Sustainable solutions for a sustainable London
More than half of the world’s population live in cities, the consumption of natural resources in cities accounts for two thirds of our global energy demand, and up to 80% of greenhouse gases are produced in metropolitan areas. Given these realities sustainable urban development has become one of the most pressing challenges of the 21st century not just for London and but for major cities around the world. An energy-efficient and sustainable infrastructure plays a crucial role in the lives of London’s citizens and today. The UK’s capital is well positioned to maintain its leadership on the topic and create opportunities for development, employment and increased prosperity linked to a more sustainable future.

The impact of over eight million people living, working and travelling within London on a daily basis is obvious. Siemens is helping to create a greener environment for London and its communities with some exceptional projects that address arising challenges.

Buildings, the transportation system, energy supply, public facilities and living areas are all largely dependent on effective technologies. Siemens is a reliable partner for London consistently presenting innovative, individualized products and solutions from the world’s largest environmental portfolio. These premium technologies enhance environmental friendliness, enable a higher living standard and even save bottom-line costs.

Great success stories highlight how Siemens plays a key role in getting London ready for the challenges of today and tomorrow.
Building awareness of urban sustainability
The European Green City Index, a unique research initiative supported by Siemens, measures and rates environmental performance, and has ranked London just outside of the top ten among 30 leading European cities. London continues to advance its plans for a sustainable future, and Siemens is at the centre of the effort. A pioneer in the field, Siemens has established a home for the world’s largest exhibition on urban sustainability at the heart of London’s new Green Enterprise District. This facility, known as “The Crystal”, presents a broad spectrum of state-of-the-art, sustainability-focused technologies including best practice examples and explores the challenges and solutions for preserving the environment in major cities with technology.

The Crystal is an excellent platform for creating a dialogue between key decision-makers and the public, and for revealing the potential of technology to increase the well-being of the city and its people. As a global knowledge hub, it provides a high-profile learning environment that inspires conversation about how we can create a better future together.

One of Siemens’ greatest achievements is a pioneering solution deployed for the London Borough of Bexley to deliver a safer city. While community safety has always been a top priority, they are now the first local authority to outsource their CCTV service to further reduce crime and secure the safety of its residents. In the future, housing estates, shopping centres and business parks can be easily monitored from the Siemens community safety centre.

Siemens further services communities and businesses by promoting a low carbon society and reducing air pollution. With the help of Siemens, UK Power Networks established an operational data store to retain trial information and analysis for the ‘Low Carbon London’ project. It is the UK’s first trial for a smart electricity network. Siemens is also at the forefront of generating clean energy for London, which could cover nearly a quarter of the city’s electricity demand in the future. London Array, the world’s largest offshore wind farm with 175 Siemens wind turbines and a total capacity of 630 megawatts, is situated just off the Kent coast. Siemens’ supply of gas insulated switchgear enables safe transformation into a voltage of 132 kV and a high-technology grid access connects to London’s power supply. Rayleigh, Hendon, Bow and West Ham will also soon benefit from a highly reliable distribution of eco-electricity with advanced safety.

“Siemens is establishing the Crystal in order to help find solutions for making the world’s cities more sustainable. It will serve as a centre for dialogue, learning and discovery.”

Roland Busch, CEO Sector Infrastructure & Cities
This is where we make London a more sustainable city
Reference projects in London

London Array Offshore Wind Farm
- Offshore structure
- 175 wind turbines each at 3.6 MW
- Gas insulated switchgear for safe voltage transformation
- Grid access connects to London’s power supply

Hybrid Buses
- Transport for London
- 15% more fuel efficient with consumption of only 8.6 mpg
- 300 eco-friendly buses expected by summer 2012

Heathrow Express
- BAA Airports Limited
- Inspections and repairs of Siemens trains
- Bi-weekly design and system review

Heathrow Express
- BAA Airports Limited
- Supply and maintenance of all medical devices
- Allergy testing equipment and service

Railway Extension to Stratford
- Docklands Light Railway
- Communications Systems and CCTV
- Installation of alarms and help points

E-Car Infrastructure
- Source London
- 7,500 publicly accessible charging points for electric vehicles by 2013
- Office infrastructure, and software solutions

Tolling System
- Transport for London
- Over 646 automatic number plate recognition cameras
- Reduction in CO2 by 113,000 tons per year

Terminal 5 Lighting and Ventilation
- BAA Airports Limited
- At Heathrow’s new T5 lighting system save 15.5 million kWh
- Eco-friendly tunnel ventilation and control system
We help keep London moving
London is one of the world's fastest moving cities and each day relies heavily on a functioning transport system. London's dense and continuous traffic circulation presents numerous challenges and requires a well-devised traffic system to keep the flow. In the city's effort to provide a developed but eco-friendly public transportation system for its citizens and visitors, Siemens' broad array of innovative and reliable mobility solutions make a real difference.

Around 67 million passengers pass through the doors of London Heathrow Airport each year, making it the second busiest airport in the world. After arrival at the airport, the Heathrow Express offers a swift connection for travellers to the city centre. All trains operating on the Heathrow Express and Heathrow Connect rail service undergo rigorous testing and maintenance schemes. Siemens, with its final approach of the Dockland Light Railway extension to Stratford where Siemens communications systems and CCTV, alarms and help points ensure passenger safety.

Siemens combines innovation with responsibility to deliver technologically advanced solutions that keep London on track.

Bus travel in the UK accounts for 60% of all public transport journeys. Hybrid technology drives in buses enable a green approach to city transport in London. Transport for London has adapted its buses to the requirements of the 21st century, while maintaining the traditional 'hop-on, hop-off' rear open platform of the original vehicles. Siemens' electric hybrid driveline makes buses 15% more fuel efficient than the existing hybrids and 40% more efficient than conventional diesel double-deckers. Already sweeping through the streets of London in the summer of 2012 the full fleet is expected to include 1,000 eco-friendly buses. Since 2003, anyone driving their car into London has had to pay a congestion charge. Siemens successfully provides an innovative toll-charging technology which helps relieve London's congestion zone. Siemens operates and maintains the system which involved installing over 646 automatic number plate recognition cameras at 173 sites. These cameras are capable of capturing an estimated one million number plates every day, helping to reduce the volume of traffic by 15% lowering air pollution by 150,000 tonnes of CO₂ each year.

With the continuous development of sustainable mobility solutions that enhance quality of life as well as the climate, Siemens is responding to one of the biggest challenges of our age.
We deliver green innovations for London
As a global technology and innovation leader, Siemens is promoting a green transition that will reshape the way we consume resources, use energy, produce goods, move people and promote health. Siemens helps make London greener through ground-breaking products and solutions.

London is at the forefront of the electric vehicle revolution and Siemens is already paving the way for a mass deployment of these vehicles in the city. ‘Source London’ sets the standard, implementing a large network of publicly accessible charging points for electric vehicles across the city. Siemens technology underpins Source London, providing the back office infrastructure, IT systems, customer service centre and registration processing. Through Siemens technology, users can access any Source London charge point, anywhere in the city via a single membership card. Source London is pioneering and has the potential to radically change the transport landscape for the capital.

Innovative mobility solutions by Siemens are essential to delivering the Mayor’s vision to make London the “electric vehicle capital of Europe”. London’s window to the world is Heathrow airport and at the recently built Terminal 5, the safety and comfort of large numbers of passengers and staff is paramount. By integrating a modern lighting system which allows a consistent level of light to illuminate open spaces, Siemens has created a fully automated, eco-friendly environment and achieved savings of 15.5 million kW hours of energy. Additionally, the eco-friendly ventilation and control system promotes constant air circulation in the T5 tunnel and ensures all safety standards are easily met.

Green contributions in London come from all Siemens sectors – Industry, Energy, Healthcare and Infrastructure & Cities. From the high-quality, low profile wiring technology at The Park Plaza Westminster Bridge London Hotel, biomass boilers and Combined Cooling, Heating and Power (CCHP) plant at the Energy Centre in Kingsyard and Stratford City to healthcare equipment for St Bartholomew’s and The Royal London Hospitals. State-of-the-art Siemens products and solutions are energy efficient and deliver against the highest standards.

Siemens is truly a pioneer in green technologies. And in London as well as around the globe, “Made by Siemens” is a recognised trademark for sustainable, forward-looking technologies that change the world for the better.

“Siemens’ Crystal is a perfect platform to help kick-start this regeneration demonstrating the type of dynamic partnership I want London to forge with global innovators in order to create the best big city in the world.”

Boris Johnson, Mayor of London
Large infrastructure projects frequently drive the implementation of innovative solutions which address the challenges of today’s world. These projects are often triggered by mega-events such as sports competitions and expos. The construction of new stadia and event facilities can lead to additional projects in the host country or city resulting in new development, regeneration and growth opportunities for the region. Organisers of major events frequently rely on Siemens’ know-how to turn these projects into success stories and address related challenges in a responsible way. Siemens offers innovative and efficient state-of-the-art technologies for sustainable solutions in all areas of public infrastructure and support for low-carbon urban development.

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