

15 - 16 November, Wembley Stadium, UK



 **Partners in
Performance[®]**
Unleashing potential | Lasting impact

Project ~~Controls~~
Performance

CAPTURING THE FULL PERFORMANCE POTENTIAL OF MEGA PROJECTS

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2022



Projects leave serious money on the table – everyday!

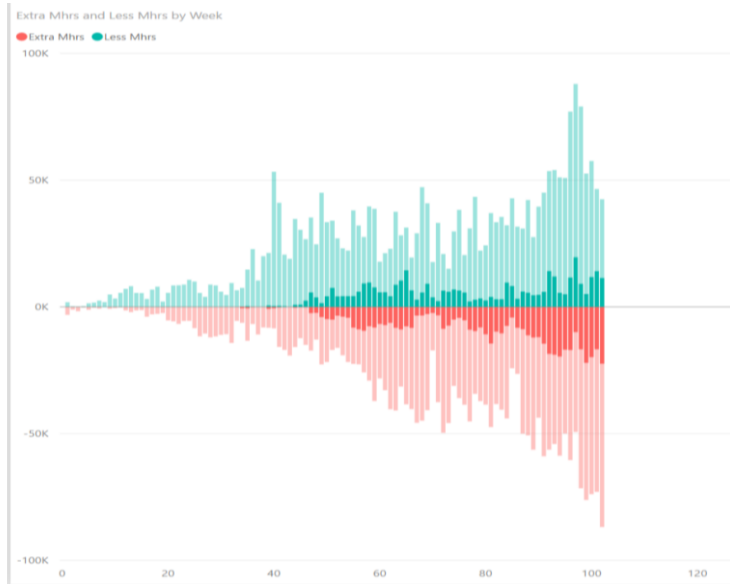
Projects are almost naturally set up to under-perform

- Estimates
- Contracts & Incentives
- Ever changing activities
- Immature teams
- Accounting based reports

This is **good news!**

Because the opportunity to over-deliver is typically really big!

Productivity at 50% through a \$4bn GTL Plant Build



- 8m hours into project
- CPI = 1.01
- ~1m hours over-performance
- ~1m hours under performance
- 15+% performance left behind

Above ground fabrication CS Pipes



... 2 to 10 inch



... above 10 inch

With project values at \$1m a day – improvement counts

\$25bn Gas Project



\$8bn Mine Project



Project Value

\$1.6b

Engineering

3 mths

Permitting

3 mths

Construction

8 mths

Sourcing

\$45m

Commissioning

6 mths

Significant Savings Can Be Achieved

Bulk Earthworks

5 mths

Structures

2 mths

Tailings Dam

3 mths

M&E

4 mths

Concrete

2 mths

Systems

4 mths

Project controls teams are ideally positioned to drive performance...

- Have **access to data**
- Have the **right technical skills** to gain insight, and communicate it
- Can **set targets** for specific packages to achieve or **beat the plan**
- Can look forward and **identify most valuable opportunities**
- Can **challenge the assumptions**
- **Foresee risks and drive action**

...but often driven to spend too much time looking backwards

- **Overly manual, wordy & protective reporting** (daily, weekly, monthly)
- **... reporting too focused on the past** (eg: costs, progress, variations and reasons)
- **Semi-manually linking up different data sets** from several contractors
- **Ad hoc requests** from Project Managers and Directors for data and reports in different formats
- **Not treated as an essential performance** enabling team by project managers

**So, where to
focus to enable
project controls
teams to drive
performance on
mega projects?**



Six key changes are key to capturing this performance opportunity

Projects & Project Controls need to:

Drive a culture...

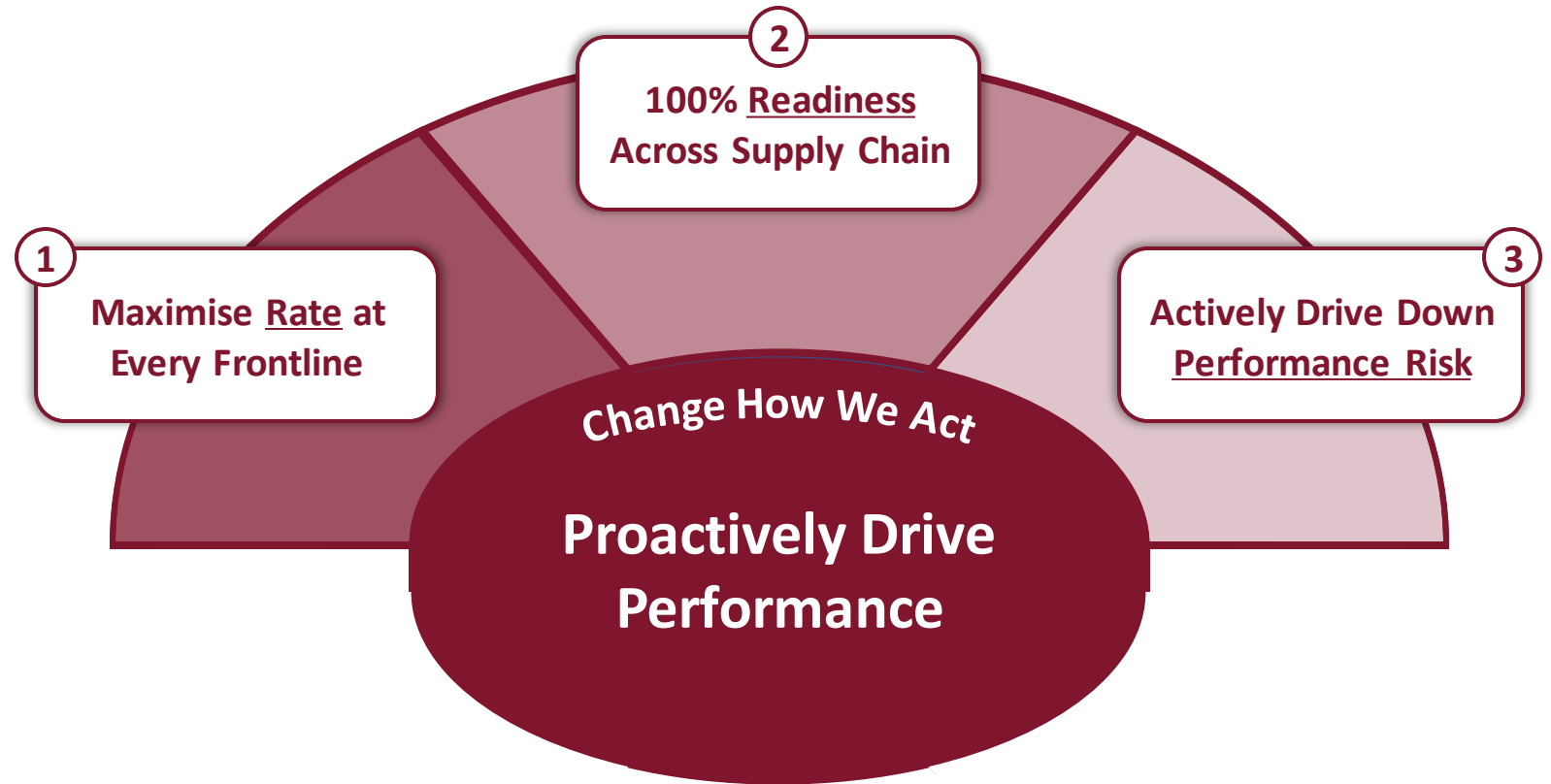
- Across all crews and the supply chain

That, in the detail:

- Maximises productivity and valuable improvement every day

And...

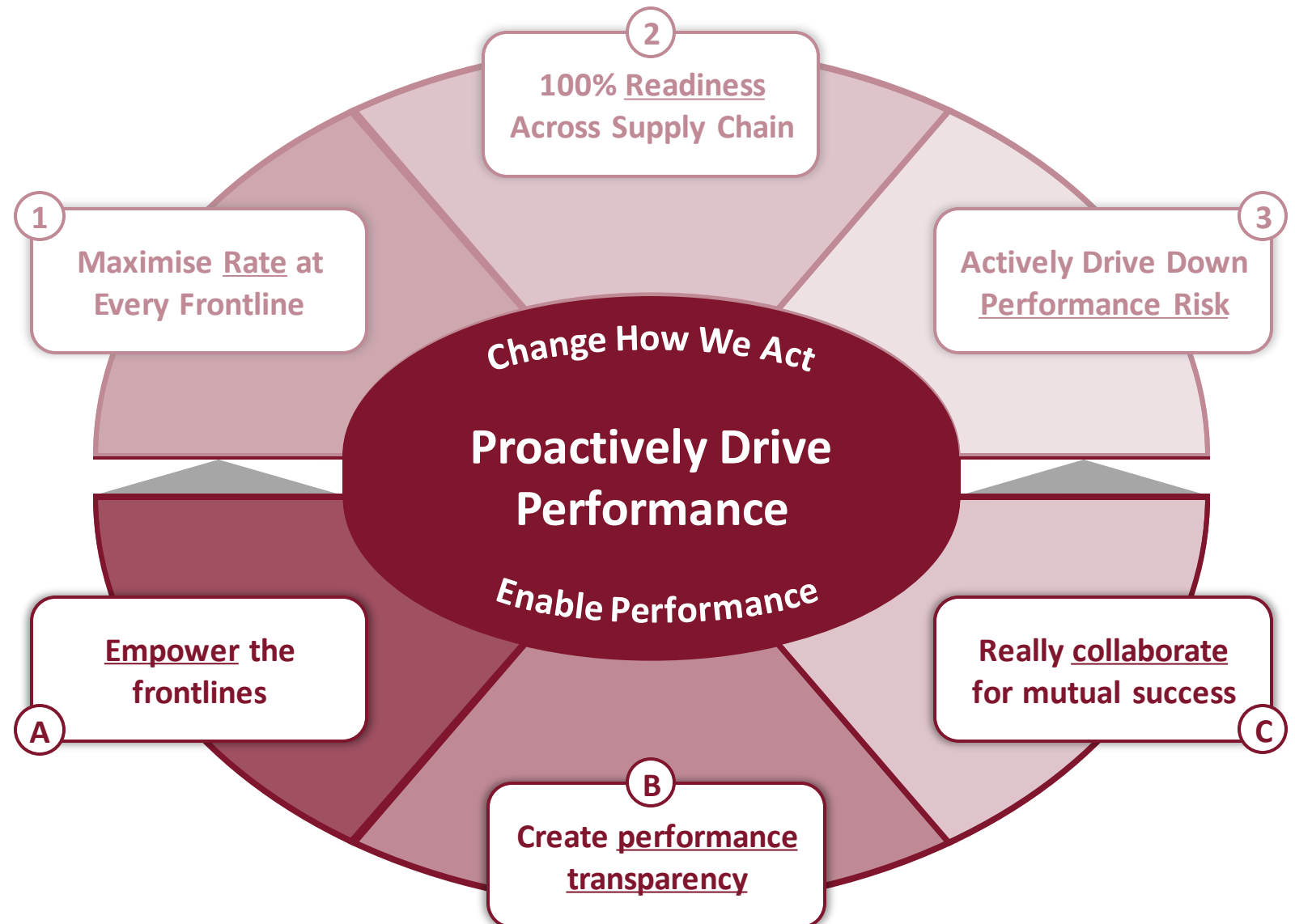
- Knows and acts to ensure that nothing will get in the way of this



Six key changes are key to capturing this performance opportunity

the project needs to set itself up for performance...

- Recognise that performance comes from the frontlines
- Use digital and data to build a single source of truth to help all see ahead of the curve
- Contract, incentivise and build a culture of: *“together we can all help everyone beat their targets”*





**We see these talked about
a lot...**

But somehow they get lost!

Maximise Rate at every Frontline

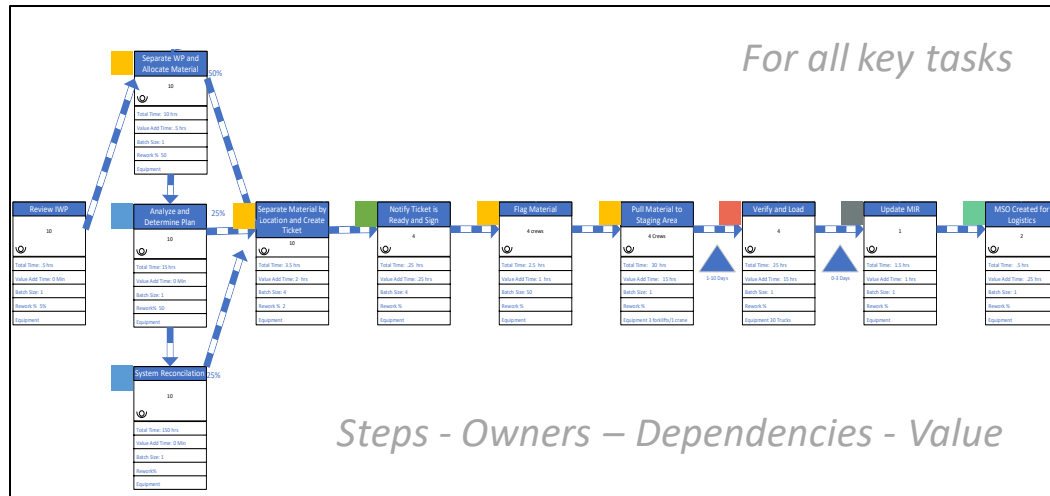
Continuously drive up rate through process discipline and improvement

Develop Efficient Processes with Clear Rates & Owners
Create a foundation for performance and improvement

Continuously Improve
Improve the most valuable processes

Maximised Rate
Secure performance quickly

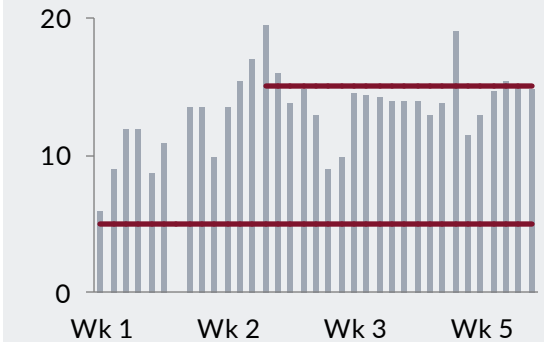
Engineering - Fabrication - Construction - Commissioning



- Be ready everyday
- Be clear on target timings for each process step
- Train and coach teams on good process
- Reduce handover downtime
- Improve the process

5 weeks : 50% Improvement

Rail Construction – Line Laying



Build process clarity; Ensure readiness; Remove variability; Simplify the process

Project Controls are key to building and supporting core performance disciplines

Ensure 100% Readiness across the Supply Chain

Shift the upstream focus to “Is everyone making construction ready on time?”

Does every team know specifically when they need to complete their task for each package?

Does the project know when a team misses a deliverable?

Act early enough to recover

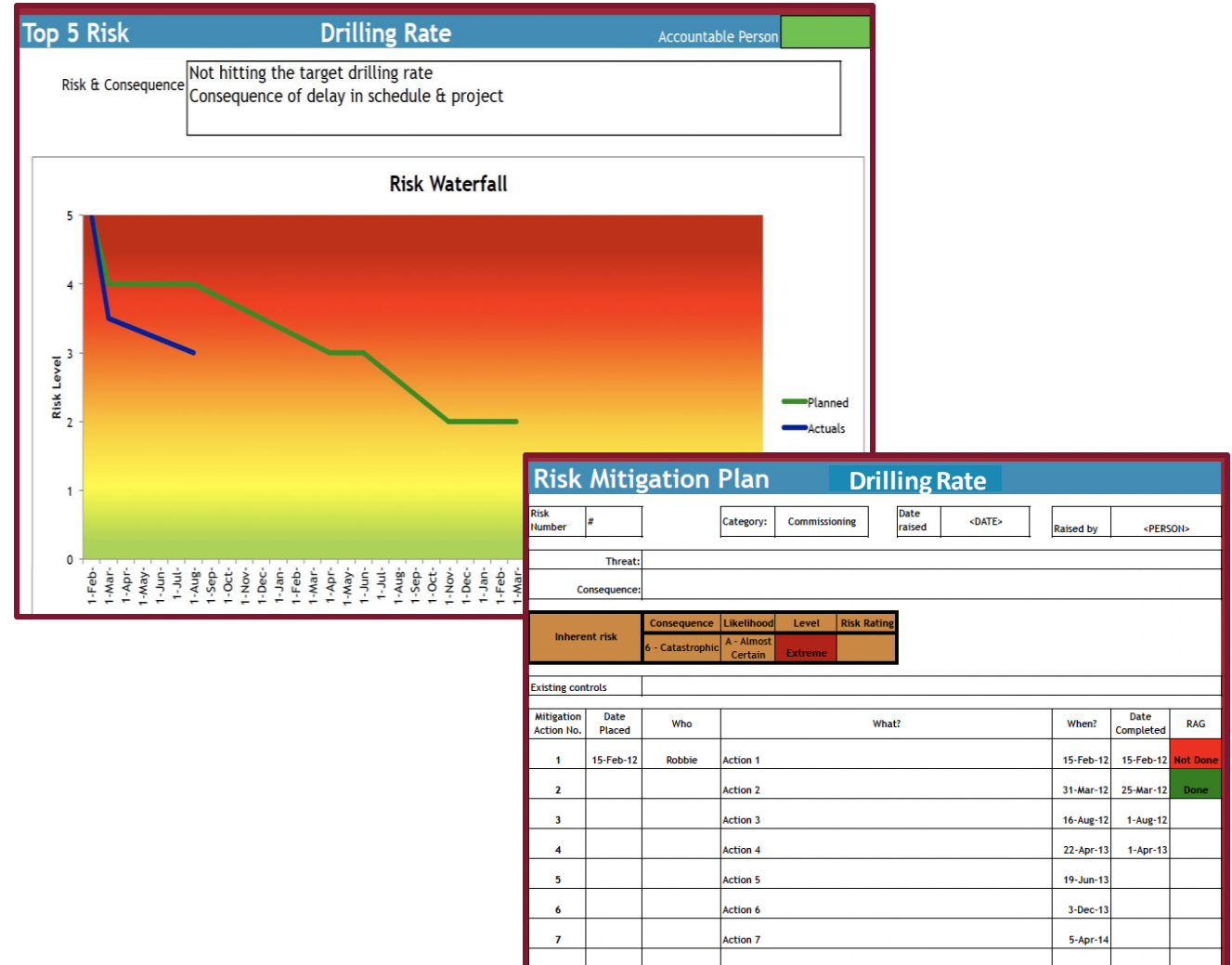
Package	Due & Status	Approvals	Design	Procure	Fabricate	Ship	Site Ready
Keeneland - Separate Part 1 - Part 1.1	20-Jul-12	1	1	1	1	1	1
APLNG Vehicle	13-Sep-12	1	1	1	1	1	1
APLNG T1	13-Sep-12	1	1	1	1	1	1
APLNG T2	13-Sep-12	1	1	1	1	1	1
APLNG T3	13-Sep-12	1	1	1	1	1	1
APLNG T4	13-Sep-12	1	1	1	1	1	1
APLNG T5	13-Sep-12	1	1	1	1	1	1
APLNG T6	13-Sep-12	1	1	1	1	1	1
APLNG T7	13-Sep-12	1	1	1	1	1	1
APLNG T8	13-Sep-12	1	1	1	1	1	1
APLNG T9	13-Sep-12	1	1	1	1	1	1
APLNG T10	13-Sep-12	1	1	1	1	1	1
APLNG T11	13-Sep-12	1	1	1	1	1	1
APLNG T12	13-Sep-12	1	1	1	1	1	1
APLNG T13	13-Sep-12	1	1	1	1	1	1
APLNG T14	13-Sep-12	1	1	1	1	1	1
APLNG T15	13-Sep-12	1	1	1	1	1	1
APLNG T16	13-Sep-12	1	1	1	1	1	1
APLNG T17	13-Sep-12	1	1	1	1	1	1
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APLNG T60	13-Sep-12	1	1	1	1	1	1
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APLNG T62	13-Sep-12	1	1	1	1	1	1
APLNG T63	13-Sep-12	1	1	1	1	1	1
APLNG T64	13-Sep-12	1	1	1	1	1	1
APLNG T65	13-Sep-12	1	1	1	1	1	1
APLNG T66	13-Sep-12	1	1	1	1	1	1
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APLNG T80	13-Sep-12	1	1	1	1	1	1
APLNG T81	13-Sep-12	1	1	1	1	1	1
APLNG T82	13-Sep-12	1	1	1	1	1	1
APLNG T83	13-Sep-12	1	1	1	1	1	1
APLNG T84	13-Sep-12	1	1	1	1	1	1
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APLNG T94	13-Sep-12	1	1	1	1	1	1
APLNG T95	13-Sep-12	1	1	1	1	1	1
APLNG T96	13-Sep-12	1	1	1	1	1	1
APLNG T97	13-Sep-12	1	1	1	1	1	1
APLNG T98	13-Sep-12	1	1	1	1	1	1
APLNG T99	13-Sep-12	1	1	1	1	1	1
APLNG T100	13-Sep-12	1	1	1	1	1	1

- Not an even bigger P6!
- Give upstream teams the precision they need to be construction led
- Stop using % complete to track performance - it's “Done or Not Done”
- Real demand bumps can be smoothed out
- Recovery can be completed early enough
- Following teams and construction can see packages will be ready

“Engineering is usually too opaque. Readiness gives us the specificity engineering needs and the transparency the project needs. The same mindset flows down through the supply chain”

Actively drive down performance risk

- What are the risks that will cause us not to achieve maximum rate on our key activities?
- When will they impact us?
- What actions can we take to remove those risks? How much will I invest to remove them?
- What is the timed action plan to execute them?
- Are we driving & tracking risk removal / mitigation with the same discipline as performance and progress?



Empower the Frontlines

Performance comes from frontline – release and enable them

Execution driven performance

- Frontline team leaders responsible and enabled to drive performance
- Supply chain 100% **focused on feeding construction on time and in full**
- Leadership's role is to **remove the barriers**
- Controls **provide teams with targets, structure and insights** to perform and improve



Performance Transparency

Real time performance transparency across the project and its supply chain

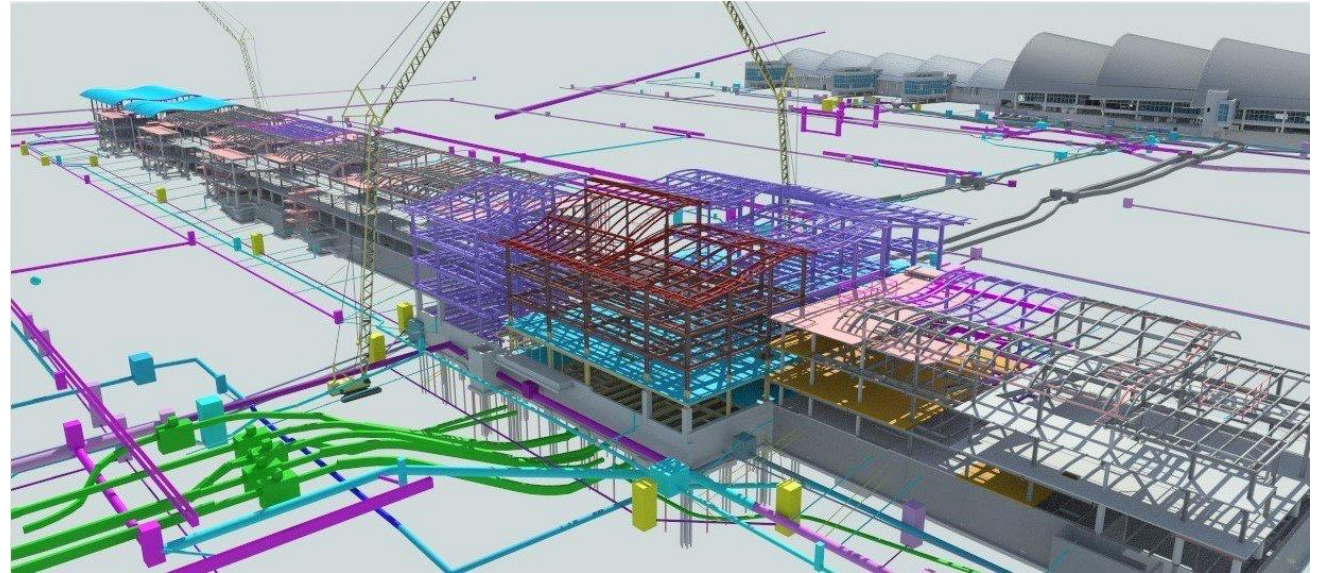
Still too many text heavy reports that report past progress and protect the contract



Digital dashboards that highlight performance & progress from one source of truth



Digital twin that enables collaborative performance & supply chain efficiency



Set the Foundations

- Digital twin
- Common data structure
- Common key software
- Performance reporting

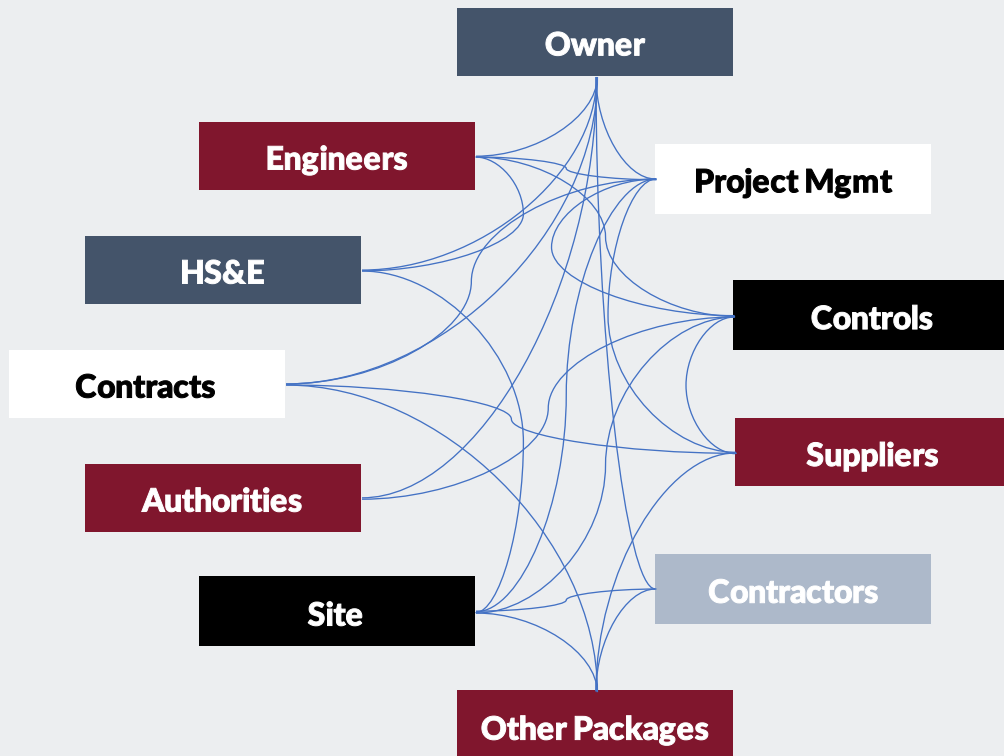
Secure Value Eg:

- Performance focus
- Collaboration
- Productivity apps
- Blockchain payments

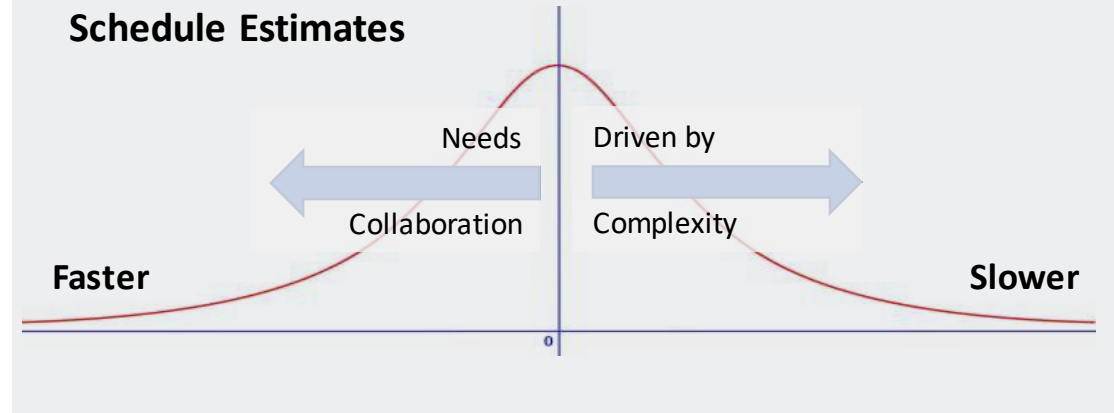
Collaborate for Mutual Success

All teams and organisation shift from “safe plan for us” to “best result for all”

It's sort of complicated out there...



...which gets in the way of performance



Collaboration must be grown

- Right partners
- Right team & mindset
- Right incentives
- Everyone can win
- Trust that is built
- Early engagement
- Transparency
- Stability

In summary...

Project high performance is naturally harder to than in more stable ops - *its tough!*

But...

- *too much*
- *too often*
- *left on the table*

With the right performance culture and discipline, significant value / upside is available to all

Project Controls are key to high performance...

- **Driving** the processes, discipline and improvements that secures **rate**
- **Ensuring** that everyone has the detail to know what must be done today to be **100% ready** for construction tomorrow
- **Agreeing** the actions required to drive out **performance risks** on time
- Setting-up the **digital twin** so that everyone can **see performance**
- Automatically **reporting & highlighting performance opportunities**

But, the whole project team also needs to want to reap the benefits of an **empowered and collaborative performance culture**

Thank you



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