



TRC Service Definitions G-Cloud 15 Framework

Lot 3: Cloud Support – Digital Grid Solutions

January 2026

TRCCOMPANIES.COM





TRC background & capabilities



Energy Control
Systems & DERMS



Geospatial
information systems



System architecture
& IT/OT integration



Energy market
management



Grid edge &
Data analytics



System Resilience



Advanced Metering
/ SMART



Programme management
& project controls

Sample European Utility Clients

STEDIN^{.NET}

EirGrid

NORTHERN
POWERGRID

ESB NETWORKS

e-on

United
Utilities

nationalgrid

elektrilevi

SP ENERGY
NETWORKS

BnM

YorkshireWater

Landsvirkjun

Established in 1969, focused on expert
services to Energy & Utilities

\$1B+ Annual Revenue

End-to-end IT/OT transformation partner

More than 50 utility clients worldwide



Power



Infrastructure &
Environment



Intelligent Grid
Solutions



~8,000 Practitioners
~800 IT/OT and
digital experts



150+ Offices,
5 countries and
growing

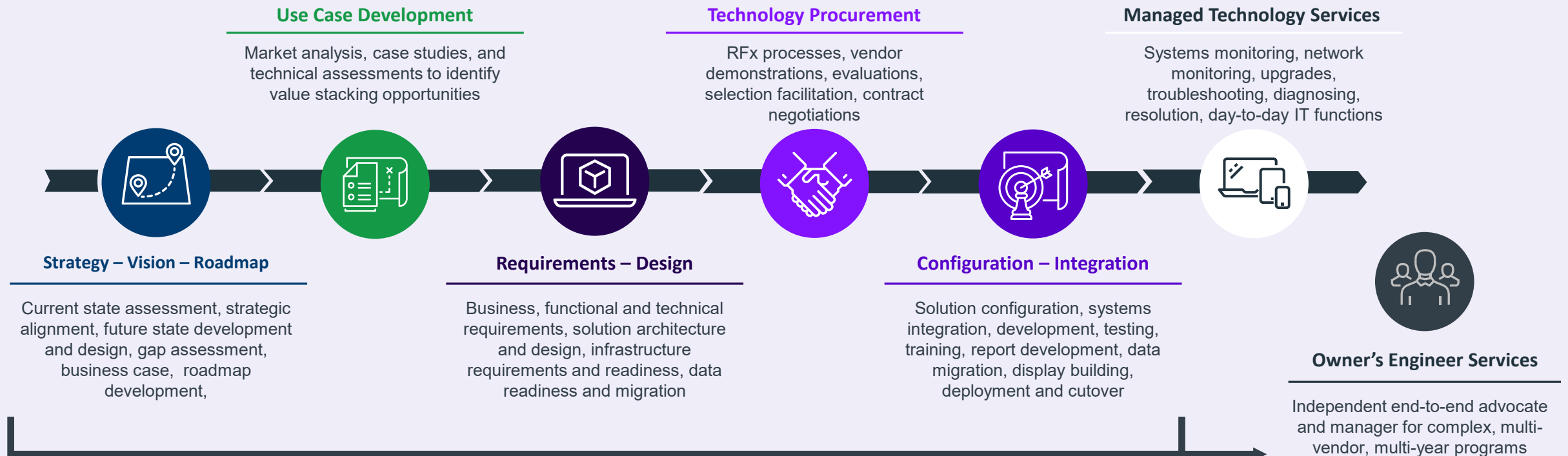


Local partner,
global reach



Comprehensive Digital Solutions

TRC offers a complete end-to-end solution for smart networks, integrating modern GIS, enterprise systems, and field data for increased efficiency, lower costs, and streamlined workflows.



Our reference framework



TRC provides a reference framework for real-time system operations and asset management, which is the standard for TSOs, DSOs and Generation

1. Business vision



2. Business capabilities & process framework



3. IT/OT reference architecture & data management



4. Cyber security framework



5. Requirements management



6. Roadmap & implementation plan



Our framework covers the entire life-cycle of a transformation



Project & program management, QA					
Plan	Tender	Design	Implement	Test	Commission
- Regulations - Market trends - Guidelines & architecture principles - Risk management - Business requirements - Functional & non-functional req. - Gap analysis	- Tender preparation and specifications - Vendor analysis - Vendor selection support - Due diligence	- Data standardisation - Process harmonisation - Configuration & development plan - Integration plan - Conversion plan - Maintenance plan - Organisational model - Test & training plan	- Configuration - Development - Integration - Data conversion - Schematics - Change mgmt. - Vendor support & QA	- P2P & protocol testing - FT/SIT - FAT/SAT - Security test - Performance test - Failover/fall-back test - Training - Certification	- Trial runs - UAT - Cut-over & aftercare - Decommissioning - Maintenance services
System architecture & infrastructure					
Data management					
Cyber security					

TRC acting as your cloud and OT implementation partner



Working side-by-side with the utility

- **Directly collaborating with the TSO/DSO on internal developments and external collaboration & QA**
Being the eyes and ears for the utility in a landscape with multiple internal stakeholders and vendors
- **Developing the internal IT-OT architecture, data management, cyber security and telecom set-up**
Enabling the right foundation for vendors to deploy their software products and be compliant with utilities' methodology and standards. This includes network modelling, I/O standardisation, GIS data exchange, and system integrations
- **Value case realisation**
Defining and managing the business case to ensure business value is being achieved

Being the implementation partner

- **Implementation partner for and with vendors**
We collaborate with many OT and cloud vendors as their implementation partner (e.g., IPS Energy, Hitachi, Emerson, GE, SE, Siemens). Additionally, we have strong relations with specialised technical consultancy and solution partners. We also act as integrator in case of multiple vendor solutions
- **Adding AI/ML to vendor solutions**
We design, develop and implement AI/ML solutions on top of existing products without creating a customised product. By using standard SDKs and APIs we enrich products with new capabilities and/or integrate with 3rd party products
- **Different collaboration set-ups possible**
Many tenders ask for a single (prime) contractor for the E2E implementation. We then act as a subcontractor. Instead of being subcontractor for the vendor, we can also act side-by-side with separate contracts and OLA in place or being the prime contractor

TRC is a vendor agnostic implementation partner of CoTS products



CoTS products only

- **TRC configures vendor products**
For our collaboration partners, we configure their products and build additional capabilities
- **TRC co-designs the E2E solution**
Defining the solution within the utility's system landscape and selecting/ implementing the vendor modules
- **TRC integrates with other products**
Using standard APIs for data exchange and product integration
- **Change management**
To allow business implementation of new products & services
- **Hardware & infrastructure**
Implement in the utility's landscape

CoTS with small variations

- **Implementing / enhancing style sheets (UI/UX)**
Define the look-and-feel of the new system, potentially introducing specific icons, colouring and lay-out
- **Adding customer-specific data to existing tables**
Products have the capability to add bespoke columns in data models, without changing the integrity of the solution. We configure/activate these
- **Using SDKs to define add-ons**
Most products provide SDKs. We can develop product add-ons via SDKs without changing product integrity
- **Product roadmap**
Together with vendors we develop the roadmap, which can add new requests to the standard product

3rd party bespoke solution

- **Integrating with 3rd party products**
TRC integrates 3rd party products seamlessly, without end users knowing additional solutions are being used
- **AI/ML integration**
Multiple cloud and OT solutions don't have full AI/ML capabilities embedded. We integrate own and 3rd party AI/ML solutions
- **IT/OT integration**
Data interoperability also means data exchange between corporate departments and the control centres (e.g., for asset performance mgmt. and workforce mgmt.). We enable the E2E process and integrations



Lot 3: Cloud support – services definitions

TRC Digital Grid Solutions

1. System operations
2. Data management
3. Asset management
4. Smart metering
5. Congestion & capacity management
6. IT-OT integration
7. Cyber security services
8. Offshore platforms & wind
9. Grid resilience
10. Agile cloud development
11. Test services for OT & IT
12. Market management services
13. Training services for OT & IT
14. GIS spatial integration
15. GIS cloud transition and support
16. Integrated project controls
17. Oracle Primavera P6

Service definition – System operations



Lot 3: Cloud Support

TRC cloud strategy, implementation, maintenance and operations services for SCADA, ADMS, EMS, GMS, DERMS, DSA, FSA, WAMS, WAMPAC, system protection and grid configuration services. Real-time and near-time data analytics for control centre operations and OT implementations, incl. Enterprise Architect modelling (e.g., ArchiMate, BPMN)

- E2E project & portfolio management for implementation
- Design of the control centre of the future
- System architecture & infrastructure
- Upgrade existing system operations
- Enterprise Architect modelling: ArchiMate, BPMN
- IoT, IIoT, sensor integration
- System implementation services
- Cyber security & resilience
- Security of supply, voltage quality, quality of service
- Simulation & calculation
- One-stop shop for system implementation
- Vendor agnostic
- On time, on budget, according to scope
- Deep technical expertise
- Trusted partner of all large software vendors
- Vast project experience, many projects executed
- Business integration
- Business case, value case realisation



Service definition – Data management

Lot 3: Cloud Support

TRC data management for IT, OT, and industrial automation. Network model management (NMM), GIS, data standardisation, data cleansing and data governance. CIM (IEC 61970, 61968, 62325), BIM (ISO 19650) and video analytics. AI/ML data provisioning and integration

- CIM and BIM integration and compliance
- Standardised data models and processes
- Use case implementation (TSO, DSO, Generation)
- Interface descriptions and data exchange definitions
- Data governance establishment
- Network model management
- TSO-DSO collaboration and exchange
- Enabling dissecting complex legacy systems
- Value creation with data
- AI/ML data services and data cleansing
- One-stop shop for data governance & management
- Vendor agnostic
- On time, on budget, according to scope
- Deep technical expertise
- Trusted partner of all large software vendors
- Business integration
- Business case, value case realisation
- Renewables, DER integration
- IT, OT data implementation
- Single source of truth, master data trust



Service definition – Asset management

Lot 3: Cloud Support

TRC services for asset management and asset operations. Compliance with ISO 55k standard (ISO 55000). Implementation of risk management, process standardisation, asset performance management, asset health analysis, asset investment planning, and integration with EAM and ERP. System protection schemes (SPS)

- ISO 55000 implementation and compliance
- Process standardisation and harmonisation
- Asset health, asset performance management
- Asset investment planning
- System protection settings
- EAM / ERP implementation
- OMS integration and implementation
- Asset management and asset operations services
- Cloud services for IT and OT AM data
- AI/ML data processing
- One-stop shop for asset management & asset operations Vendor agnostic
- On time, on budget, according to scope
- Deep technical expertise
- Trusted partner of all large software vendors
- Business integration
- Business case, value case realisation
- Renewables (RES), DER integration
- TSO-DSO integration

Service definition – Smart metering



Lot 3: Cloud Support

TRC cloud strategy, implementation, maintenance and operations services for smart metering and conventional meters. AMI/AMI, HES, MDM, MDMS implementation capability. Smart metering analytics, fault detection, LV management integration, HV-MV-LV-meter data integration. Meter roll-out strategy and new meter definition and tender support

- UK Smart DCC
- Residential, SME, C&I & Sub metering
- IEC 62056 – DLMS/COSEM
- IEC 62351 – cyber security
- Communications (PLC, MPLS, 4G, 5G, ...)
- AMI, AMR, HES, MDM, MDMS implementation
- LV insights and low voltage visibility
- Smart meter analytics and AI/ML data processing
- Congestion analysis, meter-to-cash
- Regulatory compliance
- One-stop shop for (smart) metering
- Vendor agnostic
- On time, on budget, according to scope
- Deep technical expertise
- Trusted partner of all large software & meter vendors
- Business integration
- Business case, value case realisation
- Value creation with meter data
- Regulatory adherence

Service definition – Congestion & capacity management



Lot 3: Cloud Support

TRC congestion & capacity management analysis, asset strategy, investment planning, congestion products definition and implementation. Voltage quality analysis, capacity constraints analysis, dynamic security assessments, updating company policies and regulations. Connecting more customers and industry, enabling economic growth while maintaining security of supply

- E2E congestion & capacity analysis
- Voltage quality analysis
- Closed loop ring, network design
- Batteries, RES, DER integration
- AI/ML network analysis
- Network planning
- Network topology
- Risk-based asset management
- System implementation services
- Regulatory compliance
- One-stop shop for congestion & capacity services
- Vendor agnostic
- On time, on budget, according to scope
- Deep technical expertise
- Trusted partner of all large software vendors
- Business integration
- Business case, value case realisation
- Connecting more customers & industries
- Increased network capacity
- Congestion heatmaps



Service definition – IT/OT integration

Lot 3: Cloud Support

TRC cloud strategy, implementation, maintenance and operations services for IT-OT integration, industrial IT, process IT and corporate IT. System architecture, solution architecture, integration layers, enterprise service bus (ESB) and business process integration. Linking business processes to IT/OT systems, incl. Enterprise Architect modelling (ArchiMate, BPMN)

- E2E system & solution architecture
- E2E project & portfolio management for implementation
- Integration layers, DMZ
- Smart grid reference architecture
- Smart Grid Architecture Model (SGAM)
- Sparx EA (ArchiMate, BPMN)
- IoT, IIOT cloud integration
- Architectural principles and security guidelines
- End-of-life and legacy replacement projects
- System implementation and integration
- One-stop shop for system & solution architecture
- Vendor agnostic
- On time, on budget, according to scope
- Deep technical expertise
- Trusted partner of all large software vendors
- Business integration
- Business case, value case realisation
- Project, programme and portfolio management
- Decreasing dependencies between projects



Service definition – Cyber security services

Lot 3: Cloud Support

TRC cloud strategy, implementation, maintenance and operations services for cyber security. Embracing ISO 27001 (corporate risk), NERC CIP, IEC 62443/NIS2 (process automation) and IEC 62351 (protocol security). National cyber security centre (NCSC) and cyber assessment (CAF), GOVS 007 and E3CC alignment with BEIS, Ofgem and NCSC

- E2E cyber security and resilience services
- ISO 27001, NERC CIP, IEC 62443/NIS2
- CAF, E3CC, BEIS and NCSC strategy compliance
- Secure system architecture for IT and OT
- DMZ, PKI, firewalls, antivirus, LDAP/AD
- SIEM and system monitoring (sysmon)
- IT-OT integration
- Architectural principles and security guidelines
- Security implementation and integration
- Cyber resilience
- One-stop shop for cyber security services
- Vendor agnostic
- On time, on budget, according to scope
- Deep technical expertise
- Trusted partner of all large software vendors
- Business integration
- Business case, value case realisation
- Cyber compliance, NIS2 compliance
- Cyber defence



Service definition – Offshore platforms & wind

Lot 3: Cloud Support

TRC cloud strategy, implementation, maintenance and operations services for offshore gas, electricity, hydrogen and CO₂. Renewables and distributed energy resources (wind, solar/PV, battery/EV, micro co-generation). Tender specification, requirements managements, OT implementation services and cloud integration.

- Offshore process IT / OT requirements
- Renewables and DER integration
- Offshore and local SCADA/DTS
- HVDC connectors and substations
- Tender preparation and running
- IEC 61892 compliance for offshore platforms
- IEC 61936 and IEC 60092 series
- IEC 60079, IEC 60533, IEC 61508/61511 standards
- HVDC stations
- Operational planning (OPS) and optimisation
- One-stop shop for offshore utilities
- Vendor agnostic
- On time, on budget, according to scope
- Deep technical expertise
- Trusted partner of all large software vendors
- Business integration
- Business case, value case realisation
- Enabling new RES and DER

Service definition – Grid resilience



Lot 3: Cloud Support

TRC strategy, implementation, maintenance and operations services for outage reduction and network improvements: SAIDI, CAIDI, SAIFI, SAIDI optimisation. Vegetation management, grid investments, outage prevention, outage impact reduction and digitalisation

- SAIDI reduction
- Business vision and strategy
- Regulatory compliance
- E2E business implementation
- Alignment of asset management, asset operations and grid operations
- Financial (TOTEX, CAPEX, OPEX) optimisation
- Cyber resilience
- Power system robustness & stability
- Protection, fault detection & self-healing (IEC 60255, 61869)
- IEC 61850, substation automation, IEC 104 (IEC 60870-5-104), DNP3
- One-stop shop for grid & cyber resilience
- Vendor agnostic
- On time, on budget, according to scope
- Deep technical expertise
- Trusted partner of all large software vendors
- Business integration
- Business case, value case realisation
- Resilience improvement programmes



Service definition – Agile cloud development

Lot 3: Cloud Support

IT/OT implementation services for utilities: Co-development, design and implementation services following Agile, Scrum, SAFe Agile Framework, and Waterfall. Delivery of SaaS, PaaS, IaaS, XaaS and in standard software packages and custom developments. Performing cloud migration projects

- IT-OT delivery
- SAFe Agile Framework, Scrum, Waterfall
- Data migration
- Business & IT service migration
- Data cleansing
- Functional and technical design
- Coding and development (e.g., C#, Python)
- Testing and deployment
- Change management, transformation management
- Commissioning, decommissioning
- One-stop shop for IT-OT delivery
- Vendor agnostic
- On time, on budget, according to scope
- Deep technical expertise
- Trusted partner of all large software vendors
- Business integration
- Business case, value case realisation
- Strong project metrics and proven track record

Service definition – Test services for OT & IT



Lot 3: Cloud Support

E2E test management for OT and IT business processes, systems/applications and people developments. Enabling automated testing, scripting and code quality analysis, for FT/FAT, SRT, integration tests, performance tests, compliance tests, UAT/SAT and go-live support

- Support for the whole V-model
- TMMi framework
- DevOps test embedding
- IEC 61850 test compliance
- Safety & reliability testing frameworks
- Cyber security testing (IEC 62443, 62351)
- Automated testing
- AI/ML test optimisation and analysis
- One-stop shop for OT (and IT) test management
- Vendor agnostic
- On time, on budget, according to scope
- Deep technical expertise
- Trusted partner of all large software vendors
- Business integration
- Business case, value case realisation
- Proven testing in critical infrastructure

Service definition – Market management services



Lot 3: Cloud Support

TRC delivery of consulting and market readiness programmes (regulatory-driven, multi-stakeholder), providing market experts. Design and development of scheduling and dispatch programmes, operational system planning and RES/DER integration. Balancing, capacity and wholesale markets

- Design market rules based upon regulatory & business requirements
- Market establishment and change delivery in EU
- Conduct market and system studies to validate market rules
- Vendor management, MMS implementation and MMS extensions
- Market simulation execution with key internal/external stakeholders
- Development of technical requirements based on market rules
- Validation of optimisation models to meet key objectives
- DER integration and market impact analysis
- FTR, capacity, ex-ante, balancing, and market settlements
- TSO, BRP market process implementation
- One-stop shop for markets and regulatory developments
- Vendor agnostic
- On time, on budget, according to scope
- Deep technical expertise
- Trusted partner of all large software vendors
- Business integration
- Business case, value case realisation
- Market bid-to-bill, platform and systems
- Market change programme planning, structuring, and delivery
- Readiness assessments



Service definition – Training service for OT & IT

Lot 3: Cloud Support

E2E user training for OT and IT business processes, systems/applications and people developments. Development of user manuals, validation of product documentation, enabling training programmes, train-the-trainer to verify the organisation is ready accept new OT (and IT) developments going live

- Change and transformation management
- Project documentation (CMMi, TMMi)
- User manuals
- Train-the-trainer and end-user training
- Cut-over plan
- Change enablement
- Business case realisation
- Troubleshooting and ticket logging
- Go-live support and aftercare
- One-stop shop for OT (and IT) training
- Vendor agnostic
- On time, on budget, according to scope
- Deep technical expertise
- Trusted partner of all large software vendors
- Business integration
- Business case, value case realisation
- Acceptance of changes and using new functions in critical infrastructure

Service definition – GIS spatial integration



Lot 3: Cloud Support

TRC's geospatial solutions help organisations unlock value and efficiency by enabling new insight. We democratise spatial data through a single portal, providing support for an increased range of business functions. Our award-winning spatial innovations help you make sense of data, maximise your spatial investments and improve decision making

- Intuitive and sophisticated spatial asset management, maintenance & defect resolution
- View/analyse asset and survey data via a single enterprise portal
- Spatial browsers configured for web and mobile (Esri, VertiGIS, open-source)
- Survey data management and integration (mobile, imagery, UAV/drone video, Lidar)
- Spatial programme control integrating schedule, designs, surveys, maps and imagery
- Convey vision and improve stakeholder reporting using augmented reality
- Enterprise integration – Esri, SAP, Salesforce, Primavera, design/document management
- Integrate/support technologies – Esri, Geocortex, ProjectWise, FME, Potree, open-source GIS
- Unified field-office-field information using map-based integrated mobile applications
- Industry compliant data models – OGC, INSPIRE, Utility Network, BIM
- Single portal for asset, survey, CAD, document and scheduling data
- Remove the need for multiple specific, specialist desktop applications
- Asset management/survey data available to a wider audience including non-specialists
- Greater remote management / maintenance capabilities to support field operations
- Manage H&S, suppliers, quality and progress from survey data
- Improved decision making through better data visibility, accuracy, quality, reliability
- Enhanced defect identification and resolution - reduced asset assessment time
- Easy access to supporting evidence for milestone completion and payment
- Improved stakeholder visibility and reporting
- Esri Platinum partners, SAP spatial integrators, Oracle Cloud Sell partner

Service definition – GIS cloud transition & support



Lot 3: Cloud Support

TRC's Geospatial Information System (GIS) transition and support services focus on the design, delivery, integration and support for your GIS platform. This includes strategy, implementation and data management/migration and can encompass transition from on-premise to cloud. TRC provides comprehensive application and technical support for your solution

- GIS cloud strategy and architecture
- GIS design reviews and system health checks
- Implementation and hosting on cloud infrastructures or your own infrastructure
- GIS application build, upgrade, configuration, support and training
- Integration of GIS with other enterprise systems
- Data strategy, design, management and migration (including Esri Utility Network)
- Industry compliant data models (OGC, INSPIRE, IFC, COBie, BIM)
- Spatial reporting and dashboards
- Technologies supported: Esri, VertiGIS, FME and Open Source
- Service management including application administration and technical support
- One stop shop for geospatial solutions and services
- Broad expertise, vendor and technology agnostic - trusted advisor
- Complex transition experience in a variety of sectors
- Enhanced customer service and support
- Cross industry experience including transport, utilities, construction & environment
- Domain expertise - policy, regulation, engineering standards, operations and maintenance
- Highly skilled, certified and experienced professionals
- Focus on benefits and RoI in line with strategic objectives
- Application hosting / managed service including via 3rd party partners
- Esri platinum partner, SAP integration partner, Oracle Cloud Sell partner



Service definition – Integrated project controls

Lot 3: Cloud Support

TRC's Integrated Project Controls services support Oracle (Primavera P6EPPM, Oracle Primavera Cloud (OPC), Unifier, Gateway, Primavera Risk Analysis, Aconex, Analytics), Deltek (Cobra, PM Compass, ProPricer, Open Plan, Touchstone, Acumen Fuse and Risk), InEight Model Suite, Kahua, EcoSys, Safran Risk, Contruent (Ares Prism), Goliath Performance Monitor and Microsoft Project/EPM

- Integrated Project Control Systems Cloud Strategy and Architecture
- Integrated Project Control Systems Health checks
- Implementation and Hosting on cloud infrastructures or your own infrastructure
- Integrated Project Control application build, upgrades, configuration and application support
- Project Controls integration to third party applications
- Bespoke/customised training course development and management
- Migration from other systems including MS Project
- Spatial and Programme Controls Reporting & Dashboards configuration
- Service Management including administration
- One-Stop Shop for Hosting and Support Services
- Vendor Agnostic
- Enhanced Customer Service
- Integrated Business Platform
- Deltek Professional Services Partner
- Oracle Primavera Cloud Sell Partner
- InEight Model Partner
- ESRI Platinum Partner
- SAP Integration Partner
- License Acquisition

Service definition – Oracle Primavera P6



Lot 3: Cloud Support

TRC's Enterprise Project Portfolio Management (EPPM) consulting services provide just what your team needs to implement, integrate and technically support your Primavera P6EPPM, Oracle Primavera Cloud, or Unifier solution. We provide Strategic Consulting, Licenses, Implementation/Configuration, Bespoke/Customised Training, Administration, Data Management/Migration, Application Support, Cloud, Hosting and Integration services

- P6 and Programme Control Systems Cloud Strategy and Architecture
- P6 and Programme Controls Systems Health checks
- Implementation and Hosting on cloud infrastructures or your own infrastructure
- P6 Application Build, Upgrades, P6 Configuration and P6 Application support
- Oracle Primavera P6, Unifier and Risk Analysis (PRA) Licence procurement
- Integration to Unifier, GIS, SharePoint, Deltek, InEight, Acumen Fuse, ERP
- Bespoke/customised P6 and Unifier Training course development and management
- Data migration from other planning systems including Microsoft Project EPM
- Spatial and Programme Controls Reporting & Dashboards configuration
- Service Management including P6 and Unifier Administration
- One-Stop Shop for Hosting & Support Services
- Vendor Agnostic
- Enhanced Customer Service
- Integrated Business Platform
- Oracle Primavera P6 EPPM Specialist Partner
- Oracle Partner with Cloud Sell track
- ESRI Platinum Partner
- SAP Integration Partner

Thank you!

Critical infrastructure security & resilience



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