



# OUR WHY, HOW & WHAT

  
PCSG  
Professional Construction Strategies Group

# DELIVER

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# OPERATE

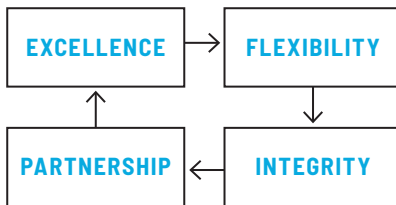
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# OPTIMISE

PCSG is a leading built-environment consultancy. From our bases in the UK, Australia and Hong Kong we are a trusted partner to some of the biggest names in industry. We help our clients to **deliver, operate and optimise** their built assets – unlocking value and building resilience into their projects and businesses.

# WHAT'S IMPORTANT TO US

Working towards our vision of infinitely smarter futures, everything we do is shaped by our firmly held values of excellence, flexibility, integrity and partnership.



• We are a truly diverse team of over 50  
• people, with specialists in disciplines  
• ranging from digital data strategy and  
• implementation, to environmental  
• management as well as a wide range  
• of construction bidding services.

 **50/50**  **44 YEARS**  
AGE RANGE



**13 LANGUAGES**  
**12 NATIONALITIES**



***By creating value in information, we help our clients realise their potential.***

***The incredible diversity in our high calibre team, and our deep understanding of both the built asset lifecycle and the construction industry, helps us find solutions to our clients' key business issues each and every day.***

**Dr Mark Bew** MBE

Chairman, PCSG



# WHO DO WE WORK WITH?

We work extensively with government departments and their agencies, local authorities, private sector developers and universities, construction companies of all sizes, multi-discipline design consultancies, SME organisations – and many more. Here are just a few examples:



# HOW DO WE HELP OUR CLIENTS?

Since 2000, we have provided an outstanding service and the best-informed advice to organisations both in the UK and abroad. Working in close partnership with our clients, we leverage the skills and expertise of our team, and a select handful of high-calibre, complementary partners, to meet and surpass expectations.



## Bidding & Project Support

Winning bids and supporting projects through quality approaches



## Asset Management

Dramatic operational improvements through digital management



## Smart, Sustainable Communities

Delivering city and rural community strategies to support and enhance citizens' lives



## Project Design & Delivery

Delivering effective assets through digital management



## Predictive Performance

Digital analysis of asset data to predict future performance



## Standards & Compliance

Driving improvement through compliance and a practical approach to standards



## Digital Manufacturing

Transforming productivity through digital design and delivery processes



## Digital Twins

Digital representations of real-world assets to enable informed decision-making



## People & Transformation

High performance leadership and teamworking to transform outcomes







# BIDDING & PROJECT SUPPORT

WINNING BIDS AND SUPPORTING PROJECTS THROUGH  
QUALITY APPROACHES

**Since 2000 PCSG has provided 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.

While bid leadership and writing are the most in demand services, we also specialise in helping clients prepare for tender presentations, interviews and behavioural assessments – an increasingly important part of major infrastructure tenders. 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 very proud of the long-term relationships that we have built with our clients, and that our work with them 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 client side, from the early planning stages onwards, 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









# ASSET MANAGEMENT

DRAMATIC OPERATIONAL IMPROVEMENTS AND SERVICE AVAILABILITY THROUGH DIGITAL MANAGEMENT

**98% of the built estate and infrastructure network in the UK already exists. To enable the most effective and safe delivery of services, asset owner operators need to ensure that their existing assets are available for use for all of the time they are required.**

Effective maintenance and optimisation of your asset base is the key to providing the capacity and availability required to meet customer needs.

PCSG has extensive experience in gathering, structuring and managing asset data, providing rich digital resources to inform decision making. Depending on requirements, this can include planned preventative maintenance, advanced analytics and AI-driven predictive capabilities.

We have experience in complex, safety-critical environments such as nuclear and transport, and can now bring the benefits of these techniques to less complex built assets, including schools and residential buildings, in order to provide more liveable and effective spaces.

## SERVICE AREAS

- ▶ *Health check / Peer Review / Strategy development*
- ▶ *Information & Data Standards development and implementation*
- ▶ *Digital process development and implementation*
- ▶ *Systems selection and implementation*
- ▶ *Client Representative 'Digital clerk of works'*
- ▶ *Records management and systems administration*
- ▶ *Teams in difficulty and conflict resolution*





# SMART, SUSTAINABLE COMMUNITIES

DELIVERING SUSTAINABLE COMMUNITY STRATEGIES TO SUPPORT AND ENHANCE CITIZENS' LIVES

**We all live in a community, and often more than one. We have homes and families, work and leisure activities, all of which have different needs, dynamics, connectivity and perceptions.**

PCSG works with a wide range of different communities to deliver sustainability services and outcomes that work for everyone, whoever they are and whatever they do. We engage with clients from businesses to managers of rural and urban regions, both in the UK and internationally, to help make our lives better and more liveable.

Our strategic approach has evolved in two key fields, both of which target more sustainable futures:

- ▶ Using the power of sport to accelerate change
- ▶ Using digital technology, data and information as an enabler of change

Both approaches are led by the challenges we face, driven by a collective vision and based on a sound business case, along with good governance and management.

All communities live in and make use of the built and natural environment. We understand the challenges faced to deliver smart, sustainable communities in a resource constrained future and we use the information and experience from assets, estates and networks to inform decision making.

Our methodology is underpinned by stakeholder engagement and collaboration across the communities we support. Our systematic approach enables a transparent, realistic and deliverable plan to be taken forward providing us with unique insights into how we can improve and optimise the built and natural environment to the benefit of all. We measure this through the provision of a sustainable set of outcomes based on fiscal, environmental and social measures.

## SERVICE AREAS

- ▶ *Strategy and vision*
- ▶ *Procurement and Planning*
- ▶ *Management systems, compliance and audit*
- ▶ *Programme Implementation Support*
- ▶ *Innovation and research*



## Business Strategy

Strategy  
Planning  
Marketing  
Analysis  
Ideas  
Success  
Management

23:35:60

Business Strategy

Innovation  
Marketing  
Analysis  
Success  
Management



# PROJECT DESIGN & DELIVERY

## DELIVERING EFFECTIVE ASSETS THROUGH DIGITAL MANAGEMENT

**Any client faced with the need to deliver a new asset is likely to expect a disruptive process, regardless of the type of business they operate.**

However, the provision of good, high-quality information and data can substantially improve the understanding and governance of the complex concepts required by all parties. Using simulations and Building Information Modelling (BIM), PCSG helps suppliers and clients optimise their activities to ensure thorough understanding, effective decision making and increased productivity.

PCSG has pioneered the use of BIM, with many of our team having over twenty years' experience in client, designer and contracting environments. Using this experience, we led the delivery of many of the standards used to define the interfacing processes between client and supply chain and continue to develop tools and techniques to improve this interaction. This includes the analysis of information requirements, the development of contract requirements and documentation, and the delivery

of tools including common data environments, engineering analysis and information presentation applications.

PCSG also provides project delivery services ranging from Project and Construction Management through to strategic advice on digital and lean techniques, underpinned by a high-level of professionalism and the effective use of quality data and processes.

### SERVICE AREAS

- ▶ *Information management strategies*
- ▶ *Information procurement and planning*
- ▶ *Standards, Methods and Procedures*
- ▶ *Information management systems*
- ▶ *Information assurance and assessment*
- ▶ *Insight and intelligence*
- ▶ *Technical Delivery Support*
- ▶ *Training*









# PREDICTIVE PERFORMANCE

## DIGITAL ANALYSIS OF ASSET PERFORMANCE TO PREDICT FUTURE PERFORMANCE

**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 planned 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 used. With this new information we can identify the root-cause of non-planned performance and predict how assets will perform in service over time. This enables a far more predictive approach to maintenance and

operational services. We use a number of mathematical, machine learning and artificial intelligence models to ensure this capability.

### SERVICE AREAS

- ▶ *Management Strategies*
- ▶ *Outcome Planning*
- ▶ *Measurement*
- ▶ *Insight and Intelligence*
- ▶ *Asset and organisational optimisation*
- ▶ *Assurance and assessment*
- ▶ *Systems*
- ▶ *Training*

**quality**

# **STANDARDS**

**service**

**iso 9001**

**process**

**business**





# STANDARDS & COMPLIANCE

## DRIVING IMPROVEMENT THROUGH COMPLIANCE AND A PRACTICAL APPROACH TO STANDARDS

**We believe the power in using standards is to define common processes, including governance or key interfaces such as data exchange, and that this should be applied in a way that minimises cost and maximises effectiveness.**

We always apply standards in a manner that is compliant but also relevant to the business executing the process, in order to add value and competitiveness.

Achieving the business outcomes of the client organisation, whether they are safety, delivery or commercial, is key to our approach. Quality management systems are crucial to unlocking short / medium-term cost savings and ensuring long-term business sustainability.

Drawing on our extensive track record gained in global contracting and design / engineering businesses, we assist in the strategic design of systems. This includes the provision of full information system design incorporating infrastructure, back office, construction and production systems, collaboration and information sharing, and Building Information Modelling (BIM), including systems

integration and security (both physical and cyber). As part of this process, we can carry out detailed business process mapping and data requirements analysis to design bespoke systems to meet your specific needs and those of your clients.

We apply the same diligence to businesses of all sizes. Successful examples of our work are operating within Tier 1 organisations, as well as Small and Medium Sized Enterprises.

### SERVICE AREAS

- ▶ *Data & Information Standards, Methods and Procedures*
- ▶ *ISO Standards and quality management Systems (QMS) support*
- ▶ *Environmental management systems (EMS) support*
- ▶ *Training in environmental management*







# DIGITAL MANUFACTURING

## TRANSFORMING PRODUCTIVITY THROUGH DIGITAL DESIGN AND MANUFACTURING PROCESSES

**If we are to provide economic and social infrastructure development at the rate society demands, using current traditional methods, we will fail to achieve a fraction of the required output. Productivity and capacity constraints require a new approach.**

PCSG has worked with leading manufacturers and agencies around the world. We help them to develop new design methods, viability assessment and procurement methods, supply chain management, site logistics and delivery methods. The aim is to dramatically improve their productivity, products and services to the construction sector.

Manufacturing has given us the opportunity to develop advanced generative design approaches and new methods of commercial engagement and information management, which are driving significant benefits to our clients both in the manufacturing and asset delivery sectors.

The opportunities provided by the rich data sets used in the manufacturing process help us to track components and materials on their journey from raw material through production, use

and decommissioning. This ensures that we can identify opportunities to reuse or recycle elements within the construction process and enable the Circular Economy. There are also opportunities to encourage innovation related to automated tooling, robots and applications.

### SERVICE AREAS

- ▶ *Servitisation strategies*
- ▶ *Benefits Measurement*
- ▶ *Productivity assessments*
- ▶ *Circular economy strategy*
- ▶ *Automation*
- ▶ *Industry 4.0*
- ▶ *Business-wide digital strategy*
- ▶ *Digital & advanced manufacturing*
- ▶ *App development*









# DIGITAL TWINS

DIGITAL REPRESENTATIONS OF REAL-WORLD ASSETS  
TO ENABLE INFORMED DECISION-MAKING TO ACHIEVE  
BEST VALUE, OPTIMISATION AND RISK REDUCTION  
THROUGHOUT THE ASSET LIFECYCLE

**Simulating virtual assets,  
systems and networks to ensure  
understanding and effective  
decision resolution.**

One of the biggest challenges with BIM, drawings and other engineering or architectural information is the ability for lay users and operators to understand the content with any level of accuracy. This information is also only part of the built and natural environment story. The two key enablers for the digital twin are:

- ▶ The ability to manage and aggregate data
- ▶ The ability to present and analyse the data in a meaningful format to the consumer

to use and understand interface to the complex world of engineering and the built environment.

The system is based on a modular structure enabling users to select from functional systems which provide data management, aggregation, integration, security and analytics.

## SERVICE AREAS

- ▶ *Simulation Models*
- ▶ *Planning Simulations*
- ▶ *Asset Management*
- ▶ *Virtual Training*

PCSG have partnered with three businesses to develop the GeoConnect+ product. This partnership brings together Ordnance Survey, GroupBC and German company, LocLab Consulting. Together we bring wide scale, high accuracy and realistic interactive mapping and gaming simulations. This provides an easy



King's Cross

CUSTOMER INFORMATION



Meeting Point



- ↑ Underground
- ↑ Platforms 0 to 8
- ↑ Taxis
- ↑ Dining & seating
- ↑ Tickets

Platforms 0 to 8  
Dining & seating

Check before you travel this late May bank holiday  
Service changes 26-28 May



# PEOPLE & TRANSFORMATIONAL CHANGE

## HIGH PERFORMANCE LEADERSHIP AND TEAMWORKING TO TRANSFORM OUTCOMES

**The sheer pace of change in the 21<sup>st</sup> century is creating significant challenges for all our clients. Getting 'the people stuff' right is often challenging but the outcomes are always rewarding for individuals and are of significant value to the organisation.**

These days change often represents a paradigm shift for teams and organisations. We work with individuals, departments, project teams, executive boards, JVs and alliances to help the process go smoothly.

High performance teams do not happen by accident. They are the result of team leaders providing strong continuous leadership and an environment in which communication is open and relationships are based on mutual trust and respect. This leadership ability does not come naturally for many people. We work with our clients, using our high performance team model and other leading tools to develop approaches which deliver the right results.

Our work has taken us as far afield as Qatar and Peru 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 skill.

### SERVICE AREAS

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



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