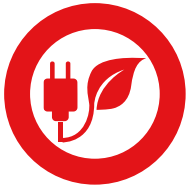


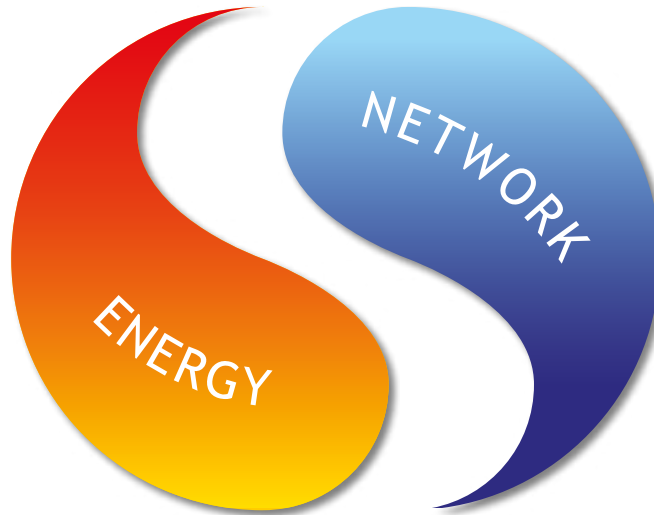
Renewables



Reuse



Self Generation



Internet Of Things



Connected Cities



Smart Cities

MAKING THE DATA
CENTRE WORLD
MORE COOL





RENEWABLES

Within its vision for decarbonising the economy, the [UK National Renewable Energy Action Plan \(2009\)](#) proposed a series of targets that will simultaneously reduce reliance on carbon fuels, as well as achieving 15% of its energy consumption from renewable sources by 2020.

coolDC is working to this agenda in a number of ways. Firstly, although deriving our power principally from electricity, we are committed to purchasing renewable power from the grid. Secondly, depending on the location of our sites, we also aim to utilise solar energy and waste biomass currently ending up in landfill.



REUSE

Data Centres produce huge amounts of surplus heat as a by-product of cooling. Rather than this being emitted into the atmosphere, coolDC designs respond to the [European Commission's Strategy on Heating and Cooling \(2016\)](#) by harnessing heat that would otherwise be wasted.

Our designs offer a number of innovative solutions for recovering and reusing heat produced via our industrial processes. These include, for example, utilising residual heat in our own sites; recovering surplus heat to provide energy for subsequent cooling cycles, or diverting it into a district heat grid for use - at reduced cost - in local buildings. Depending on the location of our sites, these might include hospitals, university halls of residence or social housing.



SELF-GENERATION

Conventional Data Centres draw power exclusively from the grid, resulting in both carbon emissions and electrical transmission losses.

At coolDC, we're trying to be different. We aim to build [Combined Heat and Power](#) plants (CHP) at locations where this is feasible.

Cogeneration of power - via CHP and the reuse of surplus heat, for example - is recognised as an effective way to reduce carbon emissions by up to 30% - helping us, and our customers, to achieve our low-carbon targets. The [UK government](#) estimates that energy bills could also be reduced by up to 20%, a saving that will lead to a reduction in operating costs for customers.





INTERNET OF THINGS

The Internet of Things (IoT) offers multiple benefits to a range of interest groups. For businesses, it has the potential to underpin solutions that can improve decision-making, productivity and logistics across a range of sectors, including manufacturing and agriculture. Importantly, it has the potential to enhance the lives of consumers and communities; for example, in improving energy efficiency, security, health, education and transportation networks.

Successfully exploiting the full potential of IoT is contingent upon the enhancement of existing mobile connectivity. coolDC contributes to this by providing the platform for new and existing technologies to operate from. However, with innovation in how data can be harnessed and exchanged more effectively, there emerge specific challenges. In the context of IoT, these are principally concerned with matters of *security*, privacy and trust, none of which have been overlooked by coolDC.



CONNECTED CITIES

Digital technologies are being harnessed to enable towns and cities to deliver key services in more cost effective ways. These can improve the planning, design and delivery of - for example - transportation systems, tourist information, infrastructure and buildings to create healthy, sustainable, resilient and prosperous places. These systems are dependent upon access to safe and reliable data storage and communication networks, offered as competitively priced solutions. coolDC is an enabler of this by not only providing the platforms from which these applications and systems operate, but by offering protection through state of the art, round-the clock, logical security.

Additionally, we believe that the benefits of expanded and enhanced services should not be enjoyed exclusively by communities or businesses located in urban areas. We aim to utilise our network of Data Centres to facilitate improved access to information and communication systems into the regions. This will improve the access homes and businesses in *rural communities* have to broadband and digital services, services that are taken for granted by people in towns and cities.



SMART CITIES

“In Smart Cities, digital technologies translate into better public services for citizens, better use of resources and less impact on the environment... A smart city is a place where the traditional networks and services are made more efficient with the use of digital and telecommunication technologies, for the benefit of its inhabitants and businesses” (European Commission).

coolDC is an enabler of the development of Smart Cities. We can provide the infrastructure to facilitate the enhanced network connectivity upon which digital technologies are dependent. Our solutions offer cost-effectiveness to clients and businesses, enabling them to enhance the lives of individuals and communities through improved services.

Our commitment to clean energy - via the use of renewables, recycled waste heat and self-generated power - allows us to do this with a reduced environmental impact.



coolDC offers a step-change in how Data Centres operate by using sustainable forms of energy that will guarantee our ability to deliver services for *the future*. Not only do we have an ethical commitment to environmental sustainability and decarbonising the economy, but we also want our Data Centres to work in the interests of the wider community. We want to connect cities, communities and regions through our infrastructures, products and services.

Our Mission

coolDC aims to provide sustainable, energy efficient and demand driven IT solutions. While being bespoke to the needs of clients and surrounding communities, we offer a replicable business model with enhanced corporate social responsibility. Rather than producing a model restricted to towns and cities, our aim is to extend these benefits into the regions.

OUR VISION

At *coolDC*, we want to develop Data Centres for the future which not only respond to some of the most pressing concerns of our age - climate change, data security and connectivity - but to do so in ways which both harness and enhance existing infrastructures, are demand driven, and address the needs of as wide a range of communities and businesses as possible.

OUR STRATEGY

We have assembled an impressive team of partners and suppliers who share our vision of extending what we can achieve within our individual specialisms. Rather than working in silos, we have developed a collaborative approach in encouraging each other to push the boundaries of innovation. Through our combined novel thinking, we want to make the Data Centre world more *cool*, leave a reduced carbon footprint, and provide a legacy that will benefit communities, businesses and future generations.

