

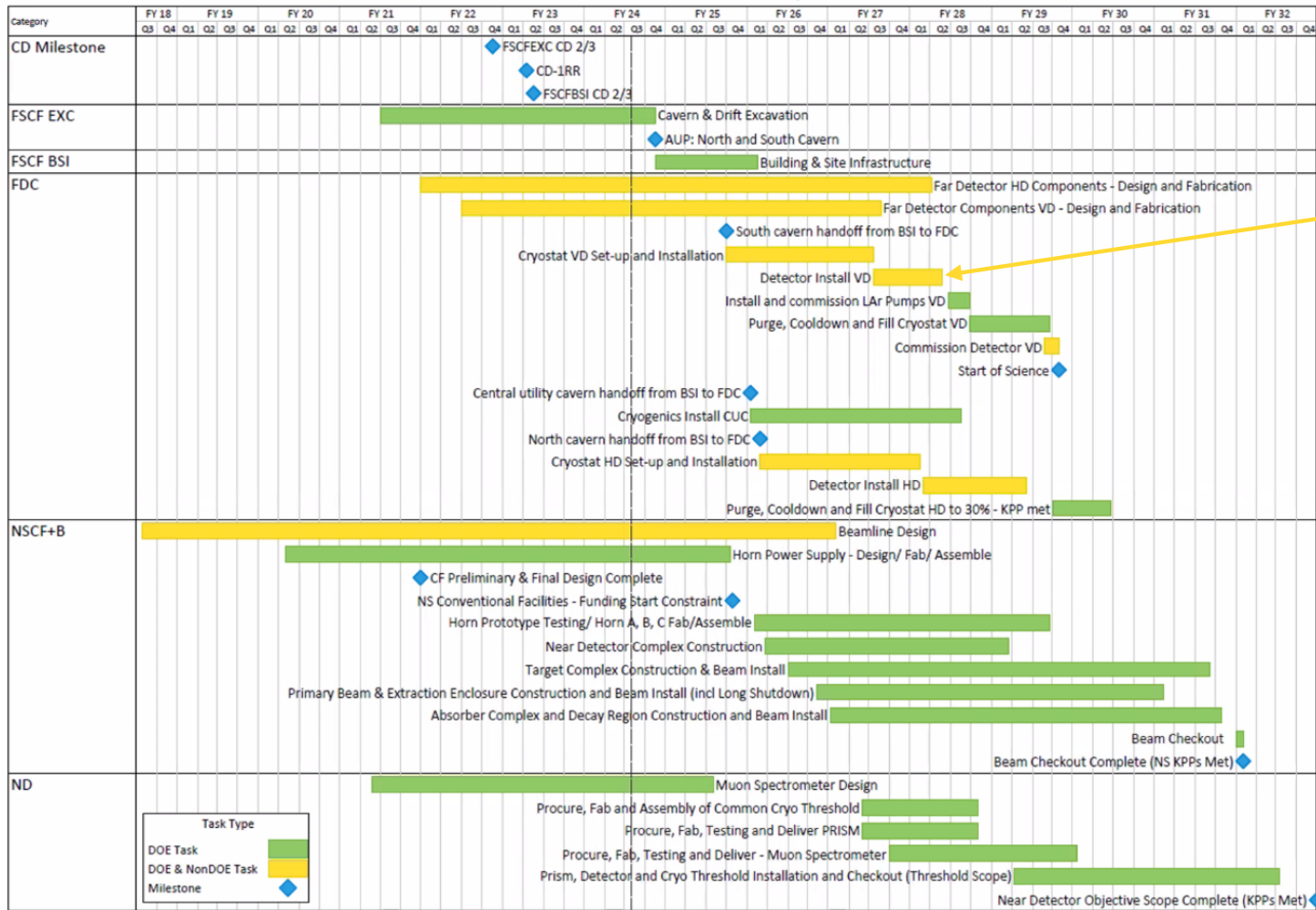
VD PDS Schedule Summary

DUNE PDS Schedule Workshop

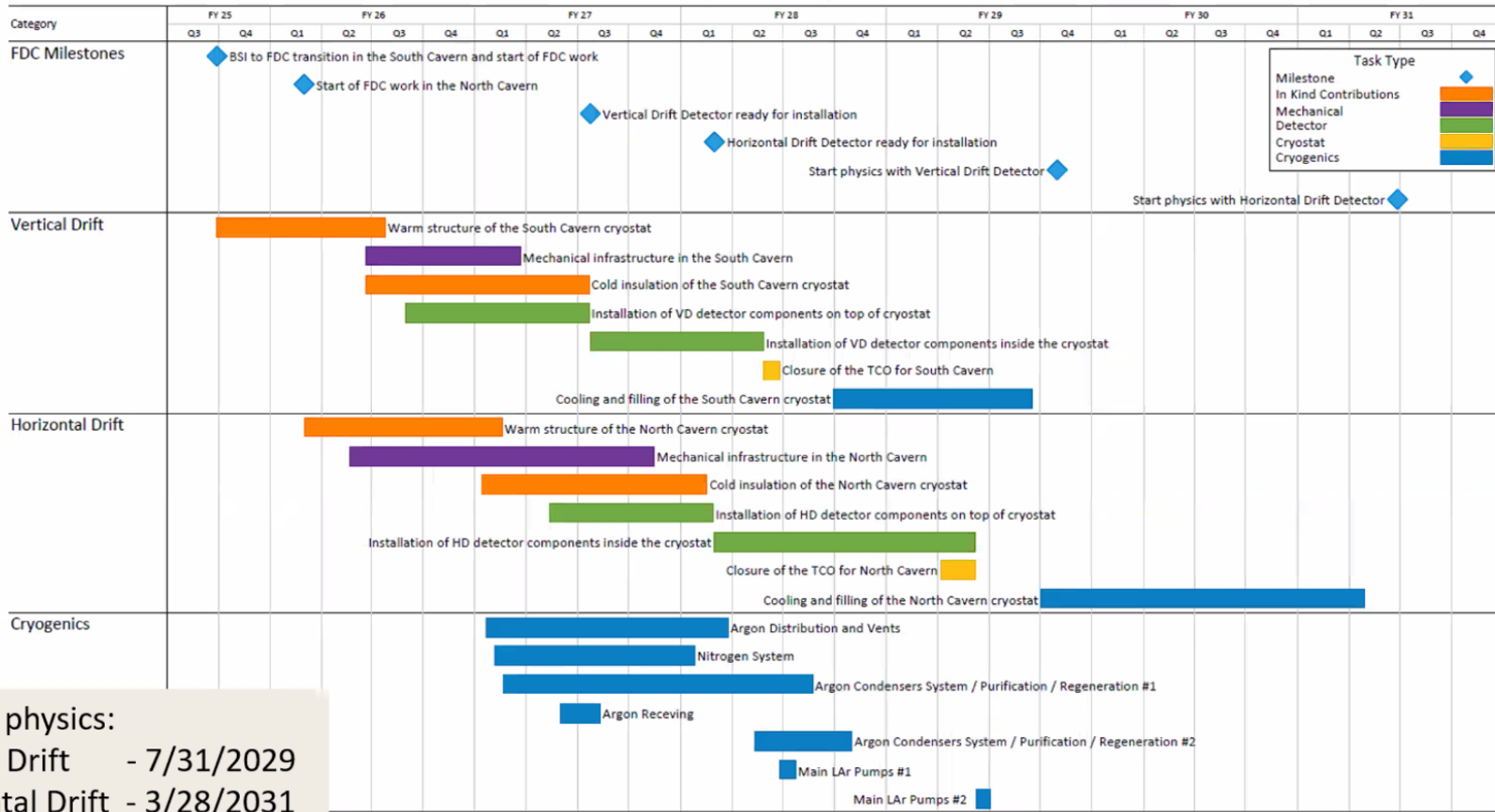
NIU - May 19, 2024

P. Shanahan - Fermilab

LBNF/DUNE Summary Schedule

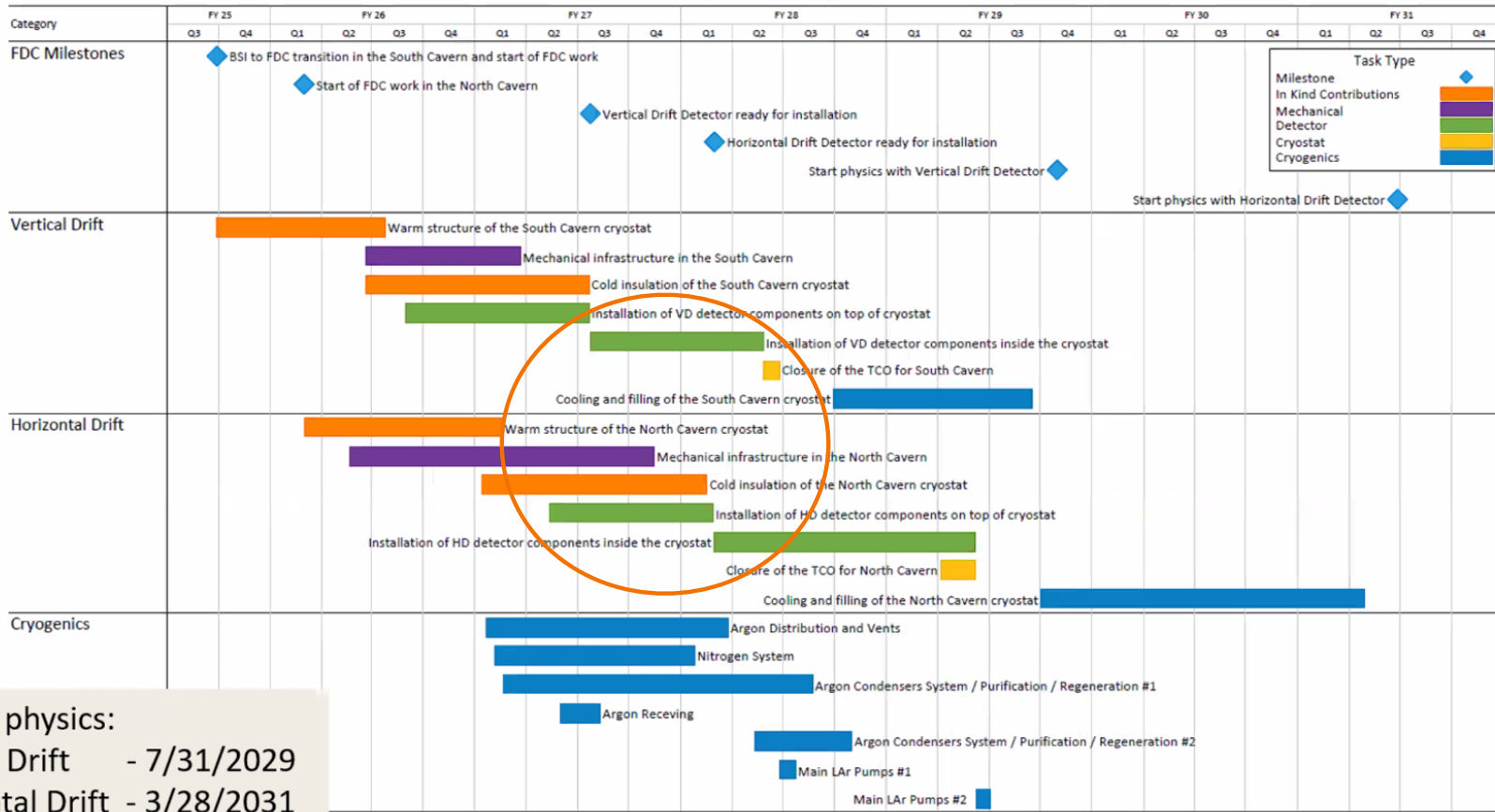


Far Detector Summary Schedule



Start of physics:
 Vertical Drift - 7/31/2029
 Horizontal Drift - 3/28/2031

Far Detector Summary Schedule

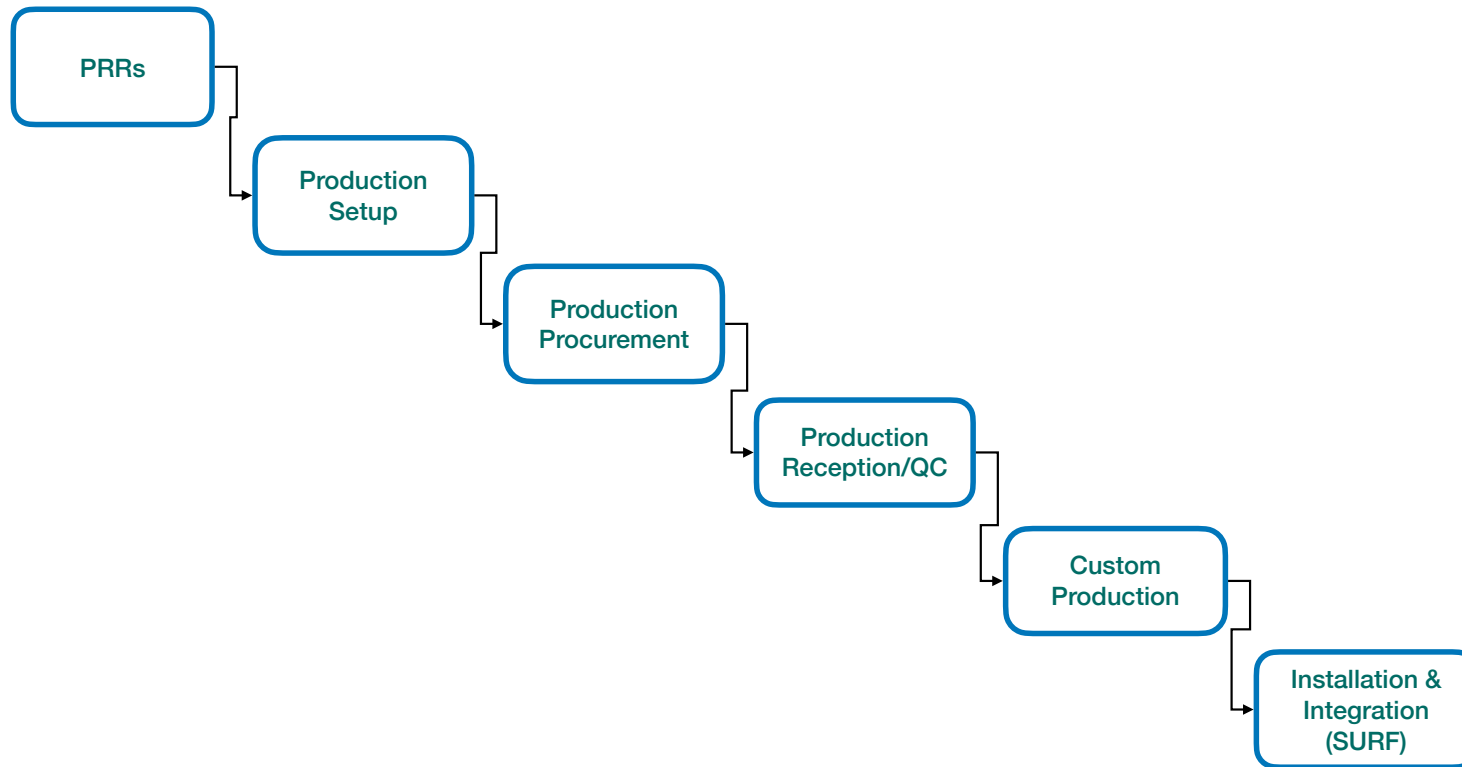


Start of physics:
 Vertical Drift - 7/31/2029
 Horizontal Drift - 3/28/2031

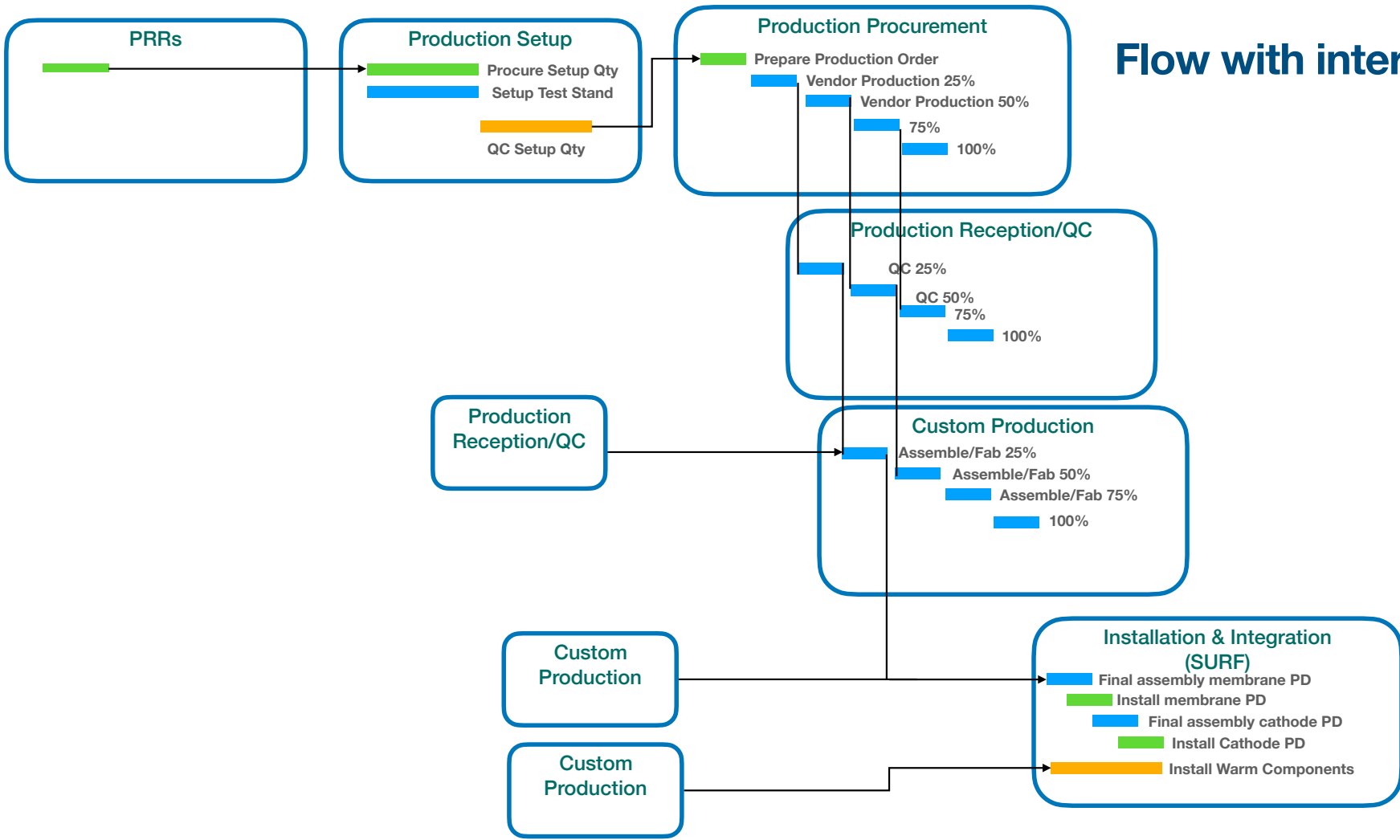
Caveats

- There are still a few logic bugs.
- Some scope assignments remain TBD
 - Membrane cold electronics solution
 - Addition of Fermilab resources for DAPHNE
 - Other possible reassignments of scope
- This schedule assumes flex circuits ordered by SiPM vendors
- Some shipping is missing - more on this later

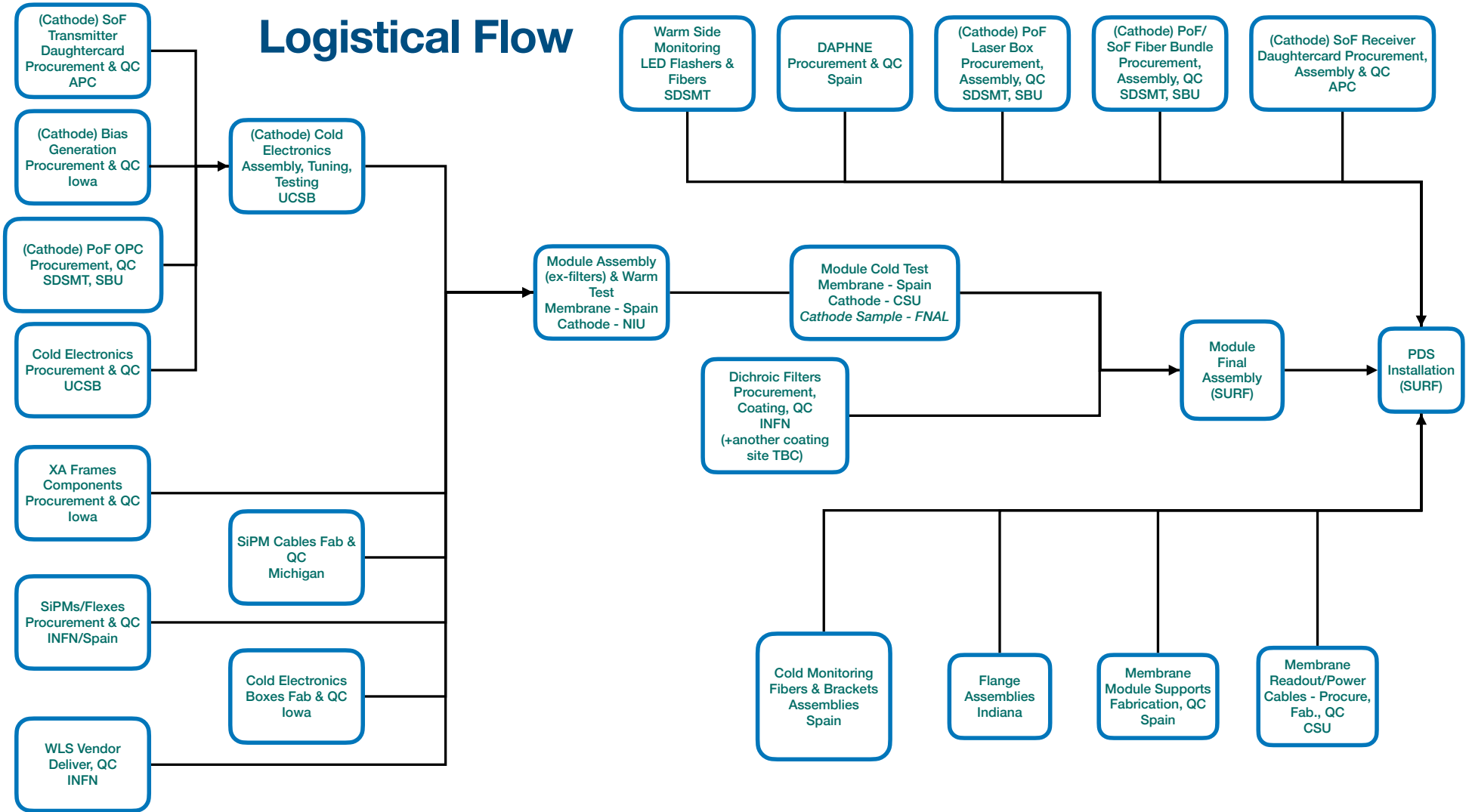
General Flow



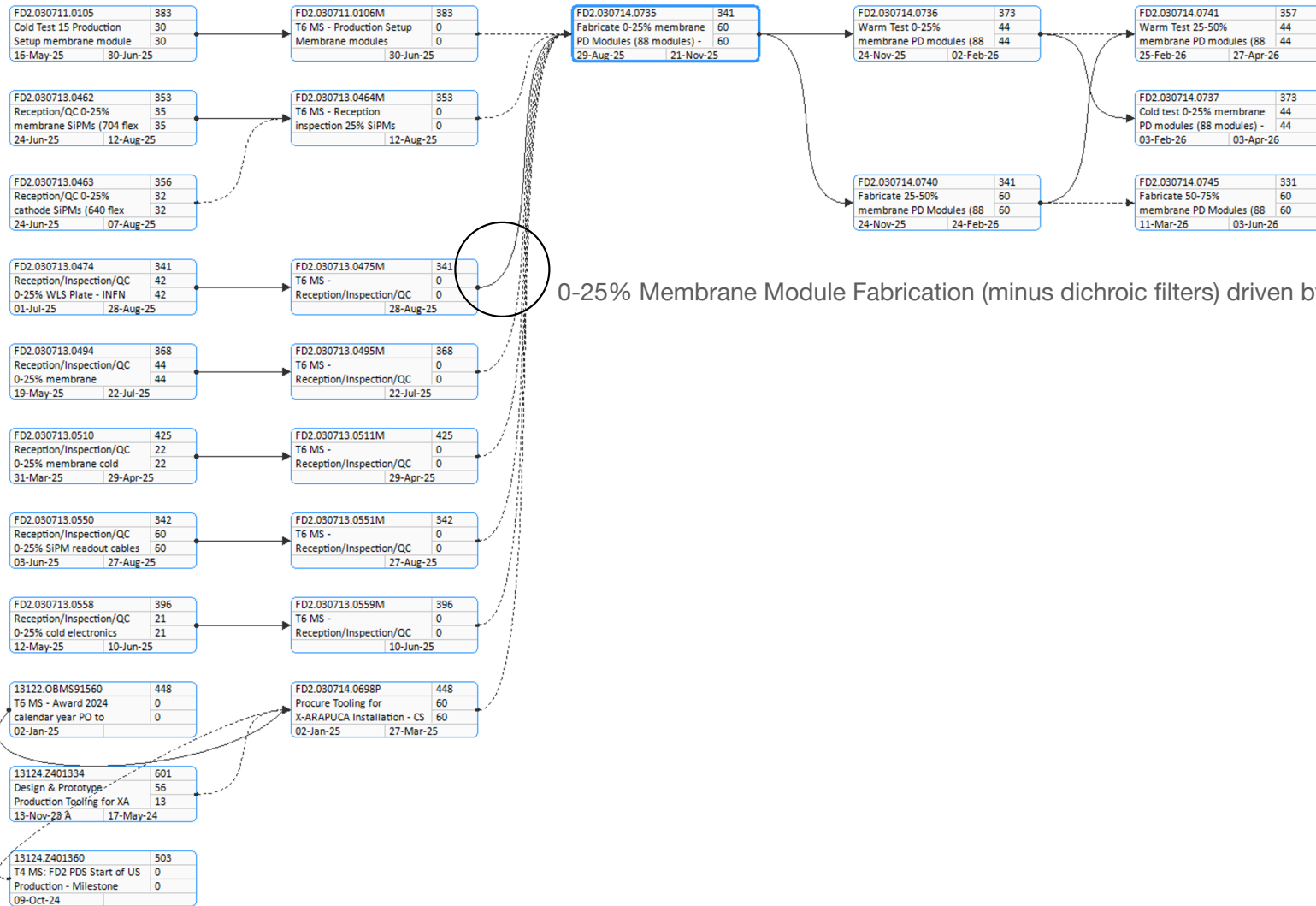
Flow with internal steps



Logistical Flow

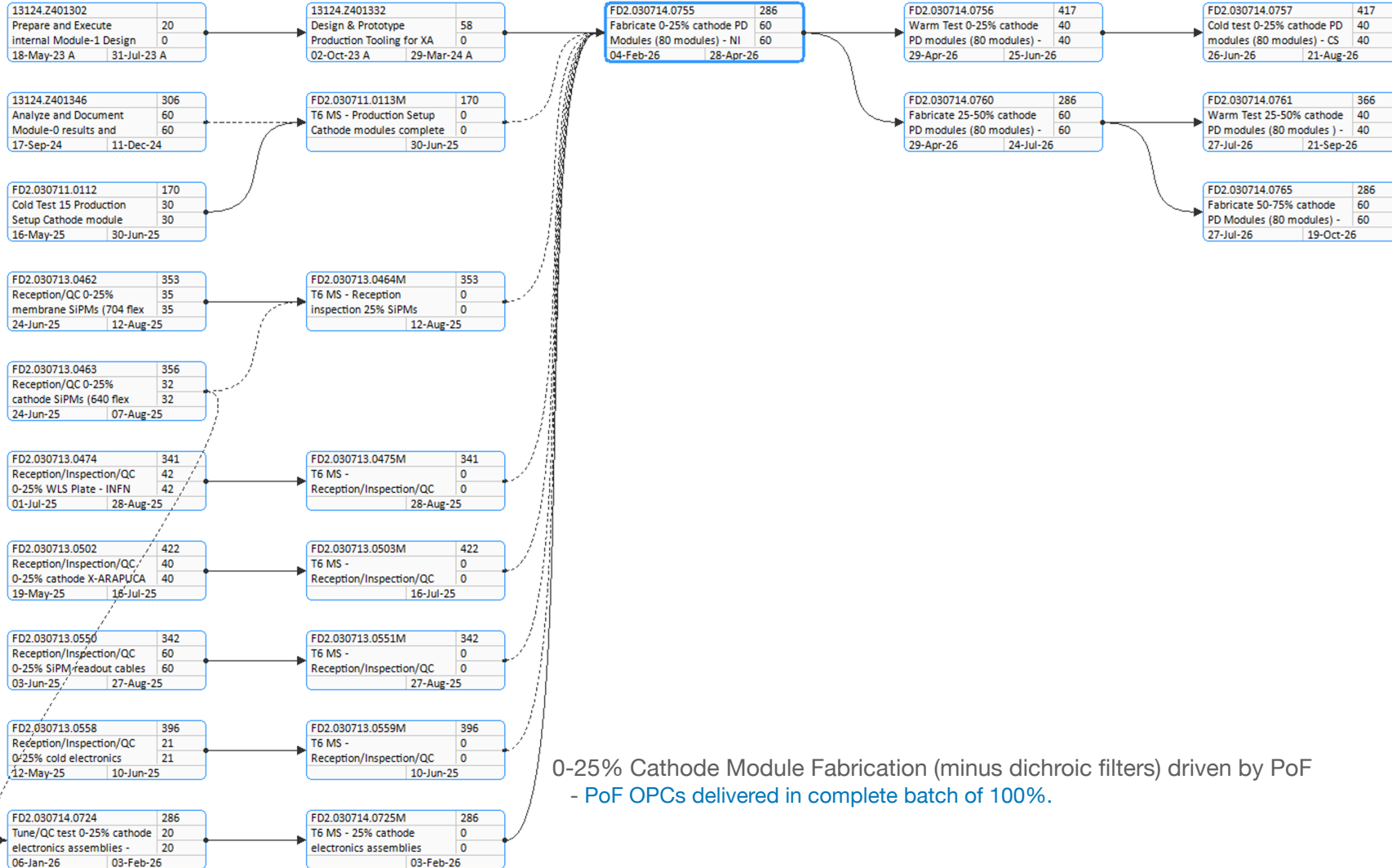


Membrane Module Fabrication Logic



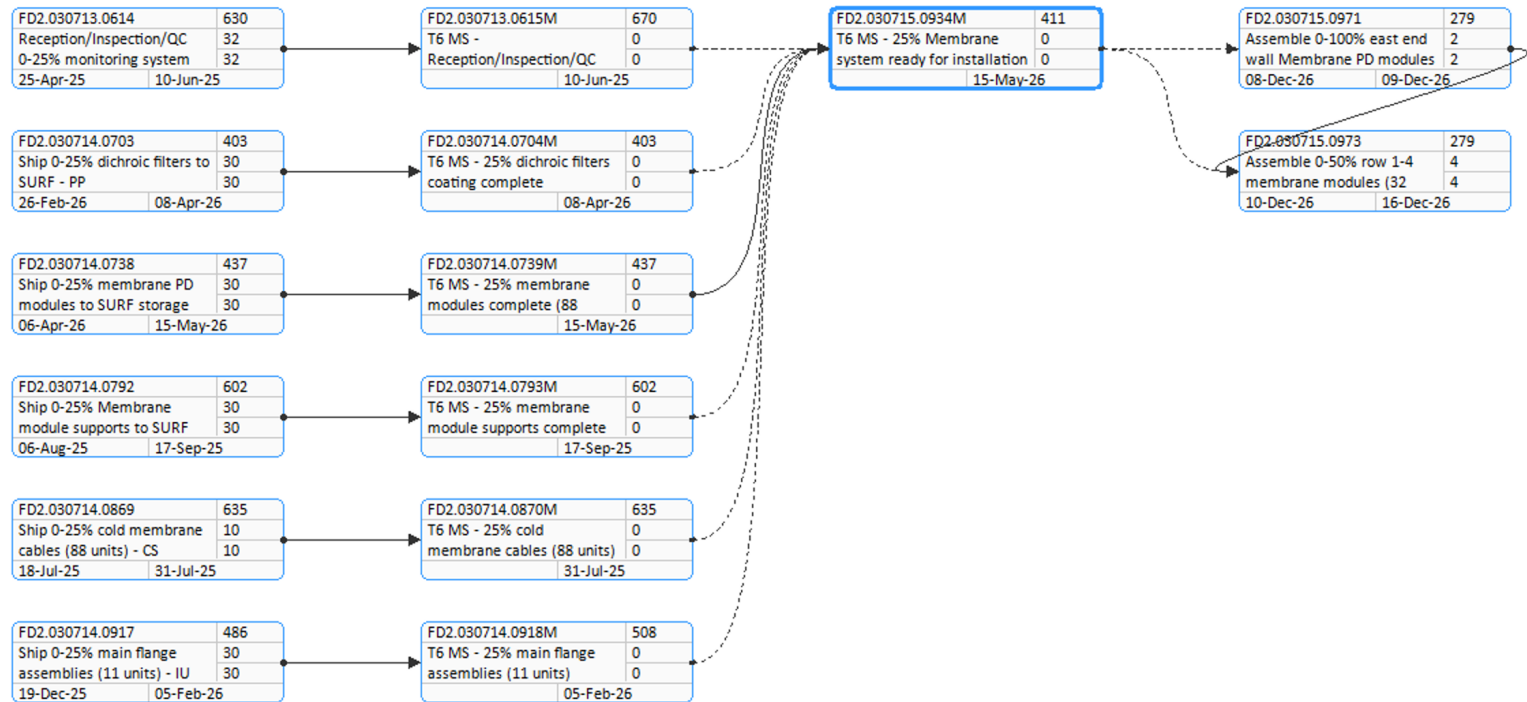
0-25% Membrane Module Fabrication (minus dichroic filters) driven by WLS

Cathode Module Fabrication Logic

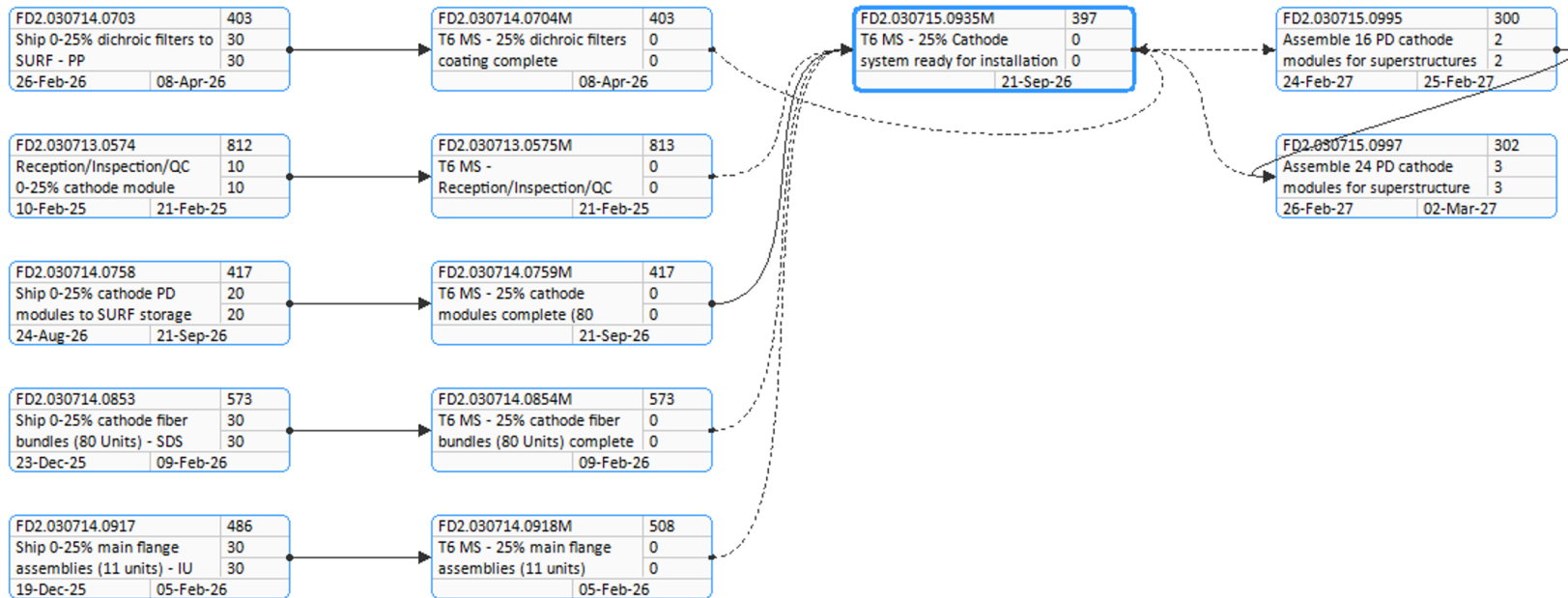


0-25% Cathode Module Fabrication (minus dichroic filters) driven by PoF
 - PoF OPCs delivered in complete batch of 100%.

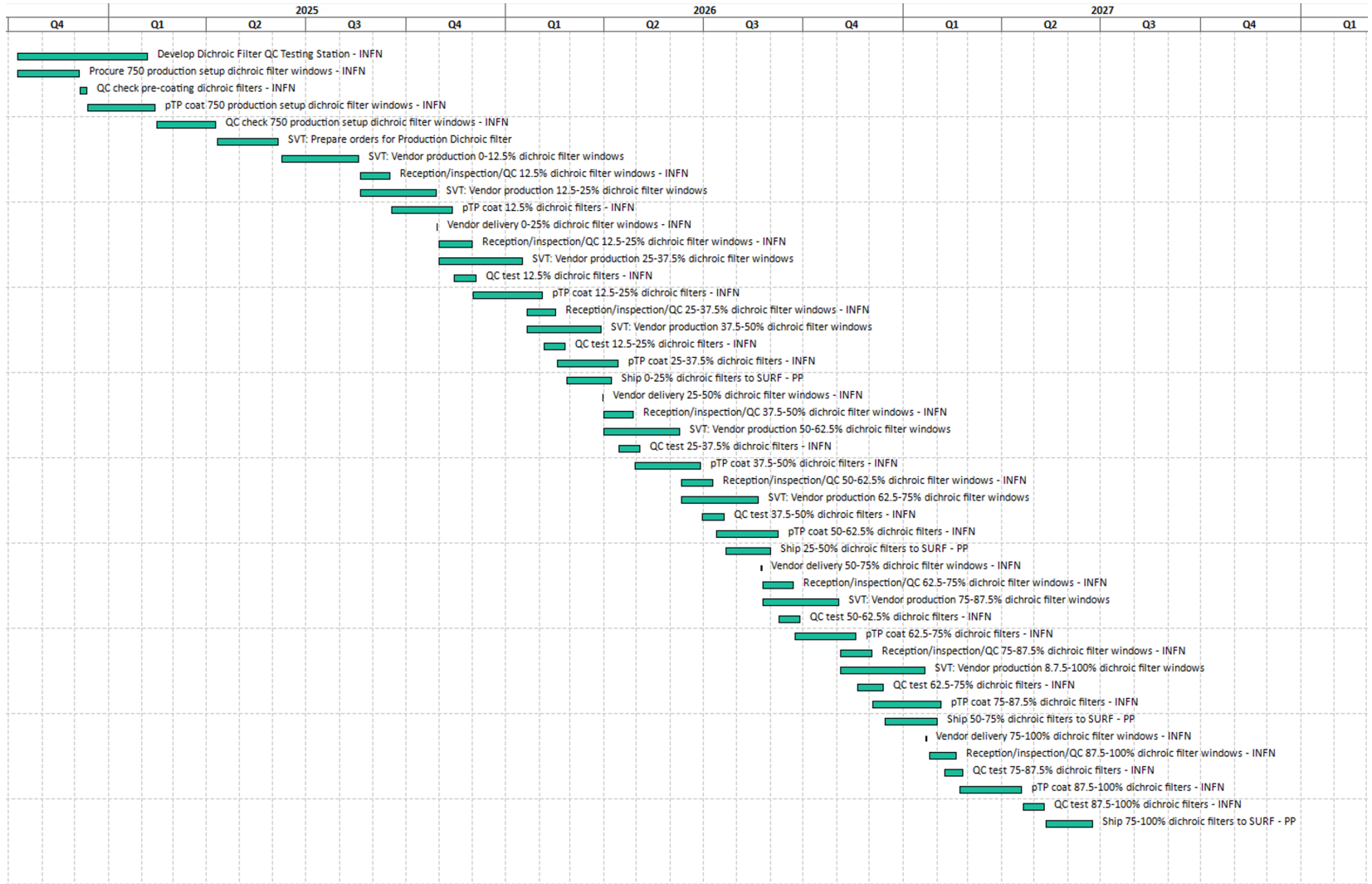
Logistical Flow to SURF - 1st 25% of Membrane System

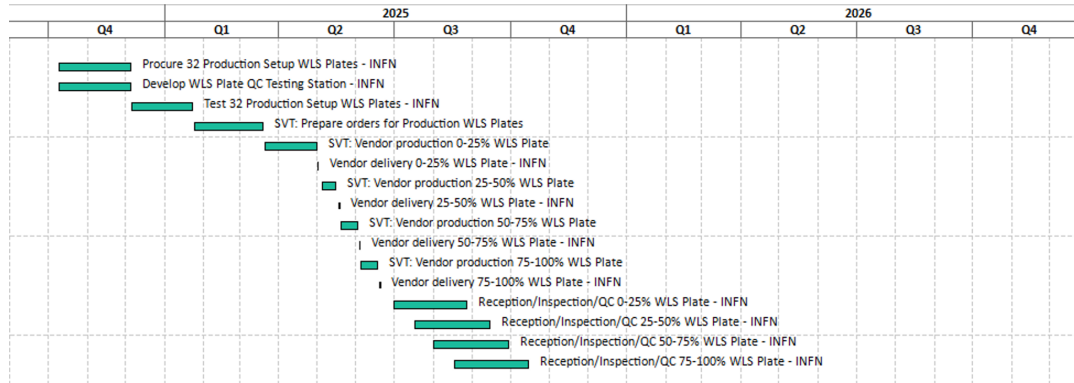


Logistical Flow to SURF - 1st 25% of Cathode System

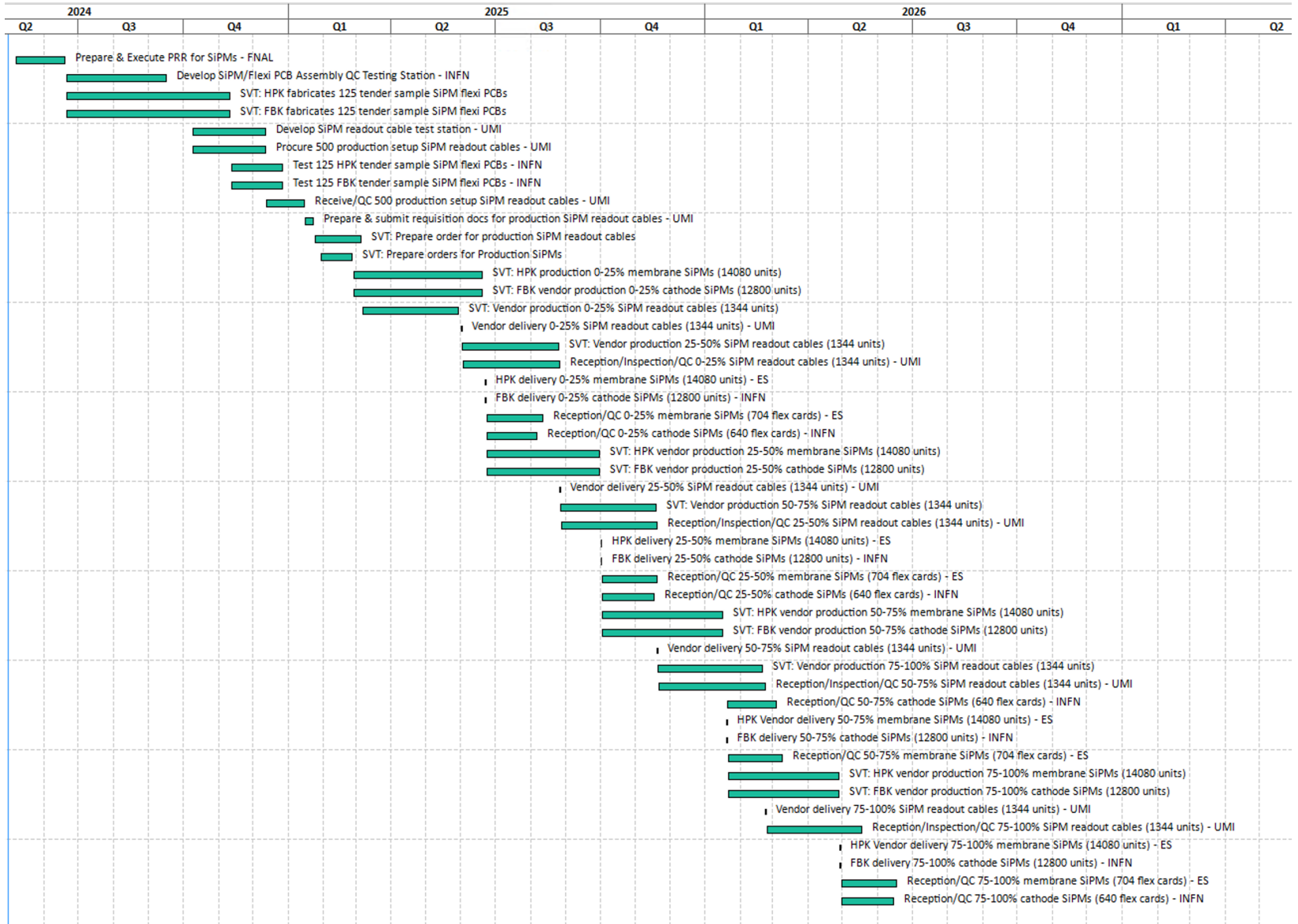


Dichroic Filters

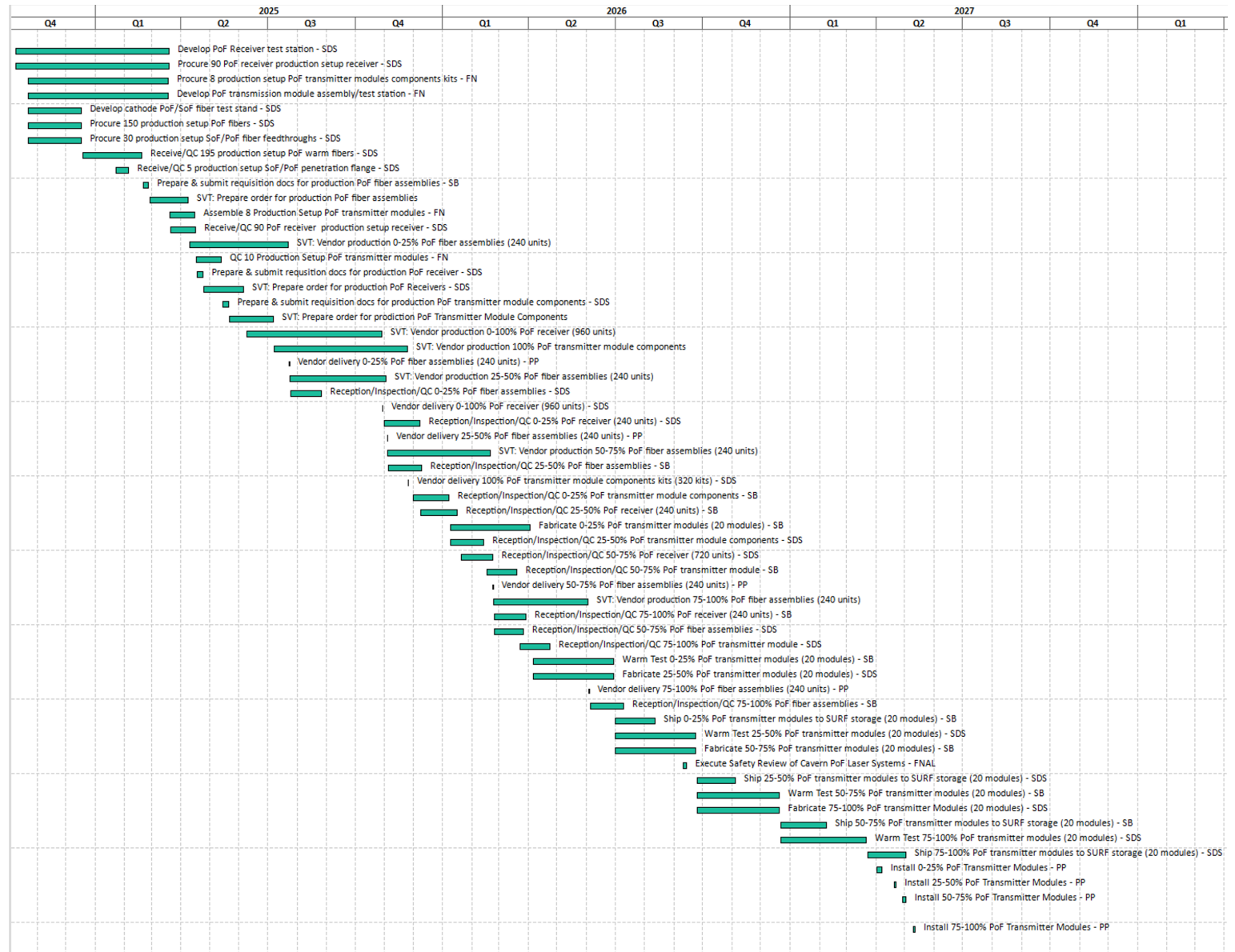




SiPMs/ Flexes



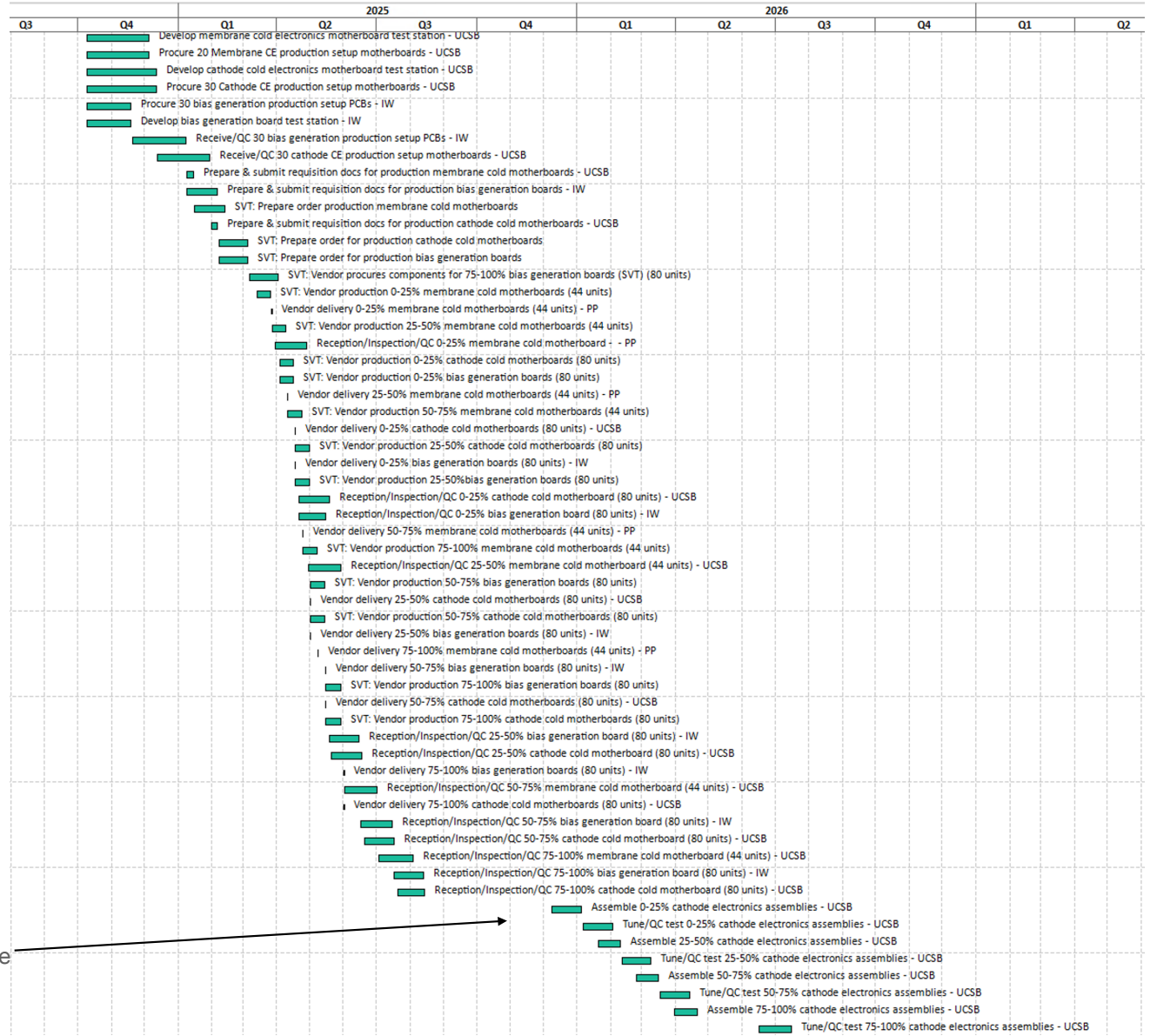
PoF



SoF

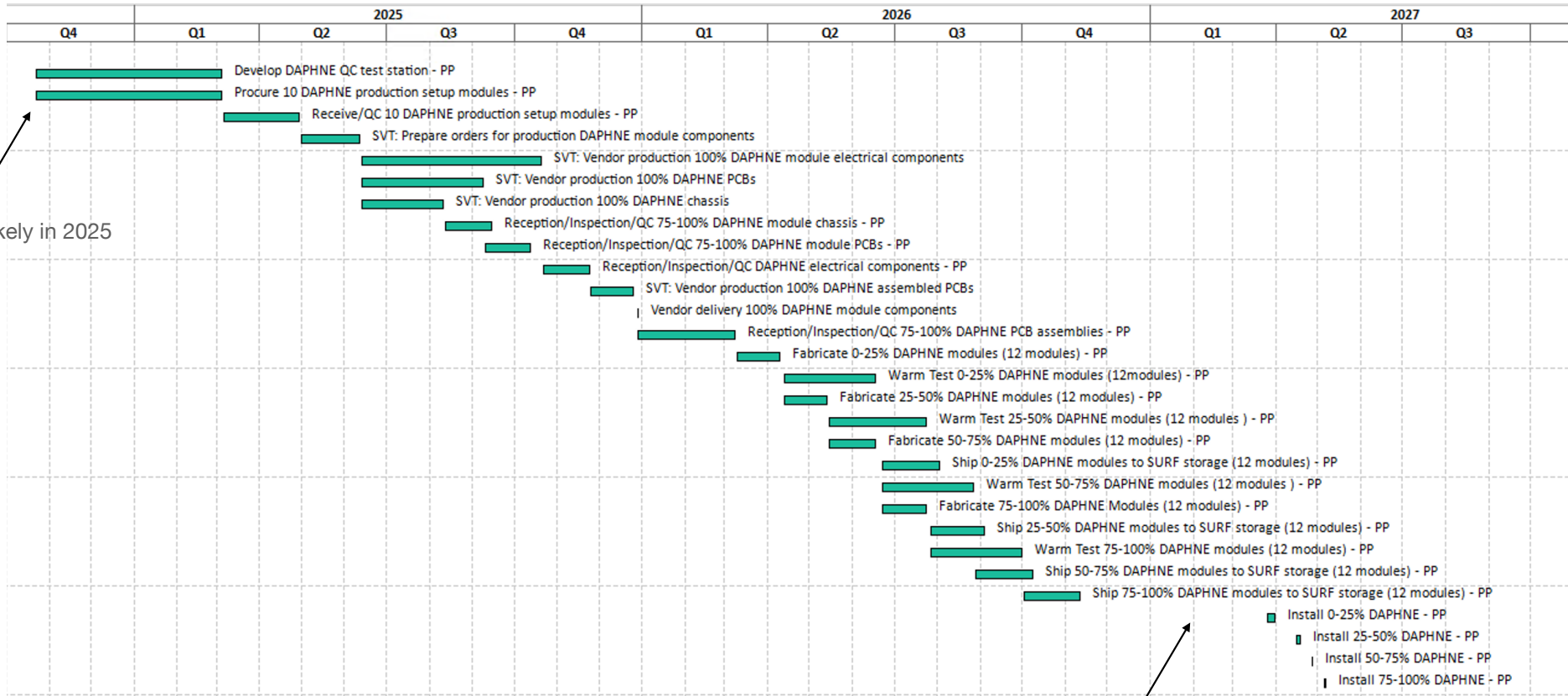


Cold Electronics



Gap due to all PoF Receivers (OPCs) arriving at once

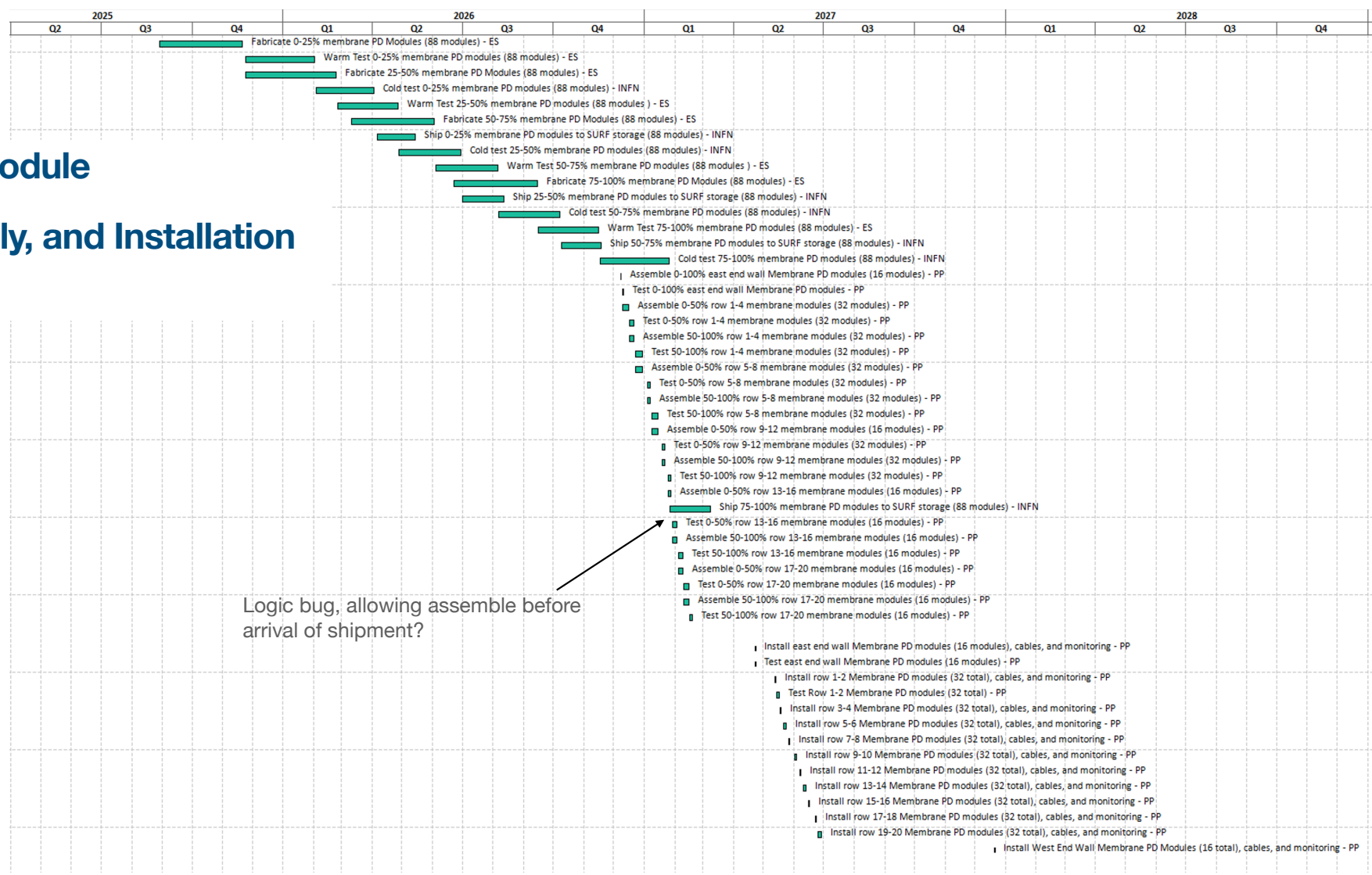
DAPHNE



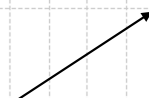
Actual start likely in 2025

Sufficient float to accommodate delayed start

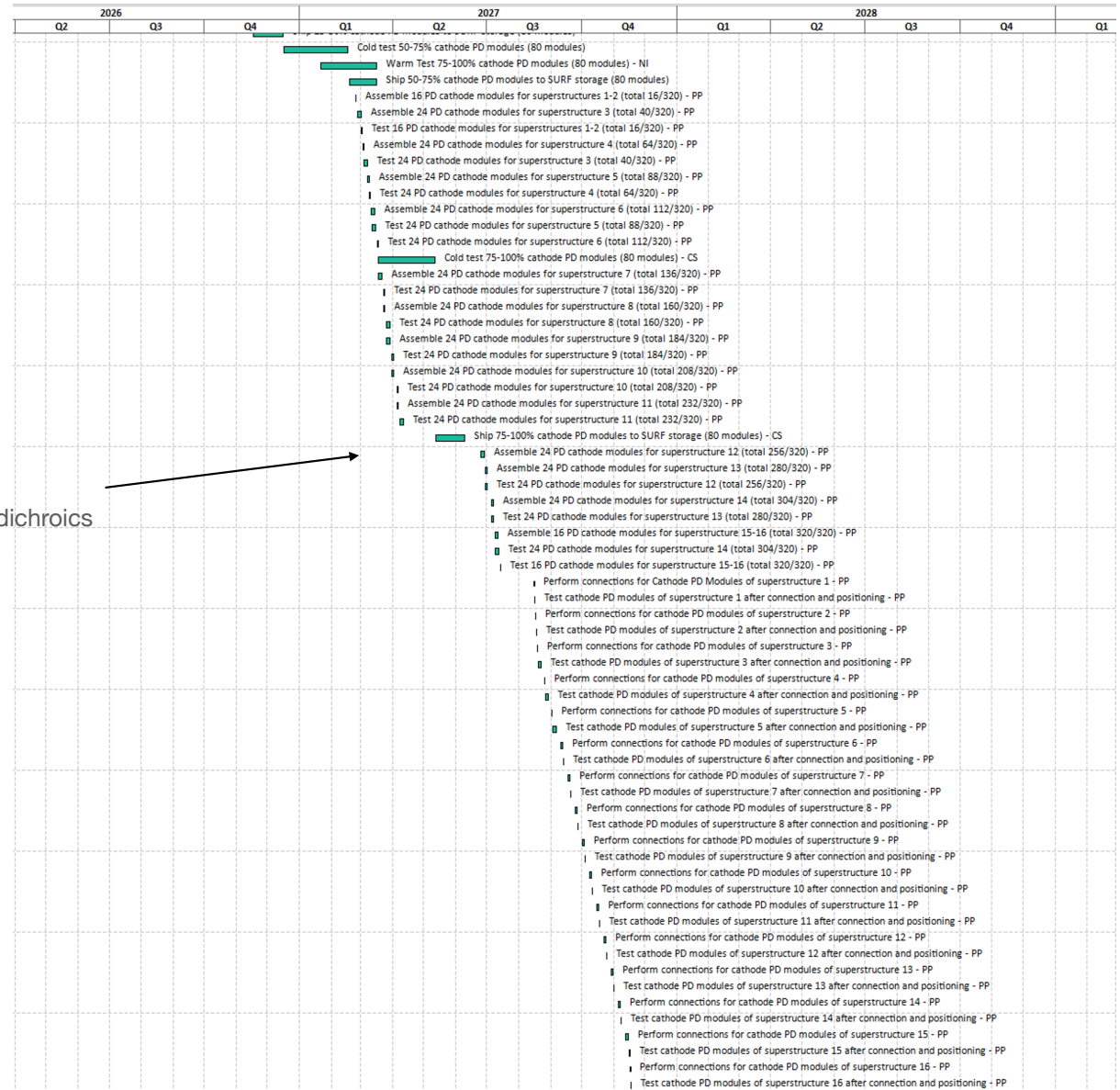
Membrane Module Fabrication, Final Assembly, and Installation



Logic bug, allowing assemble before arrival of shipment?

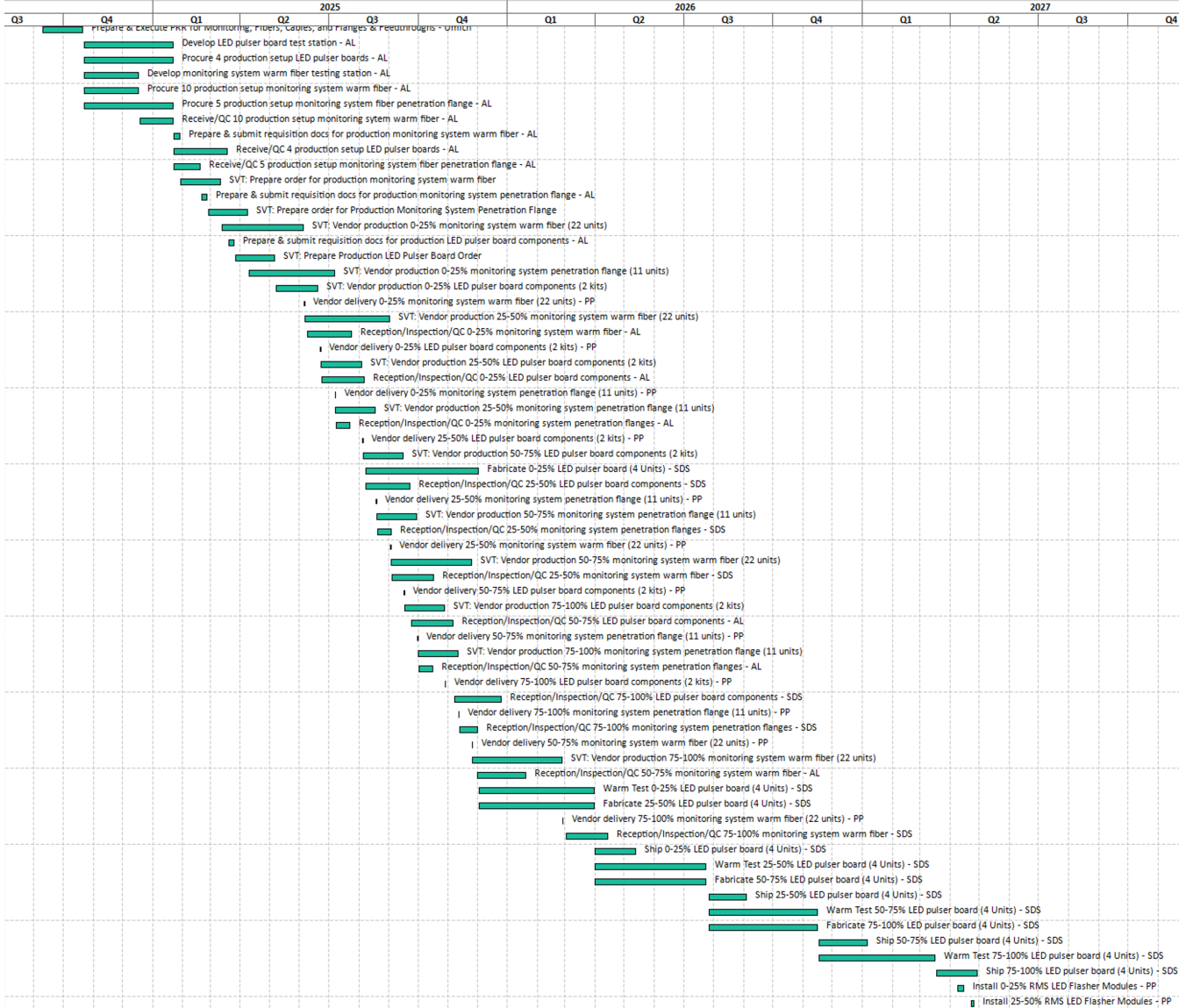


Cathode Module Final Assembly & Installation

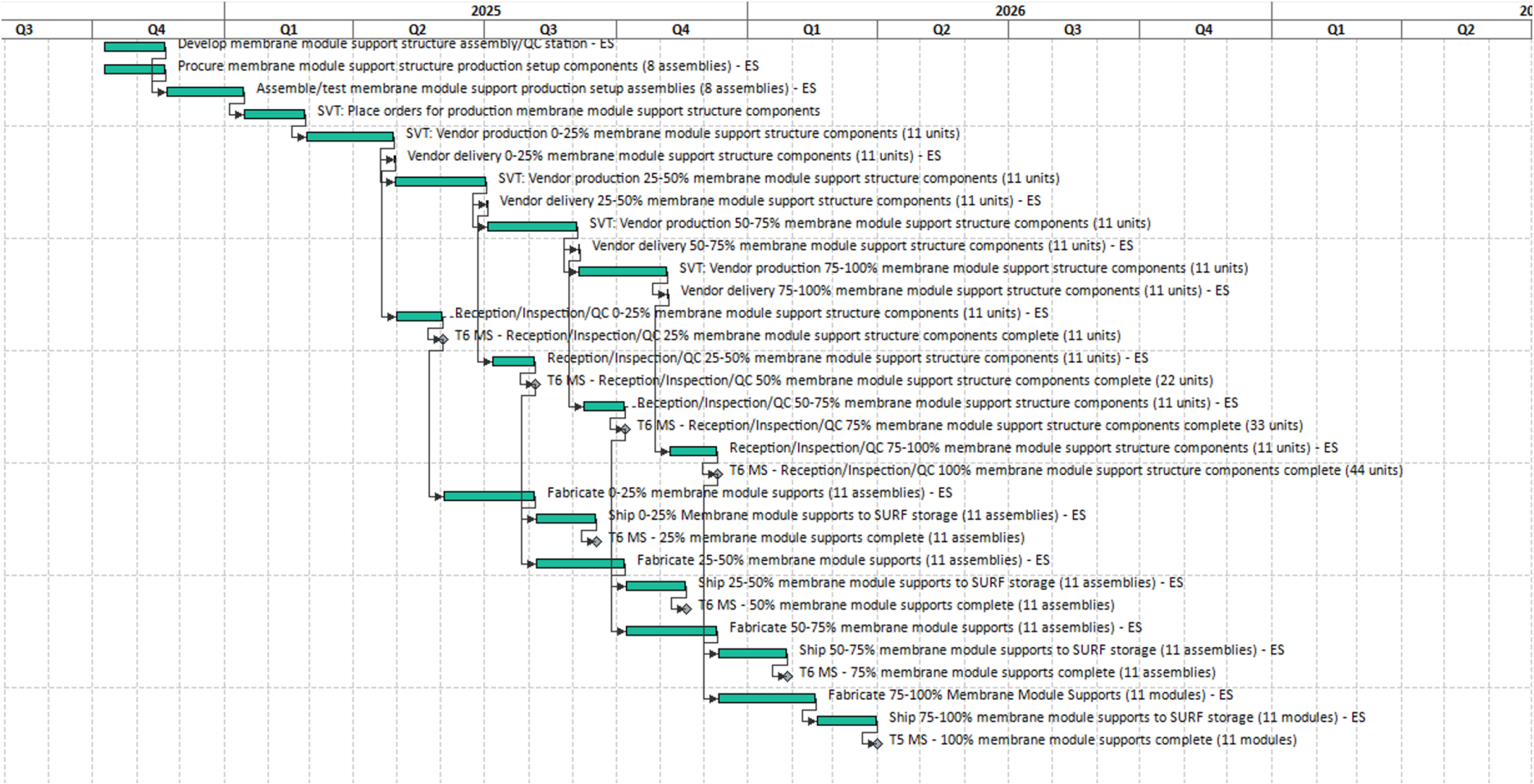


Pause in assembly due to last shipment of dichroics

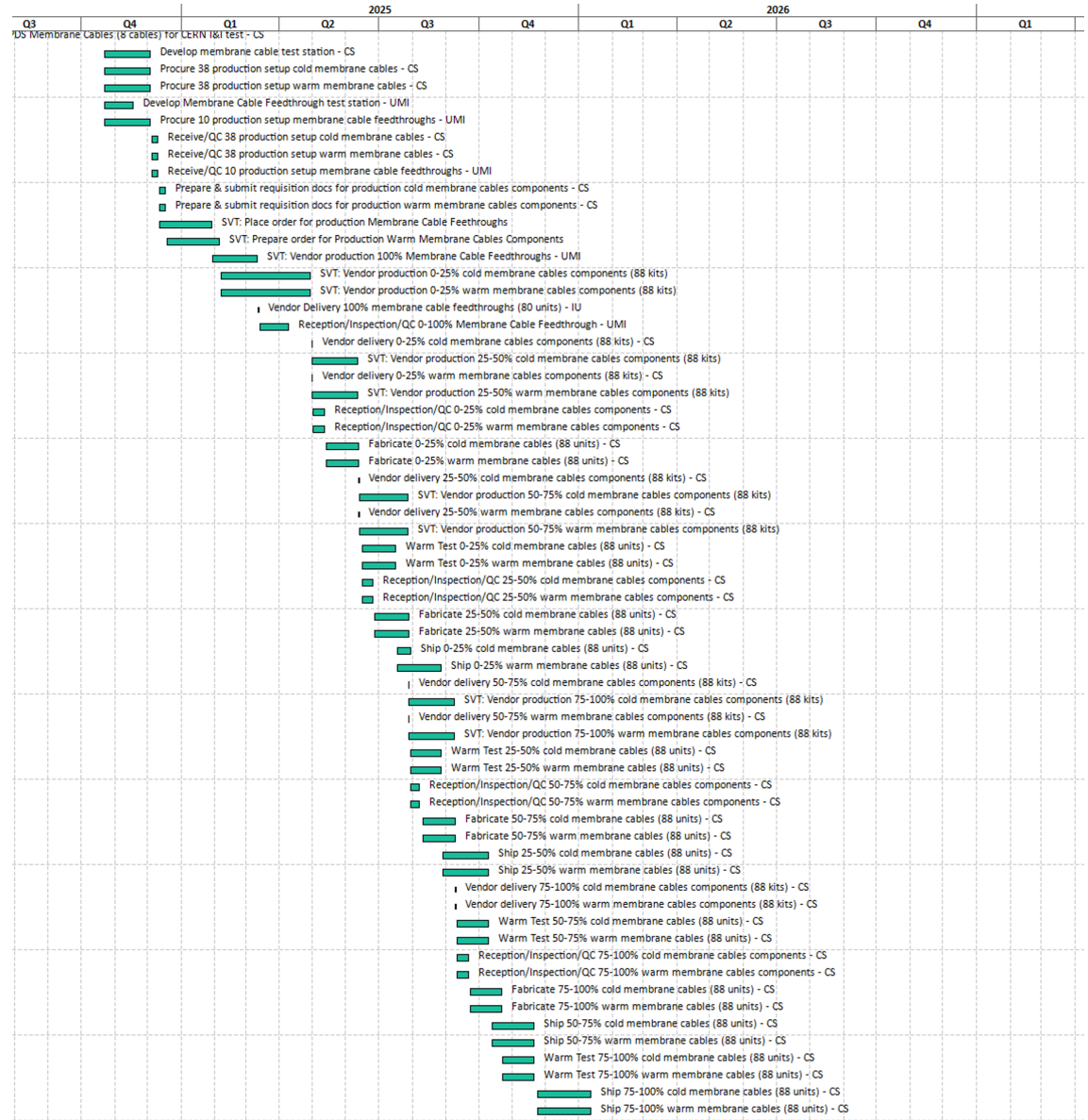
Monitoring System - Warm Side



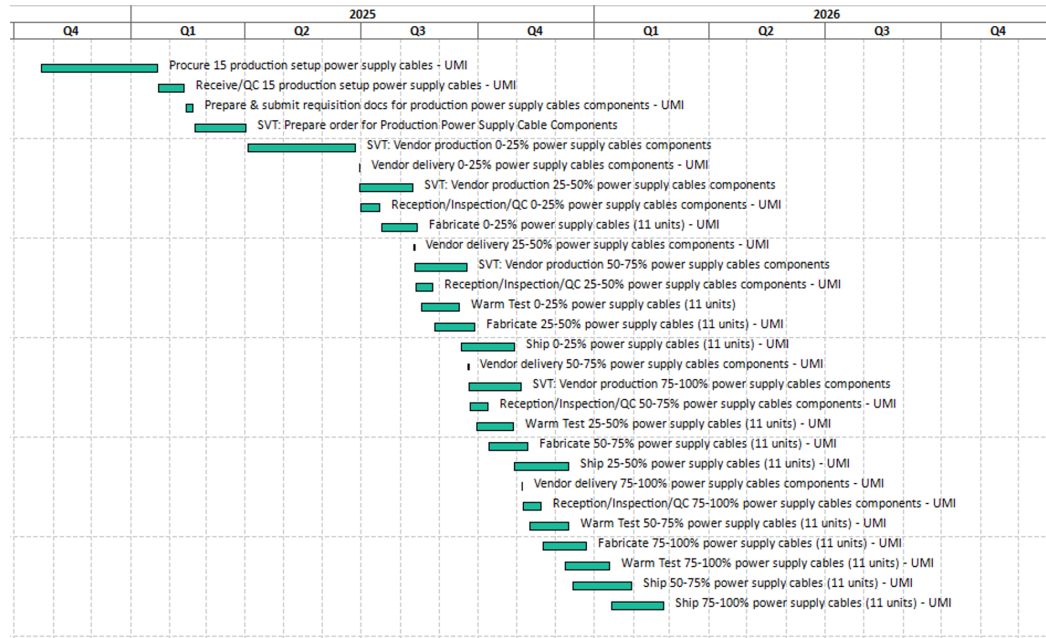
Membrane Support System



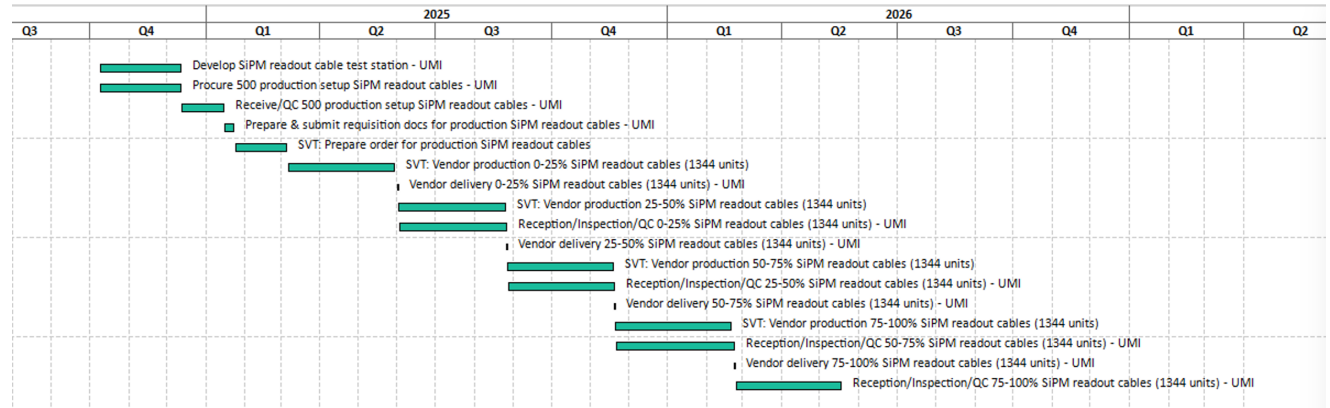
Membrane Cables



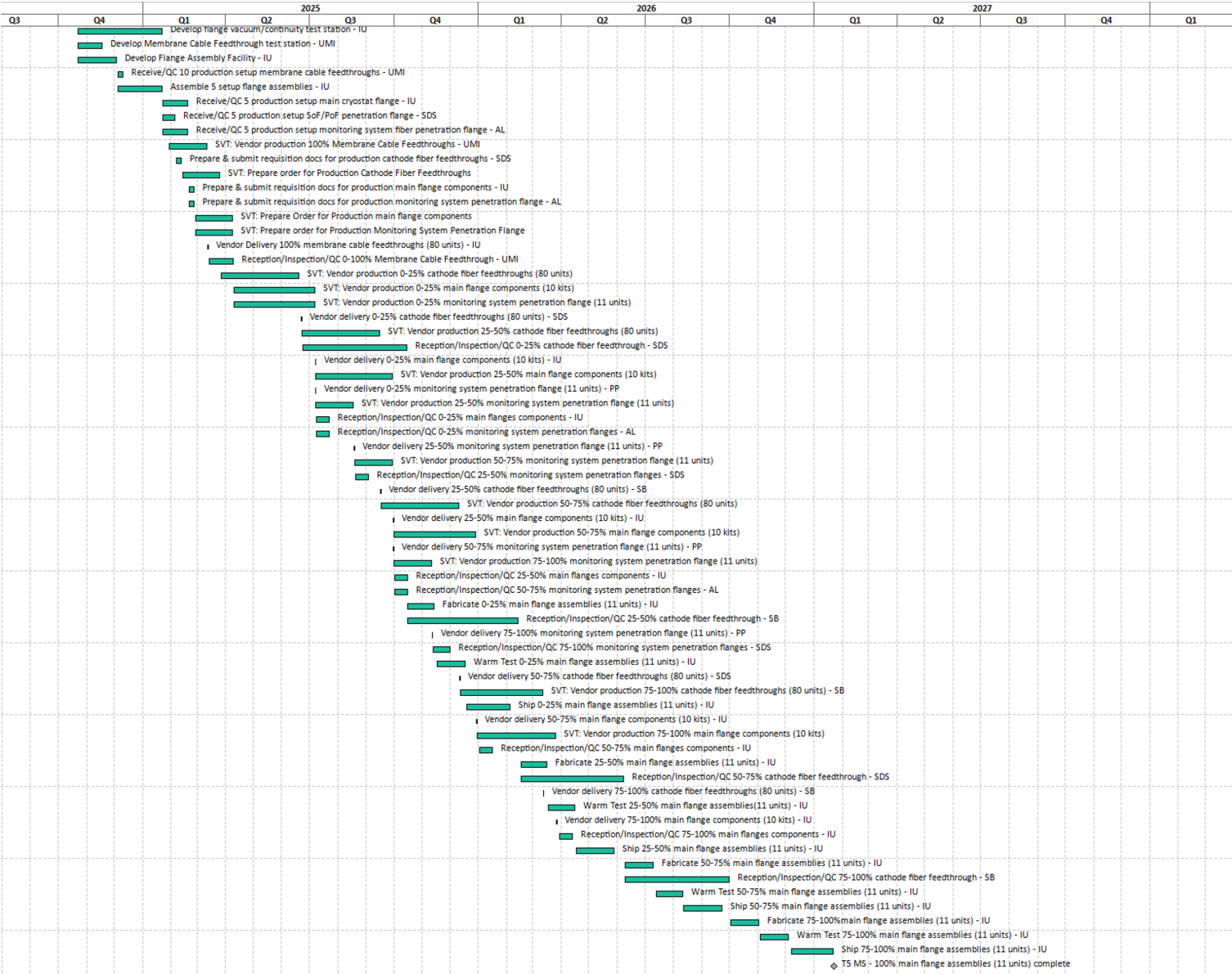
Power Supply Cables



SiPM Cables



Flanges & Feedthroughs



Shipping

- Most shipping included - perhaps overly conservative in places.
- 30 days (6 weeks) for Europe-to-SURF.
 - Delicate, high-value items.
- Missing shipping - most items from US to Spain, Italy to Spain
 - As unassembled items, durations should be short enough not to have a significant schedule impact.

