

Critical Path Analysis Report

Product Qualification Schedule — Target: Project — August 19, 2026

Target Date	Predicted Date	Gap	8-Week Trend	This Week
Nov 30, 2028	Jul 09, 2028	+144 days EARLY	PULLED IN 298d	Pulled in 262d

Executive summary

A step-change recovery: the final milestone (Product Qualified, Owner A) pulled in **262 days this week** — the result of the decision to pursue a **backup processing partner in parallel** with the primary partner's later slot, rather than waiting. The program is now predicted at **July 9, 2028**, which is **144 days EARLY** to the November 30, 2028 target. An open action (Owner H, due August 31) is to have the backup partner develop the required process recipes so the earlier material availability can actually be used.

The recovery hangs on CP2 — and CP2 is slipping. The sample shipment to the processing partner (Owner A) is the very task that enables the backup path, yet it holds only **14 days of buffer and slipped 8 days this week**. If shipment slips further, the 262-day gain unwinds day-for-day. Meanwhile the back of the pack is racing forward: marking instructions to the assembly partner (Owner F) slipped **49 days in 2 weeks (24.5 d/wk)** and documentation (Owner C) is slipping 10 d/wk — both reach critical within ~2-6 weeks at current rates.

Critical Path Analysis: Project — Buffer Erosion View

Target: Nov 30, 2028 | Predicted: Jul 09, 2026 | Gap: +144d EARLY | CP1 pulled in 262d this week via backup-partner decision

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Product Qualification Schedule

Generated: August 19, 2026

Buffer erosion analysis

CP1's 262-day pull-in was a **step change** (a decision, not a steady rate), so weeks-to-critical below uses each path's **own slip rate** against a stable CP1. Caution: if CP1 continues to be optimized, all buffers compress further and these timelines shorten. Sorted by urgency.

CP	Task	Owner	Buffer	Own Slip	Wks to Critical	Status
10	Send marking instructions to assembly partner	Owner F	57d	+24.5 d/wk	2.3 wks	CRITICAL <3 WKS
2	Ship samples to processing partner — ACCELERATING (8d this wk)	Owner A	14d	+2.4 d/wk	5.8 wks	CRITICAL <6 WKS
10	Product documentation completed	Owner C	57d	+9.9 d/wk	5.8 wks	CRITICAL <6 WKS
8	Revise and release experiment split plan	Owner B	55d	+6.0 d/wk	9 wks	ERODING
4	Design Rev B: lot start and process to M0	Owner C	40d	+3.5 d/wk	11 wks	ERODING
6	Finalize Rev B redesign based on final test	Owner D	51d	+3.6 d/wk	14 wks	ERODING
10	Develop array characterization program	Owner G	57d	+3.5 d/wk	16 wks	SLOW ERODE
3	Learning lot processing completed	Owner B	26d	+0.3 d/wk	78 wks	SLOW ERODE
5	Design Rev A validated (engineering samples)	Owner C	50d	-3.6 d/wk	—	STABLE / IMPROVING
7	Design Rev A validated (x16 package)	Owner E	53d	-4.0 d/wk	—	STABLE / IMPROVING
9	Wafer sort program developed	Owner E	56d	-0.5 d/wk	—	STABLE / IMPROVING

Reading this table: the marking-instructions task (Owner F, 24.5 d/wk) is the fastest slip on the program and reaches critical in ~2.3 weeks. Documentation (Owner C, ~10 d/wk) follows at ~5.8 weeks. CP2 looks moderate on its 7-week trend but **accelerated to 8 days of slip this week** — on the this-week rate it is critical in under 2 weeks, and it directly carries the 262-day gain.

CP-by-CP summary

CP	Buffer	Task / Owner	Since 08/12	Trend	Assessment
1	0d	Final Milestone: Product Qualified Owner A	+262	▲ 298d/8wk	THE critical path. Pulled in 262d this week via parallel backup-partner decision; 298d over 8 wks. Backup-recipe action open (Owner H, due 8/31) — the gain is not yet locked in.
2	14d	Ship samples to processing partner Owner A	(8)	▼ 17d/7wk	Carries the entire recovery: shipment feeds the backup path. Only 14d buffer, slipped 8d THIS WEEK (vs 2.4 d/wk trend). Accelerating. TOP PRIORITY.
3	26d	Learning lot processing completed Owner B	0	▼ 1d/3wk	Learning lot nearly stable (0.3 d/wk). Healthy.
4	40d	Design Rev B: lot start and process to M0 Owner C	+3	▼ 28d/8wk	Rev B front-end processing. Slipping 3.5 d/wk over 8 wks but pulled in 3d this week — direction improving.
5	50d	Design Rev A validated (engineering samples) Owner C	+2	▲ 29d/8wk	Pulled in 29d/8wk. One of three improving paths.
6	51d	Finalize Rev B redesign based on final test Owner D	(4)	▼ 29d/8wk	Rev B redesign finalization. Slipping 3.6 d/wk and 4d this week. Watch.
7	53d	Design Rev A validated (x16 package) Owner E	(6)	▲ 32d/8wk	Pulled in 32d/8wk but slipped 6d this week — mixed signal; confirm direction next refresh.
8	55d	Revise and release experiment split plan Owner B	0	▼ 48d/8wk	Experiment split plan slipped 48d/8wk (6 d/wk). Critical in ~9 wks. Needs an owner intervention.
9	56d	Wafer sort program developed Owner E	+8	▲ 4d/8wk	Pulled in 4d/8wk and +8d this week — improving.

CP	Buffer	Task / Owner	Since 08/12	Trend	Assessment
10	57d	Product documentation completed Owner C	(7)	▼ 79d/8wk	Documentation slipping ~10 d/wk (79d/8wk). Critical in ~5.8 wks. Second-fastest erosion.
10	57d	Send marking instructions to assembly partner Owner F	(54)	▼ 49d/2wk	FASTEST SLIP: 49d in 2 wks (24.5 d/wk). Critical in ~2.3 wks. Assembly-partner dependency — diagnose and stop this week.
10	57d	Develop array characterization program Owner G	0	▼ 28d/8wk	Characterization program slipping 3.5 d/wk. ~16 wks of runway. Watch.

Cross-CP risk themes

Theme	Evidence	Implication
Recovery is decision-driven, not locked	262d pull-in rests on backup-partner path; recipe action still open (due 8/31)	Until the backup partner confirms recipes, the gain is provisional. Close the action.
CP2 carries the gain and is accelerating	14d buffer; 8d slip this week vs 2.4 d/wk trend	Shipment slips unwind the recovery day-for-day. Daily attention until shipped.
Back of pack racing to the front	Marking instructions 24.5 d/wk; documentation 10 d/wk; split plan 6 d/wk	Three support tasks become the critical path within 2-9 wks if slips continue.
Owner C load	Owns CP4, CP5, and CP10 documentation — mixed trends across them	Fastest-eroding of the three (documentation) may need to move to another owner.
Healthy core	CP3, CP5, CP7, CP9 stable or pulling in	The design-validation spine is trending well — protect it.
Assembly-partner dependency	Marking instructions task is external-facing and the fastest slip	External dependencies fail as step functions. Diagnose the blocker this week.

Prioritized worry list

#	Concern	Trend	CP	Urgency	Impact
1	CP2 shipment: 14d buffer, accelerating slip — carries the 262d gain	▼ 8d this wk	2	IMMEDIATE	Recovery unwinds
2	Backup-partner recipe action still open (due 8/31) — gain not locked	— Open action	1	IMMEDIATE	Gain provisional
3	Marking instructions: fastest slip on program (24.5 d/wk)	▼ 49d/2wk	10	IMMEDIATE	New critical in ~2 wks
4	Documentation slipping 10 d/wk — critical in ~6 wks	▼ 79d/8wk	10	THIS WEEK	New critical path
5	Experiment split plan slipping 6 d/wk	▼ 48d/8wk	8	THIS MONTH	Critical in ~9 wks
6	CP7 mixed signal: 8wk pull-in but slipped 6d this week	▼ 6d this wk	7	NEXT REFRESH	Trend reversal?

The defensive principle applies in reverse this week: a large CP1 pull-in makes every near-CP relatively closer to critical. Defending the 262-day gain means (a) locking the backup-partner path, (b) shipping CP2 samples on time, and (c) stopping the three fast-slipping support tasks before they become the new constraint.

Recommended actions

#	Action	Owner (suggested)	When
1	Close the backup-partner recipe action (due 8/31) — confirm early material availability is usable	Owner H	This week
2	Protect the CP2 shipment: daily check-in until samples ship; escalate any blocker same-day	Owner A	Daily
3	Diagnose the marking-instructions slip (24.5 d/wk) with the assembly partner; stop it this week	Owner F	This week
4	Intervene on documentation (10 d/wk slip); consider reassigning from Owner C	Owner C / PM	This week
5	Owner-level intervention on the experiment split plan (6 d/wk slip)	Owner B	This week
6	Confirm CP7 direction at next refresh (8wk pull-in vs 6d slip this week)	Owner E	Next refresh
7	Weekly buffer-erosion review — after a large CP1 pull-in, every buffer is relatively tighter	Schedule owner	Every week

Report generated from lateralworks fastProject CP Analysis export. Source: *Product Qualification Schedule*. Analysis date: August 19, 2026. The 262-day gain is provisional until the backup-partner path is confirmed and CP2 samples ship.