Preliminary Study on the Various PPP Options for the Renovation of the Palais des Nations

Prepared by the Toyo University PPP Study Team, Tokyo, Japan, under the auspices of the UNECE Team of Specialists on PPPs

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Executive Summary

The United Nations Office at Geneva (UNOG) has been conducting a study for the renovation of the Palais des Nations (PdN) and has developed the Strategic Heritage Plan (SHP) for the project. A key challenge and obstacle to the plan is the funding for a project of such magnitude. Conventional funding from Member States through the General Assembly (GA) is not a likely or viable option due to the unsuccessful experience of the United Nations in New York. As such and under the auspices of the United Nations Economic Commission for Europe (UNECE) and its intergovernmental Team of Specialists on PPPs (TOS PPP), the PPP Graduate School of Toyo University (Toyo PPP Team) volunteered to conduct a study to explore the possibility of applying a more creative Public-Private Partnership (PPP) development strategy for this major renovation.

Alternative project approach and funding

The Toyo PPP Team used a two-step approach to assess the current situation and to determine the optimal, best value options for the renovation project. The steps were as follows:

Step 1: Develop a high-level assessment and inventory of the existing assets and compare the current operational requirements and needs against those assets. Identify PPP options for using new technology strategies in the renovation that will modernize PdN and meet the objectives of the SHP.

Step 2: Based on the assessment results, the Toyo PPP Team sought to identify the most appropriate logical project delivery models using the Public-Private Partnership approach.

Preliminary findings

Step 1 of the study included meeting with UNOG officials, Member States and their representatives in Geneva, including several Ambassadors. Interviews were conducted and numerous meetings were held to discuss the current situation and future needs. Below is a summary of our key findings:

- Existing PdN facilities (and their associated infrastructure) are in poor condition and not fit for their intended purposes.
- Existing PdN facilities are inadequate in terms of meeting the current needs and operational requirements of UNOG.
• Both short and long-term accommodation for Member States’ delegations and the United Nations is inadequate. Those assigned to work at the United Nations on longer-term assignments are required to rent expensive housing in the local areas.

• Building services and building management (e.g. information technology, power supply, lighting and controls, high voltage electrical systems, and water and sewage piping) are obsolete to a point where it is more costly to maintain them rather than replace them.

• Current infrastructure is potentially hazardous to the health of those working at UNOG (e.g. asbestos, poor ventilation, poor ergonomics in offices, “sick building” syndrome).

• Existing land at the PdN is an underutilized asset. Developing a site master plan could significantly improve the capacity, operability and financial position of UNOG at the PdN.

Assessing PPP options and renovation methods

The first exercise examined the application of PPP methods for the renovation of the PdN and the second exercise looked at a PPP method of making use of the underutilized property of the PdN to generate revenue to contribute toward the renovation.

It examined the advantages and disadvantages of each PPP method for the renovation and analyzed the risks to the United Nations and its Member States.

The degree of risk transfer and utilization of private management expertise, i.e. the scope of services, in our view are the key factors in considering which method is optimal for the renovation of the PdN.

Since operations and maintenance costs over the asset’s lifetime far exceed the initial capital renovation costs, a rigorous cost benefit analysis should be done and should cover the “whole life” of the PdN. In 2012, UNOG procured various services from private sector parties which added up to USD 70 million. In addition, UNOG paid CHF 2.32 million for electricity and water. Therefore, our preference is to use a comprehensive (scope and project flow) project delivery method such as Design/Build/Finance/Maintain (DBFM). Some lease options could be considered as well if the financing solution proves competitive.

On the other hand, many Member States have indicated difficulties in making a
financial contribution towards the renovation, while simultaneously pressurizing the United Nations to improve its efficiency and to reduce its apportioned contribution; hence, cost reduction and revenue generation need to be explored. No matter what method is chosen for the renovation, unless UNOG changes its system from traditional methods, the Member States will have to pay off the debt. In addition, it is necessary for UNOG to establish mechanisms to avoid cost and time project delivery overruns as well as managing the performance of private sector parties.

A key strategy in employing PPP methodology for this project is to take advantage of the underutilized property of UNOG and to develop certain projects that can be revenue generators, which can in turn be used to pay for the renovation works. The United Nations undoubtedly has such underutilized property at the PdN. This study has examined whether such property can be used to develop certain United Nations related development projects and to determine whether such projects can produce enough revenue to pay for a significant portion of the renovation cost. When we speak of these projects we are referring to the development of: 1) accommodation facilities for the guests of the Member States and the United Nations; and 2) housing for the Member States’ representatives and staff of the United Nations and other international organizations.

In order to consider this type of PPP methodology in supporting the cost of the PdN renovation project, the study examined the involvement of several public organizations such as the Member States of the United Nations, the Swiss Mission (Swiss Government, Canton of Geneva and the City of Geneva) and UNOG in this possible PPP project.

**Assessing accommodation and housing needs**

In order for these types of PPP projects to be successful, there has to be sufficient market appetite for bidders to become involved. This in turn drives “Value for Money” for UNOG.

Geneva has a severe lack of available lodging and housing, especially for the delegates of the Member States and the United Nations. The Member States have a significant need for lodging and housing for their guests and staff, which cannot be satisfied by the Geneva local market. On some occasions, for example, the delegates have to be lodged in Lausanne, more than an hour’s commute to the PdN. The United Nations hosts over 10,000 conferences annually, which makes it one of the largest conference centres in Europe. Delegates to those conferences also suffer from the insufficient accommodation facilities in Geneva.
Interviews and feedback from Member States

Even though our study period was short (February–April 2013) and we could only interview and meet a limited number of organizations: Geneva Group, Member States’ Missions, Host Country Mission, local contractors and so on during the team visit to Geneva on 4–10 April 2013, we reached a strong conclusion that opportunities for lodging, housing and other accommodation could provide significant income towards the required investment in the SHP.

During the interviews with several Member States, we found that there is a rather limited interest in providing direct capital funding towards the renovation of the PdN. Some were very negative towards making a financial contribution and some Members stated that the “Old days are over and a new culture of thinking must be examined for paying such expenses”. Several Missions stated that if the United Nations takes steps, such as a new type of PPP in an attempt to meet a portion of the renovation payment, then Missions may consider a pro rata payment approach for the renovation. It appears that there could be a warm welcome for using an innovative PPP approach.

This report offers very preliminary findings. If the United Nations is interested in following up on some of these PPP suggestions, we recommend that it carries out further studies of the relevant issues in order to confirm our results. As to how much these revenue generators could contribute to SHP costs, we believe a substantial amount could be realized.

The Toyo PPP Team strongly recommends that the United Nations further studies this type of PPP methodology for the renovation of the PdN, but the Toyo PPP Team has a concern over the implementation of a PPP Project at the United Nations as both the UN and UNOG lack expertise in this field.

There are, however, several experienced PPP organizations within the Member States, which UNOG may consult to obtain some expertise. The National Council for PPP of the United States, Infrastructure UK of the United Kingdom, MAPPP/IGD of France, the Canadian Council for PPPs and other PPP organizations can provide PPP advice and expertise for PPP projects at PdN. This approach would not only save costs but, depending upon the success of the projects, would also mean smaller capital contributions by the Member States toward the renovation project, creating a WIN–WIN situation for both the United Nations and the Member States.

Our conclusions in assessing the various PPP options are as follows:

1) Using a PPP approach to long-term operations and maintenance of the PdN
will provide the optimum life cycle for systems and equipment, including the necessary return-on-investment for energy-saving infrastructure;

2) The renovation project can use green, sustainable design and construction principles to create a new model and an example that might be followed by the whole of the United Nations and the Member States;

3) Using a PPP model can result in generating the necessary funding for the project, without a serious financial capital impact on the funding of UNOG or its Member States;

4) Using a PPP model with an internally sanctioned Project Management Team overseeing the private-sector partners performing the work would yield the optimal PPP arrangement and results;

5) Building new short-term (hotels), extended stay (service apartments) and long-term accommodation (condominiums) would generate the cash needed to fund a substantial portion of the renovation project;

6) By bidding and packaging the work in phases, there could be ample participation by local and international private contractors and companies; and

7) Using a PPP approach as outlined would create a unique and new business model for the United Nations and its Member States to use around the globe for projects of a similar nature.

**Comprehensive feasibility study required**

Our study has yielded various options and ideas which appear to be economically viable and attractive as a solution for meeting the challenges facing UNOG in its quest to sustain the PdN and its presence and long-standing tradition in Geneva, Switzerland. However, our study was performed over a short period and at a level inadequate to identify the overall needs and options for future consideration. A full feasibility study should now be commissioned that will provide such a blueprint and path forward for project implementation. Under the auspices of UNECE and UNOG and the advice from experienced national PPP organizations, the Toyo PPP Team is willing to assist and lead the implementation of a feasibility study based on the work already completed and the options and opportunities identified.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACABQ</td>
<td>Advisory Committee on Administrative and Budgetary Questions</td>
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<td>ASG</td>
<td>Assistant Secretary General</td>
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<tr>
<td>BLM</td>
<td>Build, Lease and Maintenance</td>
</tr>
<tr>
<td>BLMO</td>
<td>Build, Lease, Maintenance and Operate</td>
</tr>
<tr>
<td>BOT</td>
<td>Build, Operate, Transfer</td>
</tr>
<tr>
<td>BTO</td>
<td>Build, Transfer, Operate</td>
</tr>
<tr>
<td>CERN</td>
<td>European Organization for Nuclear Research</td>
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<tr>
<td>CHF</td>
<td>Swiss franc</td>
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<tr>
<td>CMP</td>
<td>Capital Master Plan</td>
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<tr>
<td>DAB</td>
<td>Dispute Adjudication Board</td>
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<tr>
<td>DB</td>
<td>Design and Build</td>
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<tr>
<td>DBFM</td>
<td>Design, Build, Finance and Maintenance</td>
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<tr>
<td>DBFMO</td>
<td>Design, Build, Finance, Maintenance and Operate</td>
</tr>
<tr>
<td>DBM</td>
<td>Design, Build and Maintenance</td>
</tr>
<tr>
<td>DBMO</td>
<td>Design, Build, Maintenance and Operate</td>
</tr>
<tr>
<td>DG</td>
<td>Director General</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organization</td>
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<td>GA</td>
<td>General Assembly</td>
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<td>ILO</td>
<td>International Labor Organization</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<tr>
<td>LCC</td>
<td>life cycle cost</td>
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<tr>
<td>LDTR</td>
<td>Loi sur les démolitions, transformations et rénobilations de maisons d'habitation</td>
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<tr>
<td>O&amp;M</td>
<td>operation and maintenance</td>
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<td>PdN</td>
<td>Palais des Nations</td>
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<td>PFI</td>
<td>Private Finance Initiative</td>
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<td>PPP</td>
<td>Public-Private Partnerships</td>
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<td>SHP</td>
<td>Strategic Heritage Plan</td>
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<td>SPC</td>
<td>Special Purpose Company</td>
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<td>UNCITRAL</td>
<td>United Nations Commission on International Trade Law</td>
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<tr>
<td>UNDC</td>
<td>United Nations Development Corporation</td>
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<tr>
<td>UNECE</td>
<td>United Nations Economic Comission for Europe</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<tr>
<td>UNOG</td>
<td>United Nations Office at Geneva</td>
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<tr>
<td>USG</td>
<td>Under-Secretary General</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<tr>
<td>WIPO</td>
<td>World Intellectual Property Organization</td>
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<tr>
<td>WTO</td>
<td>World Trade Organization</td>
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I  Purpose of the Report

The General Assembly mandated the United Nations secretariat to explore the possibility of innovative funding options for the renovation of the Palais des Nations (PdN).

The purpose of this study is to provide the PPP options, which the United Nations Office in Geneva (UNOG) can consider for the renovation of the PdN and for possible revenue generation with certain developments within the property of the PdN.

UNOG has asked the United Nations Economic Commission for Europe (UNECE), which has resident expertise and an intergovernmental process – the Team of Specialists on PPPs – to look into the PPP options for the renovation of the PdN. In collaboration with UNECE’s efforts, Toyo University provided a pro bono report on the preliminary study of the application of PPP methodology to the renovation of PdN and its funding options.

PPP Graduate School of Toyo University in Tokyo, the only graduate school specialized in PPP around the world, has volunteered to conduct the preliminary study in the use of PPP and submit the conceptual study to the UNECE for a review.
II  Project background

This chapter provides a brief history of the PdN and its current operations, as well as a preliminary view of the proposed PdN renovation project. In addition, this chapter compares several methods of renovation/reconstruction while preserving the cultural heritage of the existing buildings.

1  History

The original PdN in Geneva was built in 1937 to house the League of Nations and the United Nations (UN) inherited the facility in 1946. The additional building was constructed in 1973 to meet the need for more space with the ever increasing activities of the UN.

Today, the PdN holds approximately 10,000 meetings/conferences annually, which make the PdN one of the largest and busiest conference centres in the world. The Conferences and Meetings serve as a vibrant platform for the work of the UN in Europe.

2  Study

UNOG has been conducting a study for the renovation of the PdN and has developed the Strategic Heritage Plan (SHP) for the project.

UNECE has the lead responsibility for promoting PPP and capacity-building around the world and has established the UNECE International PPP Centre of Excellence.

The PPP Graduate School of Toyo University is the only graduate school specializing in PPP education/training around the world and has been recognized by UNECE as a training hub for PPP advancement in Asia.

In February 2013, the Toyo PPP School agreed with UNECE and UNOG to conduct a conceptual PPP Options Study for the renovation of PdN, on a pro bono basis.

3  Surrounding conditions

After 76 years for the original buildings and 40 years for the additional building, the entire complex is facing a number of challenges:

1) The deteriorated piping system and building structure cannot meet current health and safety standards;

2) Conference rooms are outdated and facilities are not designed to meet the accessibility needs of persons with disabilities;

3) The cost of maintenance of the buildings is very high when compared with newer buildings similar in size;

4) Energy efficiency and conservation can be improved substantially but is currently inadequate in comparison to today’s high standards;
5) The operation of the UN in Geneva requires additional office space inside the PdN in order to accommodate UN staff currently outside the facility at a substantive reduction in rental costs and the existing office configuration requires better design to increase its capacity.

The above five issues should be considered by the United Nations in the renovation of the complex. With the experience and budget/expenditure overruns of the New York Headquarters renovation project in recent years, the United Nations should consider new and alternative PPP models for this critical project. Using such PPP models in combination with a strong project management approach can achieve far more effective results.
III Strategic Heritage Plan (SHP)

This chapter studies how the objectives of the Strategic Heritage Plan (SHP) can be achieved. It compares different preservation/refurbishment (reconstruction) methods from both technical and economic perspectives.

UNOG has launched the SHP for the renovation of the facility in order for it to remain a centre of excellence for international diplomacy. The SHP points out the following challenges that must be addressed. UNOG has estimated the cost of the SHP, with an eight-year renovation period, to be approximately CHF 618 million, and around CHF 1,344 million including 25 years of maintenance and energy costs.

<table>
<thead>
<tr>
<th>Cost-Benefit Analysis (25 years)</th>
<th>(in millions of CHF)</th>
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<tbody>
<tr>
<td><strong>Strategic Heritage Plan</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Short Term</strong></td>
<td><strong>Medium Term</strong></td>
</tr>
<tr>
<td>1) Construction &amp; Associated Costs</td>
<td>694</td>
</tr>
<tr>
<td>2) Maintenance Costs under current policy (25 years)</td>
<td>211</td>
</tr>
<tr>
<td>3) Increase in Maintenance Costs to reach 3% of Asset (25 years)</td>
<td>399</td>
</tr>
<tr>
<td>4) Energy Costs (25 years)</td>
<td>95</td>
</tr>
<tr>
<td>5) Motta &amp; Wilson Rent</td>
<td>26</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1335</strong></td>
</tr>
</tbody>
</table>


1 Challenges

Listed below are some examples of the challenges that UNOG is facing. They range from major modification and repair to complete replacement.

a) Piping systems have deteriorated and are inefficient:
   - Rusted, leaking and clogged pipes
   - Thousands of meters of piping need to be replaced

b) Building structures have deteriorated and are unsafe:
   - Corrosion and ageing of concrete structures
   - Skylights are structurally unsound, not thermally insulated, and do not use energy-savings bulbs or controls

c) Health and safety standards require substantial improvement:
   - Current health, safety and fire standards are not met
• Outdated electrical installations
• Old infrastructure has asbestos which impedes upgrades and refurbishments and is a health hazard

d) Conference rooms are outdated and do not have the technology required for today’s meeting and teleconference communications needs:
• Poor sound quality from old analog interpretation/recording equipment
• Negative impact on conference effectiveness
• Interruption to conferences caused by equipment breakdowns
• Conference rooms cannot be fully utilized due to rigid design makings and accessibility to persons with disabilities is very difficult
• Premises were built when the principle of universal design was not practiced
• The rights of persons with disabilities are not recognized: stairs, elevators, toilets, braille signs, etc.

e) Energy efficiency must become a priority:
• Mechanical and electrical systems are not up to current industry standards in terms of energy efficiency and conservation
• Millions of dollars in potential savings can be achieved by installing energy efficient systems and smart grid technologies
• Buildings are very old and require additional capital investments.
• Office space utilization is inadequate – rearranging can add up to 800 more desks
• Simple reconfiguration of existing space will result in efficiency gains
• Convert existing underutilized spaces for additional office space

To meet the above challenges, SHP established key goals and objectives for the renovation. The goals are described in section 2, below.

2 Goals and objectives

According to our discussions with UNOG’s SHP team, the following points are the major objectives of the SHP, and are prioritized in the following order.

1) Ensure the continued functions of the complex;
2) Safeguard the health and safety of delegates and staff and meet current standards and regulations;
3) Reduce operation and maintenance (O&M) costs by providing sustainable and energy efficient facilities;
4) Consolidate UNOG staff within a single compound through efficient space utilization;
5) Create full accessibility for persons with disabilities;
6) Preserve the historical and heritage value of the complex.
The SHP also emphasizes the following features for the renovation project.

3 **Features**

- Maintain the visitor’s enjoyment of the Palais;
- Respect the UNESCO classification of the League of Nations’ Institutional memory;
- Create the most cost effective solution;
- Create premises which are not subject to specific host country authority;
  a. Strict security controls;
  b. No building permit requirements.

4 **Evaluation of the six goals of the Strategic Heritage Plan (SHP)**

1) **Ensure the continued functions of the complex**

There are two options to meet this goal:

(a) Finding a large enough space for the transfer of the entire UNOG operation or
(b) phasing of the renovation project for the continuation of the operation.

Considering the size of the UNOG staff, it would be very difficult to consider option (a).
Thus, option (b) must be considered by UNOG for the renovation.

2) **Safeguard the health and safety of delegates and staff and meet current standards and regulations**

The asbestos problem and the old electrical installations must be fixed and other health, safety and fire standards must also be met in the renovation project to insure the health and safety of UN staff, conference attendees and visitors. These requirements must be emphasized and strictly enforced for the renovation of the complex.

3) **Reduce operation and maintenance costs by providing sustainable and energy-efficient facilities**

This goal has some conflicting elements with goal 6) of the SHP. The more preservation that the UN tries to keep in the renovation, the higher the maintenance costs will be over the asset’s lifetime. The UN must balance goals 3) and 6) to best serve both goals.

Keep the current building design or keep the facades and rebuild the interior.

4) **Consolidate UN staff within a single compound through efficient space utilization**

This goal can be met in two ways: reconfigure the existing office space to increase the efficiency of the space utilization and construct additional buildings to accommodate more UN staff, who are presently located in other buildings in Geneva. In the SHP, it is estimated that a maximum of 1,000 desks can be added by a more efficient use of space.
5) **Create full accessibility for persons with disabilities**

In the renovation process, the accessibility standards must be enforced to meet all the standards required by the UN.

6) **Preserve the historical and heritage value of the complex**

How much of the traditional designs of the PdN to be kept must be weighed against increased energy efficiency and long-term considerations.

5 **Renovation proposals**

1) **Our assessment indicates that there are three viable proposals or options for the renovation of the PdN**

**Option 1 – Keep as much of the original design of the entire complex as possible**

This option will achieve goal six of the SHP but may not be the option UNOG can accept if the other five goals are to be implemented. The long-term energy efficiency and reduced O&M costs must also be considered.

In this method, it is necessary to ensure safety, convenience, and comfort of building users during the renovation period. In order to renovate buildings while they are in use, temporary work has to be undertaken. During the asbestos removal work, the E building should not be used. Since the removal works must be suspended when conferences and meetings are being held, the work will take a substantially longer period of time. Sufficient investigation/study of existing conditions and structures and advanced special skills are required to avoid power outages, collapse of deteriorated structures and other disruptions.

In addition, it is very common to find latent defects during the construction period, even after the preliminary studies have been carried out. Latent defects are often a major cause of cost/time increase, and change orders.

Because renovation would not materially change the footprint of the buildings, the physical conditions of the structures will not be changed drastically. It limits improvements in complicated flow plans, scattered space plans, or accessibility plans. Buildings would be partially demolished in order to improve accessibility through the construction of elevators, slopes, or accessible restrooms.

Electric, water and ventilation facilities and equipment should be replaced approximately every 30 years, depending upon the specification, and it will substantially increase the life cycle cost of the PdN, since the replacement work will require considerable funding – whether for temporary works or for the SHP. On the other hand, it is easier for UNOG to acquire a social understanding of preserving the cultural and historical heritage of the buildings.
Option 2 – Keep the facades of the entire complex and rebuild the inside as a greenfield project from the ground up

This option may be the best option to meet all six goals of the SHP. There are many historical buildings around the world where the original facades are preserved simply for the sake of preservation but where the inside is rebuilt to increase energy efficiency and improve convenience and comfort of the buildings [see Appendix 1]. One example of this can be found in the Cornavin Station in Geneva. UNOG can keep the UNESCO classification of the League of Nations’ institutional memory and at the same time maximize energy efficiency and reduce the O&M costs of the entire complex.

Advanced technological capabilities are required to preserve and reinforce the structural strength of the building. Swing space is necessary to maintain the administrative functions and conference meetings at the PdN. The construction period will be longer because of the constraints associated with the preservation of the façade.

Space planning, flow planning, facility/equipment planning and accessibility planning will improve drastically because the structure has been entirely demolished and rebuilt. It will also improve the energy efficiency, while reducing future maintenance costs, energy costs, and replacement costs throughout the life cycle of the building.

Depending on the degree of preservation and demolition, some opposition to this plan could be filed by members of the public and other concerned parties.

Option 3 – Build a new complex from the ground up

This option cannot achieve goal six of the SHP. However, the benefits of this option are better energy efficiency, and quicker and less expensive construction. An additional benefit of this option is the better utilization of the real estate within the UN property. The configuration of the existing buildings is not ideally designed for the efficient use of the property and the transferability of the staff and visitors to the PdN. The redesign of the entire complex from scratch will most likely achieve the best space utilization of the entire property of the Palais.

In order to reduce the impact on the existing functions, a phased approach should be adopted. Thus, it is necessary to ensure safety, convenience and comfort of the workplace during the construction period. If the UN chooses to reconstruct new buildings on the area of the existing footprint, temporary works will be required and the cost will be higher than building in a different location.

Concerned parties, such as the International Council of Monuments and Sites or Documentation and Conservation of Buildings, and Neighborhoods of the Modern Movement may oppose such reconstruction.
2) **Comparison of the three options**

<table>
<thead>
<tr>
<th></th>
<th>SHP</th>
<th>Partial preservation</th>
<th>Rebuild from scratch</th>
</tr>
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<tbody>
<tr>
<td>Temporary works</td>
<td>Extremely expensive</td>
<td>Expensive</td>
<td>Expensive</td>
</tr>
<tr>
<td>Cost increase during construction</td>
<td>Most possible</td>
<td>Possible</td>
<td>Less possible</td>
</tr>
<tr>
<td>Construction skills and techniques</td>
<td>Advanced and special skills required</td>
<td>Advanced skills required</td>
<td>Normal</td>
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<tr>
<td>Impact on work environment</td>
<td>Especially large Swing space required</td>
<td>Small Swing space required</td>
<td>Large Swing space required</td>
</tr>
<tr>
<td>Construction period</td>
<td>Longest</td>
<td>Long</td>
<td>Long</td>
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<tr>
<td>Convenience &amp; comfort after completion</td>
<td>Not improved much</td>
<td>Improved</td>
<td>Improved</td>
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<tr>
<td>Expansion of space</td>
<td>Impossible</td>
<td>Possible</td>
<td>Possible</td>
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<tr>
<td>Life cycle cost</td>
<td>High</td>
<td>Average</td>
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</tr>
<tr>
<td>Opposition concerning cultural heritage</td>
<td>Small</td>
<td>Moderately small</td>
<td>Large</td>
</tr>
</tbody>
</table>

* Since construction methods or techniques are not identified, evaluations of these elements may vary.

6 **Consideration of life cycle cost (LCC) for the renovation and long-term maintenance costs of the renovation process**

In the renovation process, the above three options must be evaluated. If the goal 3)—(reduce operation and maintenance costs by providing sustainable and energy efficient facilities) is a critical point for UNOG, then the LCC consideration must be included in the entire renovation process. Goal 6) will produce the least results and worst costs to the LCC. UNOG might wish to consider this LCC element in the renovation process when selecting the design of the renovation from the above three options.

7 **Consideration of phased development**

The renovation of PdN requires a phased approach. For the renovation to start, there must be a swing space (defined in SHP) for the relocation of UN offices and conference facilities while sections of PdN are under renovation.

In the first phase, it is important to determine the location of the swing space building. The Feuillantines property seems an ideal location for this purpose. While the renovation plan is finalized, the construction of the swing space can start. Then, by the time the renovation plan is finalized and the action is about to start, the swing space will be available. The downside of this approach is that the swing space cannot be converted into a lodging facility.
to generate revenue for the renovation until all renovation work is completed.

Other swing space locations could be within the PdN properties as identified in the previous chapter. If one of the PdN locations is chosen for the swing space, the construction of the building is the first phase of the renovation project. With this approach, the swing space building can be converted to housing units to be used by diplomats and other staff of the Member States after the completion of the renovation. Meanwhile, if this is the option, the Feuillantines property can be used to develop the lodging facilities so that from an early stage, revenues can be generated to offset the renovation cost.

Which sections of the PdN offices and conference facilities need to be renovated can be determined by a more thorough feasibility study.
IV  PPP method options for renovation

This chapter compares the applicability and risk allocation in various PPP methods that could be used for the renovation of PdN. Greater risk transfer (greater scope of services) is the preferred option for improving efficiency and optimizing value for money over the life cycle.

1  Assumptions for the utilization of PPP delivery models

Ownership of the property and buildings

The United Nations Office at Geneva is located in the Ariana Site (approximately 24.9 hectares) under the Agreement on the Ariana Site (Ariana Agreement) signed by the United Nations and the Swiss Confederation in 1946. UNOG also owns adjoining plots of land (approximately 18 hectares). The Ariana Agreement guarantees the United Nations the transferrable and exclusive right of use of the existing buildings and non-transferrable right of use on the rest of the site. Although it is necessary to further explore any other restrictions which may apply on this site, it is assumed that UNOG may be able to transfer its real property rights to other entities even within the Ariana Site.

2  Possible PPP delivery models

1) Definition of PPP models and their applicability in the project

There are many PPP models commonly used around the world. These are shaped by the laws of the country or the nature of public entities. Some of the widely used models are described in table II.

Table I below shows possible services which can be delivered through a PPP.

<table>
<thead>
<tr>
<th>Phase and category</th>
<th>Services</th>
<th>Payment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design and construction</td>
<td>Preliminary study</td>
<td>Monthly payment during construction period</td>
</tr>
<tr>
<td></td>
<td>Design</td>
<td>Long-term repayment or deferred payment</td>
</tr>
<tr>
<td></td>
<td>Construction engineering</td>
<td></td>
</tr>
<tr>
<td>Maintenance and facility management</td>
<td>Building maintenance</td>
<td>Commission payment</td>
</tr>
<tr>
<td></td>
<td>Facility maintenance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equipment management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exterior maintenance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Security service</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cleaning and sanitation</td>
<td></td>
</tr>
<tr>
<td>Operation</td>
<td>Travel services</td>
<td>Commission payment</td>
</tr>
<tr>
<td></td>
<td>Library management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Printing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Energy management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receptions and guides</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cafeteria, kiosk, etc.</td>
<td>Independent private business</td>
</tr>
<tr>
<td></td>
<td>Catering service</td>
<td>through outsourcing or renting spaces</td>
</tr>
</tbody>
</table>

Table I
Table II: Comparison of PPP models

(D: Design; B: Build*; R: Rehabilitate; M: Maintenance; O: Operate; F: Finance)

<table>
<thead>
<tr>
<th>Options</th>
<th>Scope of works</th>
</tr>
</thead>
</table>
| i) Traditional | • UN raises funds for the renovation and selects a private entity for design and construction  
• UN pays renovation costs during the construction period  
• After the renovation is finished, the UN performs operation and maintenance (some services may be outsourced) |
| ii) DBM | • UN raises funds for the renovation and selects a private entity for design, construction and maintenance as one contract  
• UN pays renovation costs during the construction and maintenance period  
• UN pays maintenance costs on periodical basis  
• UN performs operations as is currently done (some services may be outsourced)  
• UN owns the real property rights |
| iii) DBMO | • UN raises funds for the renovation and selects a private entity for design, construction, maintenance and operation as one contract  
• UN pays renovation costs during the construction, operation and maintenance period  
• UN pays operation and maintenance costs on an annual basis  
• UN owns the real property rights |
| iv) DBFM | • Private sector prepares financing for capital expenditure  
• UN selects a private entity for design, construction and maintenance as one contract  
• UN pays renovation costs during the construction and maintenance period  
• UN pays maintenance costs on an annual basis  
• UN owns the real property rights |
| v) DBFMO | • Private sector prepares financing for capital expenditure  
• UN selects a private entity for design, construction, operation and maintenance as one contract  
• UN pays renovation costs during the construction and maintenance period  
• UN pays operation and maintenance costs on an annual basis  
• UN owns the real property rights |
| vi) Lease | • UN transfers real property rights to a private entity  
• Private sector prepares financing for capital expenditure of the project and for the property rights  
• Private entity performs renovation, operation and maintenance as an owner of the property  
• UN pays renovation costs and operation and maintenance costs as lease payments |
| vii) Concession** | • UN gives concession contract to a private entity  
• Private sector prepares financing for capital expenditure of the project and for the concession rights as a one-off payment  
• Private entity performs renovation and maintenance as a concessionaire  
• UN may pay some portion of the renovation costs but usually the concessionaire bears the demand risks |

* “B (Build)” is used in this table, even though this project is an “R (Rehabilitate/renovate)” project.  
** This table should be modified according to the United Nations procurement rules, general conditions of contracts, accounting, and taxation in relation to the private sectors.  
*** In principle, concessions are used only on projects paid by user fees. There are almost no user fees associated with this renovation. Thus, concession is excluded from the following comparisons.
2) **Comparison of applicable PPP models**

**a. PPP models**

In this project there are only limited services which can be given over to the private entity. Thus, it is impossible for the private entity to depend on user fees to pay for its operation and maintenance expenditures.

**b. Comprehensive outsourcing of operation and maintenance**

Hard maintenance and energy costs are included in the cost estimate for SHP. These do not include some of the services that can be provided in the private market (e.g. some of the administrative, auxiliary services and conference operation services.

In 2012, UNOG purchased more than USD 70 million in services from private sector parties. Goods purchased by UNOG from the private sector alternate between USD 10 million and USD 20 million every two years. Some of these goods and service purchased can be included in the PPP models. It may also reduce the cost because of the economy of scale and improved efficiency. There are many successful cases of administrative outsourcing. [See Appendix 2]

While the SHP has a huge impact on reducing annual O&M costs of UNOG (up to CHF 10 million annually for the rental of office space for staff housed outside the Palais) by simply consolidating the UN organizations scattered around Geneva, further management efficiency can be achieved by outsourcing. In addition, the United Nations is implementing *Umoja*, a global initiative for administrative reform in the United Nations system on a pilot basis. Though it will take at least two more years before this effort is brought into UNOG (the programme will be deployed to UNOG in 2015), such factors should also be taken into consideration when deciding the scope of services and the space management.
## Risk allocations

The following are typical risk allocations of each method:

<table>
<thead>
<tr>
<th>Method</th>
<th>Traditional</th>
<th>DBM</th>
<th>DBMO</th>
<th>DBFM</th>
<th>DBFMO</th>
<th>Lease</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNOG</td>
<td>PRIVATE</td>
<td>UNOG</td>
<td>PRIVATE</td>
<td>UNOG</td>
<td>PRIVATE</td>
<td>UNOG</td>
</tr>
</tbody>
</table>

### Political
- Decision making, agreements (Member States, headquarters)
- Change of rules and procedures within the UN system
- Swiss regulations (zoning, building codes, taxation etc.)
- Operation
- Licensing, approval and authorization
- Maintenance
- **Unspecified**

### Economic
- Exchange (foreign currency)
- Inflation
- **Unspecified**
- **Unspecified**
- **Unspecified**

### Environmental
- Study, design, build
- Maintenance
- Operation
- **Unspecified**
- **Unspecified**
- Land (pollution, buried structures, subsidence)
- Asbestos and other hazardous materials
- **Unspecified**
- **Unspecified**
- **Unspecified**
- **Unspecified**

### Neighborhoods (residents, industry)
- **Unspecified**
- **Unspecified**
- **Unspecified**
- **Unspecified**
- **Unspecified**
- **Unspecified**
- **Unspecified**
- **Unspecified**

### Planning
- Obtaining information (consult, related plans, related information, procedures, costs)
- **Unspecified**
- **Unspecified**
- **Unspecified**

### Study, design, build
- Study/investigation (error, scope of study)
- Design (error, change of design, change of design)
- Delay of schedule
- Change of cost
- Construction delivery and technology
- Accidents
- **Unspecified**
- **Unspecified**

### Implementation
- Efficiency of facilities
- Repair
- Accidents and injuries
- Change in service and other costs
- Change in utility costs
- **Unspecified**
- **Unspecified**

### Maintenance
- Inadequate performance
- Compensation for damage, injury, etc
- Usage conditions, rights, servitude
- Damage on facilities, equipments and facilities
- Bankruptcy
- **Unspecified**
- **Unspecified**

### Operation
- Demand
- Market competition
- Accidents, injuries, and damages
- **Unspecified**
- **Unspecified**
- Compensation for damage, injury, etc
- Bankruptcy
- **Unspecified**
- **Unspecified**

### Others
- Force Majeure (disaster, terror etc.)
- **Unspecified**
- **Unspecified**

*The risk can be transferred only on self-sustaining (user-fee) services

*Can be shared by contractual agreement

*If the inflation exceeds agreed rate, public also shares the risk

*If the damage is caused by UNOG

*If the damage is caused by UNOG cannot clarify the conditions in the bid documents

*If the damage is caused by INOG

*If the damage is caused by UNOG cannot clarify the conditions in the bid documents
## UN Merits and Demerits and Financial Obligations

<table>
<thead>
<tr>
<th></th>
<th>Merits</th>
<th>Demerits</th>
<th>Evaluation</th>
</tr>
</thead>
</table>
| **Traditional** | i. Faster and cheaper procurement because it uses existing procurement system  
ii. UN staff are familiar with the system  
iii. Less “soft cost” for comparison of methods and studies  
iv. Member States are familiar with the system | i. Short-term heavy financial burden on Member States  
ii. Difficult to optimize flow plan and O&M efficiency because design and O&M are separately outsourced  
iii. Life cycle cost may not be reduced because maintenance services are procured separately  
iv. UNOG bears the risks associated with O&M | • Unless UNOG finds a decent financial source, this will not solve the financing issue that UNOG has encountered  
• Difficult to reduce the O&M costs |
| **DBM**        | i. Better flow plan and improved maintenance (energy efficiency) because maintenance efficiency is optimized in design  
ii. The private entity can bring their expertise and innovation and can reduce the maintenance costs  
iii. UNOG can transfer cost-overrun risk to the private entity | i. Short-term heavy financial burden on Member States  
ii. Corporate tax may be imposed on the reserves for future repairs and replacement cost and thus unitary payments increase accordingly  
iii. UNOG bears the risks associated with O&M | • Unless UNOG finds a decent financial source, this will not solve the financing issue that UNOG has encountered  
• Difficult to optimize the energy efficiency and reduce the O&M costs |
| **DBMO**       | In addition to the merits in DBM:  
i. Better O&M efficiency because O&M optimization is fully considered from the earlier phase  
ii. Better energy management and human resource management can be achieved  
iii. Improved service and efficiency in O&M  
iv. Some risks in operation such as change of utility cost can be transferred to private | i. Short-term heavy financial burden on Member States  
ii. Corporate tax may be imposed on the reserves for future repairs and replacement cost and thus unitary payments increase accordingly  
iii. UNOG bears the risks associated with O&M  
iv. O&M methods after the contract period should be sought out | • Unless UNOG finds a decent financial source, this will not solve the financing issue that UNOG has encountered  
• Comprehensive contract throughout the project life cycle may reduce project life cycle cost and improve the service |
| **DBFM**       | In addition to the merits in DBM, DBMO:  
i. UN does not need to prepare short-term heavy finance  
ii. Capital expenditures can be deferred and leveled for long term | In addition to the demerits in DBMO:  
i. Capital cost may be more expensive in private finance than UN financing  
ii. Corporate tax may be imposed on the reserves for future repairs and replacement cost and thus unitary payment increase accordingly  
iii. UNOG should guarantee the future payments (long-term financial obligation) | • Operational costs may not be reduced and energy management may not be optimized  
• Comprehensive contract throughout the project life cycle may reduce project life cycle cost and improve the service  
• If some revenue generating programs are bundled, UN may be able to reduce the obligation for capital or operational expenditure |
| **DBFMO**      | In addition to the merits in DBMO, DBFM:  
i. Risks associated with owning buildings (e.g. force majeure etc) can be transferred to the private entity  
ii. Repair risks can be transferred to the private entity  
iii. Less complexity in contracting | | |
| **Lease**      | In addition to the merits in DBMO, DBFM, DBFMO:  
i. Property taxes might be imposed  
ii. Bankruptcy risk may be higher because no SPV is established  
iii. Lease may increase | | • DBMO can be contracted out in comparatively simple form  
• Total commission may be higher due to property taxes and profit of lease agency |

In principle, energy and management efficiency are improved in a comprehensive contract because the private entity tries to optimize the efficiency through design and planning. In addition, some of the operational and administrative work, e.g. translation, reception, delivery, etc, can also be purchased in the private market. The private entity can bring in innovation, efficient resource management, shared services and management efficiency. These will help reduce the LCC. In this regard, the DBFM model could be of benefit.

On the other hand, there will be resistance if some administrative or operational works currently provided in-house, are outsourced. This study lacks data and information on these functions (scope, tasks, scale, workforce, etc), requiring a further evaluation through a feasibility study, if this option is to be pursued. This would identify the possibility in terms of improved management efficiency and cost reduction, as well as issues associated with the integrity of employment and commitment to UN staff.

Even if the private sector can provide funding for the capital expenditure, the UN is obliged to pay back the capital expenditure and maintenance costs. Under the lease contract, unless the private company makes a one-off payment to compensate for the transfer of the property rights, the UN could pay an expensive lease, which would consist of the equivalent to the capital expenditure, O&M expenditure, and profits of the lease company. These PPP options can be used to improve efficiency and thus reduce the cost through private innovation and resource management, though it cannot solve the biggest issue, i.e. the financial burden on the Member States. In addition, these financing options may be more complicated than the normal UN financing method, because it is required to have the approval of the General Assembly.

Therefore, if the United Nations is eager to reduce the financial burden of Member States, it is recommended that the UN consider some revenue generating activities through PPP.

3) Project monitoring, evaluation and compensation

In order to achieve objectives through a PPP, good governance dictates that the UN should periodically evaluate and monitor the activities and project outcomes. Often, the results of the evaluation and monitoring are tied to the private entity's revenue/compensation mechanism, so that the private sector puts in more effort to improve the service and thus its revenue. Evaluation and monitoring are done through a combination of many methods: objective output evaluation (e.g. number of users, usage rate, availability, etc), periodic reports (daily, monthly, annually, etc), self-evaluation, third-party evaluation, and 'on-the-spot' evaluation.

UNOG should decide which outputs or indexes are the most important and how often they should be evaluated and monitored.

It should be noted that this kind of mechanism is used to maintain the level of services
above the desired level, but not to punish the private sector by reducing the payment.

a. **Self-supporting revenue stream**

If the demand decreases, the revenue of the private sector decreases as well. Once demand risk is transferred to the private sector, they should make accurate estimates of the demand, avoid overinvestment and make efforts to increase the demand. This revenue generation function is only applicable to the cafeteria or some other catering services in the PdN project. However, it can also be applied to the revenue generation project mentioned later on.

b. **Availability fee payment**

UNOG pays the private sector based on the availability of the service. In this scheme, demand risk remains with UNOG, though almost no demand risk is concerned in the renovation of PdN. It will provide discipline to the private sector’s activities by setting clear conditions for payment.

c. **Incentives and penalties**

Incentives and penalties are given based on the indexes set by the availability OR performance (do not double count). If the private sector cannot meet or retain a specified level of aspiration, there would be penalties. First, they are given a written notice, and if they fail again to reach the required level, their payment will be decreased. If the private sector improves the service far better than the required level and if it has met the public’s needs, they will be rewarded. This kind of mechanism encourages performance, innovation and efficiency by the private sector.
Developing the evaluation, monitoring, and compensation mechanism
V  Funding options for the renovation project

This chapter explores possible funding options to be used for either traditional procurement or for PPP. All options will be subject to approval by the GA.

1  Funding from the Member States

The annual United Nations operation budget is paid for by the Member States. For the Capital Master Plan in New York, a special fund was established and the budget assessed to each Member States as a regular operation budget.

The payment of the estimated CHF 618 million (renovation cost of PdN) can be paid by a similar method as part of the annual budget. However, the cost of the NY Headquarters renovation almost tripled from project conception to asset delivery and the UN must consider a better way to pay for the renovation of the PdN. In recent years, due to the global financial crisis, Member States are seriously considering whether they can contribute to the operations of the United Nations. The NY renovation was an additional contribution over and above the annual contribution of the Member States. It may be very difficult for the Member States to consider additional contributions for the renovation of the PdN.

If the UN decides to go ahead with PPP for renovation and enter into a contract for 25-30 years operation and maintenance (O&M), the capital and the O&M cost can be paid over the period of the contract maturity on a deferred basis, through a single annual payment, called the Unitary Charge.

2  Funding from other UN sources

On some occasions, the United Nations seeks other sources of funding from the Member States and/or other organizations to sponsor special project funding such as special buildings, special audio equipment, publications and others. For example, Spain donated the funds for the renovation of a large conference room, the Human Rights and Alliance of Civilizations

Room at the PdN. Other countries have opted to pay for the renovation of other conference rooms and facilities. However, the renovation of the PdN is estimated to be over CHF 600 million and it will be very difficult for many Member States or organizations to contribute to such an extent given the particular financial circumstances.

3 Long-term borrowing or issuing bonds by the UN

The General Assembly has approved borrowings on a few occasions, but these are only from Government sources. In these cases, the UN can borrow at no interest. These borrowings can be repaid by the assessed contributions of the Member States.

However, since the SHP is very large (CHF 618 million) and many Member States, especially advanced countries, have been struggling with severe domestic financial conditions, it is not so easy to resort to assessed contributions for all the necessary funding. This may cause lengthy discussions at the GA and its subsidiary bodies, and some countries may oppose their assessed contribution in light of the experience of the Capital Master Plan in New York.

In New York, the State of New York established a public benefit organization, United Nations Development Corporation (UNDC), in order to develop some premises for the UN. UNDC has functions similar to the Foundation des Immeubles pour les Organisations Internationales (FIPOI) (building foundation for international organizations). It has the authority to issue public bonds. UNDC has developed several buildings by issuing public bonds.

4 Sale of a portion of UN properties and other assets

The UN uses a large portion (24.8 ha) of the PdN under the Ariana Agreement with the Swiss Confederation. Under the Ariana Agreement, the UN holds transferrable and exclusive right of use of the existing buildings and surrounding area. It also holds non-transferrable exclusive right of use for the other areas. In addition, the UN also owns several plots of land within the PdN. The total area of the land it owns adds up to more than 20 ha. The UN may be able to sell these plots of land, although they are within the security fence and include buildings used for UN purposes (e.g. Director General's residence, training facilities, and other villas).

The UN also owns several properties outside the PdN. One is located near the Palais and the tram station. The other small plot is on the lake shore, holding a restaurant operated by the UN Beach Club. The UN can sell these plots or the construction rights associated with these plots. The UN is now considering selling construction rights for the development of La Tour des Feuillantines, to be undertaken in collaboration with the Canton of Geneva.

5 Funding from the host State

Another way to finance the project is through funding from the host country. The Swiss Confederation can provide a long-term loan or subsidies to international organizations according to the Host State Act (HSA). The 50-year interest-free building loan can be provided either directly from the Swiss Confederation or through the FIPOI. However, according to Swiss Ambassador, Mr. Pérez, the FIPOI can only provide loans for new
construction projects, not for renovation projects under the current regulation. In order to provide loans to the renovation project of the PdN, the current regulation will have to be amended. If the regulation is amended, Switzerland may provide a loan for the renovation of the PdN below the market rate. Even if this arrangement is achieved, the Member States will have to secure a long-term financial obligation to repay the debt. Thus, it is important to seek ways to reduce the overall amount of renovation and O&M costs.

Under HSA, subsidies can also be provided to international organizations. The subsidies can be in two forms: a one-off subsidy up to a maximum of CHF 3 million; or recurring subsidies, which provide an annual amount of CHF 2 million for a maximum of four years in succession. Besides the financial subsidies, the country can also provide in-kind contributions such as personnel, premises or equipment.

The Swiss have generously provided CHF 50 million to UNOG for the improvement of energy efficiency of the PdN. In this project, UNOG subcontracted FIPOI to act as an implementing organization. However, there may be some limitations in using FIPOI for the renovation of the PdN. With FIPOI implementing the project, the organization may procure in accordance with the procedure by Société Suisse des Ingénieurs et Architectes (SIA) (Swiss Association of Engineers and Architects), “procédures et formes d'attribution des mandats de prestations en architecture” (procedures for awarding contracts for architectural services). The advantage of using FIPOI to implement the project is its simplified and quick procurement. However, the condition may act in such a way as to give preference to Swiss companies. For a large project like the PdN renovation, the United Nations budgetary body Fifth Committee or ACABQ will ensure that the tender is open to all in the international market. This may cause some further lengthy discussions among the Member States in New York.

6 Loans from private banks

As stated above, the GA has so far approved borrowing only from governmental sources. In addition, the UN cannot provide mortgages or security for the borrowing, which may result in higher interest rates. Thus, it is necessary to discuss with financial institutions the possibility of providing unsecured loans to the UN. Since there are top level financial institutions across Switzerland, this is clearly an option. If the host State or some other Member States can provide guarantees, this option could become far more realistic.

The World Intellectual Property Organization (WIPO) borrowed CHF 114 million from two local banks in Switzerland: Cantonal Bank of Geneva and Cantonal Bank of Vaudoise in 2008. The money was used for the construction of a new administration building and a new conference hall. The loan is unsecured, with a 15-year fixed interest rate (Swiss Franc swap LIBOR Rate and margin of 0.3-0.7%). WIPO made another arrangement to borrow an additional CHF 40 million from these two banks in 2010 with the same conditions.
7 Revenue generating PPP options

1) An outline of various project options

To pay for the renovation of the PdN, the UN might consider certain development projects within the PdN property to generate revenue. The private sector is invited to participate in the projects in order to assume the revenue risk. Certain projects could provide accommodation facilities and housing to be used by the staff and guests of the Member States and the United Nations but not for use by the general public.

2) Real estate project options

Lodging facilities: hotels and service apartments for the guests of the United Nations and the Member States and possibly other international organizations.

| Scheme | UN provides the lodging operation right to private sector and private sector operates the lodging facilities
| Scheme | UN and the Member States encourage the use of the lodging facilities by their delegates in order to increase the occupancy rate of the lodging facility
| Scheme | Private operator pays an agreed fee to UN from the proceeds of the lodging operation. UN then uses this fee to pay a portion of the renovation costs of PdN
| Scheme | UN can pay a portion of the renovation costs from the private operation within PdN
| Scheme | The operation is managed by the private sector and the UN does not have to investor or hire any staff to run the operation
| Scheme | UN and Member States will help but the business risk is on the private side. Revenues and operation risk is taken by private sector
| Scheme | UN is relatively risk free
| Scheme | Methods of the UN and Member State enforcement of lodging facilities would also be an issue of demand risk if the UN closes in Geneva and moves to another location

| Housing supply for the staff of the Member States and UN |
| Scheme | UNOG agrees with each of the Member States the purchase of housing to be developed by UNOG. The number of housing units will be determined by the agreement. Each state will advance a portion of the cost of the units to UNOG, which UNOG can use to pay the private company. Private company builds the housing units. Upon completion, each Member State will take possession of the units and pay the final tranche. UNOG pays the private company and keeps the profit, which is used to pay for the renovation of the PdN
| Scheme | UNOG charges maintenance costs to the owners of the housing. A private company will be paid by UNOG to maintain the development and upkeep of the property
| Scheme | UNOG may allocate and develop some housing units for staff. UNOG would ask a private company to build the housing units
| Scheme | Before construction, UNOG would have the contracts signed by the future owners of the housing. The contract price could be double the construction cost but far less than the market price. The difference goes toward the payment of the renovation cost of the PdN
| Scheme | If and when UNOG agrees with the Member States on the housing project, UNOG can pay for a substantial portion of the renovation from the sale of the housing at PdN
| Scheme | Development will be done by the private sector. Thus, UNOG bears no risk in the financing and maintenance costs
| Scheme | UNOG risk is minimized by the contract between UNOG and the Member States. Since the private entity cannot sell or let these houses to private individuals disconnected from the UN and international organizations, UNOG should share demand risks at the level both parties have agreed upon.
| Scheme | Resale of the housing by Member States

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### 3) Model risk allocation on the revenue generation project

<table>
<thead>
<tr>
<th>Category</th>
<th>Hotels</th>
<th>Condos</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Political</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision making, agreements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Member states, headquarter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swiss regulations (zoning,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>building codes, taxation etc.)</td>
<td></td>
<td></td>
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<tr>
<td>Change of rules and procedures</td>
<td></td>
<td></td>
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<tr>
<td>within the UN system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Licensing, approval</td>
<td></td>
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<tr>
<td>and authorization</td>
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<tr>
<td>Study, design, build</td>
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<tr>
<td>Maintenance</td>
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</tr>
<tr>
<td>Operation</td>
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<tr>
<td>Change of taxation</td>
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<tr>
<td>Study, design, build</td>
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<td>Maintenance</td>
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<td>Operation</td>
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<tr>
<td>Economic</td>
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<tr>
<td>Exchange (foreign currency)</td>
<td></td>
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<tr>
<td>Inflation</td>
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<tr>
<td>Financing (lack of funds,</td>
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<tr>
<td>raise of interest rate)</td>
<td></td>
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<tr>
<td>Environmental</td>
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<tr>
<td>impacts (pollution, noise,</td>
<td></td>
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<tr>
<td>sustainability)</td>
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<td></td>
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<tr>
<td>Land (pollution, buried structures,</td>
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<tr>
<td>subsidence)</td>
<td></td>
<td></td>
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<tr>
<td>Asbestos and other hazardous</td>
<td></td>
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<tr>
<td>materials</td>
<td></td>
<td></td>
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<tr>
<td>Neighborhoods (residents,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>industry)</td>
<td></td>
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<tr>
<td>Prior to the implementation</td>
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<tr>
<td>During the implementation</td>
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<tr>
<td>Planning</td>
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<td></td>
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<tr>
<td>Obtaining information (Swiss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>law, other plans, related</td>
<td></td>
<td></td>
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<tr>
<td>information, procedures, costs)</td>
<td></td>
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<tr>
<td>Plan change, suspension,</td>
<td></td>
<td></td>
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<tr>
<td>cancellation</td>
<td></td>
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<tr>
<td>Inadequate bid documents, errors</td>
<td></td>
<td></td>
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<tr>
<td>and etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procurement</td>
<td></td>
<td></td>
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<tr>
<td>Proposal (cost of defeat,</td>
<td></td>
<td></td>
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<tr>
<td>intellectual property)</td>
<td></td>
<td></td>
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<tr>
<td>Study (error, scope of study)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design (error, change of design,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>scope of design)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delay of schedule</td>
<td></td>
<td></td>
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<tr>
<td>Change of cost</td>
<td></td>
<td></td>
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<tr>
<td>Construction deliverability and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>technology</td>
<td></td>
<td></td>
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<tr>
<td>Accidents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inadequate performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation for damage, injury,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usage conditions, rights, servitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficiency of facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repair</td>
<td></td>
<td></td>
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<tr>
<td>Accidents and injuries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in service and other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in utility costs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*UNOG bears the risk if UNOG changes the scope of study*

*UNOG bears the risk if the damage is caused by UNOG*

*UNOG bears the risk if UNOG cannot clarify conditions in the bid documents*
<table>
<thead>
<tr>
<th>Operation</th>
<th>Inadequate performance</th>
<th>Compensation for damage, injury, etc</th>
<th>Bankruptcy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>•</td>
<td>▲</td>
<td>▲</td>
</tr>
<tr>
<td>Market competition</td>
<td>•</td>
<td>▲</td>
<td>▲</td>
</tr>
<tr>
<td>Accidents, injuries, and damages</td>
<td>•</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inadequate performance</td>
<td>•</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation for damage, injury, etc</td>
<td>•</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bankruptcy</td>
<td>•</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change of scope</td>
<td>•</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer of rights after the contract period</td>
<td>•</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Others

| Force majeure (disaster, terror etc.) | • | • |

*UNOG bears the risk if the damage is caused by UNOG

*UNOG shares the risks for residence because it needs to agree with Member States on purchase
VI  The project market study and demand analysis for Geneva

1 Populations

- Geneva population 195,000
- Geneva Canton population 470,000
- Geneva and nearby France 1.2 million
- Greater Geneva – Bern Area 2.9 million

2 United Nations

- The United Nations has 193 Member States and Permanent Missions to the UN which include approximately 9,000 diplomats and staff stationed around Geneva.
- The UN has approximately 5,000 staff in Geneva.
- UNOG receives approximately 100,000 guests and visitors annually and the average stay is 3 days.

3 Hotel/lodging market in Geneva

International Geneva has a very strong hotel demand. In the Canton of Geneva, there are 96 hotels (about 9,034 rooms with 14,798 beds), which accommodate 2,800,000 visitors. Net occupancy rate for rooms is 65.1 per cent. The largest tourist attraction is the Geneva Motor Show, which attracts nearly 700,000 visitors. The United Nations hosts/services 10,000 conferences and 100,000 visits to the PdN.

One of the largest challenges for the Permanent Missions in Geneva is to find accommodation for their government delegates. Many affirmed that during peak times, e.g. during the Motor Show period or large international organization annual meetings, the price of a room can go up to as much as CHF 900 per night. Thus, they have to often accommodate the delegation in Lausanne, and other nearby towns and cities.

One Member State declared that they receive an average of 5,000 delegates annually and the average stay is 10 days. They have affirmed that they could commit to ordering 50,000 room nights per year, if the UN were to develop hotel(s).

■ Hotel prices (in CHF)

<table>
<thead>
<tr>
<th>City</th>
<th>Hotel (5-stars)</th>
<th>Hotel (3-stars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geneva</td>
<td>665</td>
<td>290</td>
</tr>
</tbody>
</table>

Price for a double room with bathtub and WC, including breakfast for two people and service, in a first-class international hotel or a good mid-range hotel.
4 Housing market in Geneva

1) Houses and condos

According to *Loi sur les démolitions, transformations et rénобations de maisoпs d’habitation* (LDTR), the Canton of Geneva requires renovation of old houses as there is little property for new housing in the city, keeping the housing market relatively flat.

### Housing prices (in CHF)

<table>
<thead>
<tr>
<th>City</th>
<th>Normal local purchase price per m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geneva</td>
<td>11,052</td>
</tr>
</tbody>
</table>

The figures given are merely tentative values for average purchase prices per square meter. The purchase prices are based on apartments built after 1980 of a size typical for the city, with an average comfort customary in the locality and near the city center.


2) Apartments

Apartment rents are very high in Geneva. In recent years, the average turnover rate of housing has remained around 0.2 per cent. In one study, it was reported that it will be necessary to construct 4,000 houses per year to keep the housing price constant, while actual average new construction per annum in 2000-2011 was only about 1,500 units.

As an example, Toyo University rents a one-bedroom apartment in Geneva and pays CHF 3,200 monthly. Tokyo is known for its high cost of living in world rankings yet a similar apartment can be rented in Tokyo for less than half of this price.

According to our interviews, this situation has caused problems for many Permanent Missions in Geneva, especially the ones whose diplomats are looking for housing on their own. Although this situation has became slightly better since some 9,000 workers were laid off in the Geneva region in 2012 (including Merck Serono), one permanent mission had to house their incoming diplomats and staff in a city in France for at least 2-3 weeks until they could find their own housing.
5 Office market in Geneva

The price in Geneva has been increasing rapidly in recent years. According to one study in Geneva, if the 2005 price was 100 baseline, the average prices in Switzerland have not moved very much, but in Geneva, the price has gone up by 140-150 per cent of the 2005 baseline. This percentage increase is much higher than in other cities such as Lausanne, Nyon and Zurich.

In the Sécheron area near the PdN, 30,000 m² of office space is being developed.

Office prices (in CHF)

<table>
<thead>
<tr>
<th>Market</th>
<th>Country</th>
<th>Unit</th>
<th>Time period</th>
<th>Class A net rent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geneva</td>
<td>Switzerland</td>
<td>m²</td>
<td>Month</td>
<td>55</td>
</tr>
</tbody>
</table>


6 Other possibilities in Geneva

Based on the interviews conducted with several Missions, there is a strong demand for day care service (Crèches) in the area. Some Member States asked for grocery stores, weekend shopping, restaurants, etc. The proposed plan for a development being considered by the Canton of Geneva and UNOG, “La tour des Feuillantines,” could
include such functions as service apartments/flats, business center, data center, international school, child care facility, conference center, gym/fitness center, visitor center and others. These are services which seem to be required by the UN and other organizations in the area.
VII  Possible funding and PPP options for the Palais des Nations

This chapter identifies the possibilities for revenue generation through the utilization of UNOG’s underutilized properties. Though these numbers should be carefully observed and need to accommodate the local market and the conditions set by the United Nations and Member States, there are possibilities to generate enough profit to cover a substantial percentage of the renovation cost.

1  Utilization of underutilized properties

The report has described how new types of PPP models could use underutilized UN properties to allow private development to generate revenues to pay for the needed public facilities renovation, new construction and other items.

Based on our research, the UN has several properties with a great potential for development: 1) Villa des Feuillantines (just outside of the main gate of PdN), 2) UN properties within PdN (northern part of PdN, to the left side of the main entrance,
eastern part of PdN, etc.), and 3) the UN beach property.

These are prime site properties in Geneva, which would allow the project developments described in this report to generate considerable revenues to pay for the renovation of PdN.

2 Formula to generate the funds for the renovation

The estimated renovation cost for PdN is CHF 618 million based on the SHP data. The PPP option attempts to generate enough funds from the development of the underutilized property of UNOG, approximately 45 hectares, to minimize the financial contribution by the UN for the renovation. The following is a formula for the UN to consider in undertaking such a PPP option:

In chapter VI the hotel and housing markets in Geneva were identified.

All country missions of the Member States are paying significantly high prices for their diplomats and staff to maintain their annual operations. If UNOG can offer an alternative for each Mission to reduce its housing expenses, the feedback obtained from interviews with Member States was that they may agree to support such a project. If this option allows a smaller contribution toward the renovation of the PdN, Member States might indeed welcome such a development. This option must of course be carefully examined, but it has merit and if acceptable to the Member States, the following formula could be considered.

To allow the private sectors to develop its land, the UN should require the private sector to pay development rights (upfront). The amount of this fee may be included in the private entity’s proposal for UNOG’s evaluation. This upfront payment could be used straightforward for the renovation.

3 Hotel operation at the Palais des Nations

1) Possible business scheme

![Diagram of hotel operation at the Palais des Nations]

- **UNOG**
  - Development rights
  - Fee for development rights
- **[Private]**
  - Hotel operator or SPC
  - Design, Build, Maintenance, and Operation
- **Visitors**
  - Accommodation
  - Room charges
- **Recommendations and arrangements with Member States**
2) **Business profitability**

UNOG receives 100,000 visitors annually and their average stay in Geneva is for two to three days. If UNOG offers their staff and the visiting delegations of Member States the option of staying at its own hotel, the hotel could have a high occupancy rate.

<table>
<thead>
<tr>
<th>(A) Income</th>
<th>(B) Costs and profits of private room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>51 million</td>
</tr>
<tr>
<td>Annual room sales</td>
<td>34 million</td>
</tr>
<tr>
<td>50% revenue 3/2 single/triple</td>
<td></td>
</tr>
<tr>
<td>Average charge for night</td>
<td>207/CHF</td>
</tr>
<tr>
<td>Occupancy rate</td>
<td>85%</td>
</tr>
<tr>
<td>Days of operation</td>
<td>360 days</td>
</tr>
<tr>
<td>Food &amp; beverage sales</td>
<td>17 million</td>
</tr>
<tr>
<td>Estimated 25% of room sales</td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td></td>
</tr>
<tr>
<td>Construction cost</td>
<td>62.5 million</td>
</tr>
<tr>
<td>Total floor space 25,000 m²</td>
<td>8/CHF, use for restaurants, banquet facilities, service and utility space</td>
</tr>
<tr>
<td>Operational cost</td>
<td>30.6 million</td>
</tr>
<tr>
<td>Debt payment</td>
<td>5-7 million</td>
</tr>
<tr>
<td>Estimated as 10% of total sales</td>
<td></td>
</tr>
<tr>
<td>Expected return</td>
<td>5-7 million</td>
</tr>
<tr>
<td>Estimated as 10% of investment</td>
<td></td>
</tr>
</tbody>
</table>

\[
\text{Margin} = 16.6 - 18.6 \text{ million/year} = (A) - (B) \\
\text{This amount is gained by the private sector to offset the upfront payment} \\
\text{In 10 years} \quad 160-170 \text{ million CHF} \\
\text{In 20 years} \quad 320-340 \text{ million CHF}
\]

3) **Establishment of a central reservation and conference coordination centre**

We have found that there is very limited coordination between the UN, the Member States, the international organizations such as ILO, WHO, WTO, etc, as well as between the Member States with the United Nations on conference services and planning. This lack of coordination sometimes causes difficulties in seeking hotel availability and could result in conferences being cancelled.

If the UN takes the decision of developing accommodation within or nearby the UN, this study recommends the establishment of a lodging and conference coordination office for the UN, international organizations and local tourism offices. This coordination office can create a central reservation system for lodging that will assure a very high occupancy rate for the operation. Another function of this office would be to coordinate the major events of international organizations and the United Nations. At the same time, the office would work with the local tourism offices to reduce the number of uncoordinated events in Geneva for all parties. The office could publish a monthly event calendar for this purpose.
4 Housing for the Member States

1) Possible business scheme

If UNOG is allowed to use the underutilized property for development, it could develop from several hundred to a maximum of several thousand units of condominiums for the staff of the Member States and the UN in Geneva. This option can be considered because of the high housing prices in Geneva.

This option must be carefully examined by UNOG and the Member States. Since these housing units can only be sold to Member States and UN staff, the demand risk should be hedged by the purchase agreement between the United Nations and the Member States. Thus, the demand risk would be shared.

If this option can be agreed by all involved in the renovation project, it could trigger the entire project to go forward.

2) Business profitability

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This option must be carefully examined by UNOG and the Member States. Since these housing units can only be sold to Member States and UN staff, the demand risk should be hedged by the purchase agreement between the United Nations and the Member States. Thus, the demand risk would be shared.

If this option can be agreed by all involved in the renovation project, it could trigger the entire project to go forward.
3) UN beach property

Our study has found that the beach property on the water front of Lake Leman, which the UN owns, is another underutilized property. If the UN needs to generate revenue toward the renovation of PdN, the following may be possible.

The property is approximately 4,450 m². If the UN kept half of the property for use by UN staff, the other half could be developed to generate revenue for the renovation. For example, a mid-rise condominium could be developed on this prime property. We estimate the building of approximately 40 condominiums averaging 200 m² in size. The land ownership would be kept by the UN but the developed condominiums could be sold first to Member States and second to the general public. Based on our research, such a prime water front development of that size could be sold for CHF 4 to 5 million per unit. The construction costs could be less than CHF 1 million. Each unit could generate 3 to 4 million in profit. The 40 units could produce a profit of CHF 120 to 160 million for the UN.

If the penthouse in this development were to be used by the Director General of UNOG, the present residence within PdN as well as the large track of land below the residence could be used for other developments that could generate considerable revenues.

The above is just an idea and concept developed by the Toyo PPP Team. It demonstrates, however, the potential use of underutilized property for certain developments to create extra revenue for other purposes. Of course all legal and other issues must be examined before revenue generation from such projects could be considered.

5 Create an energy efficient system within PdN

Electric supply is designed for peak use capacity. Thus, during the off peak hours, there is a surplus of energy. At night time the rate is reduced.

Japan practices dynamic pricing for electricity for this purpose. Dynamic pricing means the setting up of a high electric rate for peak hours (set up to 10 times the off peak hour rate) to discourage electric use during peak hours. It sets a reasonable rate for those who use electricity in off peak hours. [See Appendix 4]

When the design of the renovation of PdN is considered, the best energy consumption system must be utilized to reduce the operation and maintenance costs for PdN. As stated in this report, O&M costs of the project will be more expensive than the initial
renovation costs.

If the UN considers the optional developments within its property, this price rate can be obtained, as the lodging and housing units will consume electricity at the moment when the PdN is at off peak hours.

The UN might consider studying generating or co-generating electricity for the PdN for the best energy efficiency for the renovation and future operation of PdN.
VIII Conclusions

1 Renovation

PPP methods and models are an effective way to reduce the cost of construction. PPP models can be used for the renovation of the PdN to reduce costs and PPP methods should also be considered for the O&M after the completion of the renovation. A comprehensive contract, such as DBFM is recommended. This encourages the private entity to efficiently maintain the PdN and reduce the LCC, and to transfer as much risk as possible to the private sector. In order to improve energy efficiency, an O&M contract should be bundled together with the design and construction phases. This will help reduce the LCC of PdN.

DBFM may reduce the cost of renovation, though it does not generate revenue to repay the capital expenditure by the private sector. If the long-term financial commitment by the Member States is the largest issue facing the SHP, the problem remains unsolved.

2 Revenue generation

Our preliminary study has yielded a number of options and solutions to the existing challenges facing a comprehensive PdN renovation. Using a conventional approach is simply not viable in today’s economic climate and with the experiences of other similar types of UN renovation projects, such as the one in New York. The identified PPP options show enough potential to warrant further study towards a solution and a path going forward. In fact, we are confident that the options and ideas generated can be further developed for full implementation of a project within as little as one year. Ultimately, the results will be a complete renovation and transformation of the facilities and infrastructure into a modern, efficient and technology-driven complex that will sustain UNOG’s presence in Geneva and allow it to meet its vision and mission for decades to come.
IX  Future steps with selective options

Although there is potential for applying PPP in the renovation of the PdN, and generating revenue through utilization of underutilized properties, some institutional or organizational adjustments are required within the UN system. One important aspect is the procurement system (see separate UNECE report to UNOG) and another aspect is the organizational structure to strengthen the capacity of UNOG to implement projects.

1  Procurement system

Although many studies and cost estimations have been done for the SHP, there are various ways to execute the renovation. Some private entities, for example, may provide better swing space solutions, better phasing of plans, better technologies or simply better equipment/facilities. Others may propose improved energy efficiency, optimized space management or better VFM throughout the life cycle. In the current UN procurement system, it is difficult to accept this wide variety of proposals and compare them equally or indeed generate a competitive tension (competitive dialogue) between the preferred bidders. There are some limitations on the use of procurements found in the UN’s Procurement Manual and Practitioner’s Guide, although these are mitigated by virtue of Rule 105.16(a) of the United Nations procurement rules, where the Under Secretary General for Management, and/or other authorized United Nations senior staff members (e.g. Controller or Assistant Secretary General, Central Support Services), can set aside some sections of the United Nations procurement rules for PPP arrangements in the context of the renovation of the Palais des Nations, including the use of “Competitive Dialogue”, which can drive competition among short-listed bidders into various rounds so that the Procuring Authority obtains the best possible outcome.

1)  Competitive dialogue

Competitive dialogue procedure is widely used in Europe. When the public authority cannot specify the technology, quantity or other substantial element of the bid, the procuring body “communicates” with bidders competitively in writing or in person in order to achieve the highest value for money (VFM). During this process, the public body expresses its needs and its envisioned scope of services or objectives, so that both parties can narrow down the suitable technologies or services. Bidders can also modify their proposals to best suit the procuring authority’s demand. In the competitive dialogue procedure, the UN and private entities can communicate from early on and improve specifications and proposals
through an exchange, thus optimizing the VFM by accepting innovative proposals from private entities. Since the SHP is a very large and complex project, it is recommended to use the procurement method that can utilize private sector expertise as much as possible. In the latest UN Procurement Manual, the UN and bidders can communicate through an open dialogue, but not once the bid documents are published. This approach is not recommended given the complexity of the SHP.

The current UN procurement system allows Best and Final Offer (BAFO). In this procedure, the qualified bidders are allowed to submit BAFO to increase their chance of winning, if there are situations where: i) clarification from Vendors on their technical proposals is needed, which may affect the commercial proposal; ii) clarification of requirements and/or correction of factual errors in the Solicitation Documents are needed; iii) there are weaknesses in the submissions that are changeable/remediable; and iv) commercial proposals are tied. This will allow UNOG to obtain a better VFM. However, significant changes in specifications, Terms of Reference or Statements of Work are not allowed. In this regard, competitive dialogue procedures or variant bid procedures allow more innovative proposals from bidders. Even though the BAFO procedures cannot utilize private innovation or expertise compared to the competitive dialogue procedures, it helps the UN to allow several highly competitive qualified bidders to render more competitive proposals. One advantage of the BAFO over the competitive dialogue is the faster and less expensive procurement period.

A competitive dialogue approach with a BAFO element included is the preferred procurement methodology for the SHP.

2) **Variant bid/value engineering**

Some other ways to utilize private expertise and innovation are variant bid and value engineering. If UNOG cannot specify the scope of services or decide quantity, or it believes that there are various technical, economical and operational proposals which can better achieve the objectives of the SHP, UNOG should strongly encourage the bidders to submit variant bids. On the other hand, if UNOG focuses only on the reduction of costs or the shortening of the renovation period, the value engineering may be effective.

3) **Incentive contract**

Throughout this study, UNOG has continuously emphasized their intention to
avoid cost overruns and delivery delay. This was also reinforced by many Member States. In this regard, it is recommended to add some incentive measures into the contract to improve the cost, performance or delivery time. Since renovation projects run the risk of latent defects and increased construction costs and delays, a lump sum fixed cost contract may discourage some bidders. In order to motivate bidders to submit competitive proposals and perform as is, incentives (cost and performance) are recommended.

2 Organizational mechanisms

1) Establishment of Dispute Adjudication Board

In large international projects, establishment of a Dispute Adjudication Board (DAB) is often recommended. The DAB is established for smoother communication between the procuring body and the contractor, and assists in avoiding unnecessary disputes and arbitration. Often, DAB consists of personnel from a public entity and a contractor, joined by a third party professional. This helps both parties to communicate regularly and act on small claims, discuss change orders and other issues. It is reported that one of the major reasons of cost overrun in CMP in New York was because of the issuance of continuous change orders. This will be an effective way to avoid cost overrun and delay.

Though the General Conditions of Contracts by the United Nations states that it will settle arbitrations according to UNCITRAL Arbitration Rules, establishment of the DAB may make contractors feel more confident to conclude such a large renovation contract with the United Nations, which enjoys Privileges and Immunities.

2) Reinforcing the capacity of UNOG to implement the project through PPP

The Toyo PPP Team is concerned about the implementation of the proposed PPP projects at the United Nations. PPP is a relatively new way of funding public infrastructure and facilities and the United Nations and UNOG lack the necessary expertise. Hiring PPP experts and consultants is an expensive option for the UN.

There are several very experienced PPP organizations within the Member States such as Infrastructure UK of United Kingdom, MAPPP/IGD of France, National Council on PPP of the United States and the Canadian Council for PPP, which can provide the advice and expertise for the PPP project at PdN. This approach will not only save on the funding of the project but will also contribute significantly to its success. It will mean less of a contribution by the Member States toward the
renovation project and will create a WIN–WIN situation for both the United Nations and the Member States.

3 Recommended future steps

The following are steps which the United Nations should consider in discussions with the General Assembly.

1. Approval to conduct a full feasibility study on the renovation – based on this preliminary report, and the principles of using PPP options and methods to implement the project.

2. Assemble PPP experts from PPP organizations under UNECE TOS PPP to be advisors to the project.

3. UNOG initiates the feasibility study with a team of PPP experts. If requested, the Toyo PPP Team is willing to assist with the feasibility study project and to organize the team of experts from around the world to perform the work under the leadership of UNOG and UNECE TOS PPP.

4. Agreement on the scope of work, schedule and cost for the feasibility study. The Toyo PPP Team will be willing to assist in providing a complete project approach.

5. Identification of the various team members (internal/external) who will participate in conducting the study, including those Member States with PPP expertise to offer.

6. Agreement on the expected outputs of the feasibility study, including the following deliverables:

   • Interview and consultation by UNOG and Member States on the use of PPP options for the renovation of PdN.
   • Interview and consultation by UNOG and Member States on the use of PPP to determine the volume of the housing needs for the diplomats and staff and accommodation needs for their guests.
   • Discuss with the host country the PPP options for the renovation and PPP developments within the PdN.
   • Determine the phasing developments for the renovation including the location of the swing space.
   • Study the compatibility between SHP and possible PPP options for the renovation and the developments.
• Prepare:
  • A master plan
  • Conceptual site layout of buildings and facilities
  • Site utilities plan using energy conservation and smart grid technologies
  • Project schedule and scope of work outlines and bidding packages
  • Legal review
  • Financial model
  • Project finance recommendations
  • Project memorandum for financiers
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The PPP Graduate School at Toyo University is the only graduate school in the world specialized in the study of Public-Private Partnership. The school studies various PPP models around the world providing the faculties and the graduates with a wealth of PPP project experience.

UNECE

Many have contributed to this study, but special thanks go to the co-Chairpersons of TOS PPP, Leo McKenna from the United Kingdom and Art Smith from the United States. The secretariat team was led by Geoffrey Hamilton.
Appendix 1: Example of old office renovations in Japan

1) DN tower 21

   Old building
   
   Completion of construction: 1938 SRC RC
   
   Extension and renovation
   
   Commencement of construction: 1990
   Completion of construction: 1995
   Construction period: about 5 years
   Total floor space: 97,966m²
   The number of floors: 21F · B5F

Daiichi Life·Building is located in one of Japan's most historical and prestigious areas, and the building formed a part of a beautiful landscape on the moat of the Imperial Palace.

The building is also well known historically, because the General Headquarters of the Supreme commander for the Allied Powers (GHQ/SCAP) was located there after World War II. Furthermore, Norinchurin Bank·Yurakucho Building, which was located near Daiichi Life·Building and was constructed in 1938, is also historically famous.

When the renovation plan was considered, it was the time of an economic bubble in Japan and the tasks facing the financial institutions and institutional investors dramatically increased. It was also a period when Japanese office buildings had to introduce new IT technology. While keeping the beautiful landscape and respecting its history, this life insurance company and financial institution tried to partially keep the external walls and the old rooms in the buildings and construct a Skyscraper in the central areas. This was done in order to expand the central functions of the companies, where the Skyscraper was integrated into the original parts of the buildings. The design of the external wall of the buildings was the same as the one that had previously existed.

2) This kind of method for preservation and renovation has been implemented successfully many times in Japan. Practically speaking, the method was used for the renovation of The Industry Club of Japan (completion of construction: 1920), and Tokyo Central Postal office (completion of construction: 1930).
Meiji-Life Insurance Building

Old building
Completion of construction: 1934
Structure: SRC
Architectural area: 31,762m²
The number of floors: 8 F — B2F

Extension and renovation
Commencement of construction: 2001
Completion of construction: 2005
Construction period: about 4 years

Meiji-Life Insurance Building is defined as an Important Cultural Property by the Japanese government, due to its history. While maintaining its value, the renovation was done for the purpose of maintaining its functions as a modern building. Windows were re-used in order to increase air tightness and maintenance efficiency. Keeping the existing windows and utilizing natural ventilation make it possible to reduce energy for air-conditioning. By updating devices including air-conditioning and the power supply, it improved energy efficiency and the functions of the existing buildings.

The renovation was funded by combining it with the construction of a tenant office building nearby. Although it is not an office building, the cost of the renovation project for the Tokyo station building that is accredited with the status of an Important Cultural Property was achieved by selling the floor area of the station building site to the neighboring Skyscraper office building development.
3) Sophisticated example of the energy saving office building in Japan
Shimizu Corporation “Zero-carbon office building”

Completion: May 2012
Structure: RC with Seismically isolated structure
Number of Floors: 22F/B3F
Total floor space: 51,355m²

By reducing the demand and supply of air-conditioning and illumination by 60-70 per cent within the buildings, a technology was introduced that makes people feel comfortable. For the air-conditioning, a technology was used that combined radiation air conditioning and dehumidification ventilation, which is rare in Japan. For the lighting, natural illumination and LED lighting which changes the angle of the window shade and allows sunlight into inner rooms was introduced. The lighting is regulated on the work floor through the use of sensors. Energy saving management was introduced to regulate the balance between the power supplies (such as power generation by solar panel, power incoming commercially and power storage by power storage battery) and power demand at the optimal level. In these ingenious ways, the company has succeeded in saving more than 60 per cent in energy costs compared with other large office buildings in Japan where the fluctuation of temperature and humidity is quite large. These methods are effective in maintaining building functions, even in circumstances when severe earthquakes take place and the power supply is suddenly cut. The building acquired the highest score (9.7) in Japanese building energy efficiency measures, CASBEE (Comprehensive Assessment System for Build Environment Efficiency, similar to LEED in the United States or Minergie in Switzerland).
Appendix 2: Outsourcing of public services

<table>
<thead>
<tr>
<th>City of Sandy Springs</th>
<th>Fulton County, Georgia, United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporated</td>
<td>2005</td>
</tr>
<tr>
<td>Population</td>
<td>Approx. 90,000</td>
</tr>
</tbody>
</table>

The city of Sandy Springs, a newly incorporated city in Georgia, operates its municipal government with only seven public employees (excluding police and fire). Before it was incorporated, the interim committee estimated the annual operational costs for a local government of the same size at about $50 million. The interim committee decided to outsource most of its municipal functions (e.g. administrative works, municipal courts, public works, code enforcement and licensing, etc.) to one private company.

As a result, for the first six-year contract, the City’s annual outsourcing cost was about $25-30 million, which is $20-25 million less than that of a traditional government of the same population size. Currently, the City divides the contract into seven parts (finance, IT, municipal court, recreation and parks, communication, community developments and public works), and contracts with five contractors. About 140 employees from private companies currently work for the City. Even after the contract was renewed, many employees of the former contractor remained working in the city hall, transferring to the companies which had won the new contracts. The total cost of the seven contracts is $17 million. In addition, the private efficiency encouraged private investments in Sandy Springs. Neighboring cities followed the outsourcing trends.
Appendix 3: Accommodation facilities owned by international organizations

The Concordia

Private use hotel for guests of IMF, World Bank and other affiliated organizations (only non-profit organizations)

<table>
<thead>
<tr>
<th>Location</th>
<th>1250 New Hampshire Ave. NW, Washington, D.C., USA</th>
</tr>
</thead>
<tbody>
<tr>
<td># of rooms</td>
<td>178 rooms (studio type rooms with kitchen)</td>
</tr>
<tr>
<td>Management</td>
<td>ARAMARK Harrison Lodging</td>
</tr>
<tr>
<td>Structure</td>
<td>10 stories /Basement 1(Parking) total 8,658m²</td>
</tr>
<tr>
<td>Site area</td>
<td>2895.6m²</td>
</tr>
<tr>
<td>Other</td>
<td>LEED Gold Certification</td>
</tr>
<tr>
<td></td>
<td>Renovated (Renovation cost $23 million)</td>
</tr>
<tr>
<td></td>
<td>1,500 square feet of meeting space</td>
</tr>
</tbody>
</table>

Source: http://www.engr.psu.edu/ae/thesis/portfolios/2013/isb5006/buildingstatistics.html
# CERN Hostels

Private hostel for visitors of CERN. The hostels provide reasonable extended stay for visiting professors and researchers.

<table>
<thead>
<tr>
<th>Location</th>
<th>Route de Meyrin 385, 1217 Meyrin, Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td># of rooms</td>
<td>541 (Build 38, 39, 41, and Saint-Genis)</td>
</tr>
<tr>
<td>Room rates</td>
<td>Buildings 39 &amp; 41</td>
</tr>
<tr>
<td></td>
<td>SINGLE w/washbasin, shower, toilet CHF 58.</td>
</tr>
<tr>
<td></td>
<td>DOUBLE w/washbasin, shower, toilet (1 person) CHF 64.</td>
</tr>
<tr>
<td></td>
<td>DOUBLE w/washbasin, shower, toilet (2 persons) CHF 77.</td>
</tr>
<tr>
<td></td>
<td>Building 38</td>
</tr>
<tr>
<td></td>
<td>SINGLE w/washbasin, shower, toilet CHF 58.</td>
</tr>
<tr>
<td></td>
<td>SINGLE w/washbasin, toilet CHF 48.</td>
</tr>
<tr>
<td></td>
<td>SINGLE w/washbasin CHF 27.</td>
</tr>
<tr>
<td></td>
<td>DOUBLE w/washbasin, shower, toilet (1 person) CHF 64.</td>
</tr>
<tr>
<td></td>
<td>DOUBLE w/washbasin, shower, toilet (2 persons) CHF 77.</td>
</tr>
<tr>
<td></td>
<td>DOUBLE w/washbasin (1 bed in shared double) CHF 14.</td>
</tr>
<tr>
<td></td>
<td>Saint-Genis Hostel</td>
</tr>
<tr>
<td></td>
<td>SINGLE w/washbasin · &lt;10 NIGHTS € 22.30</td>
</tr>
<tr>
<td></td>
<td>SINGLE w/washbasin · 10+ NIGHTS € 16.70</td>
</tr>
<tr>
<td></td>
<td>SINGLE w/washbasin, shower, toilet · &lt;10 NIGHTS € 31.20</td>
</tr>
<tr>
<td></td>
<td>SINGLE w/washbasin, shower, toilet · 10+ NIGHTS € 26.50</td>
</tr>
<tr>
<td></td>
<td>Building 41</td>
</tr>
<tr>
<td></td>
<td>SINGLE room for physically disabled guests CHF 27.</td>
</tr>
<tr>
<td></td>
<td>DOUBLE room for physically disabled guests CHF 24.</td>
</tr>
</tbody>
</table>

Source: [https://espace.cern.ch/hostel-service/default.aspx](https://espace.cern.ch/hostel-service/default.aspx)
Appendix 4: “Dynamic pricing”

The electric supply is designed for peak use capacity. Since the pricing of electricity is generally determined by the electric supply company, there exists an imbalance of the rate by season and time zones. The consumer demands cheaper rates during the off peak hours, there is inefficiency in electric supply.

In recent years, there has been a development of more sustainable energy supply movements among advanced nations, especially in Europe. Energy sources such as hydro, wind, solar and other natural energy supplies are being developed along with the traditional oil, gas and nuclear energy. However, these new energy supplies are still in the process of development and cannot provide a steady supply of energy.

To correct the imbalance between demand and supply, Japan uses a system of dynamic pricing for electricity. Dynamic pricing means setting up a high electric rate for peak hours (set up to 10 times the off peak hour rate) to discourage electricity use during the peak hours. It sets a reasonable rate for electricity in off peak hours. With this system, Japan was able to consume 20 per cent less electricity.

There must be two facilities to implement dynamic pricing. One facility is the energy saving station after deciding the supply with the estimation of the consumption. The second facility is established as an electric storing station during the off peak hours.

Dynamic pricing is an energy control system (software) which does not require a large investment. It uses existing power transmission more efficiently. The measured data will be used as feedback to the system and with regression analysis, the demand estimate can be improved. The data in an area is basically stable and it is possible to use the prior data of the area.

The PdN is located within the City of Geneva and functions like a big city but the energy consumption is isolated and peak – off peak are clearly defined within the property. If and when lodging and housing are added, the energy system will have a more balanced consumption. When the energy consumption can be determined within PdN, dynamic pricing can be utilized to improve energy efficiency.

When the design of the renovation of PdN is considered, the best energy consumption system must be designed to reduce its operation and maintenance costs. As stated in this report, the O&M costs of the project will be more expensive than the initial renovation costs.
Evolution des structures urbaines au service de la société durable

Project "Kitakyushu Smart Community"

(reduction de moitié des émissions de CO2 en 5 ans)