Digital and Technology

Providing solutions for a more connected sustainable world.
Wood is a global leader in project delivery, engineering and technical services, providing efficient, integrated solutions across the asset life cycle in multiple sectors. We are proud of our rich heritage which underpins our unrivalled breadth and depth of capability. We employ people with the brightest minds and the sharpest skills, who use our leading-edge technology to help our customers succeed.

Our differentiators include our extensive range of services, the quality of our delivery, the passion of our people and our unique culture. True to our values, we work in an open and transparent way; a committed partner to our customers, supply chain and the communities we work with.

Our values set the tone for what is important in our business, they are the essence of our identity and fortify everything we do.

**Care**
Working safely with integrity, respecting and valuing each other and our communities

**Commitment**
Consistently delivering to all our stakeholders

**Courage**
Pushing the boundaries to create smarter, more sustainable solutions

“Each and every individual in our business has the ability to make a significant impact to our safety delivery. Safety is what we care about most and being safe means looking out for yourself and showing care for your colleagues. Keep safety at the heart of every conversation you have.”

Robin Watson, Chief Executive
We have the insight and technical knowledge to support your journey to digitisation.

Our world is changing faster than ever. By 2020 more than 40 billion objects will be connected to the internet, by 2050 more than 70% of the world's population will live in cities. Our growing population is placing increasing demand on our networks, facilities and assets. Increasing energy and water needs are placing more pressure on aging infrastructure and constrained budgets. Rising environmental and safety standards affect governments, energy and infrastructure companies alike.

Wood addresses these challenges, by providing solutions for a more connected sustainable world. Enabling people to receive cleaner, safer services, and working towards a smarter and more sustainable planet.

Our customers are seeking ways to improve the way they do business by deploying new and disruptive technologies. We collaborate, co-create and innovate to solve our customers’ biggest problems. Our solutions include:

- Enhancing profit and yield efficiency
- Achieving resiliency
- Improving connectivity from consumer to supply chain
- Transitioning to renewable energies
- Addressing safety (physical and cyber) and reducing risk
Visualisation

Through virtual and augmented reality, we don’t just imagine new worlds, we build them, creating virtual environments that can be used to optimise the design process, simplify construction schedules and improve asset performance.

Wood provides end-to-end solutions, creating digital twins to design optimal assets and modifications. For operations, ongoing performance can be monitored to compare as built with as maintained conditions.

Through virtual and augmented reality, we visualise real world environments to take customers through various scenarios to help them make better decisions in the design phase that carry through to operations and field services.

**Benefits:**

- Improved visibility and planning
- Reduced downtime
- Optimal asset performance
- Lower maintenance costs
- Reduced total cost of ownership (TCO)

Wood’s artificial intelligence and automation systems are deployed in some of the most technologically advanced and forward-thinking organisations throughout the world. We’re making mines more profitable and keeping offshore workers safe above and below the water by harnessing digital twin and simulation techniques.
Information management (Imaas)

A common data environment is vital for any business in today’s world, in the infrastructure and energy industry this is especially true. Turning data from multiple sources and supplier into actionable insights is key.

By capturing data from multiple sources and bringing our own industry experience to analyse and filter the information, Wood is able to:

• Increase accessibility and use of data throughout the asset life cycle and supply chain
• Optimise production
• Improve efficiency
• Predict safety issues well in advance

We work with multiple data publishers, to create a ‘single digital source of truth’ for our customers. Data content types include BIM, CAD, Schedule, Bill of Materials, 360º photographs, video, geospatial, land ownership, asset condition, repair information, safety hazards and access information.

Wood is transforming the way businesses connect, deploy and engage with their systems and data; quickly forming valuable insights for our customers.
IoT and connected devices

Wood uses full process knowledge to seamlessly connect all types of assets across all stages of the life cycle.

By connecting integrated devices across the entire workflow we create an ecosystem allowing us to gather rich data to monitor and optimise field services, improving performance, compliance and safety.

Benefits
- Improved visibility and planning
- Reduced downtime
- Optimal asset performance
- Reduced maintenance costs
- Decreased total cost of ownership (TCO)
- Improved safety
- Reduction in job execution times and the need for re-work
Software, applications and analytics

We strive to improve the safety and the integrity of our customer’s assets by creating solutions that help them prepare, predict and prevent.

Data analytics
Data is referred to as the ‘new oil’. At Wood we know a lot about the new and the old. Our data scientists develop powerful tools for customers to gain deep insights on their operations to improve asset design, extend life and reduce decommissioning costs.

We can provide end to end software solutions for every point in the asset life cycle. We improve our customers ability to collect, monitor and analyse information on their assets. With better visibility on asset performance, operators can make informed decisions on the future of their assets.

Maintenance routines, operational philosophy, production rates, safety and integrity can all be improved with more detailed understanding of asset data.

Benefits:
- Timely, not too late. Make informed decisions about when to intervene
- Reduce risks to people and the environment
- Minimise costs and maximise yield throughout the asset life cycle

Software
Wood has over two decades of experience in software development. Our software solutions are proved to simplify design and operational processes to ensure that assets run safely, for longer and at lower cost. Wood’s solutions development hub works across the globe with customers to co-create solutions to help solve some of their biggest problems and maximise the value-adding opportunities that digital transformation presents.

Our extensive portfolio of cloud-hosted and web-enabled technology provide the building blocks to delivering and developing new solutions across the asset life cycle.
Our environmental technology is saving sailors lives at seas with our most advanced weather detection system in the world.

Our world-class domain engineering solutions deliver unrivaled digital twins of your physical assets and solutions that track and enhance operational performance across the enterprise. Wherever possible, we automate the routine and leverage data analytics and emerging technology to systemise and enhance business workflows to extract more value from data and provide a greater level of intelligence for right-time decision-making. We’re adept in developing custom solutions to meet specific needs and have considerable experience integrating with 3rd party systems.

We leverage an agile approach to develop quickly and work with you to ensure that the exacting demands of your organisation are met from the outset and as assets evolve and mature. We work with you every step of the way, from initial workshopping and requirements gathering through implementation to the delivery of training & support. What sets us apart is that delivery throughout is performed by engineers who understand the domain and possess the know-how to overcome the challenges our customers face.
Digital project delivery

We provide smarter solutions to optimise investment decisions in new and improved assets through information life cycle design reducing both capital and operational expenditure.

A holistic approach for using automated design, modular construction and additive / 3D manufacturing and blockchain to optimise delivery with increased efficiencies, reduced schedule delays and improved quality and consistency.
Intelligent partnering
From artificial intelligence to blockchain, IoT platforms and robotic process automation, Wood collaborates closely with best-in-breed providers to remain at the forefront of emerging and disruptive technology to enhance the delivery of our services, maximise the value to our customers and accelerate the pace of their digital transformation.

Benefits:
- Efficiencies in design and development
- Certainty of costs, schedule and constructability
- Efficient use of asset investment decisions and extended life cycle
- Reduced cost of compliance – reduces effort preparing for audits and investigations.
- Improved safety
- Time and cost savings

While some of the worlds’ thought leaders turn their attention to building on Mars, Wood is developing modular construction and 3D printing for harsher environments. Once we can print components that will work in a nuclear reactor, Mars shouldn’t be such a challenge.
Wood is a global leader delivering technical, engineering and project services across the entire asset life cycle. We operate in more than 60 countries, employing about 60,000 people. We provide performance-driven solutions from development to decommissioning for a broad range of industries including all energy sectors, process and refining, power and utilities, mining and manufacturing.

For further information please go to:

woodplc.com  @Woodplc  Wood