

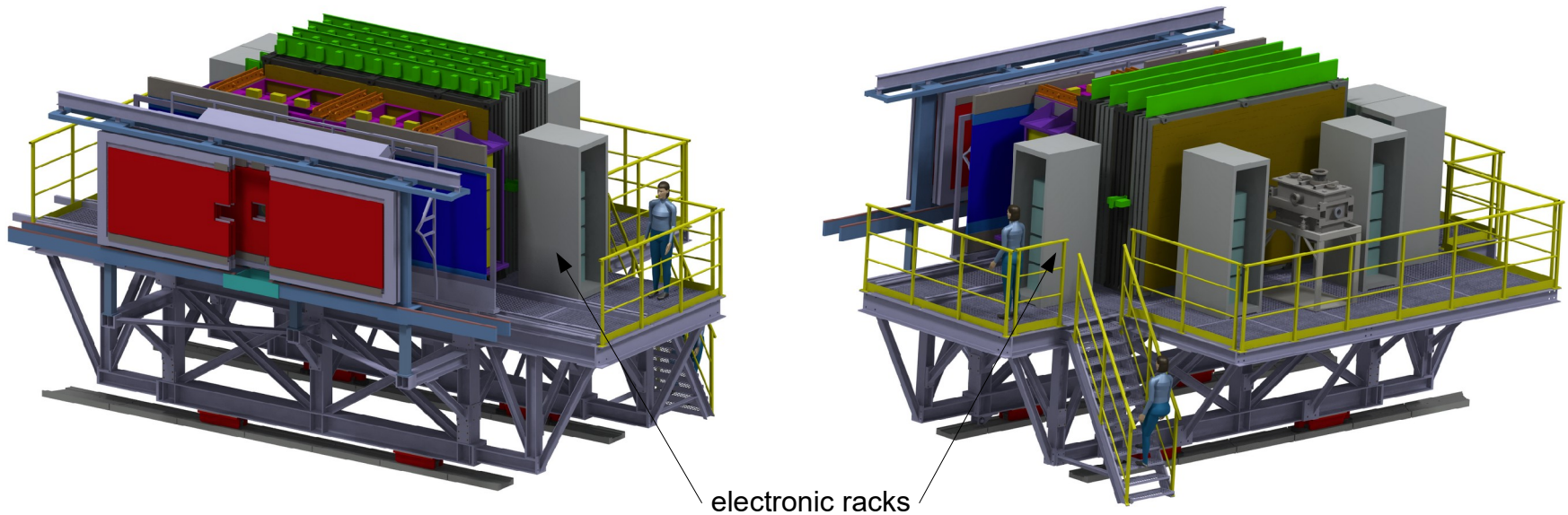
Update of infrastructure and location of the service Racks

Contents:

1. Current changes to the infrastructure
2. Overview of the Rack locations in the maintenance area
3. First calculation of the support structures

1. Current changes to the infrastructure

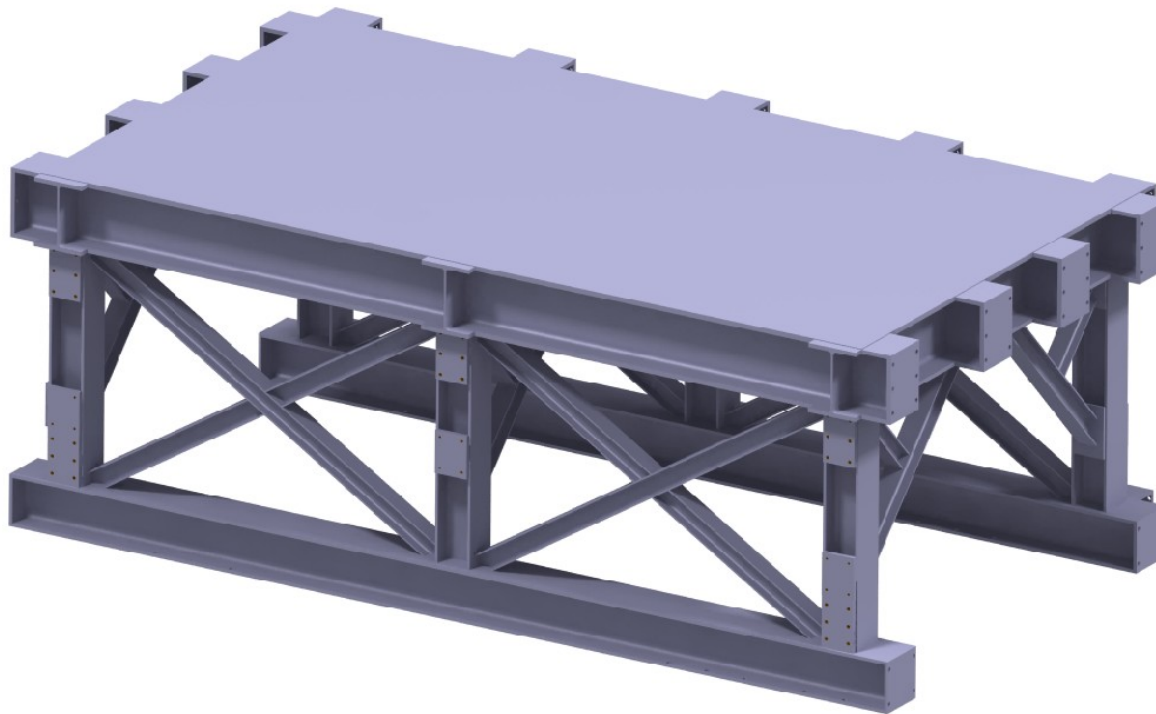
- In the last design, the Forward Platform was shown with only 5 electronic racks.



- However, the calculation of the needed racks for the forward spectrometer shows that probably 16 racks has to be foreseen. For this reason, the design of the platform has been changed slightly.

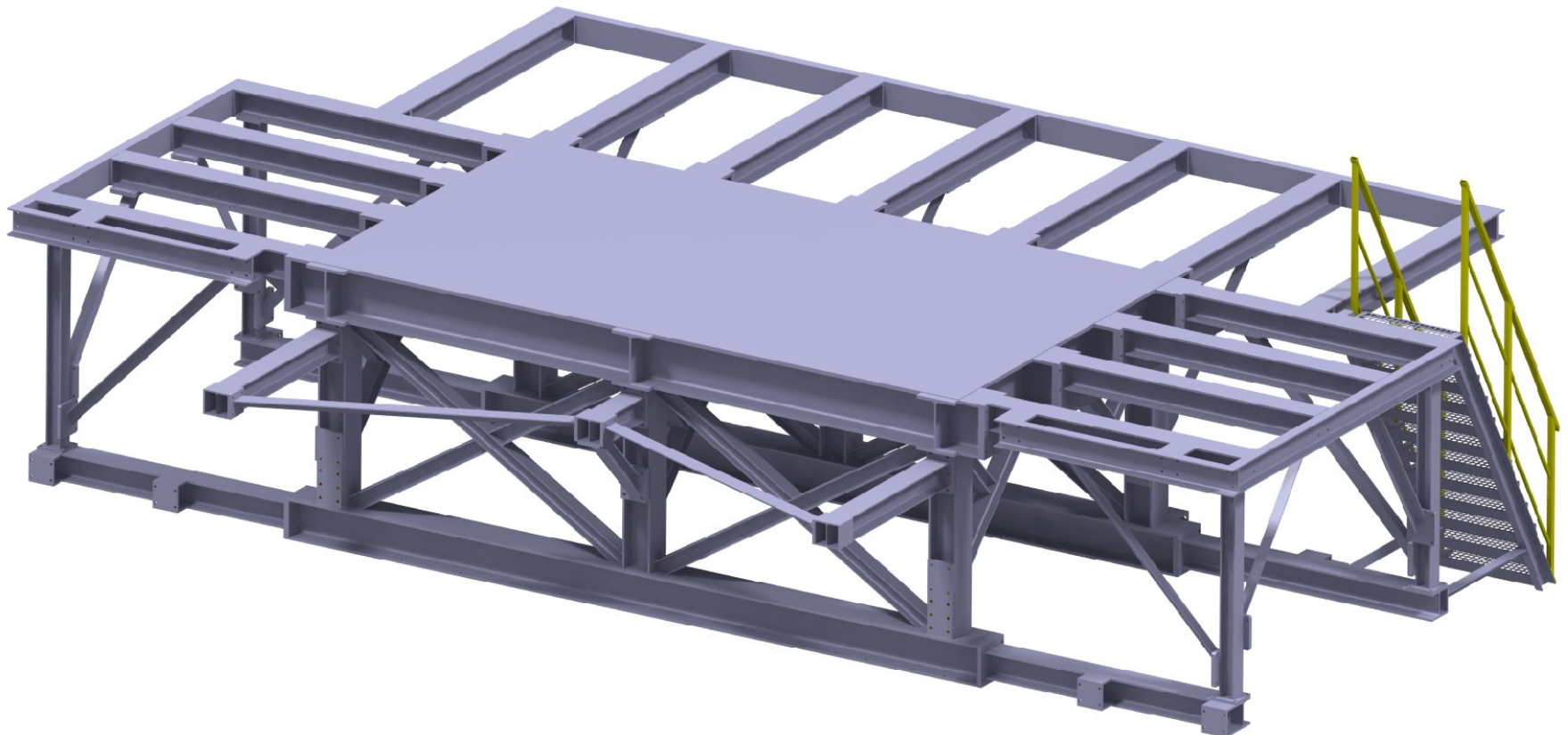
1. Current changes to the infrastructure

- The first assembly is the welded main structure, which consists of several double t carrier.



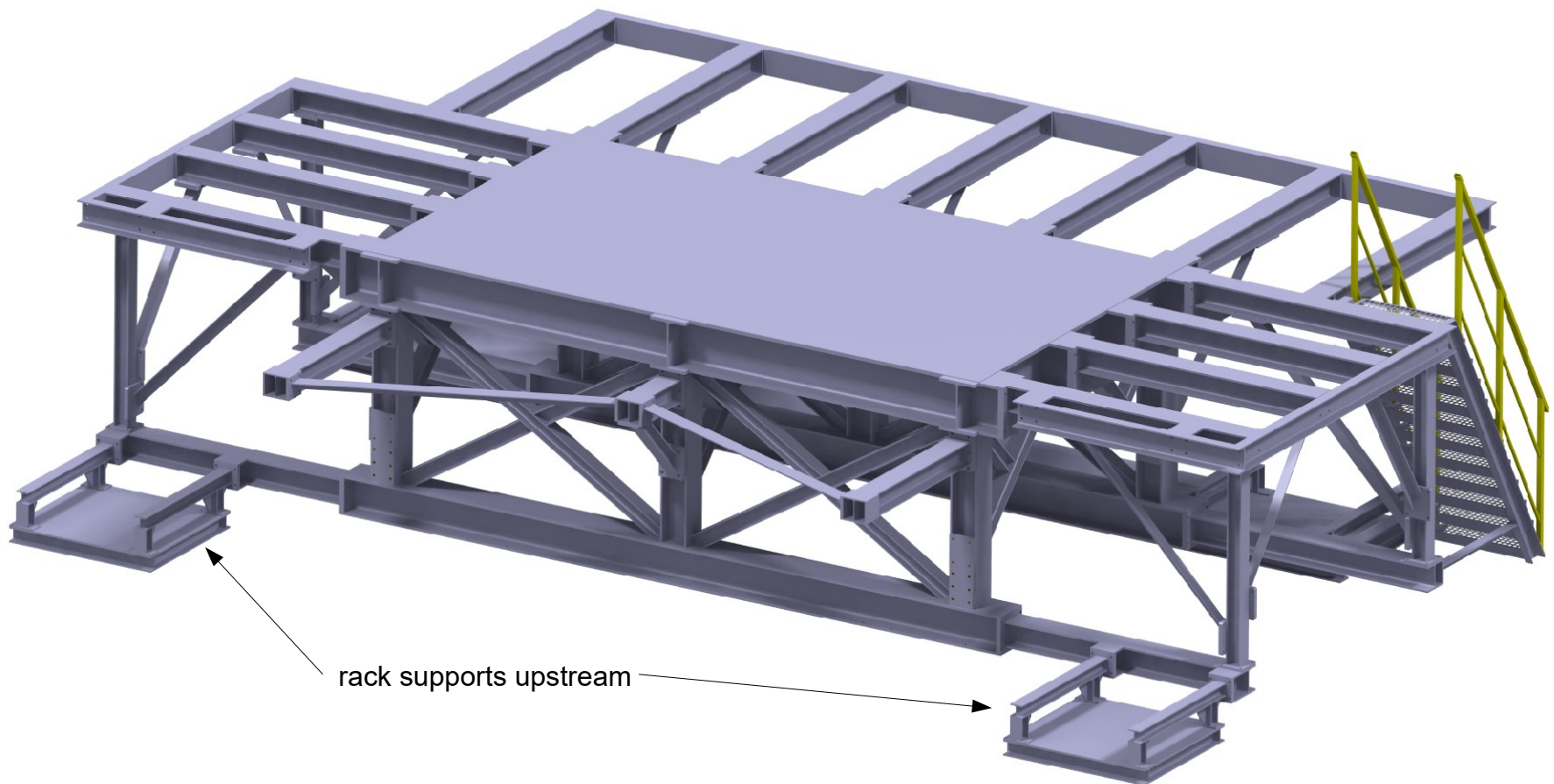
1. Current changes to the infrastructure

- In the next step, several beams and a stair will be attached to the main structure via screws.



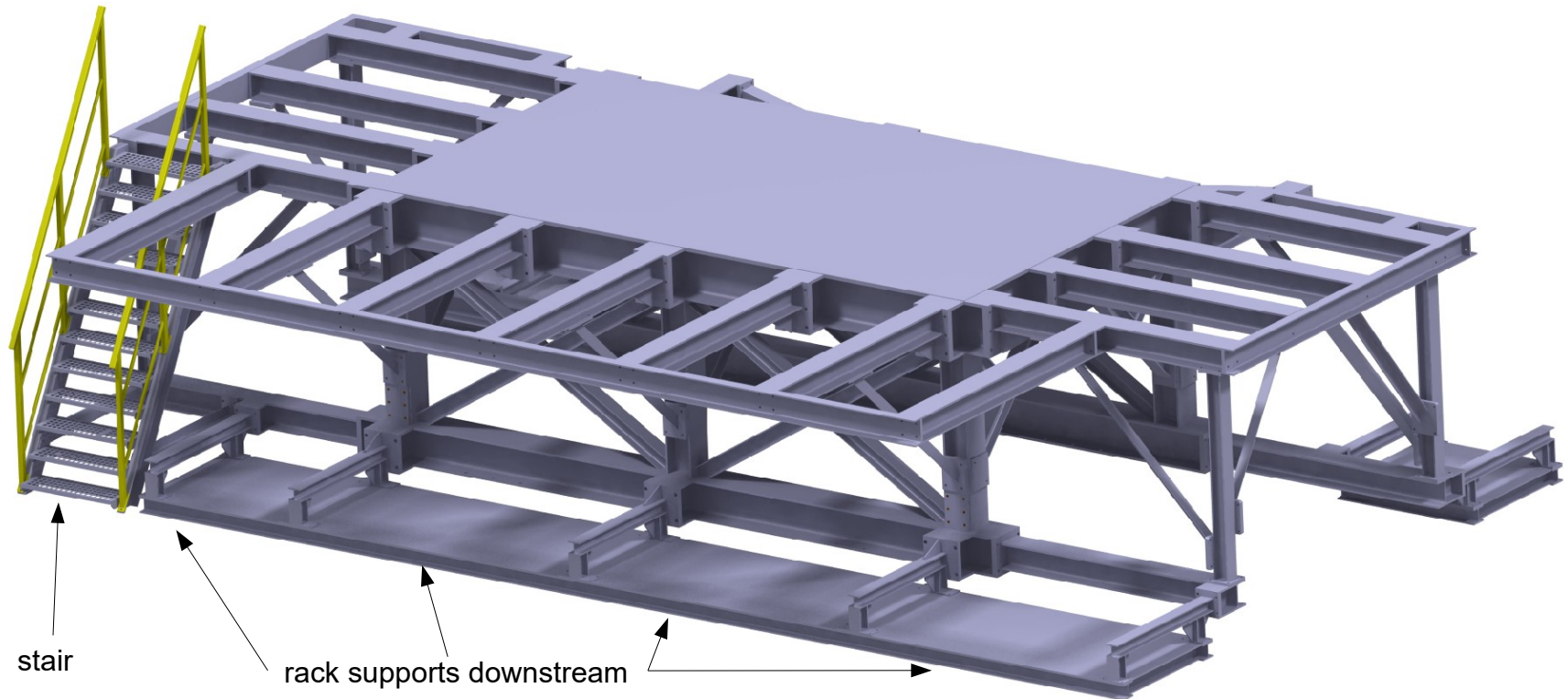
1. Current changes to the infrastructure

- Then, special supports for the needed racks will be installed on the upstream and the downstream side.



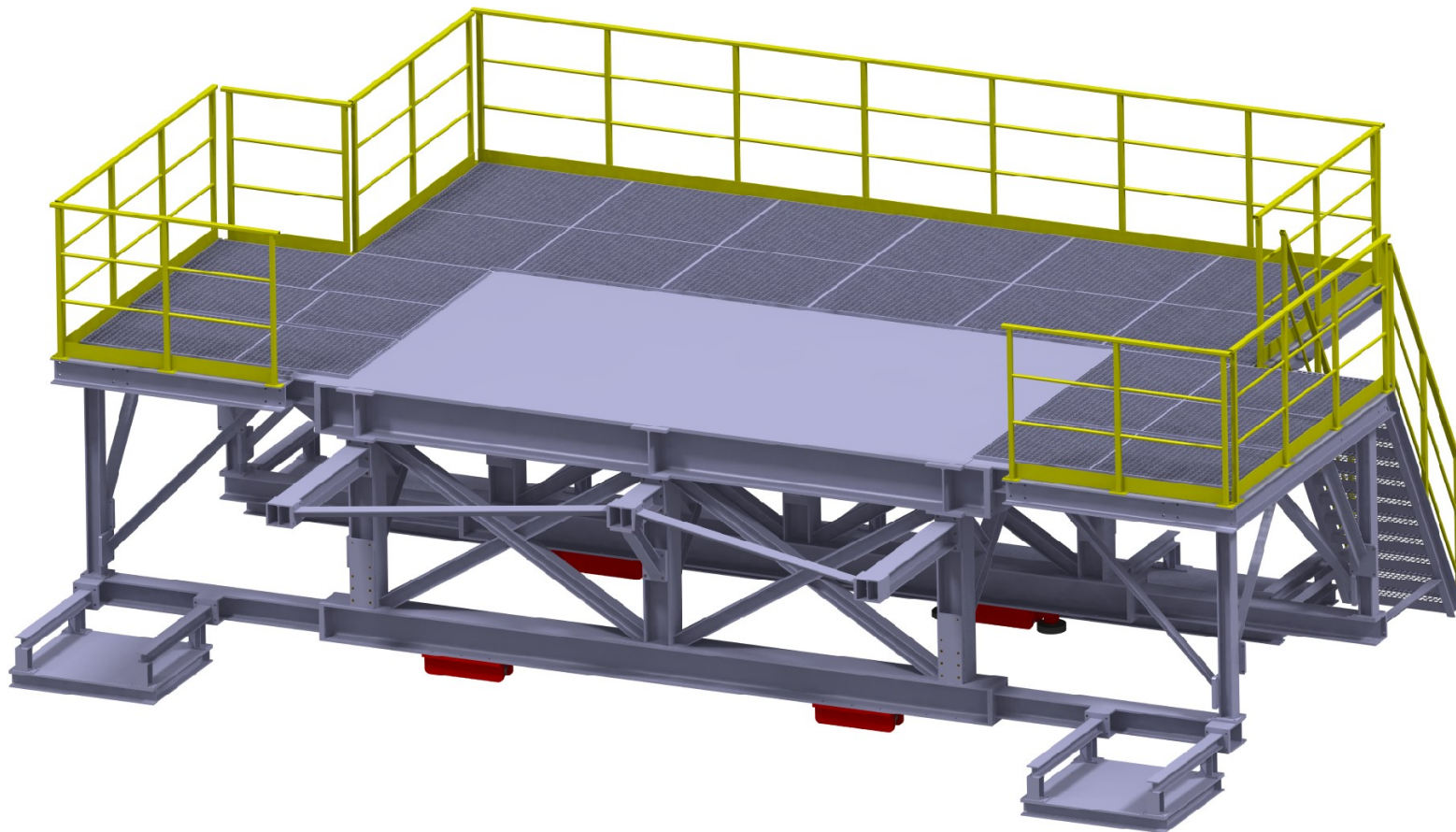
1. Current changes to the infrastructure

- Then, special supports for the needed racks will be installed on the upstream and the downstream side.



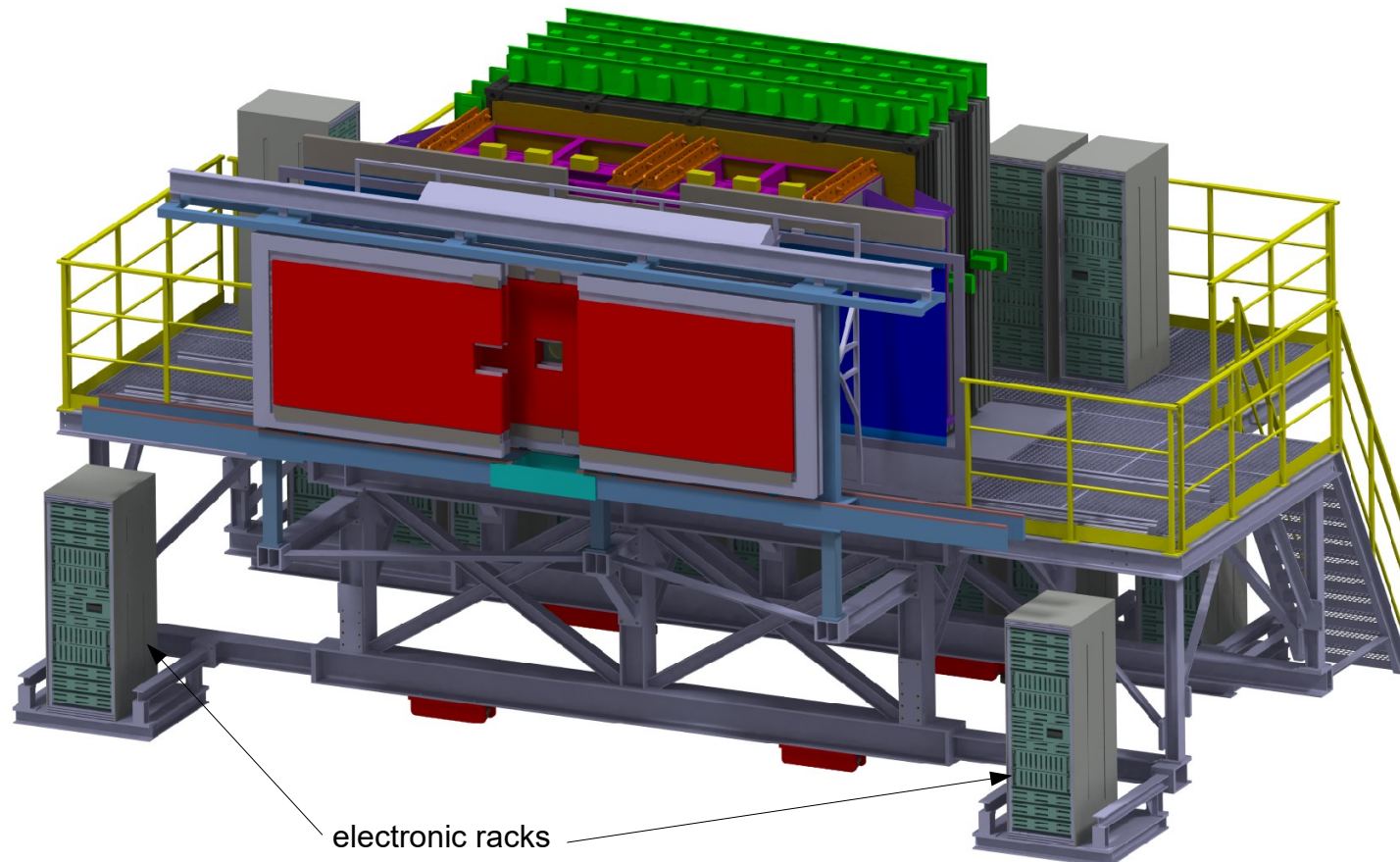
1. Current changes to the infrastructure

- In the last step, gratings and railings will be installed, and also the heavy weight roller of course.



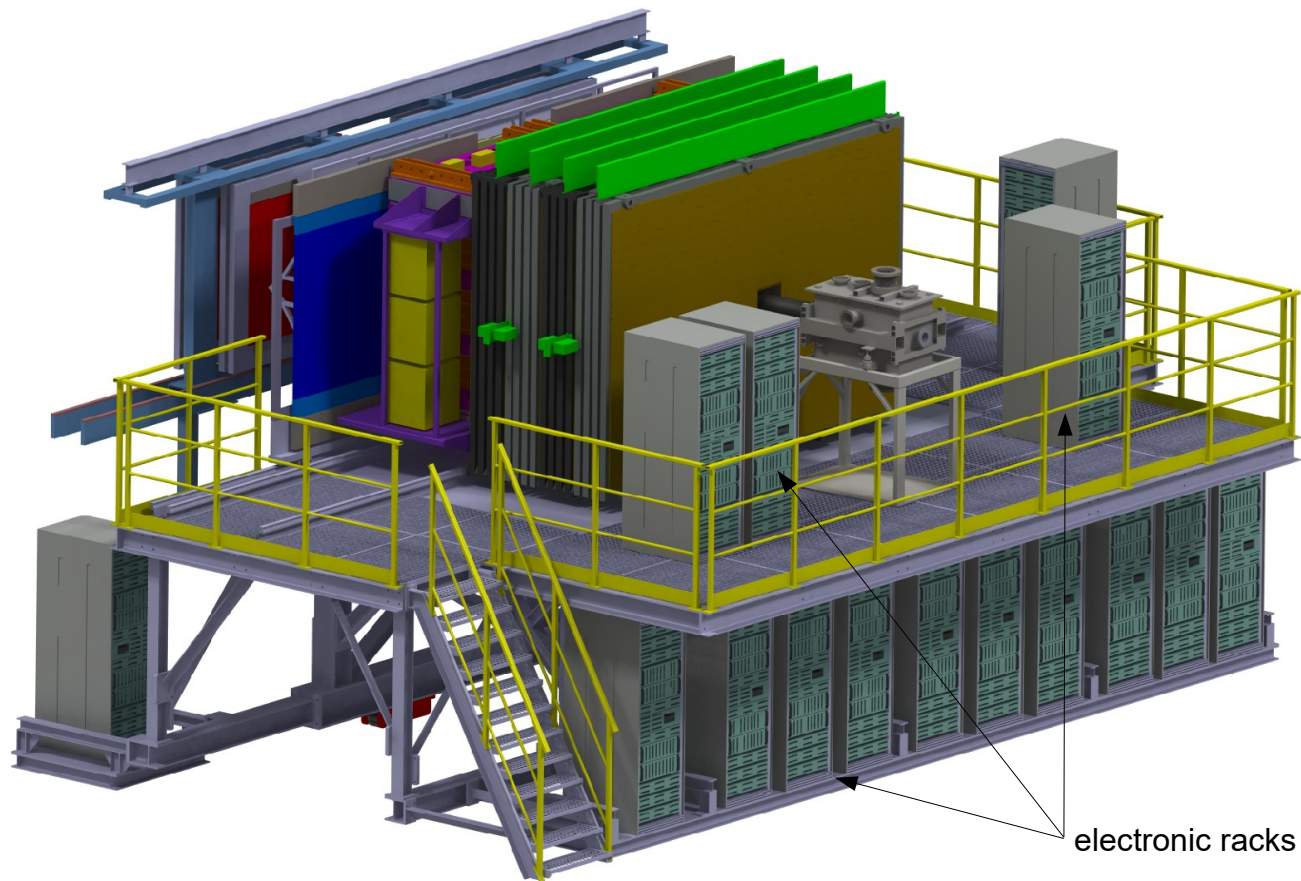
1. Current changes to the infrastructure

- The following figures shows the Forward Platform with the forward spectrometer an the electronic racks.



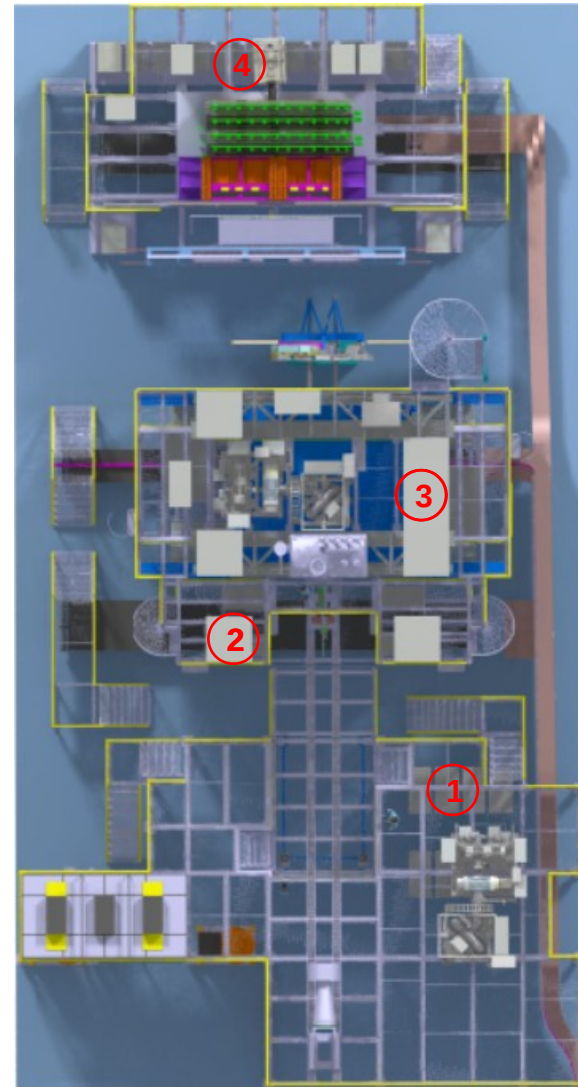
1. Current changes to the infrastructure

- For the racks, the type 37U with the outer dimensions of 600mm x 800mm x 1840mm is foreseen.



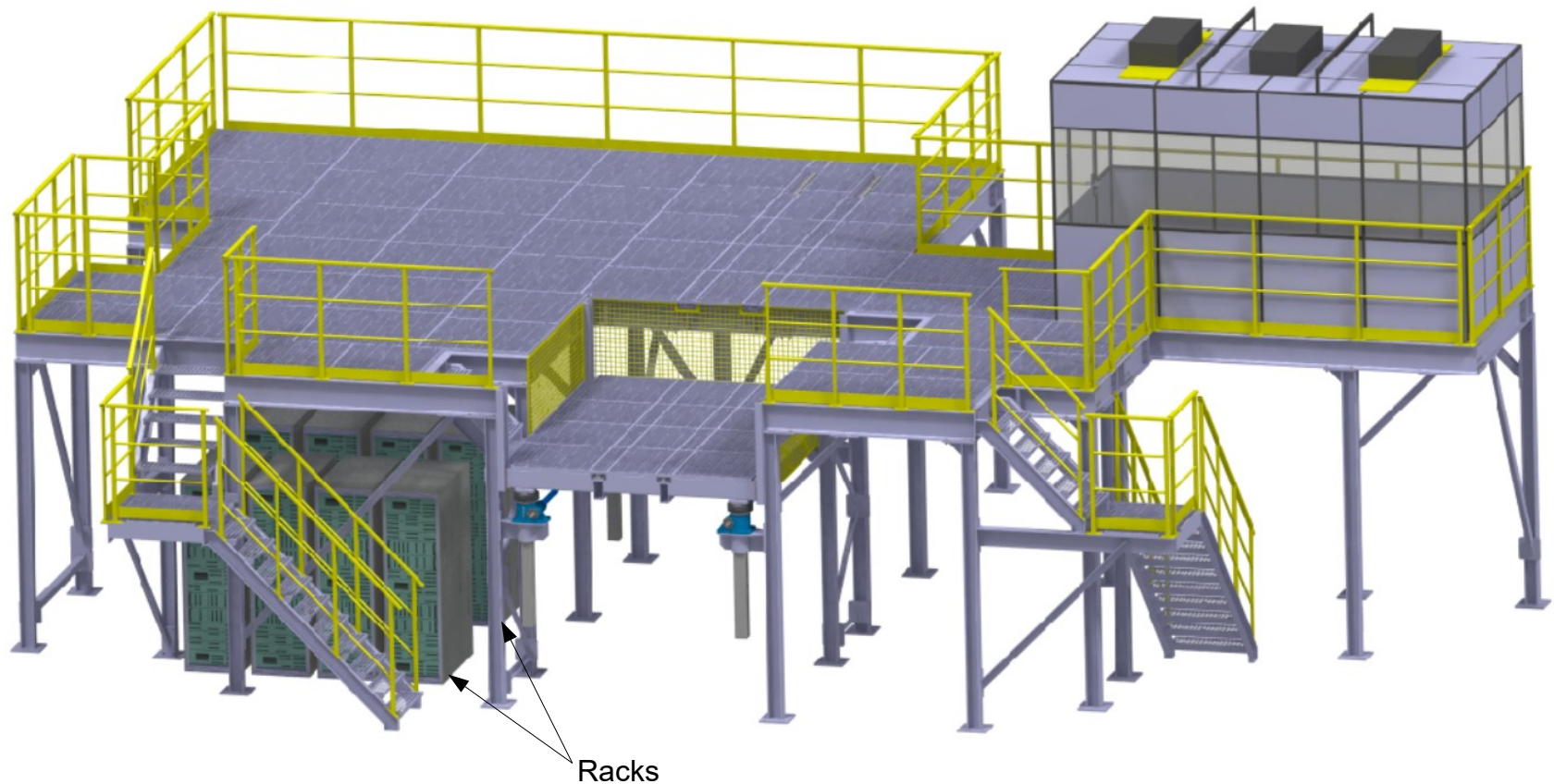
2. Overview of the Rack locations in the maintenance area

- ① 8 Racks under the Extended Platform
- ② 12 Racks on the Auxiliary Platform
- ③ 22 Racks on the Target Spectrometer
- ④ 16 Racks on the Forward Spectrometer



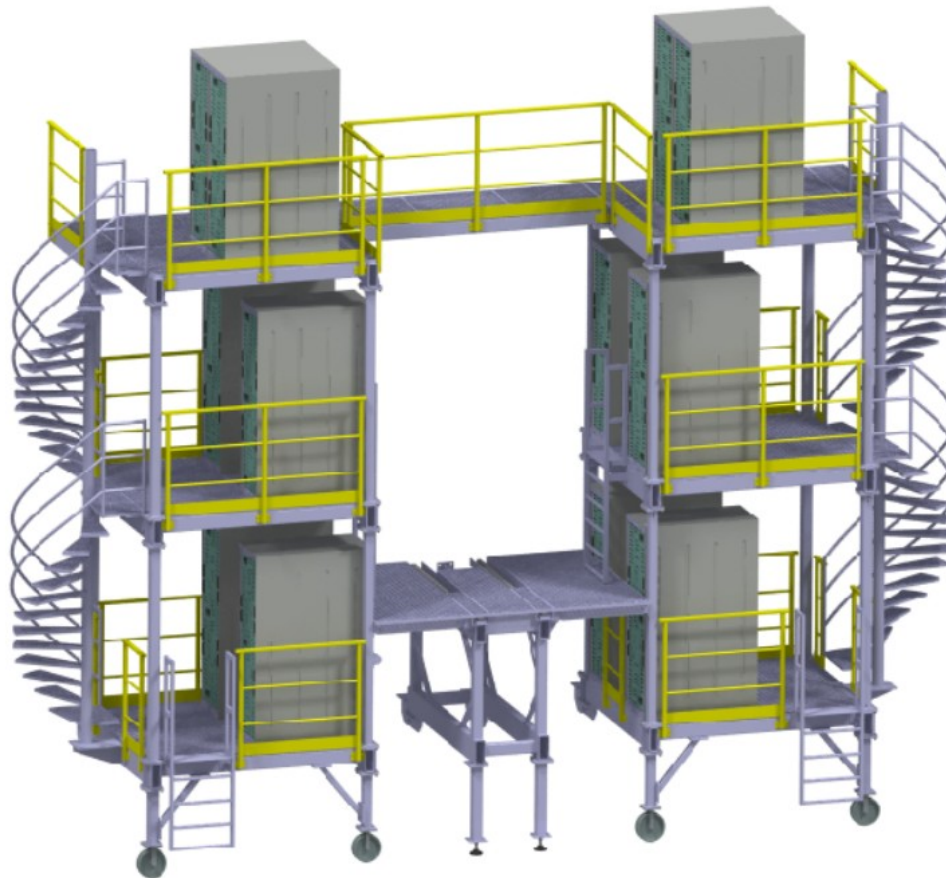
2. Overview of the Rack locations in the maintenance area

Racks under the Extended Platform: A place for 8 Racks will be reserved under the Extended Platform. The final position of the Racks has to be clarified when more details are clear.



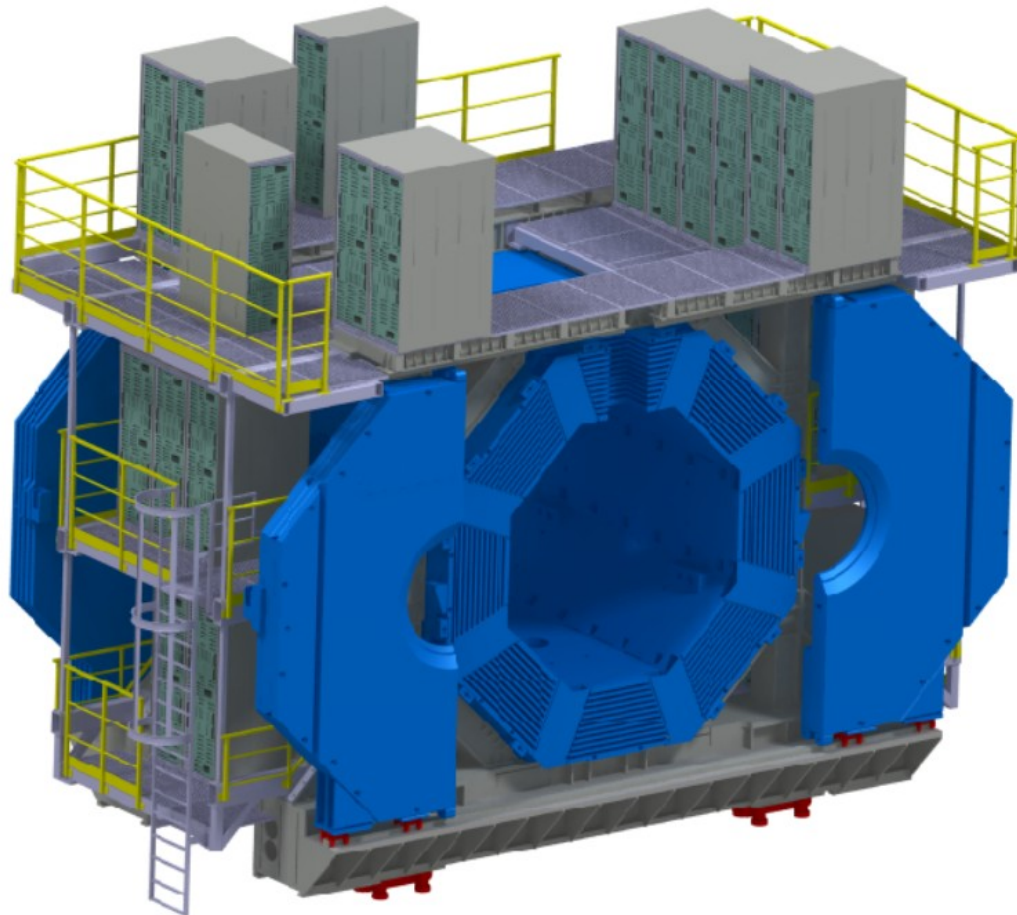
2. Overview of the Rack locations in the maintenance area

Racks on the Auxiliary Platform: 12 Racks are foreseen on this platform. Because the structure will be attached to the support structures of the solenoid, the four Racks on the upper level can be used for the target spectrometer.



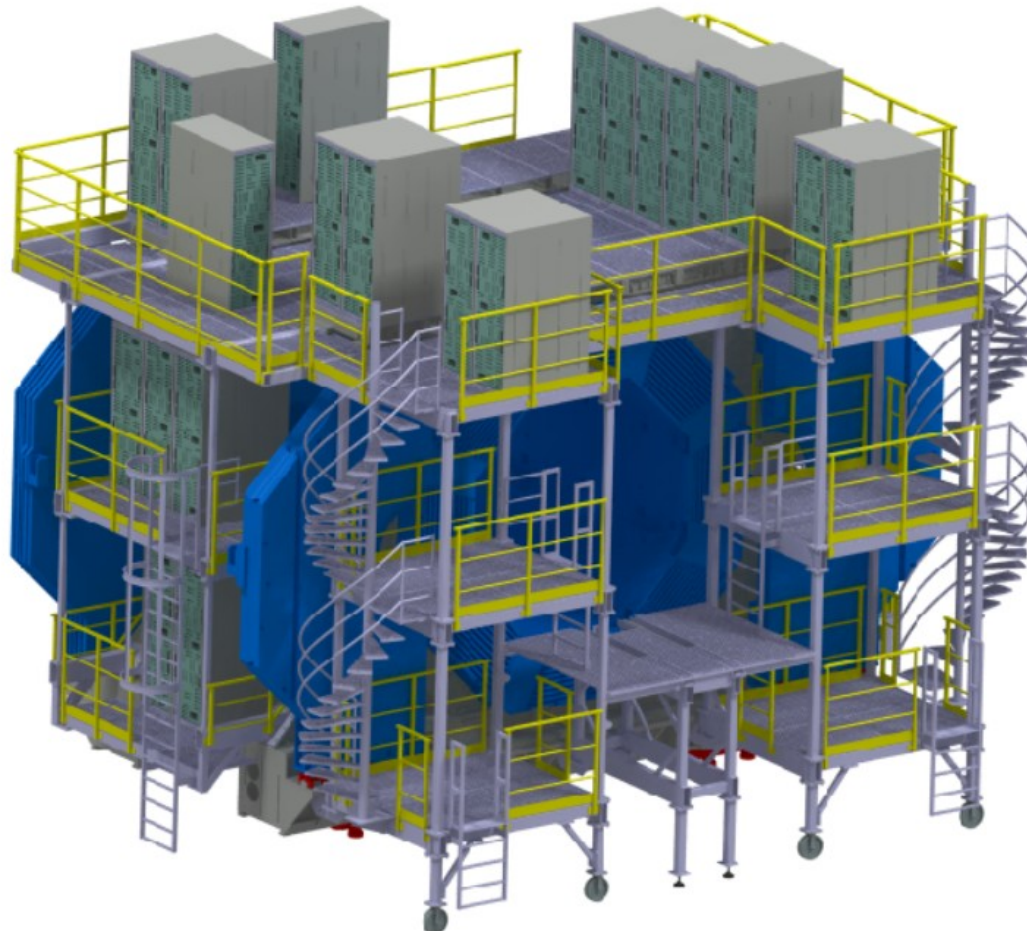
2. Overview of the Rack locations in the maintenance area

Racks on solenoid yoke: 22 Racks are planned to be located on this structures, five each on the left and the right on the support structures and 12 on the top.



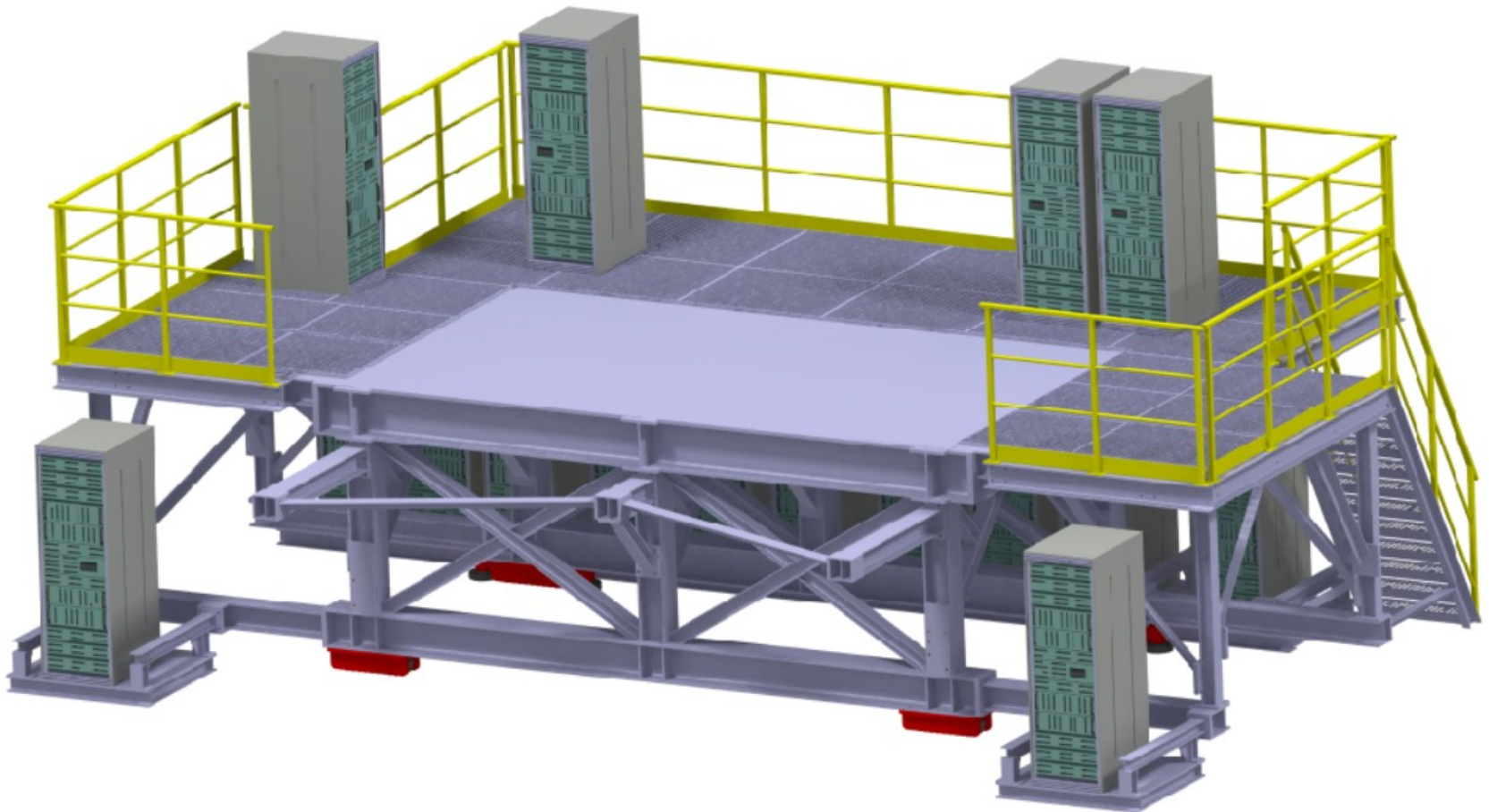
2. Overview of the Rack locations in the maintenance area

Racks on solenoid yoke: In fact, with the four upper racks on the auxiliary platform, there are 26 racks available.



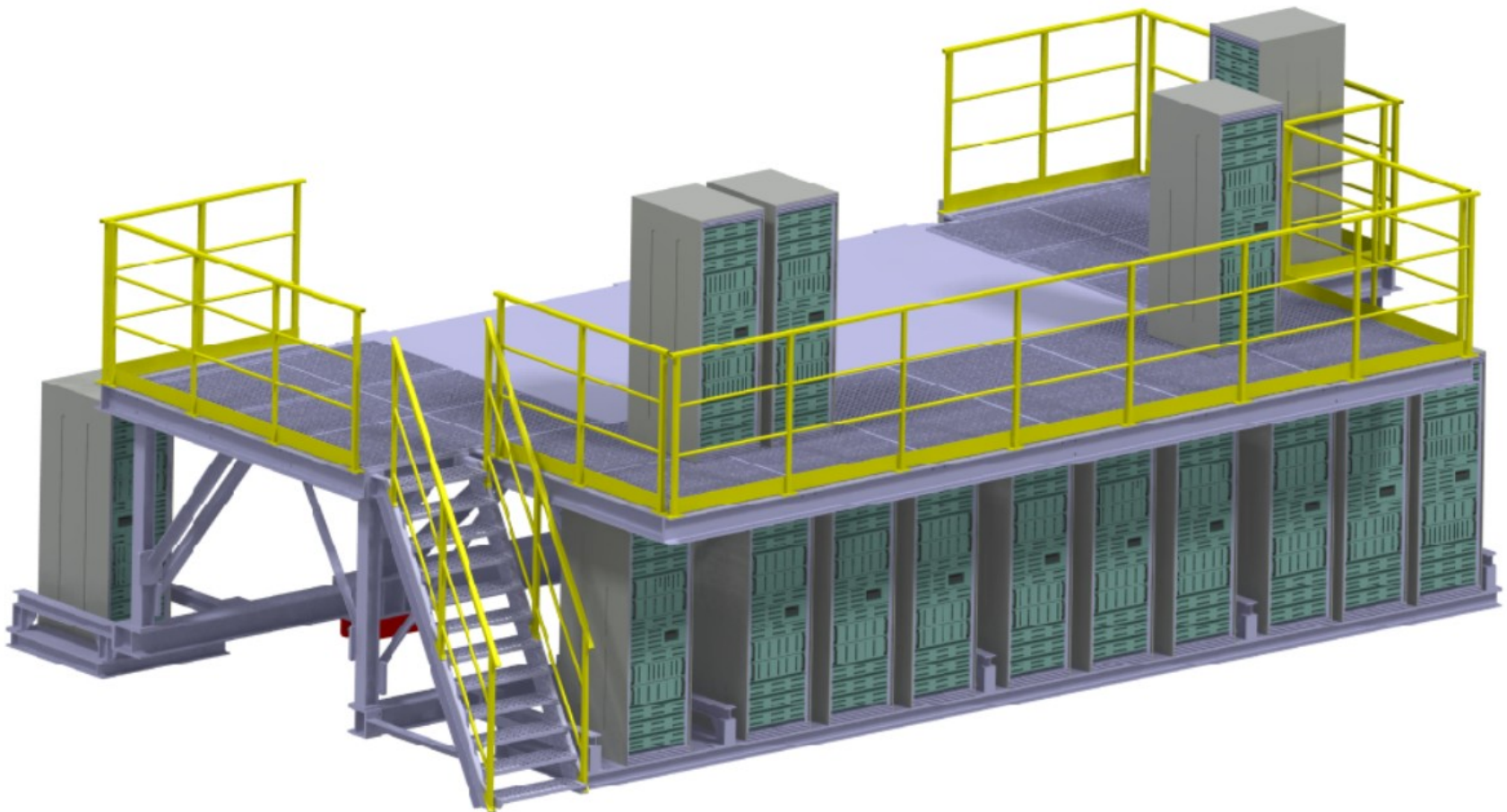
2. Overview of the Rack locations in the maintenance area

Racks on the Forward Platform: 16 Racks are foreseen on the Forward Platform, distributed on the front, the top and the back of the structure. Because of limited space, most of this will be smaller 37U Racks(600x800x1840).



2. Overview of the Rack locations in the maintenance area

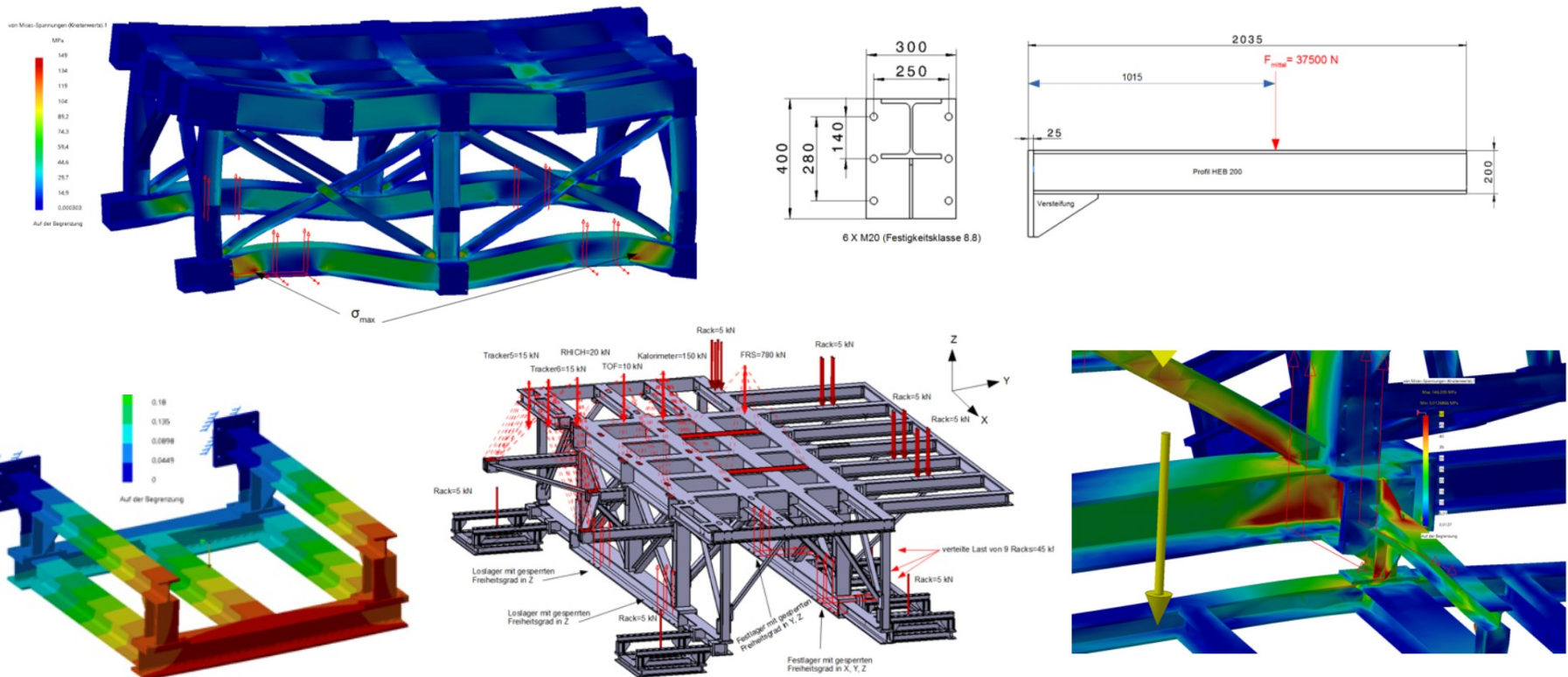
Racks on the Forward Platform: 16 Racks are foreseen on the Forward Platform, distributed on the front, the top and the back of the structure. Because of limited space, most of this will be smaller 37U Racks(600x800x1840).



3. First calculation of the support structures

For the Forward Platform, a first calculation regarding strength and deformation has been done.

However, this was just a first step to verify that the concept is fit to the loads which will be act on the platform. A final calculation will be made when all boundary conditions are fixed.



3. First calculation of the support structures



Conclusion:

The calculations have shown that the platform, its screw connections and the roller carriages are adequately dimensioned according to the latest information. Although the calculations have to be adapted to the final boundary conditions and load application points at a later point in time, it became clear that the present concept and the choice of profiles are suitable for the loads to be absorbed.

Thank you for your attention, stay healthy.