

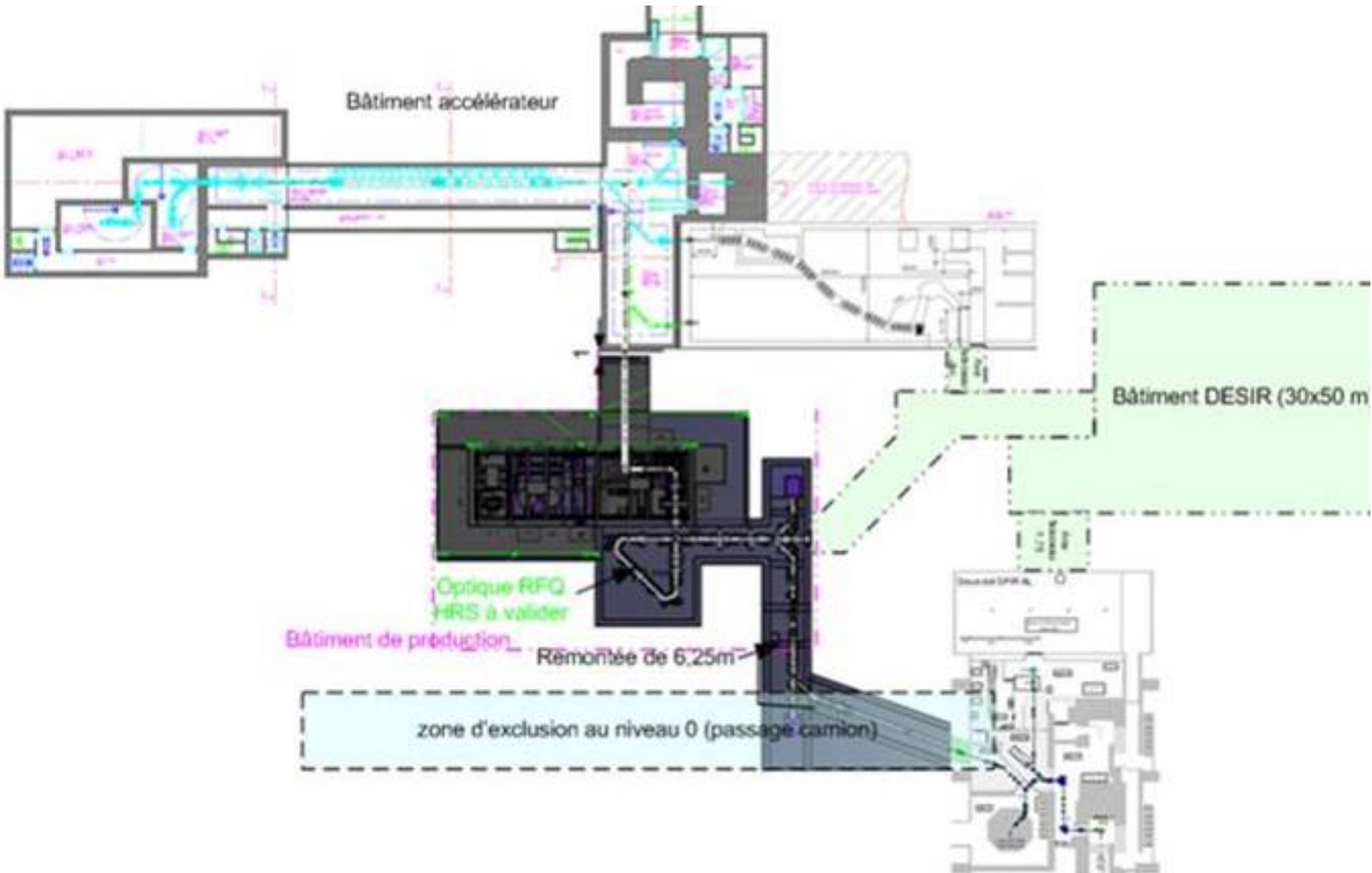
Principe of integration of radioactive beam process inside the production building of Spiral2

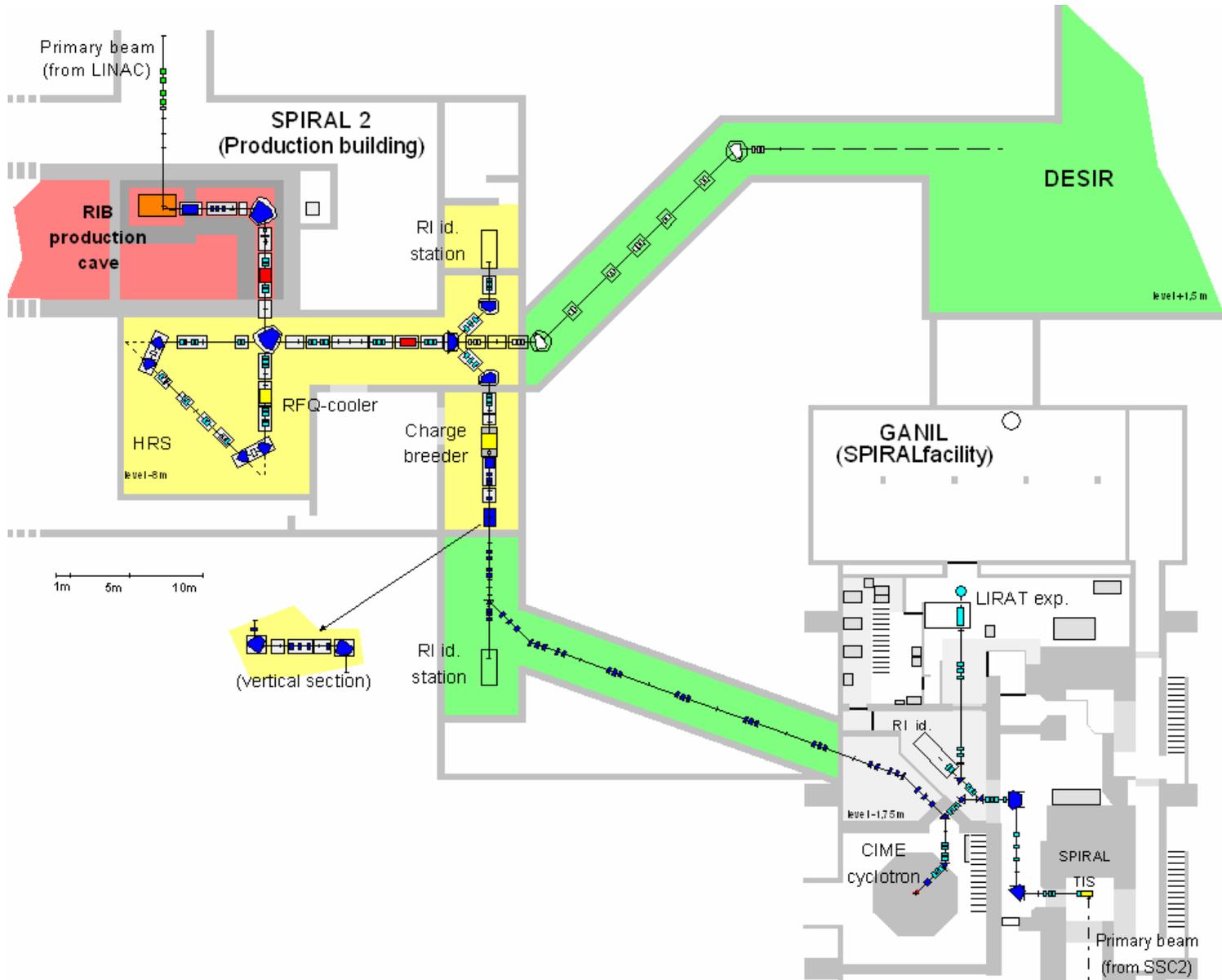


Advancement of building studies :

Phase 1 : Detailed level

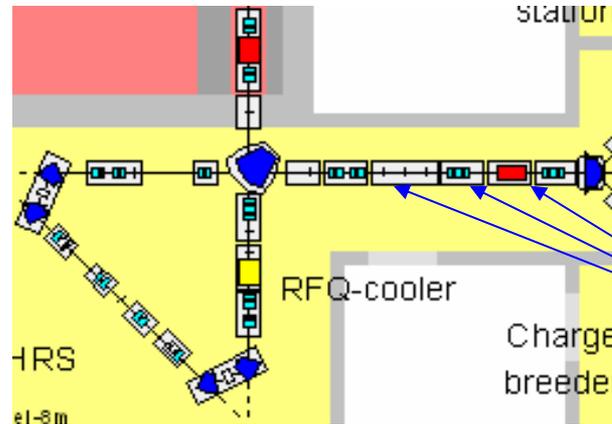
Phase 2 : Preliminary level





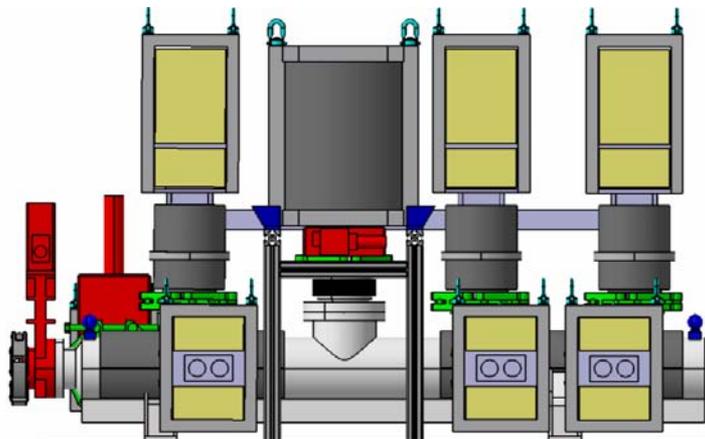
- 1/ An High Resolution Spectrometer needed for low energy beam experiments
→ HRS to be included at the entrance of the DESIR area
- 2/ An incompatibility between DESIR confinement level and potential contamination one
→ HRS to be included at the DESIR exit of the Production building
- 3/ Necessity to purify post accelerated beam also (scientific leading decision)
→ HRS to be included downstream the beam dispatching
in the Beam transport area (“yellow” zone)
- 4/ Spiral2 HRS preliminary design
→ Direct Argone model integration into the 1+ beam line system
= triangular solution as a bypass of the non-purified beam line
- 5/ Space reservation for possible evolutions of the Spiral2 HRS design
→ Proposition of an “alpha” solution with chromatic compensation

1/ Definition of groups of beam line equipments = “modularisation”



Beam line =
succession of modules

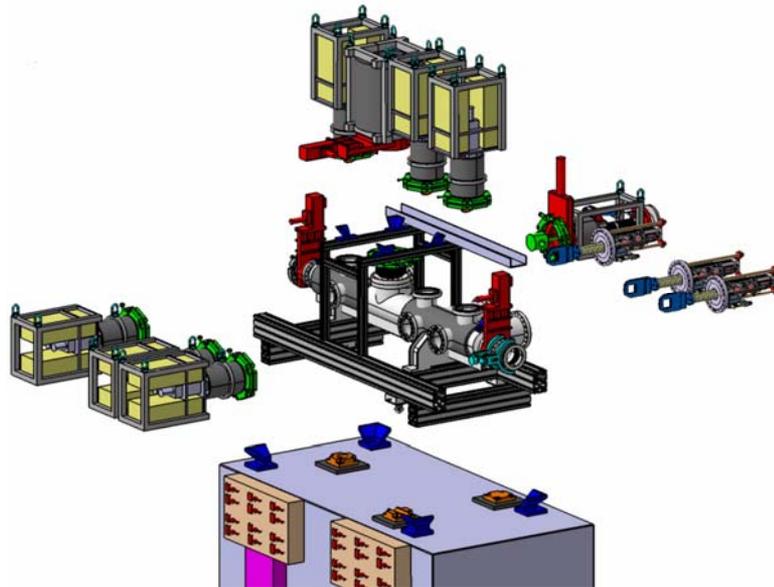
2/ Each module is vacuum independent (confinement for maintenance operations)



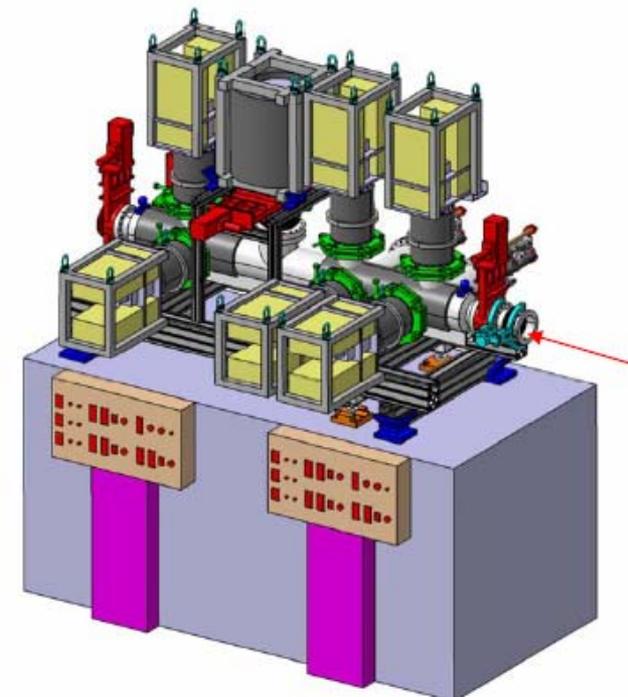
Isolating valves

Interfacing below

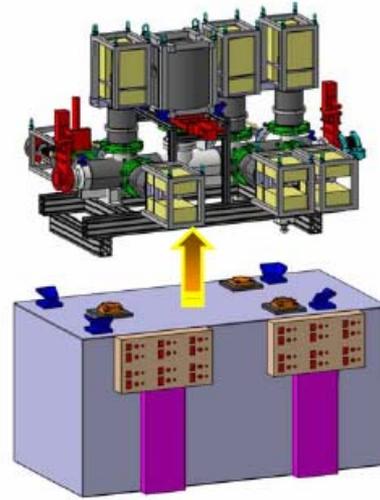
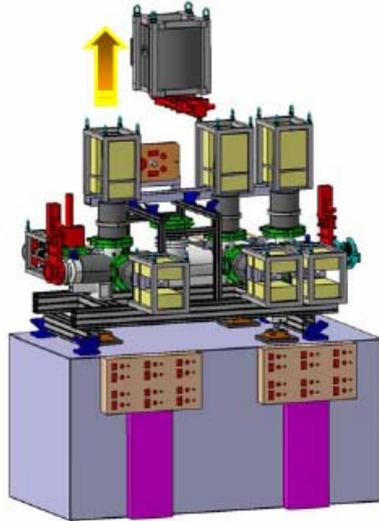
3/ Each module is composed with main core and satellites (for systems needing regular maintenance operation (vacuum pumps for example))



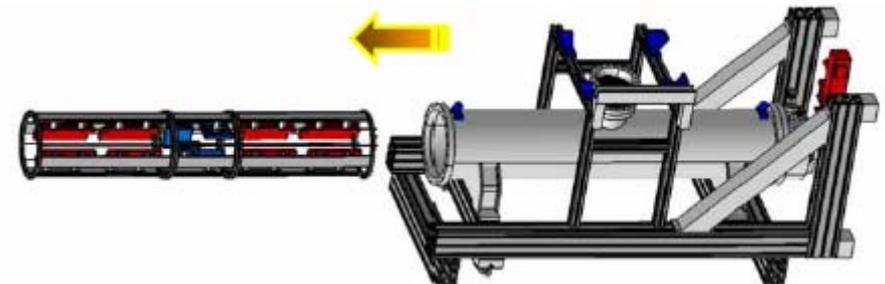
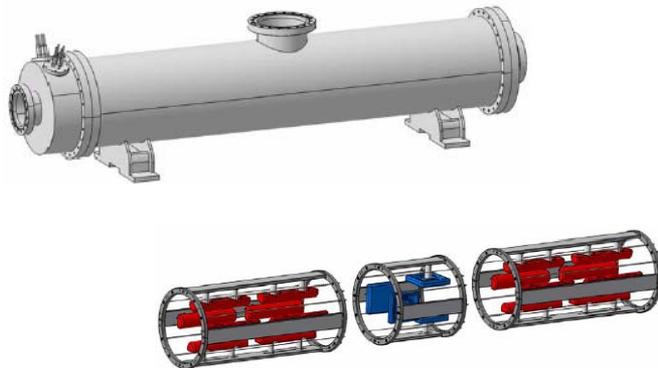
4/ All supports necessary for each module and satellites are centralised on a connexion plate for easy plugged/unplugged operations

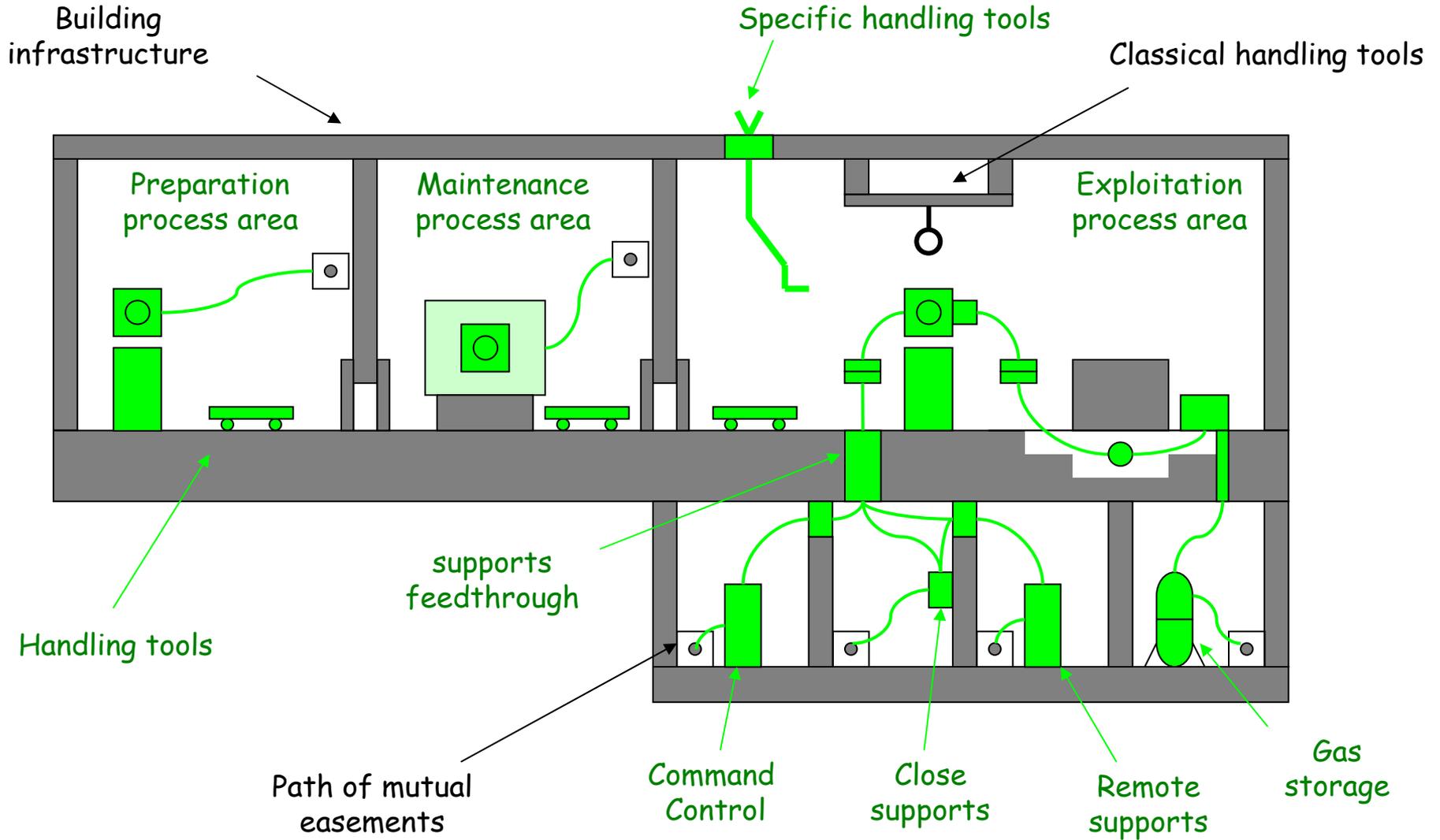


5/ Each module or satellite can be easily mounted/dismounted from its operation position for maintenance operations into adapted maintenance rooms (glove box...)

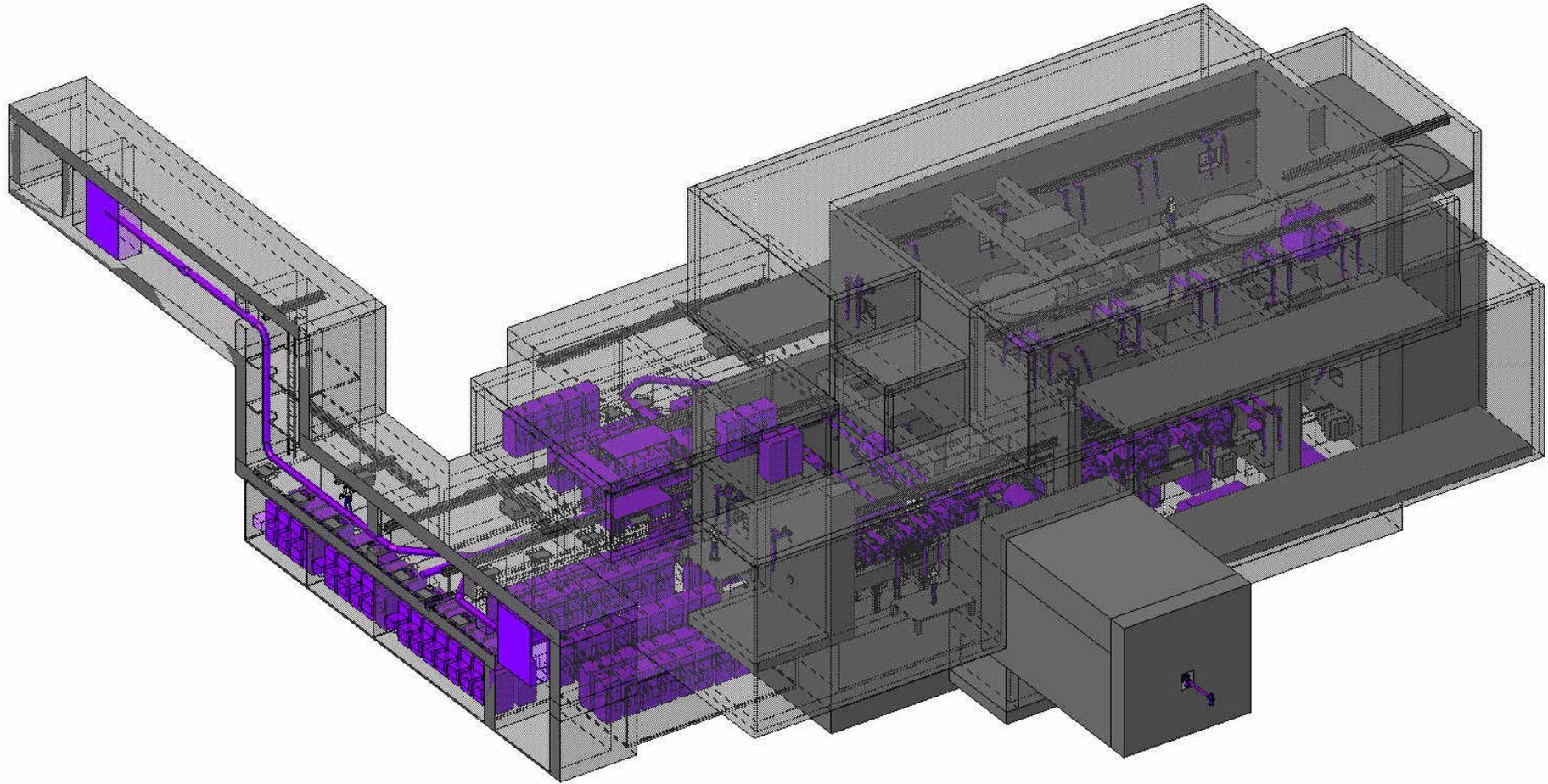


6/ Internal equipments must be “nuclearised” (adapted to distant dismounting process)





3D scheme of process requirements for building
= Input data for MOE building



Example of integration propositions :

vertical feedthrough for electric, electronic and cooling supports
and horizontal way for vacuum system

