



---

S/1564/2017  
22 December 2017  
Original: ENGLISH

**NOTE BY THE TECHNICAL SECRETARIAT**

**NEEDS STATEMENT FOR UPGRADING THE OPCW CHEMICAL LABORATORY TO  
A CENTRE FOR CHEMISTRY AND TECHNOLOGY**

1. On 10 July 2017 the Technical Secretariat (hereinafter “the Secretariat”) issued Note S/1512/2017 entitled “Upgrading the OPCW Chemical Laboratory to a Centre for Chemistry and Technology”, informing States Parties of the details of the proposed project to upgrade the laboratory.
2. In September 2017, a consultancy firm, in close cooperation with the Secretariat, started to prepare a needs statement for this project containing more detailed information. On 12 October 2017, the Secretariat provided a status update to States Parties at a side event during the Eighty-Sixth Session of the Executive Council. On 27 November 2017, the Secretariat provided further updates, including an outline of the needs statement, at a side event during the Twenty-Second Session of the Conference of the States Parties. Positive feedback was received on the project.
3. The needs statement for the project, reflecting the comments the Secretariat has received from States Parties, has been prepared and is annexed hereto.
4. As a next step, the Secretariat will begin to identify a suitable location for the building and begin the project organisation (using the PRINCE2 methodology). The Secretariat welcomes any further feedback from States Parties regarding this project and will continue to engage with them. Technical questions or comments about the project should be addressed to Mr Marc-Michael Blum, Head of the OPCW Laboratory (Tel: +31 070 416 4605; Email: marc.blum@opcw.org). Other questions or comments regarding the project should be addressed to Ms Sakiko Hayakawa, Senior Planning Officer (Tel: +31 070 416 3459; Email: sakiko.hayakawa@opcw.org).
5. The support of States Parties for this project is crucial. In Note S/1561/2017 (dated 8 December 2017) entitled “Request from the Director-General to States Parties for Voluntary Contributions to a New Trust Fund for Upgrading the OPCW Chemical Laboratory to a Centre for Chemistry and Technology”, the Secretariat informed States Parties of the establishment of a trust fund for this project and requested that they make voluntary contributions. The Secretariat reiterates its request for voluntary contributions to the trust fund and, in particular, asks that early contributions be made, as these will provide an impetus for the start-up and design phase of the project.

Annex: Needs Statement for Upgrading the OPCW Chemical Laboratory to a Centre for Chemistry and Technology



**Annex**

**NEEDS STATEMENT FOR UPGRADING  
THE OPCW CHEMICAL LABORATORY  
TO A CENTRE FOR CHEMISTRY AND TECHNOLOGY**

**TABLE OF CONTENTS**

SUMMARY .....4

BACKGROUND .....5

MISSION AND OBJECTIVES .....6

REQUIRED INFRASTRUCTURE .....7

CONCEPT PLANS AND COST ESTIMATES..... 10

NEXT PHASES ..... 18

## **SUMMARY**

The OPCW Laboratory is an embodiment of the OPCW's commitment to science and technology (S&T). It is central to the effectiveness and integrity of the verification regime of the Chemical Weapons Convention (hereinafter "the Convention"). Furthermore, it contributes to the development and maintenance of capabilities in States Parties through the network of designated laboratories and beyond.

In order to strengthen the OPCW's S&T capabilities to fully address the real threat of chemical weapons, as well as to support capacity building in our States Parties, the OPCW Laboratory should be expanded and bolstered with additional capabilities benefiting from recent advances in S&T. As the OPCW has been operating for several years on the basis of a zero nominal growth budget, a practice that will continue for the foreseeable future, a trust fund with voluntary contributions has been established for this initiative.

This needs statement describes the programme requirements for the upgrade of the OPCW Laboratory and Equipment Store, as well as various concept plans to accommodate these requirements.

## **BACKGROUND**

### **1. Rationale for the project**

- 1.1 The OPCW Laboratory is an embodiment of the OPCW's commitment to science and technology (S&T). It is central to the effectiveness and integrity of the verification regime. Furthermore, it contributes to the development and maintenance of capabilities in States Parties through the network of designated laboratories and beyond.
- 1.2 Despite the worldwide taboo over the use of chemical weapons, the stark reality is that chemical weapons have continued to be used, and their re-emergence is a real concern against which the OPCW remains vigilant. When an incident occurs, it can be difficult to identify immediately whether it is an accidental release or a hostile act. In all cases, countries need to respond immediately, which includes identifying chemicals involved and determining swift responses, from medical treatment of victims to decontamination and remediation of the scene. The effects of some toxic chemicals are rapid and the window of opportunity to preserve life can be severely limited. Additionally, authorities need to attribute and apportion responsibility and investigate how the toxic chemicals were acquired in order to prevent recurrence. However, many countries lack such capabilities, which hampers efforts to bring perpetrators to justice.
- 1.3 In order to strengthen the OPCW's S&T capabilities to fully address the real threat of chemical weapons, as well as to support capacity building in our States Parties, the OPCW Laboratory should be expanded and bolstered with additional capabilities benefiting from recent advances in S&T. As the OPCW has been operating for several years on the basis of a zero nominal growth budget, a practice that will continue for the foreseeable future, a trust fund with voluntary contributions has been established for this initiative.

### **2. Preparatory actions**

- 2.1 The OPCW Laboratory, which has been in the same facility in Rijswijk for well over 20 years, while gradually expanding both in surface area and in functions, is in need of an investment that matches both its current uses and future ambitions.
- 2.2 From September to November 2017, the project goals and objectives as proposed by the Secretariat were quantified, resulting in an overall programme of requirements. Several concept plans, including estimated costs, were developed in consultation with staff from the OPCW Laboratory and Equipment Store through interactive round-table sessions. Interviews were also held with more than 20 OPCW stakeholders. This needs statement is the final result of this process.

## **MISSION AND OBJECTIVES**

### **3. Mission of the OPCW**

- 3.1 The mission of the OPCW is to implement the provisions of the Convention in order to achieve the OPCW's vision of a world that is free of chemical weapons and of the threat of their use, and in which cooperation in chemistry for peaceful purposes for all is fostered. In doing this, our ultimate aim is to contribute to international security and stability, to general and complete disarmament, and to global economic development.
- 3.2 Two fundamental principles underline the OPCW approach. The first is the centrality of the Convention's multilateral character. The second is the equal application of the provisions of the Convention to all States Parties.

### **4. Goals and objectives**

- 4.1 The key goal for this project is an upgrading of the OPCW Laboratory to a Centre for Chemistry and Technology ("the ChemTech Centre") to keep pace with current threats and remain fit for purpose ahead of future threats. Another goal is to enhance the capability to lead the network of partner laboratories in research activities on chemical weapons investigation as well as to assist States Parties in research and capacity-building activities, if need be, with the ChemTech Centre providing critical support. In this way, the ChemTech Centre will be a hub for relevant laboratories and experts, creating the knowledge repository needed to tackle chemical threats worldwide.
- 4.2 The project envisions the following objectives:
- (a) Augmenting analytical capabilities: Instrumentation and analytical science is a dynamic field. This means that the OPCW must continually develop analytical techniques and methods to ensure their relevance.
  - (b) Augmenting the capability to test, evaluate, and deploy equipment: The safety of inspectors under dangerous conditions is another area requiring new approaches and investment. The OPCW should continue to acquire equipment that will enable inspections with a higher degree of safety for inspectors, such as unmanned systems for sample collection, remote inspections, and protective equipment. To that end, the OPCW seeks an augmented capability to test evaluate and deploy commercial equipment for use by the Secretariat.
  - (c) Obtaining the capability to engage in research activities: The ChemTech Centre should lead the network of partner laboratories by engaging in research activities on chemical weapons that are not or cannot be addressed by external partners due to capability, confidentiality, or other issues. While the OPCW staff will focus on research relevant to the Convention's verification regime, the ChemTech Centre could host experts from States Parties to enable them to accomplish research and development in areas such as new decontaminating agents, medical countermeasures, methods for identifying use of toxic industrial chemicals, new detection devices, and molecular mechanisms of action of toxic chemicals among others.

- (d) Augmenting training capability: While it is essential that the OPCW be able to provide a continuous training programme due to the tenure policy, the current training programme is limited, to some extent, by OPCW Laboratory infrastructure and capability. The OPCW needs significant enhancements to its training programmes, including sampling and subsequent handling of highly hazardous materials such as chemical warfare agents inside the facility with highest safety standards and best practices. It will also enable the OPCW to provide in-house capacity-building programmes for States Parties, which would be to the same standard as that received by OPCW staff. This will contribute to more in-depth sharing of knowledge among all concerned parties.
- (e) Increasing the number of the designated laboratories: The OPCW's designated laboratories system comprises external laboratories that have been certified by the OPCW, where samples taken during investigations are analysed. The results of analyses in these designated laboratories play an essential role in judicial processes. Increasing the number of designated laboratories with enhanced regional diversity is crucial for the States Parties to stand ready for investigations of toxic chemicals anytime and anywhere in the world. At this moment, most designated laboratories are located in Western and Asian countries, and there are no such laboratories in Latin America or Africa. Training scientists from these laboratories is a necessary element in expanding this network of laboratories, and is a key role for the ChemTech Centre.
- (f) Obtaining the capability to safely synthesise small quantity of chemical weapons agents: The capability to safely synthesise chemical weapons agents on a research and development scale is critical for the ChemTech Centre. It will enable the OPCW to further enhance analytical and research capabilities along with a capability to test commercial equipment related to chemical weapons for use by the Secretariat. It could also deliver some aspects of mandatory inspector training, such as toxic chemicals training.

## **REQUIRED INFRASTRUCTURE**

### **5. Quantifying objectives**

From September to November 2017, the project goals and objectives as proposed by the Secretariat were quantified, resulting in an overall programme of requirements. Several concept plans with estimated costs were developed in consultation with staff from the OPCW Laboratory and Equipment Store through interactive round-table sessions. Interviews were also held with more than 20 OPCW stakeholders.

## **6. Description of functions**

### Functions related to the OPCW Laboratory

- 6.1 The OPCW Laboratory lies at the heart of the Organisation's analytical capability. Samples coming in from various OPCW missions are processed and safely stored there. The laboratory contains a variety of sensitive and high-end sets of equipment for analytical chemistry (e.g. for sample weighing and splitting). The laboratory facility can be divided into different areas, and adjustments to the main laboratory therefore yields the following: an inorganic laboratory, a bio-laboratory, a sample handling laboratory, a weighing room, and a room for secure sample storage.
- 6.2 The new laboratory building also needs to provide extra space for a small synthesis laboratory for highly toxic chemicals. The amount of biomedical work at the laboratory is also increasing, meaning that a larger bio-laboratory is also needed. Separation of synthesis and analysis functions (including calibration) is essential to prevent contamination.
- 6.3 Furthermore, it is desirable to locate the training laboratory close to the main laboratory, in order to stimulate interaction and functional flexibility in the future. To further increase synergies and efficiency, a computer-based modelling/simulation laboratory will also be located between the regular office and the laboratory.

### Equipment Store

- 6.4 The Equipment Store is the home of all OPCW mission equipment. Equipment is ordered, maintained, and safely stored by Equipment Store staff.
- 6.5 Mission equipment comes in and goes out via the loading dock. Next to the loading dock, a check-in and check-out room is needed to ensure verification and transfer of equipment to designated areas in the Equipment Store.
- 6.6 Large and standby equipment is stored safely in the Equipment Store's main area. Adjusting the main area will provide a smaller area for storing chemicals, classified drugs, and technical equipment. The new facility should also have separate areas for the washing of mission-suits and for advanced air handling.

### Training facilities

- 6.7 The training facilities need to be enhanced significantly to augment the training capability offered to staff members and States Parties. To accommodate all future training activities, there should be two more classrooms in addition to the existing one, each providing enough space for 20 people. The classroom must provide sufficient desk space and computers.
- 6.8 The size of the training laboratory area needs to be doubled compared to the current space, in order to provide sufficient training possibilities with equipment and machinery. Interaction with the main laboratory also needs to be facilitated. Therefore, the training laboratory should be located near the main laboratory. An outside training area is also desirable, as there is no such area at the current facility.



## Offices

- 6.9 The offices in the new facility should support a variety of office activities, which will therefore require a mix of offices. While stimulating interaction between staff is important, privacy must also be provided for confidential work or phone calls. Meeting rooms are required to facilitate formal meetings as well as online and offline collaboration with States Parties and designated laboratories worldwide.

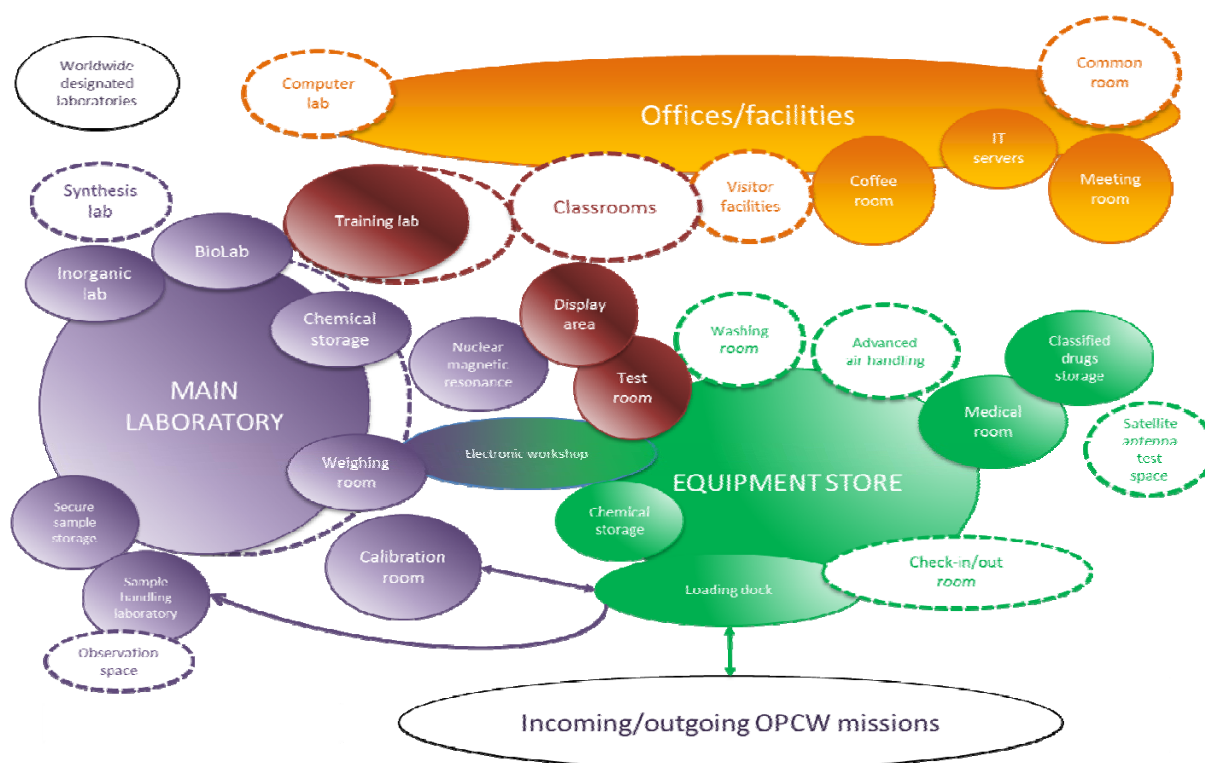
## Other facilities

- 6.10 The OPCW Laboratory and Equipment Store have been receiving an increasing number of visitors from States Parties. The current Rijswijk facility lacks a proper entry area. The new building should feature a visitor reception area, including restroom facilities. While visitors to the facility are warmly welcomed, such visits should not affect daily operations or interfere too much with ongoing activities or affect confidential procedures.

## **7. Overall programme of requirements**

- 7.1 The overall programme of requirements for the functions in the new facility is depicted in Figure 1 below. Functions appearing in dotted circles are new and/or proposed to be expanded, in line with achieving the project objectives.
- 7.2 Functions related to laboratory activities appear in purple, those related to (laboratory) training activities appear in dark red, those related to Equipment Store activities appear in green, and those related to office work appear in yellow.

**FIGURE 1: OVERVIEW OF FUNCTIONS AT THE NEW FACILITY**



7.3 In the development of the programme of requirements the following (new) functions have been addressed:

- (a) increased laboratory bench space within and outside of fume hoods;
- (b) high hazard synthesis laboratory;
- (c) engineering/electronics workshop (also for use by the Equipment Store);
- (d) computer-based modelling/simulation laboratory;
- (e) extended secure archive and chemical storage for samples;
- (f) multipurpose large-capacity space for conferences, meetings, or training. In case of emergencies, this space and other laboratory infrastructure can be used for the OPCW's disaster recovery and business continuity site;
- (g) training-related areas such as basic and advanced training laboratories, an outside training area, and a demonstration area;
- (h) enhanced office space to at least match current number of staff; and
- (i) enhanced equipment store to internalise the external storage currently in use.

7.4 The infrastructure required to achieve the objectives of the project must be:

- (a) future-proof, i.e. fit for purpose for the next 20 years at the OPCW;
- (b) standardised and flexible, i.e. a laboratory and training laboratory design that is suited to achieve the objectives and is resilience to remain fit for purpose; and
- (c) partially flexible in terms of office space, so that it can be used by visiting OPCW staff, inspectors before and after missions, or for business continuity purposes (in case of an emergency at the Headquarters).

## CONCEPT PLANS AND COST ESTIMATES

### 8. Rijswijk facility

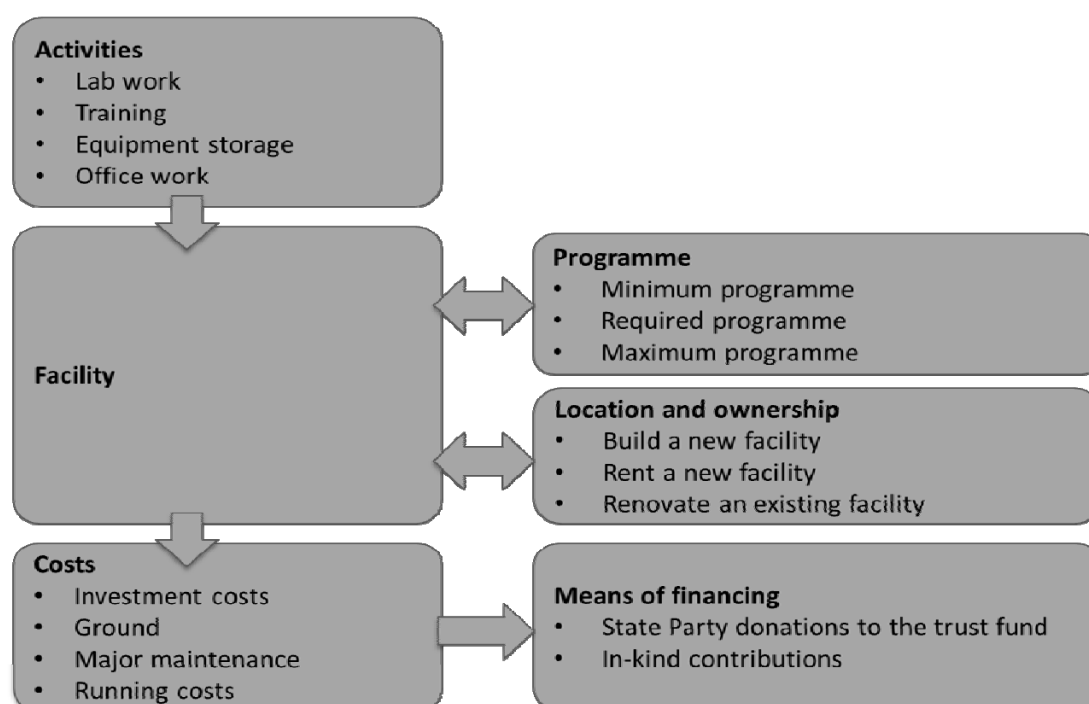
8.1 For the past 20 years, the OPCW Laboratory and Equipment Store have been based at a facility on a small industrial estate in Rijswijk, which is a 20-minute drive from the OPCW Headquarters in The Hague. The operations of the OPCW Laboratory and Equipment Store have changed and grown significantly over the years, not only in terms of the type of lab activities and reach-back, but also in terms of the demand for lab and mission training and the number and intensity of missions. The OPCW has outgrown the facility, using off-site storage and outside containers to accommodate non-standby equipment overflow.

- 8.2 Over the past 20 years, no major infrastructure updates have been undertaken. The building is aging and major maintenance is due, at a cost estimated at over EUR 5 million. A renovation or upgrade would require the current facility to be out of service for approximately one year.
- 8.3 This needs statement describes, in various concept plans, how to achieve the required infrastructure to match the ambitions of the project: a fit-for-purpose facility for the next 20 years at the OPCW Laboratory and Equipment Store. All concept plans accommodate a flexible and future-proof infrastructure.


## 9. Required programme in square metres

- 9.1 When translating a global programme of requirements to a concept plan with cost estimates, a number of variables have to be taken into account. The flow of this process is shown in Figure 2 below.

**FIGURE 2: TRANSLATING A GLOBAL REQUIREMENTS PROGRAMME INTO COST ESTIMATES**



- 9.2 This process results in concept plans that are flexible in terms of the size of the programme (depending on the ambition of the States Parties and the amount of funding), the location and ownership of the programme, and the means of financing it, either through voluntary contributions to the trust fund or in-kind contributions.
- 9.3 The starting point of the concept plans is the required programme in square metres (m<sup>2</sup>). In Table 1 below, the current size of the Rijswijk facility and the new facility are shown (in m<sup>2</sup>). Both are expressed in m<sup>2</sup> of gross leasable area (GLA), which is the area in use not including construction, corridors, elevators, stairs, and technical conduits.

**TABLE 1: REQUIRED PROGRAMME<sup>1</sup>**


<b>Building</b>	<b>Current GLA (m<sup>2</sup>)</b>	<b>Future GLA (m<sup>2</sup>)</b>	<b>Future GFA (m<sup>2</sup>)</b>
Lab	472	840	1,480
Training	152	420	680
Equipment Store	816	1,050	1,750
Office	307	640	890
<b>Total</b>	<b>1,747</b>	<b>2,950</b>	<b>4,800</b>
<b>Outside area</b>	<b>460</b>	<b>1,400</b>	

**10. Concept plan 0: Renovate and rent the Rijswijk facility**

- 10.1 The cost of renovating the Rijswijk facility to match the objectives of an upgraded OPCW Laboratory and Equipment Store is estimated at EUR 18.8 million. Renovation includes replacement of all installations, non-load-bearing walls, flooring, and roofing. The estimate includes costs for consultancy, design, and project management services.
- 10.2 Also included are transition costs of EUR 1 million for equipment for the expanded training laboratory. A list of definitions related to the cost estimate can be found in the appendix attached hereto.

**TABLE 2: COST ESTIMATE FOR RENOVATING THE RIJSWIJK FACILITY**

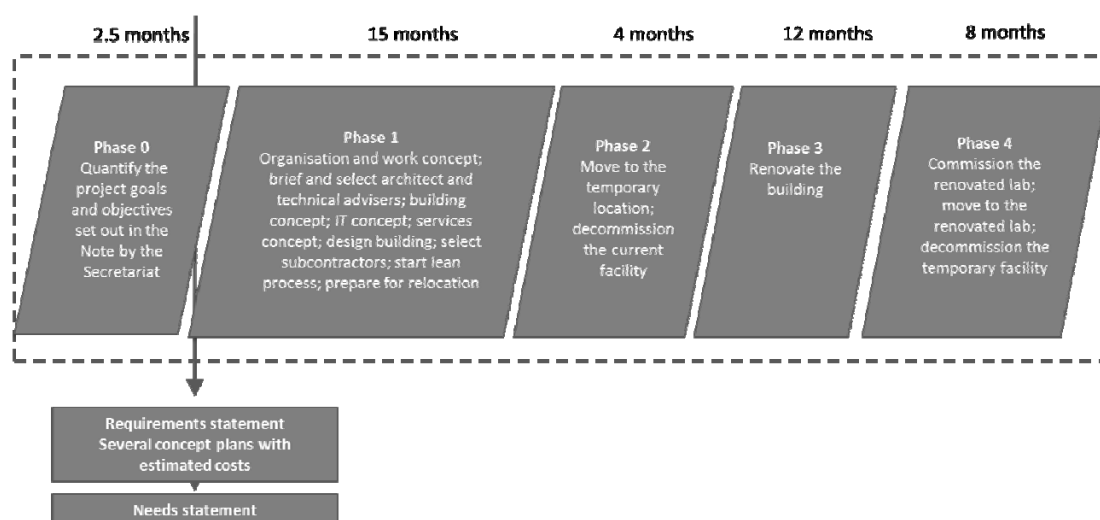
	<b>GFA (m<sup>2</sup>)</b>	<b>Investment costs 2018 (excl. VAT)</b>
Building (renovation)	4,800	EUR 14,600,000
Furniture and workstations		EUR 1,200,000
Outside area	1,400	EUR 200,000
Decommissioning of facilities		EUR 1,000,000
Transition costs		EUR 1,300,000
Dedicated OPCW project management		EUR 500,000
Temporary rental of a suitable location (18 months)		TBD
<b>Total</b>		<b>EUR 18,800,000</b>

<sup>1</sup>

The gross leasable area (GLA) is translated to the gross floor area (GFA), using a benchmarked GFA/GLA ratio. The investment costs are calculated from the GFA, using benchmarked prices in euro/m<sup>2</sup>.

- 10.3 Renovating the Rijswijk facility is not very likely, as adding space on top of or adjacent to the current facility is technically difficult. Renovation will take at least a year, during which time a suitable temporary location would need to be found for the OPCW Laboratory and Equipment Store, at an estimated annual rent of anywhere between EUR 200,000 to EUR 2,500,000, depending on location and suitability. After renovation, the rent of the current facility would likely go up, with multi-year lease conditions (>15years) to be expected.
- 10.4 In this concept plan, operations would have to be relocated twice, which presents a risk for fragile equipment. The timeline of this concept plan is 39 months, including a long transition phase: two decommissionings and two commissionings, and two relocations. The timeline for renovating the Rijswijk facility can be found in Figure 3 below.

**FIGURE 3: TIMELINE FOR RENOVATING THE RIJSWIJK FACILITY**



- (a) After the location and all necessary permits will have been secured, it would take at least 15 months to select the architect and technical advisers, complete the design process, select the subcontractors, and prepare for the move to the temporary location.
  - (b) It would take four months to move to the temporary location and to decommission the current Rijswijk facility.
  - (c) It would take 12 months to renovate the facility.
  - (d) It would take eight months to commission the renovated laboratory, move to the renovated facility, and decommission the temporary location.
- 10.5 This timeline is for the renovation of the Rijswijk facility and takes into account OPCW procurement procedures. It is an optimal timeline, and may be affected, for example, by delays in obtaining necessary permits. The timeline also depends to a large extent on the availability of funds.

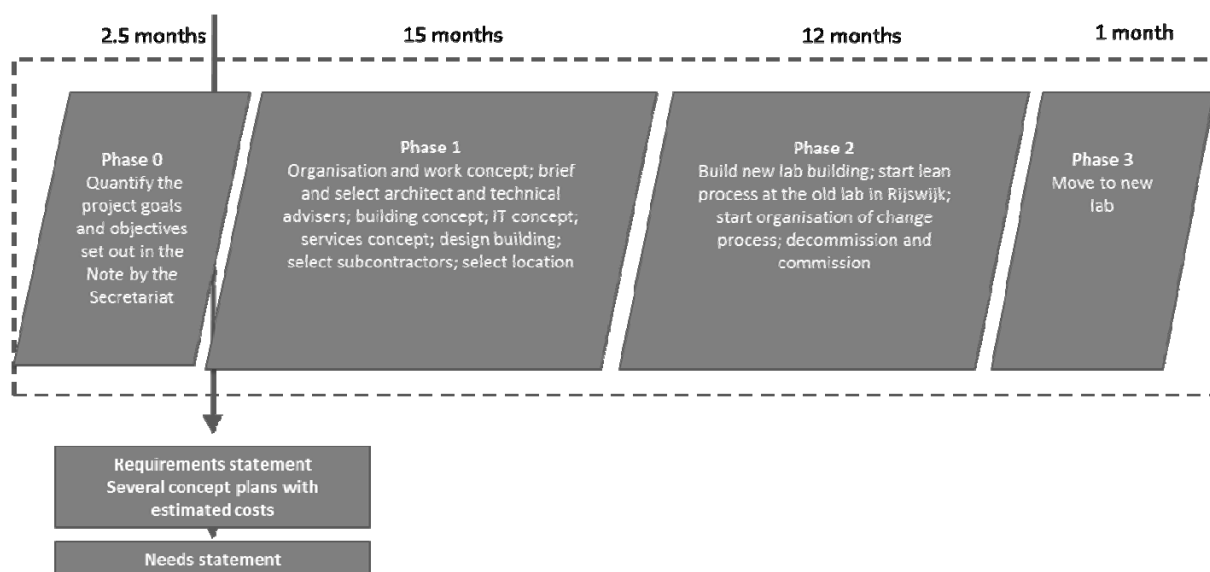
## 11. Concept plan A: Build a new facility

- 11.1 The cost of building a new facility to house the upgraded OPCW Laboratory and Equipment Store is estimated at EUR 24.9 million. The estimate includes costs for consultancy, design, and project management services. Also included are transition costs of EUR 1 million for equipment for the expanded training laboratory. A list of definitions related to the cost estimate can be found in the appendix attached hereto.

**TABLE 3: COST ESTIMATE FOR BUILDING NEW FACILITY**

	m <sup>2</sup> GFA	Investment costs 2018 (excl. VAT)
Building	4,800	EUR 17,700,000
Furniture and workstations		EUR 1,200,000
Outside area	1,400	EUR 200,000
Ground		EUR 3,000,000
Decommissioning of the current facility		EUR 1,000,000
Transition costs		EUR 1,300,000
Dedicated OPCW project management		EUR 500,000
<b>Total</b>		<b>EUR 24,900,000</b>

- 11.2 The timeline for building a new facility is shown in Figure 4 below. With the needs statement in place, it would take 28 months in total for the design and construction of and transition to the new facility.
- (a) After the location and all the necessary permits will have been secured, it would take at least 15 months to select the architect and technical advisers, complete the design process, and select the subcontractors and location.
  - (b) It would take 12 months to build the new facility.
  - (c) It would take one month to move to the new building.

**FIGURE 4: TIMELINE FOR A NEW BUILDING**

- 11.3 This timeline is for the construction of a new building and takes into account OPCW procurement procedures. It is an optimal timeline, and may be affected by a lengthy location search or delays in obtaining necessary permits, among other things. The timeline also depends to a large extent on the availability of locations and funds.

## **12. Concept plan B: Renovate and own (B1) or rent (B2) an existing facility**

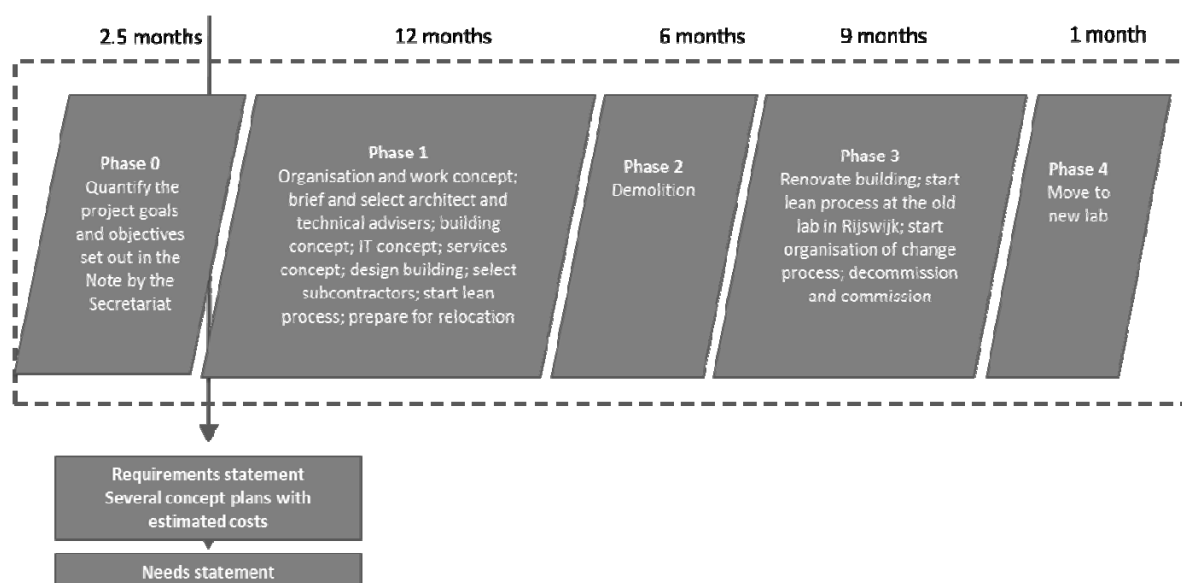
- 12.1 When renovating an existing facility, the investment largely depends on the quality of the building (year of construction, current function, presence of asbestos, etc.), the book value of the building, and whether the size and structure of the building match the requirements.
- 12.2 The cost of renovating an existing facility for the upgraded OPCW Laboratory and Equipment Store is estimated at EUR 21.8 million.
- 12.3 The renovation includes replacement of all installations, non-load-bearing walls, flooring, and roofing. The extent to which this would be needed depends to a large extent on the quality of the existing building. The book value of the building is not part of this estimate but has to be taken into account, both in case the OPCW wants to own the building or as a base for the rent of the renovated facility.
- 12.4 The estimate includes costs for consultancy, design, and project management services. Also included are transition costs of EUR 1 million for equipment for the expanded training laboratory. A list of definitions related to the cost estimate can be found in the appendix attached hereto.

**TABLE 4: COST ESTIMATE FOR RENOVATING AN EXISTING FACILITY**

	GFA (m <sup>2</sup> )	Investment costs 2018 (excl. VAT)
Building (renovation)	4,800	EUR 14,600,000
Furniture and workstations		EUR 1,200,000
Outside area	1,400	EUR 200,000
Ground		EUR 3,000,000
Decommissioning of current facility		EUR 1,000,000
Transition costs		EUR 1,300,000
Dedicated OPCW project management		EUR 500,000
Book value building (B1)/Base for rent (B2)		TBD
<b>Total</b>		<b>EUR 21,800,000</b>

12.5 The timeline to renovate an existing facility (other than the Rijswijk facility) is shown below. With the needs statement in place, it would take 28 months for the renovation and the transition to the new facility:

- (a) After the location and all the necessary permits will have been secured, it would take at least 12 months to select the architect and technical advisers, complete the design process, and select the subcontractors and location.
- (b) It would take 6 months for demolition.
- (c) It would take 9 months to renovate the facility.
- (d) It would take one month to move to the renovated facility.

**FIGURE 5: TIMELINE FOR RENOVATING AN EXISTING FACILITY**



- 12.6 This timeline is for the renovation of an existing facility and takes into account OPCW procurement procedures. It is an optimal timeline, and may be affected by a lengthy location search or delays in obtaining necessary permits, among other things. The timeline also depends to a large extent on the availability of locations and funds.

### **13. Weighing of concept plans**

- 13.1 In the paragraphs above the concept plans have been described in financial terms, but they can also be described from a point of view of value.

- (a) Concept plan 0: Renovate and rent the Rijswijk facility. Renovation of an existing facility can be state of the art and fit for purpose, but always involves compromising, either on possible programme functions, timelines, or security measures. The Rijswijk facility is aging and the renovation would be major. This concept plan contains both technical and financial uncertainties. For example: is it possible to build an extra floor on top of the facility without needing to tear the whole facility down and build it back up from the ground up? The total cost of a renovation is less certain than that of a new build project, as actual costs are harder to predict up front.
- (b) Concept plan A: Build a new facility. Building a new facility ensures that the OPCW will have a state-of-the-art, built-for-purpose facility. Costs and timelines are easier to control than in a renovation project. Safety and security can be more easily implemented to match with the project objectives.
- (c) Concept plan B: Renovate and own (B1) or rent (B2) an existing facility. Renovation of an existing facility can be state of the art and fit for purpose, but always involves compromising, either on possible programme functions, timelines, or security measures. The total cost of a renovation is less certain than that of a new build project, as actual costs are harder to predict up front.

- 13.2 The overall weighing of the concept plans is shown in Table 5 below. The concept plans are weighed against the criteria that are important for the upgrade of the OPCW Laboratory and Equipment Store.

**TABLE 5: WEIGHING OF CONCEPT PLANS**

Concept plans	O: Renovate and rent the Rijswijk facility	A: Build a new facility	B1: Renovate and own an existing facility	B2: Renovate and rent an existing facility
Match with ambitions	-	++	+	+
Continuity of operations	-	++	++	++
Timeline (certainty)	+/-	++	+/-	+/-
Possibility of obtaining a Schedule 1 permit	?	?	?	?
No book value/base for rent to consider	-	++	-	-
Total	-	+++	++	++

- 13.3 Concept plan A contains the fewest number of uncertainties both in terms of the cost estimate and timeline. The match with the OPCW's ambitions is best in this concept plan, as it is a fit-for-purpose design.

## NEXT PHASES

### 14. Further steps and timelines

- 14.1 With the needs statement completed at the end of phase 0, preparation for phase 1 can start. The scouting for a new location and the implementation of the OPCW project organisation (using the Prince2 methodology) are the first steps, and will be followed by the development of guidelines to select the architect and technical advisers. A shortlist of suitable architects, advisers, and (later) contractors will then be drafted.
- 14.2 The selection of the location is a defining factor at the start of phase 1. Once the location has been decided and secured, a more detailed (technical) programme of requirements can be developed, in parallel with the contracting of architects and technical advisers.
- 14.3 Phase 1 (at least 15 months) will lead to a design for the new facility or facility to be renovated. It includes the procurement for the contractors. In phase 2 (12 months) the new facility will be realised, followed by the relocation to it.

**Appendix****LIST OF DEFINITIONS**

<b>Term</b>	<b>Definition</b>
<b>Gross leasable area (GLA)</b>	The area in use, not including construction, corridors, elevators, stairs and technical conduits.
<b>Gross floor area (GFA)</b>	The area in use, including construction, corridors, elevators, stairs and technical conduits.
<b>Required programme</b>	The programme in m <sup>2</sup> that matches the objectives of the project. Broken down into functions, the programme consists of 28% laboratory, 14% training, 36% Equipment Store, and 22% office. The required programme is translated to building costs by applying differentiated benchmarked prices in euro/m <sup>2</sup> .
<b>Investment costs new facility</b>	<p>Total investment costs of a new facility (EUR 24.9 million, concept plan A) are composed of three main components:</p> <ul style="list-style-type: none"> <li>(a) Costs for consultancy, design and project management, legal dues and insurances (17 % of total investment in concept plan A)</li> <li>(b) Costs for realisation / building, furnishing and commissioning of the building (62% of total investment in concept plan A).</li> <li>(c) Costs for contingencies and price indexation (5% of total investment in concept plan A).</li> </ul> <p>Approximately 20% of the total investment is needed to reach the end of phase 1.</p>
<b>Building costs</b>	Costs for realising, furnishing, and commissioning the building. Realisation includes construction, installations, fixtures, security systems (intrusion and fire detection and suppression), and the IT backbone. The cost estimate for building costs is built up from pro rata parts of all the components of the investment costs (a, b, and c).
<b>Furniture and workstations</b>	Furniture and workstations cover all non-fixed furniture and the extra workstations needed for the enlarged training facility. The cost estimate for furniture and workstations is built up from pro rata parts of all the components of the investment costs (a, b, and c).

<b>Term</b>	<b>Definition</b>
<b>Outside area</b>	Outside area covers the area around the facility to be used for parking spots and outside training. The cost estimate for outside area is built up from pro rata parts of all the components of the investment costs (a, b, and c).
<b>Ground</b>	Ground covers the cost of the land that has to be purchased and is based on benchmarked Amsterdam prices. The cost estimate for ground is built up from pro rata parts of all the components of the investment costs (a, b, and c).
<b>Decommissioning of current facility</b>	Decommissioning of the current facility covers the cost of bringing the facility back to its original shape (including wear and tear), and also includes the cost for the safe dismantling of fume hoods, biosafety cabinets, and the removal of surplus chemicals. The cost estimate for decommissioning is built up from pro rata parts of all the components of the investment costs (a, b, and c).
<b>Transition costs</b>	Transition costs cover the cost of moving from one location to the other, including relocation fees and preparation for relocation. The cost estimate for transition costs is built up from pro rata parts of all the components of the investment costs (a, b, and c) and also includes EUR 1 million for equipment for the expanded training laboratory.
<b>Dedicated OPCW project management</b>	Dedicated OPCW project management covers the costs of internal OPCW staff members dedicated to support the project organisation. The cost estimate for dedicated OPCW project management is built up from pro rata parts of all the components of the investment costs (a, b, and c).