Gain the power to reduce TCO and serve the business better

Fresh challenges and prospects are constantly emerging in the digital economy, with data acting as both a new natural resource and an opportunity for growth. However, disruptive competitors are emerging just as rapidly. To stay competitive in this challenging new world, enterprises need IT systems that provide high levels of flexibility, and that can generate rapid insight from large and fast-growing volumes of structured and unstructured data. In addition, improved security is vital for connecting safely with customers, partners, and suppliers in the digital economy, while high performance and availability at all times are also crucial – after all, business never sleeps. At the same time, companies must balance all these requirements within the ever-present constraints of limited budgets.

As experts in IBM Power Systems with a 30-year track record of successful work with blue-chip companies, Northdoor can help you refresh and upgrade your Power environment to make it fit for the challenges of today and tomorrow. We can help you to boost efficiency and performance, and gear up to take on new workloads – all while reducing your total cost of ownership. As the first step, Northdoor offers a comprehensive assessment of your existing infrastructure, with clear recommendations on where to go next.

Challenges of the digital economy

This is the age of disruption and the rapid transformation of entire industries. The world's largest provider of accommodation owns no residential property. The world's most valuable retailer holds no inventory. The world's largest taxi company owns no cars. What unites these companies and others like them is their ability to marshall huge volumes of unstructured data and put them to work in creating business insight.

In the digital economy, data is the new natural resource. What's more, due to the growing use of real-time analytics, mobile technologies, Internet of things (IoT), blockchain and electronic contracts, data growth is actually accelerating – it is estimated that 90 percent of all existing data was created within the last two years. Your company's future prospects will depend significantly on your ability to transform these oceans of data into insight that supports rapid, highly informed decision-making. This means you need a platform that can ingest and analyse huge volumes of data at high speed.

A parallel development is the switch of focus from products and services to clients, as we enter an always-on, customer-centric culture based largely around mobile access to information tools. In a time of social media and instant gratification, there is nowhere to hide for consumer-facing businesses that fail to meet their promises. And wherever consumer industries head, business-to-business (B2B) industries will follow – not least because decision-makers in the B2B sector are themselves consumers. This all puts a huge premium on

constant uptime and high transactional performance for key business systems. So, not only do you need to take on new workloads around big data and analytics, but you also need to get better at the bread-and-butter tasks that underpin your current business.

In terms of server infrastructure, companies often fail to take advantage of the latest technologies and the opportunities they afford. Huge opportunities remain for optimisation and consolidation, and businesses that invest in a smart way can potentially improve their capabilities even as they make significant savings on TCO.

The latest IBM Power Systems offerings deliver the performance, availability, security, big data, and consolidation capabilities that companies need to thrive in the digital economy. And Northdoor has the experience and technical expertise to help you choose and deploy the right new solutions for your requirements.

Boosting performance and scalability

A further challenge for enterprises today is the unprecedented pressure to provide larger sets of products and services at ever lower costs, along with increasing expectations for fast, seamless, and reliable service. It's not enough just to maintain your current service levels – competitors can emerge from nowhere and steal your market share by doing business better, faster, and at lower cost.

Therefore, it is vital that businesses offer access to products and services through a wider set of channels and devices, while continuing to process transactions rapidly and reliably. They must also identify and understand relevant customer interactions across web, mobile and social touchpoints, and have the potential to customise offerings where appropriate.

The latest Power Systems servers have the performance and scalability to tackle these challenges. They continue to deliver compelling advantages over x86 servers, with higher performance in a smaller, more cost-effective footprint. Moreover, upgrading to the next-generation of IBM POWER processors can provide the same performance in less than half the footprint, dramatically cutting cost and complexity.

The latest IBM POWER technology is tuned for excellent performance with open-source databases on Linux, including EnterpriseDB, MongoDB and Redis, running side-by-side with core systems on IBM AIX or IBM i. This gives businesses the option of reducing costs by moving their workloads to Linux on Power Systems, and delivers greater ease in creating hybrid architectures. For example, you can opt to run your core business on on-premises servers, while managing spikes in demand by seamlessly transferring workload to stand-by resources in the cloud. To assist the creation of hybrid-cloud landscapes, Capacity on

Key challenges in the server landscape

- ***Scale:*** *how can we stay one step ahead of business growth without losing control over our IT costs?*
- ***Support:*** *how can we keep critical workloads running at all times to serve business users, partners and customers?*
- ***Perform:*** *how can we deliver rapid insight into growing sets of structured and unstructured data, to enable real-time visibility into the business?*

Demand (CoD) options on Power enable cloud-like consumption models for on-premises infrastructure – so you can maintain the right balance between price and performance at all times

Delivering availability and reliability for mission-critical workloads

Over the years, the number and type of workloads considered to be mission-critical has continued to grow. Once, it was perhaps just your financials you needed to worry about – now you also need to ensure super-high availability for internal and external messaging, sales administration, customer-support, and decision-support systems.

In the digital age, customers can browse and purchase items online at any time, meaning that any downtime equates to lost sales and potential reputational damage. Internally, employees need to be able to manage and analyse data sets without interruption. They must also have the capability to maintain a responsive presence across all online channels, and preserve customer trust and confidence by providing constant, reliable service. Furthermore, businesses need to avoid missing fleeting opportunities for profit by ensuring that their transactional systems are available at all times.

The latest Power Systems servers provide class-leading reliability, availability, and security, with the highest levels of protection for mission-critical systems. Chipkill memory with advanced error checking and correction (ECC) technology isolates data from the impact of a single memory chip failure. Meanwhile, PowerHA SystemMirror for AIX and i integrates server clustering technology into the OS kernel, improving the speed of response and enabling faster failover. The servers also support stretched clusters that can span multiple physical locations and hybrid infrastructure. Seamless connections to the cloud leverage standard REST APIs for easy development and management, and users can extend processing into the public cloud if problems arise with on-premises infrastructure – boosting reliability.

Take a moment to consider the cost of downtime to your business – both tangible, in terms of lost sales and productivity, and intangible, through damage to reputation. As well as enabling you to avoid the significant penalties of downtime, the latest Power servers offer lower TCO, so your investment could pay for itself very rapidly

Current infrastructure

- Not designed for challenges of digital economy
- Low performance, inconsistent time-to-results
- Inflexible resource management limits responsiveness
- Not optimised for new workloads such as machine learning

Future infrastructure

- Capable of absorbing and transforming huge volumes of incoming data
- Consistently high performance for short time-to-insight
- Highly adaptable, cloud-ready architecture enables rapid response to new requirements
- Tuned for exceptional performance in the cognitive age

Big data and new workloads

The digital economy continues to grow at high speed. Organisations of all kinds are gathering, processing and storing more data, of more types, from more sources than ever before – and the rate of growth is itself increasing.

To stay competitive – particularly against "born-on-the-web" competitors – enterprises need the ability to absorb huge volumes of data at high speed, manipulate and understand that data, and then use advanced analytics to unlock its full business value. Competitive differentiation will increasingly depend on beating other market participants to find meaningful patterns in large quantities of structured and unstructured data, translating into real-time visibility into operations, customer experience, and customer behaviour. Beyond this, many enterprises are already investing in machine learning and predictive analytics to identify opportunities for growth and profit even before they have fully emerged.

The latest generation of IBM Power Systems servers was designed from the ground up to offer exceptional performance for analytics, machine-learning and cognitive workloads. To help businesses gain insight faster from larger sets of data, the latest POWER processors offer more threads, greater memory bandwidth and larger cache versus comparable x86-architecture processors. They also offer significant gains over the previous generation of POWER processors. Equally, the IBM architecture enables very close coupling of POWER CPUs with GPU accelerators to deliver order-of-magnitude improvements in performance for analytics and machine learning. IBM benchmarking shows that Apache Spark offers double the per-core performance on the Power architecture versus x86.

Building on 30 years of experience in designing, delivering and managing infrastructure for blue-chip companies, Northdoor has the skills to help your organisation:

- Determine the current condition of the Power infrastructure and its shortcomings
- Determine the likely future requirements
- Design an appropriate server architecture for the future
- Create a costed business case for the transformation project, showing the likely ROI/payback period
- Plan a phased transition that maximises the reuse potential of existing investments
- Execute the transformation with minimal disruption or risk
- Train internal staff to master the new systems, and support them with first-class expertise
- Set up ongoing reviews to keep the Power architecture aligned to changing business needs.

For more information

Contact Northdoor for a no-obligation assessment of your existing Power Systems landscape, with recommendations on how to upgrade it for lower TCO, greater efficiency and higher performance to tackle the challenges of the digital age.