

Bringing service to life

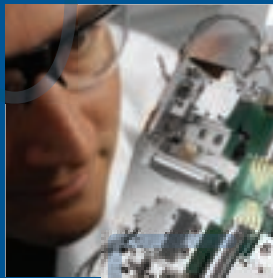


Serco Technical Consulting Services

1,000+
Safety studies delivered
to the HSE



>20
UK nuclear
reactors
supported



50 years
of continuous service to the MoD

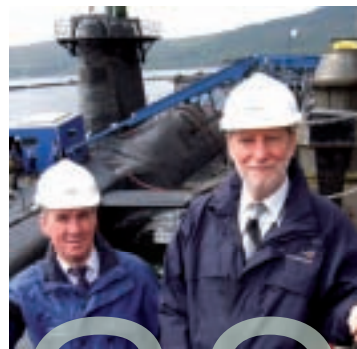
We improve services by managing people, processes, technology and assets more effectively. We advise policy makers, design innovative solutions, integrate systems and – most of all – deliver to the public

300+
companies benefit from our training

Bringing service to life

“Serco improves people’s lives by delivering great service, whether it’s making citizens safer, helping offenders back into society or improving patients’ health. We are one company made up of many businesses, united by shared values and a common approach to service. We combine a deep public service ethos with the commercial know-how that gives us the ability to deliver. We work hard to protect this ethos, living by our Governing Principles, which align our behaviours to common standards that are essential in a devolved organisation.”

Christopher Hyman Chief Executive



pas

Our **passion** is to improve services and earn a reputation for commitment, responsibility, innovation and leadership



Our Governing Principles provide the framework to make that happen:

we enable people to excel

we foster an entrepreneurial culture

we deliver our promises

we build trust and respect

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Technical Consulting Services

Serco is an international service company that focuses on improving essential public services. Our business ethic promotes innovation and go-ahead behaviours through a clear set of values. At Technical Consulting Services, we provide a broad range of science and engineering based services that help maintain a safe operating environment across the nuclear, defence and rail sectors. We draw on a broad range of capabilities, disciplines and facilities which is unique in the industry. Our key strength is our skilled and experienced personnel, who have a deep understanding of the issues that drive our customers' needs.

Our fundamental approach is based on thinking through these problems and pro-actively delivering advice and solutions. We do this by giving our people the responsibility and opportunity to make a difference.



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Our core purpose is to

assure delivery to our
client's in a responsible and cost
effective manner



Our services cover:

- Programme and project management
- Asset and plant performance
- Inspection and test
- Nuclear waste and environmental
- Regulatory support
- Research and development
- Safety and risk
- Radiation services
- Systems design and integration
- Technical software and hardware
- Training

urpose

A complete nuclear safety assurance service

Nuclear operators must maintain and demonstrate the highest standards of safety in their operations, whilst achieving their operational goals.

We provide services that help them to operate safely and effectively by applying our technical understanding and our knowledge of regulatory requirements.

We provide:

- Safety documentation
- Independent peer review
- Occupational safety
- Human factors
- Fire safety
- Reliability studies
- Risk management
- Criticality and shielding



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We've provided independent advice
to the Royal Navy on the safety of
their nuclear submarines for over

50 years

All the major UK nuclear operators depend
on our services.

We support governments and regulators in
ensuring safety.



vice

Assuring health and safety

We work closely with the Health & Safety Executive (HSE) as a leading supplier of technical services.

We investigate accidents and incidents across a wide range of industries and provide expert witness services.

Our services to the HSE include:

- Review of safety reports
- Chemical risk assessment
- Ergonomics of musculoskeletal disorders
- Gas safety
- Computer models
- Fire certificates
- Independent assessment of structural integrity



safe

We have delivered over
1000 safety related
studies to the HSE



We directly support HSE in its mission to protect people's health and safety by ensuring risks in the changing workplace are properly controlled.

Safe and efficient rail systems

The public demands rail systems that are safe, efficient and reasonably priced. Innovation in the design, build and operation of the rail vehicles and the rail infrastructure can make a real difference as operators seek to achieve more within significant financial constraints.

In that context, Serco enables its rail customers to succeed by delivering bespoke integrated solutions.

For example, we provide improved and verified inspection regimes and strategic decision support to improve asset performance.

Our services cover:

- Safety and risk management
- Asset management
- Engineering services



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We supported Eurostar's
208mph record
breaking run on the Channel
Tunnel Rail Link



Rail operators across the UK rely on our independent testing, verification and validation services to bring rolling stock safely into service.

port

Training services

We provide bespoke training solutions from simple one to one tasks through to the delivery of modern fully integrated training facilities.

We have a wide range of public access professional risk and safety management courses, delivered by a team of over 30 practising consultants who bring up-to-date knowledge and cross-industry best practice to the training they deliver.

Our training courses include:

- Fault and Event Tree Analysis
- NEBOSH National General Certificate
- Human Reliability Analysis
- Hazard and Operability (HAZOP) studies
- Major Hazards
- Reliability Assessment
- Failure Modes and Effect Analysis
- IOSH Managing Safely



Over **300** companies
have benefited from our training



We can train on our own premises or at customer sites and deliver a complete classroom with trainer and training materials.

Our capability includes; 3D animation, E-learning and complete computer-based training programmes.

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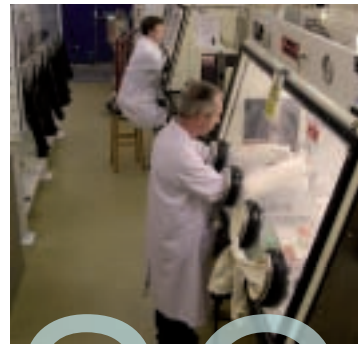
Environmental management services

Reducing uncertainty about environmental issues allows effective planning and operation within regulatory requirements.

We support clients from plant design through to construction, operation and then to decommissioning, waste management and clean-up.

We provide:

- Radioactive waste management & disposal consultancy
- Characterisation and assessment of contaminated sites
- Hydrogeological consultancy
- Strategy development
- Options studies including best practicable environmental option and best practicable means
- Environmental impact assessment
- Due diligence



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We've assessed **100s**
of acres of land for possible
contamination



Quantifying the costs, risks, timescales, and constraints enables confident management of environmental liability.

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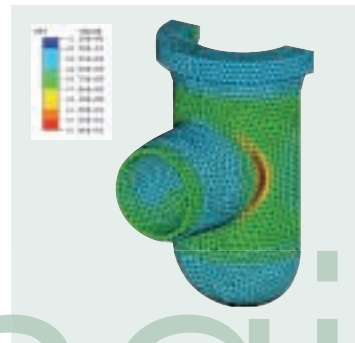
Engineering, structural integrity and NDT services

We provide strategic solutions and problem solving to improve lifetime and output limits imposed by materials and structural issues.

We underpin our solutions with diverse mathematical and physical modelling such as CFD, heat transfer & stress.

We provide:

- Finite element stress analysis
- Application of structural integrity to support safety cases
- Materials & thermal properties testing
- Corrosion testing and consultancy
- Risk-informed inspection planning
- Advanced inspection methods
- Inspection qualification



We support the operation of
over 20 UK nuclear
reactors



Better understanding and documentation of the engineering issues improves safety and allows more reliable operation.

neering

Warning against modern threats

The threat to civilian and military health from exposure to Chemical, Biological, Radiological and Nuclear events is real.

We assist in the early detection of CBRN weapons and materials by providing integrated systems and advice.

Currently:

- Our Military Chemical & Nuclear Reconnaissance System is in service and our new CBRN Integrated Sensor Management System entered in to service in 2009
- We are a key part of the team delivering a nationwide radiation detection system to the Government
- We are providing technical services and research support to the MoD's CBRN procurement team



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Our specialists provide technical
service support across Serco's
£2.8bn business



A feature of our success is our ability to
develop and deliver innovative solutions in
close collaboration with our customers.

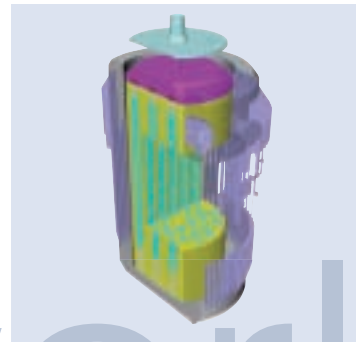
novation

World class analysis tools and software

Ensuring safety and predicting performance in nuclear systems requires exacting mathematical calculations. Our ANSWERS Service provides quality-assured, dependable, user-friendly tools for the job.

We specialise in:

- Reactor physics
- Radiation shielding
- Nuclear criticality
- Nuclear oil well logging
- Radiation dose planning



world

There are users of ANSWERS™
software in **24** countries
around the world



Established software packages, combined with a dedicated helpline, experienced consultants and analysts provide a comprehensive capability servicing the nuclear industry.

d class

System design and integration

With our systems engineering expertise we provide our customers with tailored packages from a single task to a fully integrated lifetime solution.

As a technical partner we excel in delivering innovative and high quality affordable solutions into military and civilian markets.

As an integrator we specialise in the management and delivery of technology based projects.

Integrated project experience:

- Test systems
- Avionic systems
- Surveillance and monitoring systems
- Industrial control systems
- Marine integrated systems
- HF and satellite communication systems
- Secure and unsecured network systems



We designed and built the Merlin
Avionics Test System capable
of testing **163** different
electronic subassemblies



Our range of capability and product independence allows us to provide best value, fit for purpose solutions.

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Engineering support services

Support services are integral to our business. Increasingly we find that our customers require full through-life management services to maximise availability and reduce risk.

Services include:

- Programme, risk and project management
- Supply chain management
- Technical documentation and publications
- Routine maintenance and scheduling/execution
- Post design services
- Obsolescence management
- On site service, maintenance and repair
- Remote monitoring
- Through-life support contracts
- Contractor logistics support
- Training



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We ensure > 95%
operational availability for
UK air defence radar



As a partner we provide tailored through-life support and service solutions.

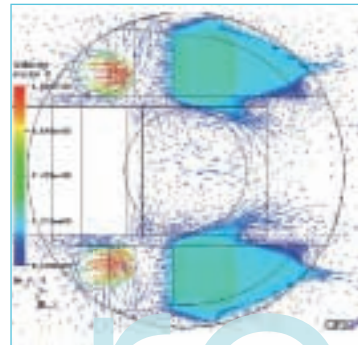
grity

What if ?

What if is a big question, but one that is often posed to us by our clients. Having made sure we really understand the question, we rely on our experience, tools, methodologies and data to provide insight and answers. Where these are at the limit, we research to expand the envelope. It's interesting work.

We research into:

- Advanced Inspection techniques
- CBRN consequences
- Environmentally assisted cracking
- Fire propagation
- Fracture mechanics
- Fluid flow and heat transfer
- Groundwater flow
- Materials properties
- Nuclear physics
- Probabilistic safety assessment
- Thermal and mechanical properties



We have over **100** materials
test stations in operation producing
new data to assure safety critical
operations



Research takes some applied thinking. This comes naturally to our staff, many of whom have higher degrees and are leaders in their field.

search

Clear vision, clear leadership

Our vision is to be recognised as the leading technical services provider in our chosen markets. We aim to be the best partner to work with, the organisation people aspire to work for, and the company that delivers superior returns to its shareholders. We will fulfil that vision by continuing to help our customers address their challenging questions and by bringing service to life for people around the world.

Our vision is a journey not a destination. We will always seek new ways to maximise the impact of our services and make the company more responsive. We take pride in our achievements and are heartened to have been recognised by Management Today as one of the top five 'Most Admired Companies in Britain'.





More than **800** staff with
a passion for science and
engineering

ear
vision

We aim to be recognised as
the leading technical services
provider in our chosen markets.

Serco in the community





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