

CASE STUDY PACK

FlashGL Case Study Pack — Three Downtime Recoveries, Hour by Hour

A grounded A320, a downed CMP tool and a depleted clinical trial site —
recovered in 11, 19.5 and 22 hours.

• Case Study Pack • FlashGL • 2026

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Every case in this pack started the same way: a phone call, a stopped line, and a clock already running.

A CMP tool down in a fab. An A320 grounded over a failed hydraulic valve. A Phase III trial site with its investigational product almost gone.

What follows is the full breakdown of three recoveries — what the situation was, what we did hour by hour, and what it was worth. **Every number here is taken from the shipment record. Where a cost figure was never disclosed, we say so instead of inventing one.**

| The numbers

19.5 h San Jose → Hsinchu, semiconductor tool recovery	22 h Basel → São Paulo, 2–8°C cold chain	11 h Shanghai PVG → Frankfurt FRA, AOG	€200,000+ Saved by the airline in the AOG case
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| At a glance

CASE	ROUTE	CLOCK	RESULT
Semiconductor — CMP tool failure	San Jose → Hsinchu	19.5 h	Total tool downtime under 24 hours
Pharmaceutical — Phase III IMP at 2–8°C	Basel → São Paulo	22 h	Zero temperature excursion; logger uploaded every 10 min
AOG — A320 hydraulic valve	Shanghai PVG → Frankfurt FRA	11 h	€200,000+ saved for the airline

| Case 1 — Semiconductor: a CMP tool down

• The challenge

A CMP tool goes down. The replacement part sits at another site on the other side of the Pacific. Standard air freight routes through cargo terminals, where shock, humidity and a broken chain of custody can ruin an ESD-sensitive component — and every hour the tool sits idle is charged to the production plan.

• What we did

Our desk took the call, confirmed NFO capacity on the fastest available departure within 25 minutes, and dispatched a vetted courier at the same time. The part was packed in ESD-safe, shock-absorbing material with an IoT shock and tilt tag, cleared export formalities against pre-filed documentation, and never left the courier's possession. Sensors streamed data through the transit.

• The result

The part was handed over at the receiving dock **19.5 hours** after the first call, and the tool came back online inside the same production cycle. **Total downtime: under 24 hours.**

| Case 1 timeline — semiconductor CMP recovery, T+0 to T+19.5 h

T+0:00 ● First call

CMP tool failure reported. Route, weight, dimensions, commodity and deadline captured in one call. A single coordinator takes ownership from here.

T+0:25 ● Capacity locked

NFO capacity confirmed on the fastest available departure. Courier dispatched to the pickup point while packaging is prepared.

T+1:15 ● Pickup

Part collected and packed in ESD-safe, shock-absorbing material with an IoT shock and tilt tag. Handover photo logged.

T+3:45 ● Boards the flight

Export formalities cleared on pre-filed documentation. The courier checks in and boards with the part as accompanied baggage — no cargo terminal, no offload risk.

T+16:45 ● Lands

Roughly 13 hours in transit. Shock and tilt data recorded throughout. Import clearance runs on expedited semiconductor equipment entry.

T+19.5 h ● Delivered to the dock

Handed over at the receiving dock. Tool back online within the same production cycle. Total downtime under 24 hours.

| Case 2 — Pharmaceutical: a trial site running dry

• The challenge

A Phase III trial site in São Paulo is running out of investigational medicinal product, and the enrollment window closes in 48 hours. The biologic has to hold 2–8°C for the entire journey — a single excursion can invalidate the batch and cost the patient slot with it. One broken cold chain link and the shipment is worth nothing.

• What we did

A GDP-qualified courier was dispatched to the Basel depot with a validated 2–8°C passive container, pre-conditioned and calibrated. At pickup the courier verified the logger readings and applied tamper-evident seals, then boarded the direct flight with the IMP in hand. The logger transmitted temperature readings every 10 minutes. At destination our licensed broker cleared the IMP under expedited clinical trial import.

• The result

Delivered to the site pharmacy **22 hours** after the first call with **zero temperature excursion**. QP release document, temperature log printout and signed proof of delivery were filed to the sponsor within the hour. Enrollment ran on schedule.

| Case 2 timeline — pharma cold chain, T+0 to T+22 h

T+0:00 ● Request received

The site reports IMP stock depletion. Enrollment window: 48 hours. The shipment is defined: biologic, 2–8°C, Basel to São Paulo. One coordinator owns it.

T+0:30 ● Courier dispatched

A GDP-qualified courier leaves for the Basel depot carrying a validated 2–8°C passive container, pre-conditioned and calibrated for this shipment.

T+1:00 ● Pickup

IMP collected at the depot. Data logger readings verified, tamper-evident seals applied, handover photo logged.

T+3:30 ● Boards the direct flight

Courier boards the 11:30 ZRH → GRU direct flight with the IMP as accompanied hand-carry. No terminal dwell, no broken cold chain.

T+12:00 ● Lands in São Paulo

Around 12 hours in transit. The logger has uploaded temperature readings every 10 minutes across the whole flight — no excursion.

T+22:00 ● Delivered to the site pharmacy

IMP handed over at the site pharmacy. QP release, temperature log and signed POD filed to the sponsor within the hour. Enrollment proceeds on schedule.

| Case 3 — AOG: an A320 on the ground

• The challenge

A European carrier grounds an A320 over a failed hydraulic valve. A grounded aircraft earns nothing, and every hour it sits cascades into cancelled rotations, crew overtime and rebooked passengers. The replacement valve is in Shanghai; the aircraft is in Frankfurt.

• What we did

The AOG desk took the call and activated a coordinator within 15 minutes. We located the valve, selected the fastest available routing out of PVG, and dispatched an on-board courier who collected the part within 90 minutes and boarded with it. Export formalities and destination pre-clearance were prepared ahead of the aircraft — not after it landed.

• The result

The valve reached the maintenance hangar **11 hours** after the initial call, cleared and delivered straight to the MRO rather than to a cargo terminal. The airline avoided **€200,000+** in delay costs.

| Case 3 timeline — AOG recovery, T+0 to T+11 h

T+0:00 ● AOG call

Carrier reports an A320 grounded on a failed hydraulic valve. Part located in Shanghai; aircraft in Frankfurt.

T+0:15 ● Coordinator activated

One named coordinator takes ownership. Part sourcing, routing and customs pre-clearance start in parallel rather than in sequence.

T+0:30 ● Routing locked

Fastest available departure out of PVG is selected. On-board courier dispatched. ATA 300 packaging prepared for the valve.

T+1:30 ● Courier collects the part

OBC mobilized and the valve picked up within 90 minutes of the call, then checked in and boarded as accompanied hand-carry.

T+0:15 → ● In the air, fully visible T+11:00

ETA refreshed for the MRO team every 15 minutes. Chain-of-custody photos logged at every handover, so the hangar knows exactly when to expect the part.

T+11:00 ● Delivered to the MRO hangar

Customs cleared and the valve handed over at the maintenance hangar — not the cargo terminal. Chain-of-custody documentation complete. €200,000+ in delay costs avoided.

What the three cases share

None of them was won by a cheaper rate. All three were decided inside the first 30 minutes: **one person took ownership, routing was locked before the part was packed, and customs was prepared before the wheels left the ground.**

That is the part worth copying. In time-critical logistics, the saving is decided before the shipment moves — everything afterwards is execution.

| What your scenario looks like

YOUR SITUATION	WHAT DELAY COSTS	RECOMMENDED MODE	TARGET DOOR-TO-DOOR
Fab tool down, replacement part overseas	\$100,000–\$1,000,000 per hour of unplanned downtime	OBC or NFO, ESD-safe with shock and tilt monitoring	6–24 h (OBC) / 24–48 h (NFO)
Clinical trial IMP running out at a site	\$50,000–\$500,000 per day of trial delay, plus full batch loss on a temperature excursion	OBC with GDP cold chain — 2–8°C / 15–25°C / frozen	6–24 h
Aircraft on ground	\$60,000–\$150,000 per hour	AOG desk → OBC, NFO, hand carry or charter	4–12 h
Line-stop risk — dated, but not yet critical	Not published — give us your line rate and we will model the delay cost with your own figures.	NFO with dual-end clearance	24–48 h

Transit ranges are our standard door-to-door targets; actual times depend on lane and flight availability. Cost figures shown are industry benchmarks for each scenario — where no figure is shown, we have not published one rather than guessed.

| Frequently asked questions

Q Are these transit times door-to-door?

Yes. The 19.5 h, 22 h and 11 h figures all count from the first call to signed handover at the final delivery point — receiving dock, site pharmacy, or maintenance hangar.

Q Why are no client names disclosed?

Because we have not yet obtained written release to publish them. Every figure in this pack comes from the shipment record; nothing was back-filled to make a story read better.

Q My lane is longer, or has no direct flight. Can you still hit these times?

Not always, and we will not pretend otherwise. Where no direct flight exists we route through hubs such as PVG, HKG or IST, or escalate to charter. What you get in the quote is an ETA we can actually hold — not a best case.

Q How is cold chain evidence delivered?

The data logger uploads temperature readings every 10 minutes during transit. On delivery you receive the calibrated temperature log, the QP release document and signed proof of delivery — enough to satisfy an audit without a follow-up request.

What would your scenario cost?

Send us the lane, the weight, the commodity and the deadline. A coordinator will come back within 10 minutes with routing options and an ETA we can hold — including an honest note on which of these numbers do not apply to your route. Email service@flashgl.com or call the 24/7 desk +86 400-011-9188.

REQUEST A QUOTE

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