Project Controls Expo UK - 13th November 2019

Emirates Arsenal Stadium, London

Getting stuff built, delivered and done

underpinned by a truly useable integrated project controls system

Liam O'Sullivan

Deputy dire3ctor and Head of Capital Programme ED1SON Alliance Delivery

Capital Programme and Procurement | UK Power Networks

Ian Thornton

Director, Digital Solutions | Enstoa UK

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Project Controls EXPO London, UK

Why?

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About the Topic

UK Power Networks went through a company-wide business transformation programme. With an annual spend of over £160~200M, capital and distribution projects investment and delivery is a key focus for continuous improvement.

Liam and Ian will discuss UK Power Network's two to three year journey to achieve a truly useable integrated projects delivery & controls way of working and business systems capability, the key ingredients to its success, lessons learned along the way and, if UK Power Networks were to do it again, why Liam (the client builder) and Ian (the implementer) both believe that a 'best-practice-driven, integrated project delivery & controls system' should be available today which is deployable and ready-to-go in under 30 days.

Expect an open and frank conversation between client and implementer!

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About the Speakers

Liam O'Sullivan

Head of Capital Programme ED1SON Alliance Delivery, Capital Programme and Procurement
UK Power Networks

Liam has the day-to-day responsibility for managing the delivery of UK Power Networks Capital Delivery Programme, with a direct team of c.150 people, support of 300+ and c.£200m per annum delivery programme for Internal and External Clients, Stakeholders and Developers throughout the Southeast Region of the UK including London.

Liam is currently the Head of ED1SON Alliance Delivery (Programme Management and Delivery) in Capital Programme and Procurement at UK Power Networks. He has recently achieved record project delivery and success as Business Transformation Programme Director at UK Power Networks.

Prior to that, he was the Transmission Construction Director & Engineering Manager for electricity transmission at the London 2012 Olympic Games. He has worked in the UK power industry since 1997 in design, project engineering and management roles on several diverse, multi-million-pound infrastructure projects. Liam is a member of the Institution of Engineering & Technology.

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About the Speakers

Ian Thornton

Director, Digital Solutions
Enstoa UK

Ian has worked in the capital projects industry for the past 10 years, focused on designing and implementing best-practice project controls solutions for owner and contractor clients. Ian's clients include MOD (DE&S), HM Treasury (National Infrastructure Plan), UK Power Networks, Sinopec, Sinopec Engineering, Chiyoda, Petrofac, Baker Hughes (GE), Shell, CH2M.

Ian worked at Oracle with the Construction and Engineering Business Unit for over seven years before leaving three years ago to setup Lifecycle Technology Ltd (LCT), a global technology and consulting firm, based in the UK, that focused on delivering solutions to the engineering, construction and asset intensive industries. LCT was acquired this year be Enstoa, one of the fastest-growing private companies in the world and the only one that focuses exclusively on accelerated digital transformation for the built environment.

About Enstoa | Accelerated digital transformation for the built environment

Awarded top 150 fastest growing solution providers

Winner of NYC SmartCEO 2017 Future 50 Award

8 years and running on the Inc 5000 fastest growing private companies in the USA

Oracle Gold Partner

Autodesk

Construction Industry Institute

Healthcare | Education | Energy & Resources | Engineering & Construction | Power & Utilities | Infrastructure | Real Estate | Retail

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Transforming the end-to-end delivery of Capital Programme at UK Power Networks

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About UK Power Networks

Three distribution networks

- London
- East of England
- South East of England

	Measure	% of industry
End Customers	8.2m	28%
Service Area	29,250km^2	12%
Underground Network	139,000km	29%
Overhead Network	46,500km	15%
Energy Distributed	84.8TWh	28%
Peak Demand	16GW	n/a
New Connections	130,768	35%
Customer density	44 per km	n/a
Distributed generation connected (2010-2015)	3GW	25%

Metric	Measure
People	6,000+
Key Contractor organisations	40+ (c. 1100 people)
No of main locations	80+
Vehicles	2,250
System Assets	2.59m
Meter point locations/Customers Served	8.2m/18m

Our business vision

- Safest network operator
- 'Best Companies' List / improving score
- Investors in People Gold
- NES Accreditation
- An appropriately skilled workforce for both today and the long-term

- Most reliable network (CIs/CMLs)
- Best service provider (BMoCS)
- High public reputation
- Trusted relationship with Ofgem
- Best stakeholder engagement
- Maintain compliance
- Most innovative DNO
- Ensure we meet the needs of our vulnerable customers, both now and in the future
- Most socially and environmentally responsible
- Enabling the net zero transition for all, as the leading UK Distribution System Operator

- Lowest cost to customers
- Deliver our RIIO-ED1 outputs and commitments in a collaborative way
- Delivering profitable growth for the Services and Connections businesses

To be consistently the best-performing Distribution Network Operator within an agreed set of values

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The ED1SON Alliance was developed with a clear alignment to the UK Power Networks' Vision…

An Employer of Choice

- Safest DNO
- 'Best Companies' List / improving score
- Investors in People Gold
- NES Accreditation
- An appropriately skilled workforce for today and the long-term

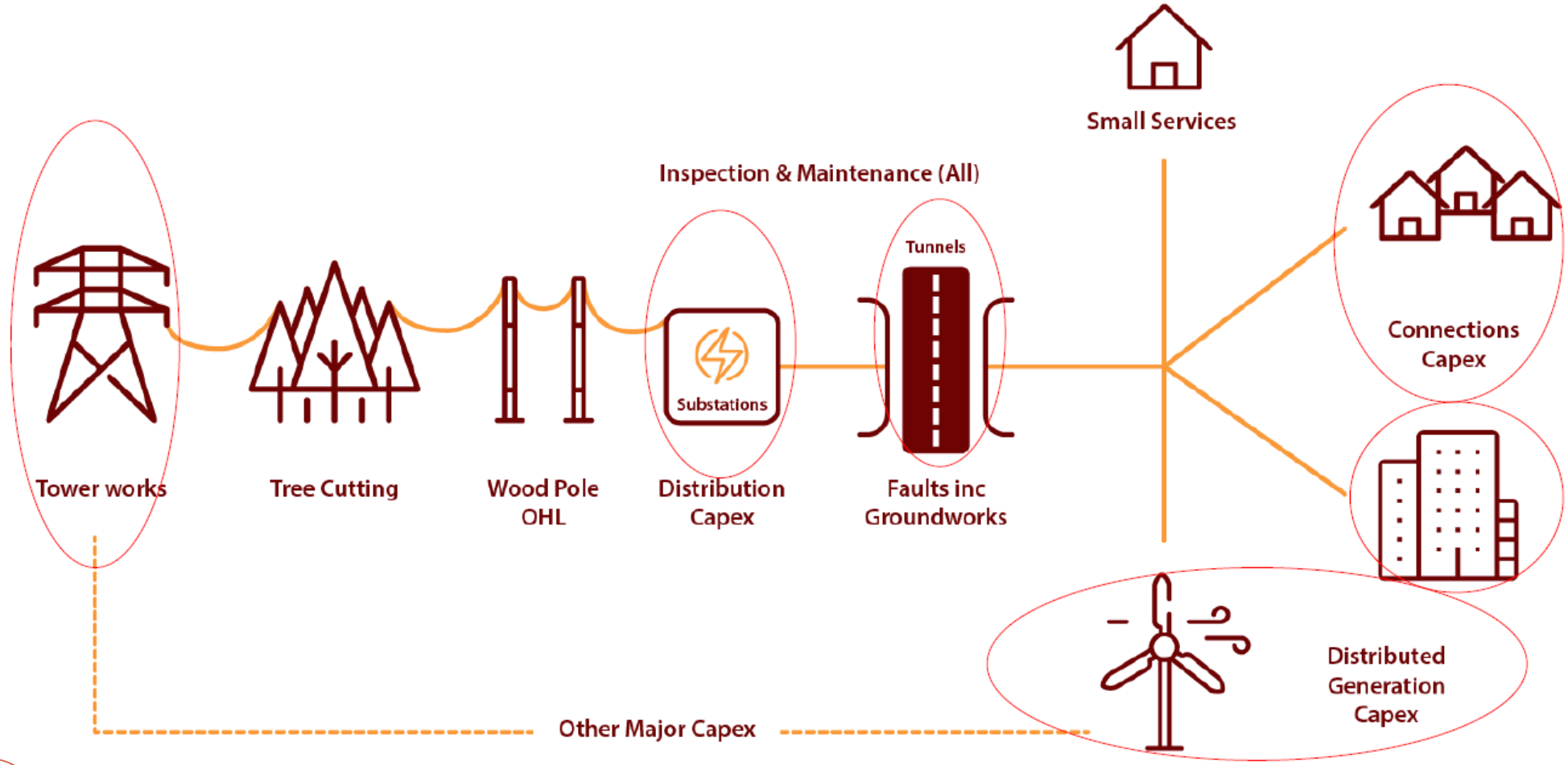
A Respected Corporate Citizen

- Most reliable network (CIs/CMLs)
- Best service provider (BMoCS)
- High public reputation
- Trusted relationship with Ofgem
- Best stakeholder engagement
- Maintain compliance
- Most innovative DNO
- Most socially and environmentally responsible
- The leading UK Distribution System Operator

Sustainably Cost Efficient

- Lowest cost
- Deliver RIIO-ED1 outputs and commitments

Safety at UK Power Networks is not negotiable
Safety has absolute priority.
Followed by:
1. Reliability
2. Service
3. Cost-efficient
Safety is our number one priority.
And we should be proud to be a company that delivers the most reliable network - with the best customer service – in the most efficient way possible.



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UKPN | The Business of CPP

- Regulated
- AMP & RIO cycles – 5 or 8 years planning
- Measured against KPI's
- Planning and managing the delivery of 160-200M
- Collaborative contracting framework, pain / gain…
- Significant supply chain & alliance partners
- Over 500 projects each year
- 100's of resources involved in CPP

How do you manage the triple constraints at this scale?

- Scope
- Cost
- Schedule

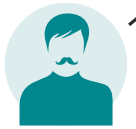
Heard in the trenches

Executive

Is it too much to ask for timely and accurate reports?

Portfolio Lead

I know we are capable of higher performance, but new systems are just too disruptive.



Project Manager

Wait — what did we learn from that project?

Contract Specialist

I track everything. Sooner or later, I have to retrieve it all too.

Estimator

I'm always cobbling together my own database of costs.

Finance

Our cash flow is like a spraying fire hose with no firefighter.

General Contractor

A little predictability in payments would be nice.

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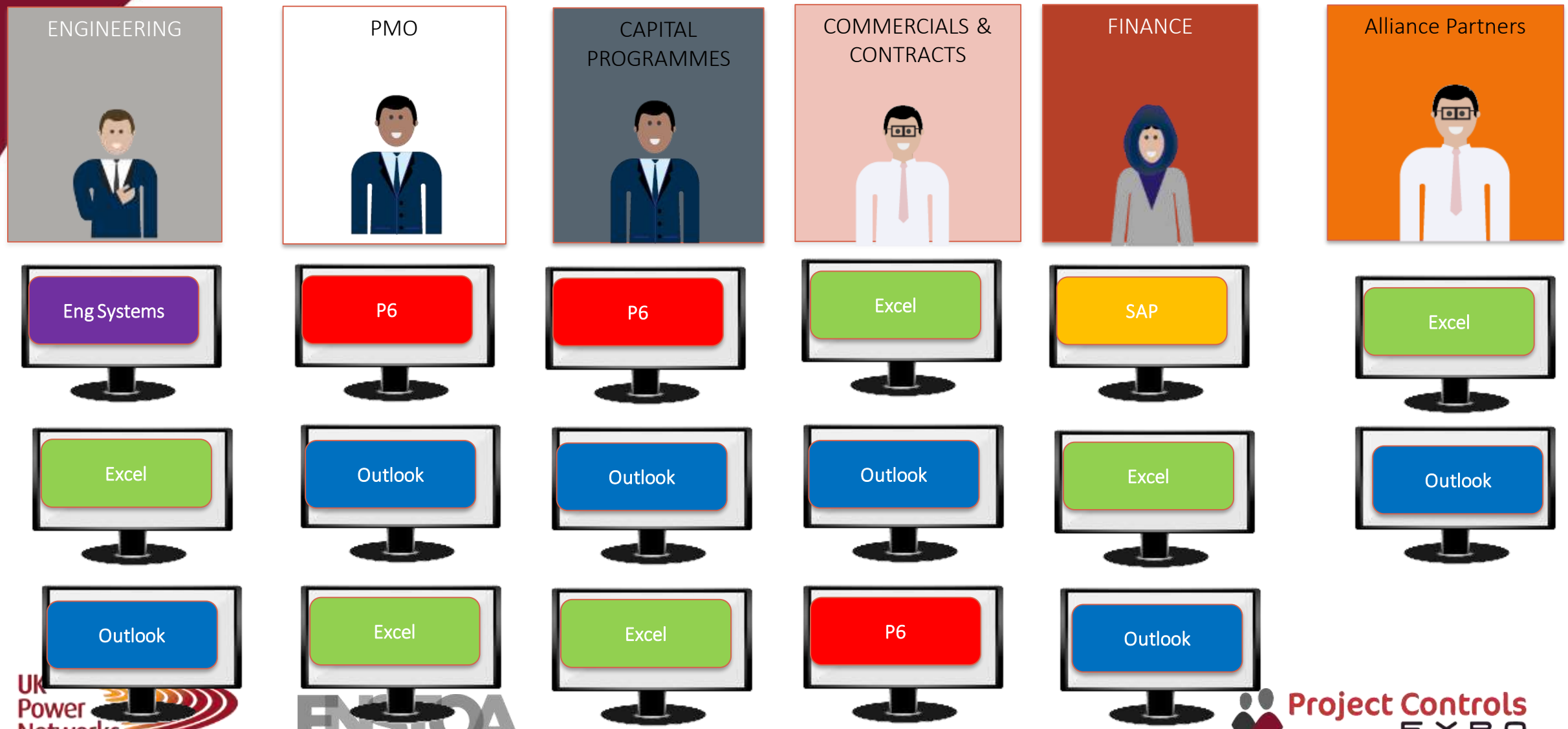
UKPN | Myriad of disconnected systems



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NEC3 | Collaborative contracting framework

The main benefit of NEC3 contracts over conventional contracts is that they have partnering built in, encouraging the two contracting parties to work together to solve problems.

Gate A

Gate B

Gate C

Gate D

- Manage Assets
- Connections

Develop Design

Programme Work

Deliver Work

Close Work

Asset Portfolio Planning

- Review Component Cost Units
- Portfolio Planning
- Prioritise investments
- Property & Consents

Connections

- Generate Quote
- Accept Quote & Pay

Set-up Delivery & Controls

Risk & Value Management

Project Risk Management

Conceptual Design

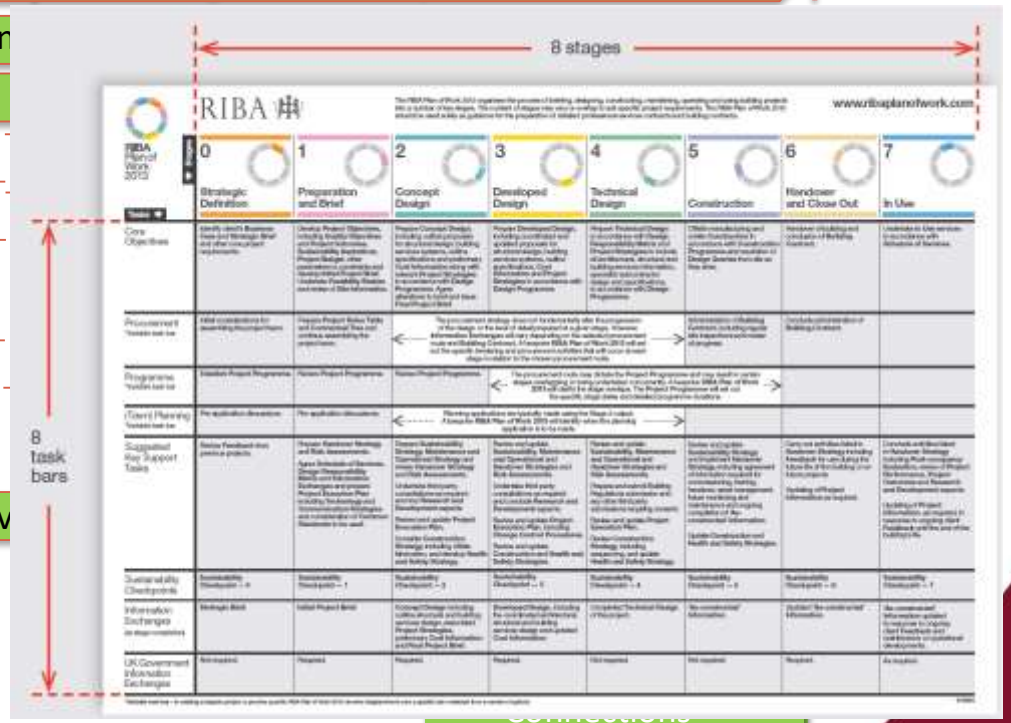
Estimate Costs

Developed Design

Plan & Organise Delivery

Technical Design

Capture / Rev



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UKPN | Life before Integrated Project Controls

Project Controls & Supply Chain

- Volume of stakeholders
  - QS's, Design, Planners, Contractors, Site Managers, Finance…
- PM's need to focus on PM and not poor IT
- Avoiding the management of schedule, scope & costs in silos
- Reporting nightmare!

Commercial & Contract Management

- Managing change
- Managing contractors
- Managing cost
- Dispute management
- Visibility
- Wasted hours on pulling data for reporting and audits
- Manual reconciliation

UKPN | Business Transformation

Business Transformation is all about **improving, simplifying** and **reducing** the numerous processes and systems so that it's easier for us to do our jobs

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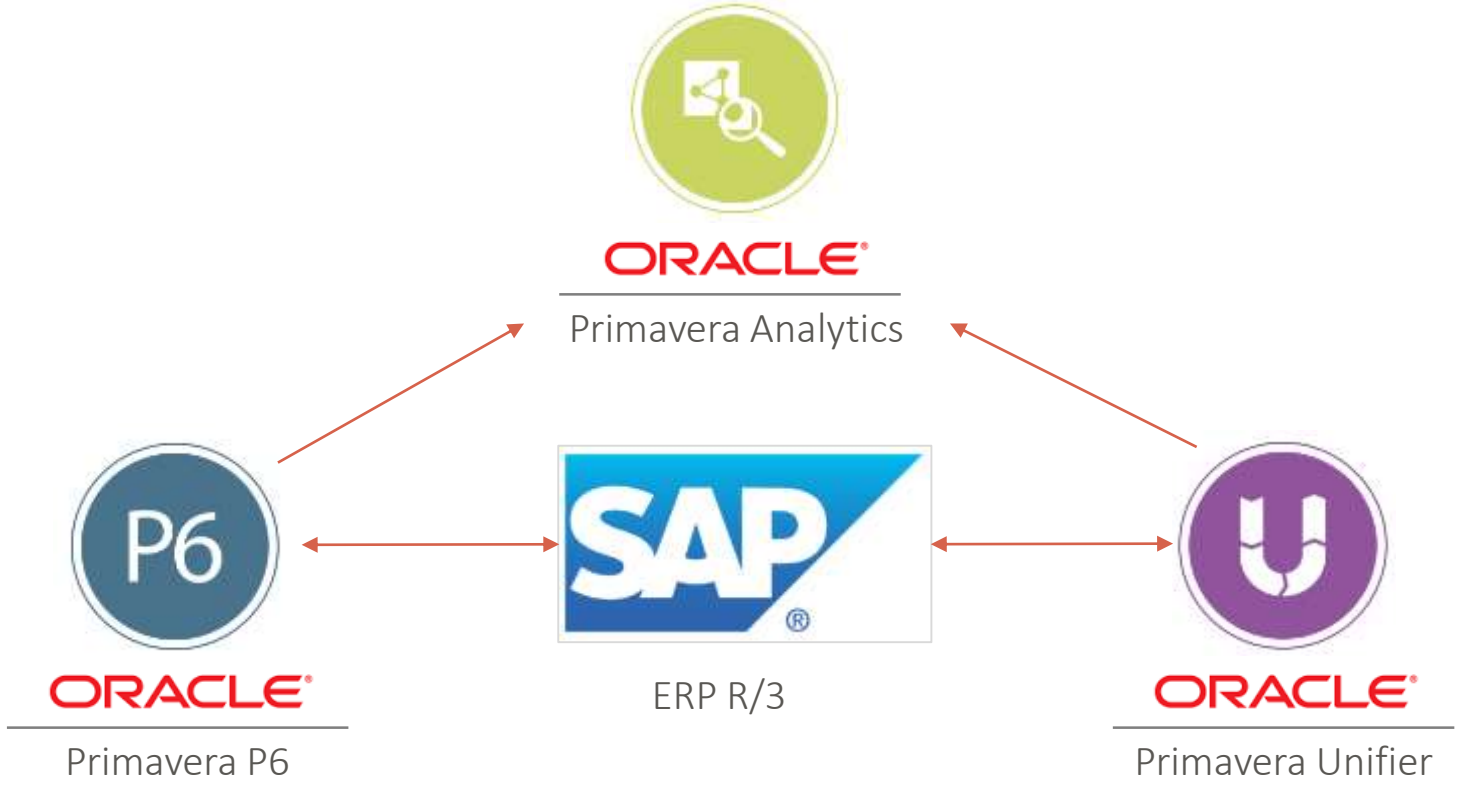
UKPN | Why we chose Primavera

- Integrated approach
  - Links schedule, cost, scope and risk
  - Better management of change
  - Compatible Units (CUs) can be better managed through lessons learned
  - Reduced the number and complexity of systems required
- Enterprise approach to data
  - Simplified reporting
  - Trusted, auditable project information
  - ‘Project on a Page’
- Rich capabilities that have helped improve business processes
  - In some places, we have taken ‘vanilla’ the approach available in the Primavera tools
  - In others, we have configured our own processes
  - NEC3 and EVM enabled

UKPN | Why we chose Primavera Unifier

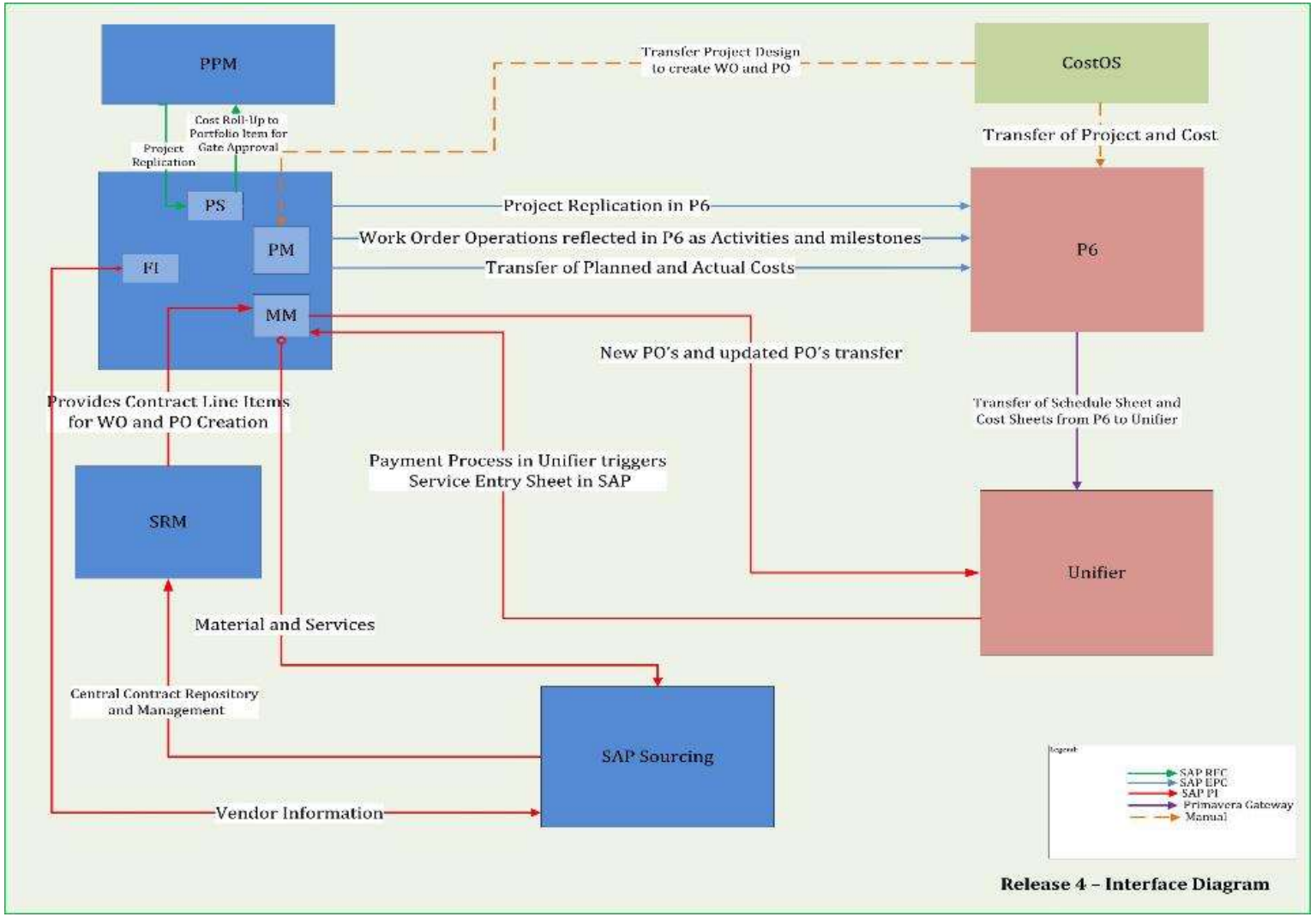
- Post Award Contract Management, Contract Data & Clauses
  - ALLIANCE (NEC3) PSC
  - ALLIANCE (NEC3 ECC) WPO Fixed & Target
- Contract Communications (e.g. Instructions, Notifications, RFIs)
- Contract Change Management
  - ALLIANCE (NEC3) Early Warning Process (incl. Contract Risks)
  - ALLIANCE (NEC3) Compensation Event Process
- Payment Application & Certification Process
- Defects Process (Tests, Inspections, Searches, Defects)
- Contractual Certificates
- Design Management (e.g. Deliverables Management)
- Construction Management (e.g. Site Diaries)
- And more…

UKPN | Why we chose Primavera



CBS/WBS mapped in 3 tools

Projects Delivery | underpinning technology is key



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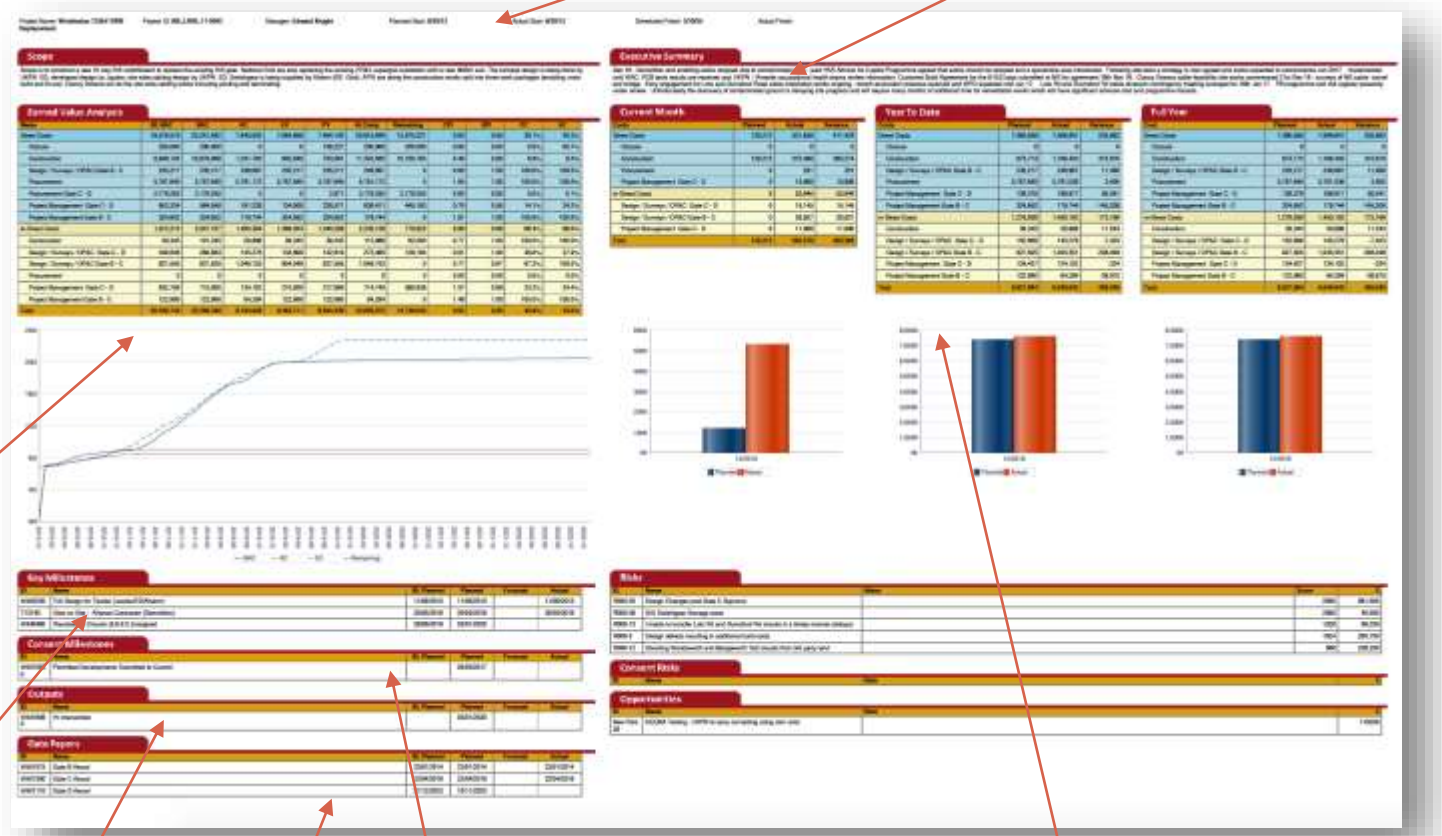
Transformative for capital programme

- Efficiency of project delivery
- Company on a page / single version of the truth - DNO, Sub Programme, Project level
- Project, commercial & construction management working together



Project Information/Status

Narrative

Earned Value Analysis

Risks

Key Milestones

Outcomes

Commercials, Contracts, Payments, Change

Current Month, Year to Date, Full Year

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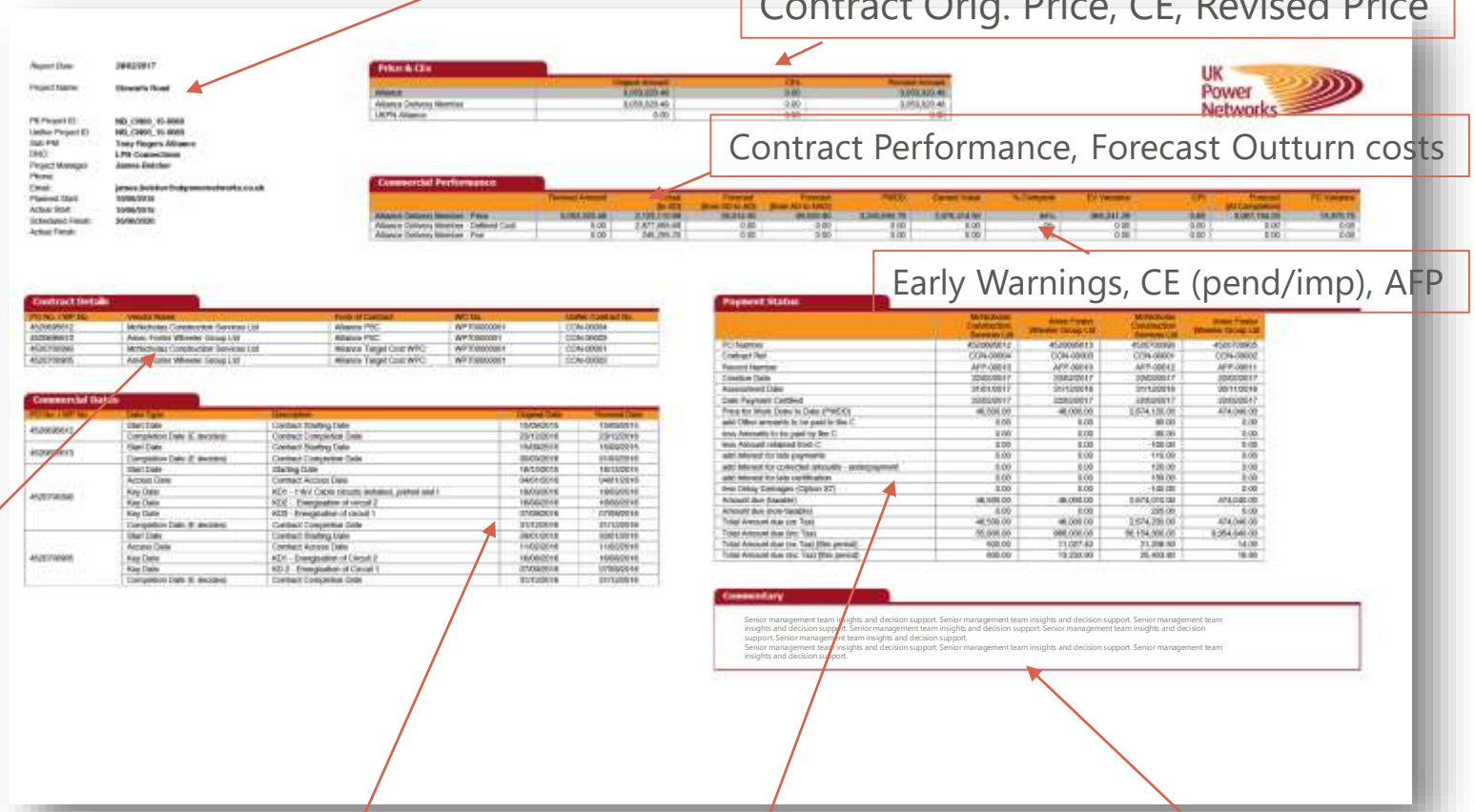
Transformative for commercial team

- Major spend visibility and tracking
- Management of high value commercial and project risks & issues
- Senior management team insights and decision support
- Full audit trail of the project lifecycle for disputes



Project Information/Status

Contract Orig. Price, CE, Revised Price

Contract Performance, Forecast Outturn costs

Early Warnings, CE (pend/imp), AFP

Contract Information/Status

Contract Key Dates (Plan, Forecastt)

Payment Status & History

Commercial Narrative

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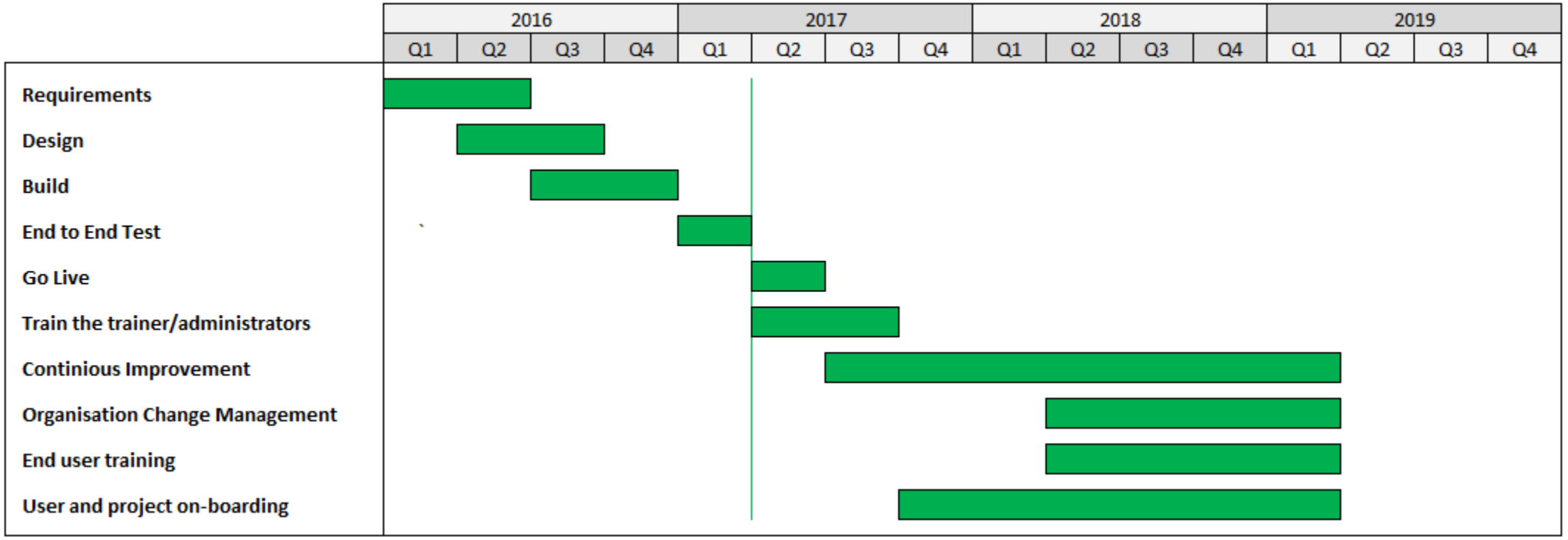
Timeline



300 users
150 projects

Business Transformation Programme - Where are we?

Contract/Commercial Management

- Alliance partners collaborating in a single system
- Greater control and visibility of potential change
- Reduction in disputes and unplanned change

Project delivery

- Single version of the truth for all projects
- Combined scope, cost and schedule data
- Efficient reporting showing all aspects of delivery

Integration

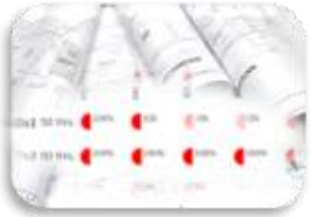
- Reconciliation with SAP for payment applications
- P6 schedule and cost data combined for accurate reporting
- Automated data transfer for contract, PO's and AFP's

Looking to the future

Transition the estate to Software-as-a-Service to simplify IT and ensure the latest and greatest is always available

Develop further reports in Primavera Analytics to provide executive dashboards. Advanced Analytics (AI/ML).

Explore Primavera Team Member as a means to better support project execution in the field and protect the integrity of data flowing back up through the management chain



Introduce Primavera Unifier Engineering Deliverables Management module to ensure efficient planning, task assignments, progress tracking and contractual turn-around obligations are met

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Lessons still to be learned and lessons Learnt

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Efficiency

What we have we done!

Industry Leading Apps

Best practice driven, loaded up with business processes, perfected by expertise.

Digital

Converts paper-based processes to digital for easier storage, powerful retrieval and data-driven analytics.

Templates

A robust set of common Business Processes and Forms helps you perform work right away.
NEC3 templates adapted for Alliance contracts.

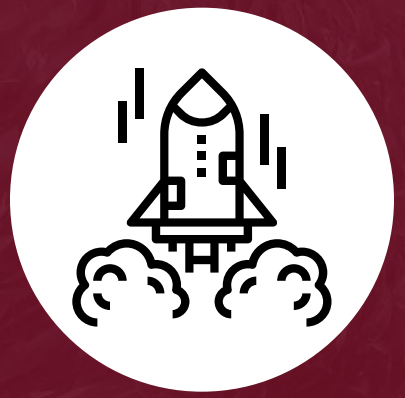
Integrations

Move large datasets automatically among applications (SAP, P6, Unifier and CostOS).

↓ Risk

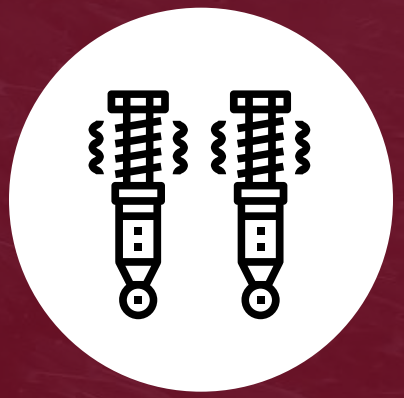
Single truth

Primavera's wide-ranging functionality and integrations mean that all the right info can live in one system.



Deploy quickly

Best practice configurations baked in, meaning it gets into user's hands quicker.



Change Management

Organizational Change Management services included, helping your people adapt.

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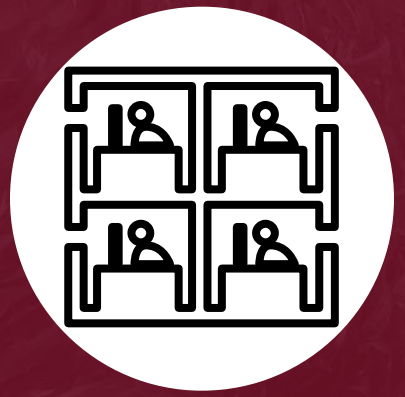
↑ Quality

Best practices

Templates to encapsulate more than a decade of experience helping orgs improve their PM skills.



Operating model

Recommended organizational roles and procedures that will best compliment the new technology.

↑ Comprehensive Solution

HyperCare

Answer all your questions and make the changes to your install that you discover you need as you execute actual projects.

Org. Change Management

Help you create and deliver unique communications that generate excitement and explain your team's objectives for adopting the new system

Training

Interactive, enjoyable and entertaining courses delivered by training professionals, engaging students to participate and quickly learn the new software and processes.

Cloud services

System deployed on scalable Oracle and Enstoa cloud infrastructure, complete with full security and hosting services.

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DO more

Additional Processes

Get more best practices templates like Estimating, Design, Quality, Safety and
Field Management

Additional Integrations

We can perform additional integrations with more of your enterprise systems.

Advanced Analytics

We can create additional business intelligence reports, dashboards and machine learning processes.

Data Migration

Have a large store of data sitting in Excel or somewhere else? We can get it all in to system.

Mobile Scheduling

Oracle's Team Member mobile app brings P6 into the field.

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↓ Time to value

30

days to production use

9

months to ROI

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Reduce complications

Deploy is fast

30 days

Continue to optimize based on actual use

Ongoing

DEPLOY | REFINE

Deployment

Breakdown structures | Users & groups | Testing

Assessment | Integration | Shell structure

Organizational Change Management

Communications plan | Newsletters | Launch events | Feedback survey

Training

Unifier Intensive | P6 Intensive

HyperCare

Onboard agents | UAT | Portal Overview | Monthly reports

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Benefits / outcomes

- Safer, faster to site and better quality
- Best customer service
- Less commercial arguments and disputes
- Greater certainty and consistency
- Great visibility
- Happier people
- Greater endeavour and productivity
- Great satisfaction

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Get it together fast

THE RIGHT SOFTWARE

Oracle Primavera Unifier

Oracle Primavera P6

Tableau

Adapters

UNBEATABLE SUPPORT

HyperCare

Organizational Change Management

Training

Cloud Services

visit us on stands 8/9

contact

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