



Annex 3

Terms of Reference (ToR) Conference Facilities Booking Tool Requester: Common Services Section, UNV Bonn

I. Background

The United Nations Campus in Bonn is home to 23 UN organizations, agencies, and convention secretariats, in their entirety referred to as UN Bonn. Sharing the same buildings gives opportunity to also share certain facilities and support services while gaining efficiencies and saving costs. Besides the joint management of the premises, central ICT infrastructures, and central services such as safety and security, mail logistics, system-wide surveys and host country liaison also dedicated conference facilities are provided to the organizations on a common basis. To manage the provision of these services to all resident agencies at two locations is the function of the Common Services Section (CS), which is hosted organizationally and administratively under the framework of the United Nations Volunteers (UNV) Program.

The UN organizations in Bonn occupy two distinct locations and several buildings. At the UN Campus the so called 'Langer Eugen' and the 'Altes Abgeordnetenhaus' are located at Platz der Vereinten Nationen 1, and 'Haus Carstanjen' is another UN location at Martin-Luther-King-Straße 8. Within the next couple of years more buildings will be added with additional common areas and common conference facilities.

The presently occupied UN Bonn common conference rooms are fully equipped with high standard audio/ video equipment. Internal as well as external services such as for example conference IT-support and catering are provided in the dedicated areas.

Due to an increasing number of conferences, meetings and dedicated common areas, the Common Services Section (CS) seeks a centralized online based booking tool to manage booking requests and conference related services in a transparent, efficient and user friendly.

CS is looking for a standardized booking service which will give meeting organizers a transparent overview of common areas and available services.

The tool should have several key features, including inter alia, being web based with secure worldwide access, being modular and customizable with options to add additional functions and a variety of interfaces, enabling connectivity and interface function with other systems, and possessing multilingual interface applications. In addition, cost overview, real-time availability check of services, and systematic recording of all booking relevant data are important aspects. Workflow design should allow direct booking for certain areas as well as booking only by approval through an administering unit. The tool shall include applications for digital signage and digital door signs.

This Term of Reference (ToR) serves to specify the detail requirements, workflow and required functions of the booking tool.



Basic definitions and terminology

Administering Unit: Organizational entity that “owns” the room, responsible for [its overall condition and] for confirming/declining bookings. Can be the Common Services Section or a UN Bonn Agency [or a specific unit within a UN Bonn Agency]

- **Organizer:** Agency organizing a conference/meeting/event
- **Requester:** Individual or organizational unit authorized and enabled to request a booking with the administering unit. Serves as focal point vis-à-vis all parties involved in the organization of the event.
- **User:** Individual or unit from UN Bonn Agency (or other UN agency) organizing the event/using the facilities and services. To be identified by the Agencies. (The approximate number of users will be 1000 – 1500).

Locations and common areas:

Langer Eugen:

- **Conference rooms:** 1916, 2112, 2116, 2105, 2312, 2705, 2712 and 2716
- **Meeting rooms:** 130, 132, 2120,
- **Videoconference rooms:** 128
- **Common areas:** Canteen VIP area, lobby, accreditation desk

Altes Abgeordnetenhochhaus:

- **Conference rooms:** Upper conference room (EG01), Lower conference room (UG02)
- **Optional:**
Meeting rooms: V-U 111, H-110 (Videoconference facility), H-308 (Videoconference facility), H-508, S-U 112, S-U 212
- **Common areas:** Cafeteria, Atrium, accreditation desk

UN Erweiterungsbau:

- **Conference Room: 1st Floor**

Main Entrance Building:

- **Common areas:** Accreditation desk

Haus Carstanjen:

- Videoconference room B-building



Digital Signage Locations:

Campus Main Entrance Building

Langer Eugen

- Lobby
- Altes Abgeordnetenhochhaus Main Entrance
- Upper Conference Room
- Lower Conference Room

UN Erweiterungsbau

- Lobby
- Conference Room

Interactive Wayfinding/ Kiosk System locations:

- Campus Main Entrance Building
- Langer Eugen
- Altes Abgeordnetenhochhaus
- UN Erweiterungsbau



II. Booking Tool Specifications and Requirements

Tool core requirements

- The booking tool should be a secure encrypted web interface i.e. using valid SSL certificates and directly accessible/available worldwide for users and administrators.
- Access should be possible for different operating systems (Microsoft, OSX and Linux) and web browser (Internet Explorer, Google Chrome, Safari, Firefox, etc.).
- The tool should provide high level of security standards to ensure data protection, data privacy, provide data control and adequate measures to protect from malicious adversaries.
- The tool is required to operate continuously (365 – 24/7) within a reliable hosting environment, continuous data backup and stable functioning of the system.
- The tool should be capable to differentiate between different interfaces (user-, administrator, system administrator... etc).
- The tool should be adaptable and allow the administering unit to customize individual workflows and services for multiple types of users/accounts.
- The tool should be modular with the opportunity to add additional functions over time by the administering unit.
- The system should offer APIs and interfaces to other systems.
- Communication and information exchange should be based on secure email communications.
- The tool should have an interactive calendar and multilingual (English, French and Spanish) interface applications.
- The tool should offer connectivity/ software interfaces to other operating systems.
- The tool should be equipped with automated calculation and accounting functions.
- The tool should generate statistics and feature automated e-mail notifications.
- The tool should include digital signage, electronic door signs and interactive wayfinding/Kiosk functions with 3rd party integration. (e.g. Crestron).



Tool specific requirements

1 Booking requirement

- 1.1 Bookings can be made directly by users and requesters. Bookings can be made through a booking form or an interactive calendar.

- 1.1.1 The calendar should give users the overview as follows:

- 1.1.1.1 *Daily overview*

- 1.1.1.2 *Weekly overview*

- 1.1.1.3 *Monthly overview*

- 1.1.1.4 *Quarterly summary*

- 1.1.1.5 *Year Summary*

- 1.1.2 Bookings can be done directly in the calendar (via drag and drop in the calendar)

- 1.2 Booking layouts - The tool needs to offer:

- 1.2.1 Different booking masks or specifications shall be deposited in respect of the booking process for different types of events.

- 1.2.2 The booking mask should have required fields.

- 1.2.3 The space management system should recognize during the booking, which services are needed and automatically triggers the service partition.

- 1.2.4 All requester and organization related information should be deposited in a database and automatically take over in the booking mask.

- 1.2.4.1 *Organization*

- 1.2.4.2 *Name of requester*

- 1.2.4.3 *Contact details of Requester and Focal point*

- 1.2.5 Information such as Organizations and Meeting titles should be invisible in the calendar view for 3rd parties.

- 1.2.6 The tool should include function for organizer to provide feedback after the event (automated link).

- 1.3 Booking interface

The tool should be able to provide a number of interfaces associated with different accounts (e.g. requester, users, administrators and system administrator).



- 1.3.1 Date and period of time - different booking periods in terms of rental of rooms, services and related costs (per hour, half day, one day, several days)
- 1.3.2 Number of participants
- 1.3.3 Organization
- 1.3.4 Organizer / Requester
- 1.3.5 Meeting Title
- 1.3.6 Title displayed on the digital signage
- 1.3.7 The site selection should be possible both via keyboard entry as well as a graphical representation of the locations (drop down list).
- 1.3.8 Room overview
 - 1.3.8.1 *The list overviews contain sorting, filtering, and group functions*
 - 1.3.8.2 *Selection of photos*
 - 1.3.9 Floor plans (CAD drawings)
 - 1.3.10 Required seating layout (seating options via drop down list)
 - 1.3.11 Different types of additional services (Catering, Technical support...)
 - 1.3.11.1 *The user should be able to book several services and additional resources for an event*
 - 1.3.11.2 *Technical equipment*
 - 1.3.11.2.1 Conference related devices
 - 1.3.11.2.2 IT related devices
 - 1.3.11.3 *Special services*
 - 1.3.11.3.1 Conference Services
 - 1.3.11.3.2 Catering
 - 1.3.11.3.3 Security
- 1.3.12 Set-up times for each service options should be automatically considered.
- 1.3.13 Real-time availability of technical and logistical items.
- 1.3.14 The Administrator should be able to add new suppliers, services and equipment.
- 1.3.15 Services such as catering should be bookable without a related room.
- 1.3.16 Additional special requirements.
- 1.4 Type of bookings
 - 1.4.1 System should automatically search for rooms per the requirements.
 - 1.4.2 All eligible areas should be displayed in a clear list.
 - 1.4.3 Automatic selection room with priorities / Quick reservation.
 - 1.4.4 Several rooms for conferences can be booked for the same period. All required room and service-related information/costs should be displayed and listed in one booking.
 - 1.4.5 Serial bookings should be possible.



1.4.6 Limitations by Administrator

- 1.4.6.1 *Extension of serial bookings over a period and the number of bookings should be limited.*
- 1.4.6.2 *The maximum number or the maximum amount of bookings should be possible to limit for each organization by the administering unit.*

1.4.7 Single or series bookings should be processed simultaneously.

2 Locations booking

- 2.1 Booking of locations should have the following features
 - 2.1.1 Rooms should be automatically selected by the system per the requirements or manually by clients via drop down menu and automatic sorting function.
 - 2.1.2 Rooms should be categorized in different types (conference rooms, meeting room, open spaces, canteen...).
 - 2.1.3 Filter function for available spaces.
 - 2.1.4 Specs should be deposited with the rooms.
 - 2.1.5 Room selection using graphic display should be possible.
 - 2.1.6 Services should be recorded for every single room and booking request.

3 Cancellation

- 3.1 Cancellation of bookings should be possible.
- 3.2 Cancellation of rooms and services should be automatically detected by the system and information on the cancellation policy, incl. fees should as well be automatically displayed.

4 Workflow and management of booking requests

- 4.1 Meeting rooms and Videoconference rooms can be booked directly.
- 4.2 Certain areas such as conference rooms and common areas can only be confirmed by the administering unit.
 - 4.2.1 Room requests can be confirmed or rejected by the administering unit.
 - 4.2.2 The room should be reserved until the administering unit confirmed or rebuffed the request.
 - 4.2.3 The organizer will be automatically informed via email on confirmation or rejection of the booking.
- 4.3 Waiting lists will be automatically created for specific locations and periods.
- 4.4 The system allows users different type of booking related reviews.
- 4.5 Administrator, requester or his representative should be able to edit/ modify bookings.
- 4.6 Participants and service provider will be automatically informed.
- 4.7 The system should be able to record all booking related changes.



5 The system should be able to display different booking status Distribution of booking related information

- 5.1 Booking related information will automatically be distributed via email.
- 5.2 Conference organizer/requester should be automatically reminded before (specified time by the administrator) the meeting starts via e-mail.
- 5.3 Service provider should be informed regarding booking of services and changes.
- 5.4 Cancellation link will be provided in the confirmation and in reminder emails/ Bookings. can be canceled in the mail by clicking a link.
- 5.5 The availability of the participants list should be determined via an interface.

6 Disposition of Requests (Administering Unit)

- 6.1 Various event types should have different type of booking masks or specification which will be automatically selected during the reservation process.
- 6.2 The administering unit should be able to edit bookings as follows:
 - 6.2.1 Reposting (date, place, topic, etc.)
 - 6.2.2 Edit ... (book, cancel, edit - services)
 - 6.2.3 Editing the list of participants
 - 6.2.4 Editing of documents
 - 6.2.5 Duplicate bookings
 - 6.2.6 Cancellation of bookings
- 6.3 Booking changes should be automatically send via mail to all related service provider.
- 6.4 The calendar should give administrators the overview as follows:
 - 6.4.1 Daily overview
 - 6.4.2 Weekly overview
 - 6.4.3 Monthly overview
 - 6.4.4 Quarterly summary
 - 6.4.5 Year Summary
 - 6.4.6 Agenda Overview
 - 6.4.7 Timeline overview
- 6.5 Appointments can be moved via drag and drop in the calendar.
- 6.6 Serial bookings can be edited, extended and merged.
- 6.7 Booking related door signs can be printed out automatically.
- 6.8 Administering Unit should be able to block rooms for maintenance.
- 6.9 All booking affected services related to the room should be automatically rebooked and service provider need automatically be informed.



- 6.10 Closures affected room bookings can be automatically distributed to a particular room or several rooms of a building, under consideration of all appointments, deadlines and services.
- 6.11 Disposition rights for individual rooms can be awarded by the administrator.
- 6.12 Administrators can edit (accept, reject) booking requests from users in assigned areas.
- 6.13 Administrators can leave while processing booking requests additional comments, which gets displayed the user who made the request.
- 6.14 Final bookings should be summarized in a document.

7 Suppliers and service provider

- 7.1 Suppliers and service provider and associated contact details will be provided in the system.
- 7.2 The system should be able to differentiate between external and internal supplier and the related services.
- 7.3 Services and equipment need to be confirmed by the supplier and/or service provider.
- 7.4 For bookings, the system should provide summarized and conditions of all services.
 - 7.4.1 Different working hours need to be considered by the system.
- 7.5 Security related services costs should be automatically generated through the number of participants.
- 7.6 The available services should be flexible and initially include the following
 - 7.6.1 Catering
 - 7.6.2 Consumables with/without quantity restrictions
 - 7.6.3 Rental products with quantity restrictions
 - 7.6.4 Services (technical and logistical equipment /catering)
- 7.6.4.1 *The service can be booked for pickup*
- 7.6.4.2 *The service can be booked as a delivery to an area or room.*
- 7.7 The area of responsibilities of service providers can be defined to any location, building, room and user.
- 7.8 Information of availability should be displayed in real time.
- 7.9 Option to restrict booking of articles, services and rooms to certain users.
- 7.10 Articles, services and rooms must be designed so, that they can only be booked by certain users.
- 7.11 Orders and booking changes will be sent via e-mail.
- 7.12 Booking lists can be filtered, grouped, sorted and can be displayed and exported.
- 7.13 Invoices can be generated.
- 7.14 Orders a service provider can be displayed in a calendar with daily, weekly and monthly view.
- 7.15 Processing of the order by the service provider is possible before and during the event.



- 7.16 The request for special services and their related costs, which are not included in the List of service, is possible.
- 7.17 Creating groups for provided services is possible.

8 System generated mails for users and organizers

- 8.1 All information exchange should be based on secure email communication systems.
- 8.2 The following types of messages will be sent by the system automatically:
 - 8.2.1 Confirmation (single reservation and booking series)
 - 8.2.2 Change of reservation
 - 8.2.3 Reminder Mail
 - 8.2.4 Cancellation mail (single reservation and booking Series)
 - 8.2.5 Confirmation (single reservation and booking series)
 - 8.2.6 Change of bookings
 - 8.2.7 Order of services
 - 8.2.8 Changes in Services
 - 8.2.9 Confirmation of service orders
 - 8.2.10 Cancellation of services
 - 8.2.11 Series ordering services
 - 8.2.12 Client survey (form, online link) after the event
- 8.3 Wording of email communication and information automatically generated by the system should be adjustable by the administering unit.
- 8.4 Function to send system generated emails at predefined times (e.g. reminders)
- 8.5 Confirmation/ reminder mails send to organizer of an event include automatically cancelation link.

9 Statistics – generated by the system

- 9.1 The following statistics in the system should be generated:
 - 9.1.1 Room utilization
 - 9.1.2 Room utilization without Sundays and holidays
 - 9.1.3 Room utilization for core time
 - 9.1.4 Room bookings
 - 9.1.5 Room cancellations / cancellation fees
 - 9.1.6 Average booking time / Number of persons
 - 9.1.7 Room popularity
 - 9.1.8 Volume Report
 - 9.1.9 Costs (rent, catering, technology, ...) / Account / Location
 - 9.1.10 Daily space utilization
- 9.2 Further statistics of all data of the system can be created



- 9.3 Forecast can be generated
- 9.4 Statistics can be visualized in tables and graphics
- 9.5 Statistics and data can be easily exported (CSV for MS Excel/PDF)
- 9.6 User/organizer feedback data and statistics can be generated

10 Information/security office

The tool should be able to provide information to security suppliers and/or 3rd parties

- 10.1 The Information/security office should receive basic overview data
 - 10.1.1 Name, type of meeting, organizers
 - 10.1.2 Number of participants
- 10.1.2.1 *Option to upload participants list*
- 10.2 Request for temporary access cards to enter the campus.
- 10.3 Option for visitor badges to be generated by the system.
- 10.4 List of all current visitors will be displayed in real time.

11 Digital Signage/ interactive Kiosk system / Interactive Door Signs

- 11.1 The system should be able to generate daily, weekly and monthly meeting overview for digital signage displays.
- 11.2 Aside from dedicated areas for the digital signage system, the system should include the interactive electronic door signs and for all rooms and Interactive wayfinding / kiosk system applications should be integrated for all related areas.
- 11.3 The tool needs to provide interfaces for integration to other 3rd party hardware and applications (door signs and interactive kiosk systems).



III. Other technical requirements & Services

12 Information and data deposit

12.1 Rooms

12.1.1 Dedicated number of spaces can be created by the administering unit.

12.1.2 Rooms and areas can be assigned to sites, buildings and floors.

12.1.3 The following attributes should be assigned to rooms.

12.1.3.1 *Room size*

12.1.3.2 *Interiors*

12.1.3.3 *Technical installations*

12.1.3.4 *Any number of user-defined attributes*

12.1.3.5 *Seating options*

12.1.3.6 *For each room, several seating arrangements can be managed with minimal/ maximal person occupancy.*

12.1.3.7 *Seating arrangements displayed as graphics.*

12.1.4 Set-up times for each seating options should be automatically considered.
Set-up times for rooms should be considered.

12.1.5 Costs of services and resources should be generated by the database.

12.1.6 Seating arrangements can be extended for each room by the administering unit.

12.1.7 Early reservation can be detected for rooms.

12.1.8 It should be possible to attach documents to a booking.

12.1.9 Room graphics

12.1.10 Floor/ground plans

12.1.11 Technical documentation

12.1.12 Room costs should be automatically generated per day and total duration of the conference (for reserved rooms).

12.1.13 The system should consider weekend, official German and UN holidays.

12.1.13.1 *The system should automatically generate additional mandatory interfaces for services requested outside of regular business hours.*

12.2 The booking tool should consider the language setting of the browser and the language should switch automatically.



13 Maintenance and update of the system

- 13.1 New services should be defined and configured by the administering unit
- 13.2 Offers can also be adjusted by the administering unit
- 13.3 Suppliers can be generated by the administering unit
- 13.4 The service providers should be listed/managed with their contact details incl. Its employees and representatives are managed in the master data.
- 13.5 The bookable service incl. the costs should be recorded in the database dependent on location and service and adjusted by the administering unit.
- 13.6 Order overviews of different services can be created for entered periods.
- 13.7 Unused services as Catering products can be removed after the meeting or the event and therefore not considered in the invoice.
- 13.8 Monthly/Quarterly Client survey should be generated automatically (email document)

14 Hosting and backup services

- 14.1 The system and database should be hosted by a service provider with clearly defined service criteria, including for maximal uptime, prompt incident management and a responsive, easily accessible service desk.
- 14.2 The provider need to assure a reliable hosting environment and stable functioning of the system which is required to operate continuously (365 – 24/7).
- 14.3 The provider should guarantee continuous data backup and necessary system and software updates. In case of a serious incident, the restoration of the system from the most recent backup needs to be assured.
- 14.4 All data including backups to be owned by the UN Bonn/ Common Service Unit and not the provider.



15 Security settings and requirements for the system

- 15.1 The tool should be accessible through a secure encrypted web interface i.e using valid SSL certificates.
- 15.2 Access control to be based on Security Assertion Markup Language 2.0 (SAML 2.0) standard exchanging authentication and authorization data between security domains.
 - 15.2.1 Assertion Query and Request Protocol
 - 15.2.2 Authentication Request Protocol
 - 15.2.3 Artifact Resolution Protocol
 - 15.2.4 Name Identifier Management Protocol
 - 15.2.5 Single Logout Protocol
 - 15.2.6 Name Identifier Mapping Protocol
- 15.3 The tool should provide high level of security standards to ensure data protection, data privacy, provide data control and adequate measures to protect from malicious adversaries.

16 Interfaces should be supported as follows:

- 16.1 Active Directory
- 16.2 LDAP
- 16.3 X.500
- 16.4 CSV (for import into e.g. MS Excel)
- 16.5 WebDAV
- 16.6 Exchange / Outlook integration
- 16.7 Cisco Tele Presence Manager integration
- 16.8 SharePoint



17 Mobile Application

- 17.1 The application should allow the organizer to have access to the same user account which interacts with the Web application.
- 17.2 The user account assigned rights of the web application will be recognized by mobile application.
- 17.3 Booking request forms should include at least the following elements:
 - 17.3.1 Number of persons
 - 17.3.2 Room type
 - 17.3.3 Venue selection
 - 17.3.4 Room attributes
 - 17.3.5 Seating arrangement
 - 17.3.6 Services (catering, equipment, etc.)
 - 17.3.7 Organizer
 - 17.3.8 List of participants
- 17.4 Users should be able to adjust reservations/book

IV. Expected Time lines of Procurement and Operationalization of the booking tool

- November 2020 – Initiation of the tender process
- November 2020 – Assessment of Offers
- November 2020 - Presentation of the booking tool to UN Bonn by preselected providers
- December 2020 - Awarding
- December 2020 - Customization of the system according to the UN Bonn requirements
- December 2020 – Upload of information and test run with internal and external parties
- January 2021 - Launch of the UN Bonn booking tool