



Cohesive

environment Lifecycle digital integrator delivering transformational outcomes through the built and natural environment Lifecycle digital integrator delivering transformational outcomes through the built and natural environment Lifecycle digital

Environment Lifecycle digital integrator delivering transformational outcomes through the built and natural environment Lifecycle digital integrator delivering transformational outcomes through the built and natural environment Lifecycle digital integrator delivering transformational outcomes through the built and natural environment

Content

| | |
|----------------------------------------|----------------------------------------------------------|
| Deliver - Operate - Optimize04 | Digital Strategies, Business Cases & Roadmaps 12 |
| What's important to us?.....05 | Enterprise Asset Management.....14 |
| How we help our clients06 | Asset Performance Management16 |
| Where has Cohesive come from? 07 | Digital Engineering & Construction18 |
| The sectors we work in08 | Bidding & Project Support.....20 |
| Our geography10 | People & Transformation..... 22 |
| | Data Content Management..... 24 |
| | Prediction & Analytics26 |
| | Requirements Management & Progressive Assurance 28 |

Cohesive is a lifecycle digital integrator – delivering transformational outcomes across the built and natural environment.

Thriving in a digital age

The rate of digital adoption is accelerating.

Every sector is examining how it works and how it uses technology to become more efficient, to meet ever increasing customer expectations – and to remain agile in the face of global trends and influences.

Asset owners understand the value of embedding digital processes across their operations, but many are uncertain about how to seize the opportunities presented and where to turn to – how, in short, to make digital transformation a success.

Cohesive is changing this. Bringing together the best in digital engineering capability, asset performance management and infrastructure digital solutions from around the globe, we have developed the first truly integrated approach for the management of critical assets and services.

Cohesive: Empowering asset owners

Founded by Bentley Systems, the US infrastructure software leader, Cohesive brings together six global digital and asset management organisations, each a leader in its field.

Our services span the entire asset lifecycle and focus on how we can help you be infinitely more successful, achieving your service, fiscal, environmental and social goals. We achieve this through a blend of technology, process and people transformational change, working with clients either as a light touch or full outsource of your asset delivery and management needs.

An independent and technology agnostic digital integrator, we provide not just industry-leading digital tools and solutions, but the multidisciplinary expertise and the depth of engineering and construction knowledge needed to help owner operators and their teams to embed them within their organisations.

Operating across the Americas, EMEA and Asia-Pacific, we are experienced across key sectors including energy and utilities, transportation and mining, manufacturing, buildings and communities.

Our integrated and trailblazing approach to the management and delivery of assets has immediate impact and helps asset owners to optimize performance, proactively predict problems and gain access to the continuous operational insights which are essential for reduced downtime, reliability, efficiency and safety.

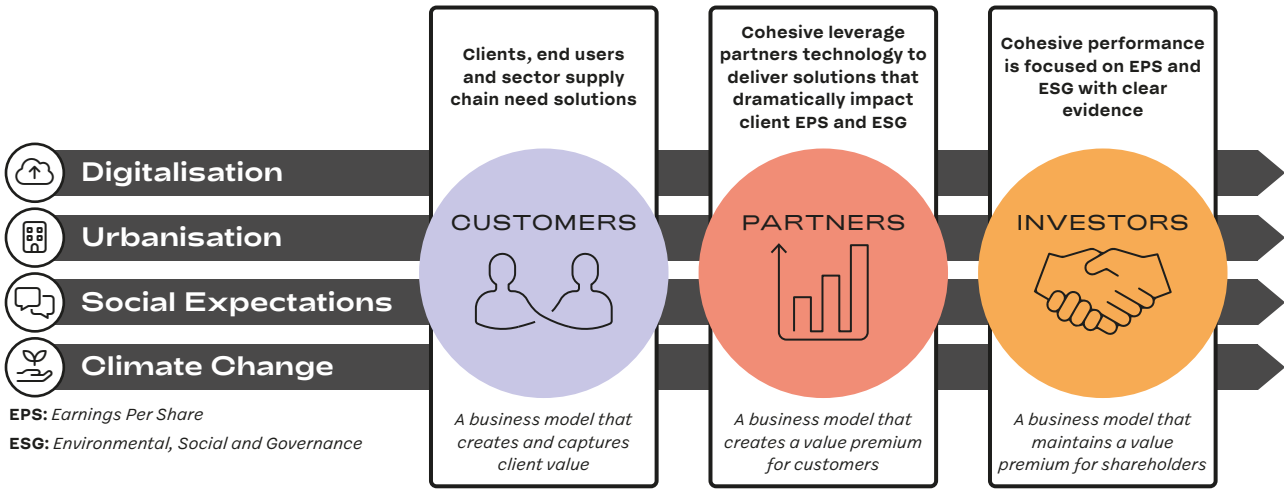
The world is rapidly changing. We are all facing the global megatrends of digitalisation, urbanization, social expectation and climate change.

Clients are expected to manage these challenges and at the same time, continue to respond to market demand with assets and networks that take decades to develop and deliver.

Our diverse team of 667 colleagues stand ready to help you overcome these complex challenges and realize your business potential by transforming the way you deliver and manage your assets in the built and natural environment using proven methods that deliver high-value availability, increased performance, and provide significant cost and carbon benefits.

Our mission and aim is to provide you with a physical and virtual world that dramatically improves your business efficiency focusing on customer outcomes and user financial, environmental and social performance.

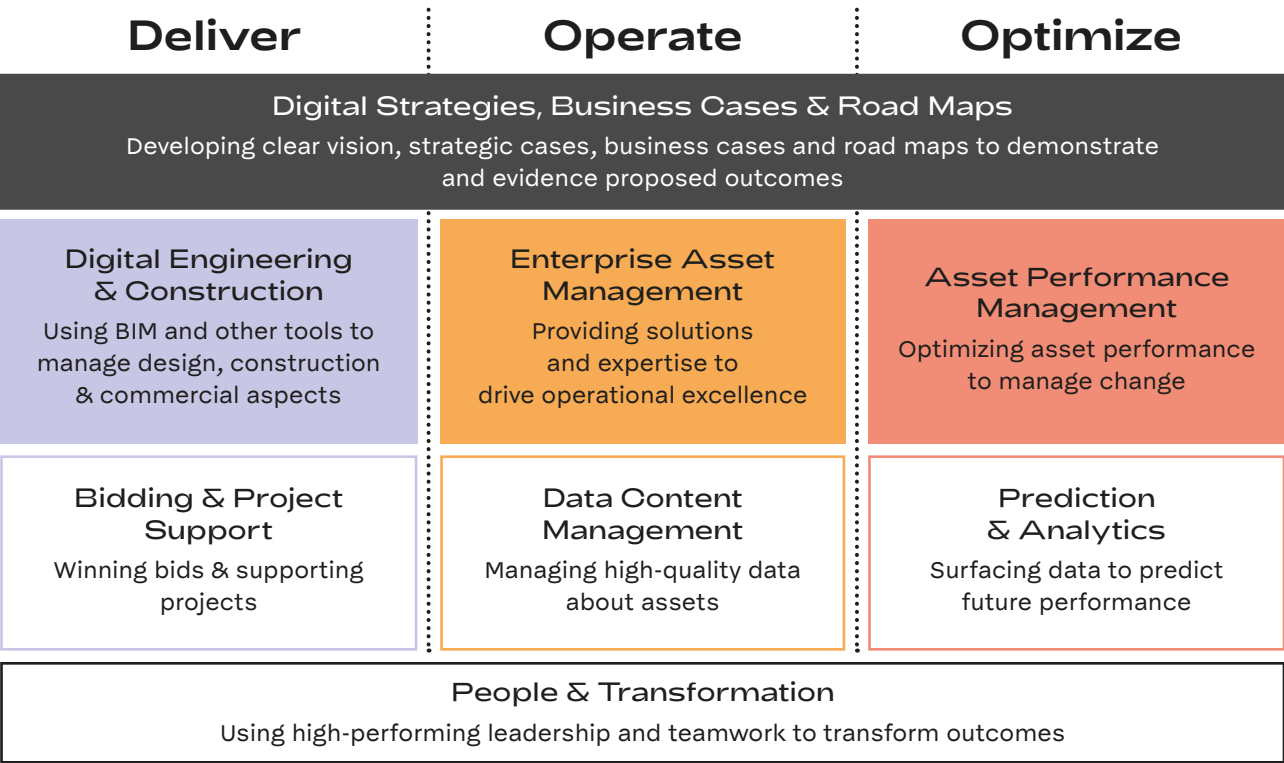
"By creating value in data, we provide information to help our clients to realize their potential. Our diverse team and expert knowledge of the built and natural environment ensures that we deliver processes and solutions that solve our client's most complex asset-related challenges."




Our mission to accelerate digital transformation across the infrastructure and asset management markets is underpinned by our commitment to working in a responsible, ethical and socially considerate way.


We work in partnership with our customers, our partners and our investors and are focused on embedding environmental, social and governance considerations as a fundamental factor in how and where we work.


We work across the asset lifecycle with teams that specialize in the three key stages of asset delivery, operation and optimization. Our key services are summarized below.





Cohesive is comprised of the historic brands of Cohesive AP, Cohesive Solutions, OnTracks , Oxplus, Professional Construction Strategies Group (PCSG), SRO Solutions, ComplyPro, MaximoCon and Vetasi, recognised around the world for their delivery of digital strategy, systems integration, enterprise asset management and data analytics services.


**Cohesive Asset Performance:** Cohesive Asset Performance, a Bentley Systems company, focusses on providing Professional Services related to Bentley System’s suite of asset management software products.


**Cohesive Solutions:** Cohesive Solutions helps asset-intensive organizations implement, optimize, and continuously improve their asset management programs. Our team specializes in highly regulated industries such as Power and Utilities, Oil and Gas, Manufacturing and Public Sector.


**OnTracks:** Ontracks Consulting is the leading North American implementer of IBM Maximo and operational improvement firm. The first Platinum IBM Maximo Business Partner, they focus on delivering enterprise implementations and helping our clients realize tangible and sustainable operational improvements.


**OxPlus:** Oxplus is The Smart Asset Management Company. They enabled Railways and Rolling Stock organizations to manage their assets in a safe, reliable and efficient manner AND improve and predict maintenance processes based on existing data.

**Professional Construction Strategies Group:** PCSG is a built environment professional services consultancy specialising in the implementation of innovative use of digital tools to transform the way assets are designed, built and operated. They have one of the UK’s leading bid content teams and have developed the GeoConnect+ digital twin integration platform.

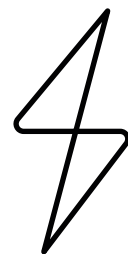
**SRO Solutions:** SRO Solutions is a dynamic software consultancy that positions innovation at the forefront of their approach to engaging with clients in connected and remote environments. Their heritage in engineering, coupled with their technical competency and Agile® methodology enables them to overcome the most complex projects with outstanding results and outcomes.

**ComplyPro:** ComplyPro simplifies the delivery of assurance on complex rail projects, reducing the cost and time typically associated with poor design visibility and build non-compliance. Reduce the need for costly parallel assurance processes and increase the integrity, efficiency, and quality of design and delivery across and throughout project and asset lifecycles.

**MaximoCon:** MaximoCon, founded in 2015, offers both technical and functional senior-level expertise to IBM Maximo Enterprise Asset Management implementations.

**Vetasi:** Vetasi is an international consultancy specialising in solutions for Work & Enterprise Asset Management (EAM), Asset Performance Management (APM), Asset Lifecycle Management (ALM), IT Service Management (ITSM) and Integrated Workplace Management Systems (IWMS) that transform and streamline business operations.

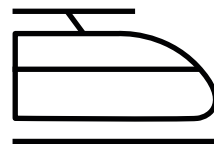
The sectors we work in



Energy & Utilities

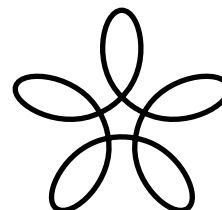
In an increasingly complex world, Cohesive helps to protect the resilience and reliability of the world’s energy and utilities networks by supplying world-class solutions for owner operators that transform the management of these critical services.

As the world transitions to decarbonized energy systems, Cohesive is also at the forefront of work to support the emerging long-duration energy creation and storage technologies that will be critical for the widescale deployment of renewable clean energy.



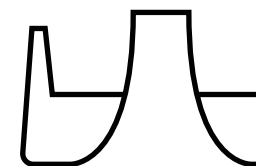
Transportation & Mobility

Cohesive supports the design, build, operation and optimisation of the world’s leading transportation projects and programmes. We are helping them to implement world-class technology solutions that deliver an outstanding customer experience. Our work helps to optimise the flow of people and goods around the world, improving the long-term financial, social and environment sustainability of transport networks.



Natural Environment

The impact of human activity has had a catastrophic impact on the natural environment. Cohesive works with the world’s largest and most complex asset owners to find ways of mitigating these impacts. We also work with many environmental agencies across the world, using technology to predict and prevent danger and damage to livelihoods and homes through the design and delivery of new and innovative solutions.



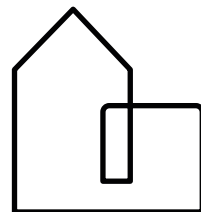
Manufacturing & Mining

Cohesive helps manufacturing and mining companies from around the world to undergo lasting digital transformation that optimises their asset performance, productivity, and safety. We provide the solutions and expertise necessary to make critical strategic decisions across the end-to-end asset lifecycle of their estates.

Building & Communities

Providing safe, secure and liveable homes, facilities, campus, estate and communities, and negating the environmental impacts of the delivery and management of major infrastructure is critical to meeting the UN Sustainable Development Goals and global environmental commitments as well as social expectations.

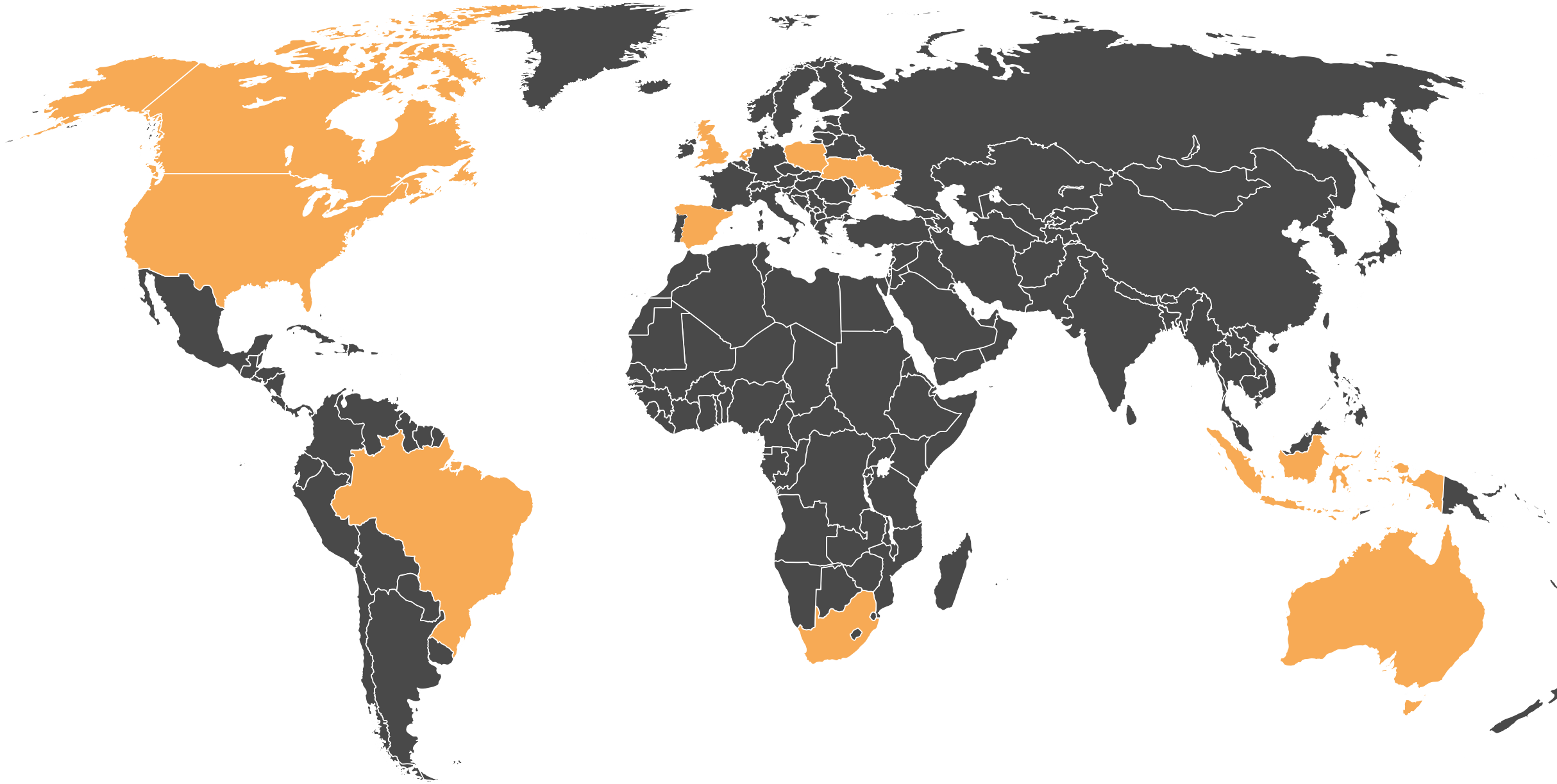
Cohesive’s extensive industry expertise enables us to provide a consistent and reliable approach to unlocking value and demonstrating change as developers and owners transform the way they acquire and grow their businesses.



Our geography

With exceptional Cohesive Colleagues around the world, we combine global expertise and local insight to guide companies through the digital transformation journey and turn their ambitious goals into reality.

Cohesive is a global digital integrator with a local presence in the Americas, EMEA and Asia-Pacific.



Developing clear visions, business case as roadmaps to transform outcomes



We bring over thirty years of experience developing and implementing high-quality digital strategies for governments, owner-operators and key industry suppliers.

Working collaboratively, our starting point is detailed discovery activities. We use our proven methods, approaches and technologies to provide a clear vision of the future in clear, accessible language.

We build visions based on organisational outcomes, often being asked to design new operating models as well as data and technology plans.

Our approach also includes using the 'Five Case' model and other standard approaches including, in the UK, the UK Government 'Green Book'.

Our commercial and outcome models clearly demonstrate how fiscal, environmental and social aspects of the vision will be achieved with clear return on investment and risk bias.

Service Areas

- Discovery and establishing current & market conditions
- Setting multi-stage visions
- Build case & realization strategies
- Benefit cases
- Public sector methods (including Green Book)
- Target operating models
- On-going monitoring & review

Leveraging our extensive enterprise asset management expertise to drive reliability and efficiency of client's asset portfolios and improve profitability and customer experience.

98% of the world's managed asset base already exists with average replacement/additions of around 2% new each year. To enable the most effective and safe delivery of service, asset owner-operators need to ensure that their existing assets are maintained in a manner that maximizes availability for use at all times they are required.

Effective maintenance programmes are key to providing capacity and availability for our clients to meet their customer's needs. Cohesive has extensive knowledge and experience of developing and delivering Enterprise Asset Management capabilities, helping clients to deliver pragmatic solutions that are supported by high-quality technical solutions.

We have experience of working with a wide number of world-class partners including IBM to deliver

Maximo implementations. We have also developed IBM Maximo to enable lifecycle data integrated data services, new remote working tools and mobile capabilities to support offshore assets with poor connectivity.



Service Areas

- Strategic planning, business cases and ISO55001 compliance
- Assessment and maturity checks
- Change and business transformation
- Health checks, peer reviews and strategy development
- Development and implementation of information and data standards
- Digital process development and implementation
- System selection and implementation
- Client representative and 'digital clerk of works'
- Data migration, integration and quality
- Record management and systems administration

Optimizing asset performance to drive efficiency and operational excellence of our clients asset portfolios



Asset Reliability Strategy Development

The impact of service load and time has a disproportionate impact on an asset or system's performance.

Environmental conditions, effectiveness and quality of maintenance, and changes in use all drive new scenarios, impacting assets and, by extension, service and customer outcomes.

Cohesive has extensive experience in providing industry best practice consulting and implementation of Asset Performance Management (APM) and analytics systems enabling you to predict and manage your assets and networks to proactively provide cost-effective, carbon-optimized and reliable services.

Asset Health Monitoring

Our focus for APM solutions is optimizing productivity and asset reliability through continuous cycles of asset improvement. This continuous improvement culture requires robust asset performance management systems and standard business processes and KPI's to track overall asset performance and health.

Our vision for maintenance and equipment reliability is the realization of a proactive approach based on the health of an asset rather than a reactive approach based on time or throughput-based scheduling.

Our Internet of Things (IOT) based services and solutions enable you to run your operation more smoothly with context and confidence. To do this we provide rapid data-driven insights and advanced analytical capabilities that improve asset performance, reduce costs, and facilitate mission-critical decision-making in a timely manner.

Our accessible, high-quality and accurate data can help you to improve business processes and asset performance, reducing unnecessary costs, carbon and resource hours.

Cohesive also provides a comprehensive benchmarking, consulting and implementation service for decision support systems that enables proactive management of assets. In the transport and mobility sector we work with a number of partner products including Bentley's AssetWise ALIM and AWLA systems. ALIM enables the management of tags and documents through their whole lifecycle whilst AWLA enables us to compare and analyze large volumes of current and historic track and trail asset data enabling engineering professionals to greatly improve their maintenance strategies and planning.

This allows us to compare and analyse large volumes of current and historic track and rail asset data enabling engineering professionals to greatly improve maintenance strategies and planning.

Our solutions include a powerful data analysis engine that automates quality indexing, forecasting, prioritization, and planning of repairs leading to improved service, safety and reliability, reducing maintenance and equipment costs, and increasing profit margins.

Service Areas

- Asset risk prioritization
- Safety analysis and management
- Asset condition monitoring and operational analytics
- ISO55001 strategy planning and compliance
- Health check, peer review and strategy development
- Development and implementation of information and data standards
- Digital process development and implementation
- System selection and implementation
- Data cleansing and migration
- Integration to enterprise applications including GeoConnect+, SAP EAM,
- IBM Maximo, Bentley AssetWise & Oracle eAM
- System administration and support
- Implementation and services for adoption of Digital Twins

Using BIM and other digital tools to manage the design, construction and commercial performance of new asset delivery and upgrades

Organizations faced with the need to deliver a new asset will expect some impact on the performance of their existing core business.

Cohesive works with clients to minimize the impact of the construction delivery process and ensure that new assets are delivered on time and on budget through the innovative use of data and technology supported by effective people change and support.

The use of a virtual or digital twin is an emerging method to help clients to reduce risk and improve productivity. The journey to a digital twin often starts with a new asset, when the provision of high-quality information and data substantially improves the understanding and governance of complex concepts.

Using requirements management, simulation, building information modelling, project controls and a range of other tools, Cohesive helps suppliers and clients to optimize their activities and ensure effective decision-making and increased productivity.

Our GeoConnect+ and digital integration suite enables all requirements, design, project management and site management data to be integrated and optimized enabling significant efficiencies and improved financial, social and environmental outcomes.

Service Areas:

- Information management strategies and systems
- Information procurement and planning
- Standards, methods and procedures
- Information assurance, delivery and assessment management
- BIM management (3, 4, 5D), including Bentley Synchro
- Project management
- Insight and intelligence
- Technical delivery support and training



Cohesive provides high-quality bid management, writing and production services to construction industry clients of all sizes, primarily across the infrastructure, buildings and facilities management sectors.



Our approach is to fill the gaps on bid teams with high calibre, experienced people who work as integrated members of our clients' teams to produce high scoring submissions.

We also specialise in helping clients to prepare for tender presentations, interviews and behavioural assessments – an increasingly important part of major infrastructure tenders – as well as to produce high-quality and compelling project communications which showcase our client's achievements.

For us, it is all about quality of service – providing the right people, processes and systems our clients need to deliver high quality bids.

We are proud of our long-term client relationships and that our work continues to help win and deliver high-profile infrastructure around the world.

Our clients frequently ask us to continue our involvement during mobilisation to help de-risk this activity.

We also provide experienced resources to support projects directly from the early planning stages, where activities include project management and design management, as well as designing and writing technical documents and plans.

Service Areas:

- Major infrastructure bidding
- International bidding
- Project support (mobilisation)
- Project support (people)
- Project support (management)
- Iconic major buildings development bids
- Bid support for major frameworks and alliances
- FM and services sector bids

High performance leadership and teamworking to transform outcomes

The sheer pace of change in the 21st century is creating significant challenges for organisations of all shapes and sizes. Attracting, engaging and retaining the best talent in the market is an increasingly complex challenge that creates significant value when managed effectively.

Cohesive works with individuals, departments, project teams, executive boards, joint ventures (JV) and alliances to help develop high-performing teams and improve communication in an environment of mutual trust and respect.

We work with clients using our high-performing team model and other leading tools to develop approaches which deliver the right results.

Our work has been delivered around the world and centres on specific objectives and outcomes. We create an environment where people can be open and honest and work together to focus on key issues. We help develop people's understanding of the profound differences between each person's approach and their natural strengths. This provides the basis to develop ways of working to each person's strengths and reduces risks resulting from a lack of team working.



Service Areas

- Transformational change programmes
- Communication & stakeholder engagement and management plans
- Benefits management
- Collaboration and high-performance teams
- Setting up projects, alliances and JVs for success
- Tender interviews and behavioural assessments
- Teams in difficulty and conflict resolution

Managing high-quality data about your assets so you can concentrate on making good decisions and running your business



Many businesses have invested heavily in data creation and collaboration systems but are suffering from institutional data that either cannot be found, is low quality, or both. Cohesive recognizes the unique challenges of managing asset data over the long-term for business benefit.

We specialize in not only optimizing your data creation capabilities in tools such as Maximo but also enabling data cleansing and refactoring with new or additional data sets.

We are also experts in data integration and mastering where our GeoConnect+ solution has unique features to master your estate or network data across all applications holding common exchange schemas and reference data to provide 'Google' – like plain language searching and system of record availability.

Our approach is equally applicable to new or existing developments where we integrate all legacy systems across your IT infrastructure. We also provide access to both public and our own data sources involving systems such as Uniclass / Omniclass and various other local, national and international and satellite spatial data sets.

Cohesive can provide you with a single port of call for data quality and integration services that enable a single point of truth whatever your legacy asset or network condition. This foundation capability enables compliant record keeping, rapid easy searching and the basis for your digital twin journey. Cohesive provide such services to High Speed 2 and the UK National Highways Agency..

Service Areas:

- Strategic planning and architecture design
- Proven accessible data and information
- Single source of truth
- High security
- System of record
- Specialist master and reference data management
- Cyber security

Traditional approaches to asset management have failed to achieve the balance between commercial viability and appropriate customer service. The needs of the customer are driven by service and asset availability.

Any lack of availability inevitably leads to frustration and added cost, as well as reduced customer perception and revenue to the operator.

The use of linear planning processes, failing to commission or manage warranty processes and not understanding how an asset is used, leads to maintenance strategies which either over or under-maintain assets. This results in unpredictable performance and waste. To better understand the asset and its associated systems and components, we measure key attributes and create engineering feedback data flows which enables us to understand how each part of the asset is being operated.

Our sector solutions include AssetWise Linear Analytics and AssetWise 4D Analytics which provide data insights that identify the root-cause of performance degradation and to enable optimized performance over time.

We use mathematical, machine learning and artificial intelligence models to enable a more predictive approach to asset maintenance and operation for clients including BP, Shell, Queensland Rail, Canadian National Rail and New York MTA.

Service Areas:

- Management strategies
- Outcome planning
- Measurement through IOT and Data Ingestion Services
- Insight and intelligence
- Operational Analytics
- Asset and organisational optimisation
- Assurance and assessment
- Systems solutions
- Support and training



Management of outcomes and requirements is a complex and often underperformed activity. Providing clarity of requirements at a system-level allows an asset owner to properly track how the design and delivery activities contribute to an asset that fully meets the clients expectations as well as providing – where necessary – evidence of audit trails, safety cases and the golden thread.

The approach also enables improved safety outcomes through the effective identification, management and mitigation of project-wide hazards, improved project governance to ensure compliance with legal standards and regulations, and better change management processes that minimise both the impact and cost of change.

Manage Assurance of the Design and Delivery Process

ComplyPro, our requirements management and progressive assurance tool, manages the governance of the assurance process, allowing your team to manage assurance of the design and delivery process collaboratively. This reduces the need for costly parallel assurance processes and increases the integrity, efficiency, and quality of design and delivery.

This approach enables entire project teams to adopt a unified approach to compliance and assurance, providing greater transparency into project health and identify issues much earlier than traditional methods allow. It enables forensic traceability from high-level project requirements and their decomposition through design and delivery to ensure compliance. Requirements and their inter-dependencies are fully traceable, enabling the rapid assessment of the risks and impacts and allowing the cost of change to be managed as it manifests on the project.

By deploying ComplyPro on their projects, our clients gain clear and transparent evidence that requirements are designed, documented and delivered correctly for their needs. In addition, the approach enables clients to identify deviations quickly and easily from their specifications to enable proactive management.



Benefits

- Support a System's Engineering approach and best practice.
- Centralize expertise, reduce silo engineering, and improve engineering efficiency.
- Promote collective understanding through access to a single project-wide assurance.
- Elicit, document, and manage project requirements and track stakeholder requirements throughout the entire project lifecycle.
- Create traceability links between verification and validation evidence and project functional requirements as a basis of progressive assurance approach.
- Collaboratively develop project specifications, and raise, log, track, and resolve design issues and assumptions.
- Set benchmarks to enable effective project and budget management.
- Systematically manage systems interfaces across the project and contractual boundaries.
- Assess the impact of unforeseen changes to make informed decisions and react before critical milestones.
- Engage collaboratively around a single view of the evolving project specification.
- Immediately highlight inconsistencies between specification, design, and deliverables.
- Ensure customers get asset and capabilities which deliver to specification first time.



Environment Lifecycle digital integrator delivering transformational outcomes through the built and natural environment Lifecycle digital integrator delivering transformational outcomes through the built and natural environment Lifecycle digital integrator delivering transformational outcomes through the built and natural environment

Notes





Cohesive

marketing@company.com

Phone +00 123 1234-1234