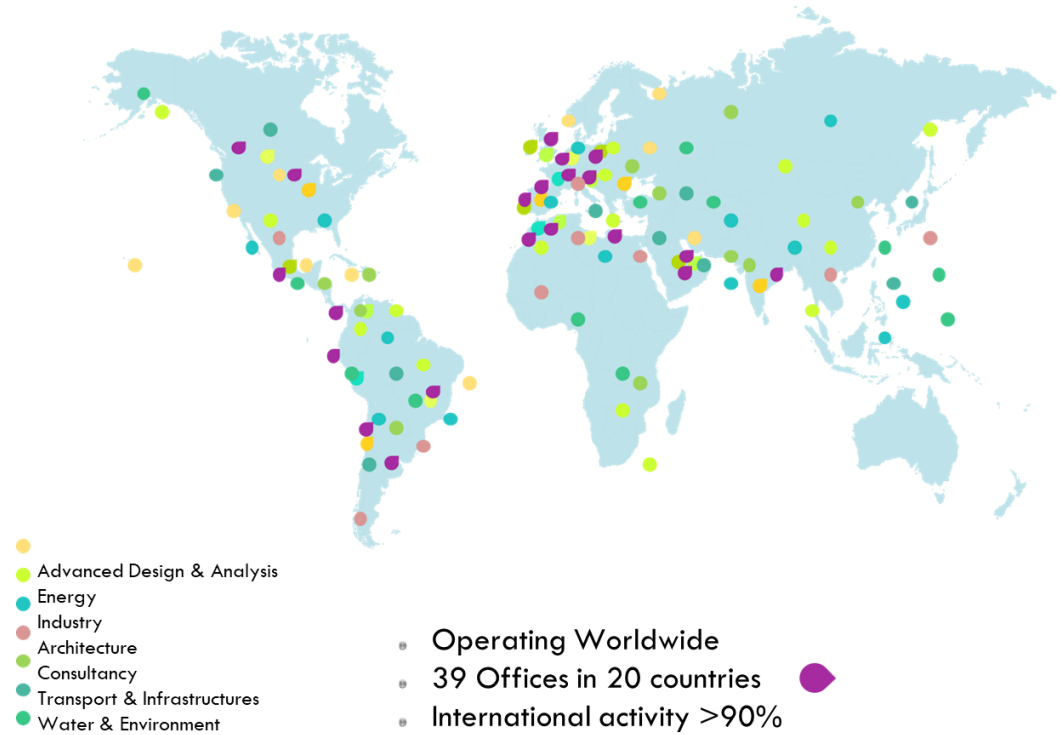


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ADA



Bilbao Headquarters



- Since 1957
- >3000 people
- Professional partnership. > 800 partners

Competences

- » Mechatronics
- » Mechanical Design
- » Optomechanics
- » Singular Structures
- » Analysis and Simulation
 - » Solid & Fluid Mechanics
 - » Radiation Transport (neutronics)
 - » Electromagnetic
 - » System Dynamics
 - » Complex Phenomena
 - » Multiphysics
- » Systems and System Integration
- » Turnkey System Provider

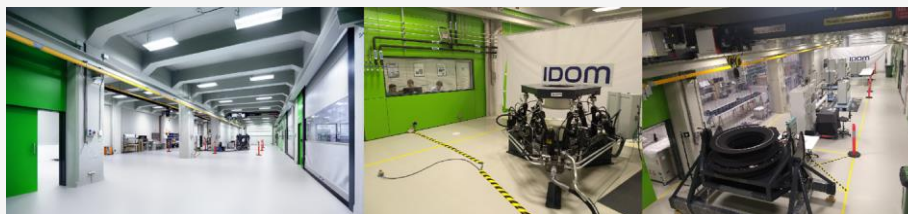
Market



- Scientific Facilities
- Scientific and Medical instruments
- Test Machines and Facilities
- Singular Structures & Engineering

Team & Resources

- » >80 people
- » In Bilbao and Minneapolis offices
- » Large Computing Facilities
- » State of the art advanced Engineering and Scientific Software
- » Prototypes and Assembly Laboratory
- » Large network of associated suppliers



The European ecosystem for diagnostics: How do we best work together?

The succesful development of a complex diagnostic systems rounds around two main points:

1. USE EXISTING AND WELL KNOWN SYSTEMS ENGINEERING METHODOLOGIES

Take advantage of previous experience
on high demanding/stablished industries:
SPACE, GROUND ASTRONOMY, OTHER
BIG INSTALLATIONS (ESS, JHR, etc.),
WIND ENERGY FACILITIES,
CONSTRUCTION, SMALL MEDICAL
INSTRUMENTS, ...

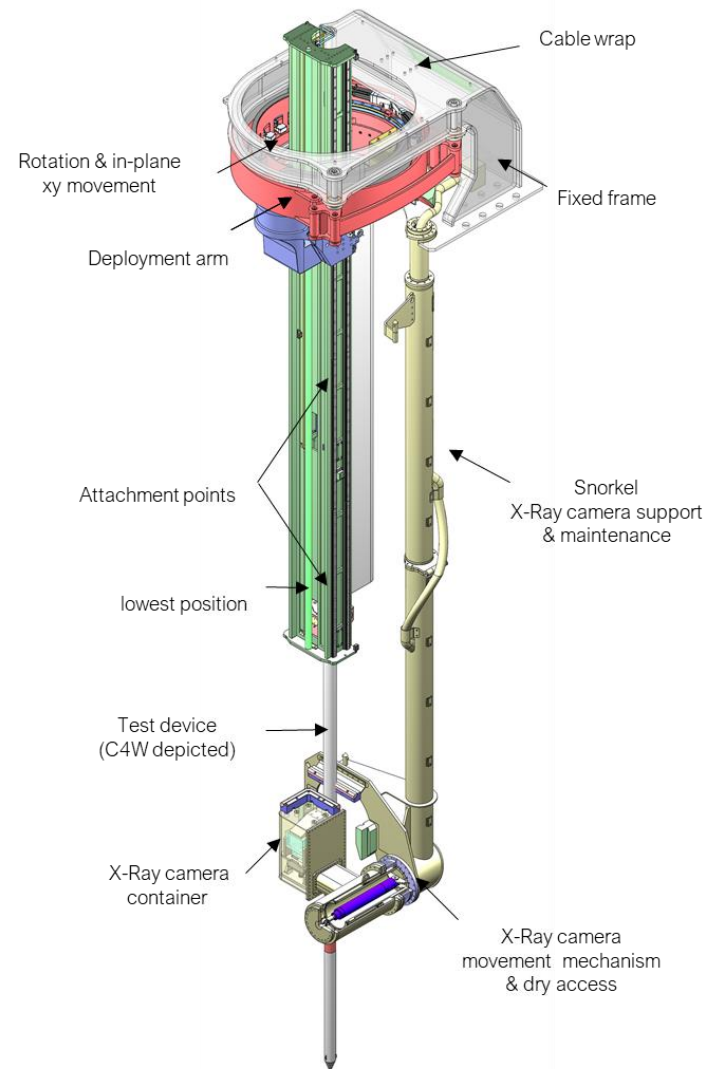
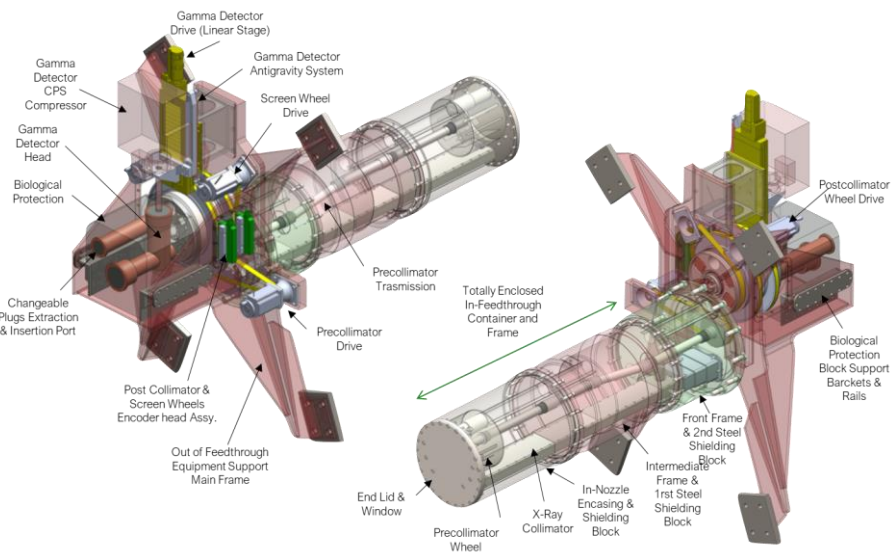
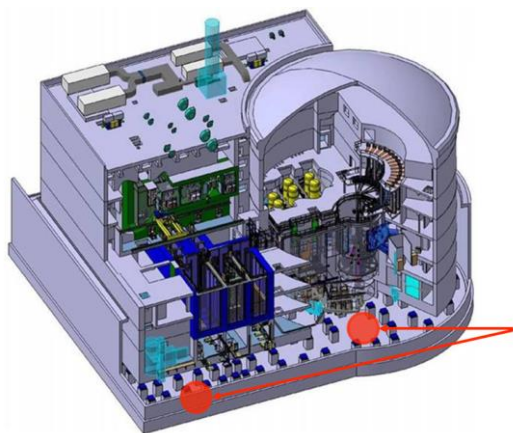
2. HAVE A BALANCED DEVELOPMENT OF THE MAIN DISCIPLINES INVOLVED IN THE PROJECT

- Science and performance
- Engineering
 - Conventional
 - Specific: RH, nuclear, EM, etc.
- Regulatory
 - Nuclear safety aspects
 - Local standards and rules: ESP, ESPN

Internal knowledge
or
external expertise

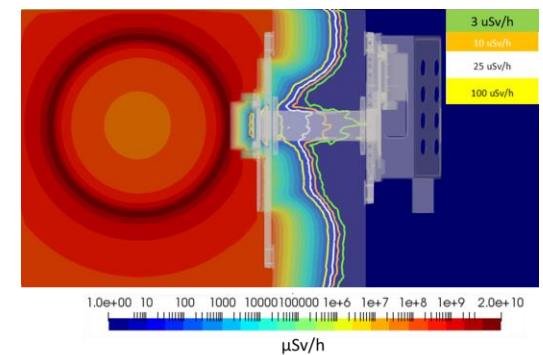
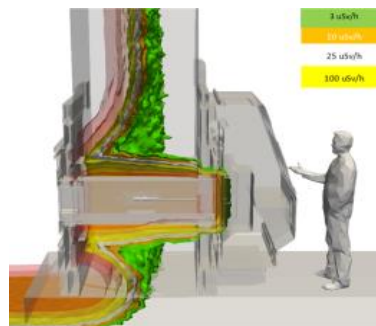
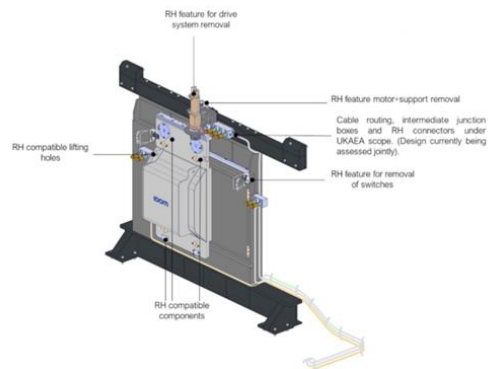
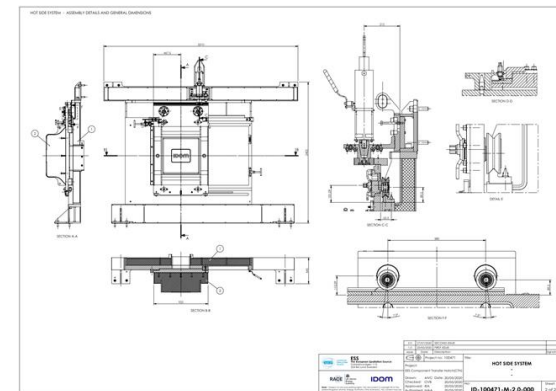
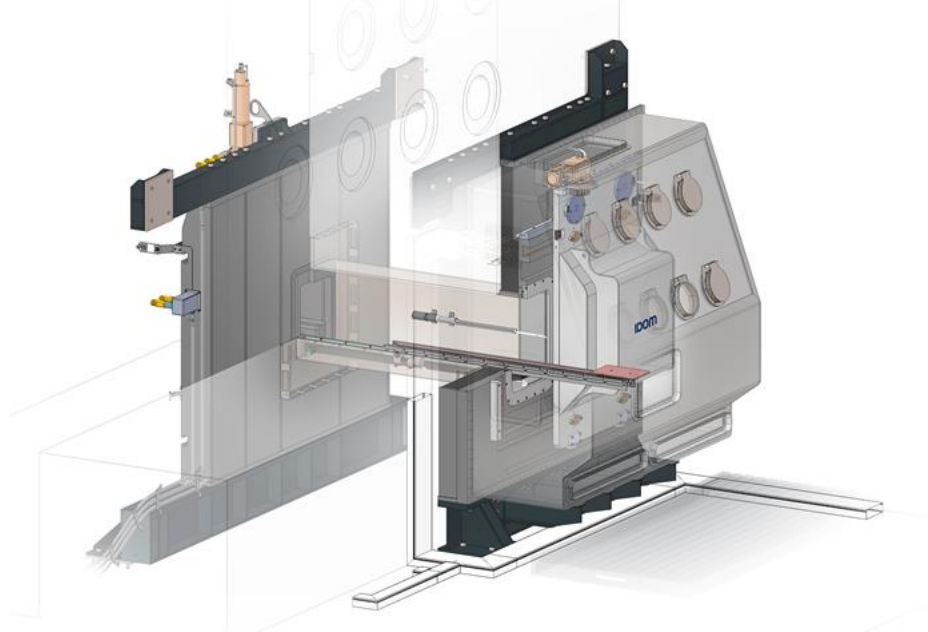
1. Use existing and well known systems engineering methodologies

UGXR Under Water Benches and Collimators (JHR)



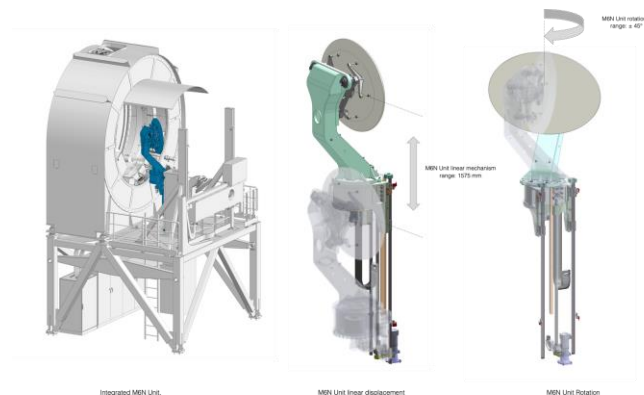
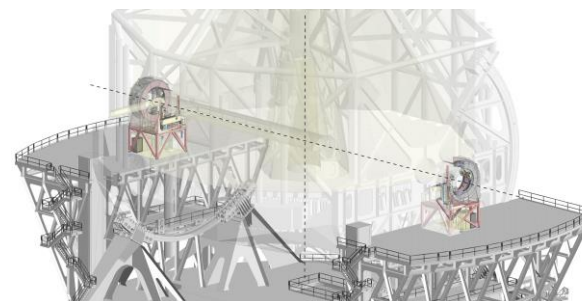
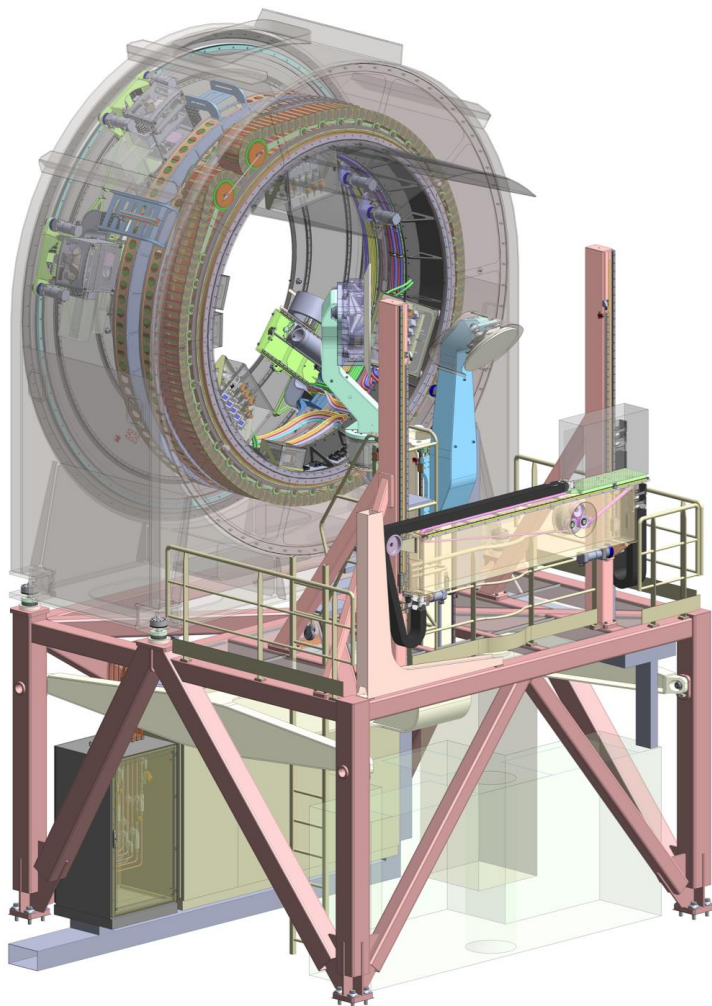
1. Use existing and well known systems engineering methodologies

Component Transfer Hatch (ESS)



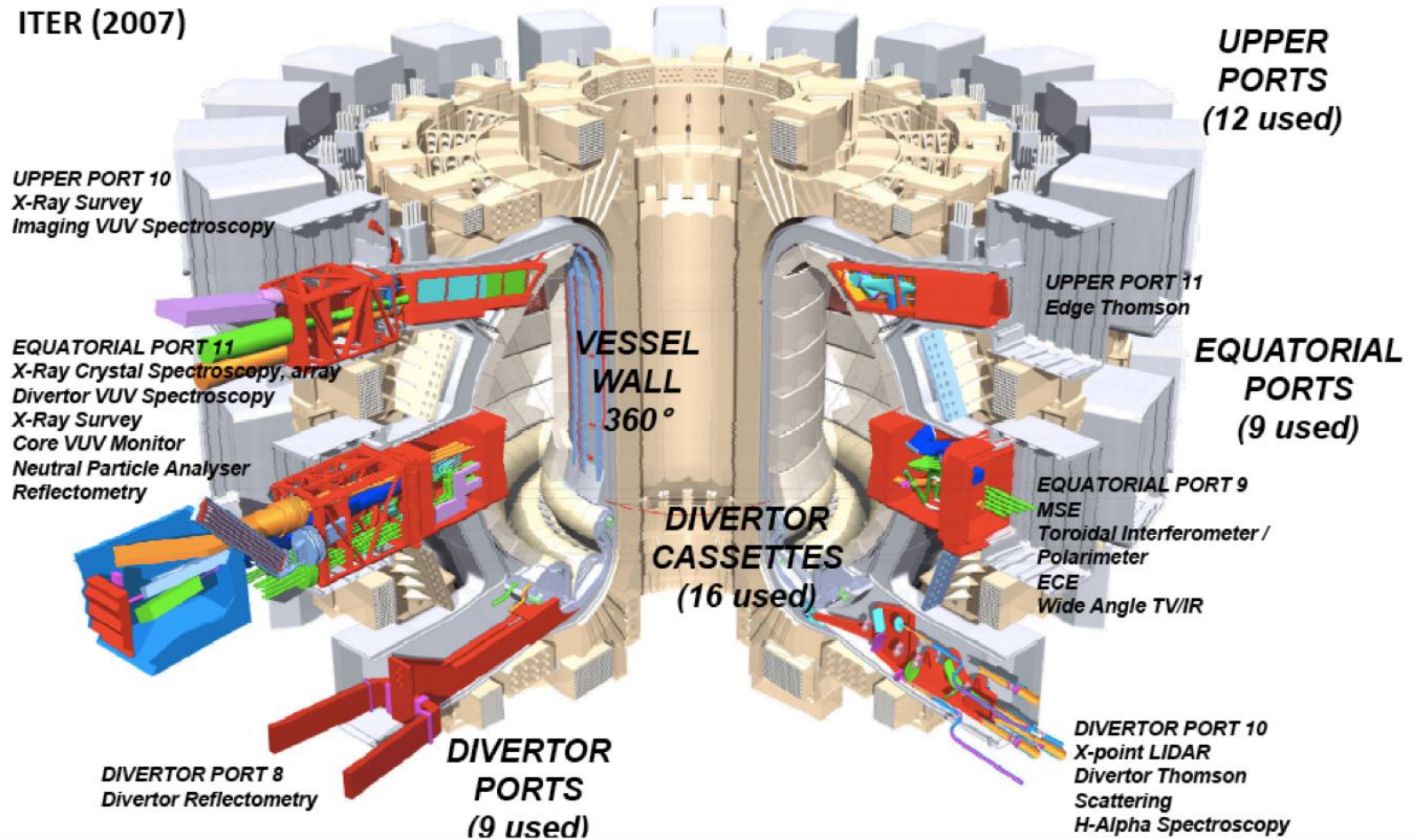
1. Use existing and well known systems engineering methodologies

Prefocal Stations (ELT)



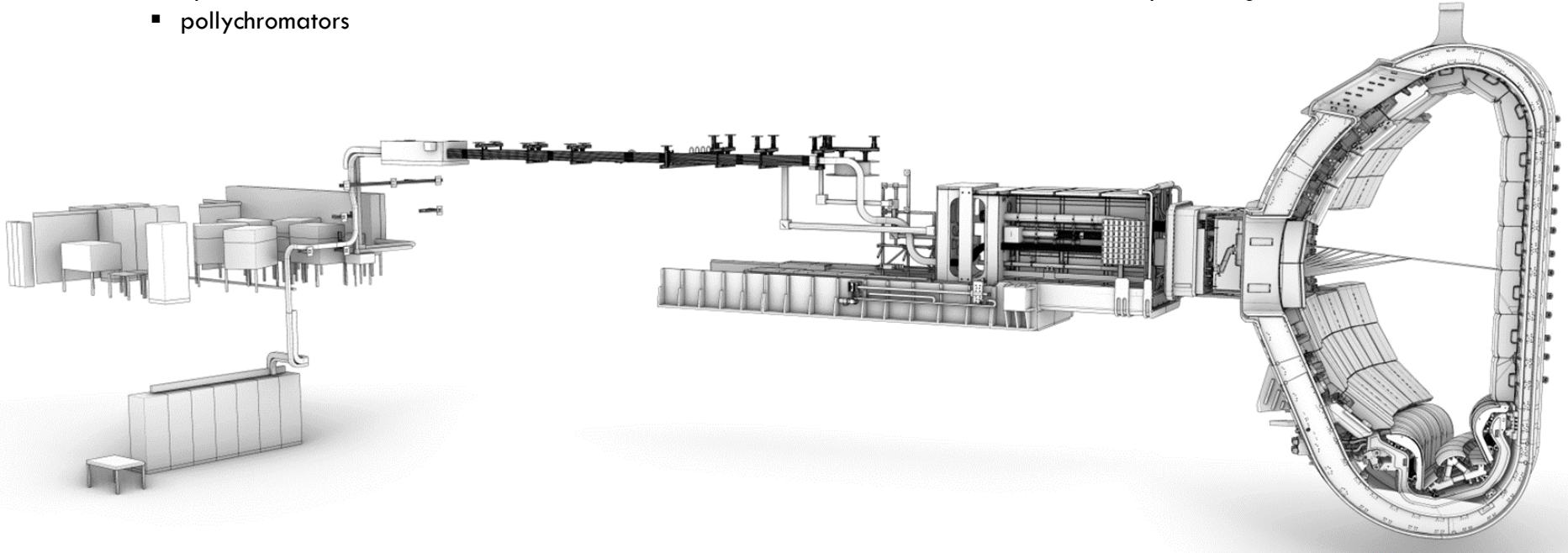
2. Have a balanced development of the main disciplines involved in the project

ITER (2007)

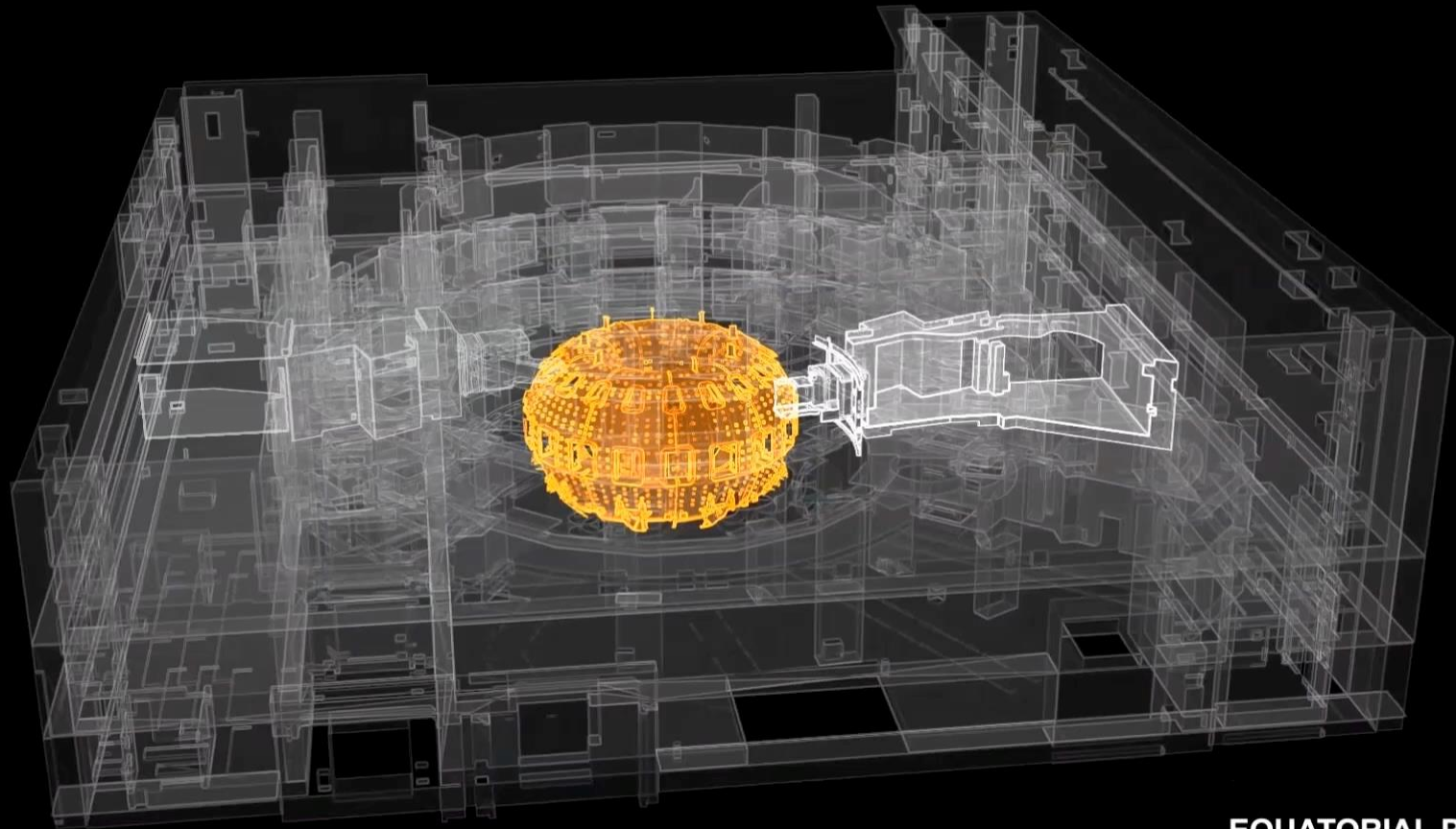


2. Have a balanced development of the main disciplines involved in the project

- SIC components (such as Windows and vacuum extensions)
- Fiber bundles in nuclear environment
- Specific laser devices
- polychromators
- In vessel optical design
- Beam dump
- Active optical alignment



Example of a diagnostic in the EP10 – Typical Thomson Scattering diagnostic



EQUATORIAL PORT 10

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