The future of banking is electronic but capacity planning remains key
Banks gain competitive advantage with capacity planning in digital age

Capacity management tools are a crucial part of modern enterprise systems – and they are rarely more necessary than in the world of high finance, where uptime and latency really matter, writes Lisa Kelly

The digital economy is growing fast and banks are at the forefront of this revolution. Whether a bank is a traditional high-street bank moving more services online or is a new entrant with an exclusive online presence, digital technology is driving their business strategy.

High-street banks and investment banks need to invest in capacity planning to best focus their digital resources, plan for contingencies and keep all their channels running smoothly to guarantee the performance and availability of services to customers. As customers and businesses in other sectors are increasingly digitally active, they demand the ability to interact with banks around the clock, 365 days a year across multiple channels. For the digital customer, there is no room for error.

Changing world

According to analyst firm Gartner, through 2018, more than 30% of enterprises will use IT infrastructure capacity management tools for their critical infrastructures to gain competitive advantage, up from less than 5% in 2014.

The British Bankers Association (BBA) acknowledges how digitization is changing the way individuals and companies work and the impact this is having on banks. Its report, Digital Disruption, highlights how the advent of the mobile device has dramatically accelerated the pace of change in the way we bank and how banks interact with customers.
The number of people visiting branches has dropped by 30% in the past three years, while some 80% of the UK banking population now uses some form of online banking service every month. In the US, the American Bankers Association’s (ABA) recent annual survey revealed that, for the sixth year in a row, customers prefer banking online. It shows that more consumers are embracing mobile banking via their phone or tablet, with a jump from 8% in 2013 to 10% in 2014.

“Advances in technology have enabled banks to expand customer choices and make it easier for consumers to manage their account anywhere, any time,” said ABA’s senior vice-president, Nessa Feddis.

Young people in the US are particularly unenthusiastic about traditional banking; some 38% hadn’t visited a bank in the past six months, compared with 36% of the overall population, according to a survey by financial publisher Bankrate.

In response, banks worldwide are changing their business models, but one of the biggest challenges is that customers expect digital applications to work quickly, efficiently and seamlessly at all times.

Retail and investment banks increasingly need sophisticated capacity planning...

**Open all hours**

Per Bauer, director of International Services at TeamQuest, says digital technology is driving banks to invest in back-office systems that can deliver services around the clock. “Certainly for investment banking there has always been a busy exchange somewhere in the world at any time in the day, but for traditional retail banking there were slack periods. If the back-office operation was not perfect, problems could be fixed behind the scenes. What is new with the digital economy is that every transaction at any time must be quick and is much closer to the customer; there is nowhere to hide,” he says.

A lot of retail banks are interacting with customers through handheld devices. Customers want every interaction to be instant and seamless and this heightened transparency increases the need for capacity planning tools, says Bauer. “Previously, capacity management tools were required to drive efficiencies. Now that has elided with the need to mitigate the risk of offering services at any time of the day,” says Bauer.

If a service is perceived to be inferior, it risks losing business. This is driving automation and self-service because constant operation cannot be done manually. For investment banks, extreme value is placed on speed and availability of systems. “A lot of things happen that require sub-second response times. The potential return on investment for key systems is huge; everything has to be fine-tuned and even three times the capacity of what is actually needed can sometimes be justified” says Bauer. For retail banks, organic growth used to be predictable. Looking at trends was many times enough for planning. But with new entrants, new habits and multiple service offerings the willingness of customers to shop around has increased. Growth is unpredictable.

Bauer says capacity planning tools that can implement different scenarios and predict outcomes are key. “Capacity planning tools should have the ability to take empirical data and use it to perform ‘what ifs’ combined with risk assessments. We support that functionality and more advanced analytics 100%. Without it, planning is so much harder,” says Bauer. Similarly, investment banks need to establish reasonable scenarios, so they can meet market demand with new capacity.

One use of such software in retail banking is to plan for specific events, such as Black Friday or the last shopping days before Christmas, to make sure systems can cope with the volumes of card transactions. And investment banks can use the tools to enhance performance and respond to events in the digital global economy, that has major impact. “When things happen in a volatile global market, it can generate a tsunami of transactions that must happen in a short time. We focus on ensuring there are no delays or latency to those systems,” says Bauer.

Banks are exploring cloud services to meet this extra capacity, and capacity management tools need a holistic view of the entire infrastructure. “Three years ago, most banks categorically said no to cloud services, but as that technology has matured, some banks are starting to entertain the thought of using it for some of their services or have even started to adopt a hybrid approach, and use cloud for non-critical services. For example, for investment banks their trading systems are their competitive edge and they will not be outsourced. But those systems are only a smaller part of their overall operation and they are more open to putting some less important legacy operations and workloads in the cloud,” says Bauer.
and management tools to meet these exacting expectations and to enable them to uphold their reputations and compliance obligations. These tools must be able to predict and analyze data in real time to ensure banking systems are highly responsive to any requirements for change and operate efficiently.

In particular, new entrants, such as Metro Bank and Atom Bank, need to be able to respond rapidly to spikes in demand and changing market conditions as they are the innovative entrants with a digital-only agenda and a focus on maintaining their agile edge. Digital banking breaks down barriers and allows innovation by developing new products and services, but it also promotes competition.

Building high levels of functionality into mobile and internet portals, while maintaining traditional channels, such as branches and call centers, is a key challenge for traditional retail banks. “This is a major test for the banks given the pressure from regulators and politicians to ensure continuity of service, particularly as customers are increasingly used to being able to access banking services 24/7,” says the BBA report.

Ian Campbell, an interim CIO who has worked as a consultant for RBS and NatWest, on trading systems for Barclays and as CIO at Citibank, says the digital customer is demanding and this is affecting systems and capacity. “Customers expect service 24/7 and are horrified by any outages. The intensity on systems and capacity compared to what it was some years back when banks could shut down and have overnight processing is extreme,” he says.

“Banks must invest to keep up with modern business”
Per Bauer, TeamQuest

What banks need from IT capacity planning and management

Banks are inundated with data travelling through thousands of servers and virtual machines and need to be able to survey and make sense of this data to track their IT capacity and measure performance risk. They require capacity management tools with analytic intelligence that can work with any data source and provide answers to the IT capacity questions asked by the business. Pulling information into a single, analytical report in an automated fashion frees up staff time and allows analysts to be more gainfully employed analyzing reports on performance, instead of being tied up creating them. In the digital era, with inherent volatility and a dynamic customer base, capacity planning gives banks insight so they can plan ahead with confidence.

Banks need tools that can model different what-if scenarios so they can identify what steps need to be taken, in line with evolving business requirements. Simplifying difficult tasks and allowing banks to be proactive and forward-thinking is a key requirement of capacity management solutions. The goal is capacity management software and services that facilitate IT service optimization which continuously, automatically and predictively connects technology and business metrics across the IT environment.

Banks are operating in a 24/7 environment and haven’t got windows of downtime to upgrade their IT systems to ensure they have the capacity to cope with demand. They therefore need tools to iron out mismatches between the perception and reality of IT optimization to improve service delivery and reduce costs. To achieve this level of agility, banks need powerful analytic tools capable of making near-real-time calculations that show which IT systems need attention.

Making informed business decisions about how launching new services will affect the infrastructure requires being able to model the impact of running additional services, allowing banks to plan ahead and avoid outages. Rather than creating theoretical models, banks need to be able to take live data from their systems and use that to model, which allows them to operate at maximum efficiency with the appropriate balance of load and risk. All banks want automated health monitoring and the ability to analyze and easily drill down and detect any problems by getting accurate analysis of the use of resources. It is vital for banks in a competitive digital landscape with strict compliance obligations to ensure the best use of investment to avoid overspending on IT. But simultaneously they need the assurance that systems will run smoothly at peak times.

Banks may have complex legacy architectures and are increasingly willing to adopt cloud services, so they need capacity management software that supports multi-vendor environments and virtualized and cloud computing. To truly optimize, they require capacity management tools that cut costs and identify over-capacity while ensuring applications perform efficiently. The end result is a better, more reliable, cheaper IT service delivery.
“Banks have to be able to process and use data in a positive way or they will run into trouble”

Ian Campbell, interim CIO

Demanding workload

However, he says the unpredictable nature of digital demand is putting an even greater strain on capacity. During one phase of Citibank’s digitization program, the bank distilled 10 pages of questions on its website, to a much smaller number of key questions to help it decide whether or not to approve customers’ loan applications. “We were inundated and we didn’t have the capacity to process demand; that was pre-mobile and pre-iPad. Now customers can generate data from any device, anywhere, but banks still have problems with legacy systems that can’t cope,” says Campbell.

According to the BBA, the hard-wired complexity of banks’ legacy systems is a barrier to change, a challenge that is compounded by customers’ rising expectations. The attitude of consumers is: “If my mobile provider and online retailer can provide a specific type of service in a particular way, why can’t my bank?” To succeed, the organization says banks’ digital services must be as seamless and frictionless as possible.

Campbell says investment banks, similarly, cannot afford latency in the digital world. “When banks trade on behalf of clients, there is no time to lose, otherwise they will go to a competitor. Investment at the trading end is second to none because of this need for speed. However, volumes can increase dramatically in a reactive digital economy. Market updates or information released to shareholders immediately affects trading and we can all react very quickly. Capacity needs to be scaled accordingly,” he says.

Most banks keep their critical systems in-house, but there is a growing appetite to explore the cloud for less critical applications and to use advanced capacity management tools to manage demand for external cloud services. “There has been a paradigm shift towards cloud and using the network for capacity loading. Customers don’t mind – they want to know which bank will help them in the most effective way,” says Campbell.
Fast growing

In Gartner’s Market Guide for Capacity Management Tools report, analysts Ian Head and Milind Govekar wrote: “Digitization produces pressure for high-performing infrastructures that are agile and are capable of deploying new services rapidly and cost-competitively. At the same time, in-house datacenter costs are being compared with infrastructure-as-a-service (IaaS) and cloud service providers. This is forcing a rethinking of the older buy-more-hardware-when-needed philosophies that used little more than in-house, Excel-based tools to gather limited historical utilization data to forecast future capacity needs.”

The report highlighted that “IT infrastructure-capacity-planning tools can generate infrastructure-capacity-related reports, are able to perform historical data analysis and capacity-related analytics, and have IT and business scenario-planning abilities.” Banks facing events, such as acquisitions, rapid growth – applicable especially to new online entrants – or critical new projects demanding rapid deployment and an elastic infrastructure, will need advanced capacity management tools. “Investment in capacity management processes and tools helps alleviate these issues and provides considerable competitive advantage,” according to the Gartner analysts.

Uncertain future

As organizations increase the proportion of virtualized infrastructure, and introduce private and hybrid clouds, it is important for them to deploy tools that allow an holistic view of the entire IT estate.

The BBA predicts that banking in 10 years is likely to be dramatically different, as digitization continues. “There will be more competitors in more channels. Customers will have more choice. Banks should be able to provide their customers with a much enhanced service, available at a touch of a button. If the banks get it right, everyone can be a winner, but it is a massive challenge and the journey has only just begun.”

Campbell agrees that choice will increase, but believes banks risk being overwhelmed by data if they don’t have good operations and capacity planning tools with analytics capabilities that can help them to make sense of trends and inform innovation. “Banks have to be able to process and use data in a positive way or they will run into trouble. Digital intensity is likely to increase and banks must be prepared by being able to spot trends and evolve strategies to service clients,” he says.

Capacity planning and management

- Banks are turning to capacity planning and management tools to help them improve their delivery of digital services.
- Capacity planning allows banks to predict how their infrastructure is likely to cope under what-if scenarios, and part of this process involves data gathering, data storage and reporting on that data.
- Banks use predictive tools to help manage the resources required to deliver IT services for changing business demand.
- Banks also use capacity management tools to manage IT services and the IT infrastructure to ensure it can deliver the service level targets agreed with the business in a cost-effective way.
- Capacity management allows banks to consider all the resources required to deliver IT services, ensuring that their IT systems are able to meet short, medium and long-term business needs.