

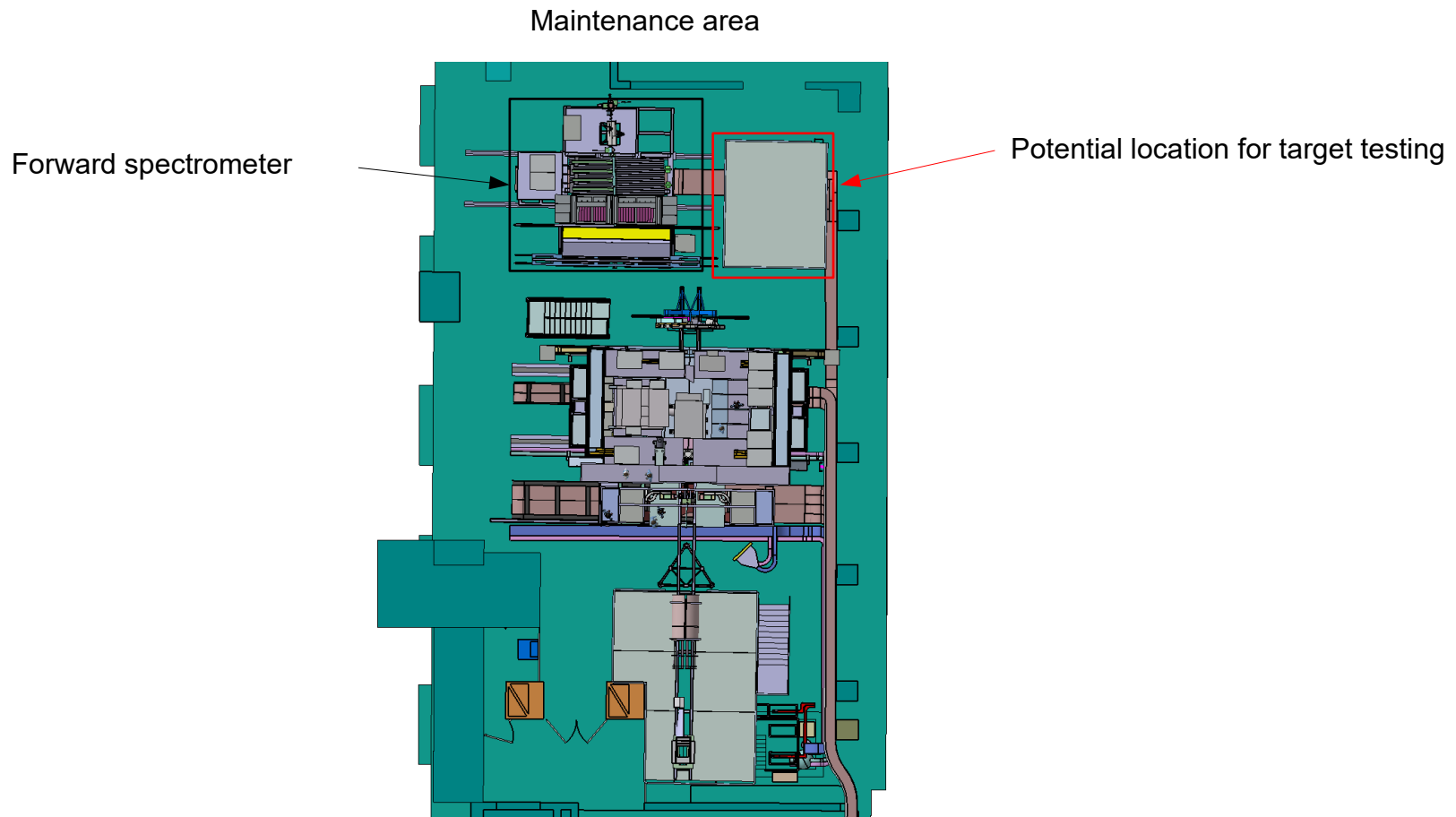
Extended platforms in the maintenance area

First Design

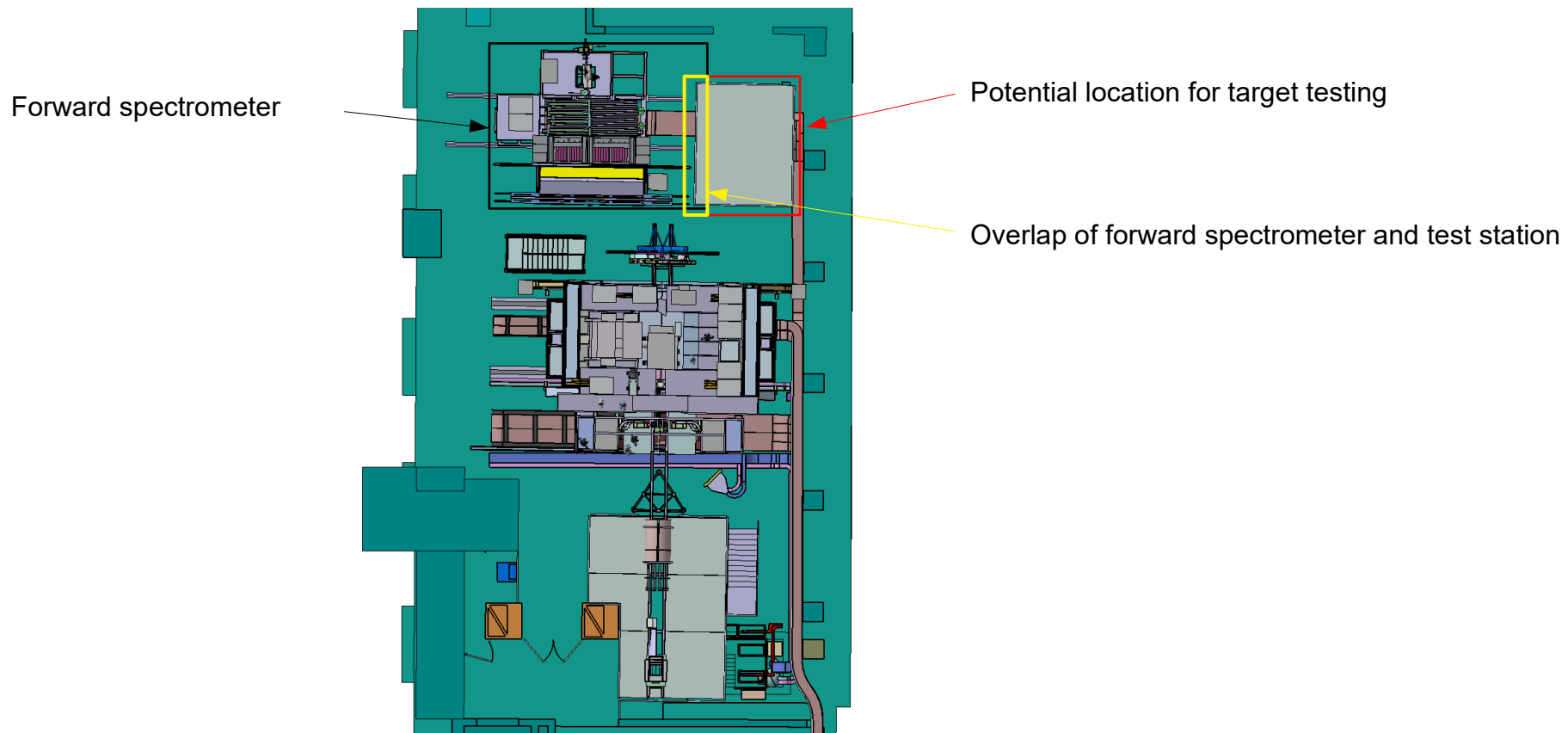
Requirements:

- We need a additional platform for testing the target systems in the maintenance area.
This platform has to be available permanently, so that one target systems can be tested when the other is in use.
- There is also a request for a place where we can install a clean room.
For ergonomic reason, the clean room should be close to the installation platform or near the Maintenance area of the inner detectors.

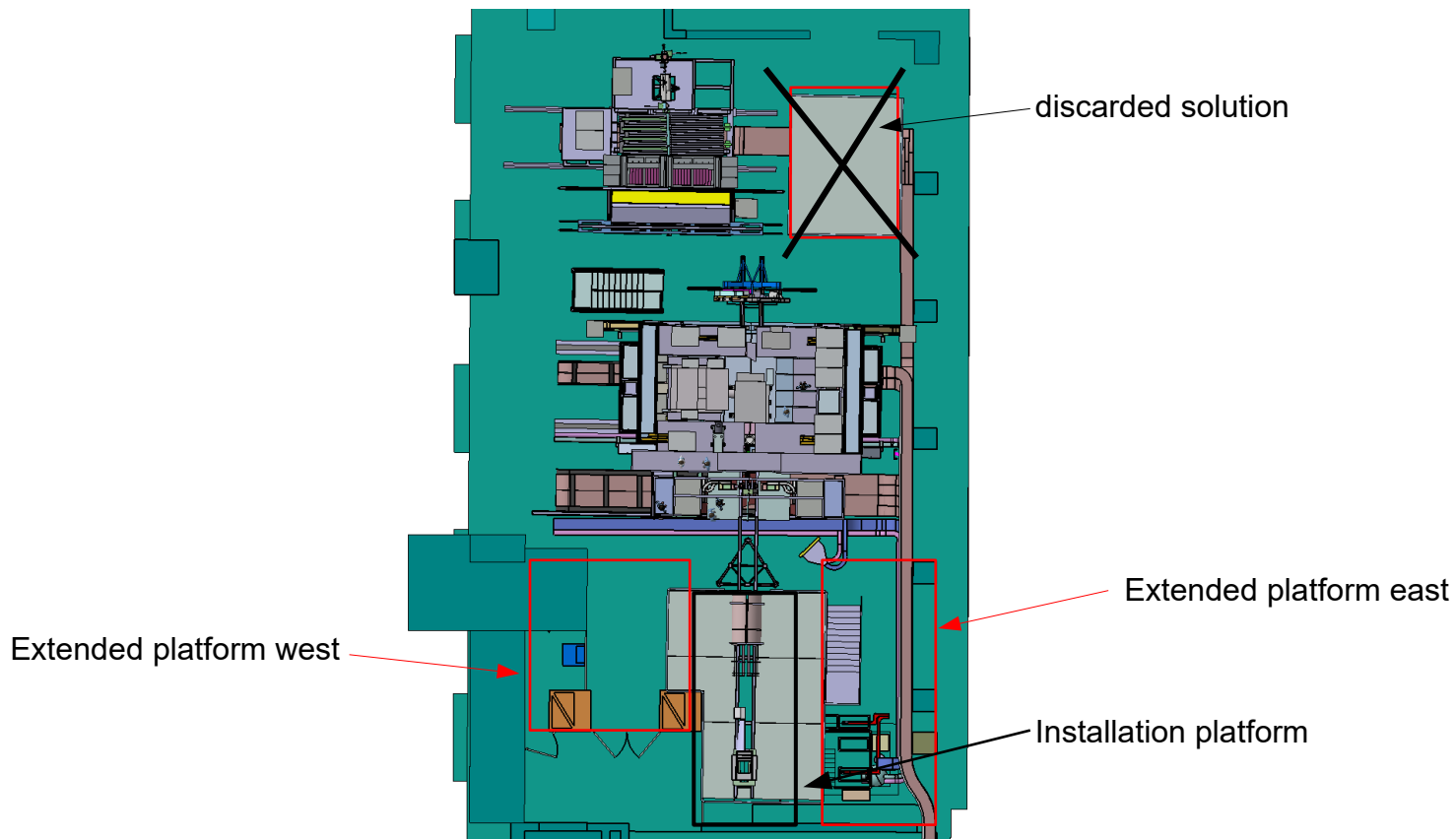
For the location of the target testing, a first approach was beside of the forward spectrometer.



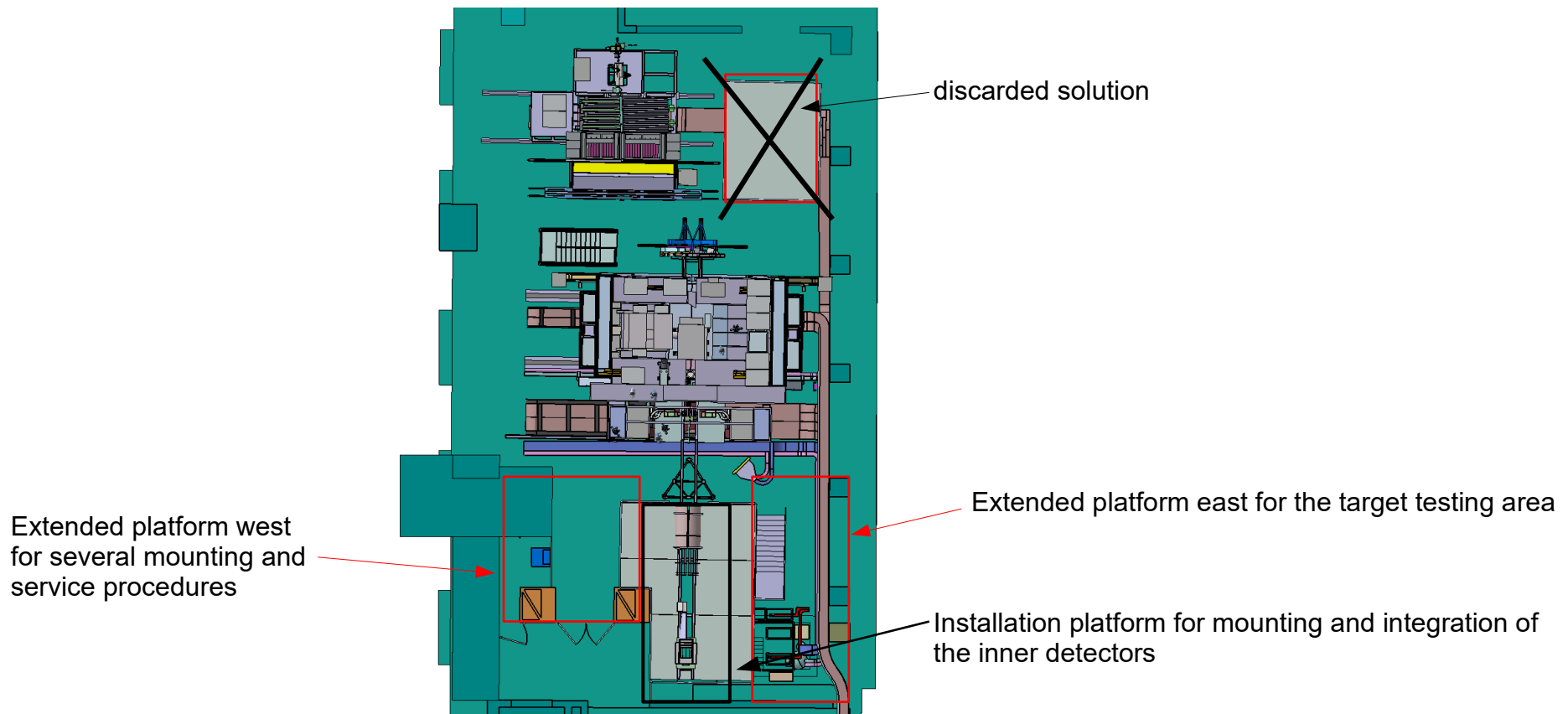
But for that location there will not be much space available for the platform, because the two halves of the shashlic detector has to be pull apart perpendicular to the beam axis for maintenance and potential repairing.



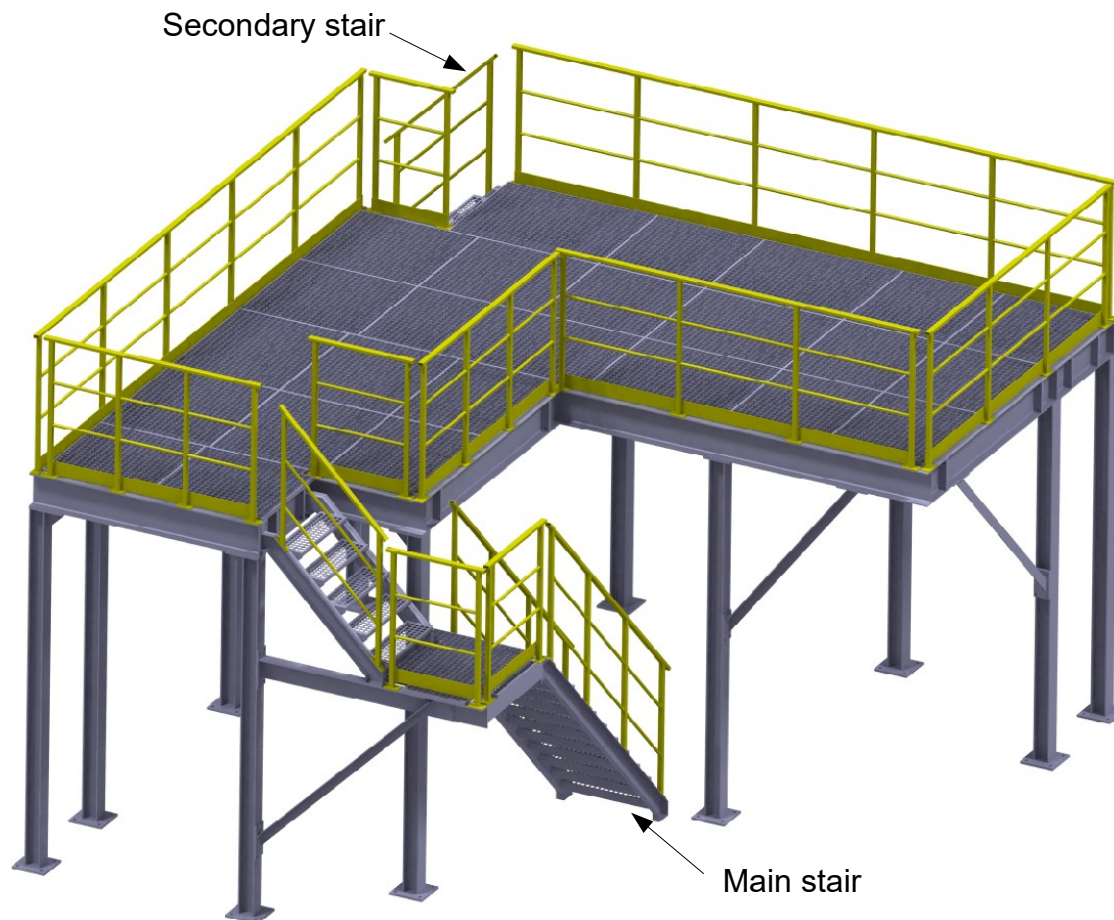
One solution would be to reduce the width of the target test platform, but whether a sensible test is still possible is not clear. Therefore we decided to build two so called extended platforms in the near of the installation platform.



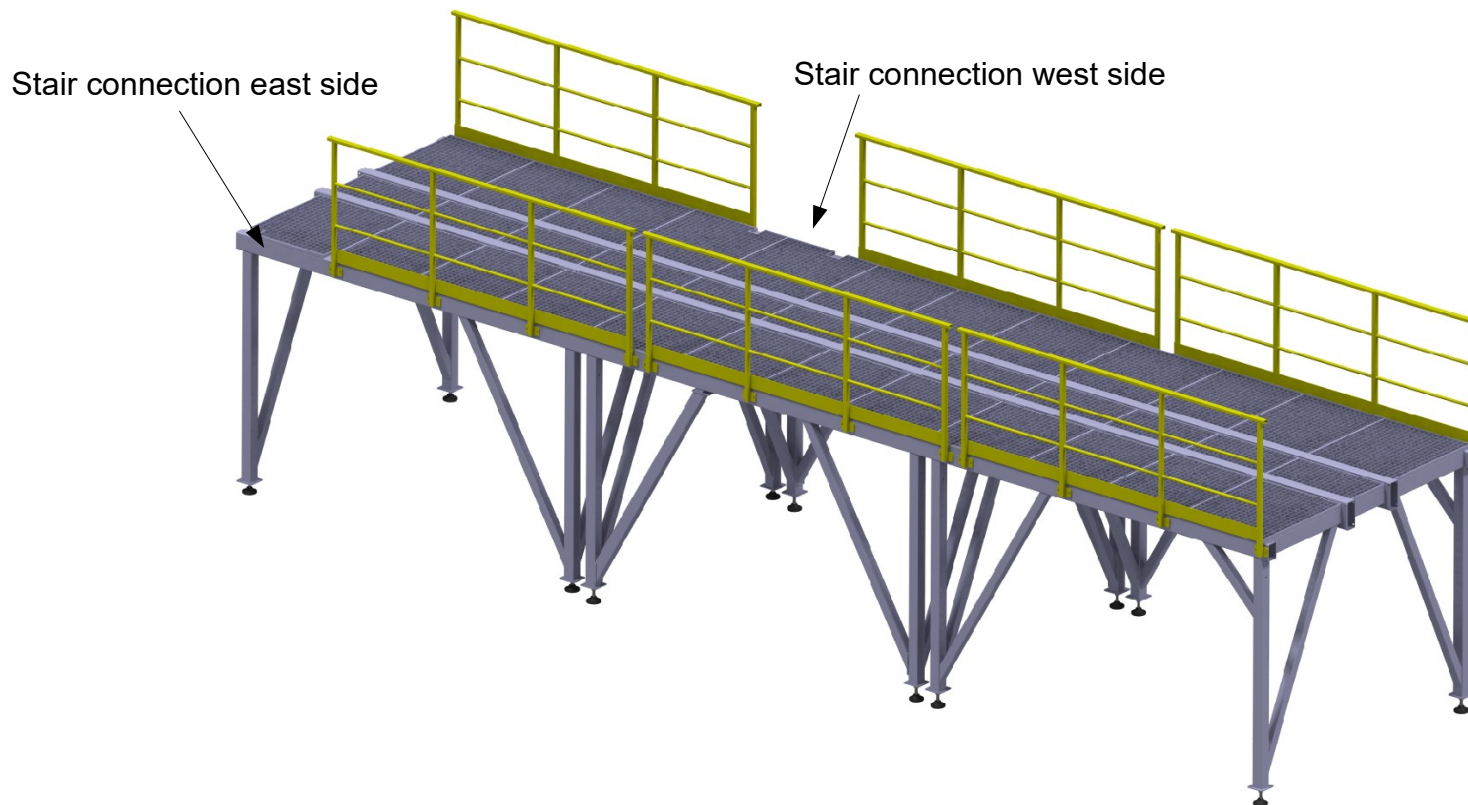
For that, the installation platform will have a lower width, but we have now much space for mounting and servicing on the extended platform west, which is also foreseen as the location for the clean room. The platform on the east will be meant to be the location the target testing area.



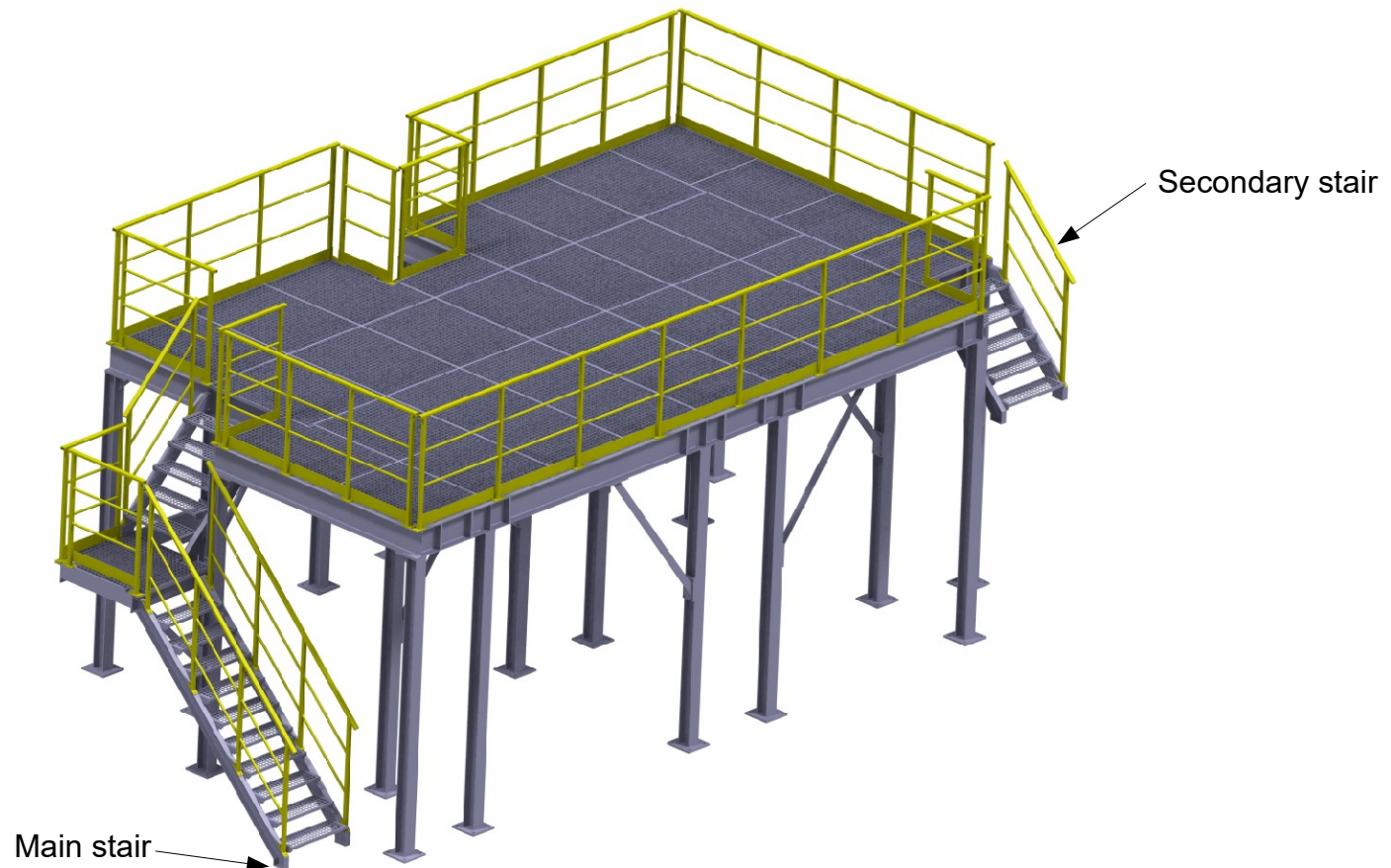
1. Extended platform west: This platform has to be integrated in our beam area lock system. For the access to the platform a stair is foreseen. Another smaller staircase gives access to the installation platform. The height of the platforms is approximately 3,6m and the usable surface is about 29m²



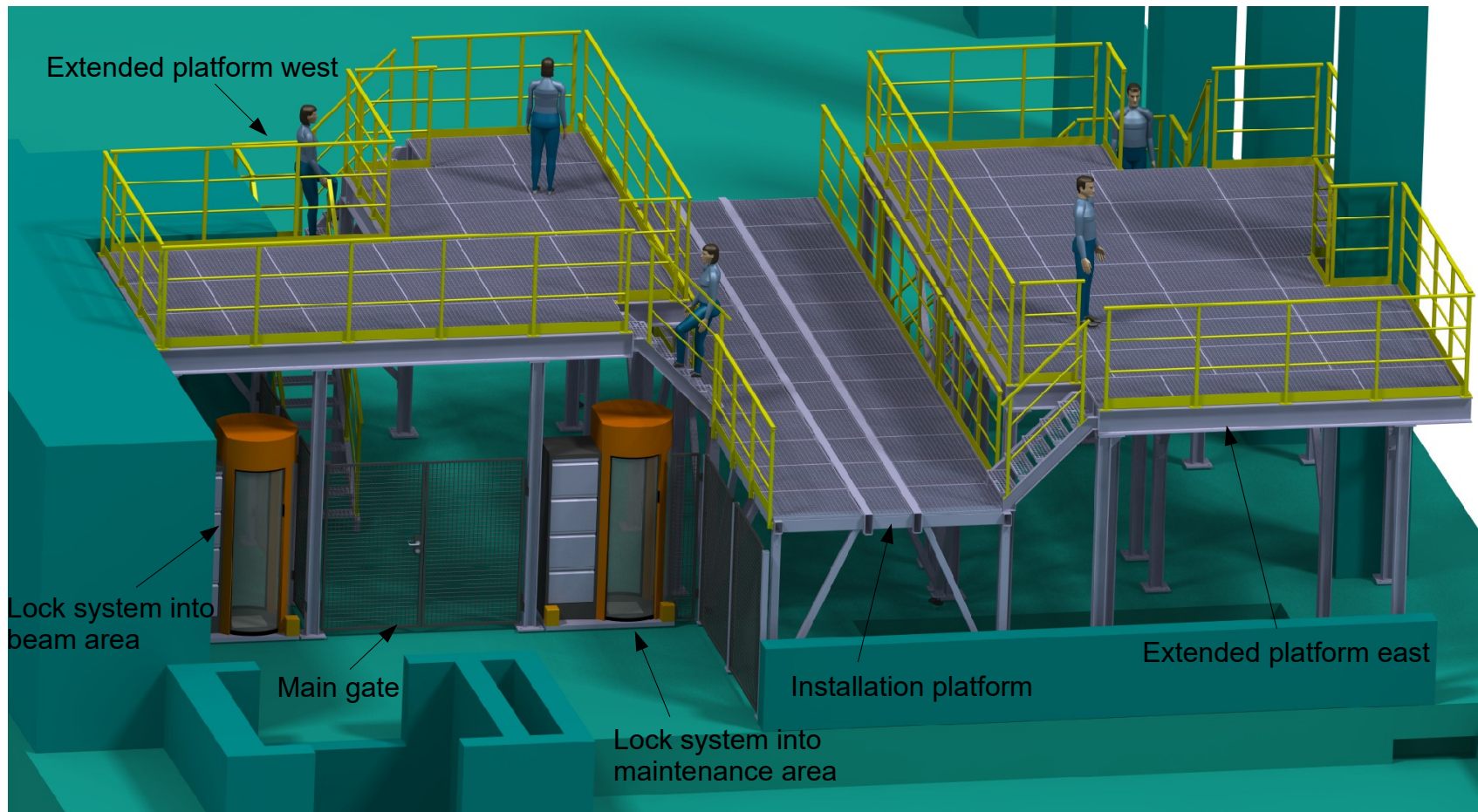
2. Installation platform: The width of the installation platform has been reduced. The access to the platform works over secondary stairs on the extended platform west or extended platform east. The platform is still made out of three separate parts which can mount independent from each other. The height of the platforms is approximately 2,4m and the usable surface is about 30m²



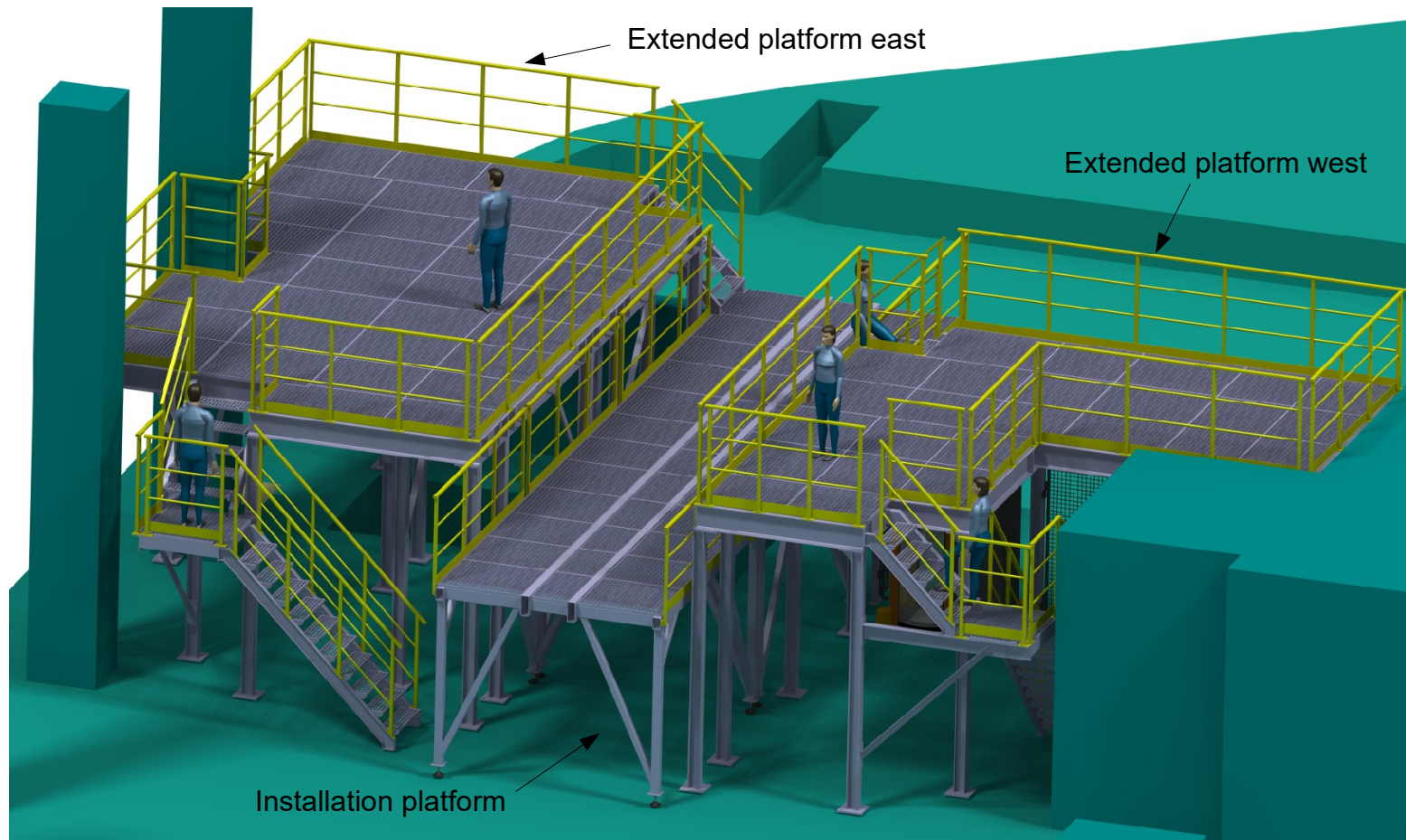
3. Extended platform east: This platform protrudes above the cable routes on the east wall and above the pit for the cooling equipment of the inner detectors. For the access to the platform a stair is foreseen. Another smaller staircase gives access to the installation platform. The height of the platforms is approximately 3,6m and the usable surface is about 41m²



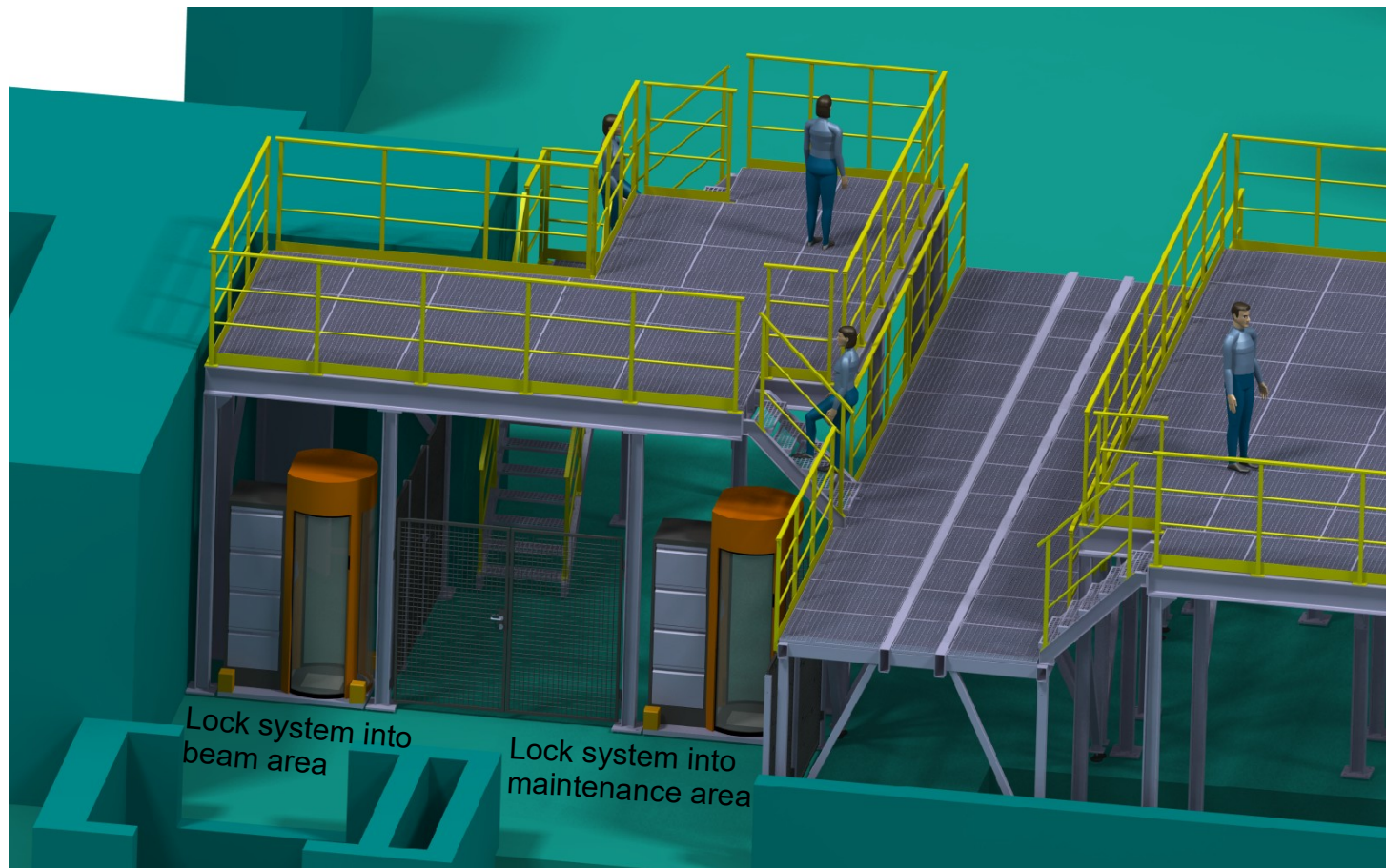
Complete mounting and maintenance area (view in downstream direction): All three platforms act as a common maintenance and assembly level. In the area of the extended platform west, the lock system for access to the beam and the maintenance area is integrated.



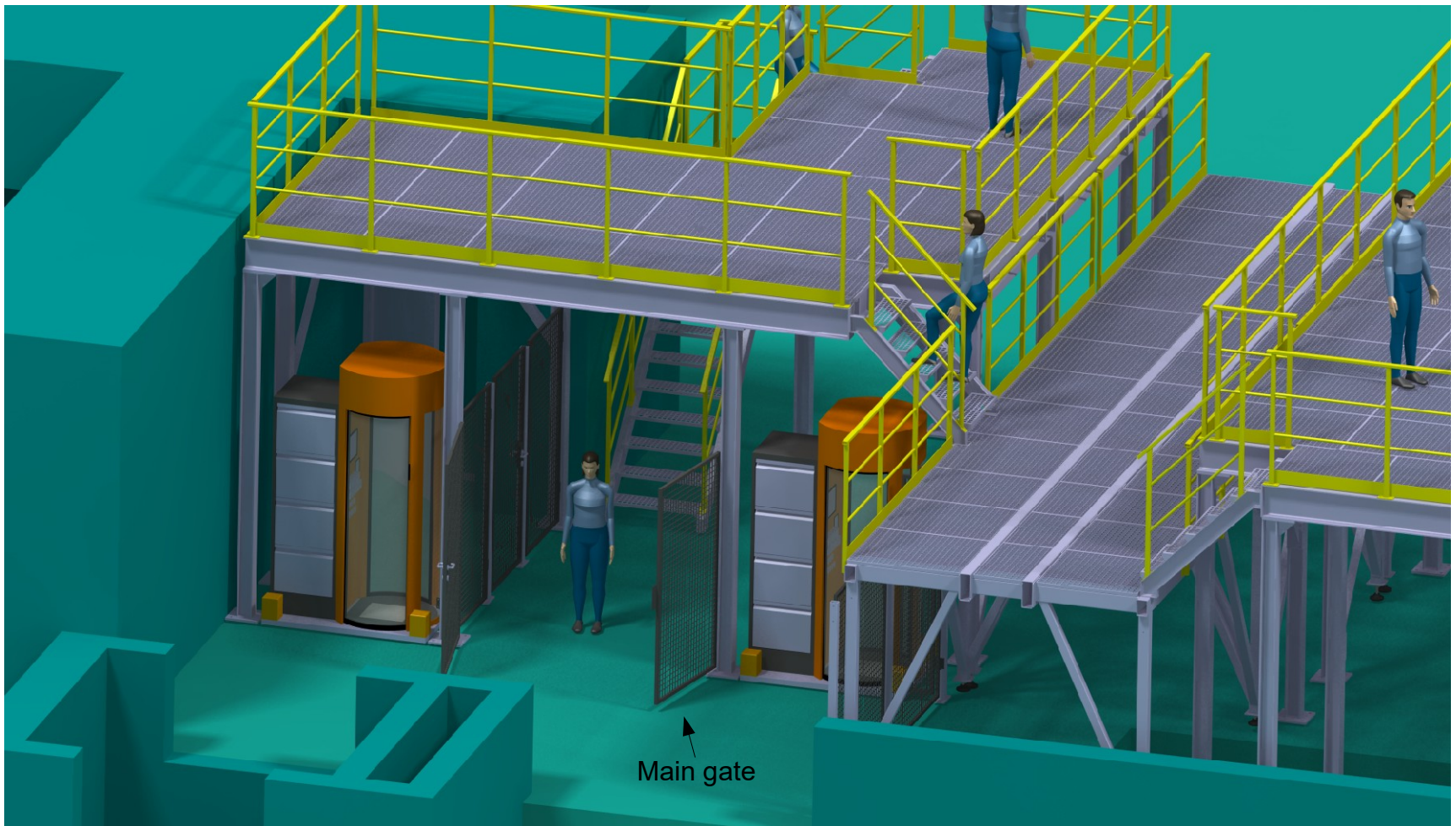
Complete mounting and maintenance area (view in upstream direction): The height of the installation platform is about 2,4m and the height of the two extended platforms is approximately 3,6m.



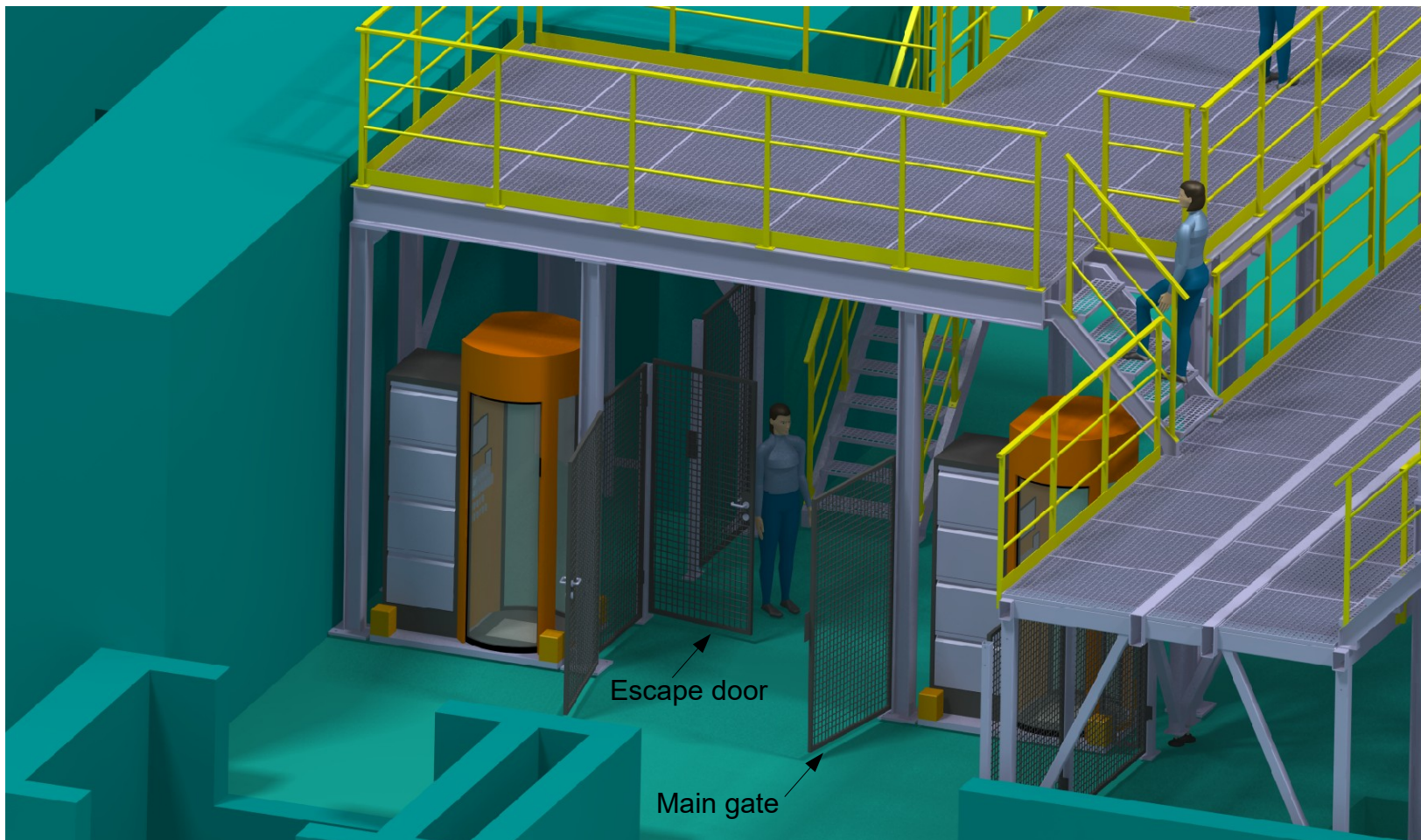
Lock system and escape routes: The maintenance area and the beam area are separated from the entry of the hall via palisades. In normal operation, access to the maintenance area and the beam area is via two separate locks.



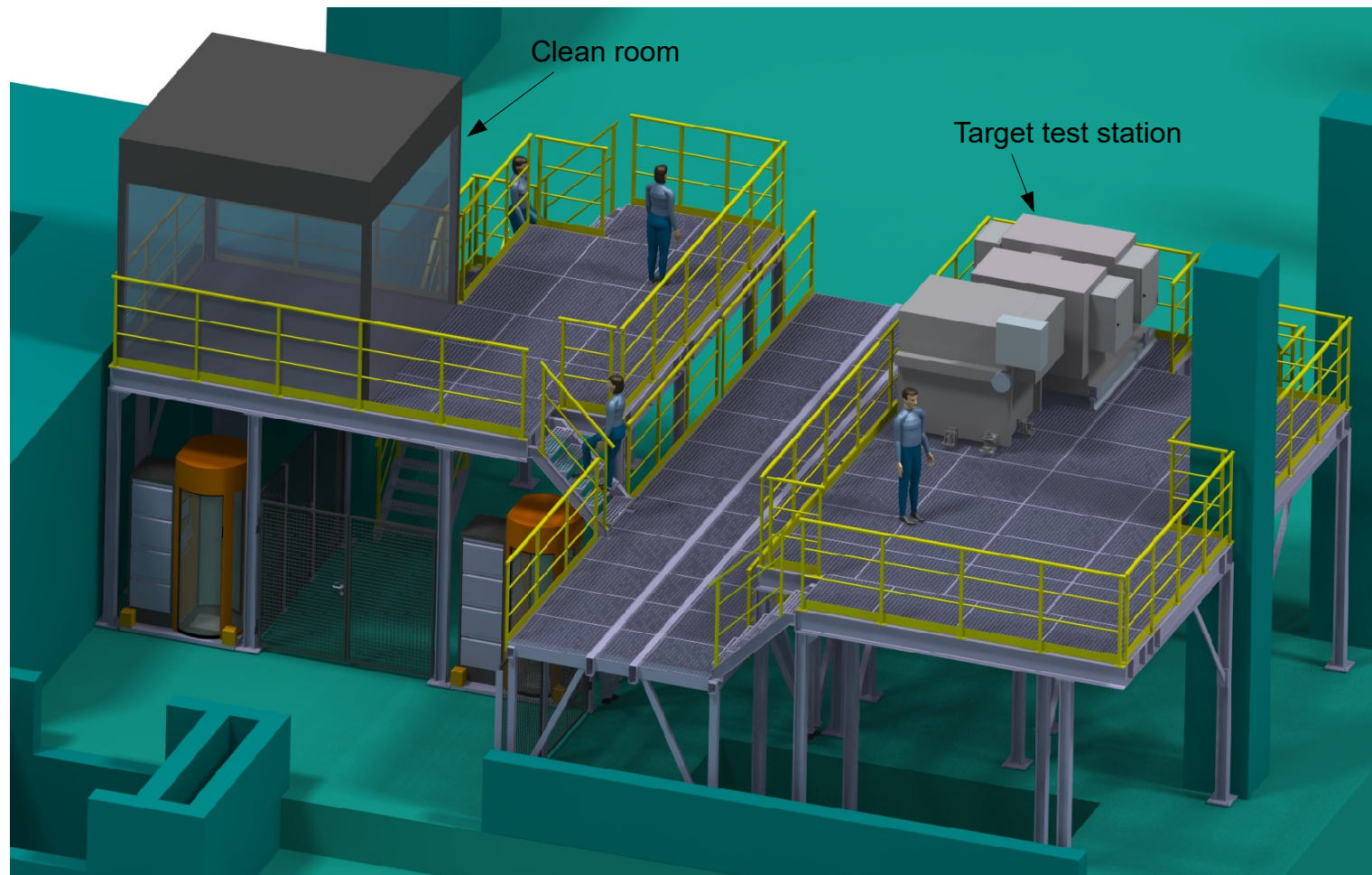
Lock system and escape routes: The escape route from the maintenance area is via the main gate.



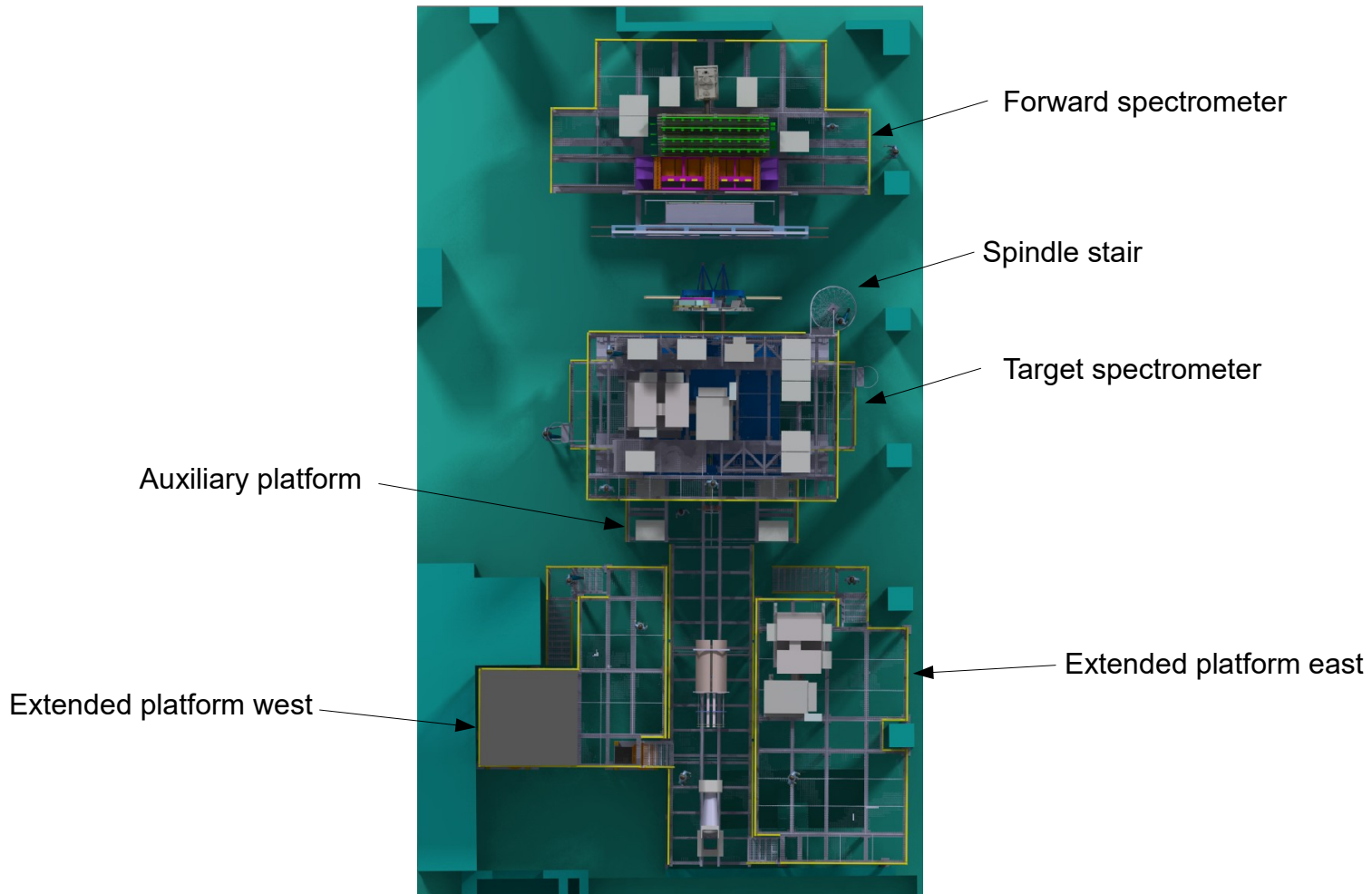
Lock system and escape routes: The escape route from beam area is via a door integrated in the palisade and the main gate in front of the maintenance area.



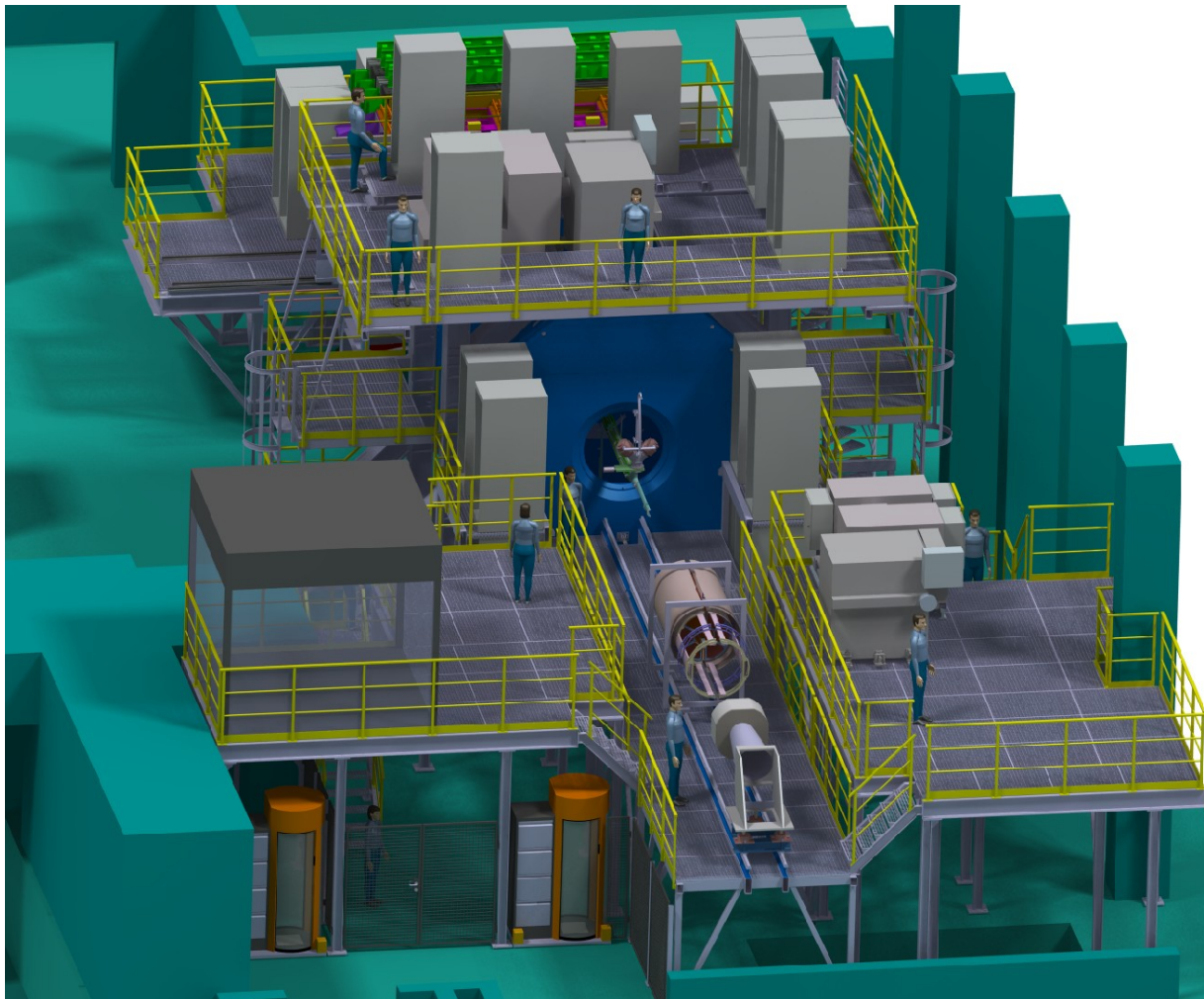
Clean room and target test station: The last slide shows a possible location of the clean room(about 10m²) on the extended platform west and the target test station on the extended platform east.



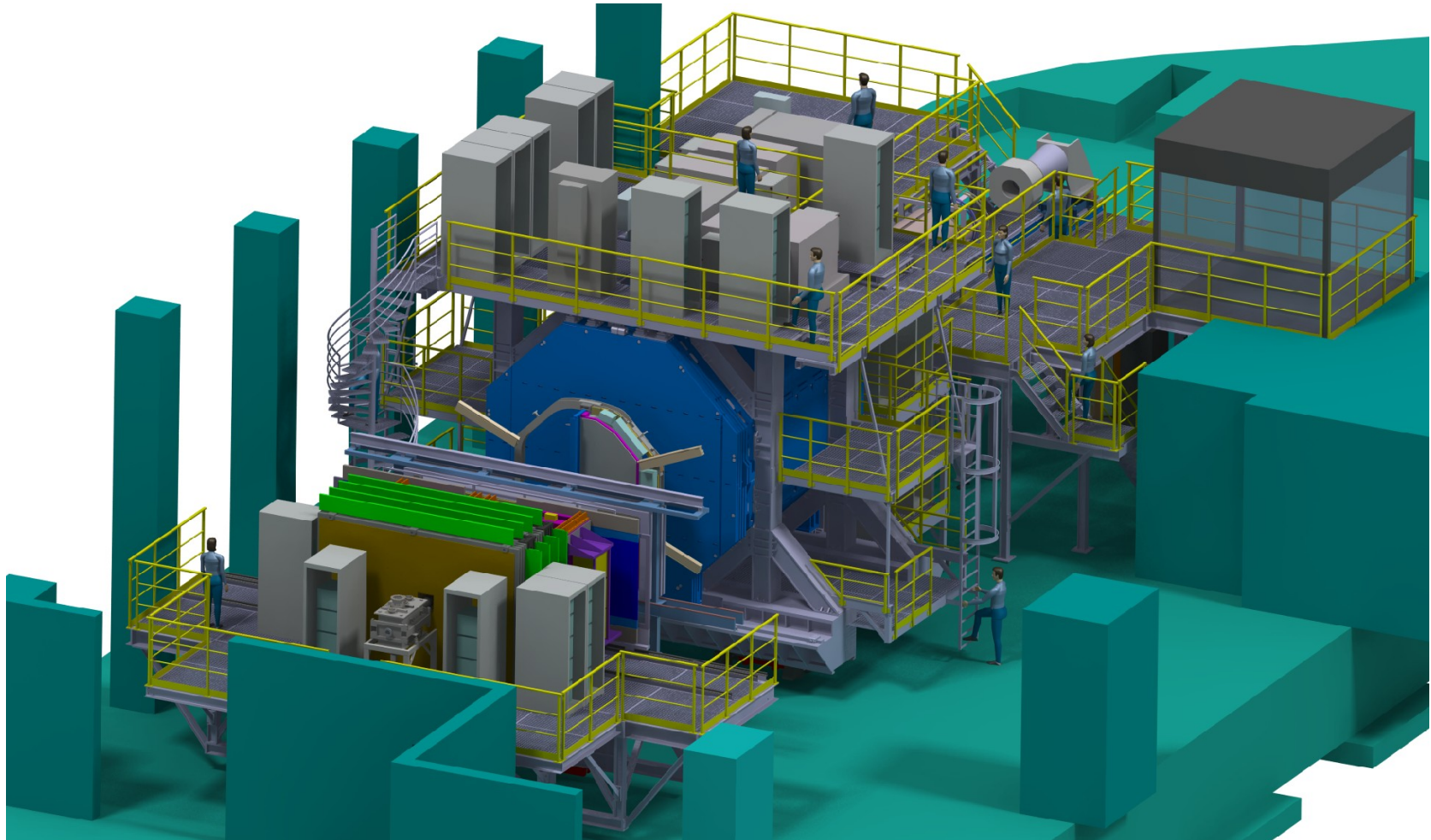
Pictures of the maintenance area: Top view of the maintenance area



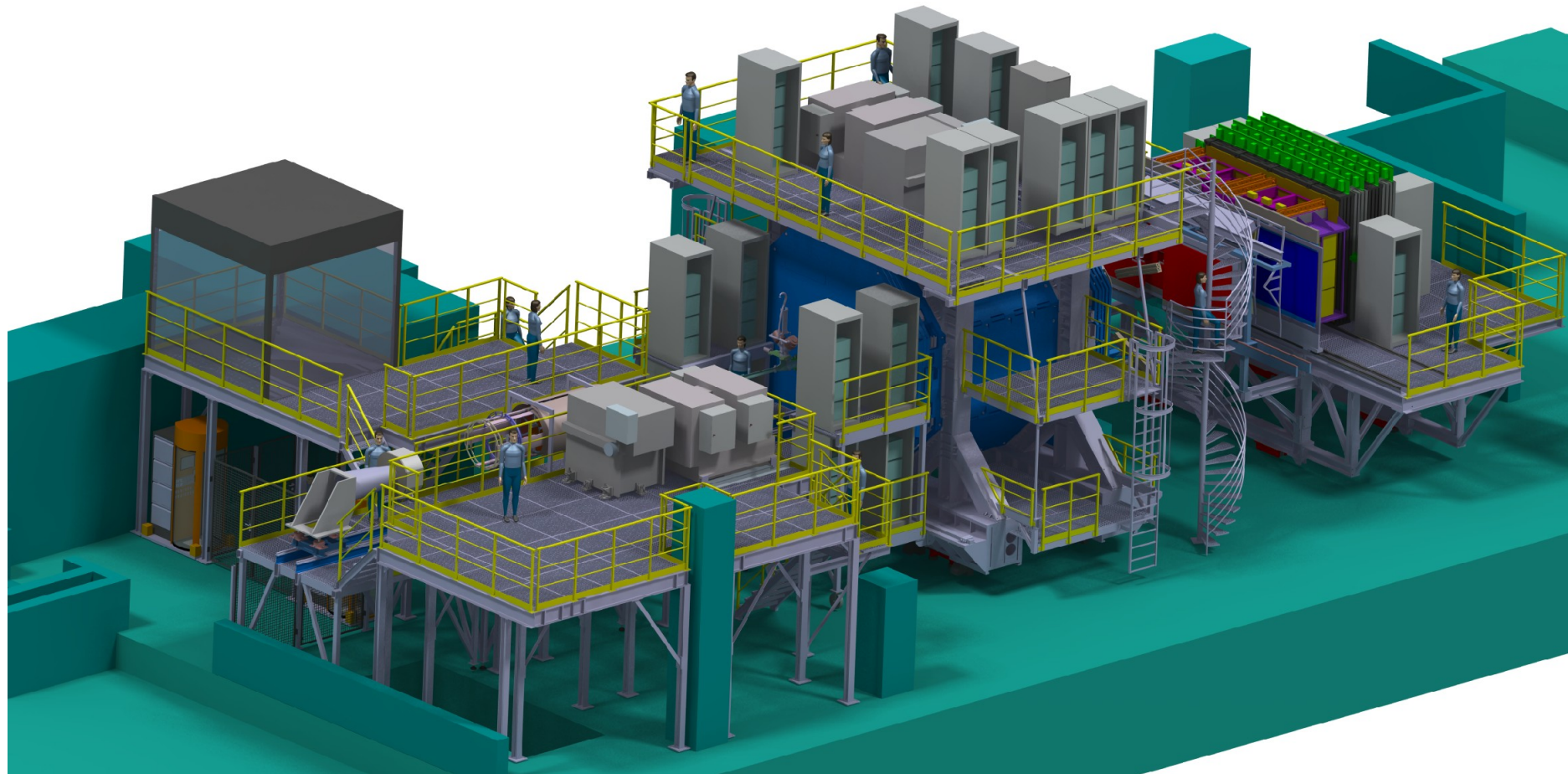
Pictures of the maintenance area: maintenance area front view



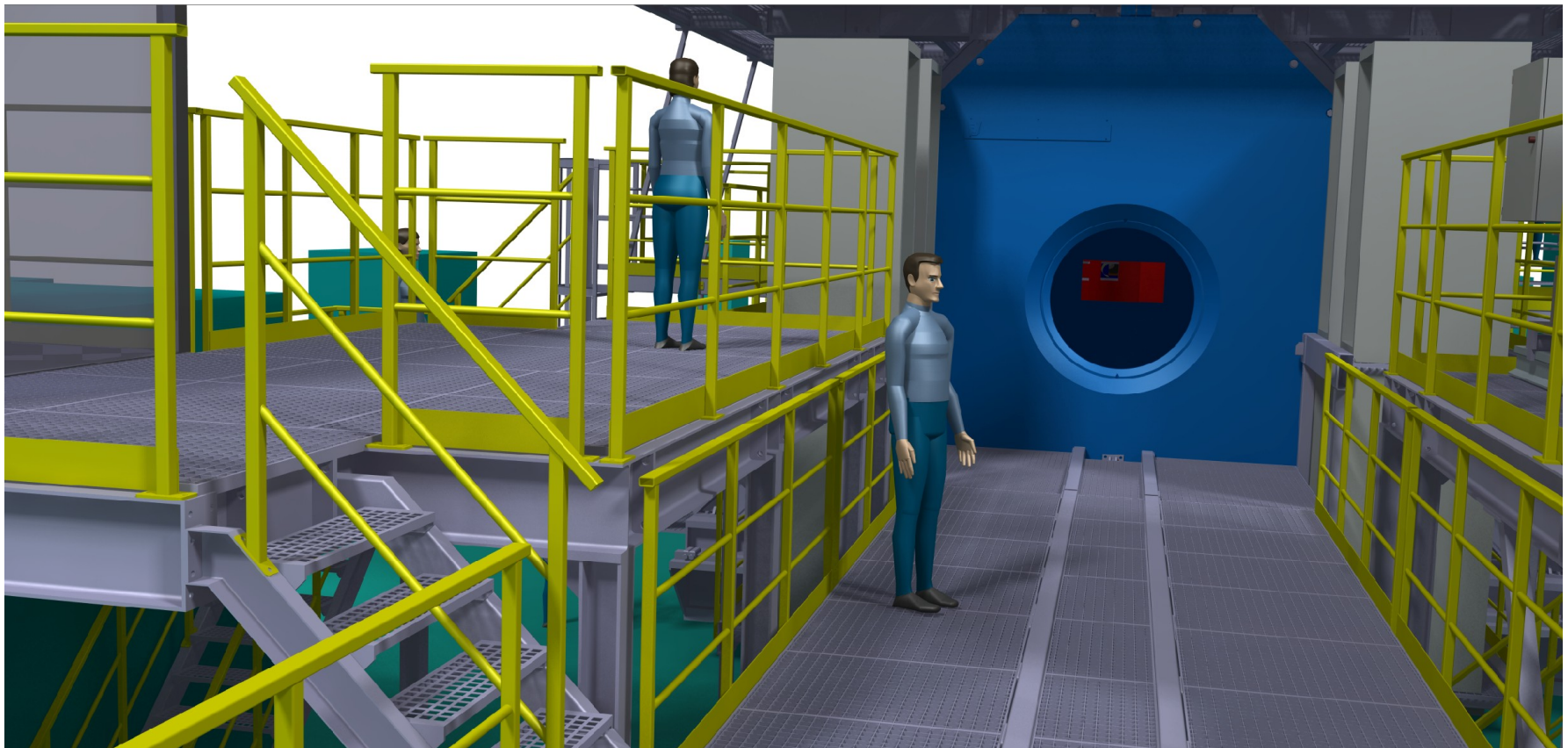
Pictures of the maintenance area: maintenance area back view



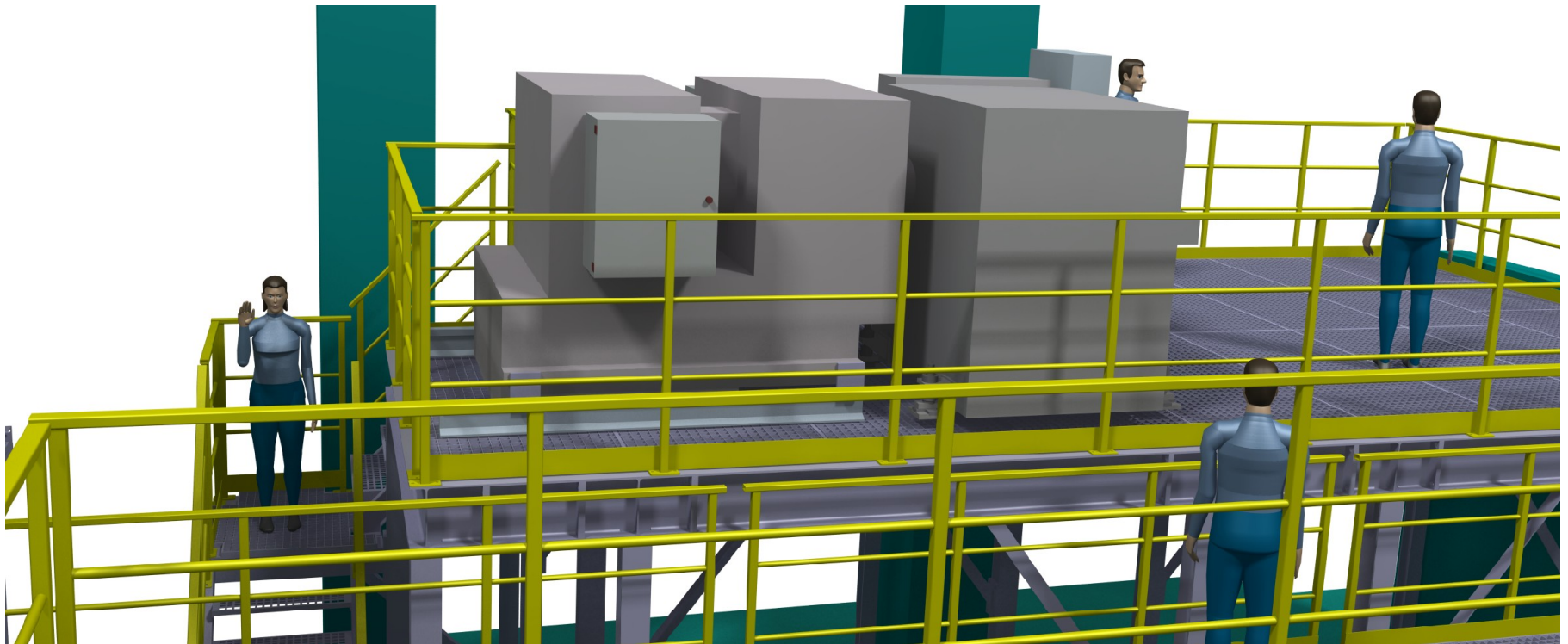
Pictures of the maintenance area: maintenance area perspective view



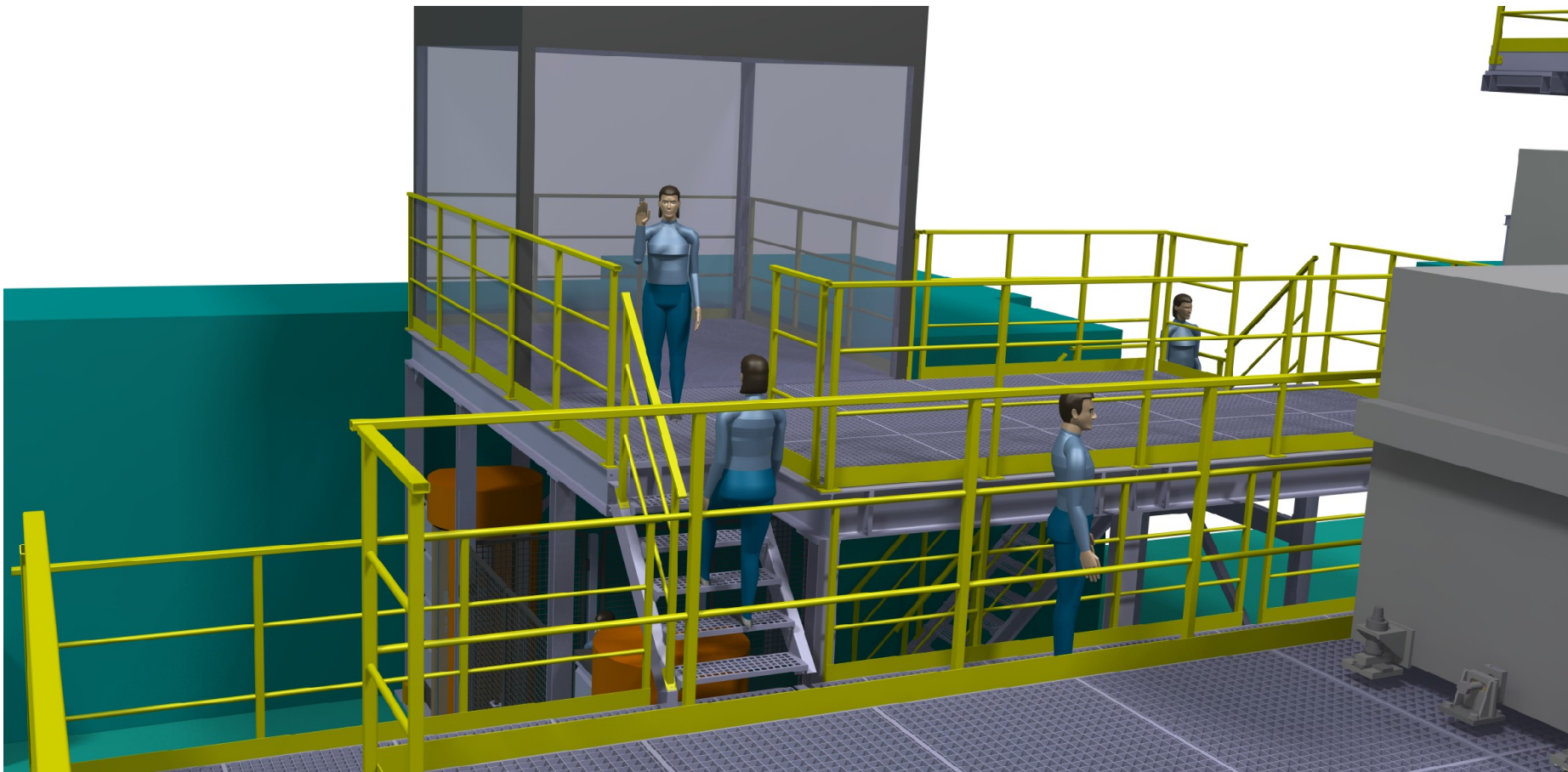
Pictures of the maintenance area: Ego perspective from the installation platform



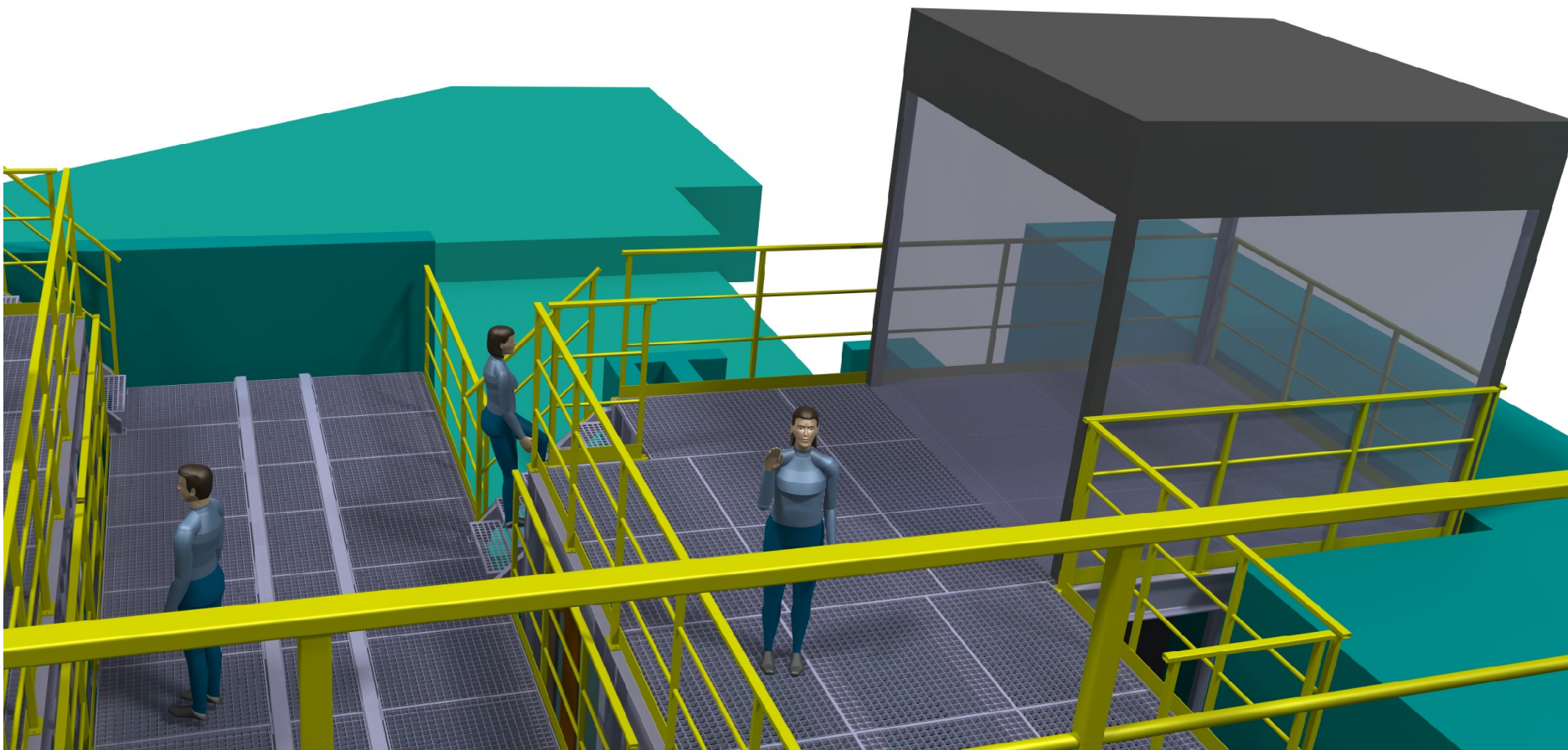
Pictures of the maintenance area: Ego perspective from the extended platform west



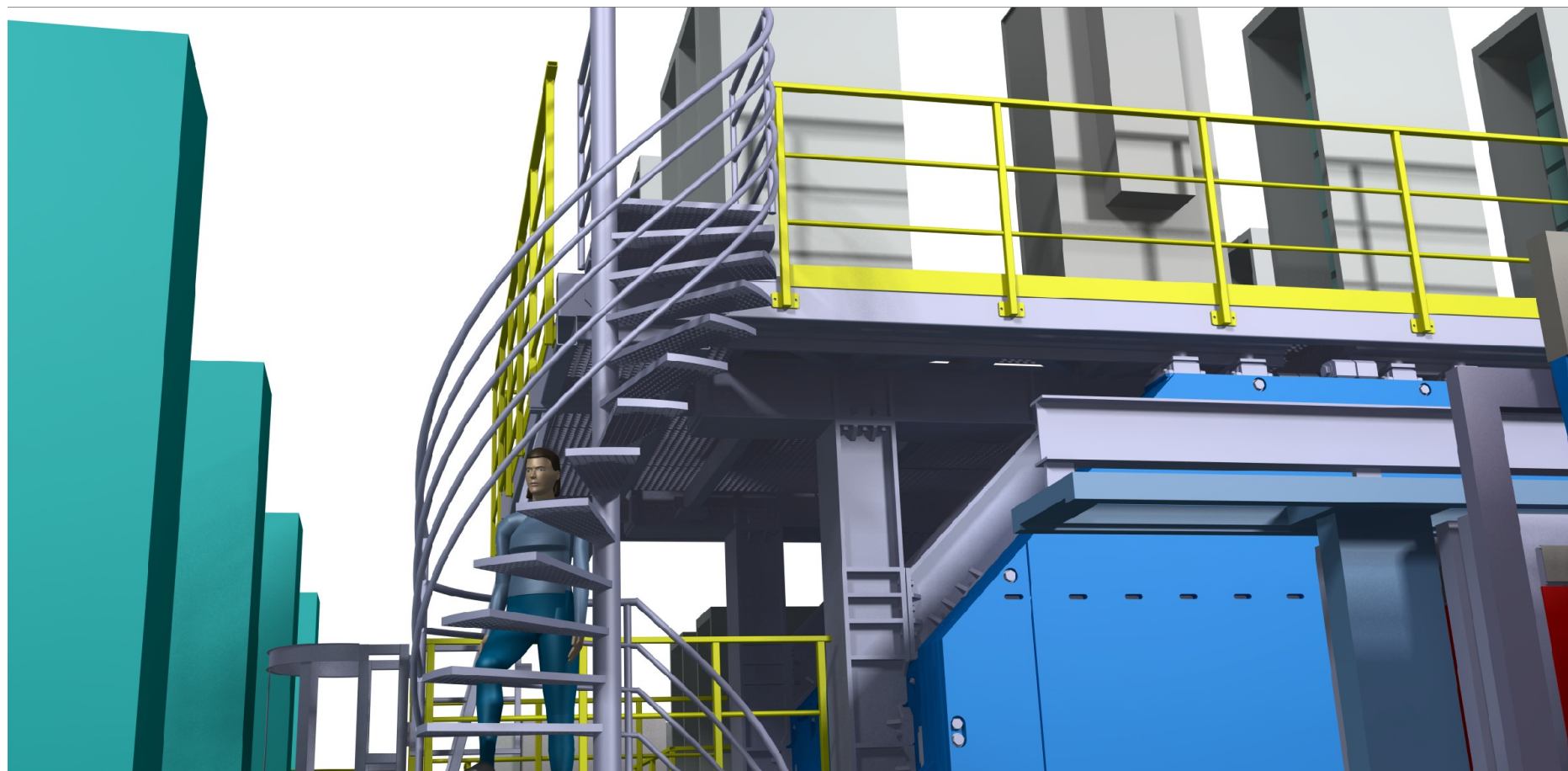
Pictures of the maintenance area: Ego perspective from the extended platform east



Pictures of the maintenance area: Ego perspective from the solenoid



Pictures of the maintenance area: Ego perspective from the forward platform



Points to be clarified:

- What are the geometrical and technical boundary conditions of the target test station?
- What sort of clean room do we need?
- How many people are foreseen to work on the platforms at the same time?
- Is the arrangement of the locks and escape routes in accordance with the safety regulations?