# Project delivery with Oracle's Smart **Construction Platform and the** ecosystem of innovation partners





#### Presenter



Geoff Roberts Industry Strategy Director, Oracle Construction and Engineering





Our mission is to help people see data in new ways, discover insights, unlock endless possibilities.





ORACLE Construction and Engineering



#### Oracle

, Enterprise Resource Planning

Financial Management Procurement Enterprise Performance Management ERP Analytics

Supply Chain and Manufacturing

Inventory Management Manufacturing Asset Management Logistics Blockchain Internet of Things (IoT)

Oracle Cloud Infrastructure

#### Human Capital Management

Advertising and Customer Experience

Industry Applications

Human Resources

Workforce Management

Payroll

HCM Analytics

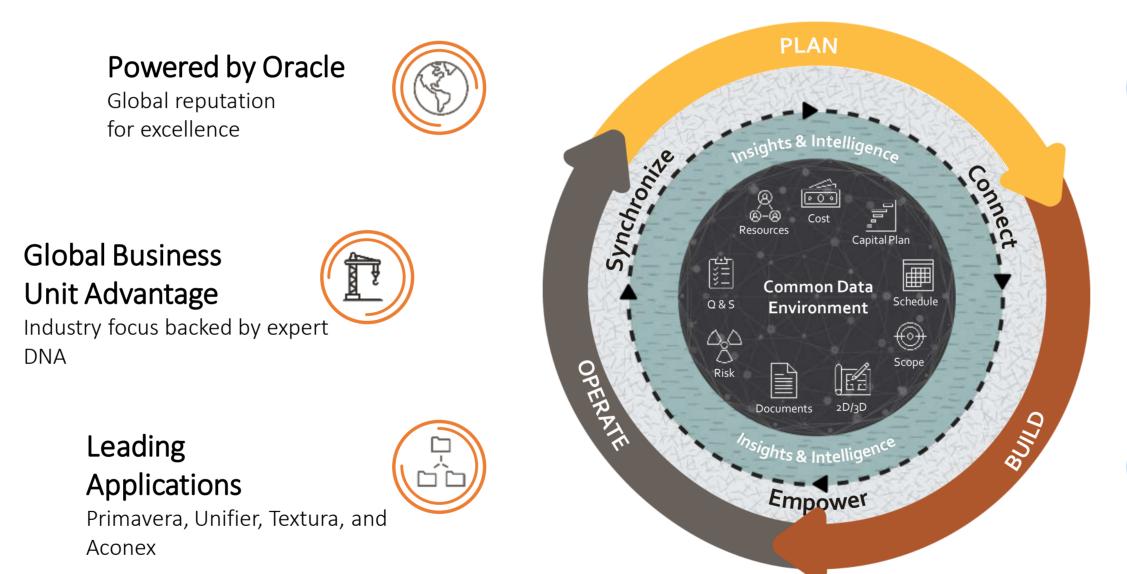
Advertising (Data Cloud) Marketing Sales Content Management

Communications Construction and Engineering **Financial Services** Food and Beverage Hospitality Life Sciences Retail Utilities





#### Oracle Construction and Engineering Smart Construction Platform





**ROI, Scale, Flexibility** Industry-leading data technologies and cloud infrastructure



#### Security

Security-first approach across compute, network and storage



## Innovation Oracle Industries Innovation Lab Program

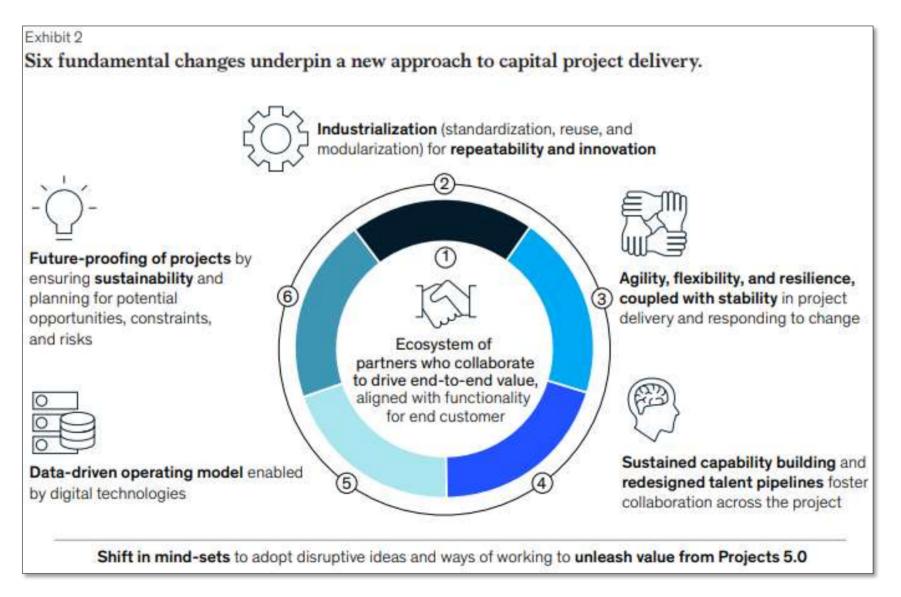






#### The importance of an integrated platform for Capital Project Delivery Insights from McKinsey

#### A new approach to Capital Project Delivery Six fundamental changes



#### Benefits of this new model

#### Measurable improvement potential

#### Exhibit 3

Projects 5.0 could transform the financial viability of large capital projects.

We surveyed 300+ industry leaders (including owners, contractors, and operators) to quantify the potential improvement across 4 dimensions of cost, time, quality, and repeatability in capital-projects delivery

Application of Projects 5.0	Potential from Projects 5.0		
Strategic importance of 6 fundamental changes	~33%	potential improvement in actual cost	
Current implementation status of changes	~32%	potential improvement in actual time	
Not started/under implementation Implemented and scaled up	>20%	improvement in quality and repeatability	





#### Benefits of an integrated platform An industry view – importance of "golden thread of data". The Hackitt Report

#### **Building a Safer Future**

Independent Review of Building Regulations and Fire Safety: **Final Report** 

May 2018 Dame Judith Hackitt DBE FREng

• A 'golden thread' of good quality information enables future building owners to better manage their buildings safely.

• As soon as detailed work commences the client needs to ensure that a **digital record** of the building work is established and **a Fire and Emergency File** is initiated.

• Both will need to be maintained throughout **design and construction** and be part of the regulatory oversight process.

• Formal handover will help enable **timely occupation**.

• This process ensures focus throughout the project, that the 'golden thread' of key information is passed across to future building owners, resulting in more effective safety management throughout the building life cycle."





#### Oracle Smart Construction Platform Drive performance, predictability, continuous improvement

- Maximize returns
- Build productively
- Connect teams
- Predict and mitigate risks
- Automate processes
- Decide, learn, improve
- Operate efficiently



Up to Improvement in **Resource Utilization** 

Up to 30% Improvement in Sustainability

Source: Compilation of 3rd party benchmarks, actual customer outcomes, and Oracle Construction and Engineering Customer Strategy insights

to 28% Capital Deployment

Up to Reduction in Project Duration





Up to 23% Improvement in Team Productivity

Up to Reduction in Claims & Penalty Costs







Product vision Industry, technology, and innovation

## Performance > Expectations

Continuous Improvement

Predictability = Norm

Connected Empowered

Synchronized







Accelerated performance Requires intelligent platforms

**Point Solutions Solved Targeted Pain Points** ✓ Basic Efficiencies ✓ Std Workflows

First Gen Platforms **Connected** Teams ✓ Faster Decisions ✓ Fewer Errors



Individuals & Departments



Project Teams

#### Intelligent Platforms Synchronize & Empower

✓ Unlock Data ✓ Automate Processes



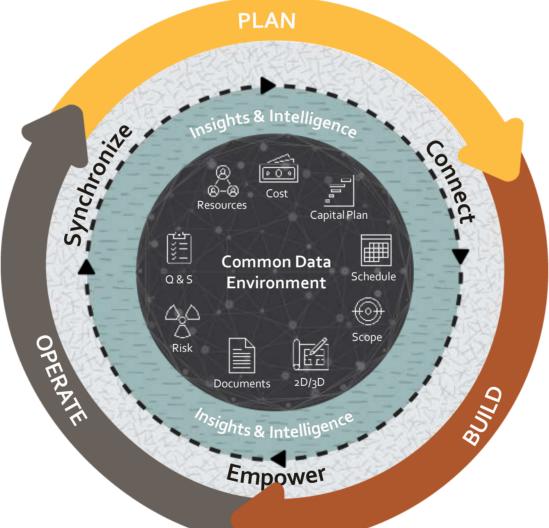
**Highly Responsive Ecosystems** 





## Oracle Smart Delivery Platform





Digital → Twin

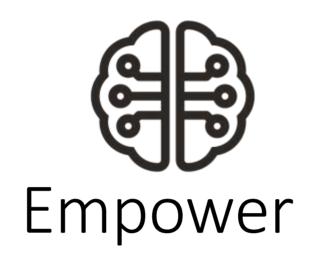






Oracle Smart Construction Platform Drive performance, predictability, continuous improvement





Teams are **connected** across processes and data

Team members are empowered with data and intelligence to make informed, proactive decisions



Activities, people, and resources are synchronized throughout the project lifecycle







### Connect

The Connect Plus consortium, including Balfour Beatty, Egis Road Operation UK and Edge Orbital Holdings Ltd., is responsible for maintaining the M25 Orbital Motorway around London has significantly sped workflows, correspondence and contract management. "The interdependencies created from cross organizational collaboration creates a more collaborative team."

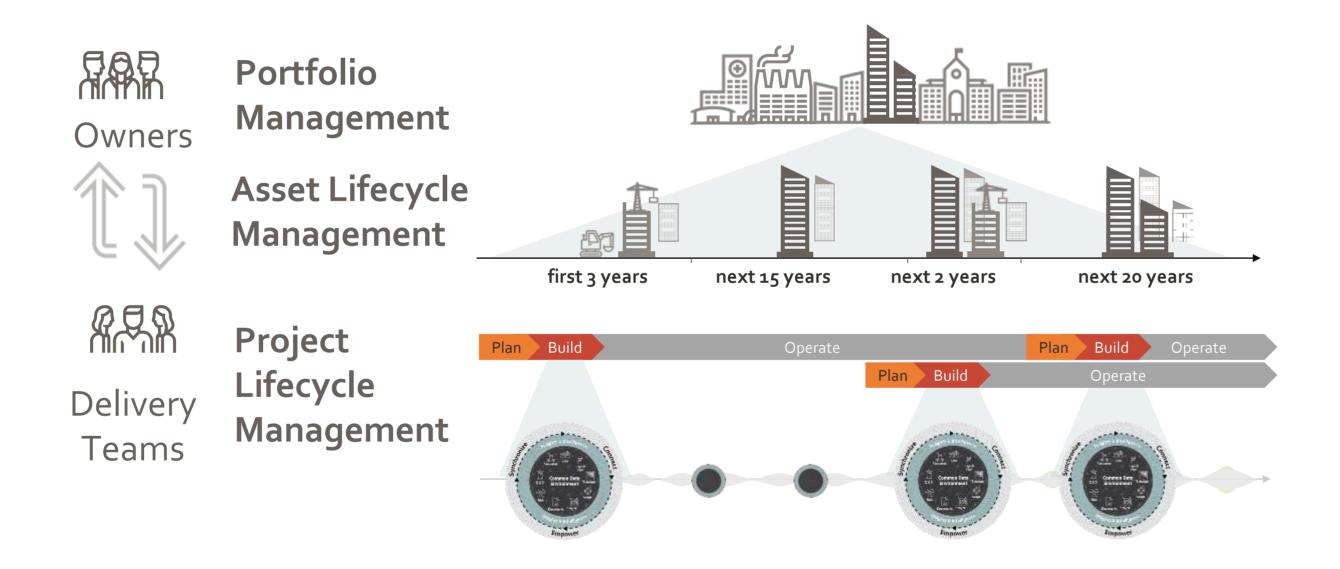
> Simon Wilkinson Commercial Manager, Connect Plus







Connect portfolios, asset and project life cycles Bridge the gap with planning, control, and visibility





Capital Works (Project) Maintenance & Repairs

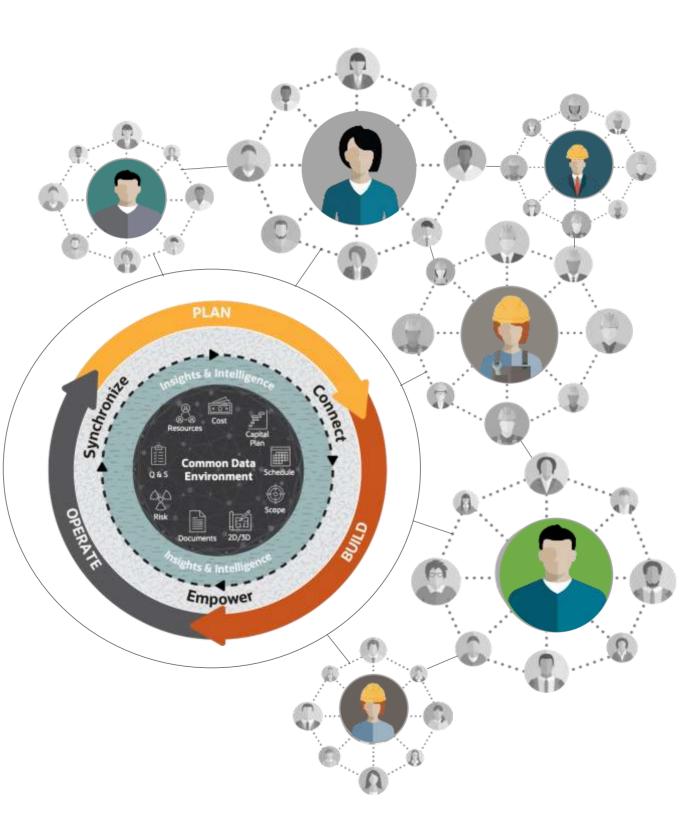






#### Connect project teams Trust, share, build productively

- Participate, share and own all relevant data
- Connect early across scope, schedule, cost to reduce costly changes and rework
- Configure processes to improve communication, speed turnaround
- Drive accurate project controls
- Efficiently manage change
- Ensure compliance, minimise risk, speed dispute resolution











Empower



The construction industry has few, if any, truly predictive analytics solutions at the project or company scale ... significant value can be created by developing analytics and insights platforms that leverage the growing pool of inter- and intra-company data. These platforms will enable more proactive, data-driven management of both individual projects and companies overall.

Source: https://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/rise-of-theplatform-era-the-next-chapter-in-construction-technology

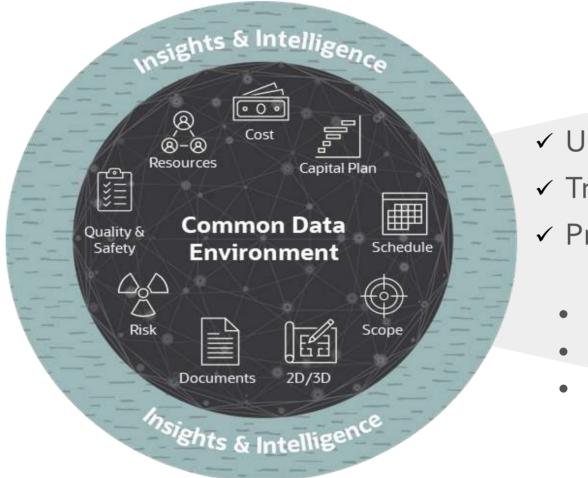
McKinsey & Company







#### Empower – predictive intelligence For proactive decisions



- Unlock broad, deep data
- ✓ Train, adjust, improve models
- ✓ Predict risk:
- Schedule
- Safety
- Rework

 Litigation Partners BudgetsCashflow

Projects > Hatel VIP > Schedule									
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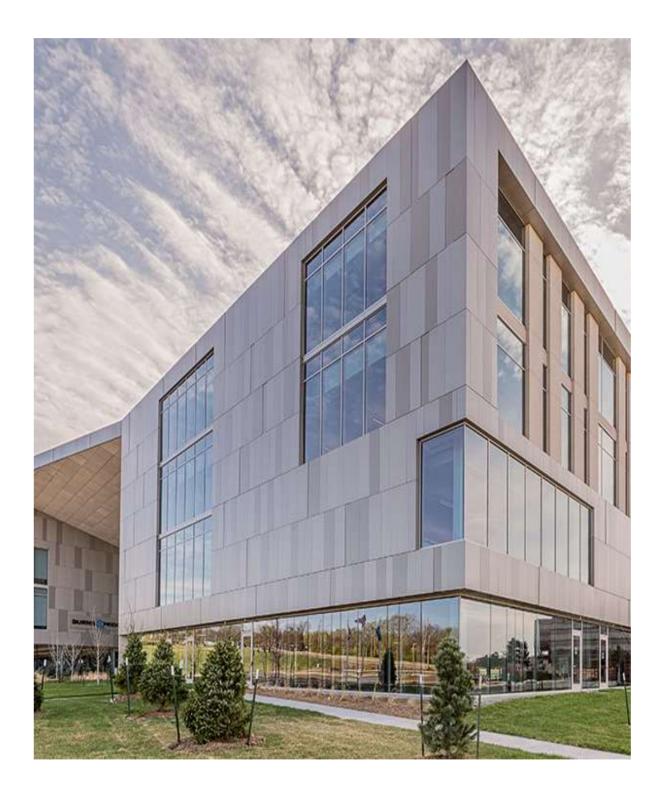






To truly improve performance, we must synchronise activities across the entire construction supply chain from designers and consultants to material suppliers and contractors, ensuring all parties are working together according to the central project schedule

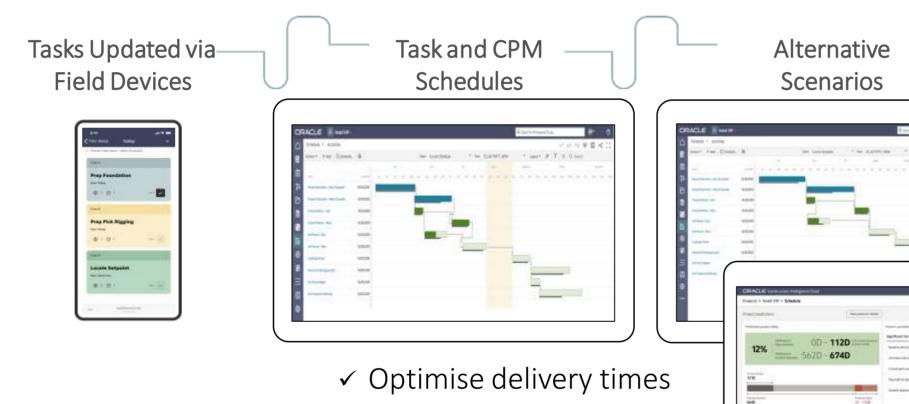
> Patty Sullivan \ Burns & McDonnell Project manager \ Strategic Initiatives







#### Synchronize supply chain Keep work progressing



- ✓ Reduce idle resources
- ✓ Eliminate waste

# ida of hogy publicity (more black parent

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Crews Reallocated



Equipment Adjusted



Suppliers Notified









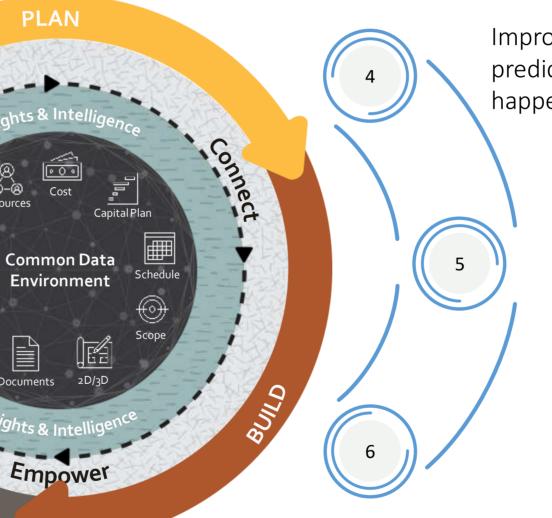
#### Imagine accelerated performance Connect, Empower, Synchronize

3

Reduce rework and speed workflows by breaking down data-silos and increasing transparency with connected teams

Eliminate waste in padded schedules, excessive material orders, and idle crews and equipment with synchronisation

Equip all team members, novice or veteran, with AI powered intelligence for decision making



Improve safety by learning from past projects and predicting the likelihood of possible incidents before they happen

> Transform how key business processes are executed using datadriven insights to make continuous improvements

Operate Efficiently with fast access to accurate project and asset information







#### Oracle Smart Construction Platform customer value Drive performance, predictability, continuous improvement



**GRAHAM** 

Graham connects project team across 100 organizations to speed turnaround times >50%.



PROPERTIES

Landmark Properties synchronises task and CPM schedules across three divisions.



TRACTEBEL

Empowered with clear and accurate data from their 3D models, Tractebel captures and resolves issues 50% faster.



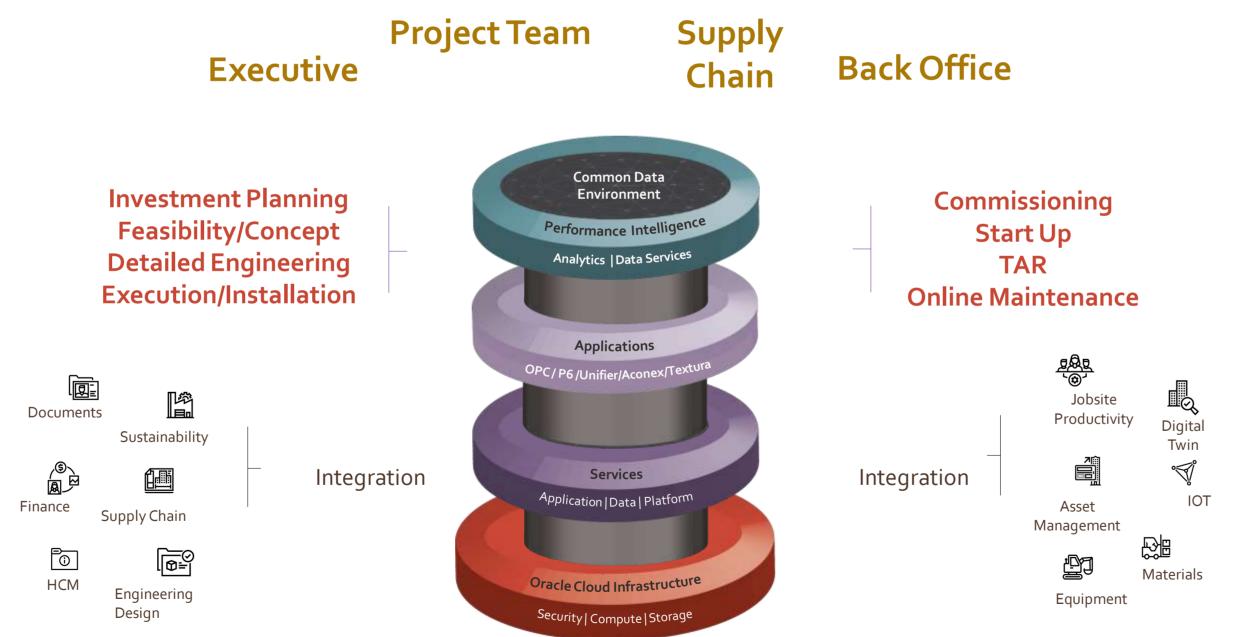
Vesta commercial real estate reduces insurance risk with predictive intelligence.

vest∧





#### Oracle Smart P3M Delivery Platform



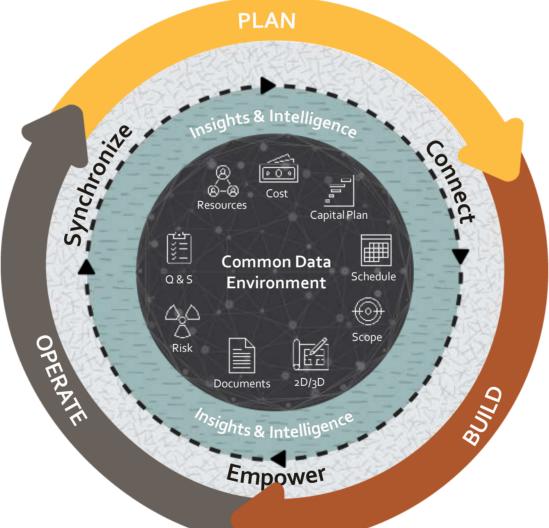






## Oracle Smart Delivery Platform





Digital → Twin

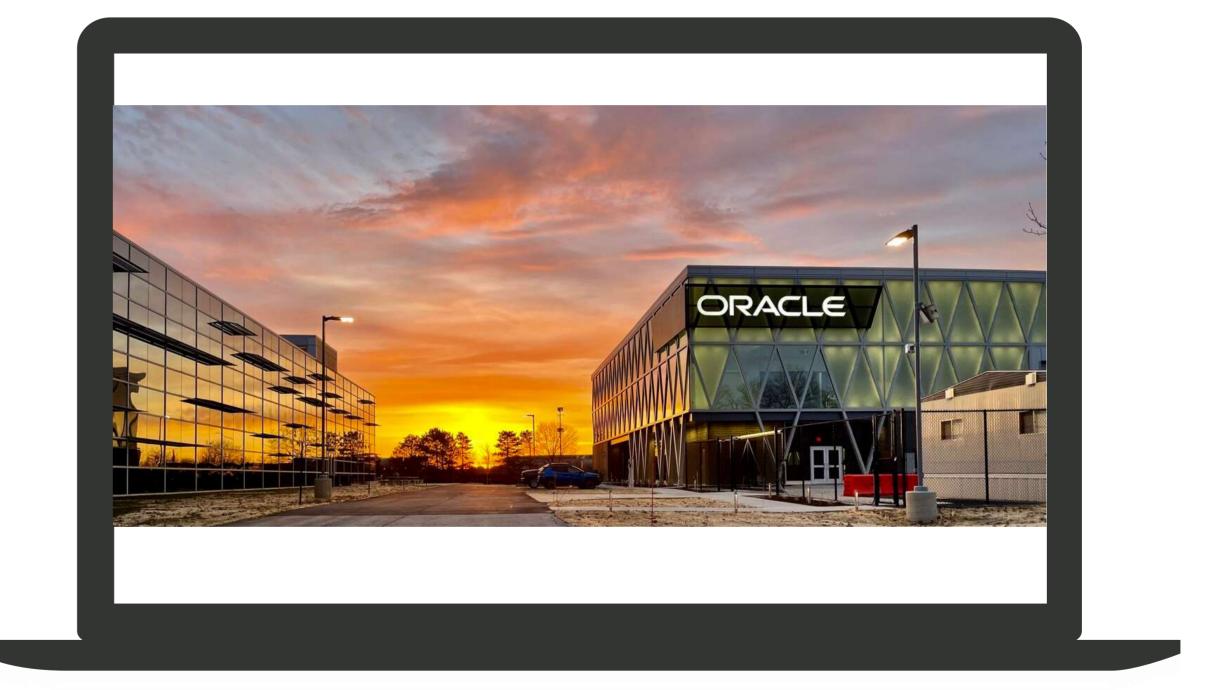






#### Oracle Industries Innovation Lab Mission

Enable Oracle to collaborate with customers and partners across industries to co-innovate, experiment, and bring to life the power of transformative technologies.







#### Opportunities available to our customers today Align opportunities to your organization's goals



Model centric Adding a spatial dimension to most transactions and processes in the Plan-Build-Operate lifecycle

The team using a common platform to plan,

• BIM

- Model coordination
- xD scheduling
- VR/AR
- Trusted CDE
- Model coordination
- Mobility
- Sensors
- Drones
- Facility visualization
- 5G
- VR/AR
- Facility visualization
- Wearables/IoT
- Off-site construction
- Connected tools



Remote construction and facility management Leveraging technology to manage activities remotely.



Health & Safety

Digital collaboration

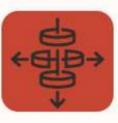
record, and share information

Always a focus, COVID as increased the urgency and complexity of delivering on worker safety



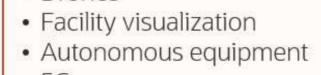
#### Productivity improvement

Increase the output of the jobsite and office workers



#### Leveraging data

Capture the generated data improve processes through-out the plan, build, operate lifecycle



#### Project optimization

Improve the ability to deliver on schedule an within budget.

- BIM IoT
- Off-site construction
- Connected tools
- Predictive analytics
- Integrated procurement
- IoT Platform
- Trusted CDE
- 5G
- Predictive analytics
- Integrated procurement
- IoT Platform
- xD Scheduling
- Overlay on all other trends

Autonomous equipment



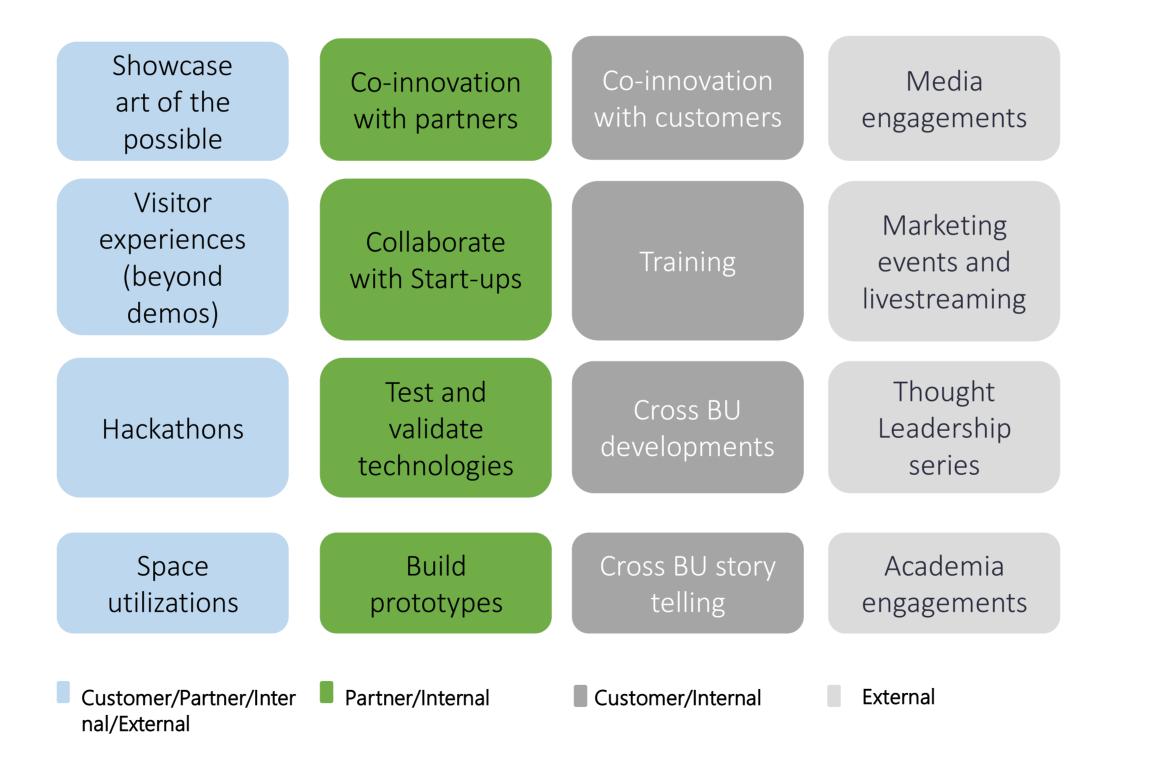
#### Incorporating AI/ML

Understanding the impact of AI/ML on the plan, build, operate lifecycle and developing an AI/ML strategy.





#### Innovation Lab engagement components







Oracle's vision for a global innovation lab network Facilitating the industry's digitalisation



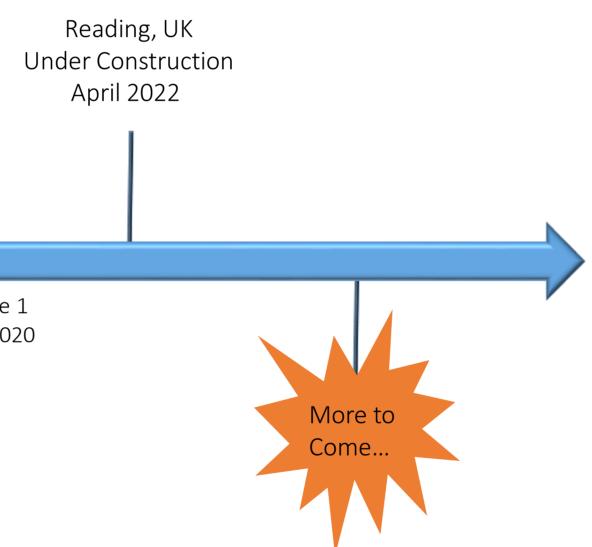
Chicago Phase 2 November 2020

Chicago Phase 1 August 2018



Sydney Phase 1 November 2020









## Oracle Industries Innovation Lab – Reading, UK







## Oracle Industries Innovation Lab themes – Reading, UK



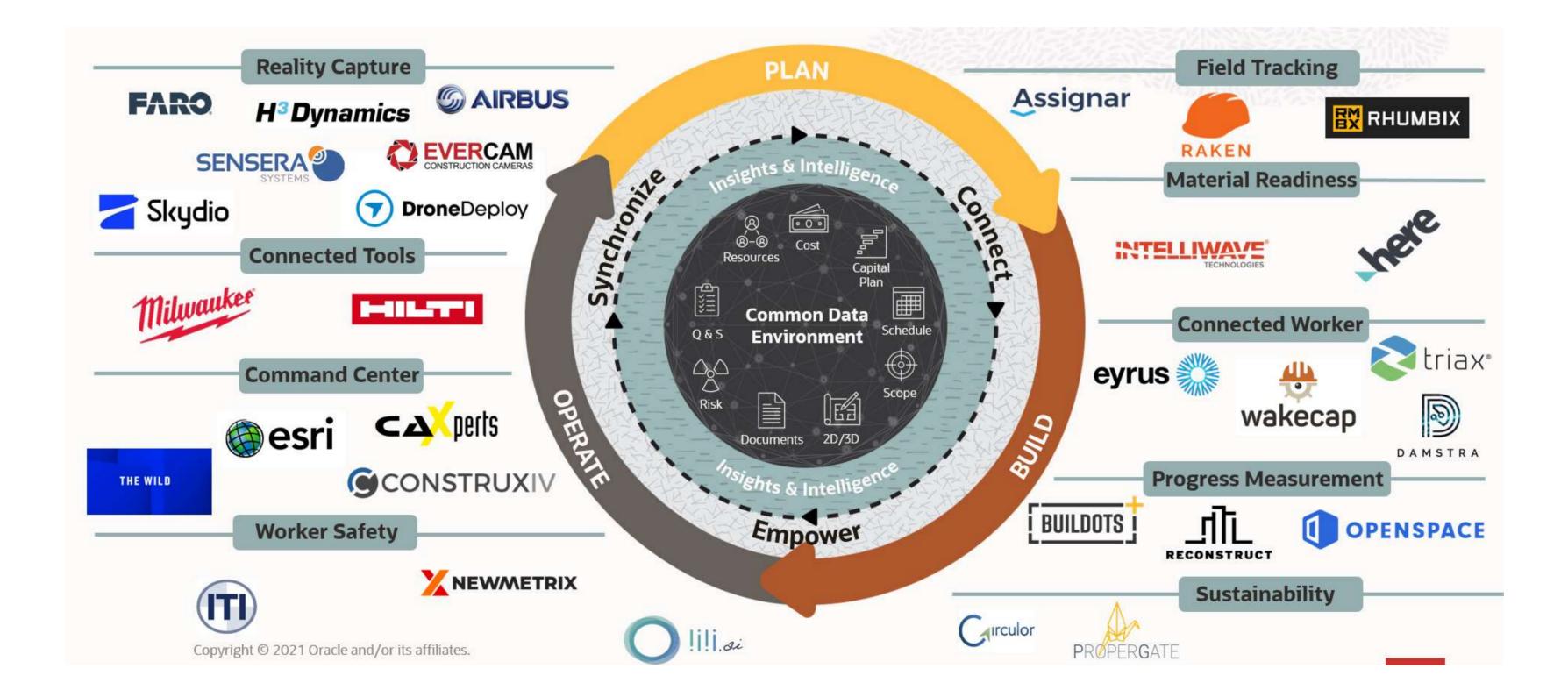
#### Accessibility

#### Sustainability





#### Our executive approach Oracle, customers, and partners to co-innovate and bring to life transformative technologies









#### Key Takeaways

- 96% success rate for projects who have skilled teams, and integrated systems
- Only 22% of projects have skilled teams, fully integrated processes and systems.

Platform is key - Now is the Time to Transition





## THANK YOU



