

# DAQ Consortium News

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DUNE DAQ Meeting, 25.03.24

**Alessandro Thea**



# My biggest thank to Giovanna

We wouldn't have made it this far with her leadership and expertise



# DAQ Management Team

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- Far Detector Technical Lead

**Roland Sipos**

- Near Detector Technical Lead

**Asher Kaboth**

- Resource Coordinator

Mandate to be reviewed - Wes Ketchum acting Resource Coordinator until resolved

- Run Coordinator

**Wes Ketchum (NP04)**

- **Management team endorsed by the CB last week**



# Roland Sipos - FD DAQ Technical Lead

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- MSc at Eötvös Loránd University, Budapest, Hungary, 2012
- **Computing Engineer Staff at CERN, Switzerland**
  - ▶ 13+ years of experience designing and developing software for various experiments
  - ▶ CMS Conditions Database contributions for CMS and ATLAS
  - ▶ Readout system development and integration for ProtoDUNE Single-Phase
  - ▶ DAQ operations coordinator of NP04 Run 2 in 2019
  - ▶ Coordination, design, and development of DUNE DAQ
    - ◆ Design and development of various subsystems
    - ◆ Co-coordinating the Core Software Working Group
    - ◆ Recently, CERN Principal Investigator





# Asher Kaboth - ND DAQ Technical Lead

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- A.B. from the University of Chicago (2006)
- PhD at Massachusetts Institute of Technology (2012)
- 20 years experience in neutrino physics, especially in developing detector technology and test stands
  - ▶ Joined T2K in 2012: analysis focus, including Oscillation Analysis Convenor (2014-2018)
  - ▶ Joined DUNE in 2016: near detector focus, including ND-GAr and analysis
  - ▶ Began driving ND DAQ work in 2019 leading to technical decision that DUNE DAQ is suitable for ND
  - ▶ ND DAQ Technical lead since 2021



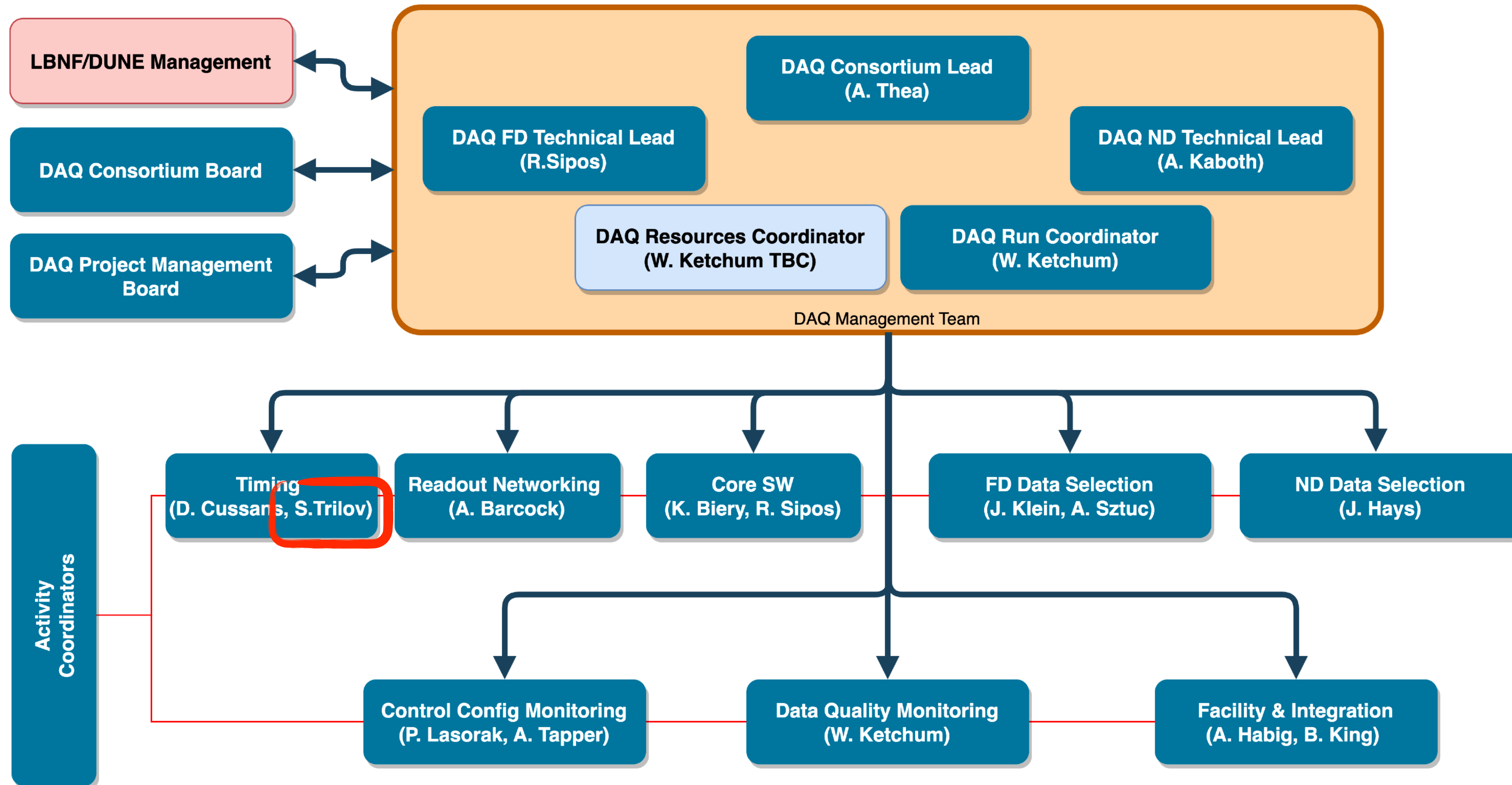
# Wesley Ketchum - DAQ Run Coordinator

- **Scientist at Fermilab (2015-present)**
  - ▶ Member of MicroBooNE, ICARUS, SBND, DUNE, and LDMX collaborations
  - ▶ Select previous collaboration roles
    - ◆ MicroBooNE Analysis Tools Co-convener (2015-2017)
    - ◆ MicroBooNE Oscillation Group Co-convener (2017-2019)
    - ◆ SBN Analysis Infrastructure Co-convener (2020-2022)
- **DUNE DAQ**
  - ▶ US Control Account Manager for FD1 and FD2 DAQ since May 2021
  - ▶ Member of DUNE DAQ consortium from beginning
  - ▶ Relocated to CERN Jan 2022; serving as DUNE DAQ EHN1 Activity coordinator
  - ▶ Resources coordinator from Nov 2022
- **DAQ prior experience**
  - ▶ Extensive experience with LArTPC DAQ systems over past decade
    - ◆ MicroBooNE (commissioning co-lead), SBN (common ICARUS+SBND online group co-lead)
  - ▶ General DAQ experience and leadership
    - ◆ “L2” trigger expert for CDF from 2008-2011
    - ◆ Member of ardaq software development team
    - ◆ Co-convener for Trigger and DAQ sub-group for US Snowmass2021 Instrumentation Frontier





# Updated Org Chart



# Challenges in 2024 - Recap

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- **NP04 operations**
  - ▶ LAr is here and filling has started in earnest
- **NP02 final integration and operations**
  - ▶ TDE, DAPHNE v3 and more
- **Production and Procurement readiness reviews**
  - ▶ Timing, Readout Network, DAQ Servers
- **Critical developments**
  - ▶ OKS configuration, run control, appfwk, etc...

*“This is going to be interesting”* 



# NP04 Beam Time

- SPS Calendar not yet final
- The current version has 1+6 weeks of beam for NP04
  - ▶ w25+w28-33

			CMS HGCAL DRAFT 7d
NP04 DRAFT 7d		NP04 DRAFT 42d	
	RD51 DRAFT 14d		RD51 DRAFT 14d



You are here



# ProtoDUNE Run Coordination

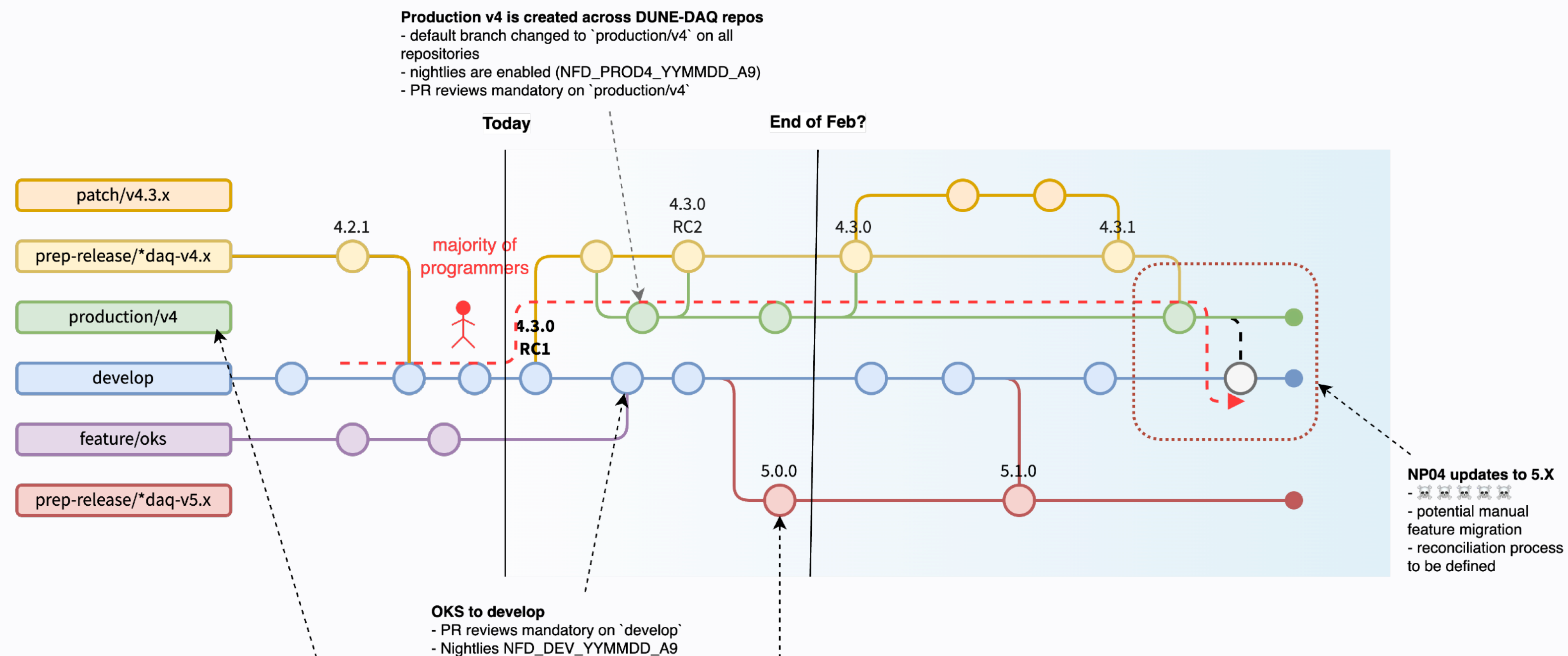
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- The Executive Board has approved the Run Coordination mandate for ProtoDUNE II
  - ▶ Separate NP04 and NP02 run coordinators
- Christos Touramanis appointed NP04 Run Coordinator
- NP02 Run Coordinator not yet identified
- Details about current data-taking plans in Wes' talk



# Development and Production

- Dual development line model deployed and routinely used
  - ▶ Thanks John and Andrew!
- production/v4 default branch across DUNE-DAQ
- develop used for OKS developments, for fddaq-v5.0.0



Production/v4 will be created on all repositories and become the default branch

**[DUNE DAQ Meeting] | [25.03.24]**

**5.0 engineering release**

- Feature set being defined
- Limited scope
- Tentatively : MiniDAQ included and available for tests

# DAQ Critical Path - 2023/24

WBS NIIMRFR	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE	2023				2024			
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>1</b>	<b>Development/testing</b>													
1	dunedaq-v4.0.0	K. Biery	10/02/23	17/04/23	67	100%								
2	Separation of FD/ND software releases complete	J. Freeman/A. Kaboth	19/04/23	01/09/23	132	90%								
3	Transition to ethernet readout for all WIBs complete	R. Sipos	20/04/23	29/09/23	159	100%								
4	DAQ in Kubernetes systematically in use at EHN1	A. Thea	15/05/23	29/09/23	134	50%								
5	Network requirements complete (incl any flow control, protocols, buffer req)	A. Habig	15/05/23	15/12/23	210	20%								
6	Configuration framework and application interface (schema, data distribution, API) complete	G. Lehmann	01/04/23	15/12/23	254	45%								
7	Op Monitoring complete incl code review	M. Roda	15/05/23	29/03/24	314	40%								
8	Review and revision of appfwk complete (cmdlib, appfwk, iomanager, conf I/F, opmon I/F)	E. Flumerfelt	03/07/23	28/06/24	355	1%								
9	Timing SW/FW complete including code reviews	D. Cussans	01/05/23	27/09/24	506	50%								
10	DAQ Deployment model demonstrated at EHN1	B. King	20/05/23	30/09/24	490	30%								
11	Database editors complete			20/12/24	44990	0%								
12	Resources management complete incl code review			20/12/24	44990	0%								

- Major work on configuration prototyping with OKS
- Today: talks from Giovanna and Eric





*Fin*

*Questions?*

