

# SWAT SPECIAL WORKFLOW AND TECHNOLOGY

THE PROCESS  
MINING  
HACKATHON

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# MISSION BRIEF

*Gear up, agents! Your first mission: extract, rebuild, visualize, and strike with data precision.*

Process Mining is your tactical tool. It unfolds in 4 critical steps:

- Data Extraction – Pull intelligence from ERP, PLM, MES systems. Accuracy is survival.
- Reconstruct Data – Align logs, timestamps, and IDs to rebuild the battlefield map.
- Visualize Data – Deploy process maps to expose hidden choke points and deviations.
- Analyze Data – Identify root causes, compliance gaps, and inefficiencies. Deliver actionable insights fast.





# THE CHALLENGE

*Clock is ticking. Failure is not an option.*

*Neutralize inefficiencies before Air+ goes down*

- Mission Status: CRITICAL
- Air+ is on the brink. Delays, cost overruns, and quality failures threaten survival.
- Your Task Force Goal: Detect bottlenecks crippling production.
- Correlate design, planning, and shop-floor execution. Deliver immediate recommendations to restore operational efficiency.
- Timeframe: 48 hours. No second chances.



# TACTICAL ASSETS: CHOOSE YOUR BATTLE

*Pick your battlefield, soldiers.*

*Code, data, mechanics, or finance ??? ...choose wisely and strike hard!!*

Your team must select ONE strategic challenge:

1. **Software Engineering & AI:** Develop a solution using Process Mining to optimize aircraft assembly.
2. **Data & AI:** Use AI to optimize the assembly process of Air+.
3. **Modeling & Digital Mechanics:** Reduce the mass of a 3D-printed mechanical part. STEP file and specs provided.
4. **FinTech:** Propose cost-reduction strategies for production and aircraft.







# INTEL AND MISSION SUCCESS CRITERIA

*Mission success is measured in impact.*

*Deliver fast, deliver smart, and bring Air+ back to life*

## Intel Provided:

- ERP\_DATASET - PLM\_DATASET - MES\_DATASET - 3DXML Aircraft File STEP and CAD File

## Evaluation Parameters:

- Depth of Analysis – How far you dig into the data battlefield.
- Innovation – Creative tactics for process mining and visualization.
- Business Impact – Potential to save Air+ from collapse.
- Immediate Feasibility – Solutions deployable within 48 hours.
- Cross-System Integration – Linking ERP, PLM, MES insights for a holistic view.





Agents, the clock is ticking!!

Complete your mission, and save Air+

Scan the QR code for full intel and operational details!!



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