Estia Toll Gate 2 meeting update of high-level schedule

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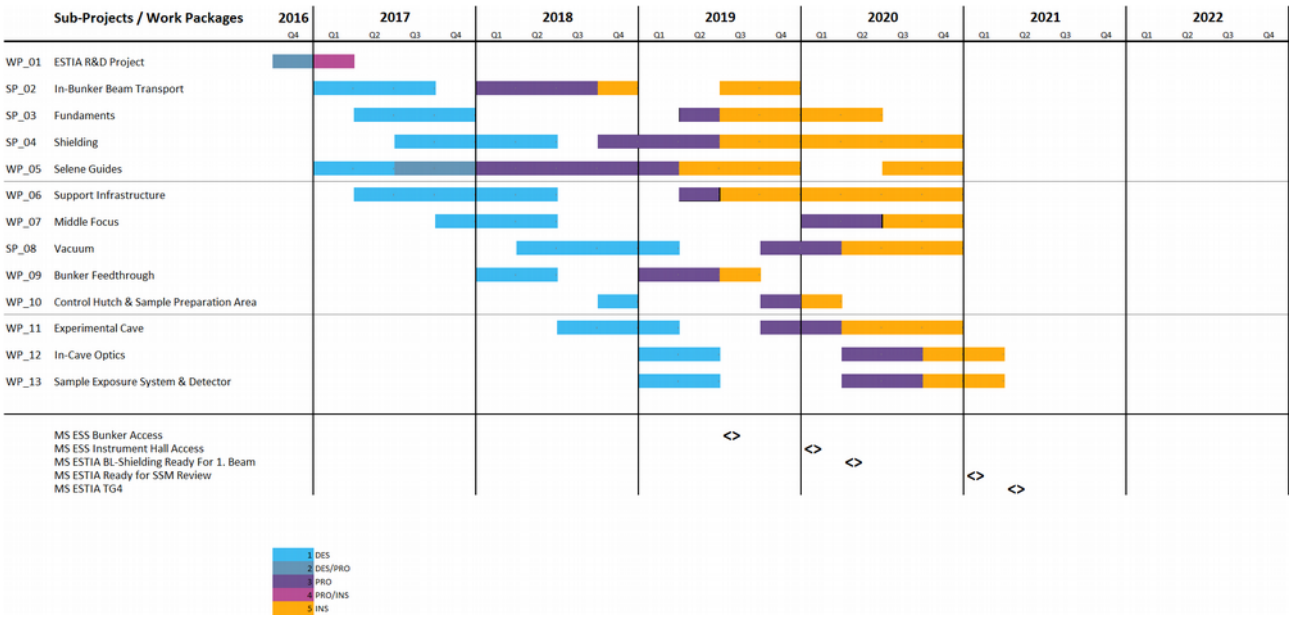
Since the submission of the TG2 documentation ESS has announced changes to the major construction mile stones that impact the instrument construction in a non-trivial manner. The instrument team has therefore prepared two scheduling scenarios with different risks and advantages that should be discussed during the TG2 meeting on 29. 11. 2016.

Scenario 1: Instrument finished as soon as possible



Estimated advantages:

- Earliest stage for instrument to move into hot commissioning
- Instrument shielding will be advanced enough to allow first beam on target in beginning of 2020 without the need to build and rebuild systems
- Full installation of all in-bunker and close to bunker components before first neutron production
- Enough time for hot commissioning before user operation, which is especially needed for the novel Estia concept to succeed

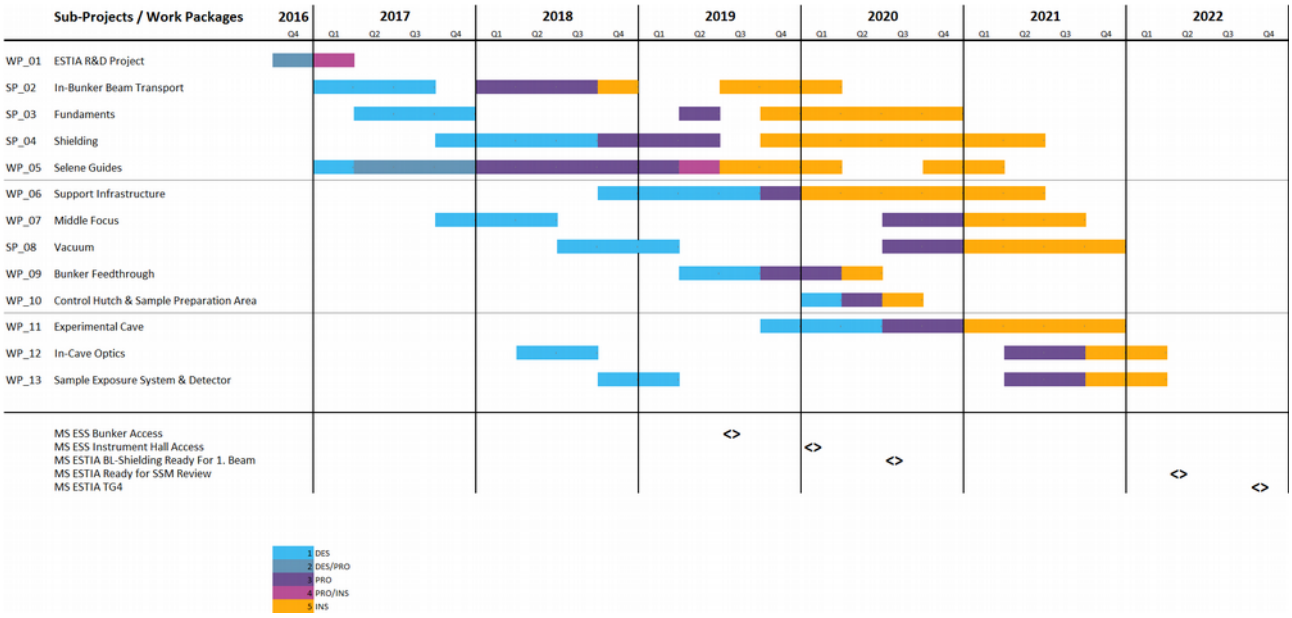
Foreseen risks:

- Very tight schedule with little room for delays of any sort
- Need for support by a large number of ESS staff at once to be able to perform parallel installations
- Some work packages might need to move to fast to follow the ESS procedural guidelines
- Issues with the Swedish Radiation Authority (SSM) will instantly delay the TG4

Additional cost compared to initial planning:

- Fast and parallel installation at ESS site will only be possible with additional assistance from PSI personal. This will likely produce cost increases of 300-500 k€

Scenario 2: Relaxed schedule with reduced risk



Estimated advantages:

- Scheduling of design WPs can be streamlined
- Limited number of parallel efforts to be coordinated by instrument team
- Enough room to manage procurement delays and perform adequate testing

Foreseen risks:

- Issues with work in activated areas as installations near and inside the bunker will be carried out after the first beam on target
- Delay of user operation to at least Q3 of 2023
- Insufficient hot commissioning before begin of user operation
- Swiss expectation of internal beamtime during hot commissioning will likely not be met

Additional cost compared to initial planning:

- The delayed installation of shielding components outside the bunker wall and the bunker feedthrough will produce additional work load due to build/re-build tasks (~100 k€)
- Unanticipated elongation of the project will require 1-2 additional Person*Years from the instrument core team (150-300 k€)