AI-First Project Controls

Lessons from Chevron, Anglian Water and Network Rail

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Project Controls EXPO London, UK

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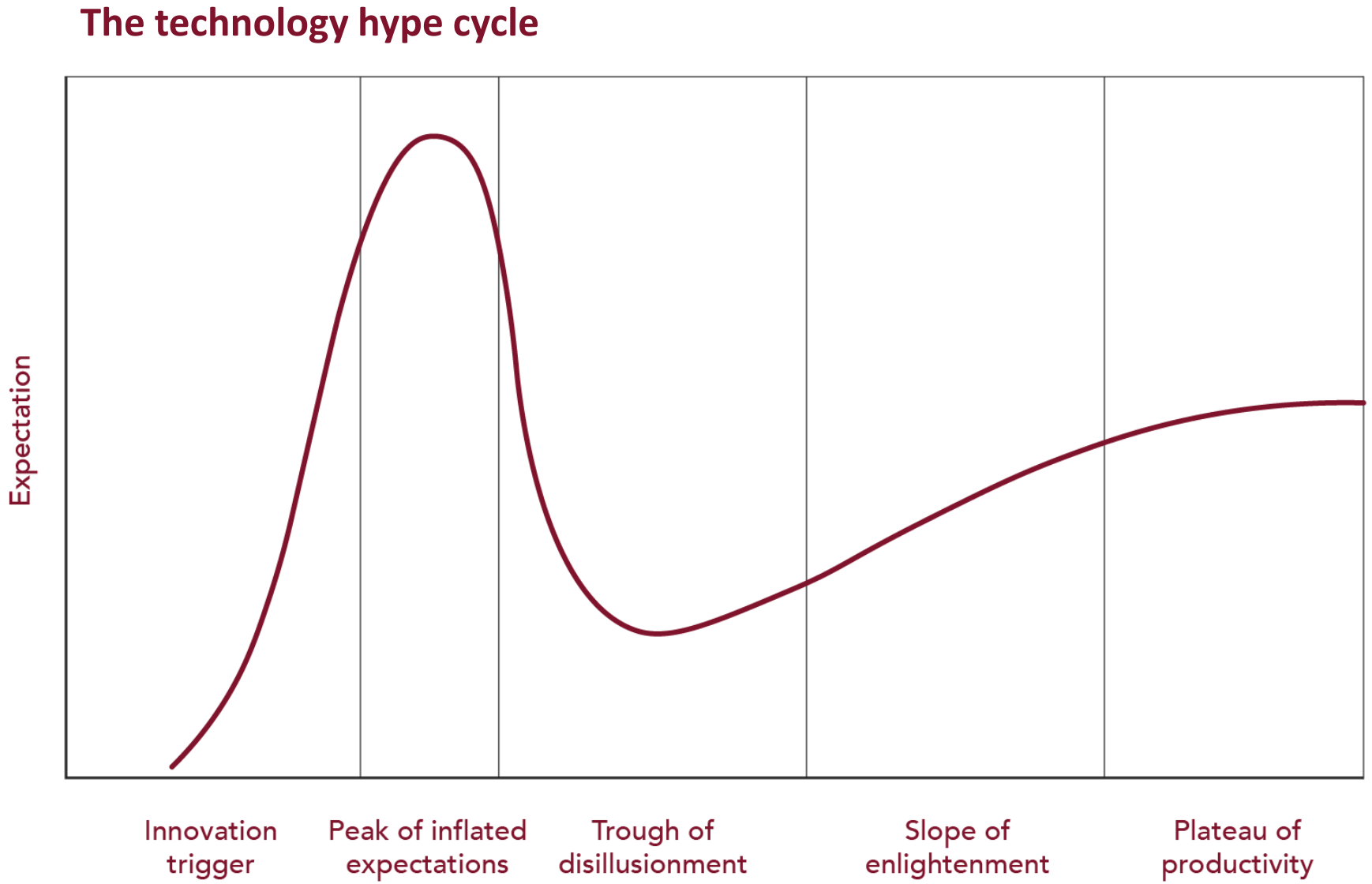
"AI-First"? Really?!



In this presentation

- What is AI-First Project Controls
- AI-First waysof working
- Effective contract and stakeholder management
- Improved certainty of outcome
- How to get started with AI

Featuring mini case studies from:
Exxon, Chevron, LXRP, TRU, LNG Canada, Transpennine Route Upgrade

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AI-First Project Controls

Combining human expertise with Predictive and Generative AI to continuously assure, de-risk and accelerate delivery.

Most major projects still miss their targets

6 out of every 7

large-scale construction projects are delivered late

The average project takes

43% longer

than planned

1 in 10

delayed projects are completed more than 365 days later than planned

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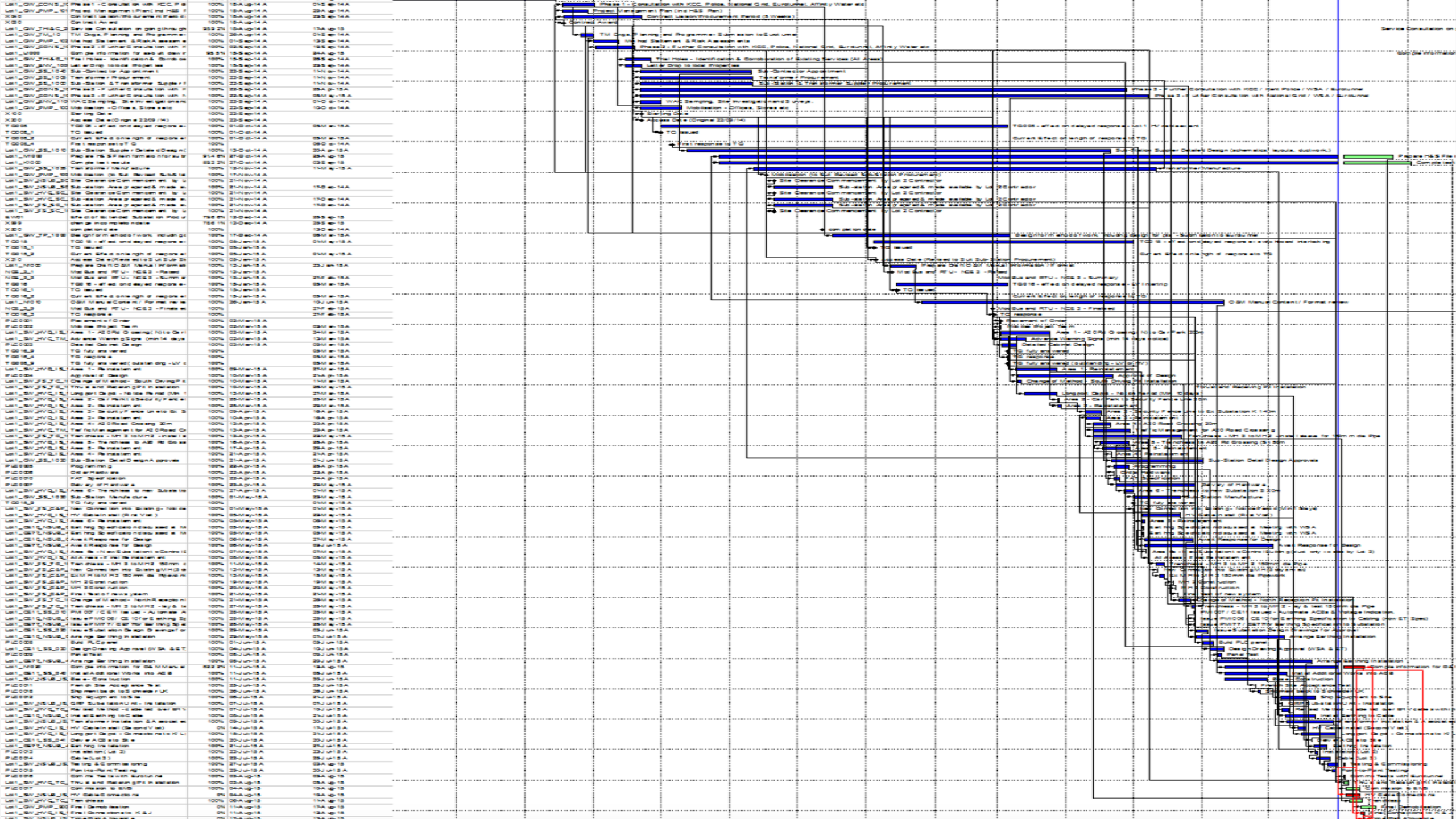
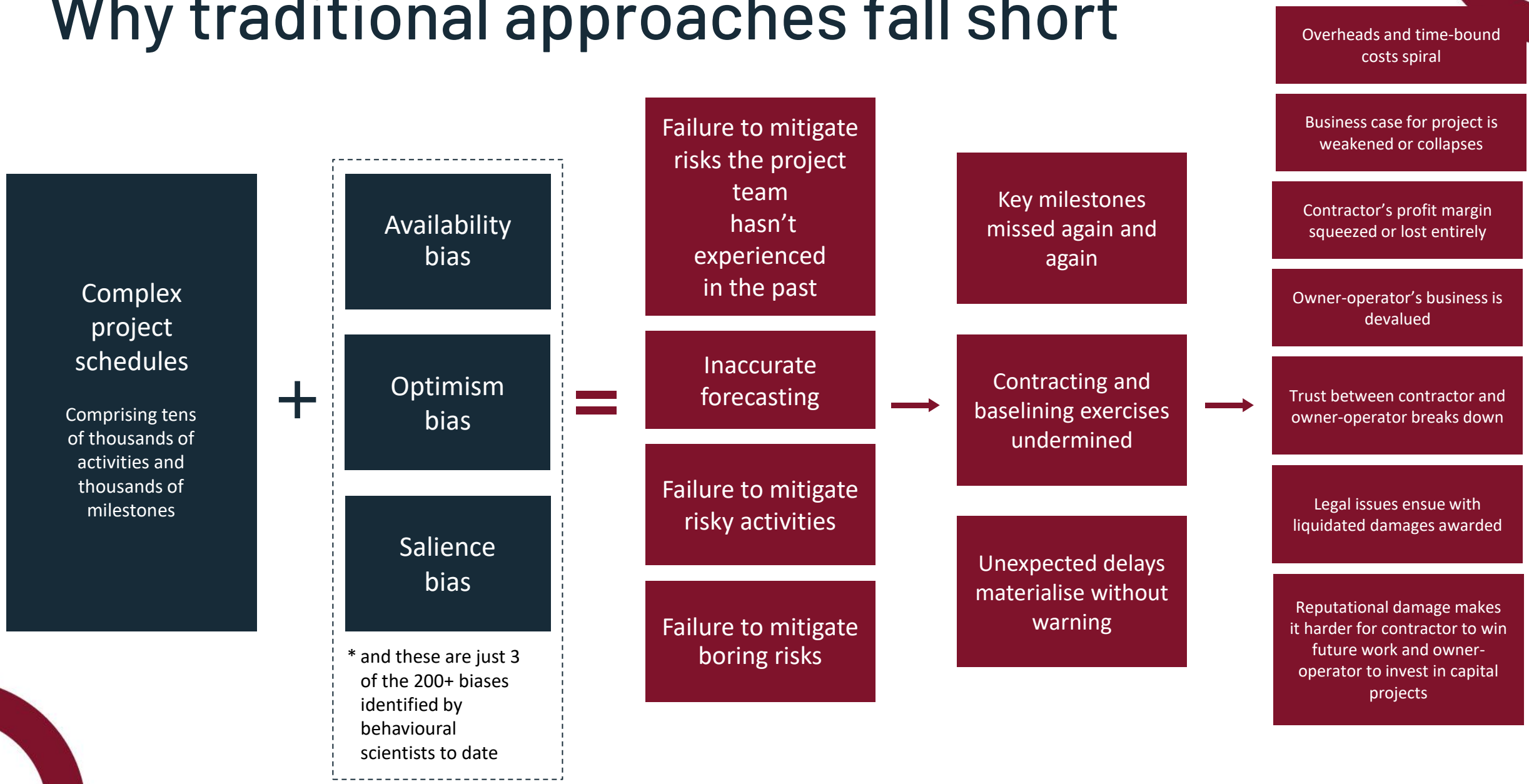


Why traditional approaches fall short



AI-First Ways of Working

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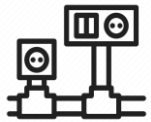
Countering bias: how AI-First teams do it

How AI-First teams handle forecasting, assurance and risk management

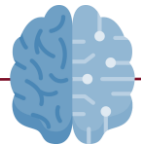
>780k past project schedules

2.5m+ years of past performance

Past activity durations

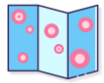


Machine learning



How long will your project take?

What might go wrong with it?



What can you do to reduce risk?

Countering bias: most constructors don't have a critical mass of past project data

Manage
Control Room
Themes
Actions
Deep Dive
Explain My Forecast
Schedule Integrity
Key Activities
Activity Search
Driving Paths
Mitigation Strategies
Utilities
AutoReport
Chat with Barry
Dashboard
ALPHA Schedule AI
File Management
My Files
Upload Schedule
Re-run Analysis

Key Activities

Rerun analysis | Download task data

Latest file: nPlan Demo Project - March 2025.xer **with data date:** Mar 15, 2025

Likelihood to Meet End Date

Planned End Date: **Sep 14, 2026**

+2%

Before Action	After Action
0%	2%

Forecast Comparison

P-value 50

Probability density

Risk Matchmaker is activated, matching risk items from Demo Risk Register.... to your key activities.
To get started with Risk Matchmaker, click on the button to the right.

Edit Risk Matchmaker

Status: Open | Risk type: All | Risk impact: 5 options selected | Labels: All

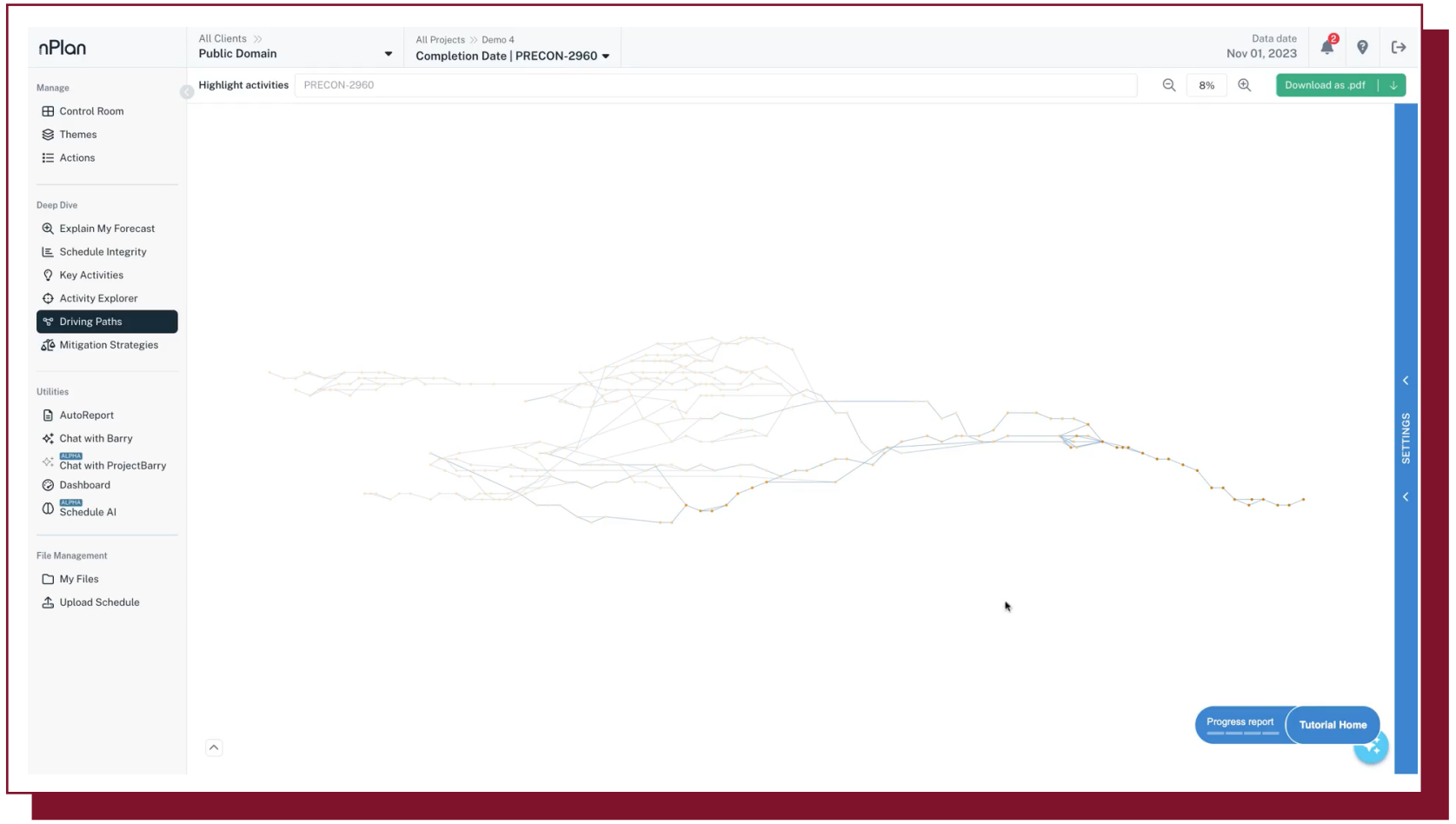
Date Range

Start: dd/mm/yyyy End: dd/mm/yyyy

Download key activities as .csv

Key Activity	Risk impact	Start date
Open Chambers Internal Favourite Utilities	Risk Impact 18 days end date impact	Start date Mar 21, 2025
New		

Countering bias: case study – Exxon



Project value:

$1B

Delay hidden by salience bias

6 months

Countering bias: how AI-First teams do it - recap

Use models trained on huge datasets of real project performance

Create a probabilistic forecast for every activity in a schedule with machine accuracy

Focus effort on mitigating the right risks in a timely manner

Combine data and human judgment, rather than rely on either alone

Better decisions, made faster

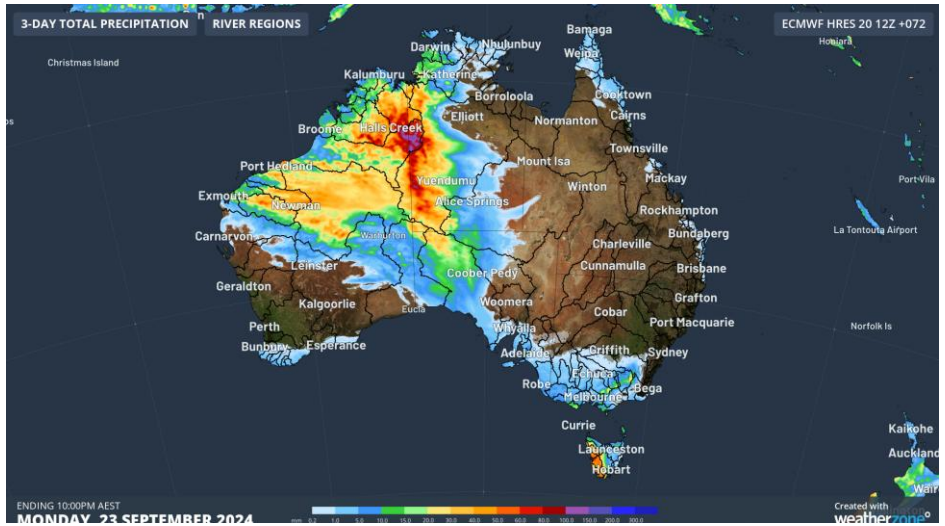
Traditional approach

- Time-consuming model build: every distribution, dependency and risk must be defined manually
- Can only test a few scenarios for a few milestones
- Results rely heavily on human assumptions
- Updates require rework and revalidation
- Provides point-in-time assurance

AI-First approach

- Pre-trained on 750,000+ past project schedules — no manual calibration required
- Run scenarios for any milestone and compare the results in <1 minute
- Results grounded in real-world performance data
- Re-runs in hours whenever new data or schedules are uploaded
- Enables continuous, iterative scenario testing and decision-support

Case study in AI-first decision-making - Chevron



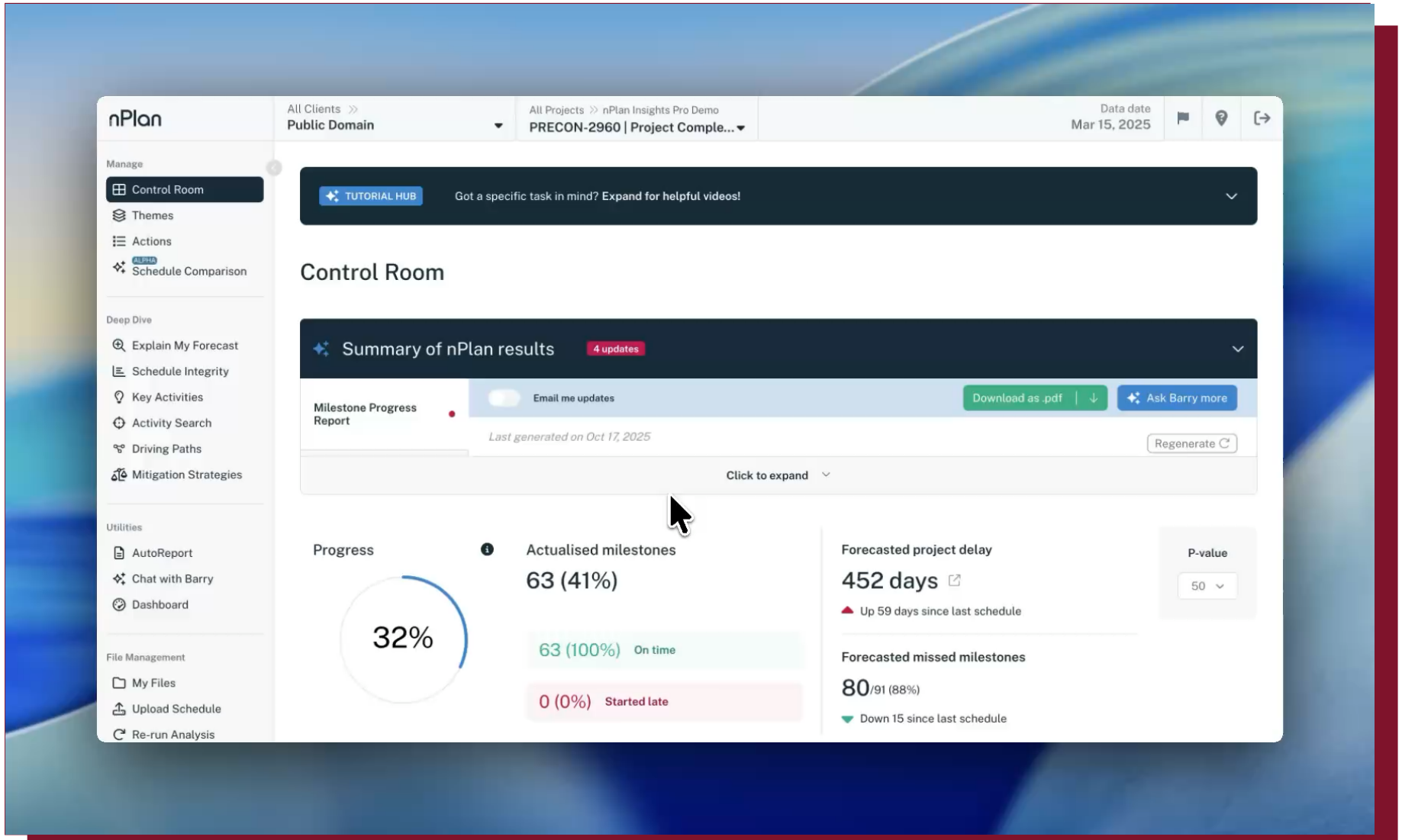
180mm of rain in 1 day - in a region that usually gets 300mm a year

?

Q: Focus recovery work in Area A, Area B, or split the work between them?

Q: Cut backfill or electrical resources by 10%?

Case study in AI-First decision-making



Effective contract and stakeholder management

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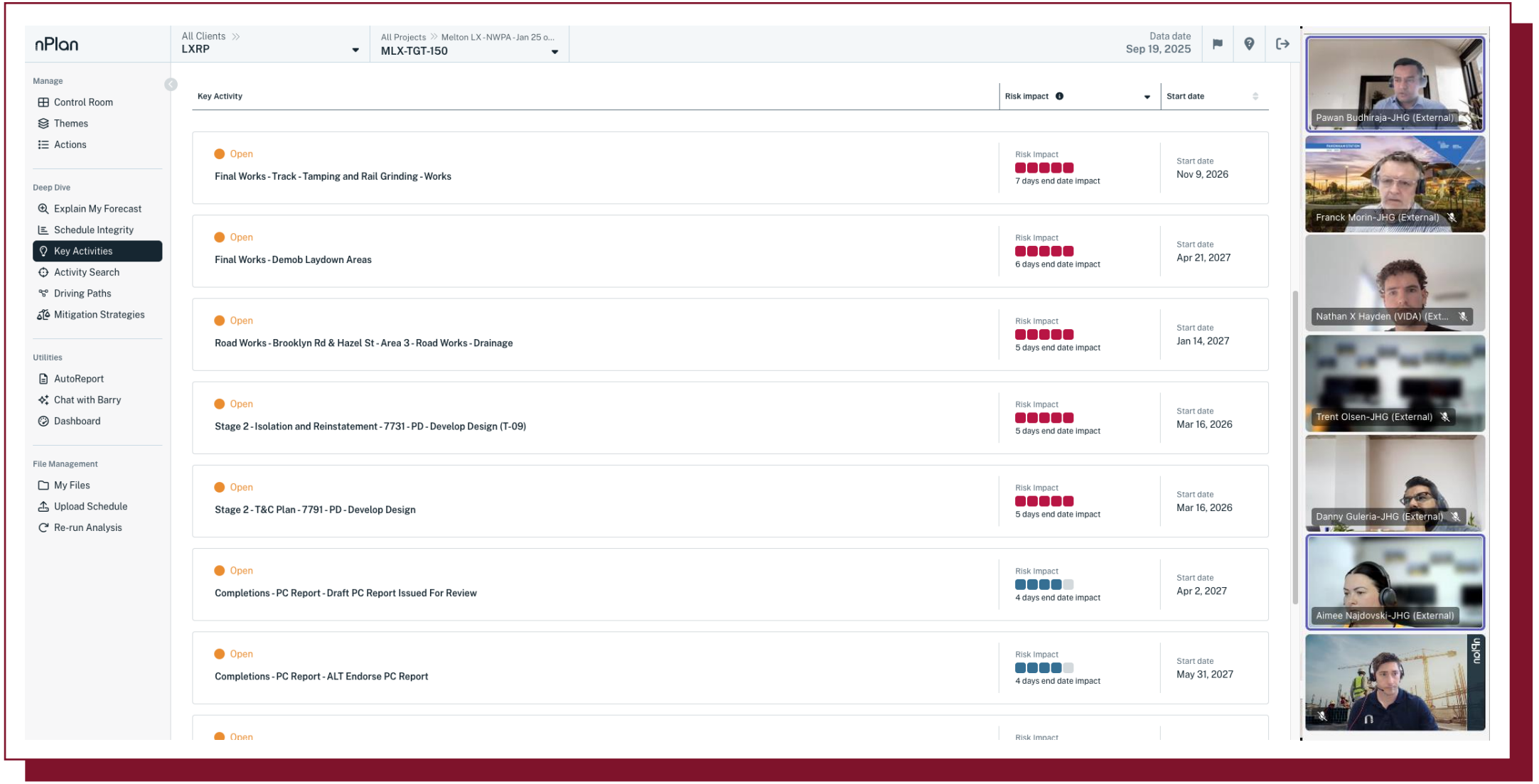
From oversight to shared foresight

Owners gain visibility beyond curated contractor reports

Predictive AI enables shared, evidence-based forecasts

Focus shifts from blame → collaboration

A case study in shared foresight: LXRP



Stakeholder Management

Traditional Reporting

- Data gathered manually from disparate systems
- Takes days or weeks to compile
- Reports are static, quickly outdated
- Often backward-looking and non-actionable

AI-First Reporting

- Data automatically refreshed from live schedules and forecasts
- Generated in minutes using generative AI and connected
- Reports are living documents that update with each schedule revision
- Drives immediate conversations about risk, mitigation, and next steps

Week 1
Gather data

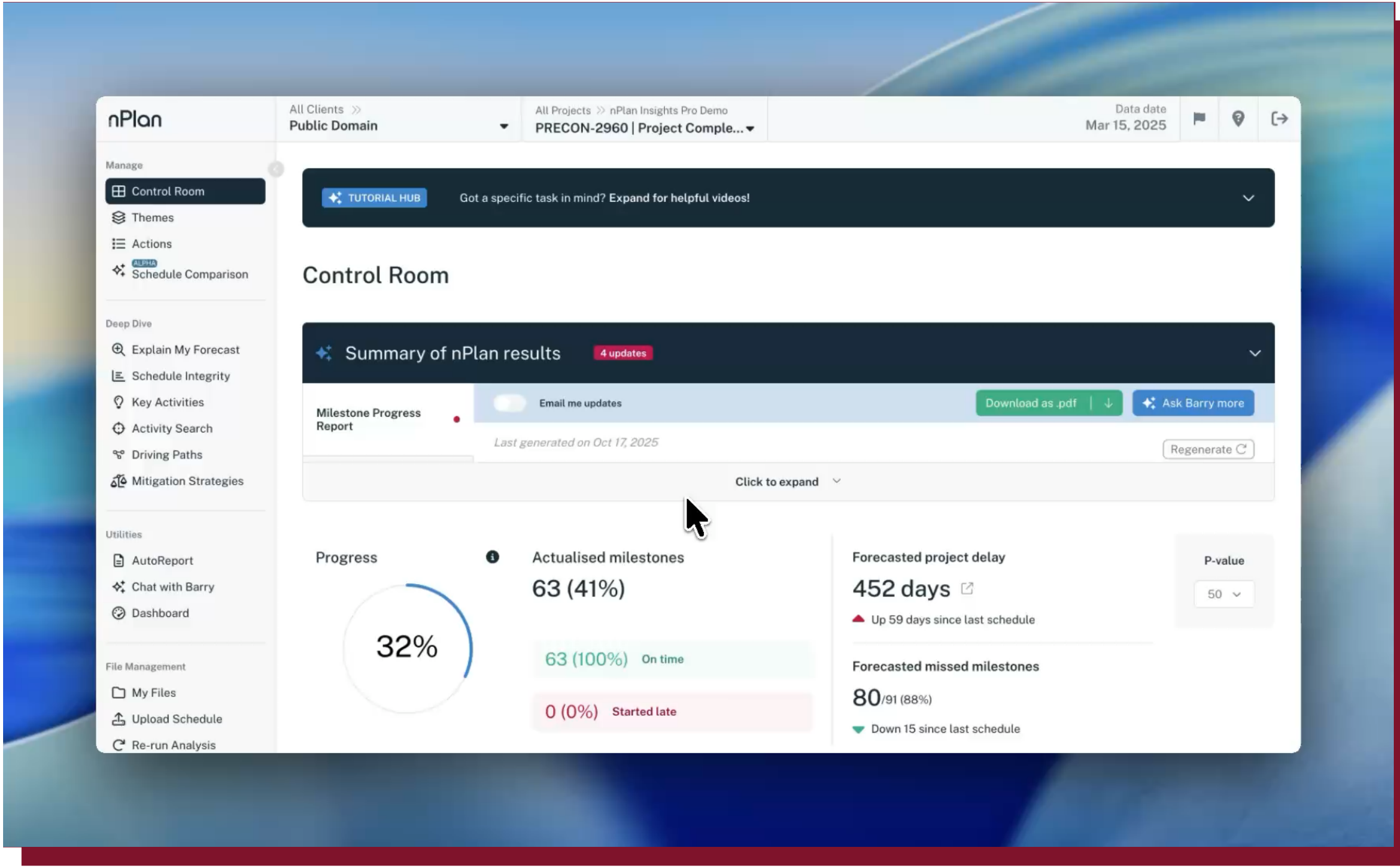
Week 2
Build report

Week 3
Present outdated insights

Minute 1
Upload new schedule

Minute 2
AI auto-generates updated forecasts and report

Minute 30
Same day stakeholder alignment


nPlan
All Clients
Public Domain
All Projects
nPlan Insights Pro Demo
PRECON-2960 | Project Comple...
Data date
Mar 15, 2025
Manage
Control Room
Themes
Actions
ALPHA
Schedule Comparison
Deep Dive
Explain My Forecast
Schedule Integrity
Key Activities
Activity Search
Driving Paths
Mitigation Strategies
Utilities
AutoReport
Chat with Barry
Dashboard
File Management
My Files
Upload Schedule
Re-run Analysis
TUTORIAL HUB
Got a specific task in mind? Expand for helpful videos!
Control Room
Summary of nPlan results
4 updates
Milestone Progress Report
Email me updates
Download as .pdf
Ask Barry more
Last generated on Oct 17, 2025
Regenerate
Click to expand
Progress
32%
Actualised milestones
63 (41%)
63 (100%) On time
0 (0%) Started late
Forecasted project delay
452 days
Up 59 days since last schedule
Forecasted missed milestones
80/91 (88%)
Down 15 since last schedule
P-value
50

Improved Certainty of Outcome

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Tackling risks before they become issues

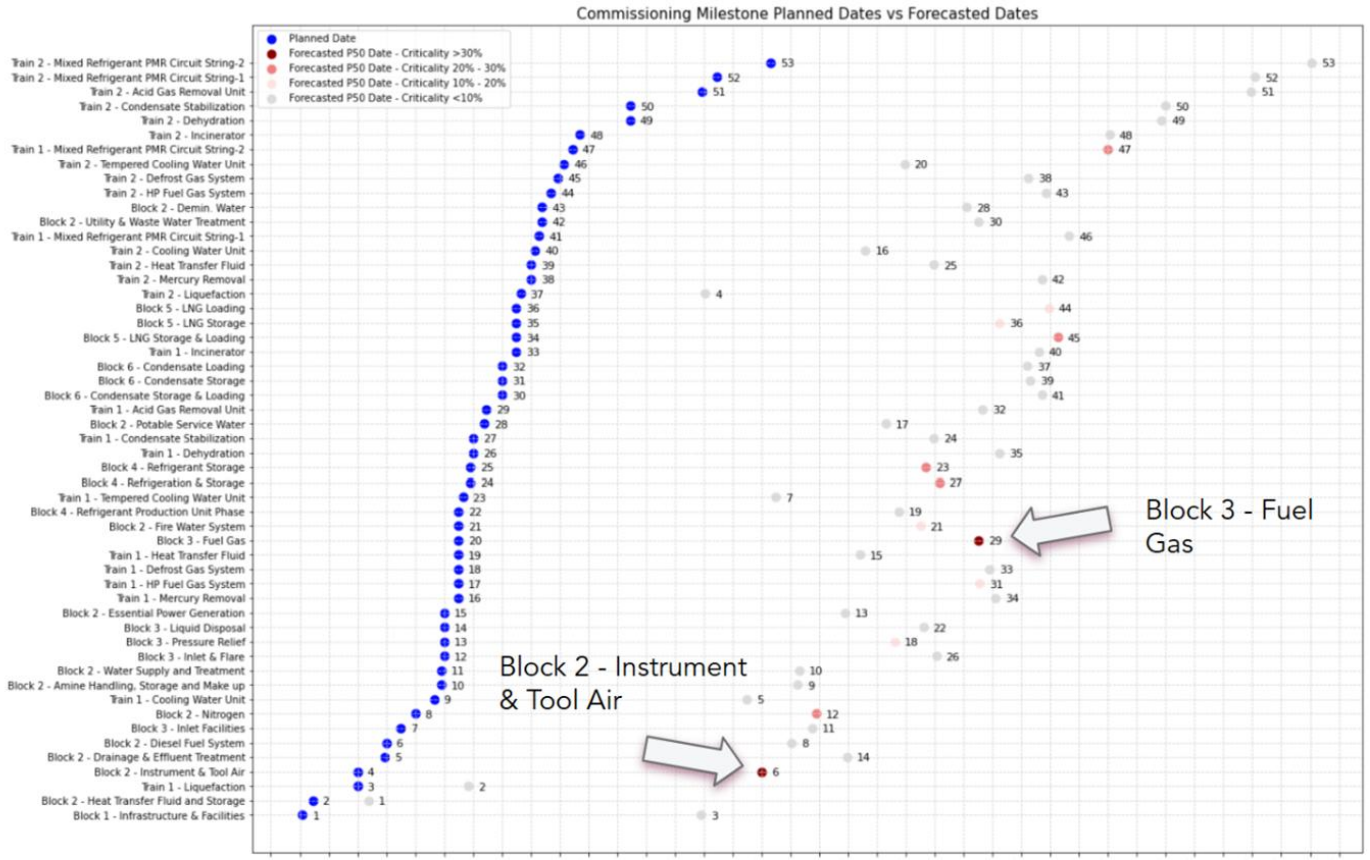
AI forecasts highlight ranked, actionable risks early

Focused mitigations replace scatter-gun responses

Shift from reactive firefighting to controlled, deliberate risk reduction

A case study in tackling risks, not issues

LNGCANADA



Potential delay avoided by resequencing the commissioning and start-up sequences

~2 months

By comparing the planned milestones with nPlan's forecasts, nPlan identified critical delays that would disrupt the sequence, potentially leading to resource bottlenecks and cascading project delays.

How do AI-First teams handle assurance

Continuous, not periodic

Data-led, not perception led

Actionable, not backwards looking

Assurance that actually reassures – a case study

TRANSPENNINE ROUTE UPGRADE

Value of possession risk management supported by nPlan

The approximate cost of failing to meet TRU's 26 scheduled weekend and overnight possessions in 2023.	**£2.6M**
The approximate cost of failing to meet 3 multi-week TRU blockades in 2023.	**£2.5M**
VALUE OF THE POSSESSION RISK MANAGEMENT SUPPORTED BY nPlan IN 2023	**>£5M**

Recap: what it means to be AI-First

AI-first delivery

⬇

continuous, data-backed, bias-free decision-making.

Measurable results seen today - not theoretical.

The shift is already underway and accelerating.

How to start or scale your journey

Start small – pilot an AI-First approach on a single project.

Frame it as strategic - AI will enable a shift from a reactive to a proactive approach to project risk management.

Consider how existing ways of working can be adapted (reduce the pain of transformation)

Find (or be) the champion for your team; let sceptics discover the potential for themselves

Read the white paper

Thank You

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