Authentic Presence

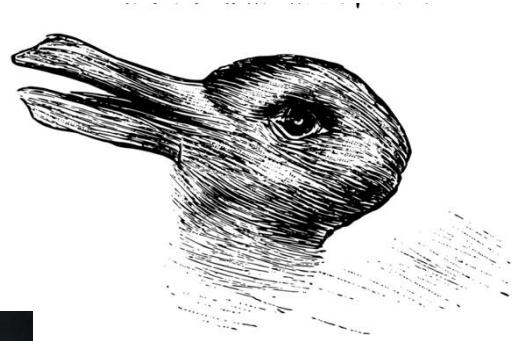
I am a **role model** leader who increases the **technical reputation** of BT&E with our program partners. I foster healthy and meaningful **relationships**.
I give this by providing a **safe space to fail**, setting **high expectations**, and **identifying connections** across diverse situations to deliver value.

- Thoughtfulness
  - Slow down
  - Calm and methodical
  - Let others finish
- Openness
  - Multiple perspectives
  - Contradictions
  - Genuine listening











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Audience Summary

Who:
Leah Rusher



Role: Senior Test & Evaluation Director (TED)

- BCA and MDA Flight Test Engineering
- Test Program Management
- New role

Relationship

- My boss's boss
- Former Test Program Manager

Style: Planner
- Process and the why
- Facts and Data
- Functional Excellence

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X-66 / Sustainable Flight Demonstrator (SFD)

Program Overview

Emily Prewett – Test Program Manager



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Attention-Getting Opening

$1.1B/FSAA

2 Partners

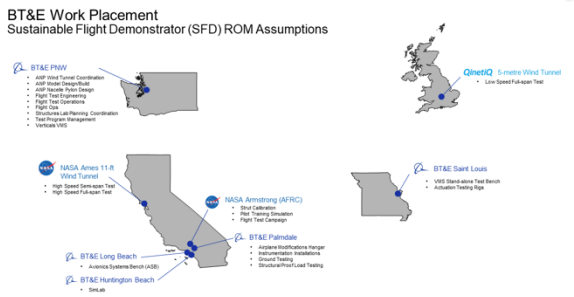
FSA

30%

7 Organizations

8 BT&E Sites

No TIA



6.5 years

3 MD-90s



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Attention-Getting Opening

The Future



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Executive Summary



- **Purpose:**
  - Inform and update
  - Answer questions
- **Why:**
  - Align on functional excellence
  - Ensure effective and efficient test program strategy
  - Utilization of enterprise capability
- **Desired Outcome:**
  - Input & support

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Agenda

- **X-66 Program Objectives**



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Agenda

- X-66 Program Objectives
- **Program Plan/Schedule**



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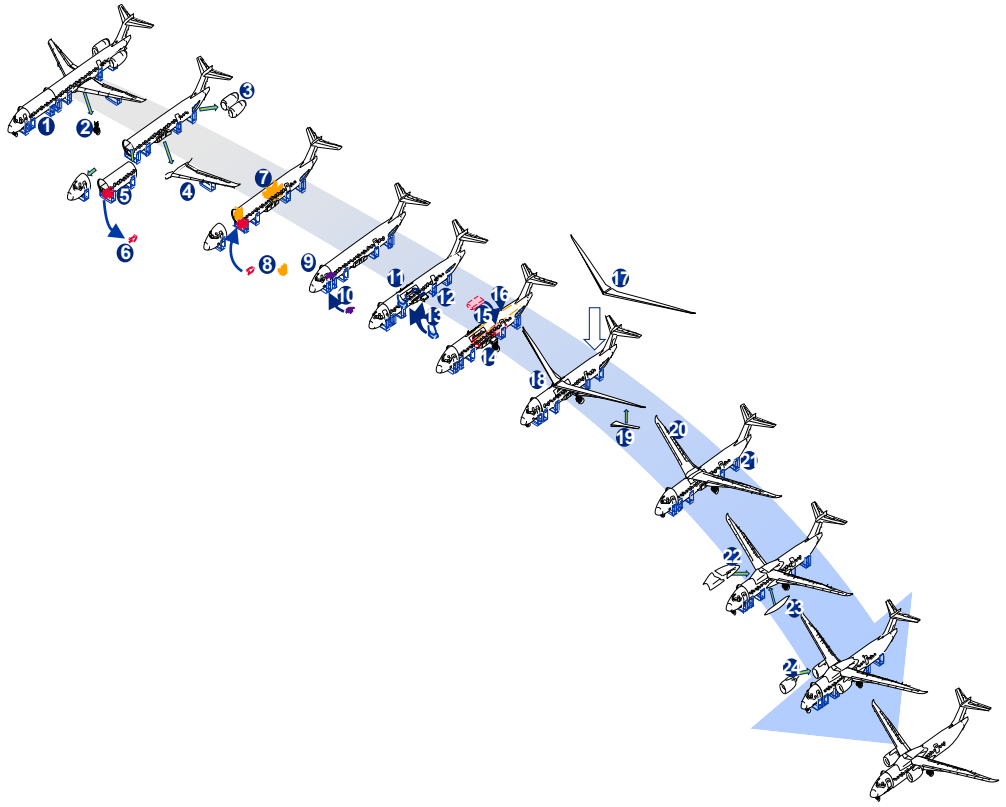
Agenda

- X-66 Program Objectives
- Program Plan/Schedule
- **Modification/Build**





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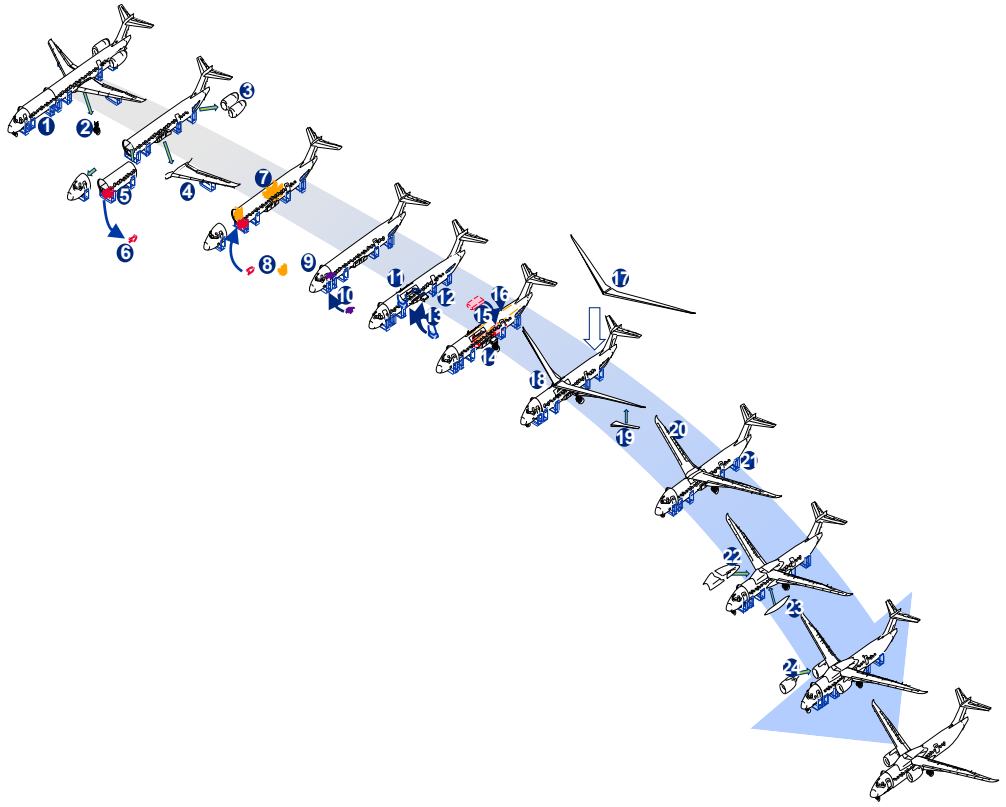
Agenda

- X-66 Program Objectives
- Program Plan/Schedule
- Modification/Build
- Test Program Strategy
- New and Novel Approaches





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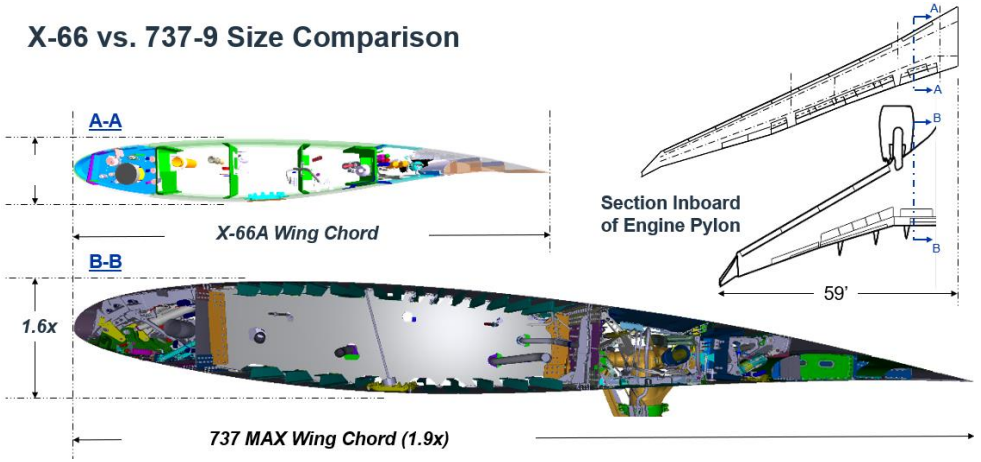
Program Objectives Overview

"H" = Highlight the Point,
"O" = OK, So What
"R" = Relevant Information

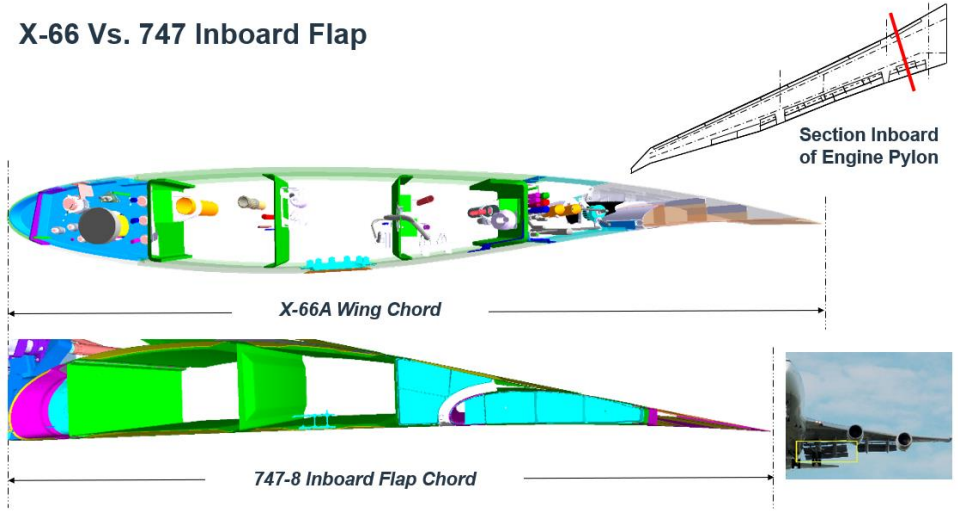
Thin Wing Systems Integration



X-66 vs. 737-9 Size Comparison



X-66 Vs. 747 Inboard Flap



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Program Objectives Overview

"R" = Relevant Information
“S” = Summarize the Point
“E” = Ease to the Next Topic

Thin Wing Systems Integration

TTBW Aero Performance

Stability & Control



Handling Qualities

Static & Dynamic Loads

Aeroelastic Stability & Flutter

Provision for future spirals

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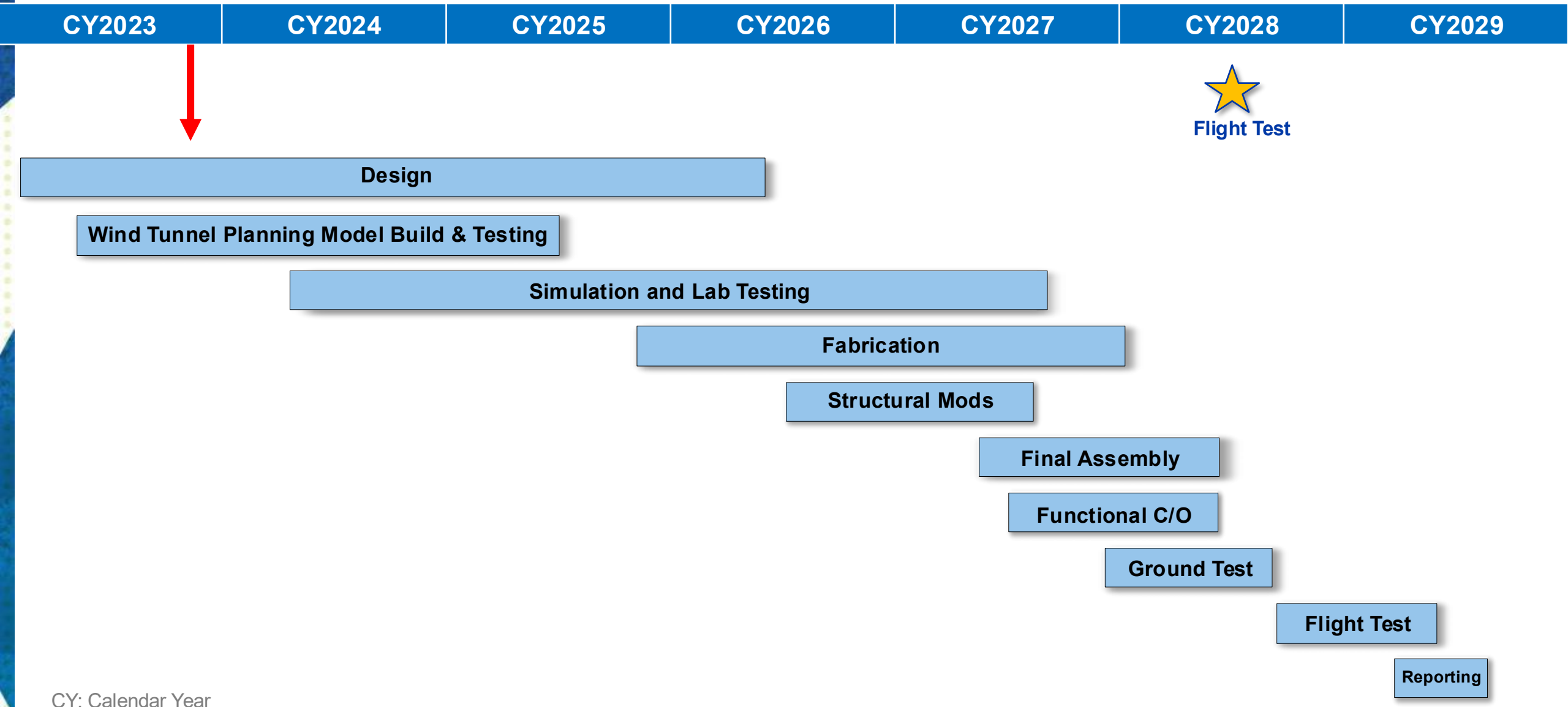
X-66 Program Plan

"H" = Highlight the Point,
"O" = OK, So What
"R" = Relevant Information



CY: Calendar Year

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X-66 Program Plan

"R" = Relevant Information

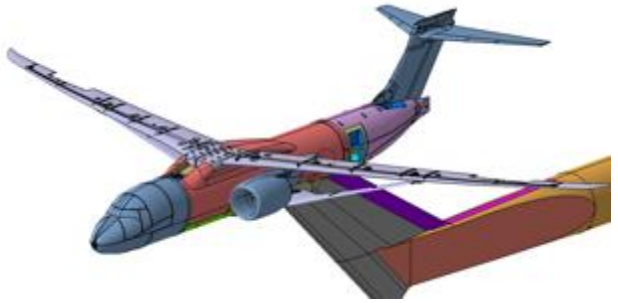
CY2023	CY2024	CY2025	CY2026	CY2027	CY2028	CY2029

High Speed Semi Span ★ NASA Ames

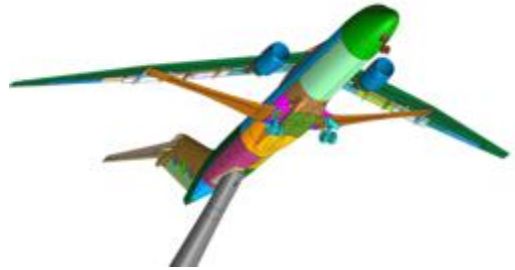


Wind Tunnel Planning
Model Build & Testing

High Speed Full Span ★ NASA Ames



Low Speed Full Span ☆ → ★ QinetiQ



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X-66 Program Plan

"R" = Relevant Information

CY2023	CY2024	CY2025	CY2026	CY2027	CY2028	CY2029

- Sim Lab – Huntington Beach
- VMS – St Louis
- ASB – Long Beach
- Simulator – Armstrong

Simulation and Lab Testing

CY: Calendar Year

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X-66 Program Plan

"R" = Relevant Information

CY2023	CY2024	CY2025	CY2026	CY2027	CY2028	CY2029



Proof - Palmdale



GVT - Palmdale

- Proof Load Test (115% of limit)
- Ground Vibration Test (under load)
- Factory and Flightline Functional
- Instrumentation Checkout

Functional C/O

Ground Test

CY: Calendar Year

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X-66 Program Plan

"R" = Relevant Information
"S" = Summarize the Point
"E" = Ease to the Next Topic

CY2023	CY2024	CY2025	CY2026	CY2027	CY2028	CY2029



First Flight

Palmdale to Armstrong

- **Initial Airworthiness**
  - Telemetered flight
  - Edwards AFB
- **Research Objective Testing**
  - Edwards AFB
- **Performance Assessment**
  - Oceanic

Flight Test

CY: Calendar Year

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"H" = Highlight the Point,
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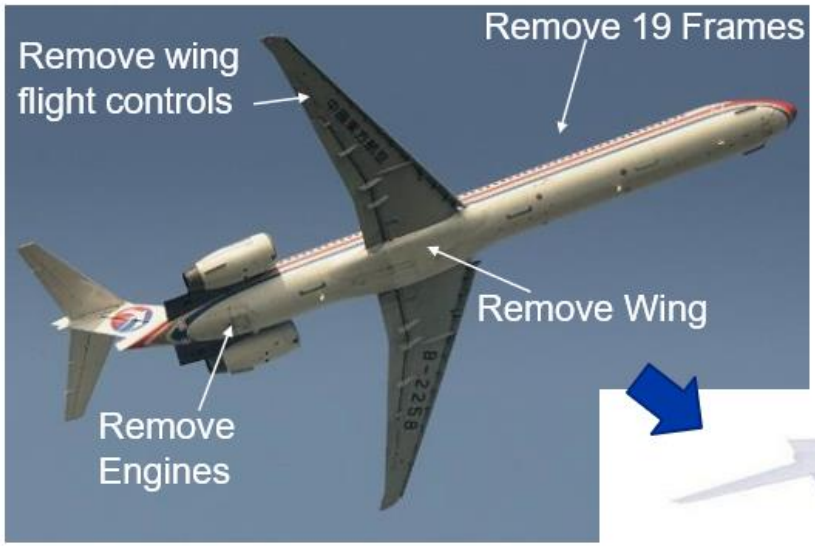
"R" = Relevant Information
“E” = Ease to Finish Strong

Modification and Final Assembly Concept Defined





Modification Complete
Ready for paint and ground test

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Summary/Next Steps

- Program Milestones
  - Mature requirements
  - Budget/schedule challenges

- BT&E
  - Identify cost or schedule opportunities
  - Right resources

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