

# Securing the Next Century of Science at the High Flux Isotope Reactor

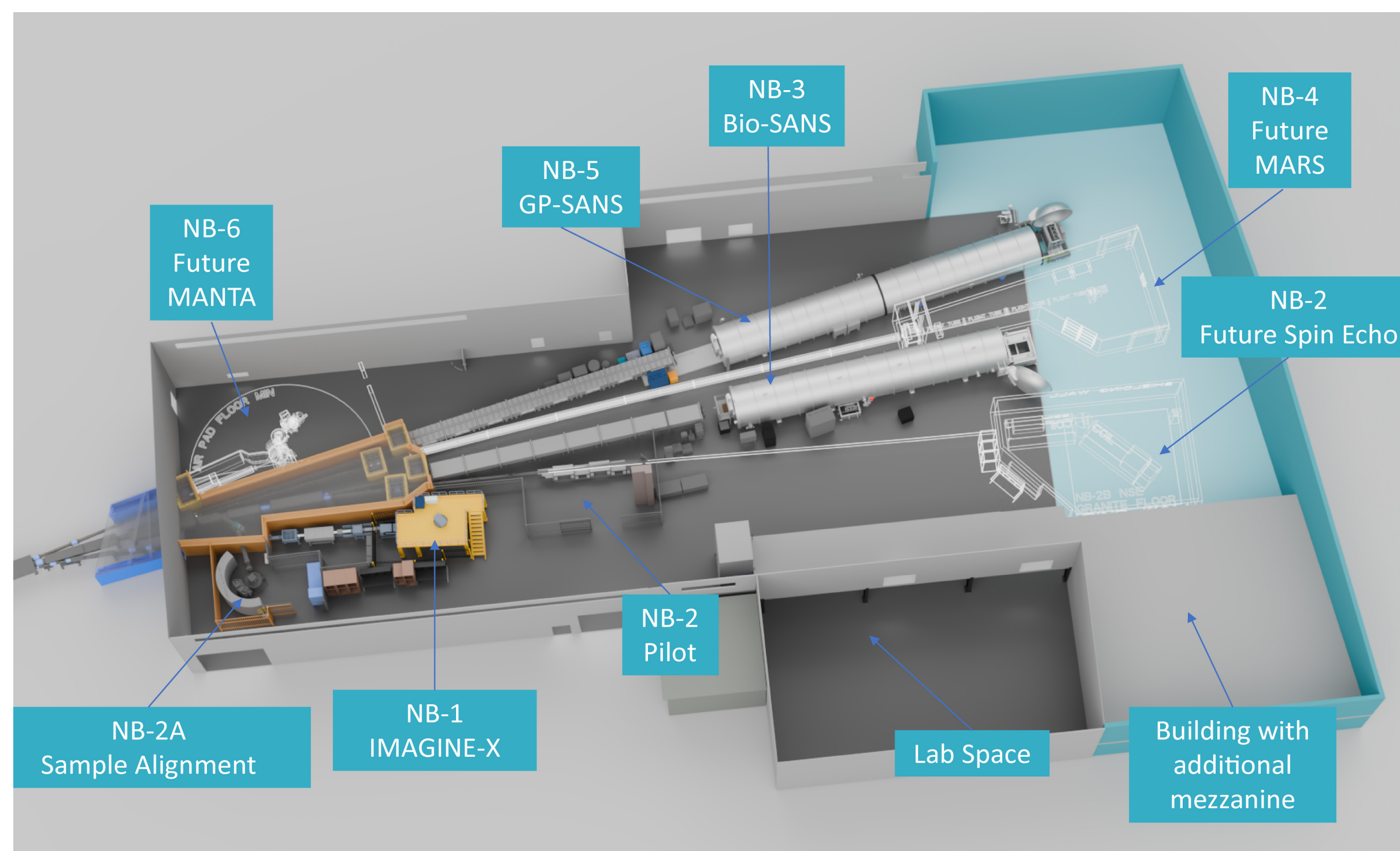
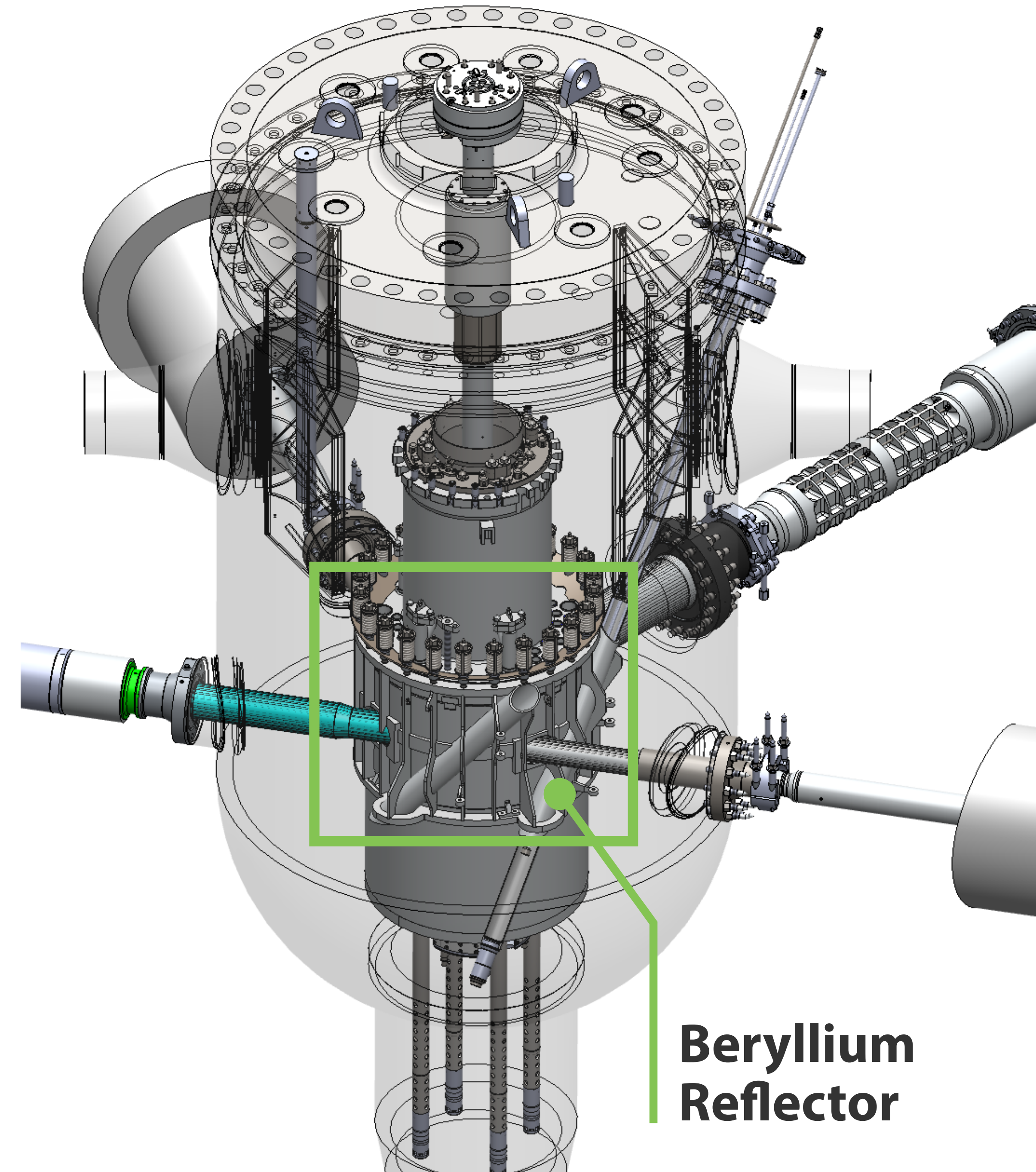
## High Flux Isotope Reactor Beryllium Reflector Replacement (HBRR)

**Beryllium (Be) Reflector:** Helps drive neutron production by reflecting neutrons back into the fuel core.

### SCOPE:

- Redesign and replace the reflector and some vessel components
- Remove and replace 4 beam tubes
- Disassemble and reinstall Beam Room instruments
- Replace the cold neutron guide network
- Make opportunistic infrastructure and instrument enhancements
- Extend the Cold Guide Hall, plus reconfigure and optimize cold neutron instruments to improve performance and make room for future new instruments and capabilities

## HFIR Pressure Vessel



## HFIR Reactor Pressure Vessel Replacement (RPVR)

**Pressure Vessel:** Contains the reactor, which runs at 85 megawatts thermal energy and is cooled with a flow of 16,000 gallons of water per minute.

### SCOPE:

- Remove and dispose of the current pressure vessel
- Install the new reactor pressure vessel and vessel core components
- Enable return to 100MW operation

