Making Moscow One Russia’s Number One Data Centre
A Case Study from Emerson Network Power

Headquartered in London, IDC - G provides data centre services across the globe through a network of owned, alliance and partner data centre providers. The alliance manages carrier-neutral data centres on five continents, with a focus on emerging and high-growth markets.

From initial investigation to deployment, with a single interface for premium data centre services, IDC - G can provide the right service for its clients - no matter where they are in their data centre investment cycle. What’s more, IDC-G’s clients are supported by the firm’s world-class industry experience, combined with the local expertise of its Alliance Members.

Developing a major data centre facility in Moscow, IDCG and its Russian Alliance Member IXcellerate had a series of commercial objectives for the programme that were closely related to the technology demands of a modern data centre facility. Enterprise-class performance, energy efficiency and cost effectiveness were all critical.

Power provision and energy efficiency were central to IXcellerate’s vision for the data centre, creating a strong need for thermal management and AC power solutions that could easily be scaled up as the development progressed. When Moscow’s extreme climate was added to the list of challenges, an adaptable approach would prove essential. Emerson Network Power provided this expertise, and more.

The Right Solution for Businesses in Russia
Russia is an enticing market for a wide range of industries. This is a market in transition, exemplified by the merger of Russia’s two main financial exchanges (Micex and RTS) in late 2011 to form the Moscow Exchange, creating a financial environment which is primed to become a key international hub. Moscow is also experiencing a large influx of corporate and content-rich media companies that require significant bandwidth to handle their surging data traffic. This surge in the use of new consumer and enterprise technologies is making Russia an exciting location for the data centre industry.

Now is a critical time for Russia to consider the data centre infrastructure it can offer to incoming businesses; a shortage of capacity at a critical period of international investment can only stifle growth. In response to this need, IDC - G and its Russian Alliance Member IXcellerate have worked closely together to create IXcellerate Moscow One - Moscow’s premier carrier-neutral, standalone datacentre.

An Enterprise-Class Experience in Moscow
With foresight for the demand within the market, IXcellerate wanted to develop a data centre facility that would offer a best-in-class, carrier-neutral services, designed to fulfil Tier 3 standards with pure-play co-location and private cages. The project had to deliver outsourced solutions backed by the quality of management and technology that international organisations have come to expect from mature Western European markets.

Today, Moscow One meets and exceeds the standards of international financial institutions, carriers and major content operators. However achieving this level of enterprise-grade, customer-oriented service was not a happy coincidence - it was the result of experienced design and trusted partnerships.

At the core of the programme was the need to develop the facility in a modular fashion, while meeting commercial objectives and creating a platform for future growth. Early in the project, IXcellerate identified that sophisticated power management capabilities would be needed to ensure the facility remained cost effective and efficient. The goal was to keep PUE as low as possible from day one, despite the modular nature of the facility, so an innovative approach was key from the outset.

Thanks to a proven working relationship together, the decision was made to take on this multi-phase development with consultancy and solutions from Emerson Network Power.
**Working in Partnership**

IXcellerate has been working with Emerson Network Power since the inception of the business, and Emerson is considered a trusted partner. It’s no surprise that in developing the extensive Moscow One data centre, IXcellerate turned once again to Emerson’s Thermal Management and AC Power to consult and deploy critical technologies across this large-scale project.

“Emerson Network Power is a recognised leader in thermal management - which in terms of environmental and financial control is an absolutely critical part of data centre management,” comments Guy Willner, co-founder of IXcellerate. “We believe in providing our customers with best-in-class services, and to do this you need to have faith that your technology partners are doing the same for you. With Emerson, this commitment is never in question.”

**Scalability by Design**

With a campus measuring 15,000 square metres, IXcellerate plans to complete the data centre in several phases, to accommodate the maturing of market demand. In addition to a wide range of considerations for the completed facility - covering capacity, availability, efficiency and performance - the project also had to be designed around this stage-by-stage build. Therefore, it was vital that each element of the fit was designed to easily scale up, for example increasing power and cooling capabilities with subsequent expansion phases.

After completing a 580 square metre technical space in phase one IXcellerate is proceeding by planning phases two and three to complete an extra area of 5,000 square metres of office and data centre floor space. “Emerson Network Power’s consultancy has proven invaluable in meeting our development objectives,” Guy Willner states. “The modular UPS systems they’ve provided allow flexibility in terms of the power services being utilised within the data centre, allowing for expansion as the project develops.”

Emerson Network Power will continue using smaller-scale environmental units throughout the second phase of the project, allowing IXcellerate to ramp up power and cooling in efficient modules. As the project transitions into future phases, and the power and cooling systems reach critical mass, IXcellerate will benefit from larger, more efficient chillers which will come into use to further improve Power Usage Effectiveness (PUE).

**A Very Russian Challenge**

Moscow’s extreme climate with temperatures ranging from +40 to -30 degrees presented its own challenges when it came to designing and building a reliable, high performance, but also efficient facility. Power management was one area that required absolute control. Emerson Network Power was entrusted to meet these challenges with its Thermal Management and AC Power solutions.

“The technology provided by Emerson Network Power was delivered according to our specific requirements, and Emerson was able to support variable winterisation control for the thermal management units within the data centre,” Guy Willner adds. “In addition to facing these extremes of temperature, we needed sophisticated power management capabilities to ensure the facility remains cost effective and efficient. Emerson Network Power worked collaboratively with us to design a solution which was guaranteed to keep PUE as low as possible from day one, and right the way through to eventual project completion.”

**The Future of Russian Data Centres**

Moscow One has proven to be a landmark facility in the Russian market, and IXcellerate plans to continue the site’s development, along with further facilities in Moscow and across Russia. Their success in creating a facility which can perform to a best-in-class standards, while efficiently addressing the climatic demands of the region, have provided a strong foundation for future success. Emerson Network Power will be on hand to consult and provide the technology solutions to meet whatever challenges IXcellerate’s future projects may hold.