

AI-First Project Controls

Lessons from Chevron, Anglian Water
and Network Rail



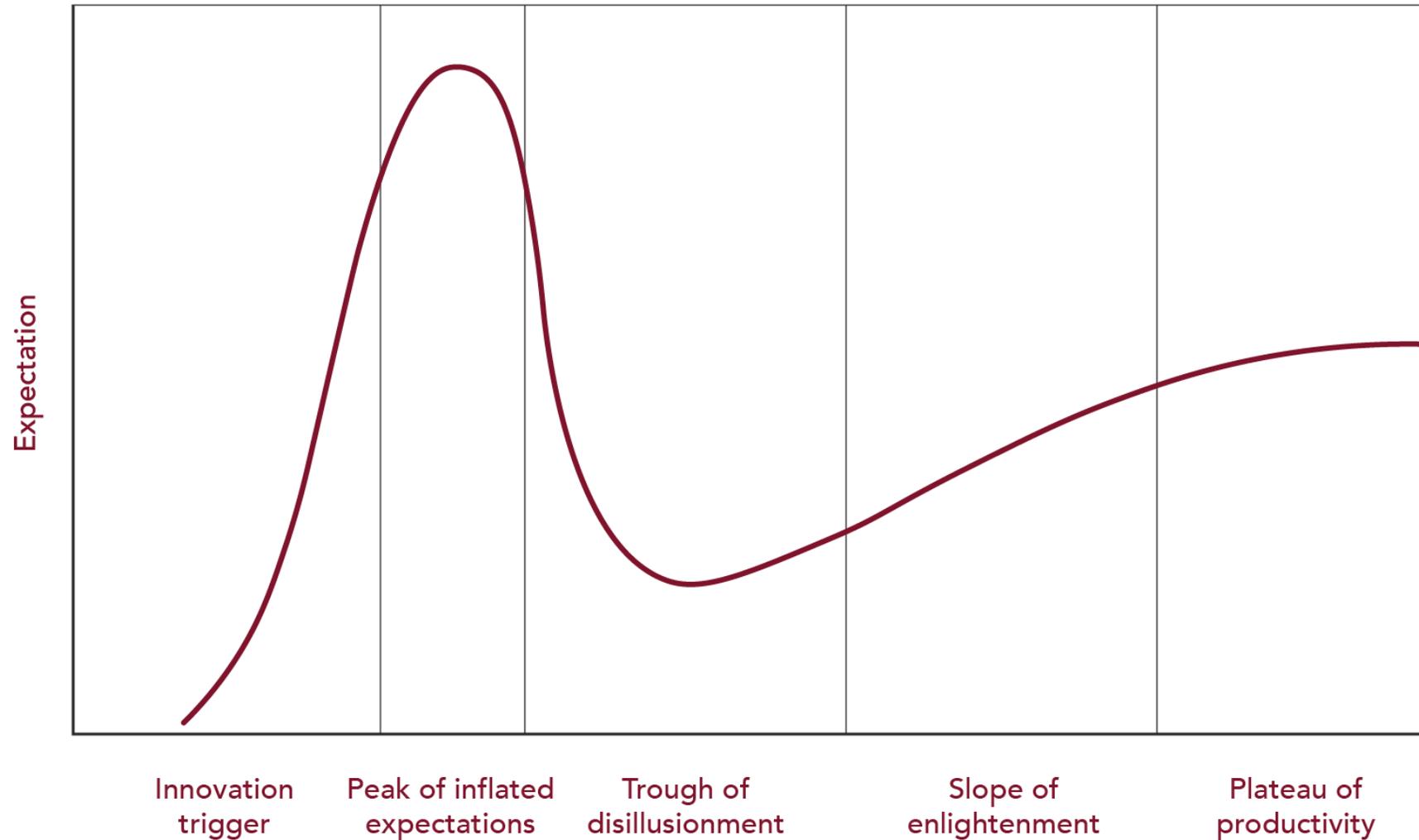
Dev Amratia

Co-Founder and CEO, nPlan



"AI-First"? Really?!

The technology hype cycle



In this presentation

What is AI-First Project Controls

AI-First ways of working

Effective contract and stakeholder management

Improved certainty of outcome

How to get started with AI

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

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

Why traditional approaches fall short

Complex project schedules
Comprising tens of thousands of activities and thousands of milestones

+

- Availability bias
 - Optimism bias
 - Saliency bias
- * and these are just 3 of the 200+ biases identified by behavioural scientists to date

=

- Failure to mitigate risks the project team hasn't experienced in the past
- Inaccurate forecasting
- Failure to mitigate risky activities
- Failure to mitigate boring risks

→

- Key milestones missed again and again
- Contracting and baselining exercises undermined
- Unexpected delays materialise without warning

→

- Overheads and time-bound costs spiral
- Business case for project is weakened or collapses
- Contractor's profit margin squeezed or lost entirely
- Owner-operator's business is devalued
- Trust between contractor and owner-operator breaks down
- Legal issues ensue with liquidated damages awarded
- Reputational damage makes it harder for contractor to win future work and owner-operator to invest in capital projects

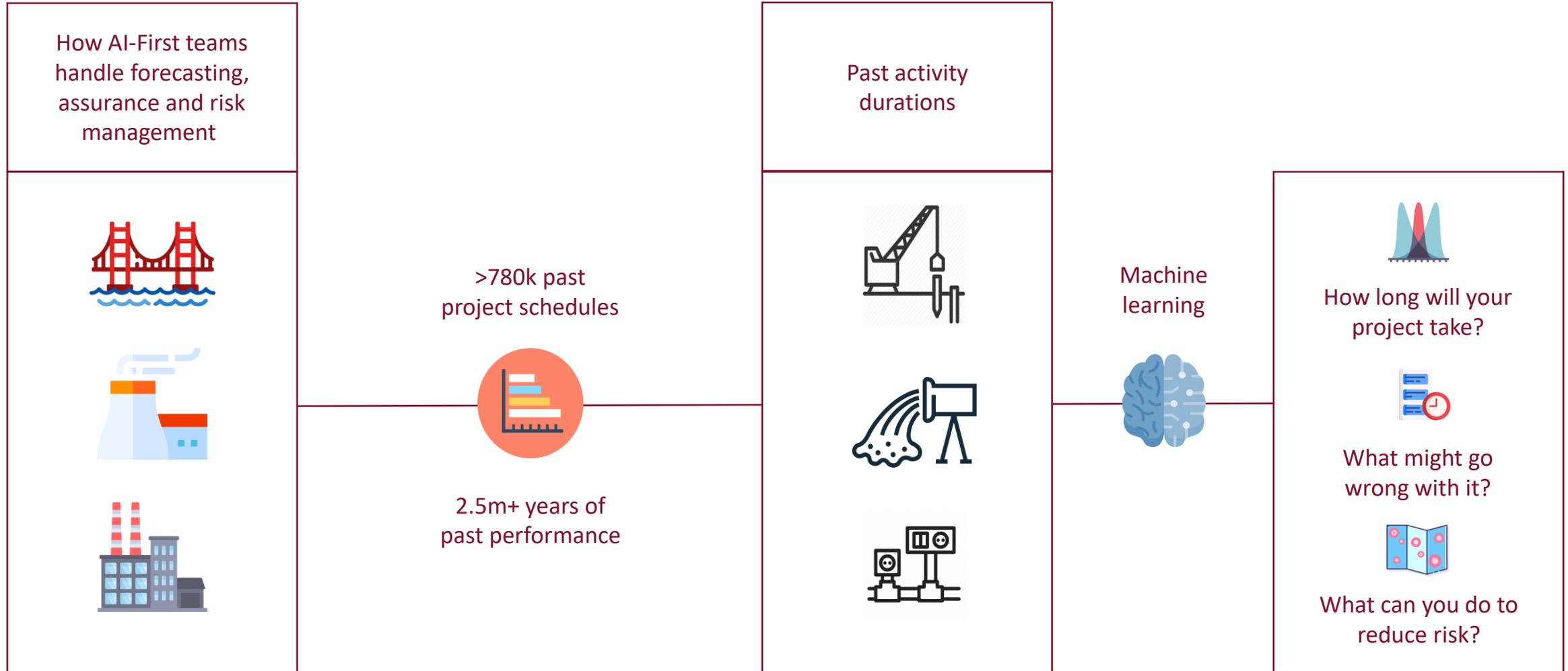
AI-First Ways of Working

nPlan

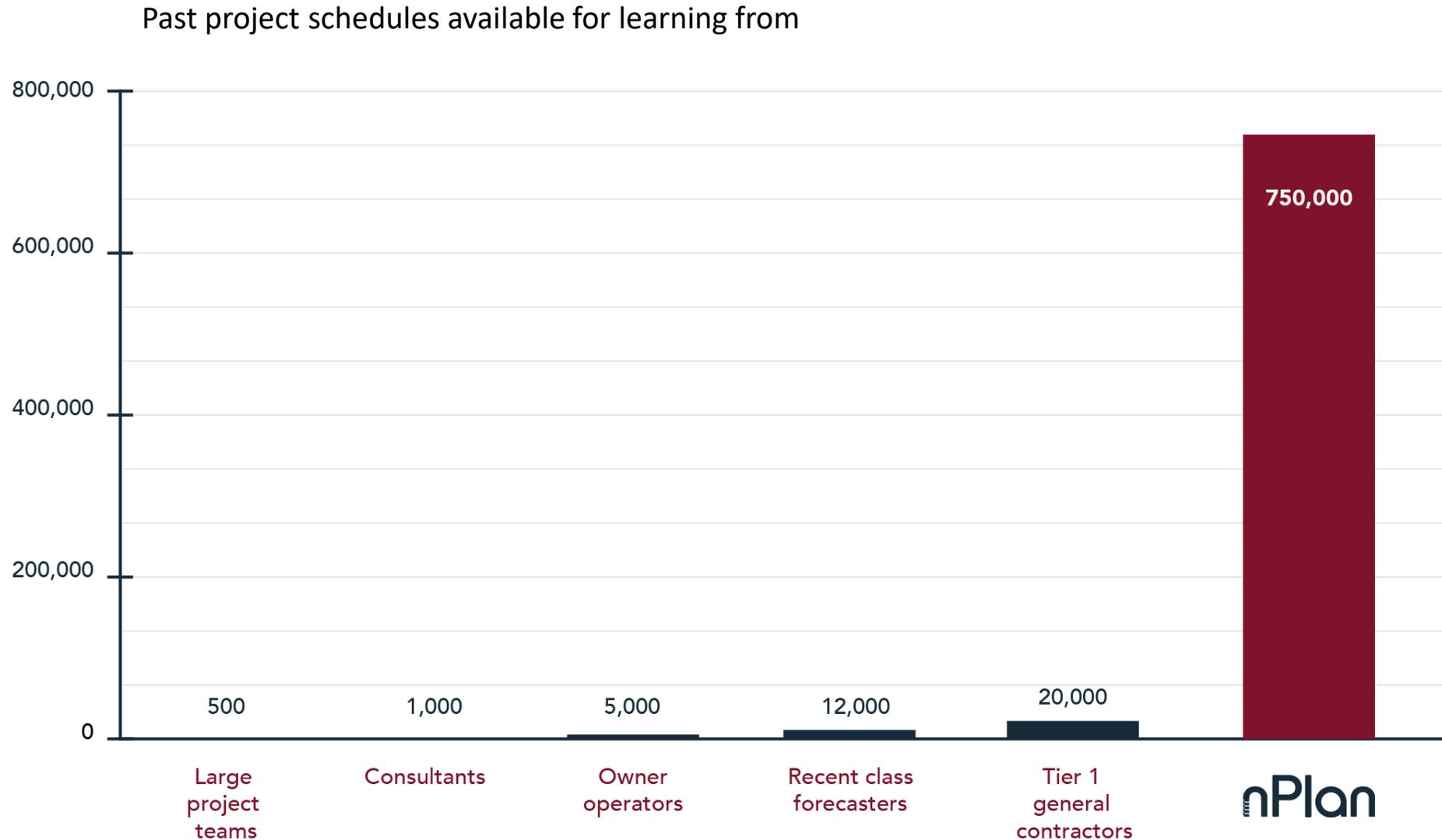


Project Controls
EXPO
London, UK

Countering bias: how AI-First teams do it



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
 - SCHEDULE AI**
 - Schedule AI

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%



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

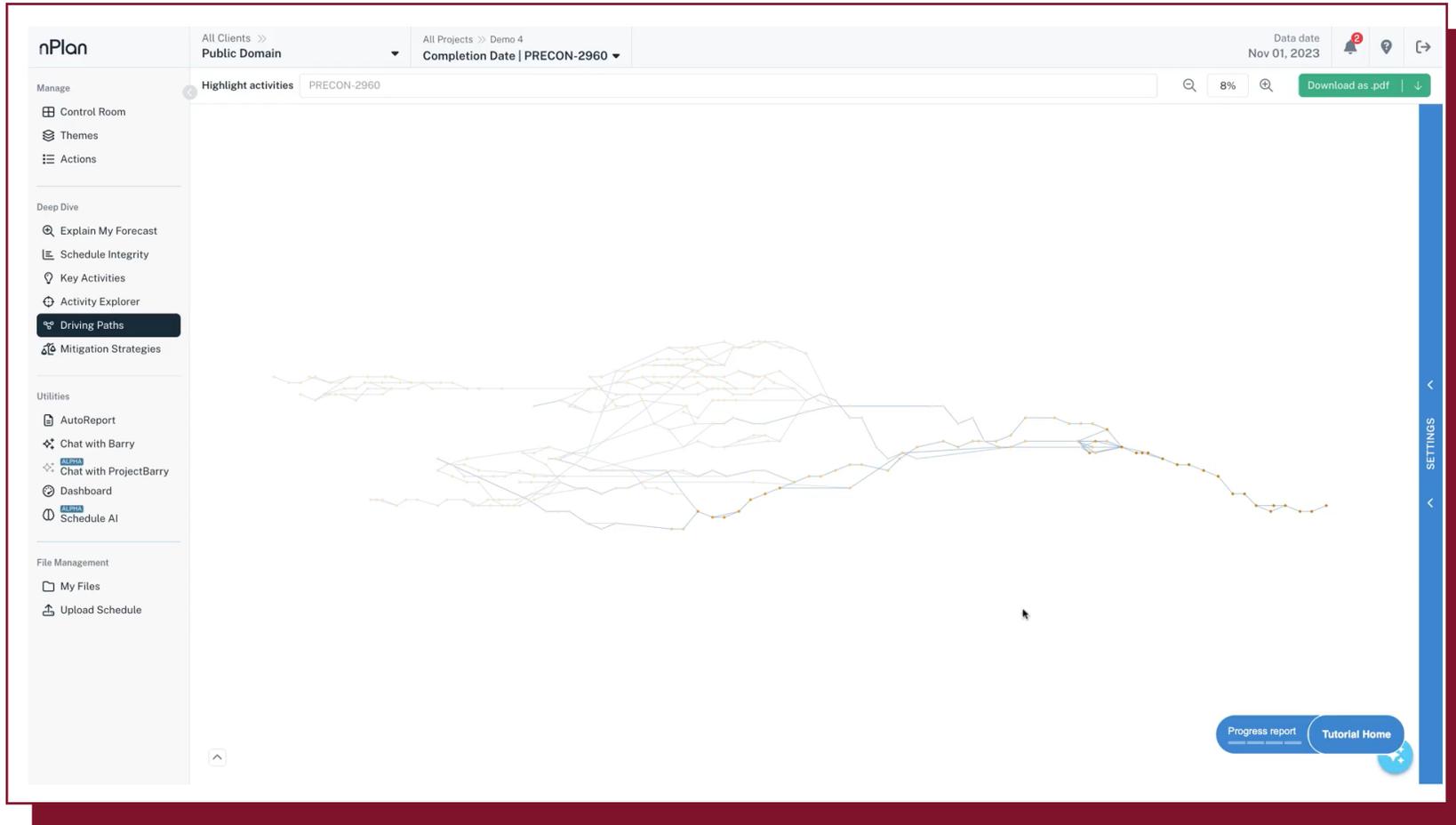
Start: End:

[Download key activities as .csv](#)

Key Activity	Risk Impact	Start date
<p>Open</p> <p>Chambers</p> <p>Internal Favourite Utilities</p>	<p>Risk Impact</p> <p>18 days end date impact</p>	<p>Start date</p> <p>Mar 21, 2025</p>

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

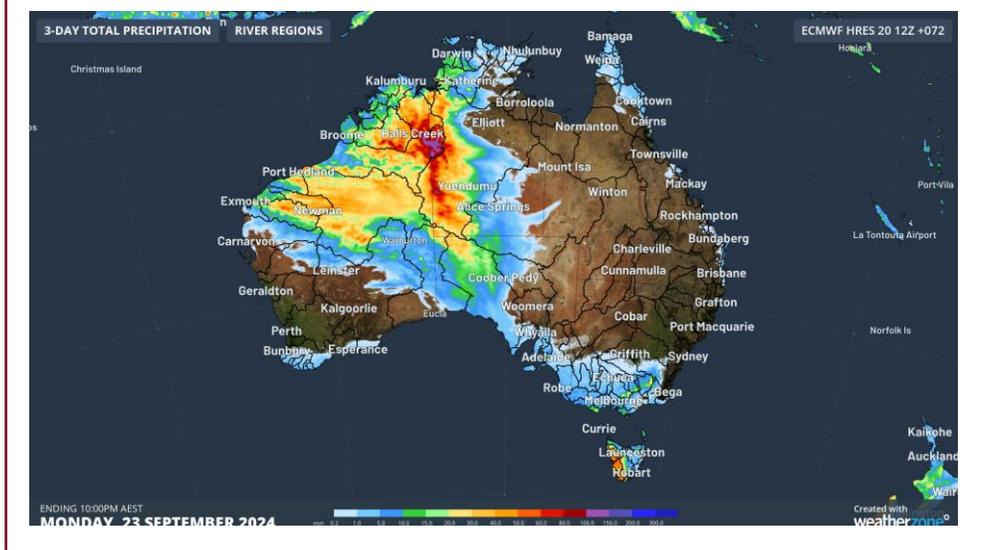
Run scenarios for any milestone and compare the results in <1 minute

Results grounded in real-world performance data

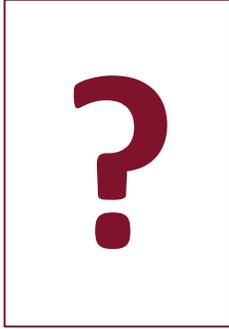
Re-runs in hours whenever new data or schedules are uploaded

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

The screenshot displays the nPlan software interface. The top navigation bar includes 'All Clients >> Public Domain', 'All Projects >> nPlan Insights Pro Demo', and 'PRECON-2960 | Project Comple...'. The date is 'Mar 15, 2025'. The left sidebar lists various management and utility tools. The main content area is titled 'Control Room' and features a 'Summary of nPlan results' section with 4 updates. Below this, there are three key metrics: 'Actualised milestones' at 63 (41%), 'Forecasted project delay' at 452 days (up 59 days since last schedule), and 'Forecasted missed milestones' at 80/91 (88%) (down 15 since last schedule). A 'Progress' gauge shows 32% completion. A 'Click to expand' button is visible below the summary section.

nPlan | All Clients >> Public Domain | All Projects >> nPlan Insights Pro Demo | PRECON-2960 | Project Comple... | Data date Mar 15, 2025

Control Room

Summary of nPlan results (4 updates)

Milestone Progress Report | Last generated on Oct 17, 2025 | Regenerate

Click to expand

Metric	Value	Change
Actualised milestones	63 (41%)	-
Forecasted project delay	452 days	▲ Up 59 days since last schedule
Forecasted missed milestones	80/91 (88%)	▼ Down 15 since last schedule

Progress: 32%

63 (100%) On time

0 (0%) Started late

Effective contract and stakeholder management

nPlan



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London, UK

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: LXR P



nPlan

All Clients >> LXR P
 All Projects >> Melton LX-NWPA-Jan 25 o...
 MLX-TGT-150

Data date
 Sep 19, 2025

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

File Management

- My Files
- Upload Schedule
- Re-run Analysis

Key Activity	Risk Impact	Start date
● Open Final Works - Track - Tamping and Rail Grinding - Works	Risk Impact ■ ■ ■ ■ ■ 7 days end date impact	Start date Nov 9, 2026
● Open Final Works - Demob Laydown Areas	Risk Impact ■ ■ ■ ■ ■ 6 days end date impact	Start date Apr 21, 2027
● Open Road Works - Brooklyn Rd & Hazel St - Area 3 - Road Works - Drainage	Risk Impact ■ ■ ■ ■ ■ 5 days end date impact	Start date Jan 14, 2027
● Open Stage 2 - Isolation and Reinstatement - 7731 - PD - Develop Design (T-09)	Risk Impact ■ ■ ■ ■ ■ 5 days end date impact	Start date Mar 16, 2026
● Open Stage 2 - T&C Plan - 7791 - PD - Develop Design	Risk Impact ■ ■ ■ ■ ■ 5 days end date impact	Start date Mar 16, 2026
● Open Completions - PC Report - Draft PC Report Issued For Review	Risk Impact ■ ■ ■ ■ ■ 4 days end date impact	Start date Apr 2, 2027
● Open Completions - PC Report - ALT Endorse PC Report	Risk Impact ■ ■ ■ ■ ■ 4 days end date impact	Start date May 31, 2027
● Open	Risk Impact	

Pawan Budhiraja-JHG (External)

Franck Morin-JHG (External)

Nathan X Hayden (VIDA) (Ext...)

Trent Olsen-JHG (External)

Danny Guleria-JHG (External)

Aimee Najdovski-JHG (External)

nPlan

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

Manage

- Control Room
- Themes
- Actions
- ALPHA Schedule Comparison

Deep Dive

- Explain My Forecast
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File Management

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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



Actualised milestones
63 (41%)

63 (100%) On time

0 (0%) Started late

Forecasted project delay

452 days

▲ Up 59 days since last schedule

P-value

50

Forecasted missed milestones

80/91 (88%)

▼ Down 15 since last schedule

Improved Certainty of Outcome

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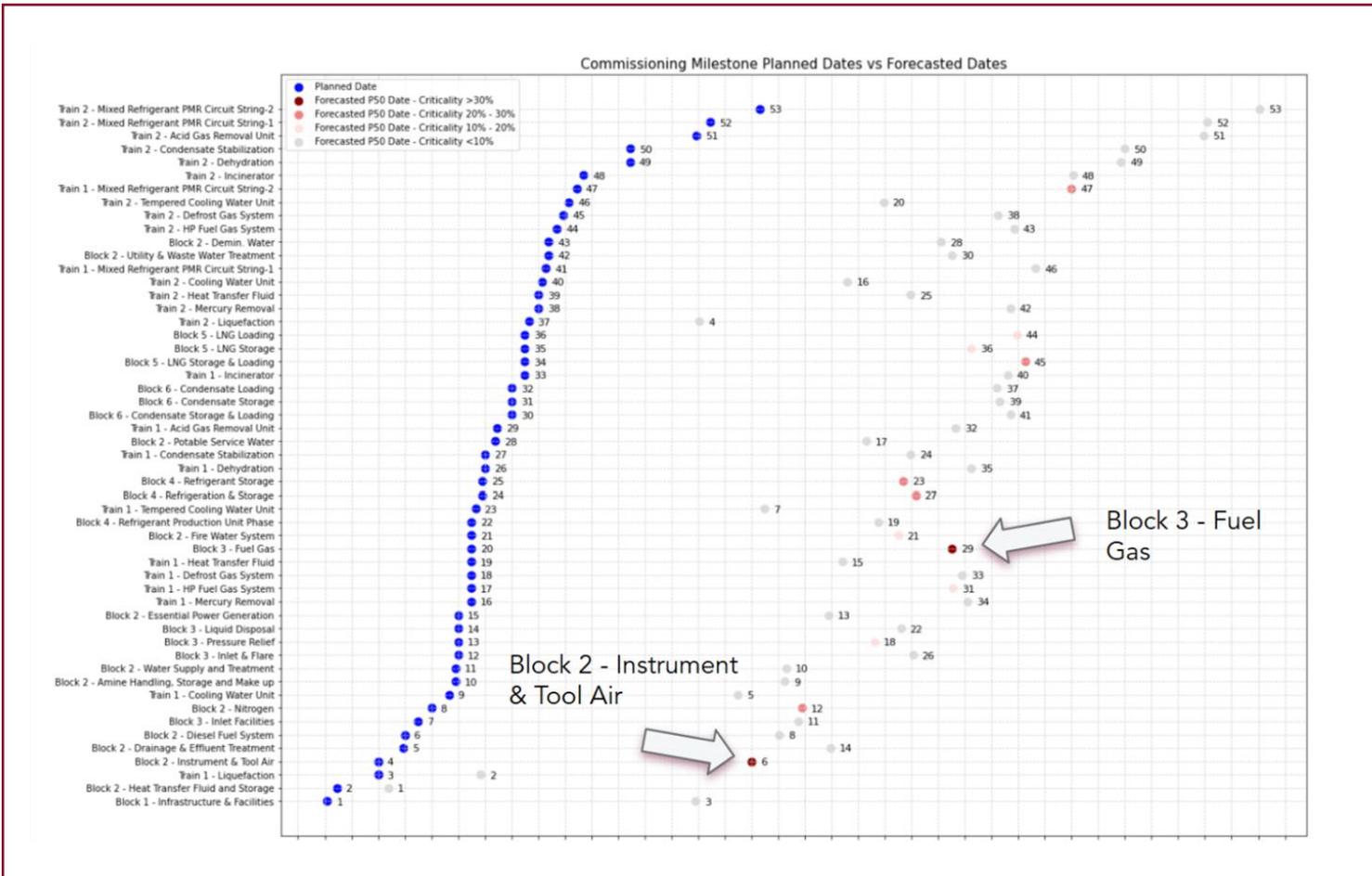
Tackling risks before they become issues

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



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



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**