# DAQ Consortium Status

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Tech Board, 14-Sep-17

DAQ Consortium Status

- Short-term action list

  ‣ First consortium (kickoff) meeting – DONE

  ‣ Identify and appoint tech lead – DONE (Georgia)

  ‣ Identify and appoint WG leaders (MB) – DONE (next slide)

  ‣ Mailing lists, etc – DONE

  ‣ First discussion with institutes – ~50% done (most US units pending - TL on the case)

  ‣ Begin biweekly consortium meetings – 2nd meeting proposed for Friday next week

  ‣ First-pass project schedule – in progress, see later

  ‣ First-pass responsibility matrix / WBS – not yet

  ‣ First DAQ workshop – trying to schedule for early November

- Upfront observations

  ‣ We have no baseline DAQ design or schedule; this is first task

  ‣ Many (most) institutes are new to the project, and therefore 'flexible'

Consortium Structure
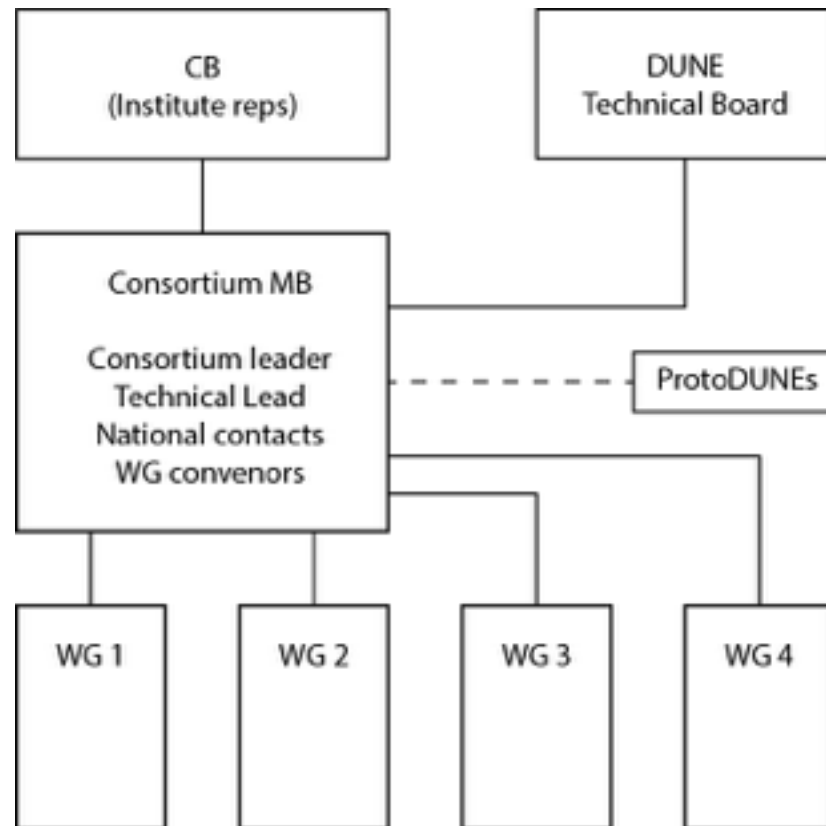
- WGs are short-lived entities (up to TP), will be updated when we have full picture of schedule and interests

Working Groups

- WG mission
  - Review requirements -> document -> (workshop) -> generate technical options -> document -> (workshop) -> decisions!
  - We anticipate that the practical work in the next months is done within the WGs

- WG1: Architecture (Giles Barr + A.N.Other)
  - Parameters of system; data flow options; simulation studies

- WG2: Data selection (Josh Klein)
  - Data selection strategy; timing, control and L1 trigger (TBD)

- WG3: Hardware and interfaces (Matt Graham)
  - Technology options and costs; interfaces to front-end electronics
  - "interface contacts" in other consortia are being established now – URGENT

- WG4: Back-end and computing (Kurt Biery)
  - Technology options and costs; software infrastrcuture; interface to offline computing

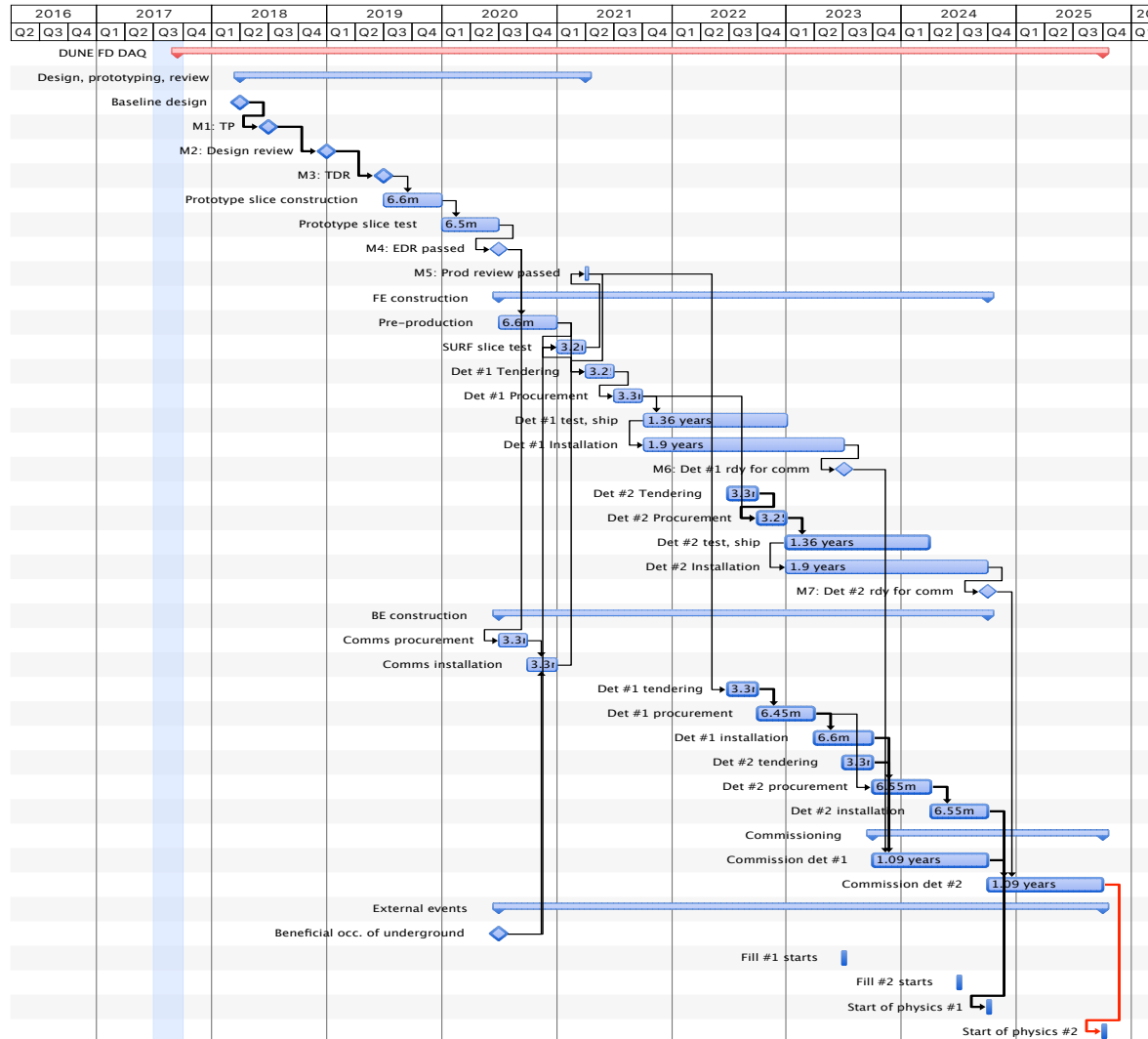- WG5: Integration and installation (name in play)

Project Schedule

- We start with a 'production schedule'

  ‣ Urgent task is to compare notes and find interactions with other projects

    - Cannot write down a full WBS without this

    - Focus on the critical path, which appears to be hardware production

  ‣ Will inform the grouping of tasks into a RACI matrix

- Some assumptions

  ‣ External dates taken from top-down DUNE FD CDR schedule

  ‣ Assume this project has a large component of custom electronic hardware

    - This is not an uncontroversial statement at the time of writing

  ‣ Avoid any interaction with the cryo schedule (no electronics on cryostat)

  ‣ Beneficial occupancy of underground DAQ area from mid-2020

- This is clearly a straw man – so please shoot it down

  ‣ To be revised heavily in coming weeks, and populated with resources

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Project Overview

- Four main project phases (as traditional)

  ‣ Design and prototyping

  ‣ Pre-production

    • Essential to stress-test {procurement, QA, installation} procedures in a large project

  ‣ Production

  ‣ Commissioning

- Milestones

  ‣ M1: Technical proposal (i.e. baseline design + options) 18Q3

  ‣ M2: Pre-TDR design review (confirm baseline based on PD data) 19Q1

  ‣ M3: TDR 19Q3

  ‣ M4: Engineering design review passed (20Q3)

  ‣ M5: Production readiness review passed (21Q2)

  ‣ M6, M7: detector #1, #2 ready for physics commissioning (23Q3, 24Q4)

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Straw Man Schedule

Det #2 probably does not follow same schedule as det #1 in reality

Next Steps

- Organisation

  ‣ Get some momentum into working groups (some have started this week)

  ‣ Finish up the discussions with institutes, populate matrix

  ‣ Begin formal consortium meetings

  ‣ Start arranging workshops

- Planning

  ‣ Move from top-down schedule to WBS

    • Not a resourced plan on a time-scale of a few days, but understood we need to do this quickly

    • The deliverables list is somehow rather 'generic'; but cannot address this instantly

  ‣ Define a first-pass responsibility matrix

    • At present, there are several areas with no institute interest – iteration needed

  ‣ Compare straw man schedule with other consortia and top level planning

    • Are our assumptions about schedule interactions reasonable?

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