



# CSPEC ACCELERATION WORKSHOP

2026-05-04



# Objective

- Defend or advance the TG5 date
- Remove remaining blockers and reduce schedule risk
- Common understanding on the challenges and priorities going forward
- Evaluate potential TG5 deferrals and their impact on hot commissioning
- Agree on clear actions and next steps

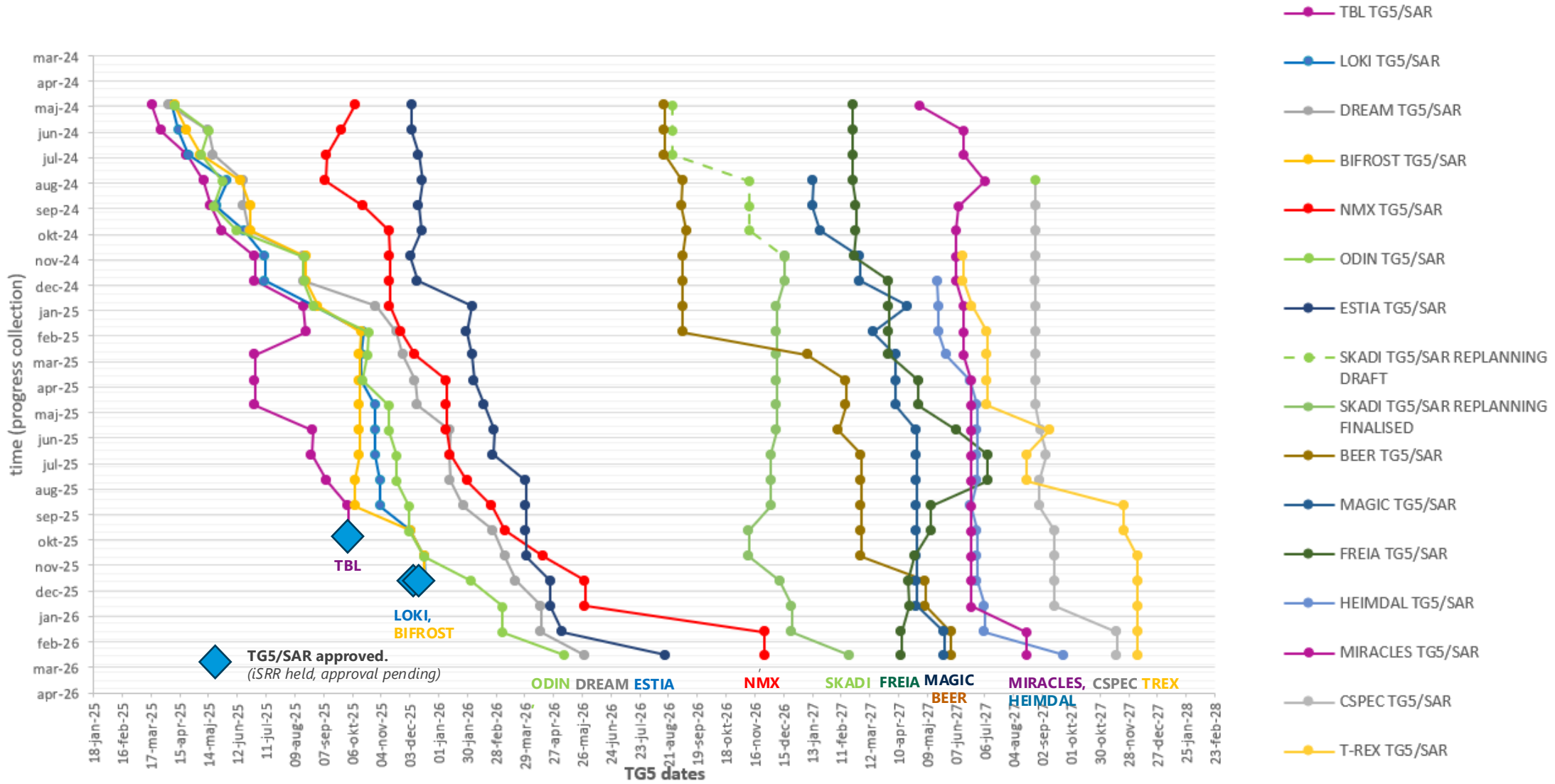


# Agenda

- Introduction
- Review of critical path
- Acceleration options.
- TG5 scope and deferral strategy.

# TG5 slip chart

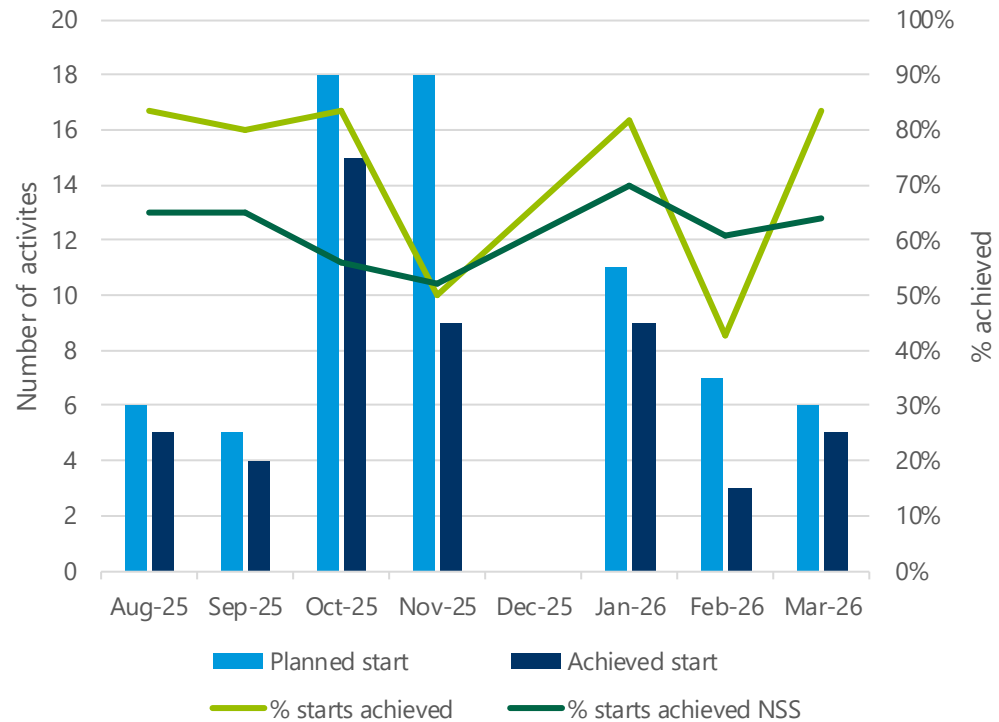
Data from P6 MARCH 2026 lock down



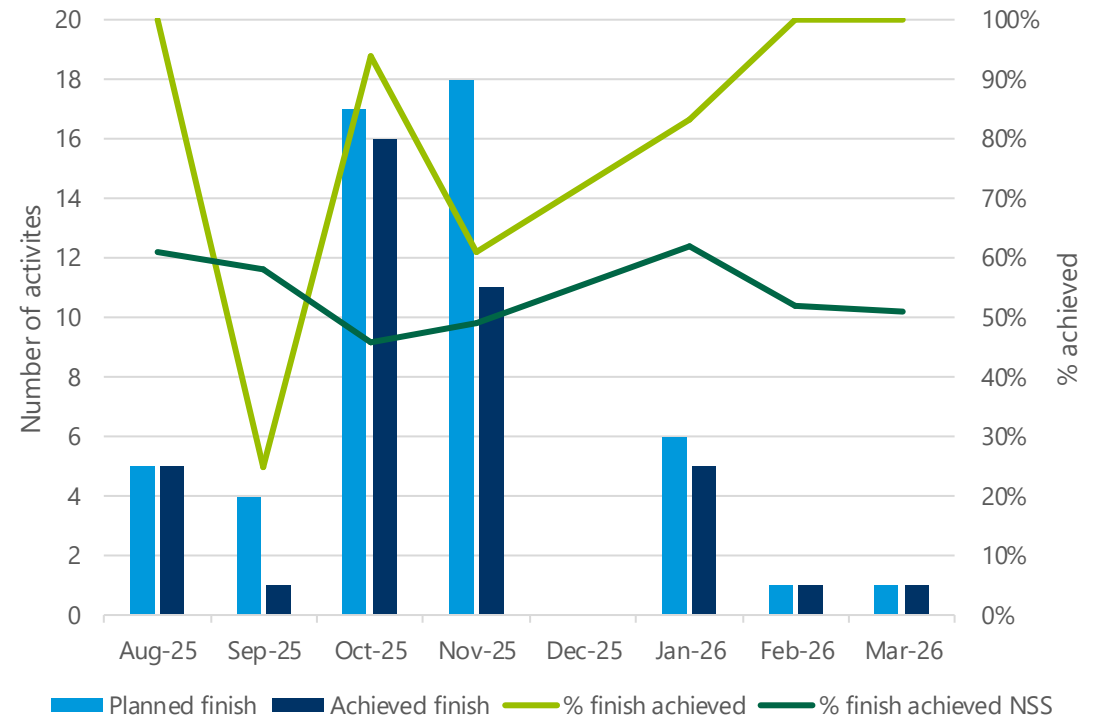
# Schedule adherence



### Started activities: Planned vs Achieved



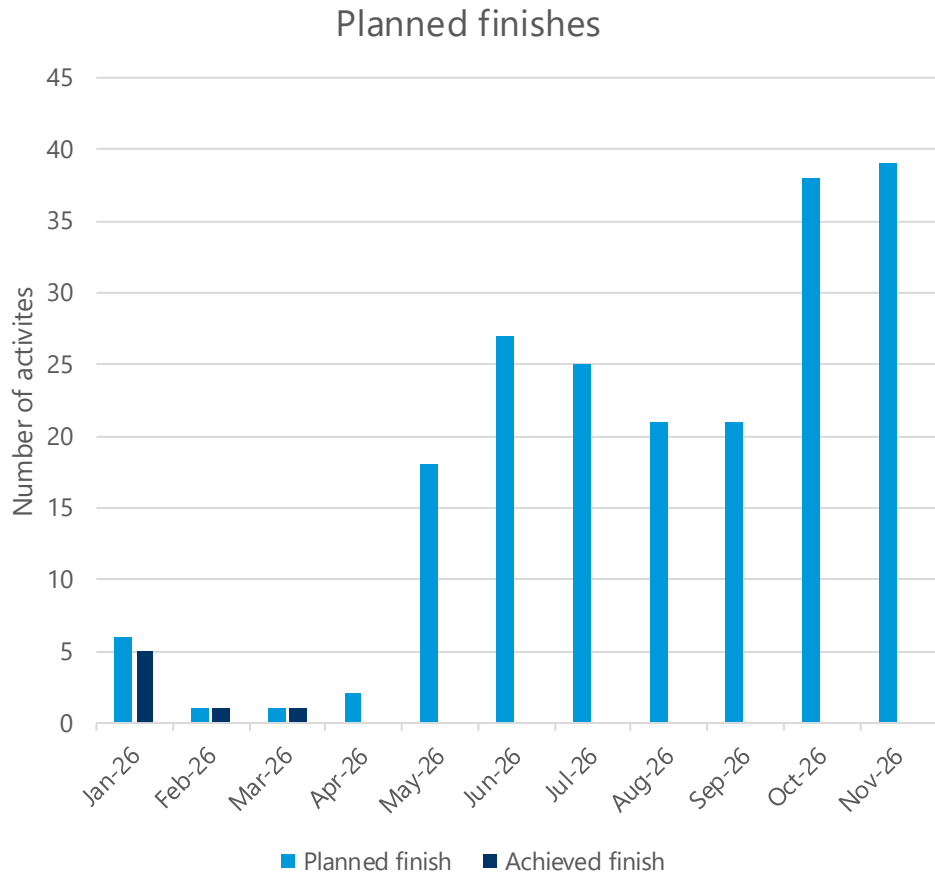
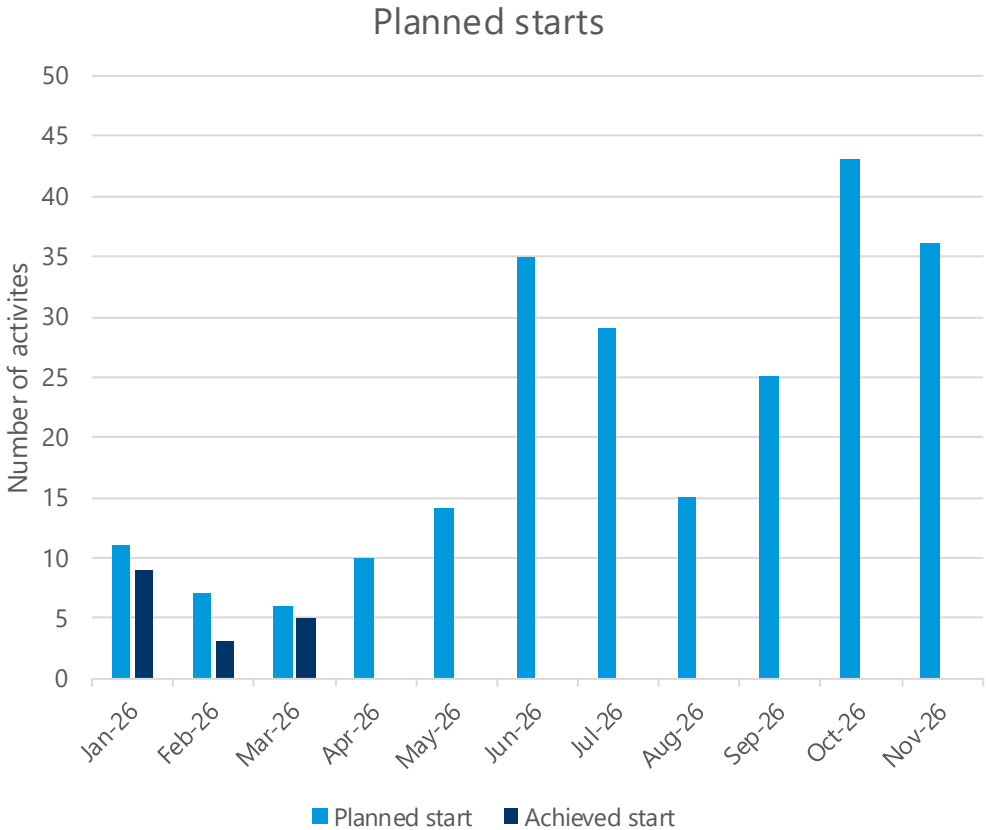
### Finished activities: Planned vs Achieved





# Lookout - future activities

There's a lot in the pipeline..



# CSPEC Critical Paths

Last ICEB

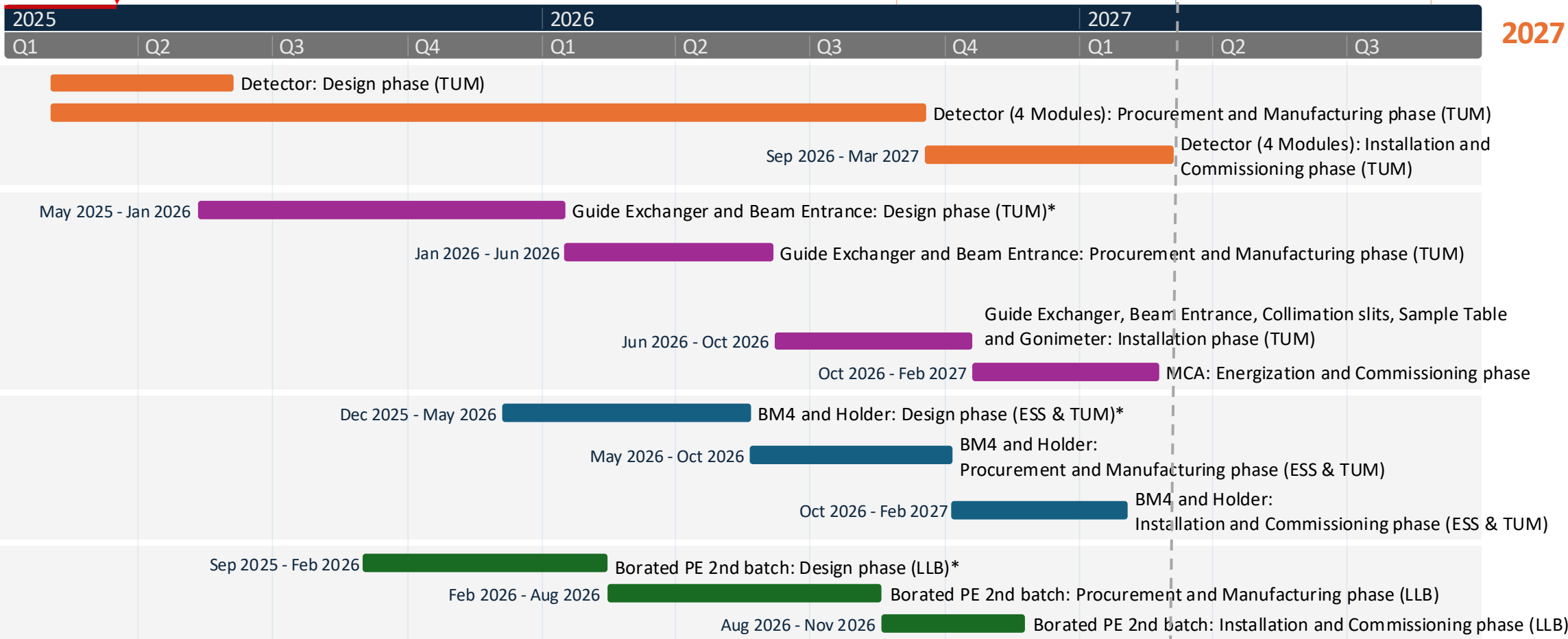
Data from P6 February 2025 lockdown

Today

Final TG3  
Aug 28, 2026

Start of CC  
Mar 5, 2027

TG5/SAR approval  
Aug 26, 2027



**Design phase** ends at CDR approval  
**Procurement and Manufacturing phase** ends at FAT closure of open points  
**Installation and Commissioning phase** ends at SAT approval  
**TF:** number days of total float to instrument's TG5

\*Resource constraints  
**Note:** Detector modules 5-7, cryofurnace, 3He insert (dilution fridge) and sample changer is part of the instrument scope but currently not linked to TG5 in P6

# CSPEC Critical Paths

Data from P6 April 2026

Today

Cold commissioning of TG5 scope complete

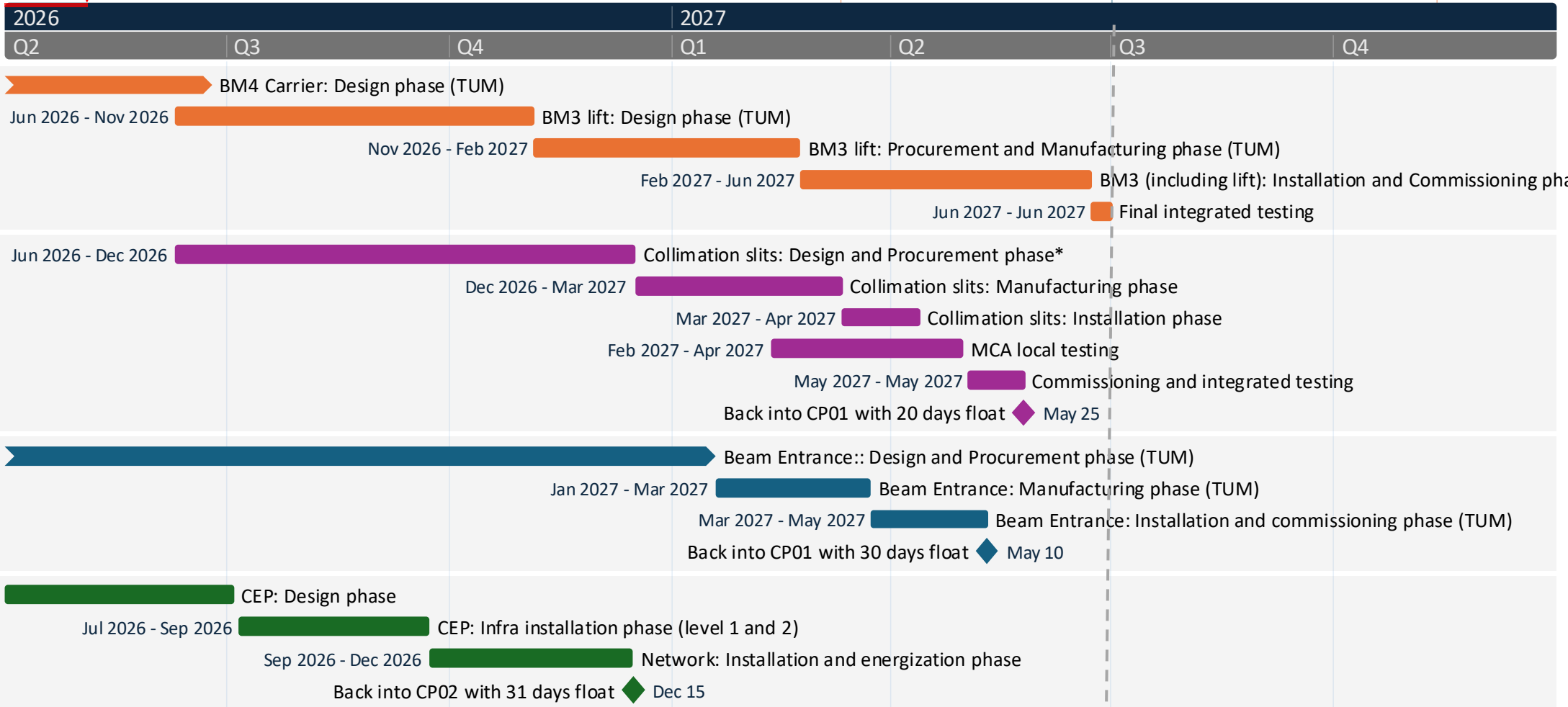
Jun 30, 2027

Final TG3 approval

Mar 10, 2027

TG5/SAR approval

Nov 11, 2027



2027

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# CSPEC Critical Paths

Data from P6 April 2026

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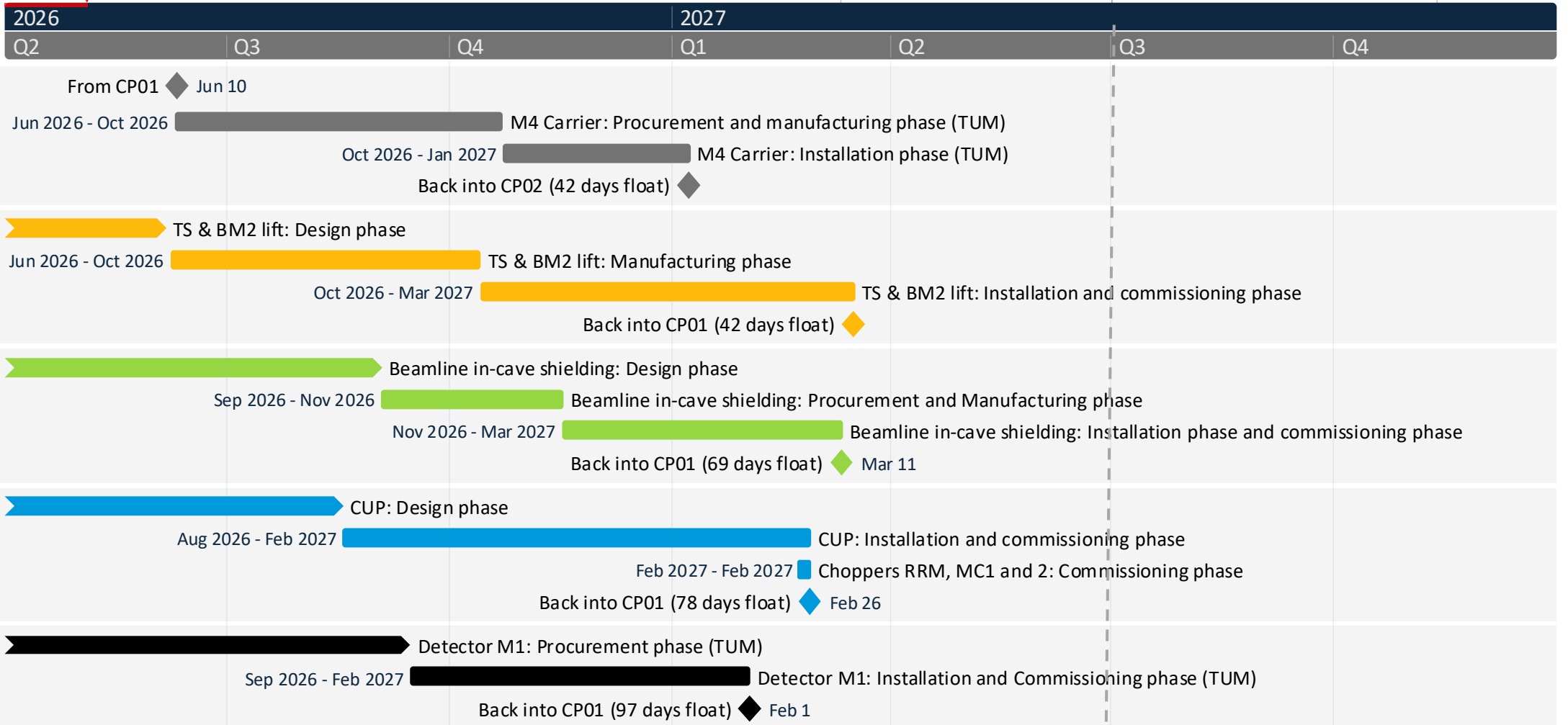
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# Evaluation of TG5 deferral candidates

- Det module 2-13
- Sample Environment
- Radial collimator and drive
- Guide exchanger and beam entrance
- Any other candidates?



# CSPEC ICEB

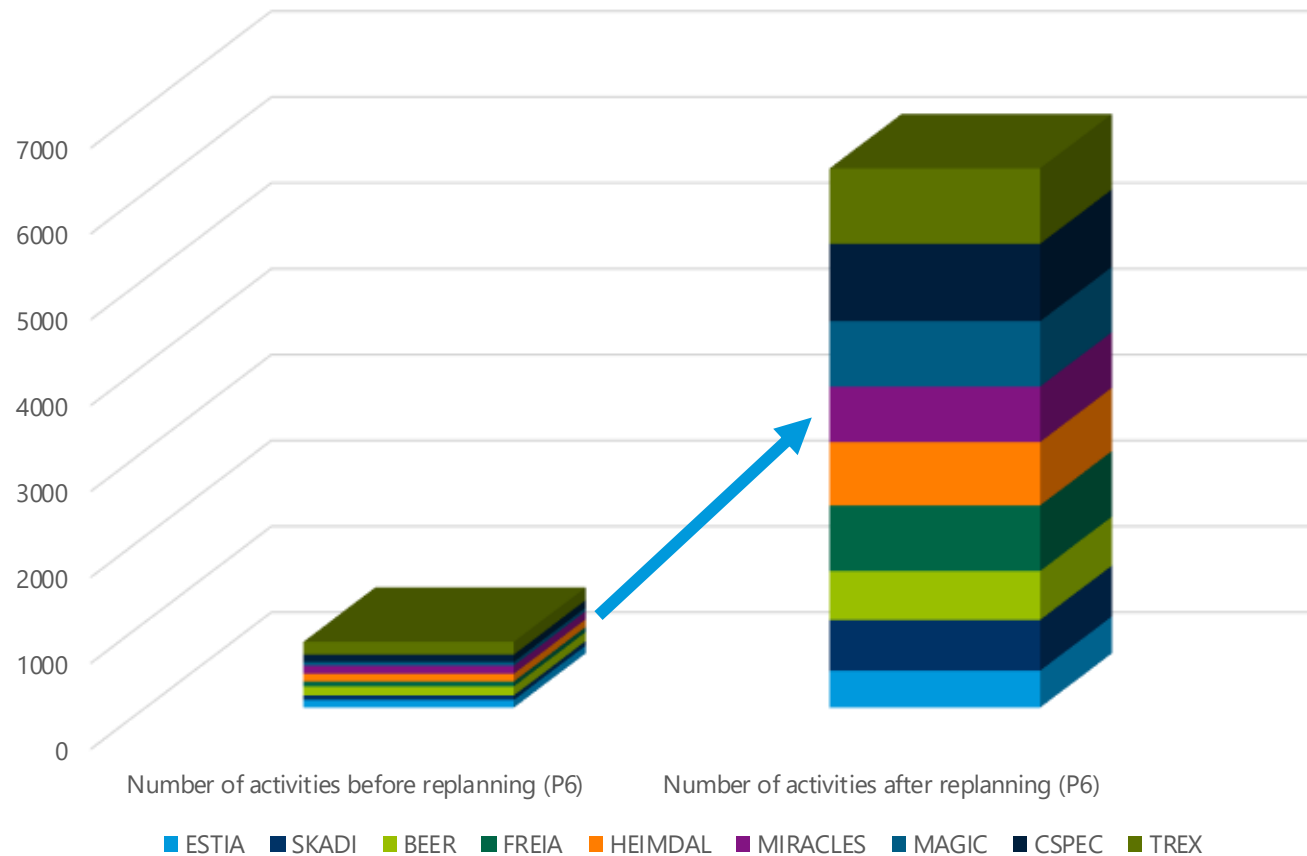
Replanning, schedule adherence, critical paths

2026-05-04

# Replanning - More details in P6



## TA milestones + detailed plan



Technically driven schedule with activities that are linked with regards to logical dependencies and resource constraints.

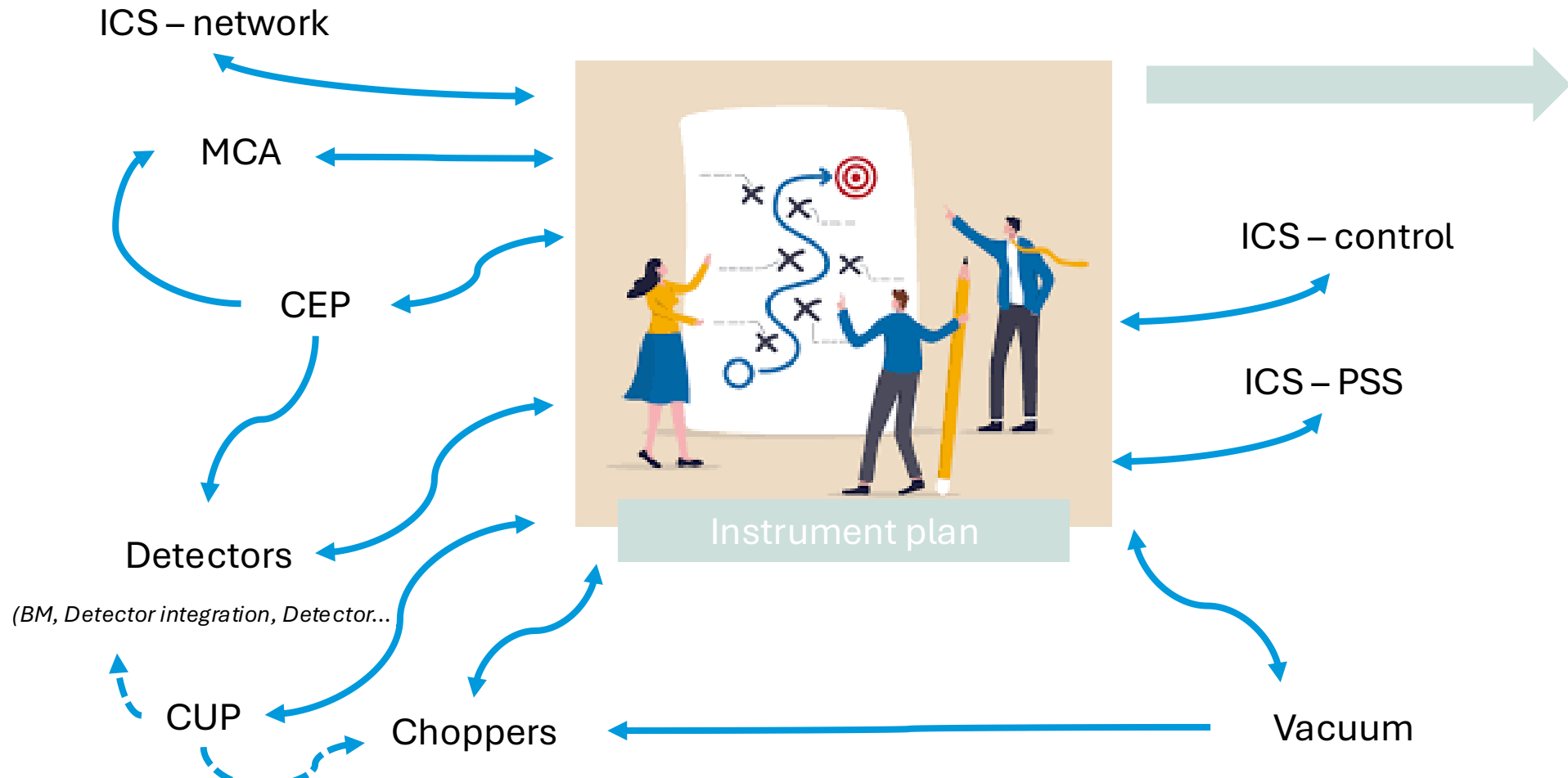
Capture enough details to ensure end-date is realistic

All instruments in one software linked to the common projects

# Simplified view of the P6 landscape



Linking an instrument plan to common projects and technology groups



## **Output:**

- Installation team
- Q-gate team
- Controllers
- ....

# Earned value

Scheduled (September 2024) vs. performed (Performed 2025)



ESS - Rebaseline	Cumulative To Date (kSEK's).			
	BCWS	BCWP	SPI	SV
<b>P5041 - Instrument CSPEC</b>	<b>50 957 kSEK</b>	<b>47 314 kSEK</b>	<span style="color: red;">●</span> <b>0,93</b>	<b>-3 644 kSEK</b>
Staff	12 587 kSEK	12 983 kSEK	<span style="color: green;">●</span> 1,03	396 kSEK
<b>CSPEC TUM Phase 2-4</b>	<b>14 808 kSEK</b>	<b>12 846 kSEK</b>	<span style="color: red;">●</span> <b>0,87</b>	<b>-1 962 kSEK</b>
Tollgates and Milestones	0 kSEK	0 kSEK	-	0 kSEK
In- Bunker Guide	5 963 kSEK	5 001 kSEK	<span style="color: red;">●</span> 0,84	-962 kSEK
Out Bunker Guide	8 648 kSEK	7 648 kSEK	<span style="color: red;">●</span> 0,88	-1000 kSEK
Monitors	0 kSEK	0 kSEK	-	0 kSEK
Slits	0 kSEK	0 kSEK	-	0 kSEK
Shutter	197 kSEK	197 kSEK	<span style="color: green;">●</span> 1,00	0 kSEK
<b>CSPEC LLB Phase 2-4</b>	<b>16 927 kSEK</b>	<b>14 448 kSEK</b>	<span style="color: red;">●</span> <b>0,85</b>	<b>-2 479 kSEK</b>
Tollgates and Milestones	0 kSEK	0 kSEK	-	0 kSEK
TANK	12 608 kSEK	5 398 kSEK	<span style="color: red;">●</span> 0,43	-7 209 kSEK
CHOPPERS	1 902 kSEK	2 298 kSEK	<span style="color: green;">●</span> 1,21	396 kSEK
CAVE & HUTCH	2 417 kSEK	6 751 kSEK	<span style="color: green;">●</span> 2,79	4 334 kSEK
Radial Collimator	0 kSEK	0 kSEK	-	0 kSEK
Sample Environment	0 kSEK	0 kSEK	-	0 kSEK
<b>CSPEC ESS Cash</b>	<b>6 636 kSEK</b>	<b>7 036 kSEK</b>	<span style="color: green;">●</span> <b>1,06</b>	<b>400 kSEK</b>
Multitube 3He detectors Production and Installat	6 636 kSEK	7 036 kSEK	<span style="color: green;">●</span> 1,06	400 kSEK

**SPI=0.93 -> slightly behind schedule**

**Ahead of schedule**

Cave : Delivery date according to replanning was February 2025

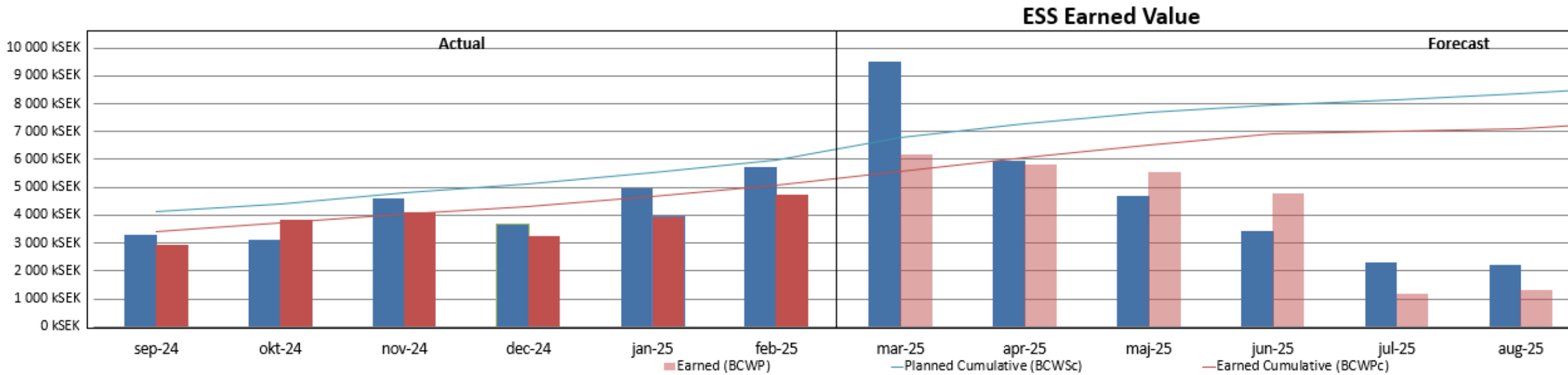
**Behind schedule**

Detector Tank: Delivery date according to replanning was December 2024

Guide installations

# Earned value

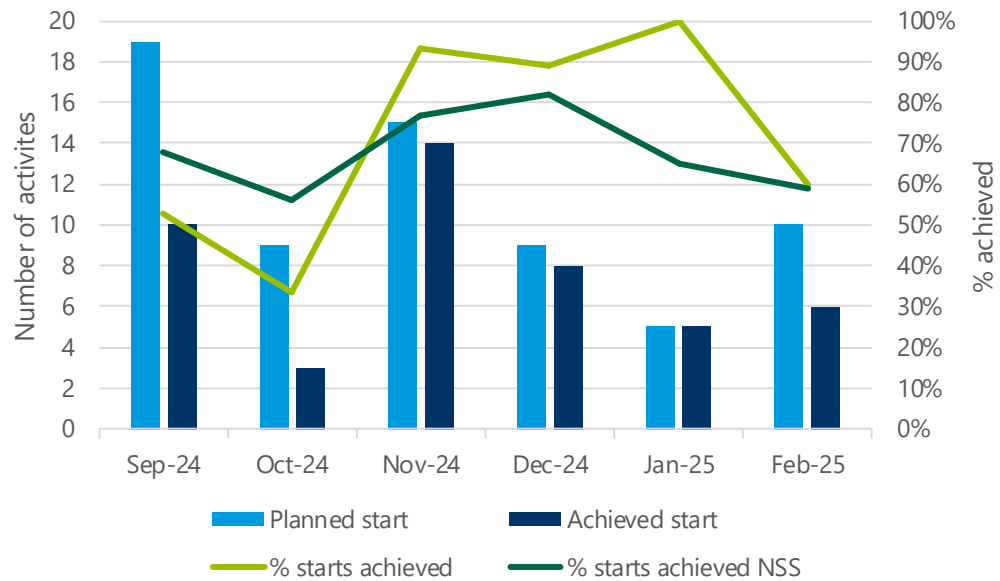
Planned (in September 2024) vs. Earned



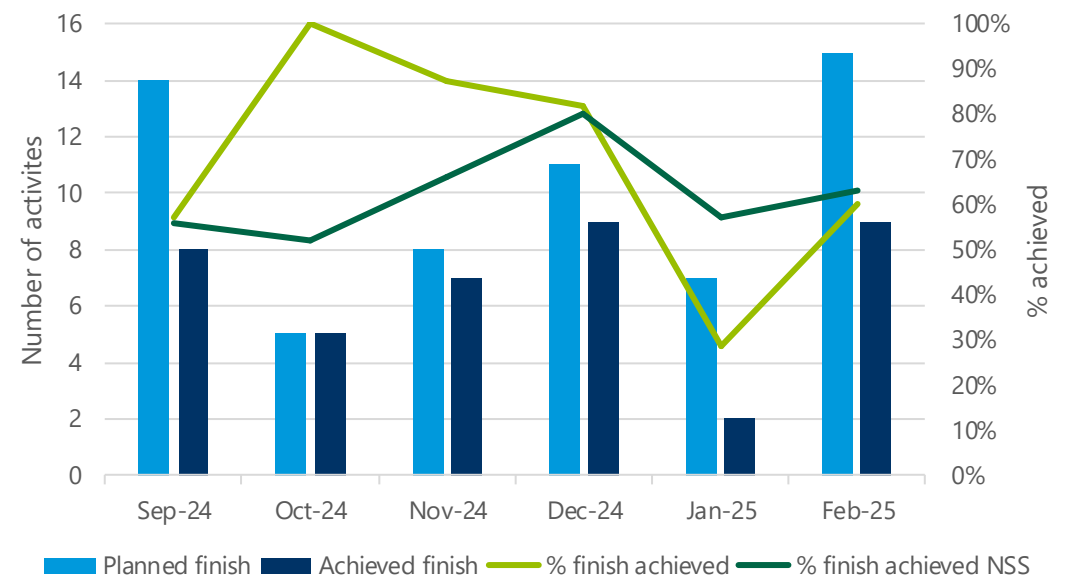
# Schedule adherence



Started activities: Planned vs Achieved



Finished activities: Planned vs Achieved





# Activities with > 4 months delay

## Comparing September 2024 with February 2025

Activity ID	Activity Name	Finish date September lockdown	Finish date February lockdown	Activity % Complete	Variance Months - Sep24/Feb25
NSS-A2147344010	CSPEC: Temporary Shutter: FAT-closure of open points and approval	12-maj-25	19-nov-25	0%	-5,7
NSS-A2147359400	CSPEC: D03 GH and Supports: Integrated SAT	18-feb-25	22-aug-25	0%	-5,3
NSS-A2147359530	CSPEC: E02 GH & Supports: Integrated SAT	01-apr-25	29-aug-25	0%	-4,1
NSS-A2147345130	CSPEC: E02 Guide Optics: Integrated SAT	18-sep-25	28-jan-26	0%	-4,2
NSS-A2147359010	CSPEC:Choppers RRM, MC1 and 2: Integrated SAT	23-okt-25	10-nov-26	0%	-11,9
NSS-A2147361310	CSPEC:Ballistic protection: FAT-closure of open points and approval	21-aug-25	27-feb-26	0%	-6,3
NSS-A2147361040	CSPEC:Radial Coll & Drive: CDR Closure of open points and approval	20-dec-24	10-jul-25	0%	-6,3
NSS-A2147361830	CSPEC:Cad Cladding: CDR Closure of open points and approval	17-feb-25	05-dec-25	0%	-9,1
NSS-A2147364920	CSPEC:Sam Chang: CDR Closure of open points and approval	16-mar-26	15-okt-26	0%	-6,4

# Key Milestones



ESS Master Milestones	Activity Title	September 2024 (replanning)	Previous Period End	Current Period End	Variance from September 2024	Variance in period	Explanation of Variance
<b>Toll Gate Milestones</b>							
NSS-A2147364820	CSPEC: Final TG3 meeting	25-feb-26	27-feb-26	01-jun-26	68	66	
NSS-A2147364800	CSPEC: Ready for cold Commissioning	05-mar-27	05-mar-27	05-mar-27	0	0	
NSS-A2147364810	CSPEC: TG5	26-aug-27	26-aug-27	26-aug-27	0	0	
<b>Instrument Key Milestones</b>							
NSS-A2147349800	CSPEC:Detector: Integrated SAT Approval- M1	04-mar-27	04-mar-27	04-mar-27	0	0	
NSS-A2147359600	CSPEC:E01 GH & Supports: Installation of Supports, Housing and Optics	18-sep-25	20-feb-26	07-apr-26	143	32	
NSS-A2147358910	CSPEC:Choppers RRM, MC1 and 2: Component delivered to ESS	08-maj-25	12-maj-25	12-maj-25	2	0	
NSS-A2147343220	CSPEC: Ch BW3, PSC1, PSC2: Component delivered to ESS	08-maj-25	12-maj-25	10-jul-25	45	43	
<b>Common Project Key Milestones</b>							
NSS-A2147104490	CEP Bunker zone energization	24-feb-25	24-jan-25	24-jan-25	-23	0	Done
NSS-A2147366190	CEP Inst zone energization		26-aug-26	29-sep-26		24	To be updated once the CR is agreed
NSS-A2146957620	CUP Final commissioning		27-jan-27	10-nov-26		-58	To be updated once the CR is agreed
NSS-A2147387070	MCA Bunker zone energization		21-aug-26	17-sep-26		19	To be updated once the CR is agreed
NSS-A2147387080	MCA Inst zone energization		02-nov-26	02-nov-26		0	To be updated once the CR is agreed

# CSPEC Critical Paths

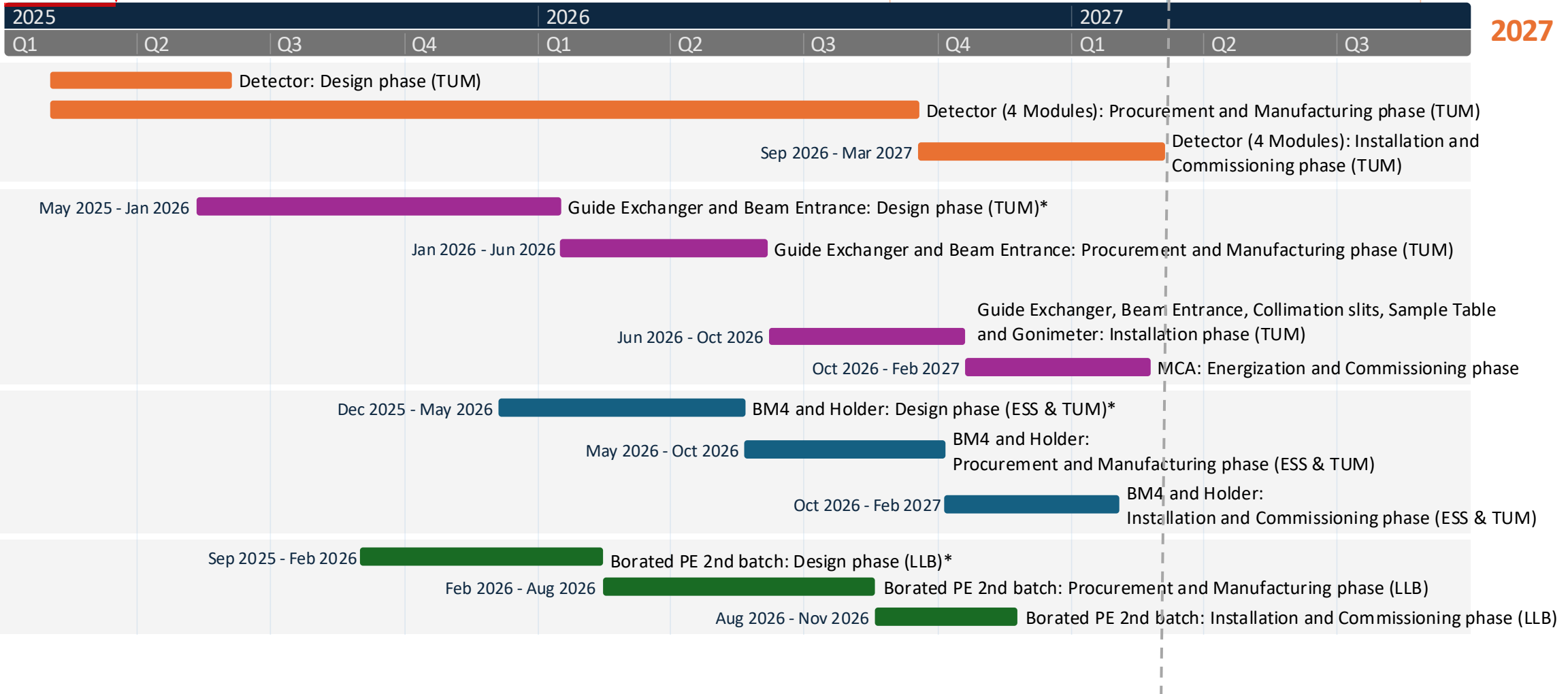
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