



S/1769/2019

9 July 2019

Original: ENGLISH

NOTE BY THE TECHNICAL SECRETARIAT**PROGRESS IN THE PROJECT TO UPGRADE THE OPCW LABORATORY
AND EQUIPMENT STORE TO A CENTRE FOR CHEMISTRY AND TECHNOLOGY****BACKGROUND**

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”, explaining the new challenges and changing requirements that made it necessary to undertake a project to modernise and expand the capabilities of the current OPCW Laboratory and Equipment Store in Rijswijk.
2. In Note S/1561/2017 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” (dated 8 December 2017), the Secretariat informed States Parties of the establishment of a trust fund for this project and requested voluntary contributions.
3. The Secretariat then issued a Note entitled “Needs Statement for Upgrading the OPCW Chemical Laboratory to a Centre for Chemistry and Technology” (S/1564/2017, dated 22 December 2017 and Corr.1, dated 3 January 2018) (hereinafter “the Needs Statement”). The Needs Statement outlined the key objectives of the project and a general programme of requirements that specified new and enhanced capabilities for the Laboratory, Equipment Store, and training facilities, as well as additional needs for offices, meeting rooms, and other general use areas.
4. The Needs Statement also presented various concept plans for the realisation of these requirements, which included the renovation of the current facility in Rijswijk, rental of a different existing facility, and construction of a new facility. Based on a cost-benefit analysis of these concept plans, the Needs Statement concluded that the optimal approach for delivering the required upgrades would be to initiate a project to construct a new centre for chemistry and technology.
5. The scope of the project was described in the Needs Statement to consist of the construction of a new Centre for Chemistry and Technology (ChemTech Centre) that would provide enhanced and enlarged facilities for the Laboratory, Equipment Store, and training, as well as the land and infrastructure required to accommodate and operate the building. The scope further included the decommissioning of the current facility in Rijswijk and transition to the new facility. The initial cost estimate for this



project was estimated at EUR 24.9 million, with the completion of its construction estimated to be feasible in 28 months.

6. Since the issuance of Note S/1512/2017, the Secretariat has continued to provide States Parties with regular briefings on the status and progress of the project, as side events during the Eighty-Sixth, Eighty-Seventh, Eighty-Eighth, Eighty-Ninth, and Ninetieth Sessions of the Executive Council, and during the Twenty-Second and Twenty-Third Sessions of the Conference of the States Parties. Additional briefings were provided to States Parties during the meeting of the Open-Ended Working Group on the Future Priorities of the OPCW on 2 October 2017, during informal budget facilitations on 5 September 2018, and during the first meeting of the Friends of the Laboratory Group on 30 October 2018.
7. This Note is intended to update States Parties on progress made in the planning and implementation of the project since the issuance of the Needs Statement in December 2017. It will also describe the revised scope, cost estimate, and timeline for completion of the project, and will detail its expected benefits. Finally, it will provide updates on fundraising status and requirements, and next steps in the project.

PROJECT PROGRESS SINCE DECEMBER 2017

8. Upon completion of the Needs Statement, the Secretariat began the preparation phase of the project and identified two priority tasks to be undertaken to initiate this phase: the establishment of the project governance and management structure and the identification and reservation of a suitable plot of land to house the new facility. The process to identify a location for the ChemTech Centre was anticipated to require a significant amount of time, given the specialised nature of the Secretariat's requirements, the high demand for commercial real estate in The Hague and surrounding municipalities, and the need to negotiate and conclude an agreement with the selected municipality. For these reasons, the Secretariat elected to work concurrently on these initial tasks.

Site for construction of the ChemTech Centre

9. Regarding the identification of a location for the new facility, the Secretariat, with the support of external consultants with expertise in construction projects of this type, spent the first half of 2018 identifying, visiting, and assessing a number of potential locations in Delft, The Hague, Leiden, and Rijswijk. This search yielded a short list of potential sites, which was subsequently narrowed to a single location on the basis of the availability and suitability of the sites.
10. The selected plot is on the Business Park Heron in the municipality of Pijnacker-Nootdorp, which is 12 km outside The Hague. The Secretariat began negotiations with the municipality on an agreement to reserve the plot in July 2018, and the agreement was concluded in December 2018. The reservation agreement calls for the Secretariat and municipality to conclude a purchase agreement for the plot by the end of 2019. Negotiations regarding the purchase agreement are ongoing.

FIGURE 1: LOCATION OF BUSINESS PARK HERON

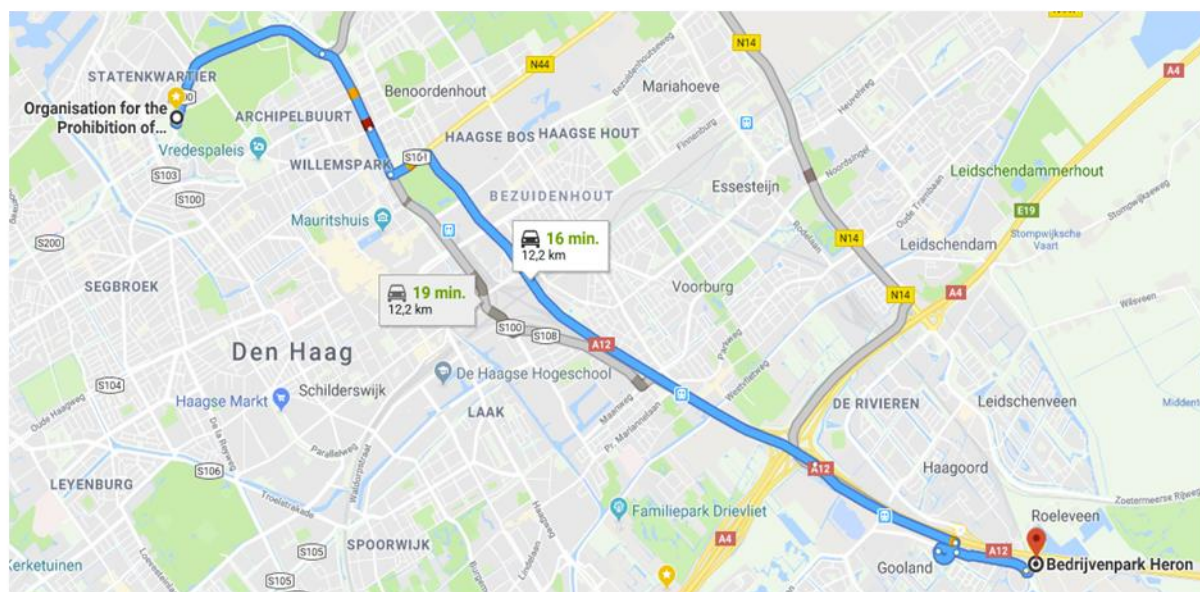


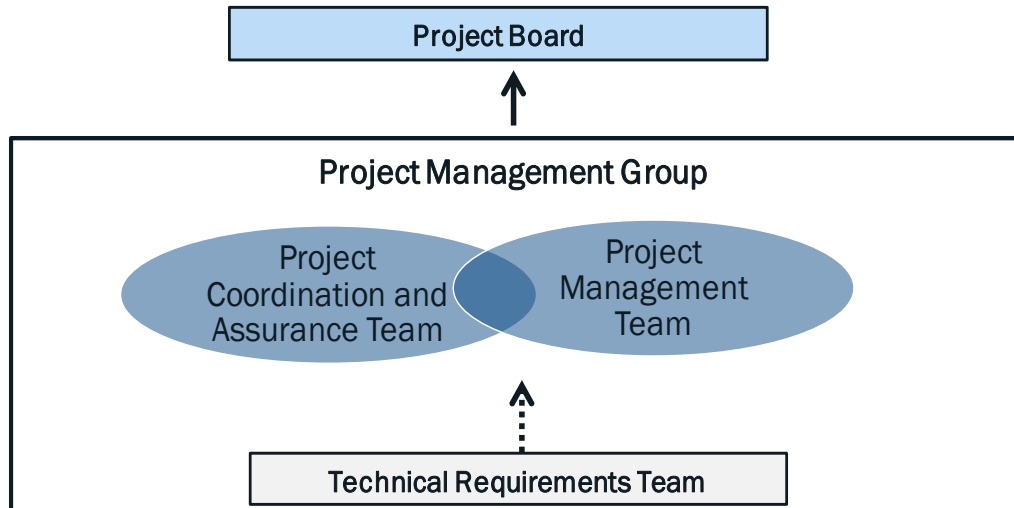
FIGURE 2: CHEMTECH CENTRE PLOT ON BUSINESS PARK HERON



Project governance and management structure

11. While conducting the search for a suitable location for the ChemTech Centre in the first half of 2018, the Secretariat simultaneously began drafting terms of reference (ToR) for the establishment of a Project Board to provide strategic guidance and oversight of the project, and for the establishment of a project management structure to lead its operational implementation. The draft ToR were finalised for submission to the Board after the change in leadership of the Secretariat in July 2018. The Project Board held its first meeting in November 2018, with the review and approval of the ToR being one of its first tasks. The project governance and management structure is shown in Figure 3 below.
12. The Project Board is chaired by the Deputy Director-General and comprised of senior staff from all divisions, branches, and units of the Secretariat that are stakeholders in the project. The Project Board reports to the Director-General.
13. The Project Management Group is responsible for the daily operational activities of the project and for implementing decisions taken by the Project Board regarding the planning and implementation of the project. This group consists of three teams that will work together to perform essential project management functions, as shown in Figure 3 below.

FIGURE 3: PROJECT GOVERNANCE AND MANAGEMENT STRUCTURE



14. The Project Management Team (PMT) will be led by a Project Manager and will provide and procure the technical expertise required to ensure the successful completion of design and construction deliverables. This expertise will include architectural and engineering design, laboratory planning, construction, and cost advisory services. The Project Manager will supervise the work of all contractors engaged to work on project deliverables. The PMT will also provide essential project support functions, such as accounting, procurement, and administrative support, to reduce the burden the project will place on the Division of Administration. The team will be comprised of the following extrabudgetary staff positions:
 - (a) Project Manager (P-5);
 - (b) Finance Officer (P-3);
 - (c) Procurement Officer (P-3); and
 - (d) Administrative Assistant (G-5).
15. The Project Coordination and Assurance Team (PCAT) consists of Secretariat staff working on the project who are responsible for fundraising, coordinating interdivisional participation and communication regarding the project, supporting the work of the Project Board, and liaising with and reporting to States Parties. The PCAT also will work closely with the PMT in the development and implementation of the project to help ensure that all products are delivered within the established targets for scope, cost, schedule, and quality, and in a manner consistent with OPCW rules, regulations, priorities, and interests.
16. The Technical Requirements Team (TRT) is comprised of substantive experts representing units within the Secretariat that will be the users of the new facility, as well as units that will support the operations of the facility, such as the Office of Confidentiality and Security. The TRT is responsible for providing the Project Manager and design team with the technical and capability requirements of the new facility to ensure that it will perform the required functions to the required level of quality. It is also responsible for certifying all design deliverables before construction proceeds, to ensure that the constructed facility will deliver the required capabilities, and for certifying the completed building's readiness and capability to perform all required functions.
17. The Secretariat anticipates and welcomes oversight of the project from the External Auditor, as well as from the Advisory Body on Administrative and Financial Matters (ABAF), for which the project is a standing item. Recommendations made by these bodies will be recorded, including those made in the most recent ABAF report,¹ and their implementation status established as a standing item in meetings of the Project Board.

¹ "Report of the Forty-Sixth Session of the Advisory Body on Administrative and Financial Matters" (ABAF/46-1, dated 7 June 2019).

Project procurement strategy and design tender

18. In November 2018 the Board took a decision with regard to the project's procurement strategy. The Board was presented with three procurement options for the project: (1) a traditional approach based on two separate tenders for design and construction, in which separate contractors provide these services; (2) a design and build approach based on a single tender to award a single design-build contract, in which one contractor would provide all services; and (3) an integrated design and build team approach in which the architect, construction company, and technical consultants are contracted simultaneously but separately in a single procurement stage before the start of design.
19. Upon considering the risks and benefits of each of the three options, and the status of the project and fundraising at the time, the Board approved the first option. The project's financial status was a key driver of this decision, as the second and third options would have required the Secretariat to have all funds for both the design and construction of the ChemTech Centre pledged or available before any of these tenders could proceed. The traditional approach allows design work to begin once sufficient funds for design services are available, while simultaneously providing time for fundraising to proceed to obtain the required funds for the construction contract.
20. Once the traditional option was approved, preparations for the design tender process began. The Secretariat will conduct four separate tenders to procure the expertise required for the design phase of the project, with three of these tenders dedicated to the procurement of specific types of required design services. These include: (1) architectural and constructive design services for the building's foundation, concrete structure, and internal layout; (2) engineering design services for the design of the building's internal services and systems; and (3) laboratory planning services to ensure that workflows and fixed laboratory furniture, such as fume hoods and laboratory benches, are properly accounted for in the design. Engaging a laboratory planning services firm during the design process will minimise the risk of costly changes to the Laboratory being required after the completion of construction.
21. Given the highly specialised and unique nature of the ChemTech Centre, it was deemed optimal to have three separate tenders for design services, as this will allow smaller firms specialised in the construction of these types of facilities to compete for these contracts. The contractors selected as a result of these three tenders will constitute the design team, which will be led by the architectural and constructive design contractor. The design team will work under the supervision of the Project Manager.
22. The fourth tender to be conducted is for an independent cost advisory firm to support the OPCW Project Manager in the design process. The independent cost advisor will provide guidance to the design team, TRT, and Project Manager to help ensure that the design and construction of the ChemTech Centre remain within budget, and that the building is designed to be as cost-efficient as possible with regard to its future operational and maintenance costs.

23. The tenders for the architectural and structural design and engineering design contracts were issued in March 2019, and the tenders for the laboratory planning and cost advisory services are planned to be issued in July 2019. All four tenders are planned for completion in the fourth quarter of 2019 to ensure that the selected contractors are simultaneously available to begin work on the design.

Programme of requirements

24. In the third and fourth quarter of 2018, a series of workshops were conducted with the users of the Laboratory and Equipment Store and the providers of support services to confirm and provide additional detail for the general programme of requirements that was prepared to produce the Needs Statement. Through these workshops, additional project scope requirements were identified and details regarding the existing requirements were further specified and refined.
25. This process resulted in the adoption of a final programme of requirements that fully details the functional capabilities and specifications of the ChemTech Centre. The information provided by the final programme of requirements was subsequently used to derive a revised scope, cost, and timeline for the project. The final programme of requirements and the revised scope, cost, and timeline for the project were submitted to the Project Board and approved in March and May 2019 respectively. Detailed information regarding the revised scope, cost, and timeline are provided in paragraphs 31 to 59 and 101 to 120 below.

Project initiation document

26. In accordance with the PRINCE2 methodology, the Secretariat has prepared an internal project initiation document (PID) for the project. The PID contains all the information needed to initiate, manage, and implement the project, and therefore serves as a reference point for all personnel who work on and are involved in it.
27. Accordingly, the PID contains the following elements:
- (a) a project overview outlining the purpose, description, and scope of the project, as well as its project governance and management structure;
 - (b) a summary of the programme of requirements;
 - (c) the business case for the project, which covers key elements such as its rationale, expected benefits, cost, and timeline;
 - (d) the project plan, which details the phases of the project and key project controls to be put in place; and
 - (e) a set of strategies to manage process areas critical to the success of the project, such as risk management, communication management, quality management, change management, and resource mobilisation. The risk management strategy includes a dedicated risk register for the project.

28. Work on the PID began in early 2018, and the document was revised and updated as planning for the project developed and progressed. Once the plot of land was identified and reserved, the programme of requirements finalised, and the revised scope, cost, and timeline approved, the PID was updated to its current version and finally approved by the Project Board in June 2019.

Lessons learned from other international organisations

29. As part of its risk management strategy, the Secretariat has consulted with other international organisations that have recently completed construction projects to learn from their experiences. The Secretariat has held consultations in this regard with the International Atomic Energy Agency, the International Criminal Court, and the North Atlantic Treaty Organization. Additional consultations are planned with the European Patent Office, which recently completed the construction of its new headquarters in Rijswijk.
30. The Secretariat has already implemented some of the lessons learned from these consultations. For example, the OPCW was advised to hire external legal counsel early in the project to provide expert guidance and support in contract drafting, negotiations, and implementation, as well as in case of contractual disputes. The Secretariat subsequently initiated and completed a tender process for external legal services, and the selected law firm began work in May 2019. The Secretariat will continue to seek out and implement lessons learned from other international organisations as appropriate.

CURRENT PROJECT SCOPE

31. The principal objective of the project is to provide increased and enhanced space and capabilities to the Laboratory, Equipment Store, and training facilities currently in Rijswijk. Therefore, the project scope calls for new and improved facilities for all three of these areas in the newly built ChemTech Centre, as well as new and improved support facilities and capabilities to improve the operation of the three main areas of the building. The scope also includes the establishment of business continuity capabilities for OPCW Headquarters, as well as the relocation from the current facility in Rijswijk and decommissioning of the Rijswijk facility.
32. The functional areas and capabilities specified for the ChemTech Centre by the final programme of requirements are described below. New facilities and capabilities that are not currently available in Rijswijk are identified, along with any significant changes to the project scope that are specified in the final programme of requirements as compared to the general programme of requirements that was used to produce the Needs Statement.

The Laboratory

33. The Laboratory in the ChemTech Centre will have the functional areas and capabilities outlined as follows:

- (a) Main Laboratory: This is the primary laboratory area where most laboratory processes and activities are conducted. It will house multiple analytical instruments and capabilities for sample preparation, rooms for the use of equipment that generates significant noise, for example vacuum pumps, and storage for consumables, chemicals, laboratory coats, glassware, and maintenance tools. The Main Laboratory provides most of the free bench space in the laboratory portion of the building and includes fume hoods for activities involving dangerous chemicals. Specialised laboratories and rooms identified below provide additional capabilities for use as required.
- (b) Inorganic laboratory: Provides equipment for the analysis of inorganic samples.
- (c) Clean laboratory: Provides an environment for the analysis of samples requiring very clean conditions to eliminate cross-contamination risks.
- (d) Biological laboratory: Provides capabilities for biochemical/biomedical sample analysis.
- (e) Small-scale synthesis laboratory: Room with the capability to synthesise highly toxic (including Schedule 1) chemicals on a limited scale below the 100-gram threshold for Schedule 1 chemicals, for research and analytical purposes. These include the production of reference samples, the development of analytical techniques for the identification and characterisation of highly toxic chemicals, and research to determine and optimise countermeasures in cases of exposure to such chemicals.
- (f) Computer laboratory: Provides workstations for computational chemistry and modelling, as well as data evaluation and processing.
- (g) Decontamination/triage area: Room for the decontamination and primary screening of samples before they are allowed to enter the laboratory area.
- (h) Sample handling laboratory with observation space: Room for packing, unpacking, splitting, and documenting samples, with a separate area for observers to view and verify the handling and splitting of samples.
- (i) Secure sample storage: Secure room to hold samples collected on missions, including highly contaminated and highly toxic samples, such as Schedule 1 samples.
- (j) Equipment and calibration rooms: Equipment rooms to house the nuclear magnetic resonance spectroscopy instrument, mission deployable gas chromatograph-mass spectrometers (GC-MS), and X-ray fluorescence instruments for sample analysis. There will also be calibration rooms for GC-MS calibration, and precision analytical balances for weighing.
- (k) General: Areas for chemical storage, washing, and chemical and biological waste disposal.

34. The small-scale synthesis laboratory, computer laboratory, decontamination/triage area, and observation space attached to the sample handling laboratory are all new facilities and capabilities not available to the Laboratory at the current facility in Rijswijk. With these additional facilities, as well as the increased and enhanced space that will be provided to the existing facilities of the Laboratory, the area dedicated to the Laboratory will be 850 m². The Needs Statement indicated that the Laboratory in the ChemTech Centre would require 840 m², and the current Laboratory has a size of 472 m². These figures indicate the gross leasable area (GLA) of these spaces, which excludes corridors, staircases, building services areas, and the area occupied by the constructed structure of the building.
35. None of these facilities represents a new addition to the initial scope of the project. However, the final programme of requirements determined that the Laboratory would require some additional fume hoods as compared to the number identified in the general programme of requirements.

The Equipment Store

36. The Equipment Store in the ChemTech Centre will have the main functional areas identified as follows:
- (a) Equipment Store: Equipment storage and manipulation area where pallets are stored and cargo prepared for shipment.
 - (b) Check-out/check-in room: For checking out and checking in equipment that goes to or returns from missions.
 - (c) Specialised equipment and materials storage: Rooms for the storage of electronic and sensitive equipment, individual protective equipment, sampling and analysis items for use on missions, chemicals, and pharmaceuticals.
 - (d) Cleaning facilities: For the cleaning of equipment used on missions and the washing of protective suits, coveralls, laboratory coats, and respirators.
 - (e) Electronic workshop: For the maintenance and electrical testing of equipment.
 - (f) Mask test fitting room: Room for testing respirators for use on missions.
 - (g) Advanced air handling: For testing compressors, for storing and filling oxygen bottles and tanks, and for filling hydrogen canisters.
 - (h) Non-destructive examination (NDE) test room: For testing, calibration, training, and operation of NDE equipment (e.g., X-ray imaging systems).
 - (i) Loading area: For receiving and loading cargo shipments.

37. All of these facilities and capabilities are currently available to the Equipment Store in Rijswijk. However, the Equipment Store requires increased space to provide internal storage for stocks of equipment that currently must be stored externally due to space constraints at the Rijswijk facility. With the addition of this space, as well as further additional and enhanced space, the area dedicated to the Equipment Store will be 1115 m². This is a small increase in the space estimate for the Equipment Store of 1050 m² that was provided in the Needs Statement, and compares to 816 m² for the current Equipment Store in Rijswijk.
38. No significant additional requirements for the Equipment Store were identified in the final programme of requirements as compared to the general programme of requirements.

Training facilities

39. The training facilities that will be available in the ChemTech Centre are as follows:
- (a) Training laboratory: To be used to provide training for States Parties and OPCW inspectors, e.g., for training in sampling and analysis and areas related to the peaceful uses of chemistry, and for inspector certifications. The training laboratory will have the same technical requirements as the Main Laboratory to ensure that training is provided in a comparable facility, and to provide additional capacity for the Main Laboratory in periods of high demand. All training activities, however, will take place in the training laboratory. Fellows and post-doctoral researchers engaged in longer-term activities will work in the Main Laboratory, but will not have access to the high-security rooms and areas.
 - (b) Classrooms: Three classrooms to provide courses for both States Parties and OPCW inspectors. For OPCW inspectors, initial and refresher training courses will be provided in the classrooms. Courses will cover the theoretical aspects of laboratory-centric training courses as well as classroom-only subjects (e.g., training in existing procedures and regulations related to dangerous goods packing and transport, the global system for labelling dangerous chemicals, sample tracking, and areas related to the peaceful uses of chemistry).
 - (c) Training areas: Indoor and outdoor training areas for inspectors and State Party participants. Training in equipment-specific and procedural training, e.g., mission scenario planning, assistance and protection response exercises, health and safety exercises, soil sampling, and setting up and operating “on-site” analytical laboratories.
40. Currently, the training facilities in Rijswijk consist of a training laboratory and one training classroom. Therefore, the additional two training classrooms and the indoor and outdoor training areas will provide new facilities that are not currently available.

41. One of the most significant changes to the initial scope of the project is the addition of the indoor training facility, which is planned to be an open, flexible space measuring 400m² that can be used for a variety of training activities. Initially, the programme of requirements called for an outdoor area outside the building to be used as a flexible, open space for the conduct a variety of training exercises. Upon further review of this requirement, an indoor area was deemed preferable to protect planned activities from weather disruptions and to provide greater flexibility in the type of activities that can be conducted.
42. Furthermore, it was determined that having a large, flexible, indoor space would offer the Secretariat a number of benefits. These include the opportunity to reduce costs on certain training activities while also improving the quality of training, providing an area in the ChemTech Centre capable of hosting public events, such as scientific lectures and hospitality and ceremonial events involving States Parties, and providing a space that could be used for business continuity purposes in case of an operational disruption to OPCW Headquarters. Consequently, in the final programme of requirements the indoor training facility replaced the outdoor training area. The specific benefits of this facility are further specified in paragraphs 76 to 86 below.
43. In addition to the indoor training facility, a dedicated outdoor training area of 50 m² for training in soil sampling was added to the final programme of requirements.
44. The area dedicated to the above training facilities will be 825 m² GLA. This compares to 152 m² GLA for the current training facilities in Rijswijk.

Offices, meeting rooms, and other areas

45. The ChemTech Centre will have the general areas outlined as follows:
 - (a) Offices, meeting rooms, and support room: Offices, meeting rooms, and room for copy machines, printers, binding, shredding, and office supplies storage.
 - (b) Entrance, visitor reception, and display areas: Entrance and visitor reception area, as well as a display area for exhibiting equipment used by the Laboratory and Inspectorate and some of the history of the OPCW.
 - (c) Security centre: Area for the management of security operations at the facility.
 - (d) Secure archive: Secure room for sensitive materials.
 - (e) Basic archive and storage: Rooms for storage of general documents and some office supplies.
 - (f) Canteen: To provide basic food and beverages to staff and visitors. The canteen will not have a kitchen.
46. The entrance, visitor reception, display areas, security centre, and canteen all represent new facilities that are not currently available at the facility in Rijswijk. The only significant addition to the scope of these areas in the final programme of requirements is an exhibition area that will showcase some of the history of chemical weapons and the OPCW. This exhibition area will be a component of the display areas.

47. As compared to the estimate in the Needs Statement, the amount of space dedicated to the above areas has increased from 640 m² to 760 m² GLA. This compares to 307 m² GLA for the comparable areas at the current facility in Rijswijk.

Total size and functional relations of the ChemTech Centre

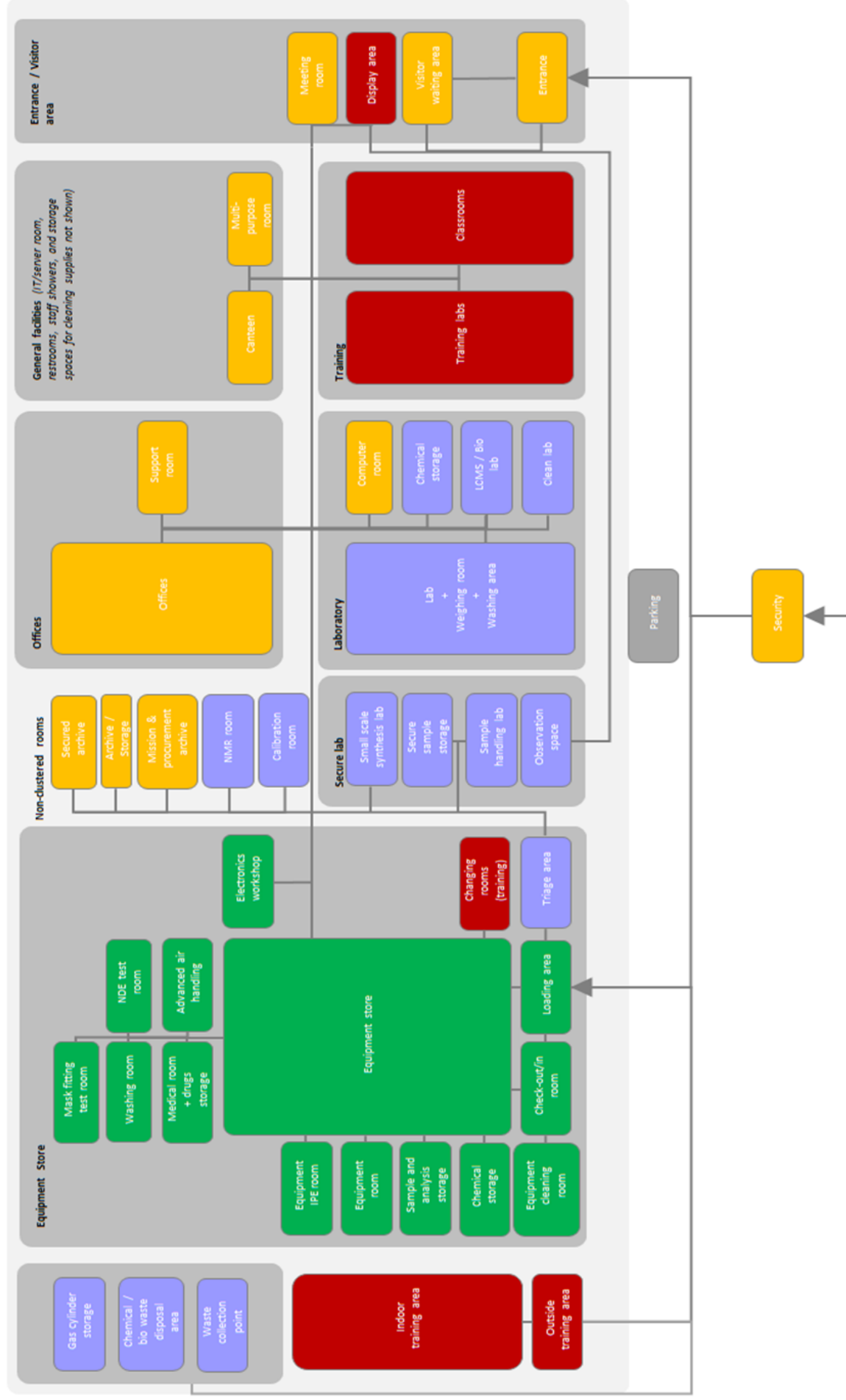
48. Table 1 below shows a comparative breakdown of the size of the current facility in Rijswijk and the planned size of the ChemTech Centre, as shown in the Needs Statement and based on current requirements. The table also shows the overall size of the ChemTech Centre in terms of Gross Floor Area (GFA), which includes corridors, staircases, building services areas, and the area occupied by the constructed structure of the facility.

TABLE 1: COMPARATIVE SPACE BREAKDOWN OF THE RIJSWIJK FACILITY AND CHEMTECH CENTRE

Function	Floor area in Rijswijk (m² GLA)	Floor area in Needs Statement (m² GLA)	Current floor area ChemTech Centre (m² GLA)	Current floor area ChemTech Centre (m² GFA)
Laboratory	472	840	850	1,448
Training	152	420	825	1,241
Equipment Store	816	1050	1,115	1,568
Offices and meeting rooms	307	640	760	1064
Total	1,747	2,950	3,500	5,320
Outside area (including car park and outside training area)	460	1,400	1,069	1,069

49. Figure 4 below shows the functional relations between the different rooms and areas of the ChemTech Centre. This figure is not intended to be indicative of the design or layout of the building.

FIGURE 4: CHEMTECH CENTRE FUNCTIONAL RELATIONS



Land and site infrastructure

50. A key component of the project's scope is the identification and acquisition of a plot of land for the construction of the ChemTech Centre. In the general programme of requirements, the size of the plot foreseen for the construction of the ChemTech Centre was estimated based only on the estimated size requirements of the facility itself and on the assumption of reasonable but also minimally sized outdoor grounds.
51. The plot in Pijnacker-Nootdorp is substantially larger in size (approximately 6400 m²) than was initially estimated, and the municipality has zoning requirements regarding the use of the plot that were not known when the general programme of requirements was prepared. Furthermore, certain physical features of the plot will entail additional efforts to properly finish the grounds around the new facility and to install the necessary site infrastructure. As a result, the plot has greater requirements than were initially anticipated for landscaping, maintenance, and the construction of site infrastructure. This infrastructure includes, inter alia, a parking lot, road access, a security fence, and connections to the business park's utility services. Additionally, the final programme of requirements specifies some additional security features that will be required on the outside of the building and the grounds of the ChemTech Centre to ensure an appropriate level of security for the facility.

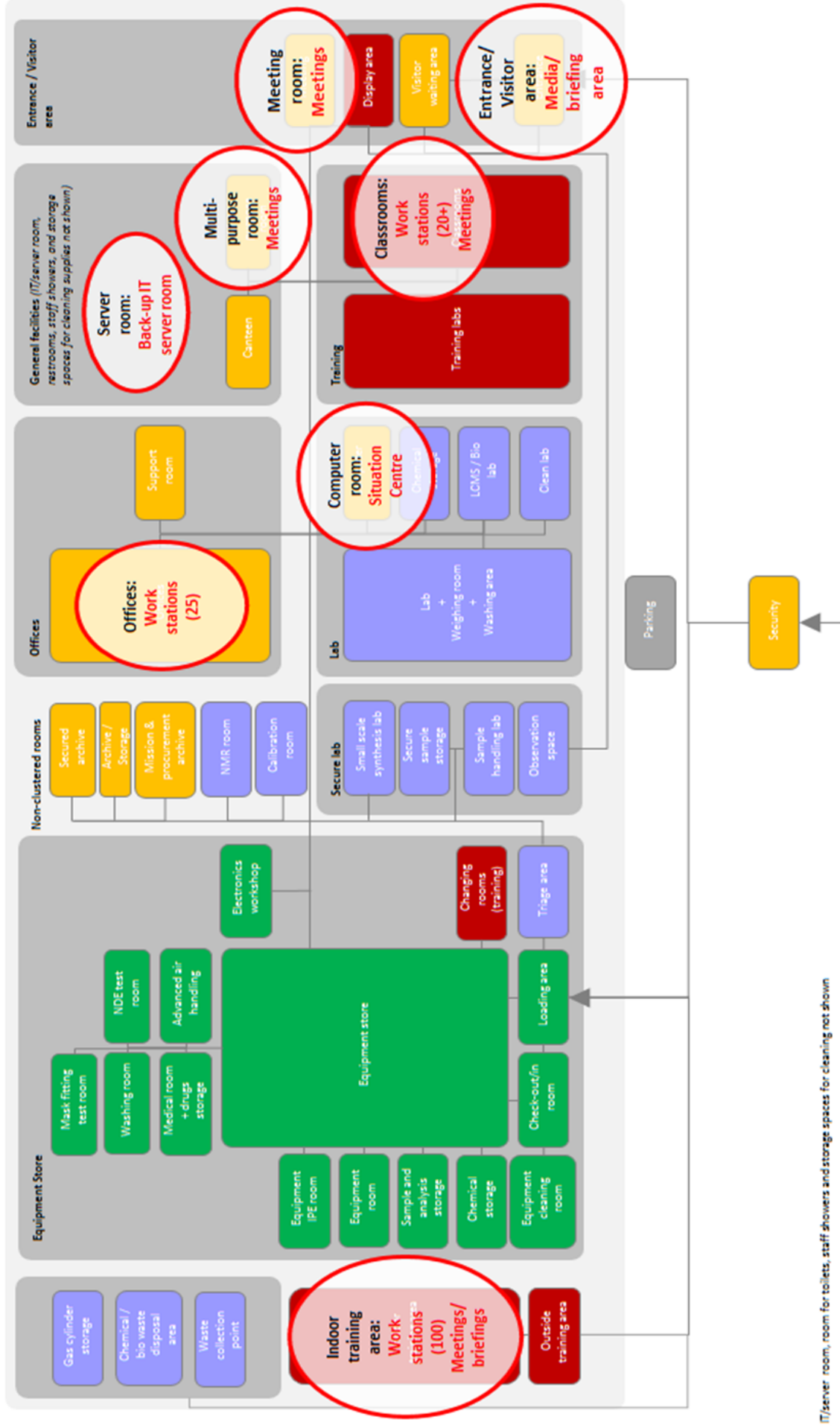
Business continuity

52. Another significant addition to the project's scope in the final programme of requirements is the provision of business continuity capabilities for OPCW Headquarters. Currently, there is no alternate site from which the OPCW can ensure the continuity of critical operations, such as mission planning and support, in case of a disruption to the Headquarters facility. The establishment of the ChemTech Centre at a second site, with the land and building owned and operated by the OPCW, creates an opportunity to address this gap.
53. The ChemTech Centre will be designed to the greatest extent possible to have flexible, multi-purpose rooms and areas, and business continuity capabilities can be accounted for in this regard. Specific offices and meeting rooms, as well as workstations in the training laboratories and classrooms, will be designated for business continuity purposes. For example, the computer laboratory can be converted into a Situation Centre to ensure the continuity of mission support and operations. The indoor training facility will also be designated for business continuity purposes in case of a more significant disruption to OPCW Headquarters that requires a greater number of staff and business processes to be shifted to the ChemTech Centre.
54. Additionally, the specifications for the building's infrastructure have been slightly modified to enable it to support critical operational functions. For example, the size of server rooms has been increased to allow for the possibility of mirroring all servers at OPCW Headquarters if this should become necessary, and the capacity of the digital network will be increased to allow larger volumes of data to be transmitted efficiently to and from the building.
55. The Office of Confidentiality and Security is planning to conduct a business impact analysis (BIA), potentially in 2020, that will identify and rank priority business processes and the measures required to ensure their continuity, as dictated by the length of any potential disruption to operations at OPCW Headquarters. There is a

direct correlation between the length of any disruption to OPCW Headquarters and the number of business processes that will require measures to provide for their continuity. Therefore, the BIA will consider various disruption scenarios and the measures and resources that would be required to ensure the continuity of the Secretariat's operations in each of those scenarios.

56. Once completed, the BIA may conclude that further business continuity investments in the ChemTech Centre will be advisable. If this occurs, and if the required resources are or become available, it may be possible to modify the design of the ChemTech Centre before it is finalised to account for these needs.
57. Figure 5 below indicates how currently planned rooms and areas in the ChemTech Centre can be used to provide business continuity capabilities in case of a disruption to OPCW Headquarters.

FIGURE 5: CHEMTECH CENTRE DESIGNATED BUSINESS CONTINUITY AREAS



IT/server room, room for toilets, staff showers and storage spaces for cleaning not shown

Transition to the ChemTech Centre

58. Another essential component of the project's scope is the requirement to move staff and equipment from the current facility in Rijswijk to the ChemTech Centre upon its completion. A plan for this transition will be developed during the construction phase of the project. The final programme of requirements did not identify any further needs for this activity.

Decommissioning of the facility in Rijswijk

59. Upon vacating the current facility in Rijswijk, the OPCW will be responsible for its decommissioning. The scope of the decommissioning work that will be required will be subject to negotiation with the owner of the facility. Consequently, the scope of decommissioning work can only be estimated at present and will remain subject to change until these negotiations are completed. No additional requirements were identified with regard to the decommissioning of the facility in Rijswijk in developing the final programme of requirements.

EXPECTED BENEFITS OF THE PROJECT

60. Delivering wide-ranging benefits for States Parties as a whole is a key objective of the project, and achieving this objective to the greatest extent possible has been a principal driver of the project's scope. Once completed, the ChemTech Centre will provide upgrades in many areas of the Secretariat's work that are of relevance to States Parties.

The Laboratory

61. As is shown in Table 1 above, the floor area of the Laboratory in the ChemTech Centre will be increased from 472 m² GLA in the current facility to 850 m² GLA. Part of this increase will be used to expand laboratory bench space to correct the significant space deficiencies in the current Laboratory. This additional bench space will also increase the number and types of activities that can be conducted in the Laboratory, while providing flexibility to adapt the Laboratory to carry out new activities that may be required in the future.
62. A key benefit of this additional space will be the capacity to accommodate State Party experts and researchers to engage in research and analytical activities for periods of up to six months or a year. Such experts could engage in activities that OPCW staff in the Laboratory do not have time to pursue due to their existing responsibilities, but that nonetheless can be of benefit to the Laboratory and States Parties.
63. For example, the Laboratory could host State Party experts who are conducting research and development in areas such as new decontaminating agents, medical countermeasures, methods for identifying the use of toxic industrial chemicals as weapons, and the development of new detection devices, among others. This additional expertise could further augment the analytical capabilities of the Laboratory in a manner that would be of benefit to States Parties.
64. The Laboratory will similarly be able to accommodate up to 10 young scientific professionals (PhD candidates or post-doctoral fellows) to also engage in research and development of relevance to the OPCW while also furthering their professional careers. This will enable the Laboratory to contribute to the professional development

of future scientific experts with the potential to contribute to the global effort to rid the world of chemical weapons.

65. Additional new space in the Laboratory will be used to provide it with new facilities and capabilities (identified in paragraph 34 above) that it does not currently have and that it requires to fulfil its key role for the OPCW. The small-scale synthesis laboratory will enable the OPCW to further enhance its analytical, research, and investigatory activities related to the verification regime, for example, through the ability to produce reference samples of new chemical weapons agents. This capability will also enable the Laboratory to contribute to the development of methods to detect and identify new chemical weapons agents.
66. This capability will also enable the Laboratory to test the suitability of commercial equipment for use with highly toxic chemical weapons agents for use by the Secretariat on missions. The findings of such activities could also be shared with States Parties to strengthen their assistance and protection capabilities. The synthesis capability could also be used to deliver aspects of the mandatory inspector training programme, such as toxic chemicals training.
67. The other new facilities will also substantially improve the capabilities and operations of the Laboratory. The engineering and electronics workshop will increase the Laboratory's ability to modify and maintain laboratory equipment to maximise its effectiveness and lifespan. The computer laboratory will provide workspace and computational resources for data analysis and visualisation. This will enable the Laboratory to effectively handle large scientific data sets of special relevance to biomedical research (e.g., identifying biomarkers, molecular modes of action of chemical agents, and countermeasures). The computer laboratory will also enable the Laboratory to employ sophisticated modelling to predict the properties of highly toxic chemicals without the need to conduct wet-lab experiments.
68. The extended secure archive and chemical storage area for samples will enhance the security and preservation of samples stored at the Laboratory, while the decontamination/triage area will ensure that samples that arrive at the Laboratory are properly decontaminated and separated for further processing. This area will enhance the safety and integrity of the Laboratory's operations.
69. The observation room attached to the sample handling laboratory will allow up to three observers to witness operations in this laboratory comfortably for a period of several hours. In the current facility, there is no dedicated space for observers. This requires observers to stand in the Main Laboratory to view the handling of samples in the sample handling laboratory, which in turn requires operations in the Main Laboratory to be halted for reasons of safety and confidentiality during these activities. This addition to the Laboratory, therefore, will resolve these operational issues while continuing to ensure transparency and confidence in the Laboratory's work among States Parties.
70. The enhancements that the ChemTech Centre will provide will also enable the Laboratory to keep pace with certain capabilities of the designated laboratory network, which is essential to the Laboratory's role in coordinating and leading this network. For example, having updated operational and analytical capabilities will

ensure that the Laboratory is properly equipped to plan and conduct proficiency tests that are designed to ensure the analytical excellence of the designated laboratories. These capabilities will also allow the Laboratory to expand participation in these tests as well as their frequency, which will help to accelerate the process of expanding the network.

71. Furthermore, with new and enhanced capabilities the OPCW Laboratory will be able to support the designated laboratory network by contributing to the development of analytical techniques required to address new and emerging chemical weapons threats. In some cases, these needs cannot be addressed by designated laboratories due to capability, confidentiality, or other issues.

The Equipment Store

72. The OPCW Equipment Store in Rijswijk suffers from a lack of storage space that currently requires the use of external storage to house some of its equipment. The increase in its floor area in the ChemTech Centre from 816 m² GLA currently to 1115 m² GLA will enable the Equipment Store to internalise all external storage currently in use. This will help to improve its workflows and efficiency, while also contributing to the care and maintenance of equipment.
73. Workflows are another deficiency at the Rijswijk facility, as it is not designed in a manner that matches workflows to the Equipment Store's work processes. The construction of a new Equipment Store will allow the Secretariat to design the facility in a way that will match workflows to work processes, such as storage, check-in and check-out of equipment for a mission, and the cleaning and maintenance of equipment. This will improve the operational efficiency and effectiveness of the Equipment Store.
74. The new facility will also strengthen the Equipment Store's ability to test, evaluate, and deploy commercial equipment on missions, which is a critical function. As the safety of inspectors on missions is closely linked to the capabilities of the equipment they use during their deployments, the Secretariat continuously seeks to acquire equipment that will provide inspectors with a higher degree of safety. This could include unmanned systems for sample collection, remote inspections, and new types of protective equipment.
75. The Equipment Store must test and evaluate such equipment under specific conditions to determine its suitability, and must be able to meet the equipment's storage and maintenance requirements. Additionally, the Equipment Store must train inspectors in the use of new equipment before it can be deployed for use on missions. All of these Equipment Store capabilities will be strengthened in the ChemTech Centre which, in turn, will help increase the effectiveness, efficiency, and safety of missions conducted by the Secretariat. These augmented capabilities could also be beneficial for States Parties, as the Equipment Store will be able to provide practical advice and guidance on the use of additional types of commercial equipment.

Training, capacity-building, and international cooperation and assistance

76. With the floor area of training facilities to increase from 152 m² GLA in the current facility to 775 m² GLA, in addition to the outside soil sampling training area of 50 m², the ChemTech Centre will provide a total of 825 m² of significantly enhanced space and capabilities. This will improve the training that can be provided to Secretariat staff, and particularly inspectors, as well as to States Parties through international cooperation and assistance activities.
77. The capacity of the training laboratory will be increased from 9 to 20 trainees, and additional training equipment (e.g., a GC-MS) will be purchased to enhance the capabilities of the training laboratory. Similarly, the number of training classrooms will be increased from 1 to 3, with space to accommodate 30 trainees in classroom activities as compared to the current 15.
78. The indoor training facility will provide a large, flexible space dedicated to training that the Secretariat has not had available on its own premises since its establishment. This space will enable the Secretariat to conduct new and increased training activities without concerns over weather disruptions that would accompany an outdoor training area, and without concerns over the substances used in these activities being released into the environment. All of these facilities will enhance and increase the training the Secretariat can provide both to staff and to States Parties.
79. For example, these facilities will improve the training the Secretariat can provide for staff and States Parties in the sampling and handling of highly toxic materials, including chemical warfare agents, and will make it possible to provide this training in accordance with contemporary safety standards and best practices. Capacity-building activities for scientists from laboratories seeking to join the designated laboratory network will also be increased, in an effort to expand and strengthen the network.
80. Training classrooms will be used for capacity-building activities focused on the full and effective implementation of the Chemical Weapons Convention (hereinafter “the Convention”), for example, training on national obligations, legal drafting, and capabilities related to customs. Assistance and protection activities, such as training of trainers in assistance and protection and assistance coordination and assessment courses, will also take place at the ChemTech Centre. Capacity-building activities in the uses of chemistry for purposes not prohibited by the Convention will also be enhanced at the ChemTech Centre, for example, activities in chemical safety and security, and chemical analysis.
81. The indoor training facility will provide opportunities for a number of practical training activities. For example, inspectors will be able to simulate a wide variety of scenarios in preparation for missions, which will enhance the efficiency, effectiveness, and safety of OPCW missions. The indoor training area will also add value to the Inspectorate in terms of innovation, retention and development of knowledge and talents, and with regard to its preparation and ability to respond to new challenges. Furthermore, this facility will contribute to the preparation of the Inspectorate to eventually act as a training provider to States Parties on chemical

safety, chemical weapons destruction, assistance and protection, and forensic activities devoted to chemical weapons incident analysis, among others.

82. The facility will benefit States Parties in similar ways. For example, it will be possible to conduct practical portions of training-of-trainers courses in assistance and protection at the indoor training facility, instead of in the confined outdoor space around the Laboratory and Equipment Store in Rijswijk or in the garage at OPCW Headquarters on weekends. This will increase the quality and effectiveness of this training.
83. The indoor training facility will also deliver substantial benefits in terms of cost savings and efficiencies. Estimated annual savings of EUR 540,000 to EUR 756,000 are currently foreseen to be generated as the facility will reduce the need to send inspectors on duty travel to States Parties' facilities for training exercises. Within less than two years, these savings will offset the estimated additional cost to the project of EUR 800,000 for the design and construction of this facility.
84. In addition to savings on training costs, the reduced need for duty travel to meet inspector training requirements will increase inspector availability for deployments and enable more inspectors to be available for non-routine missions. Furthermore, having an in-house training facility will make inspector training more scalable and flexible, for example, by enabling the training of smaller groups, which will also increase inspector availability and flexibility.
85. The indoor training area will also help to reduce the need for the Secretariat to resort to local hotels for meeting space when short-notice requirements, for example, for meetings of the Policy-Making Organs, force a last-minute change of venue. This scenario has occurred several times in the recent past and can result in substantial unplanned expense for the Secretariat. While large conferences and meetings would be too large to hold in the indoor training facility, other events that have had to be moved on short notice in recent years could be accommodated. In future such cases, it would be possible to relocate some of these events to the ChemTech Centre with transportation as the only additional cost.
86. Finally, the indoor training area will provide a space for the holding of public events in the ChemTech Centre, such as ceremonies involving States Parties, scientific lectures, and town hall meetings for staff and others working in the ChemTech Centre.
87. It should be noted that the specific nature of the training activities to be carried out at the ChemTech Centre cannot all be foreseen at this time. Training activities are planned by programme managers during the development of the annual programme and budget, and the specific requirements of these activities may vary from year to year. Additionally, the ChemTech Centre is not planned to be completed and operational until late 2022 (see paragraph 114), which creates further difficulties in forecasting the training activities that will take place at the ChemTech Centre once it becomes operational. The training capabilities planned for the ChemTech Centre, therefore, are based on the requirements of currently known demands, as well as some general demands for additional training that can be foreseen.

General areas and facilities

88. The floor area for offices and meeting rooms in the ChemTech Centre will be increased from 307 m² GLA to 760 m² GLA, and the quality of this space will be improved. This will correct current space deficiencies by providing increased and enhanced office and meeting space for existing staff of the Laboratory and Equipment Store. Additionally, the increased size of these areas will provide additional desk-sharing spaces for inspectors, trainees, State Party experts and researchers, and interns, all of which will contribute to the work done in the ChemTech Centre. Currently, desk space for inspectors and trainees is quite limited, and there is no space to accommodate interns or State Party experts and researchers. Finally, these more spacious and higher-quality facilities will provide a more comfortable and modern working environment for all OPCW personnel and visitors in the ChemTech Centre. This should result in greater efficiency and productivity in the work carried out in the new facility by OPCW personnel, and greater comfort for visitors.
89. Another benefit of the new facilities and areas will be the enhancement of security for the Laboratory and Equipment Store. Physical and electronic security features will be augmented and will include a guard house, closed-circuit TV system, burglary alarms, motion detection systems, bullet-proof glass, and an external security fence.
90. Additionally, more secure storage will be provided for samples and evidence collected as part of investigations into uses of chemical weapons, as well as for sensitive equipment. The ChemTech Centre will have different access zones to distinguish between access for staff, visitors, trainees, and temporary staff, which should increase stakeholder confidence in the OPCW's ability to maintain, preserve, and protect key information, sensitive equipment, and operational processes managed by OPCW Headquarters.
91. With regard to safety, construction of a new facility will enable the Secretariat to maximise the safety of OPCW personnel and visitors by designing the facility with safety considerations in mind and installing systems that adhere to contemporary safety standards. This will represent an upgrade from the safety measures currently available at the facility in Rijswijk.
92. Similarly, construction of a new facility offers the opportunity for the Secretariat to benefit from contemporary design and construction approaches that will increase the energy and resource efficiency of the Laboratory and Equipment Store in the ChemTech Centre. This will lead to a more effective and efficient use of OPCW financial resources and will increase the environmental sustainability of the facility. The application of BENG² standards will contribute significantly to the energy efficiency of the ChemTech Centre, and sustainability improvements will be sought and introduced with regard to the use of other resources.
93. Another new addition to the Laboratory and Equipment Store in the ChemTech Centre will be a demonstration area that can be used to demonstrate and display

2 BENG ("*Bijna Energie Neutrale Gebouwen*", which means "nearly zero-energy buildings") is a Dutch sustainability standard for buildings that comes into force in 2020. The ChemTech Centre will be designed to meet this requirement.

equipment used by the Laboratory and by inspectors on missions. Part of this area will be dedicated to displaying some of the history of chemical weapons and the OPCW to help raise awareness among visitors to the ChemTech Centre.

Construction and ownership of a new facility

94. Construction of the new ChemTech Centre on a plot owned by the OPCW will bring some further benefits. Firstly, having an owned facility will eliminate the annual rental cost of EUR 120,000 for the Rijswijk facility. This is a cost that has been, and would remain, subject to increases. Secondly, ownership of the land and ChemTech Centre will provide the Organisation with the freedom to modify the building and outside area as it may deem necessary in the future. Modifications to the facility in Rijswijk require negotiation and agreement with the landlord, and come with the cost and legal obligation of having to restore the facility to its previous condition upon the OPCW's departure. Construction of a new facility will enable the OPCW to avoid these costs.

Business continuity

95. An important benefit of the ChemTech Centre will be its capacity to function as a business continuity site for the OPCW in case the Headquarters becomes inaccessible or suffers operational disruptions. In such a case, specific rooms in the ChemTech Centre will be designated to provide temporary office space and meeting rooms for selected Headquarters staff, as well as facilities to ensure the continuity of Situation Centre and mission support capabilities.
96. The indoor training facility could provide further business continuity capacity by enabling the Inspectorate, Verification Division, International Cooperation and Assistance Division, and other business units to conduct some of their operations at the ChemTech Centre. This would be especially important in the case of a disruption at Headquarters lasting several weeks to several months, as this facility would help to minimise possible impacts on these business units' obligations and activities. The facility would also limit the extent to which the Secretariat would have to resort to long-term rental of commercial office space or similarly complex and costly solutions in case of a long-term disruption at Headquarters.
97. With regard to IT services, the ChemTech Centre will be constructed with an IT server room large enough to accommodate backup servers for Headquarters networks and data, and with digital transmission lines of sufficient capacity to handle the higher data transmission requirements that would be associated with performing Headquarters IT functions. With future investment to provide the backup servers themselves, as these are not included in the project cost, the OPCW will have the capability to continue its IT operations in case of IT disruptions at OPCW Headquarters.

Contributions to OPCW core objectives and Medium-Term Plan³ goals

98. By providing the benefits described above, the project will contribute to the achievement of a number of the OPCW's Core and Medium-Term Plan objectives. The project will contribute to the following OPCW Core Objectives:
- (a) Core objective 1: Elimination of chemical weapons stockpiles and chemical weapons production facilities subject to the verification measures provided for in the Convention.
 - (b) Core objective 2: Non-proliferation of chemical weapons, through the application of the verification and implementation measures provided for in the Convention, which also serve to build confidence between States Parties.
 - (c) Core objective 3: Assistance and protection against chemical weapons, their use, or threat of use, in accordance with the provisions of Article X of the Convention.
 - (d) Core objective 4: Economic and technological development through international cooperation in the field of chemical activities for purposes not prohibited under the Convention in accordance with the provisions of Article XI.
 - (e) Core objective 6: Full and effective implementation by States Parties of the provisions of Article VII of the Convention.
99. The project will contribute to the following Medium-Term Plan goals and result areas:
- (a) Verification for Continued Confidence in Compliance
 - (i) Medium-term goal 3: Enhanced capability of the Organisation to conduct contingency operations.
 - (ii) Medium-term goal 4: Strengthened capability of the Organisation to monitor scientific and technological developments of relevance to the Convention.
 - (b) Capacity Development to Prevent and Respond to the Hostile Use of Toxic Chemicals and to Foster International Cooperation
 - (i) Medium-term goal 5: Augmented assistance and protection capabilities of the Organisation in support of its focus on the re-emergence of chemical weapons, both in terms of prevention and response.
 - (ii) Medium-term goal 6: Enhanced capacity development for national implementation, and international cooperation.

³

“Medium-Term Plan of the Organisation for the Prohibition of Chemical Weapons, 2017 – 2021” (EC-83/S/1 C-21/S/1 dated 8 April 2016).

- (c) Engagement to Utilise Others' Capabilities
 - (i) Medium-term goal 10: Strengthened engagement with broader group of relevant stakeholders.
- (d) An Organisation that Remains Fit For Purpose
 - (i) Medium-term goal 12: The Organisation remains the global repository of knowledge and expertise in the field of chemical weapons.

Long-term benefits

100. The ChemTech Centre will provide significant long-term benefits to the OPCW. It will provide the Secretariat and States Parties with increased and enhanced laboratory, operational, and training capabilities for at least 20 years. Additionally, the ChemTech Centre is scheduled to become operational just as the OPCW is expected to be completing the destruction of the last declared stockpiles of chemical weapons (see Figure 6 below). This will shift the OPCW's focus more fully to preventing the re-emergence of chemical weapons, and the new and enhanced capabilities of the ChemTech Centre will be of great value and importance in supporting this mission. Overall, the ChemTech Centre will have the benefit of enhancing the reputation of the OPCW as a competent scientific and technical organisation capable of leading the global effort to rid the world of chemical weapons and the threats they represent.

REVISED COST AND TIMELINE

Revised cost

101. As the current cost estimate is based on more detailed information than the cost estimate that was provided in the Needs Statement, it is now possible to provide a more detailed breakdown of project costs. However, to enable a direct comparison of the two cost estimates, it is necessary first to provide a more detailed breakdown of the estimate that was provided in the Needs Statement. Table 2 below shows the initial cost estimate as it was presented in the Needs Statement and then provides a further breakdown of that estimate.

TABLE 2: COST ESTIMATE AS SHOWN IN NEEDS STATEMENT AND WITH FURTHER BREAKDOWN

ChemTech Centre Project Cost Estimate	<u>COLUMN A</u> Estimate as Shown in Needs Statement (Dec 2017, in EUR)	<u>COLUMN B</u> Breakdown of Needs Statement Estimate (Dec 2017, in EUR)
Land purchase and related costs	3,000,000	3,000,000
Design cost	<i>not identified</i>	1,252,000
Building cost	17,700,000	13,099,000
Equipment costs	1,000,000	1,000,000
Furniture and workstations	1,200,000	924,000
Outside area and site infrastructure	200,000	154,000
Transition costs	300,000	300,000
Decommissioning of facilities	1,000,000	1,000,000
OPCW project management staff	500,000	500,000
Project management and advisory services	<i>not identified</i>	2,525,000
Contingency	<i>not identified</i>	1,146,000
Subtotal	24,900,000	24,900,000
Programme support costs (7%)	<i>not included</i>	<i>not included</i>
Total	24,900,000	24,900,000

102. The building cost estimate as shown in the Needs Statement includes costs that are now further segregated into the categories of design cost, project management and advisory services, and other costs. Additionally, the building cost, furniture and workstations, and outside area and site infrastructure cost estimates included risk provisions that are now shown under the contingency category. The design, project management and advisory services, other costs, and contingency categories were not shown in the cost estimate provided in the Needs Statement. Also, programme support costs (PSC) were not included in that cost estimate.
103. Project management and advisory services include the many types of expertise that will be required to support implementation of the project and that will be needed either throughout the project or only during particular phases. Examples include external legal advisory services, cost advisory services, security consulting services, supervisory construction and engineering expertise during realisation, etc. Other costs are miscellaneous, such as insurances and other fees, and the conduct of special studies, for example, of the soil of the plot for contaminants.
104. Table 3 below provides the current cost estimate as compared to the more detailed breakdown of the Needs Statement (column B) shown in Table 2.

TABLE 3: COMPARISON OF NEEDS STATEMENT COST ESTIMATE WITH CURRENT ESTIMATE

ChemTech Centre Project Cost Estimate	<u>COLUMN A</u> Breakdown of Needs Statement Estimate (Dec 2017, in EUR)	<u>COLUMN B</u> Current Estimate (June 2019, in EUR)
Land purchase and related costs	3,000,000	2,663,000
Design cost	1,252,000	1,685,000
Building cost	13,099,000	16,224,000
Equipment costs	1,000,000	1,050,000
Furniture and workstations	924,000	924,000
Outside area and site infrastructure	154,000	553,000
Transition costs	300,000	316,000
Decommissioning of facilities	1,000,000	1,000,000
OPCW project management staff	500,000	1,505,501
Project management and advisory services	2,525,000	2,525,000
Contingency	1,146,000	2,809,000
Subtotal	24,900,000	31,254,501
Programme support costs (7%)	<i>not included</i>	2,187,815
Total	24,900,000	33,442,316

105. As shown in Table 3 above, the increase in the building cost of the ChemTech Centre is the largest driver of the higher cost estimate for the project. This increase is primarily due to two factors: (1) the different methods used to calculate the estimates in the Needs Statement and the current estimate, and (2) the addition of new items to the scope of the project, such as the indoor training facility.
106. The calculation of the estimate in the Needs Statement was based on an application of average market costs per square metre for the different types of spaces in the building, e.g., laboratory, office, and warehouse. As the programme of requirements was not finalised until 2019, the information used to calculate the estimated construction cost in 2017 was substantially less detailed. Additionally, the average market costs applied to the different areas of the building themselves relied on assumptions regarding the complexity of the type of space to be constructed, and therefore did not reflect the particular complexity of the corresponding space in the ChemTech Centre.
107. The final programme of requirements reflects a detailed understanding of the functions and functional areas of the ChemTech Centre, and their specific complexities, and as a result does not rely on such assumptions. The current cost estimate reflects a well-developed understanding and identification of the specific requirements of the ChemTech Centre. With regard to design costs, the increased

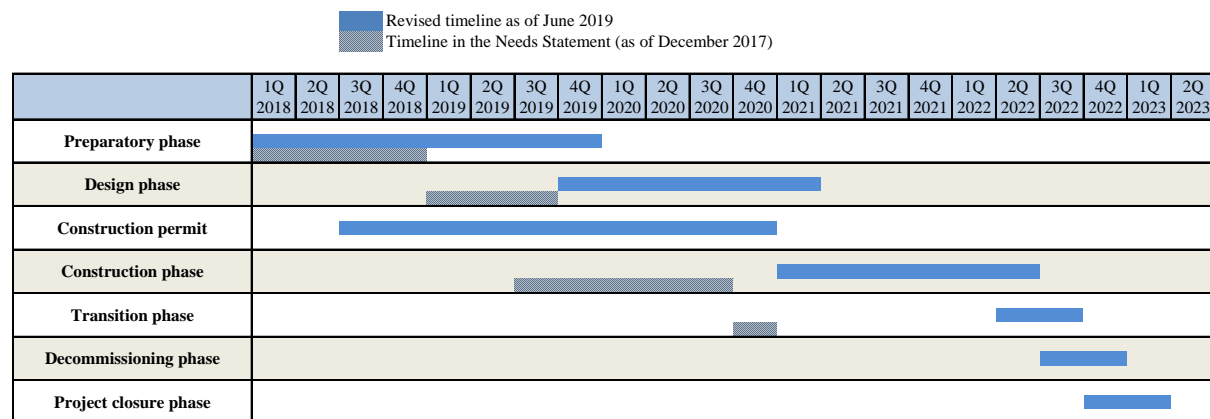
specification of the complexity of the construction requirements, in addition to new design requirements such as the indoor training facility, are the causes for the increase in these costs.

108. As stated in paragraph 51, the specific requirements of the identified plot have resulted in higher estimated costs for the area outside the ChemTech Centre and the site infrastructure required for this area. However, the actual EUR 2.3 million cost of this plot, which has been agreed in the reservation agreement with the municipality of Pijnacker-Nootdorp, subject to the completion of the purchase agreement, is lower than was anticipated in the Needs Statement. This lower cost is reflected in the land purchase and related costs category of expenditure. This category of expenditure also includes fees associated with the purchase of the land as well as the cost of studies to ensure its readiness for construction, such as a soil sampling study to ensure the absence of contaminants.
109. The OPCW's project management costs have increased by approximately EUR 1 million based on the composition of the dedicated project management team that was approved by the Project Board. A dedicated project management team was not envisaged for the project in the preparation of the Needs Statement, but in 2018 it was deemed necessary to have such a team in place based on lessons-learned discussions with other international organisations.
110. Project management and advisory services costs account for the considerable external expertise and support that will be required to ensure effective and efficient implementation of the project. These costs are planned to fund the following, for example: the services of the external legal counsel referred to in paragraph 30; an independent cost adviser to provide the Project Manager with independent assessments regarding cost estimates prepared by the design team and the best use of cost-saving approaches in construction of the new facility; and independent architectural and engineering supervisors who will be on the construction site to verify that the construction contractor is building the ChemTech Centre in accordance with the building's design.
111. The contingency now set aside in the cost estimate reflects both the larger size and greater degree of complexity in the building that is reflected in the programme of requirements, as well as the longer project timeline now anticipated for the project's completion. This level of contingency is consistent both with market standards and similar construction projects implemented by other international organisations in recent years.
112. The cost estimate in the Needs Statement did not reflect PSC. The current estimate includes PSC, which is charged at a flat rate of 7% on all voluntary contributions.
113. The total project cost estimate shown in Column B of Table 3 carries a certainty of $\pm 10\%$ and is subject to change based on the results of the design process. The final cost estimate will be available once the building's design is complete.

Revised timeline

114. Figure 6 below provides a comparison of the initial timeline from the Needs Statement with the current timeline.

FIGURE 6: COMPARISON OF CURRENT TIMELINE WITH NEEDS STATEMENT TIMELINE



115. As shown in Figure 6 above, the timeline of the project consists of the phases outlined as follows:
- (a) Preparation phase: Initial phase comprised of project set-up and organisation, search for and identification of a suitable plot for construction, fundraising, and design tender process.
 - (b) Design phase: First implementation phase consisting of the design of the ChemTech Centre and the construction tender process. Fundraising must be completed during this phase.
 - (c) Construction phase: Finalisation of the design by the design team and construction contractor followed by realisation of the building. The transition plan will also be developed during this phase.
 - (d) Transition phase: Move from the current facility in Rijswijk to the new facility, commissioning of the new facility, and start of use.
 - (e) Decommissioning phase: Decommissioning of the Rijswijk facility.
 - (f) Project closure phase: Administrative processes to close the project and the preparation and submission of final project reports.
 - (g) Construction permit: This is not a phase of the project, but it is shown since obtaining the required permissions to build the ChemTech Centre is essential and expected be the longest-running task associated with implementation of the Project.
116. Figure 6 also illustrates the extent to which the timeline for the project has been extended since the issuance of the Needs Statement in December 2017. There are multiple reasons for this extension.
117. With regard to the preparatory phase, there are two causes for the extension of the timeline. Firstly, the search for and identification of a suitable plot upon which to

build the ChemTech Centre required more time than was initially anticipated. As the design tender process could not begin until a specific plot of land for the project was both identified and secured to ensure the project's further implementation, this delayed the start of the subsequent design tender process. Secondly, to ensure the success of this tender process, the Secretariat elected to conduct a two-step procurement procedure that began with a pre-qualification of interested bidders followed by request for proposals. The initial timeline did not foresee such a procedure, which resulted in a further extension of the initial phase of the project.

118. A similar procedure will be followed for the construction tender, which also was not foreseen in the initial timeline. Consequently, the design phase has been extended to account for a longer construction tender process. This phase has also been extended to account for the difference in time that will be required to design to the detailed requirements in the final programme of requirements, as compared to the less detailed needs in the general programme of requirements. The construction phase has been extended for the same reason.
119. Furthermore, the initial project timeline was based on a single-tender procurement strategy in which all required tender processes would be conducted before the start of the design phase, as this was deemed to be the fastest and simplest procurement strategy. However, as described in paragraph 19, such strategies were shown to be impracticable due to the project's fundraising progress and requirements. Therefore, a decision was taken to conduct separate design and construction tenders, which had further impacts on the project's timeline.
120. With regard to the last three phases of the project, the transition phase has been extended somewhat to ensure that sufficient time is allotted for the various activities to be implemented. The decommissioning and project closure phases were not included in the initial timeline for the project, which is the reason for these additional extensions to the timeline.

FINANCIAL STATUS AND REGULAR BUDGET IMPACTS

Financial status

121. To date, approximately EUR 28.3 million in voluntary contributions has been pledged or provided to the project's Trust Fund. As shown in Table 4 below, these contributions have been made or pledged by 17 States Parties and the European Union. Additional States Parties have indicated that they are considering making contributions.

TABLE 4: VOLUNTARY CONTRIBUTIONS AND PLEDGES IN PROGRESS

Contributor	Amount (in EUR)
Bangladesh	13,305 (USD 15,000)
Belgium	2,000,000
Canada	4,975,077 (CAD 7,500,000)
France	1,200,000
Ireland	30,000
Italy	150,000
Japan	2,400,000
Kazakhstan	10,000
Netherlands	2,300,000
Pakistan	10,000
Poland	100,000
Republic of Korea	120,092 (USD 140,000)
Slovakia	30,000
Slovenia	10,000
Spain	60,000
United Kingdom	599,094 (GBP 516,000)
United States	6,153,000 (USD 7,000,000)
European Union	8,131,000
Total	28,291,568
Other contributors	
Estonia	Undisclosed amount

122. A further EUR 5.2 million is required to reach the project's current target cost of EUR 33.5 million. As the ChemTech Centre will offer potential benefits for all States Parties, the Secretariat is seeking to obtain contributions from as many States Parties as possible, and from all geographic regions. Contributions of any amount can be made, and all contributors will be publicly recognised at a designated area in the ChemTech Centre.

123. The remaining required funds will be needed within approximately 12 months, at which time the Secretariat will be conducting the tender process for the project's construction contract. All required funds must be pledged or provided before the construction contract can be signed.

Regular budget impacts

124. Once the ChemTech Centre becomes operational, which is currently scheduled to occur at the end of 2022, it will begin to incur operational, maintenance, and capital maintenance costs. While having a newly built, owned facility with energy and resource efficient construction will be more cost efficient on a per-square-metre basis than the current rented facility in Rijswijk, the larger footprint of the ChemTech Centre and its outdoor area are expected to result in additional operational and maintenance costs. However, the net impact of these costs on the regular budget is still to be determined as the ChemTech Centre will also generate savings through the indoor training facility and the elimination of rental costs.
125. It will be possible to estimate the additional costs of the facility only once design development is sufficiently advanced, as the design of the facility will be a primary driver of its expected running costs. Based on the current schedule for the design phase, initial estimates of the building's future running costs will become available within approximately one year. The Secretariat will closely monitor and manage the design's impact on running costs, as well as other aspects of the new facility that will impact running costs, and will keep States Parties informed of the ChemTech Centre's potential impact on the 2023 regular budget.
126. As is the case with any constructed facilities, the ChemTech Centre will require capital maintenance throughout its lifetime to maintain its technical capabilities, operational effectiveness, and structural integrity. Such expenditures are distinct from the routine operational and maintenance costs that are normally provided for by the General Fund, and are ideally addressed as a separate budgetary requirement. During the Fourth Special Session of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention, the Secretariat requested the establishment of a Special Fund for Major Capital Investments, a resource pool that would enable the Secretariat to appropriately plan for and manage its capital expenditures. Capital maintenance of the ChemTech Centre could be an appropriate expenditure to be funded from such a resource.
127. As is described in the Needs Statement issued in December 2017, it should be recalled that without construction of the ChemTech Centre, the Secretariat would in any case be confronting considerable expense to ensure the continuing operations of the Laboratory and Equipment Store due to the increasing deficiencies and aged nature of the current facility. Of the options that were considered to address this oncoming challenge, construction of a new, purpose-built facility was determined to offer both the greatest benefits, and the lowest risk and uncertainty in terms of enabling the OPCW to plan for and manage the future costs of operating the Laboratory and Equipment Store.

NEXT STEPS

128. A key focus of the project in the coming months will be to complete the preparation phase and begin the design phase. The preparation phase will be completed once the Secretariat finalises the recruitment of the Project Management Team, as well as the design tender, which will enable the start of the design phase. All members of the Project Management Team are expected to be in place in September 2019, and the design tender is currently planned for completion in the fourth quarter of 2019.
129. In parallel, the Secretariat will continue negotiations with the municipality of Pijnacker-Nootdorp to finalise the purchase agreement for the plot on Business Park Heron. The agreement is expected to be concluded by the end of December 2019. As part of the project's communication strategy, the Secretariat will engage with its future neighbours in the business park and with the local community to inform them of the work of the OPCW and ChemTech Centre, and to assure them that the OPCW will be a positive and reliable member of the community.
130. The Secretariat will maintain its engagement with States Parties through briefings, bilateral meetings, and the issuance of further written updates on the status of the project. This engagement will focus on keeping States Parties informed of the progress of the project, and on mobilising the remaining required resources for construction. In this regard, the Secretariat expresses its gratitude to the Permanent Representative of Canada to the OPCW, H.E. Ms Sabine Nölke, and the Permanent Representative of Indonesia to the OPCW, H.E. Mr Gusti Agung Wesaka Puja, for serving as the Co-coordinators of the Friends of the Laboratory Group. The Friends of the Laboratory Group is an informal group open to all States Parties that are interested in providing financial and other support to the Project, and in raising awareness of the project among other States Parties.
131. To further engage States Parties, the Secretariat is considering options for conducting a workshop in 2020 in which the Secretariat would present a preliminary design of the ChemTech Centre to States Parties for their consideration. The workshop would be open to all States Parties, and all States Parties would have the opportunity to send technical experts to review and comment on the feasibility, suitability, and affordability of the design to contribute to its development. The Secretariat will provide further information on this potential event in due course.
132. With regard to other stakeholders, a dedicated webpage for the project on the OPCW website, news stories and press releases, periodic newsletters providing brief updates, and social media will be utilised to share public information with States Parties and other stakeholders. New products such as the webpage and newsletters will be developed and put into use in the coming months.
133. The Secretariat will continue to provide States Parties with briefings and written reports to keep them informed of the status of the project.