# Real-Time Automated Project Controls









#### **Dr John Hadden** Head of Digital Technology

#### Mr Jonathan Key General Manager - NSW





## Agenda

- 1. Introduction to Lewis Woolcott
- 2. Industry challenges
- 3. Project Controls challenges and how is the industry changing?
- 4. Technology solutions
- 5. SMART demonstration
- 6. Questions & answers





## **Company Overview**

#### Who Are We?

As an innovative company focused on delivering dynamic analytical solutions, Lewis Woolcott combines technology with project management, commercial management and legal expertise to deliver industry leading services to the construction, infrastructure and engineering sectors.

On a mission to revolutionise the industry, we add value and provide the clarity necessary to ensure every client achieves the best possible outcome. Our team of commercial and technical experts, complemented by world-class technology, is what sets us apart from the rest.







### **Company Overview**







# Keeping things in perspective

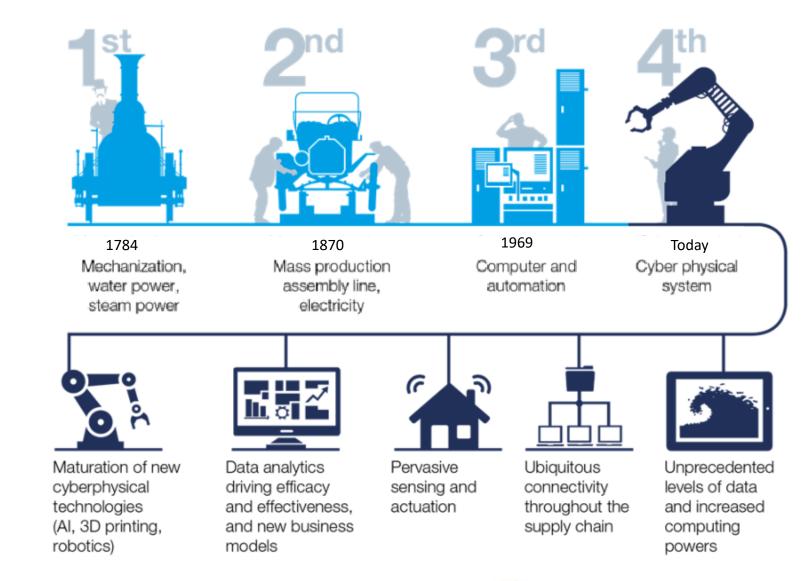
Where have we come from and where are we going?

The temptation is to let short term "urgent" issues replace longer term important issues.

Unlocking potential is about balancing shortterm and long-term strategy. Industry Challenges

**IW** Lewis Woolcott

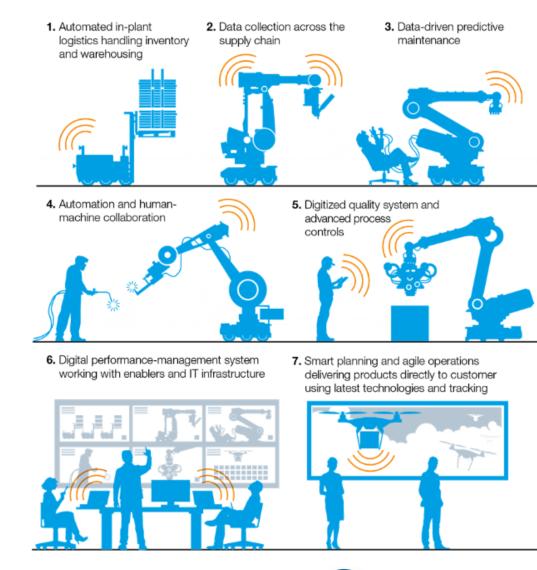
#### **Industrial Revolutions**







#### The factory of the future combines technologies that are available now

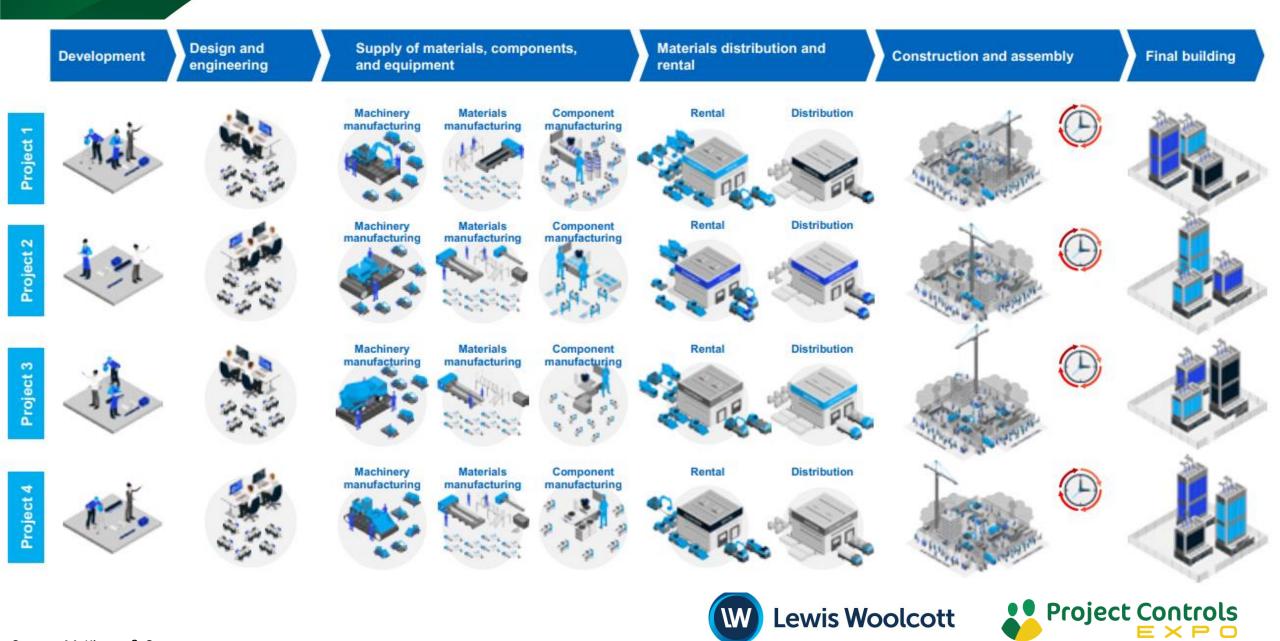






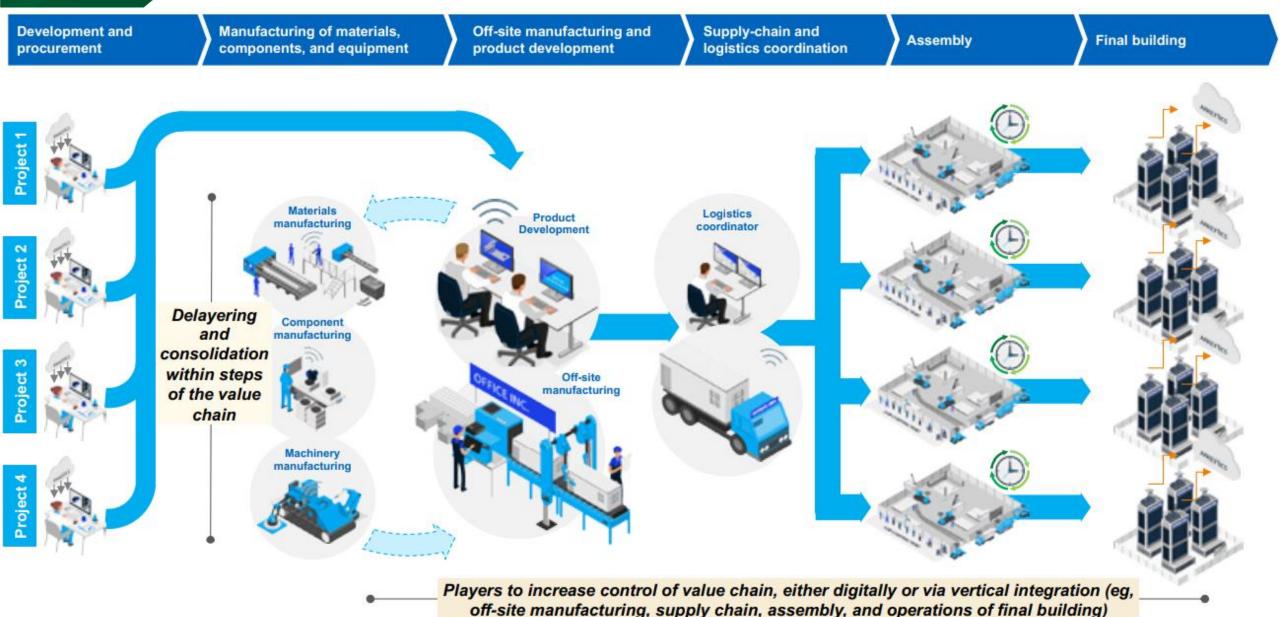
#### **Todays Construction Ecosystem**

Melbourne, Australia



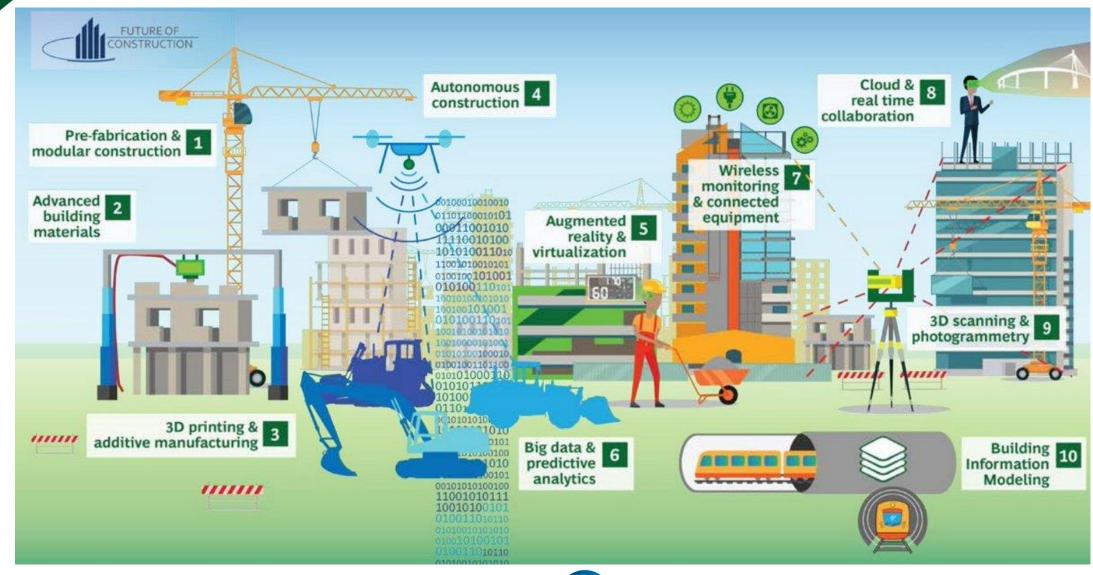
Source: McKinsey & Company

#### The Construction Ecosystem of the Future



Source: McKinsey & Company

#### What the future looked like in 2018







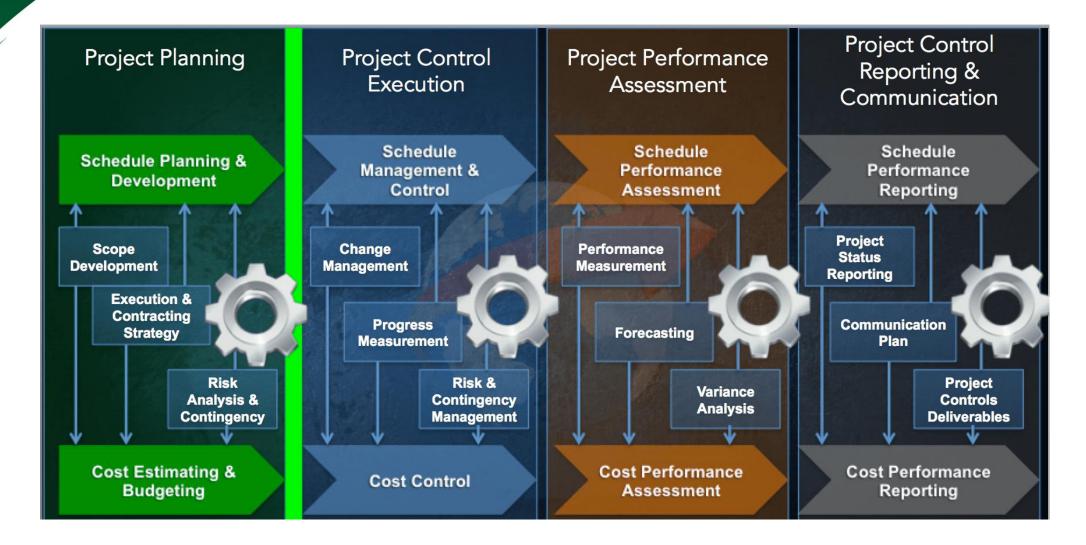
Source: Davos World Economic Forum 2018

# Project Controls Challenges

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#### **The Project Control Process**







## The Burning Issue – why do we need good project controls?

Frustration with issues across the industry include:

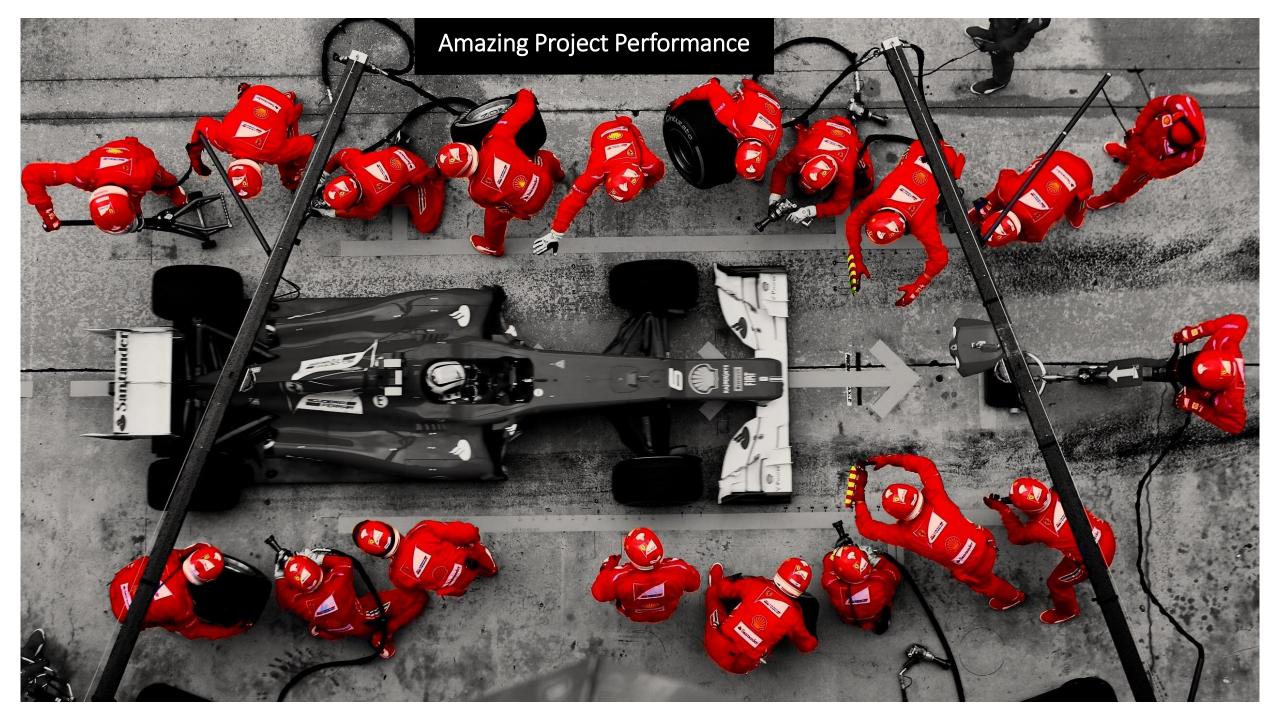
- Project Cost and schedule blowout
- Resource inefficiency & unavailability
- Site supervision and project controls monitoring is challenging on remote projects
- Poor tracking of equipment and personnel
- Poor record keeping
- Environmental and heritage breaches
- Estimating and benchmarking challenges
- Rising disputes and effort and cost required to resolve them



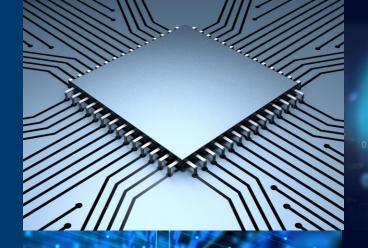
#### There must be a better way to work Smarter !!!







# Technology Solutions





## W Lewis Woolcott

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Establishing the project's critical path is of course a core element of delay analysis. Events that delay the critical path may entitle a party to relief from their effects.

LOGIC+ identifies the project's critical path across all files and finds changes from the selected baseline. An easy intervention process allows the user to make corrections to the algorithm's selection and all user interventions are logged in supporting files.









Lewis Woolcott's SATUTE has the ability to create a fast and secure internet connection anywhere in the country at the touch of a single button. It's the perfect solution for mobile teams working in locations that would otherwise be completely cut off from civilisation!





## **SMART**

#### What SMART does

- It is an advanced project management tool that enables remote management of projects
- Able to watch in real time the progress of the project
- Complete visual recording of a project
- Tracks resource information plant, equipment, people

#### **Key Features**

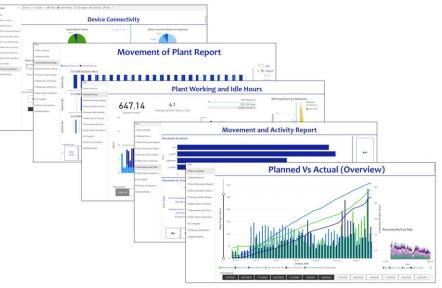
- WBS and site terrain visualization
- Assigns resources per each plant, equipment to ensure adherence to schedule.
- Instant alerting of breaches of zones

#### Results

- Analyses data to improve productivity budgeted vs scheduled
- Mitigate risks of disputes due to tracking of work
- Support resolution of issues
- Better decision making based on real-time automated project controls

#### SMART creates unity and one source of truth







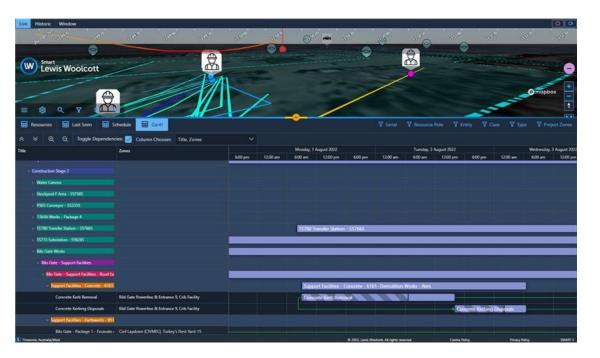


## **SMART Schedule Integration**

Integrating master schedule with SMART platform allows for:

- The ability to view activities live as they are executed on the project site
- Oversight of planned vs actual burned
- Playback of Gantt activity by a simple click

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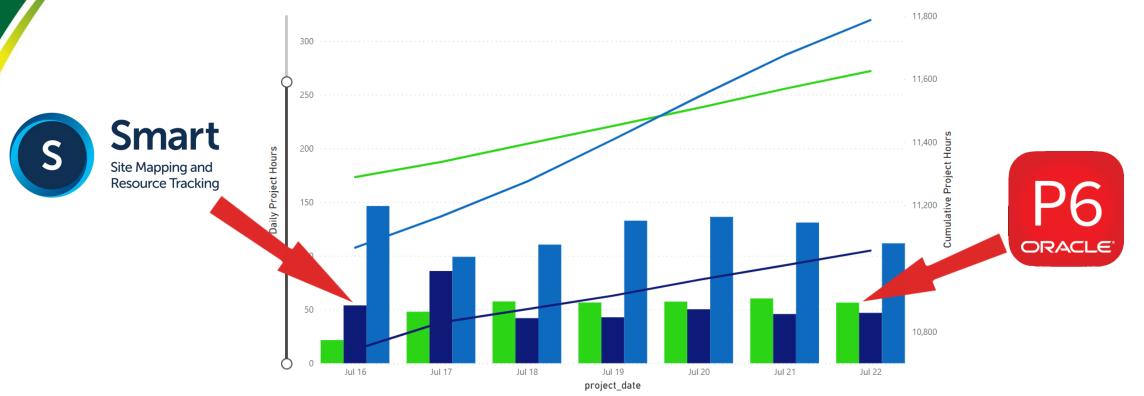






## **Tracking Actual Vs. Planned**

SMART can read data directly from P6, so Planned vs. Actual work hours can be compared in real-time.



● Planned Hrs ● Actual Hrs ● Recorded Hrs ● Sum Planned Hrs ● Sum Actual Hrs ● Sum Recorded Hrs (adjusted)

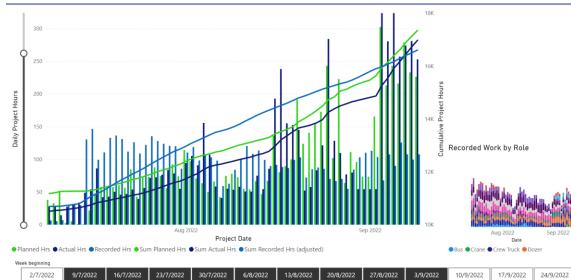




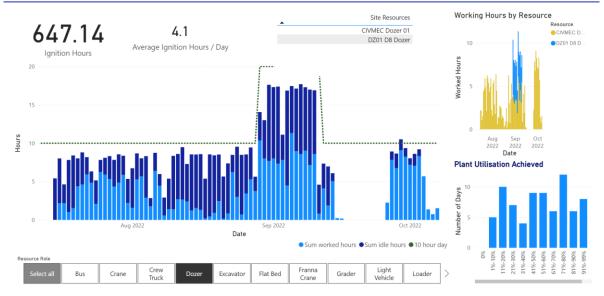
### **Transforming SMART Data Into Project Controls Gold**

Lewis Woolcott Power-BI Reporting Suite

Planned Vs Actual (Overview)



#### Plant Working and Idle Hours



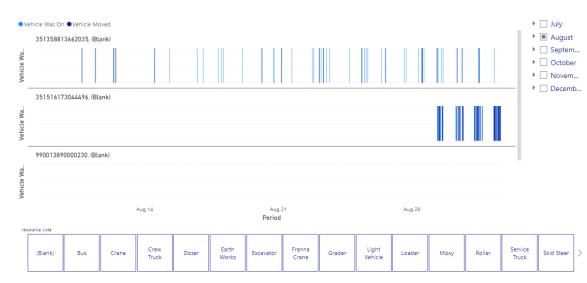


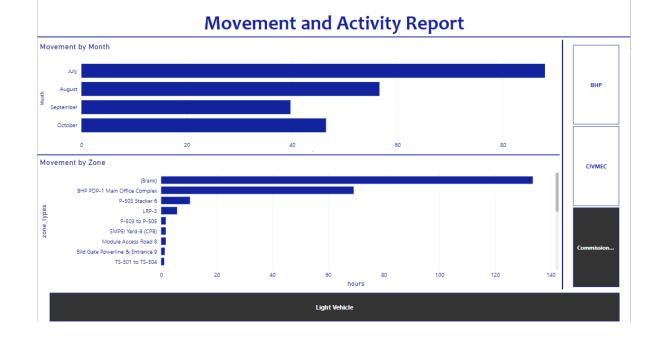


### **Transforming SMART Data Into Project Controls Gold**

Lewis Woolcott Power-BI Reporting Suite

#### **Movement of Plant Report**









### **Biosecurity, Heritage, and Safety**



Overlay of No Go Zones such as Heritage, Private Boundaries, Biosecurity, and High-Risk Zones Allow for Instant Breach Detection and Alerting

# Instant Event Alerts to Email and SMS









# Smart

Site Mapping and Resource Tracking

## Launch SMART

## Launch Dashboards





# **THANK YOU**



