To provide a common language and structure to all Instrument Work Packages, the following conventions will be followed. This applies to instrument work packages after Tollgate 2 (Decision to Proceed).

**WBS**

Section 01 shall contain Project Management, Integrated Design and System Integration activities.

Section 02 shall contain Design activities

Section 03 shall contain Procurement, Fabrication and Validation activities

Section 04 shall contain Installation and Verification activities

Sub-section 01 Shielding

Sub-section 02 Neutron Optics

Sub-section 03 Choppers

Sub-section 04 Sample Environment

Sub-section 05 Detectors & Beam Monitors

Sub-section 06 Data Acquisition and Analysis Systems

Sub-section 07 Electrical Engineering

Sub-section 08 Instrument Specific Technical Equipment

Sub-section 09 Instrument Infrastructure

Sub-section 10 available for additional elements

**PBS**

1. Shielding
   1. Calculations & Monte Carlo
   2. Beamline Shielding
      1. In monolith
      2. In bunker
      3. Out of bunker
   3. Other shielding
2. Neutron Optics
   1. Beam delivery system
      1. Translation
   2. Guide supports
   3. Alignment System
   4. Polarizing cells/cavities/guide field
      1. Presample
      2. Postsample
   5. Monochromator
   6. Analyzer
3. Chopper Systems
   1. Chopper Control System
   2. Chopper System 1
   3. Chopper System 2
   4. Chopper System n
4. Sample Environment [default area around sample position is r=50cm]
   1. Sample Stage/Sample Position
   2. Sample Environment 1
   3. Sample Environment 2
   4. Sample Environment n
5. Detectors and Beam Monitors
   1. Beam Monitors
      1. Presample
      2. Postsample
   2. Detector Readout
   3. Detector type 1
      1. Support
      2. Translation
   4. Detector type 2
   5. Detector type n
6. Data Acquisition and Instrument Control
   1. Control Box [ICS]
   2. Data Acquisition Components [DMSC]
   3. Data Analysis [DMSC]
7. Electrical Engineering
   1. Motion Control and Motors
      1. Optical Element 1 Support
      2. Sample Environment Support
      3. Detector Element Support
      4. Instrument Specific Technical Equipment Support
   2. Control Electronics
   3. PPS
8. Instrument Specific Technical Equipment
   1. Collimator
   2. Jaws/Slits
   3. Shutters
9. Instrument Infrastructure
   1. Electrical
      1. Data
      2. Power
      3. Lighting
   2. Piping
      1. Cooling water
      2. Vacuum
      3. Nitrogen gas
      4. Helium gas
      5. Nitrogen liquid
      6. Compressed air
         1. Instrument air
         2. Service air
   3. Fire Protection
   4. Vacuum
   5. HVAC/Ducting
   6. Detector vessel/vacuum/secondary flight path
   7. Beamstop
   8. Cave
   9. Beamline support structure
   10. Video
   11. RF Shielding
   12. Cranes
   13. Instrument Hutch
   14. Instrument Specific Lab
10. Available for additional elements