



Shell Global Solutions



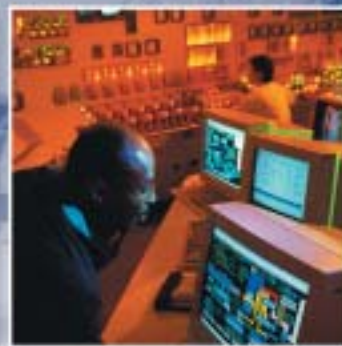
# SHELL GLOBAL SOLUTIONS

Raising your business performance



# committed

Customers gain from a powerful combination of innovative technology and extensive operating experience



**S**hell Global Solutions is a dynamic service organisation with one main aim – to help raise your business performance.

Combining leading-edge technology with extensive operating experience, we provide innovative, yet practical solutions that are designed to have the maximum financial impact.

You can count on the support of highly qualified people, many of whom have held senior posts in the Royal Dutch/Shell Group's operating units. Consequently they sit easily at the interface between technology and business and understand the kind of challenges that you face.

Shell Global Solutions is totally committed to your success – willing to work alongside you to ensure that the measures we propose actually show up on your bottom line.

*Technology-based products, services and consultancy*

## Origins in research

### *A progressive, independent business*

Shell Global Solutions has its origins in the research and technical service organisation that supports the Royal Dutch/Shell Group's activities worldwide. Several years ago, a significant part of this capability was placed on an independent, commercial footing, and its knowledge and expertise made available to other companies. An increasing number of customers are now placing their trust in a technology business consultancy with a track record that stretches back over 50 years.



Shell Global Solutions supports customers in a variety of industries:

- Refining, supply and distribution
- Oil marketing – fuels, lubricants and bitumen
- Gas and liquefied natural gas
- Oil exploration and production
- Industrial markets
- Chemicals
- Additive manufacturing
- Motorsport

# solutions

## Raising return on investment

In the upstream oil and gas sectors, we undertake front-end engineering\* work and help customers manage large greenfield projects. We also get involved in production enhancement programmes and tackle tough process engineering\* problems. Our aim is to help customers obtain the best return on investment in this high-risk business area.

## Squeezing existing assets

Customers in the refining, petrochemicals and gas sectors often call for benchmarking studies and performance improvement programmes; our maintenance and reliability consultancy is particularly popular here. We design and construct new processing units and give advice on revamps and plant rejuvenation schemes.

We also help customers respond to tighter product specifications, notably those associated with the move to cleaner transport fuels. Given the current pressure on margins, much of our effort goes into helping customers to improve their operational efficiency and squeeze their existing assets.

## Expanding your business

Oil-product marketing companies and additive suppliers come to us when they are seeking to introduce new products, expand into unfamiliar markets, improve manufacturing processes, or reduce the capital employed in their business.

We can help with product development, performance testing and portfolio rationalisation. Anti-fraud technology is a particular strength, and we have a reputation for troubleshooting and failure diagnosis work. Our motorsport activities include the development of advanced fuels and lubricants for the Ferrari Formula One motor racing team.

## Improving process efficiency

A growing number of customers are approaching us from the major process industries, such as automotive manufacturers, pulp and paper producers, mining organisations, steel makers and metal refiners. Our fundamental technical service offerings and our ability to reduce operating costs, raise processing efficiency and streamline supply chains are a major attraction for them.



Advanced surface analysis helped a manufacturer of adhesion promoters for the tyre industry understand the mechanism by which a new product acts. This enabled the company to convince potential customers of the product's value, putting it in a better position to capture market share.



Pioneering work on vortex-induced vibration in deepwater drilling risers has led to the launch of highly effective suppression devices that reduce rig downtime. Vortex-induced vibration can be so acute that it halts drilling, causing losses of up to half-a-million dollars per day.



Shell Global Solutions is helping a Thai refining company remain competitive when margins are at a 10-year low. The refinery manager believes the long-standing, close relationship between the two companies is key to "squeezing every last penny" out of the plant.

\*For projects that entail engineering services, Shell Global Solutions (US) Inc. will retain appropriately licensed engineers as necessary.

*Customers have the assurance of knowing that our capabilities have been tested throughout the Royal Dutch/Shell Group's own operations*



# integrated services

## Multidisciplinary approach

**S**hell Global Solutions' customers benefit from access to a broad spectrum of technical knowledge and operational expertise.

While solving some problems calls for skills in a specific area, effective business solutions often require experts from different fields to work together as a close-knit group. This is a culture that we have worked hard to foster – as a result, integrated teams are a natural feature of Shell Global Solutions.

This multidisciplinary approach proves especially valuable when providing consultancy services in areas that extend across technology and business boundaries, such as safety, energy utilisation, plant maintenance and reliability, and supply chain management.

Main areas of expertise:

- Refinery, petrochemicals, gas and liquefied natural gas processing
- Oil products technology – fuels, lubricants, greases and bitumen
- Offshore production technology
- Project management services
- Health, safety and environmental technology
- Pipeline systems
- Automation and process control
- Analytical science
- All the traditional engineering\* disciplines
- Statistics and risk management
- Information technology



## Customer-wide web


### *Promoting collaboration*

The way we communicate has an enormous influence on business performance. Our customer-wide website streamlines the flow of ideas, information and data between customers and ourselves. It also allows common access to technical and business software applications. Overall, this website provides a virtual working environment that spans distances and time zones, promoting collaboration and accelerating project schedules.

# relationships

Solutions that engage the customer



 ur reputation is based on providing you with value-added solutions that accurately match your needs – and that work first time.

Skills, knowledge and experience clearly count here. Having people who relish a challenge, who can see problems from a different perspective, and can inject fresh ideas, is also important.

There is another essential ingredient: people who are keen to listen to your ideas and to understand your operational issues and business objectives – with the aim of establishing your real needs. We believe it is vital to work with the staff in your organisation, to draw on their experience and encourage their involvement. In our experience, step changes in performance require that people must change the way they work. This can be achieved only if they own the improvement measures being proposed.

In essence, the types of solutions we are looking for generally involve strong interaction with our customers – *they are solutions that engage the customer.*

Shell Global Solutions helped design the power facilities for a new chemical plant in Nanhai, China. A great deal of skill and local knowledge went into negotiations with regional power authorities to arrive at a solution that integrates the plant's needs with those of the surrounding community.

Our Energise programme combines power, process and utility engineering\* skills to help customers cut energy costs and reduce carbon dioxide emissions. The programme was applied at a Danish refinery that, according to the Solomon Energy Index 2000, was the most energy efficient in northwest Europe. The immediate result was a fall in energy costs of \$0.5 million per year: the refinery is on track to deliver further annual savings of \$2.0 million. Energise is now being extended to help customers address water- and waste-related costs.



# international

Diversity is an important feature of our organisation



**S**hell Global Solutions maintains a close network of technical centres in France, Germany, Malaysia, the Netherlands, Singapore, the UK and the US. In total, we employ more than 2500 people.

As well as supporting the Royal Dutch/Shell Group globally, we are working for other leading companies in Africa, Europe, China, India, Japan, the Middle East, Russia, South America and Thailand.

Diversity is a feature of our organisation, something we actively manage and promote. Teams from Shell Global Solutions are usually made up of people from different backgrounds who have worked in various parts of the world and are therefore familiar with local industry and business issues.



We assembled a team of more than 70 refinery experts from around the world to help a leading Indian company commission and start up the world's largest greenfield refinery in record time.

Shell Global Solutions acted as technical advisor during the engineering and construction of the \$1.5 billion Oman LNG plant.

Built in record time, it came on stream in 1999. Since then, technology transfer and training of Omani staff have been high on the agenda of the team that supports plant operations.







## Shell Global Solutions

For further information contact Shell Global Solutions

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Shell Global Solutions is a network of technology companies of the Royal Dutch/Shell Group. In this brochure, the expression 'Shell Global Solutions' is sometimes used for convenience in contexts where reference is made to these companies in general, or where no useful purpose is served by identifying a particular company.

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OGJUN02-001