cloud, response times will be improved.

- Improved business continuity: Correct utilization of cloud infrastructure will enable backup and recovery to be implemented quickly and cost effectively. Exposure to loss of service due to power, internet and other failures will be reduced as will dependencies on single service providers.

Project Implementation

The proposed project will create a capability for large-scale hosting of ICT applications in the cloud and will accelerate migration of 50 high-priority applications to the new infrastructure.

A cloud center of excellence will be established and tools will be developed to automate the management of the cloud environment, security, business continuity, application deployment, incident response, change and configuration management, etc. The cloud environment will be integrated with the WIPO security management systems and with application development platforms. Once created, this capability will be integrated into the existing ICT program for ongoing operations and maintenance.

To derive maximum benefit from the cloud migration, ICT applications would require a certain amount of adaptation. Data may also need to be reformatted and migrated to the cloud. Although the effort per application may be several weeks, a one-off migration exercise of a high number of applications requires a significant investment, including establishing cloud architecture, developing migration tools, migrating data and testing applications.

The project will be managed through a structured project management approach with defined deliverables and stages to ensure control of the process. The total duration of the project is estimated at 24 months.

Drivers

- Business need: As more services are delivered via ICT applications, there is a need for a flexible and agile ICT infrastructure that allows services to be delivered to a global user base and quickly updated to respond to changing demands;
- Cost efficiency: There are significant opportunities to reduce costs of infrastructure and related ICT management services in the medium to long term;
- Organizational resilience: Use of cloud infrastructure will enable ICT applications to be easily distributed across multiple data centers and multiple regions, providing much greater resilience to technical, natural and man-made events; and
- Security and information assurance: Cloud service providers enable a higher degree of automation and security management tools that can be integrated with WIPO security management systems to improve the security of information assets and systems.

The project meets the requirements in Principle 3 of the Revised Reserve Policy as a one-time project for capital improvements based upon its size and its scope.

Estimated recurring operational costs

The annual recurring costs of maintenance and operation of using cloud services will in the medium to long term replace the recurring cost of the current on-premises hosting of WIPO's ICT infrastructure. The costs will be included in the successive Program and Budget proposals as part of the regular budget.

[Annex III follows]

ANNEX III Migration of Email to the Cloud

Project objectives and expected benefits

WIPO, like many organizations today, relies upon an email system as its primary means for daily internal and external communication, between its staff, customers, Member States and other stakeholders. This has therefore become critical to the everyday business operations of WIPO. Any disruption to this service has a significant impact upon WIPO's ability to operate.

Currently the WIPO email service is hosted on a dedicated environment at the UN International Computer Center (UN-ICC).

The objective of the project is to successfully migrate all the contents of the email system including the archives to a cloud based email service in order to decrease the dependency on UN-ICC for the provision of ICT services. A diversification strategy reduces the exposure to increased cost services provided by UN-ICC, as a result of the reduction in the use of its services by other participating UN entities.

The expected benefits of the Migration of email to the Cloud Project are as follows:

- Reduced operational costs, through the use of standard cloud based email services which have significant economies of scale;
- Increased resilience of the email service through the ability to implement greater geographical distribution in the various data centers;
- Migration from the current Microsoft Office Environment before its obsolescence date to the new Microsoft Office 365 environment, of which the email in the cloud service is part;
- Increased security of the email service through the implementation of strong authentication and access controls; and
- Provide a base for the federation of user accounts and credentials between on-site and cloud hosted services. This will facilitate the wider migration of WIPO application services to the cloud.

Project implementation

The project will be delivered in a phased implementation, including the implementation of the new environment as well as the migration of the contents of the existing email service, starting in the 2018/19 biennium, with the full operational capability being online by the end of 2020.

Drivers

- Cost efficiency: WIPO's current service provider for email services has indicated that their costs for providing the current email service are likely to increase as the number of their other customers are in the process of migrating to the cloud, so the current economies of scale will be reduced, and the subsequent unit costs will increase.

The implementation of a cloud based email system will allow WIPO to take advantage of the reduced recurring operational costs for email services.

- Security, safety and information assurance: The implementation of a cloud base email service will allow WIPO to realize greater levels of service resilience, as the hosting of the email service can be split across multiple datacenters with a greater geographically distribution than the current service. This increased distribution will allow for the ongoing operation of the email service to support a number of WIPO operations even if there was a significant incident within the Geneva area. Additionally, WIPO will be able to leverage the in-built security mechanisms provided by the cloud-based service to further protect its email service against threats.

The project meets the requirements in Principle 3 of the Revised Reserve Policy as a one-time project for capital improvements based upon its size and its scope.

Estimated recurring operational costs

The recurring costs of maintenance and operation of the cloud hosted email platform will be included in successive Program and Budget proposals as part of the regular budget. The estimated recurring costs following the project are estimated to be 460,000 Swiss francs per year. This represents a saving of over 250,000 Swiss francs per year compared to the current operational costs of WIPO's email system.

[End of Annex III and of document]