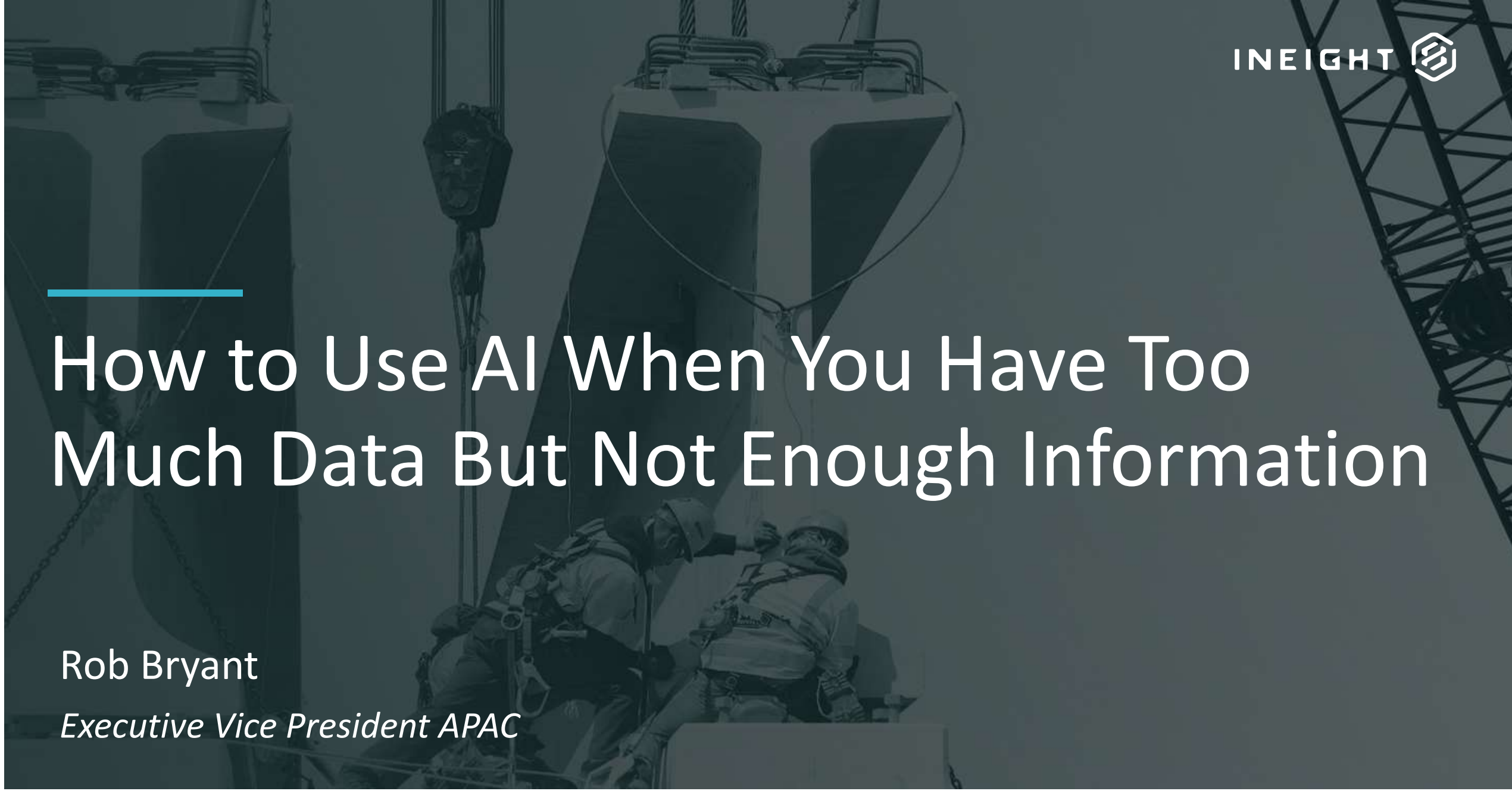


How to Use AI When You Have Too Much Data But Not Enough Information

Rob Bryant

Executive Vice President APAC

Agenda

1. The era of the mega-project
2. Knowledge over data
3. Taming the data beast – gaining control

Reducing project risk is not just “what you know”

Failures Make Headlines

"California high-speed rail loses $929M in federal funds over 'critical failures'"

"Sydney's troubled $2.1B light-rail project delayed again"

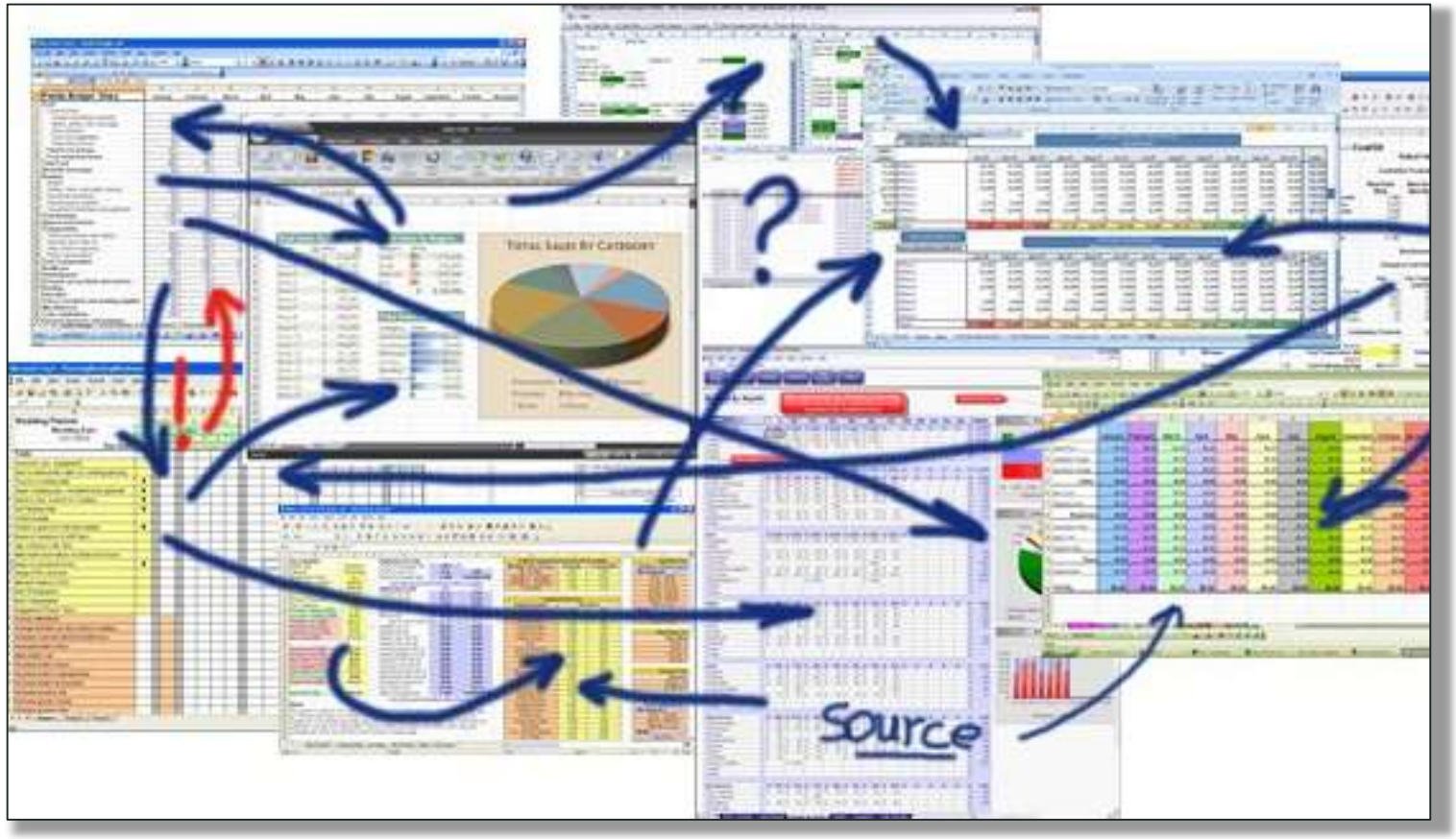
"Metro Tunnel builders battle claimed $2B blowout"

"Bleeding red ink: Australia's $150B energy projects gamble falls flat"

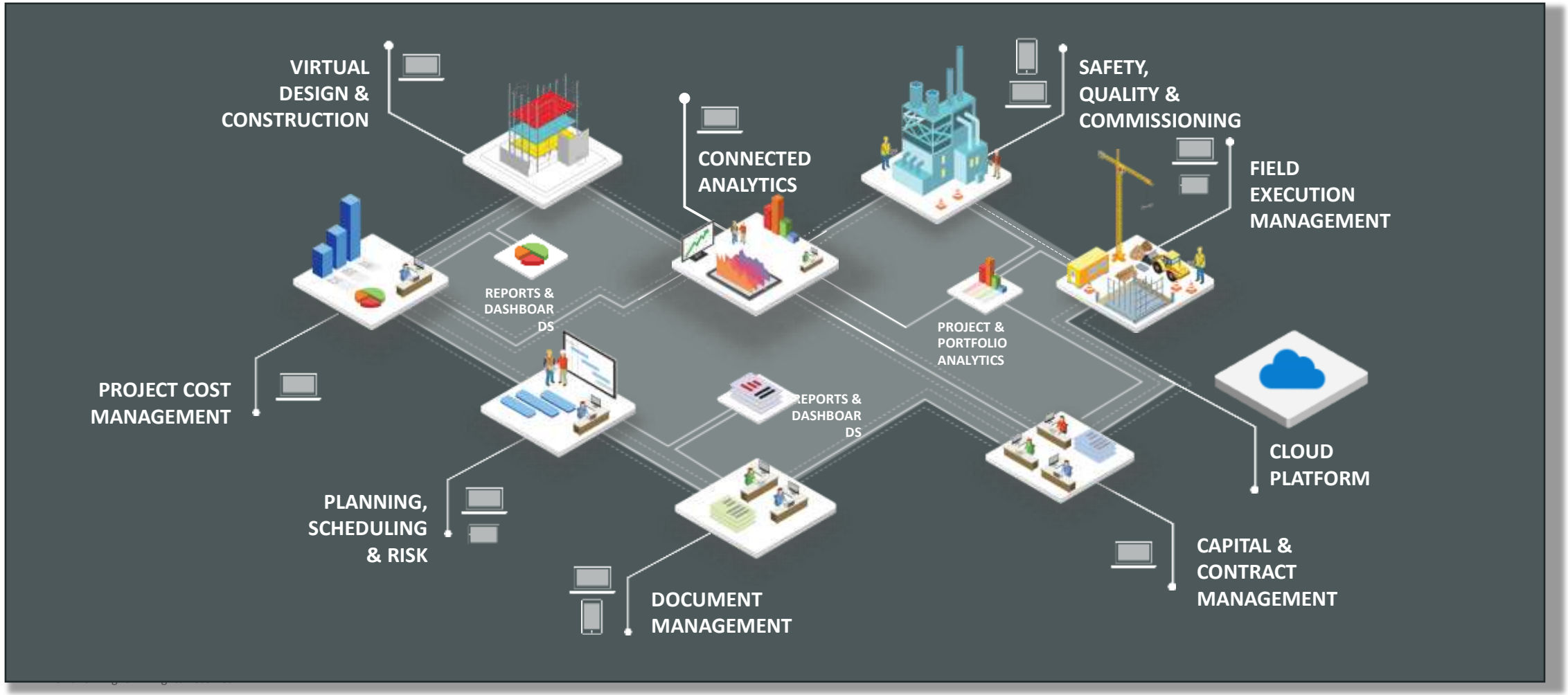
"Berlin mayor faces calls to resign over embarrassing airport construction delays"

Projects Are Bigger and More Complex Than Ever Before

- Larger scale
- More sub-projects
- Longer timelines
- Greater scrutiny
- More data than ever!

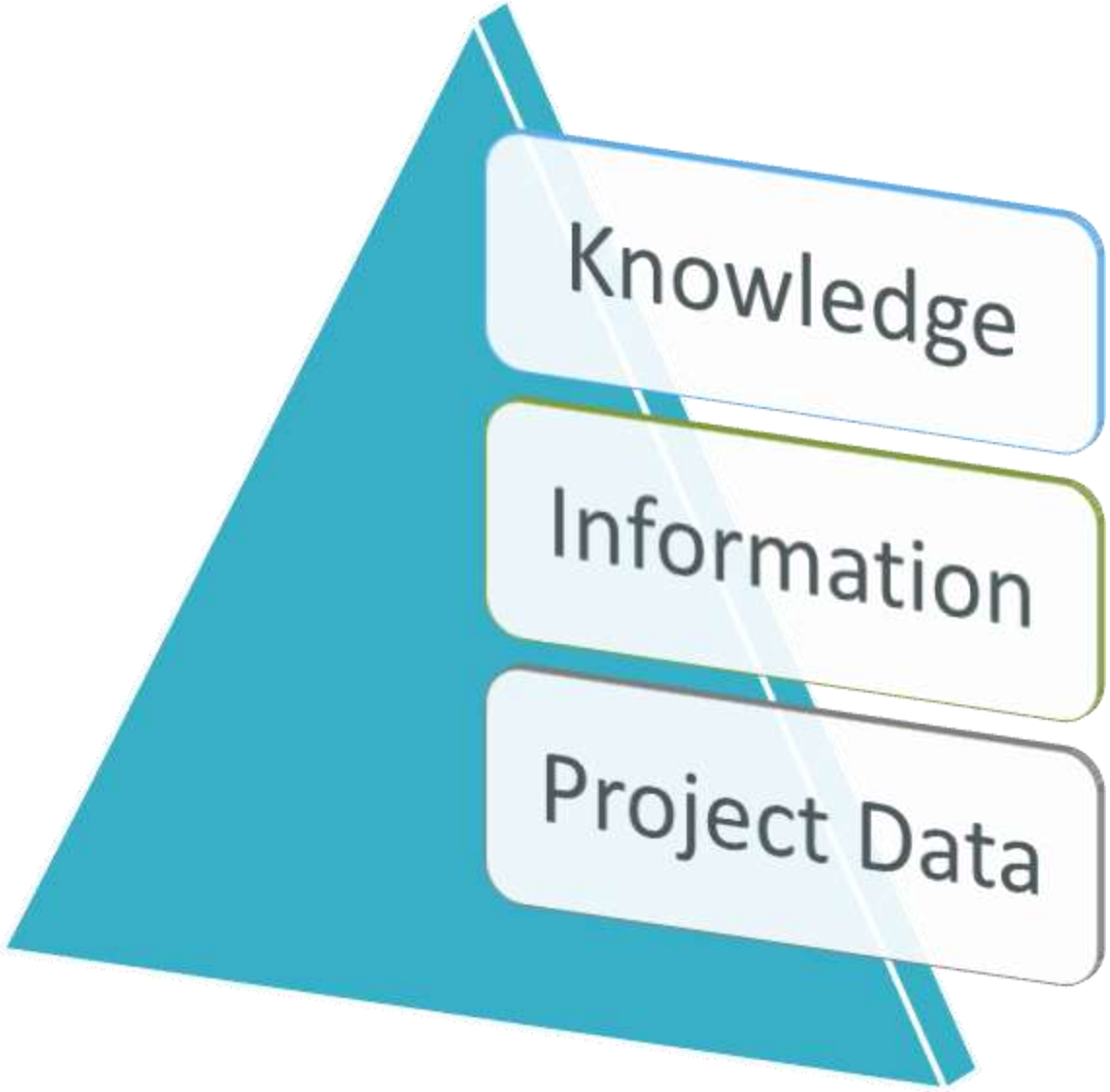


The Distribution of Our Data and Decisions



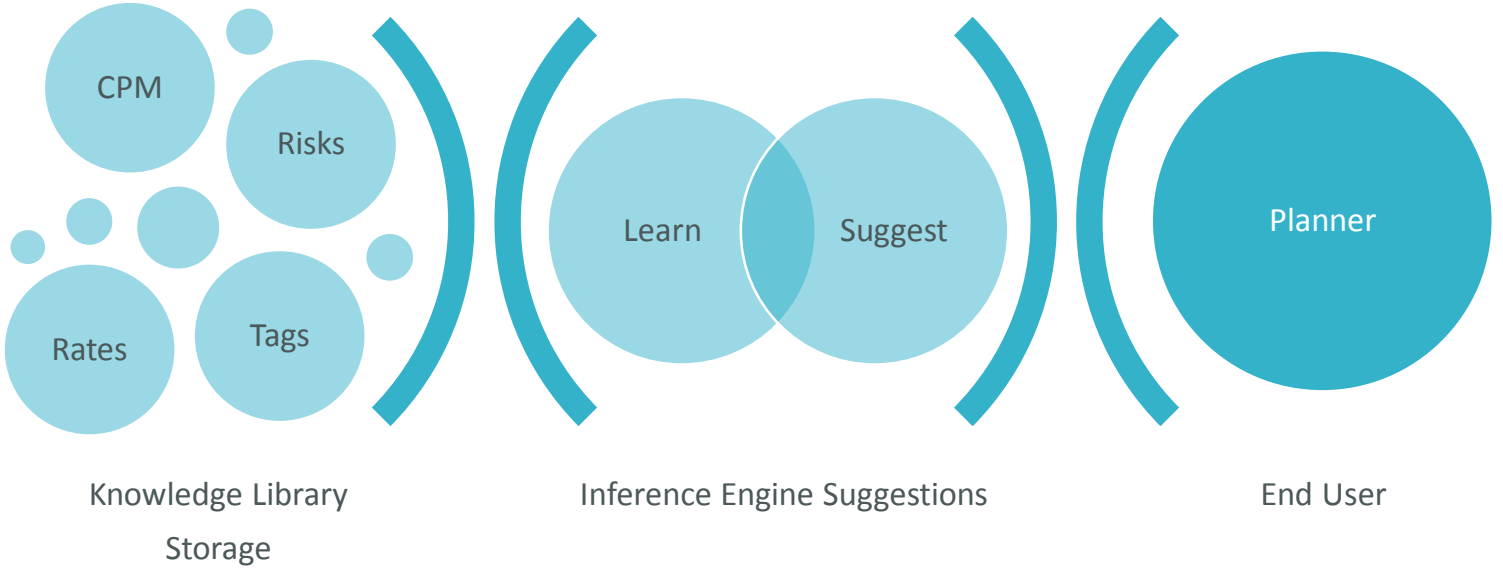
The Data Refinery

- Gather, aggregate, analyse and support decision making
- Maintain a continuous process through the project life cycle
- Retain knowledge and develop intelligent project practices



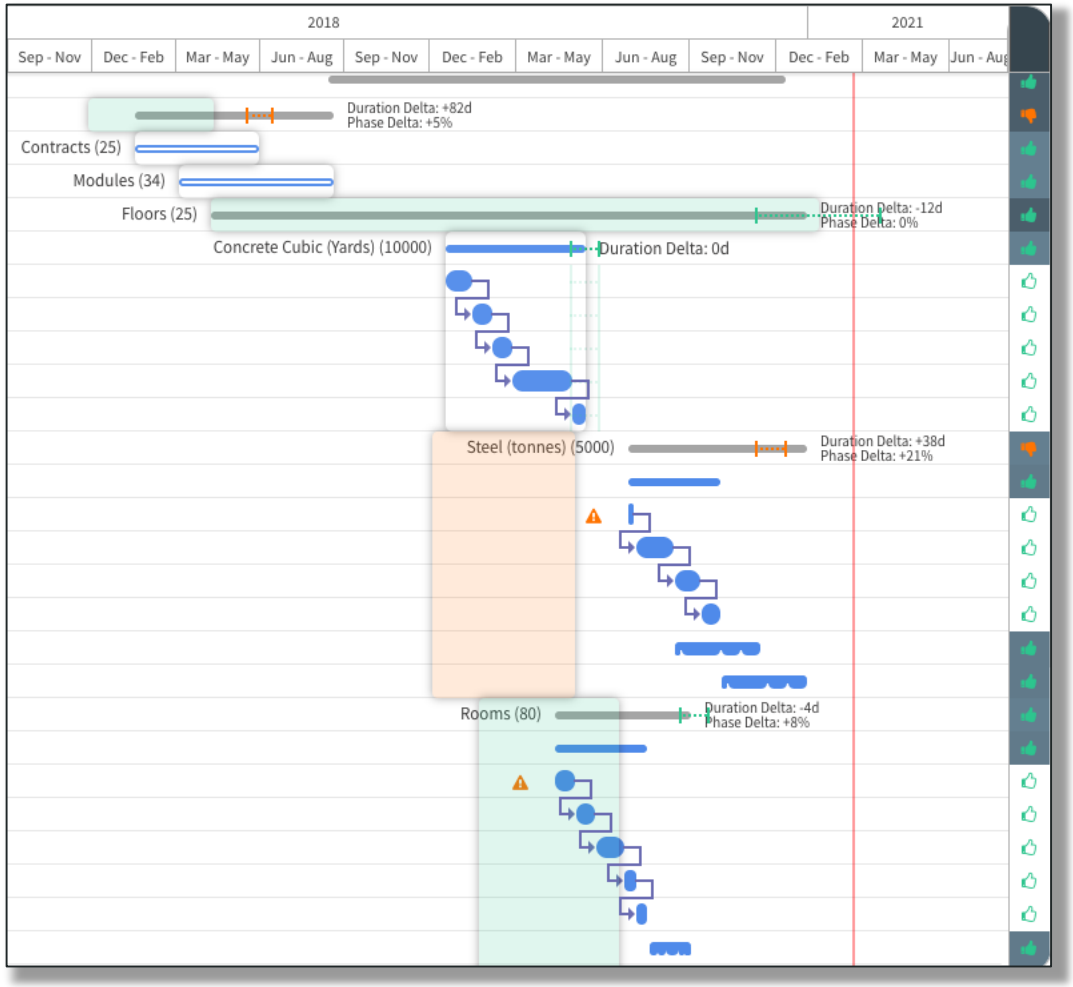
How Can AI Help?

- Emulating the way a human thinks
- Computer only gives suggestions
- Planners and directors still have ultimate control
- Neural nets and knowledge-based systems
- Augmented intelligence, not artificial intelligence



Rapid Templating and Sub-Netting Using AI

- The Old Way
  - Recreating subnets is incredibly time-consuming and inefficient
  - Subnetting is inherently hard due to logic cutting and retying
  - Copy-paste in traditional tools doesn't account for quantity differences
- The New Way
  - Smart templating
  - Guidance on how to re-sew logic
  - Automatic normalisation

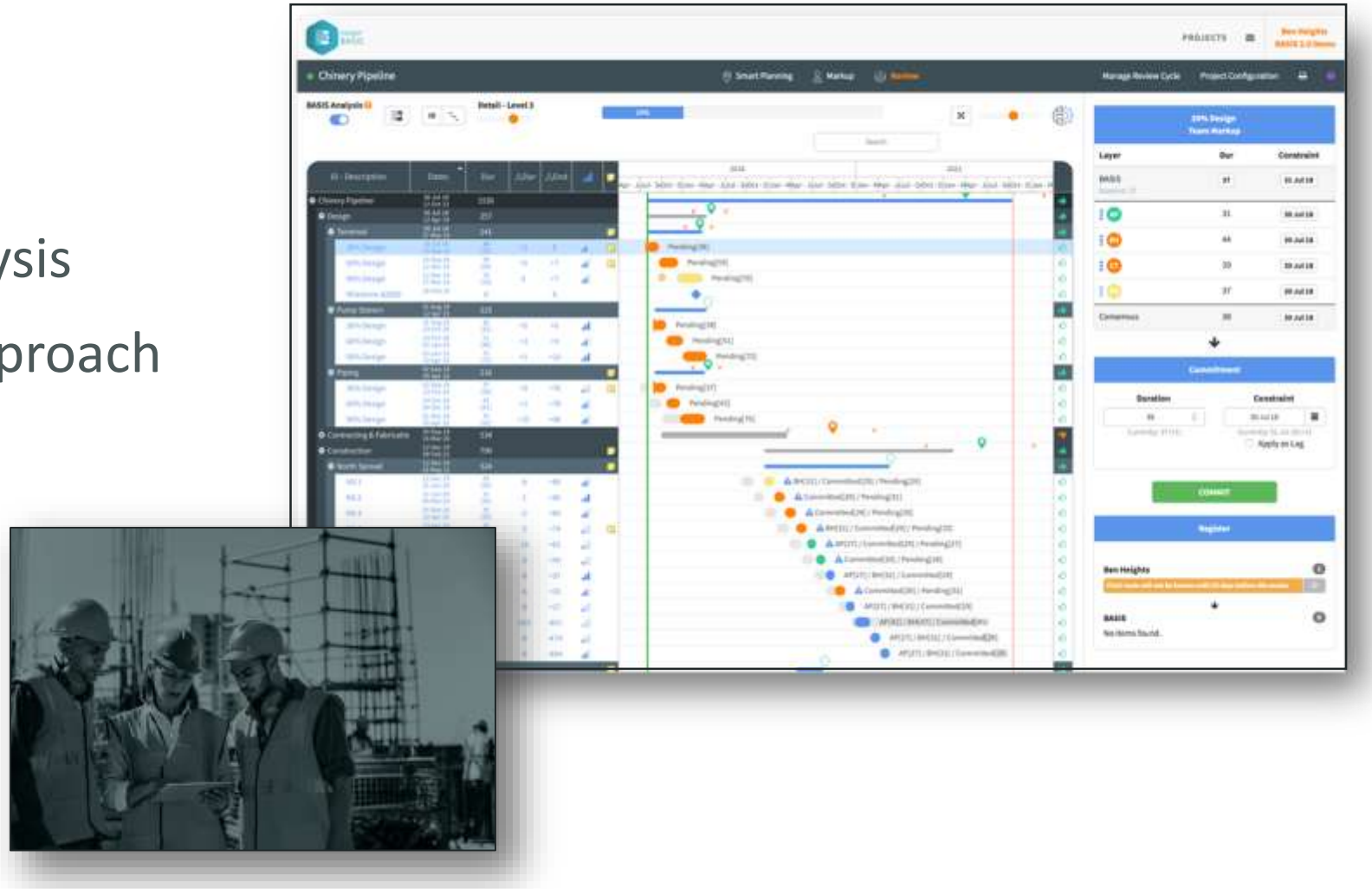


INEIGHT

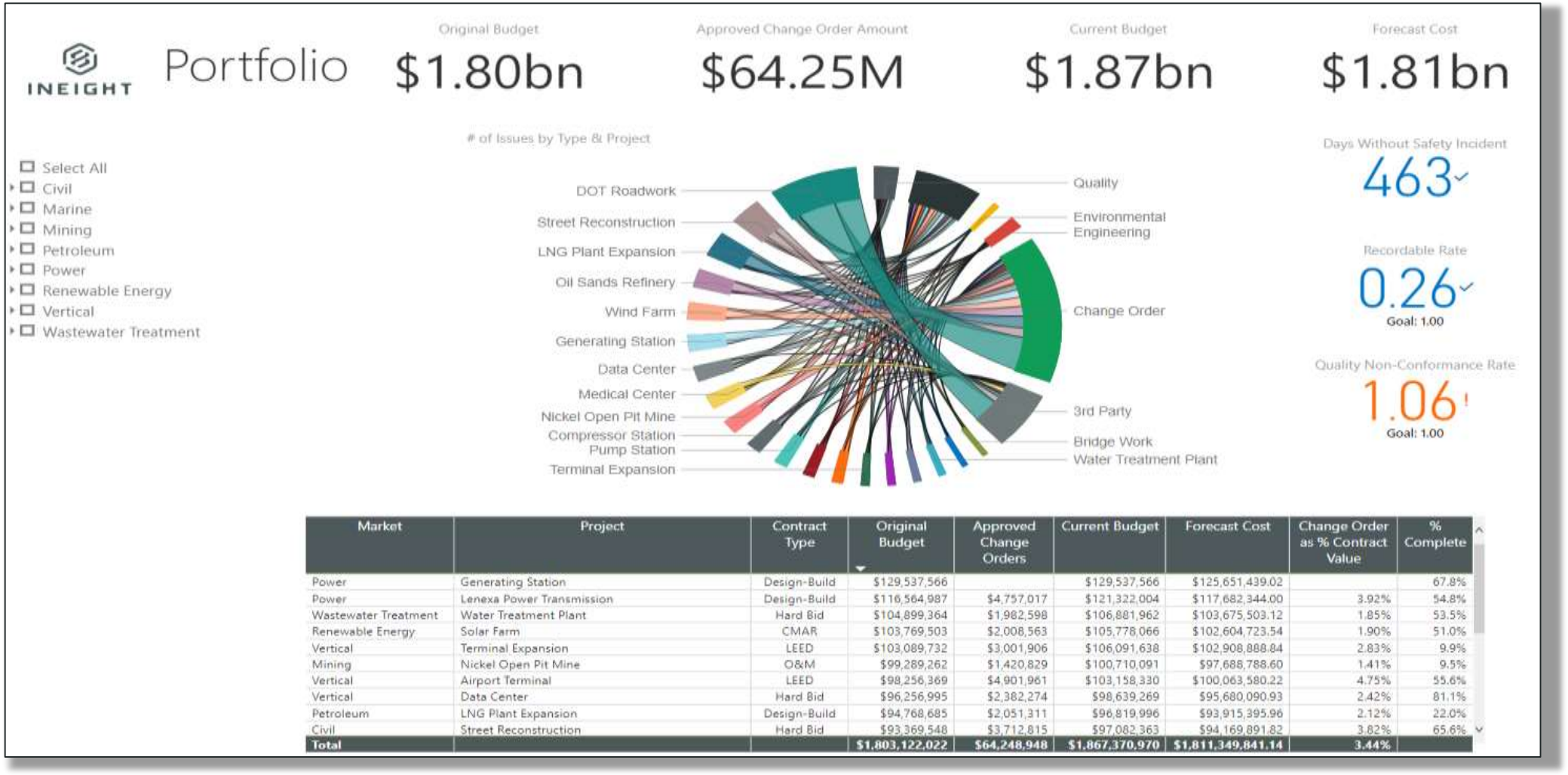
Use Lessons From the Past and Today's Insights to Determine More Predictable Outcomes

Share the Knowledge and Collaborate

- Capture expert opinion
- Drive buy-in
- Perform consensus analysis
- Use survey scorecard approach
- Build risk models



Your Entire Project Portfolio on a Page

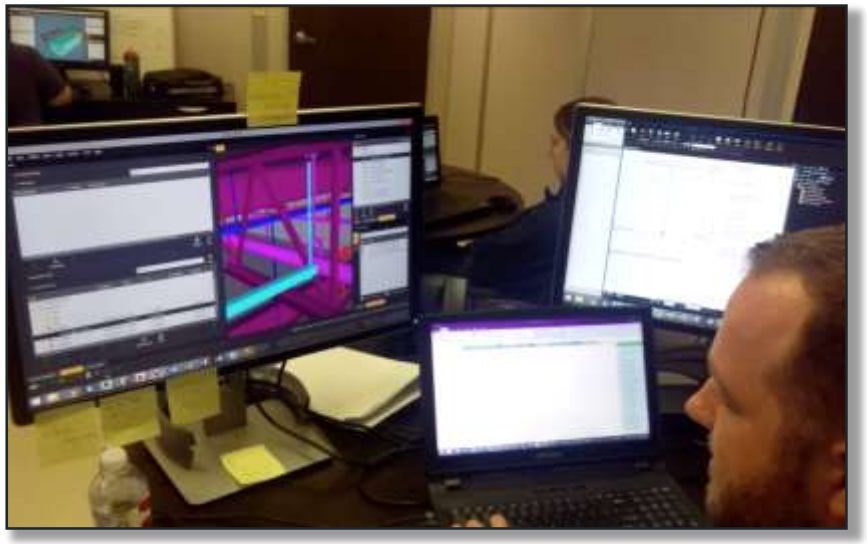


Market	Project	Contract Type	Original Budget	Approved Change Orders	Current Budget	Forecast Cost	Change Order as % Contract Value	% Complete
Power	Generating Station	Design-Build	$129,537,566		$129,537,566	$125,651,439.02		67.8%
Power	Lenexa Power Transmission	Design-Build	$116,564,987	$4,757,017	$121,322,004	$117,682,344.00	3.92%	54.8%
Wastewater Treatment	Water Treatment Plant	Hard Bid	$104,899,364	$1,982,598	$106,881,962	$103,675,503.12	1.85%	53.5%
Renewable Energy	Solar Farm	CMAR	$103,769,503	$2,008,563	$105,778,066	$102,604,723.54	1.90%	51.0%
Vertical	Terminal Expansion	LEED	$103,089,732	$3,001,906	$106,091,638	$102,908,888.84	2.83%	9.9%
Mining	Nickel Open Pit Mine	O&M	$99,289,262	$1,420,829	$100,710,091	$97,688,788.60	1.41%	9.5%
Vertical	Airport Terminal	LEED	$98,256,369	$4,901,961	$103,158,330	$100,063,580.22	4.75%	55.6%
Vertical	Data Center	Hard Bid	$96,256,995	$2,382,274	$98,639,269	$95,680,090.93	2.42%	81.1%
Petroleum	LNG Plant Expansion	Design-Build	$94,768,685	$2,051,311	$96,819,996	$93,915,395.96	2.12%	22.0%
Civil	Street Reconstruction	Hard Bid	$93,369,548	$3,712,815	$97,082,363	$94,169,891.82	3.82%	65.6%
Total			**$1,803,122,022**	**$64,248,948**	**$1,867,370,970**	**$1,811,349,841.14**	**3.44%**	

Change is the Only Constant

"I have no idea how we would have solved our challenges around multi-party forecasting if not for the InEight solution"

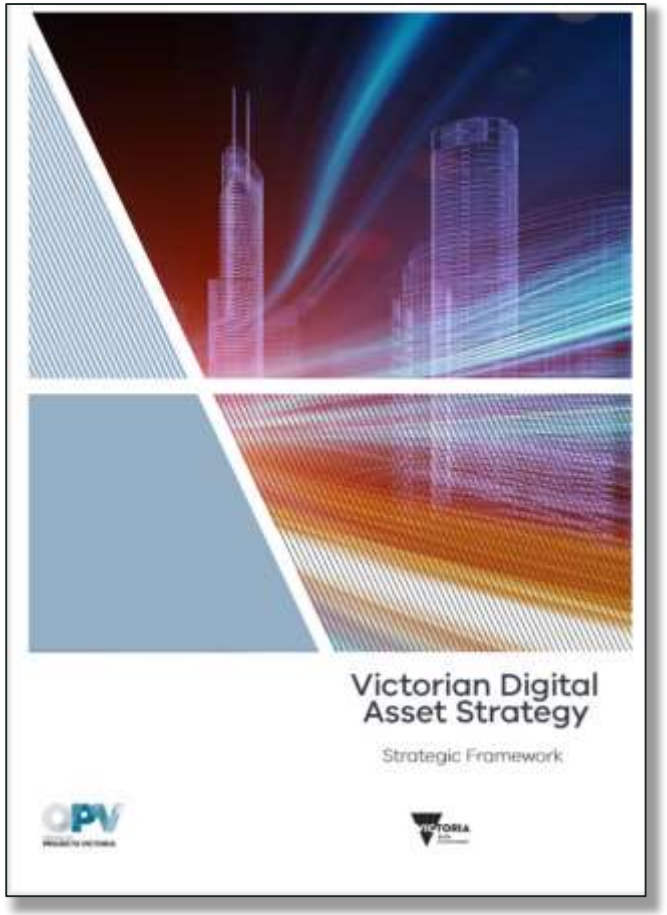
“Invest” in Digital Engineering



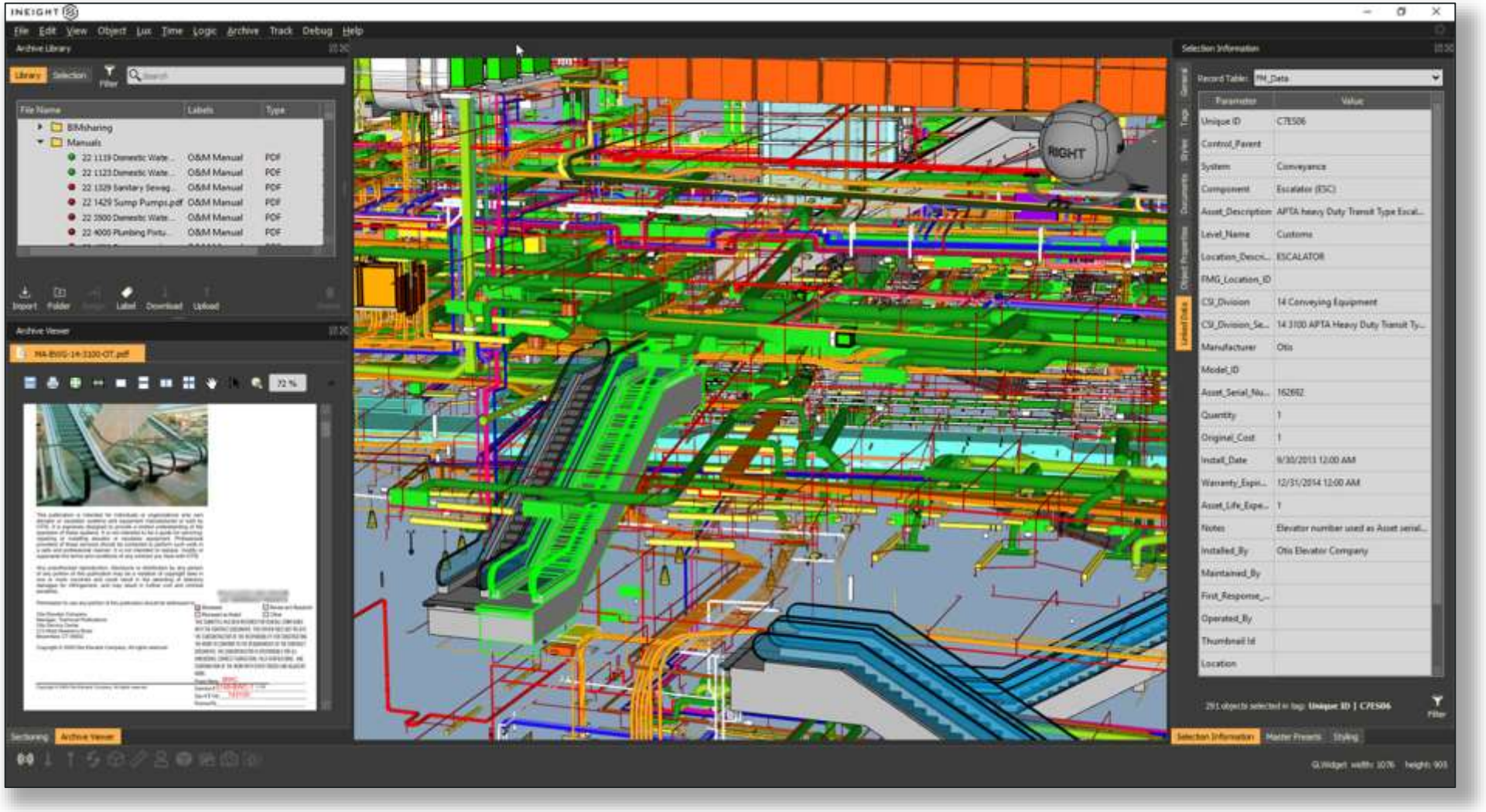
NSW GOVERNMENT

digital nsw

DESIGNING OUR DIGITAL FUTURE

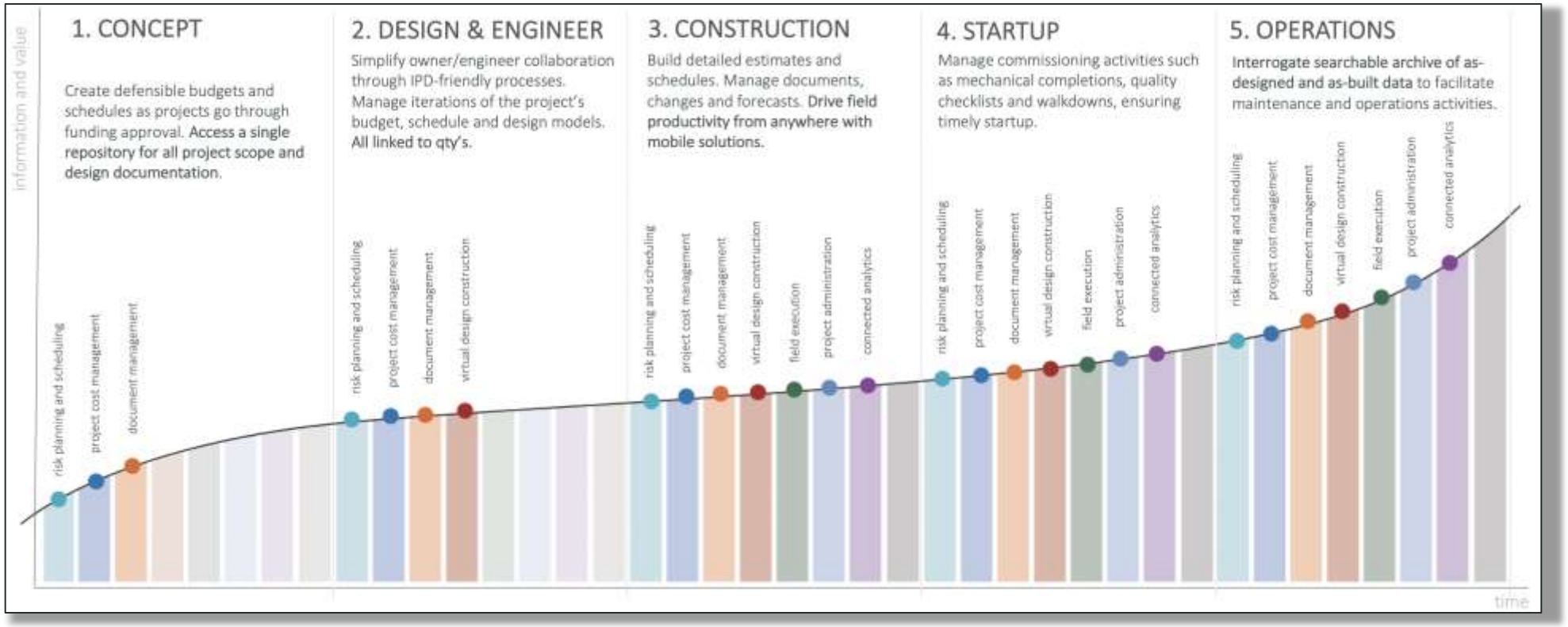


Asset Information Model



Applying Project Intelligence

- Increase project knowledge value through data aggregation and AI inference
- Continuously enrich data through life cycle
- Retain organisational expertise through a knowledge capture feedback loop



Three Ways Projects Can Benefit From This Approach

1. Add to the organisation's IP – *"It's how we work."*
2. Reduce risk
3. Improve margin

Thank You

Visit us at Stand 37, or learn more at InEight.com