

BAKER&BAKER

Case Study

Revolutionising
Production Operations:
Baker & Baker's Success
with Tata Communications
IZO™ SDWAN



Consider a bakery company that relies on an online system to manage production and inventory. If the network fails, the staff will be unable to access production details or update inventory, leading to missed orders or overstocking. This can result in delayed or incorrect deliveries, as well as financial losses from unsold products. A dependable network is crucial for the manufacturer to efficiently process orders, manage stock, and maintain high customer satisfaction ultimately supporting smooth business operations.

Discover how Baker and Baker, a leading bakery manufacturer, transformed its connectivity and strengthened its operations with the IZO™ SDWAN solution, creating a robust and resilient network.

Network reliability - The key to seamless manufacturing operations

For Baker & Baker, network reliability is not merely a technical requirement but a key element of operational success. As a leading manufacturer of fast-moving consumer goods, its production processes depend on real-time data exchange and communication across various facilities. With multiple sites across Europe, a robust network is crucial for seamless coordination among staff in different countries. Additionally, reliable connectivity is essential for integrating its SAP system, which oversees production orders, inventory, and quality control. Without dependable network access, critical operations like labelling products and communicating with logistics partners would be disrupted, affecting production efficiency and compliance with health standards.

Danny McCarthy, Director IT Technical Services, Baker & Baker, illustrated this with an example, *“At times, when our SAP system was down for maintenance, or there was an outage, for example, consider the CrowdStrike incident, we faced significant disruptions in our operations. We could not label the products correctly because the labelling data couldn’t be transmitted. Although the production of doughnuts and cookies continued without a hitch, it ended up with countless unlabelled boxes. Consequently, these products couldn’t be distributed effectively.”*

In essence, for Baker & Baker, a reliable network is fundamental to maintaining high production standards, ensuring timely product distribution, and supporting digital transformation initiatives.

About BAKER & BAKER

Baker & Baker is a leading bakery products manufacturer, serving more than 30 markets across Europe and further afield including the Middle East and North Africa. With 12 manufacturing sites across six European countries, employing more than 2,500 people and with an annual turnover in excess of €600m, Baker & Baker is a key player in the bakery convenience segment.

Inefficient and Undersized Network Infrastructure Disrupting Real-Time SAP Connectivity and Business Operations

Back in 2015-2016, Baker & Baker experienced significant growth and transitioned its manufacturing operations to be driven by SAP. Consequently, maintaining real-time, constant connectivity to the data centre hosting SAP became crucial. The previous MPLS-based network was undersized for these evolving needs, as it could only support basic communication and lacked the capacity for expanded operations and real-time data exchange. The main limitations of the legacy network included:

Frequent outages: The network experienced regular and extended outages, sometimes lasting over eight hours, disrupting operations and impacting productivity.

High latency: Considerable latency affected critical systems like SAP, which managed production orders, recipes, and inventory. This delay led to slow updates and inefficient workflows, hindering overall operations.

Limited scalability: Upgrading bandwidth was cumbersome, involving new orders, new bills, and lengthy lead times of up to six months, which constrained the company's ability to quickly adapt to its growing business needs.

These limitations led to significant communication problems with SAP, creating major issues for the manufacturing facilities. Orders sometimes went unreceived, recipes became inaccessible, packaging labels were not produced, and inventory tracking was disrupted, complicating the timely reordering of ingredients. Thus, establishing reliable two-way communication between the data centre and individual facilities was crucial for smooth operations. Additionally, the network was vital for managing and monitoring environmental factors such as bake time and cook time. Due to its unreliability, data from these monitoring systems couldn't be accurately collected, transmitted, or analysed, making it difficult for Baker & Baker to generate reports for local federal authorities and demonstrate compliance with health code standards.

The company staff also depended on shared drives on local branch servers across its sites. Mapping network drives between locations was crucial for accessing production support, environmental data, and SOP documentation, all of which were centrally stored and required direct network access.



Tata Communications IZO™ SDWAN Delivers Unmatched Network Reliability and Operational Efficiency for Baker & Baker

To address the issues, Baker & Baker sought a robust, flexible network solution. It chose Tata Communications for its reputation for reliability and innovative solutions.

The new network was designed in 2017, when Baker & Baker operated across North America, Europe, and China, encompassing 50 locations. Implementing the network in challenging regions like Russia and China, where obtaining connectivity was particularly difficult, was a major achievement. As highlighted, this network was essential for supporting SAP-based production and centralised ERP systems. Although the company's footprint has since reduced due to divestitures, the need for a reliable network with ample bandwidth and low latency remained unchanged, continuing to be critical to the company's business model.

Here's how Tata Communications transformed Baker & Baker's network, ensuring high availability and reliability:

Partner flexibility: Tata Communications showcased exceptional flexibility and a strong willingness to adapt their technology to meet Baker & Baker's specific needs. Throughout the partner evaluation phase, Tata consistently provided solutions without dismissing requests as out of scope or imposing excessive costs, distinguishing them

from other providers. Baker & Baker was particularly impressed by Tata's approach of never saying "no" to any requirements. During a collaborative two-day whiteboard session, 35 Tata engineers worked closely with Baker & Baker to seamlessly integrate the company's unique needs into their technology platform.

Local breakouts: Tata Communications implemented local internet breakouts at each site, removing single points of failure. This setup ensured that an internet outage at one site would not impact the entire region.

Real-time failover: Internet traffic often experienced significant spikes due to high demand, affecting the performance of SAP traffic to the data centre. The new design separated internal data centre and production system traffic from internet traffic. Dynamic routing protocols were used to ensure automatic failover within seconds in the event of circuit failures.

Continuous collaboration: Tata Communications has maintained a close working relationship with Baker & Baker through regular weekly calls. These meetings ensure continuous support and alignment on ongoing projects and new items.



IZO™ SDWAN enhanced Baker & Baker's network connectivity and fortified its security, resulting in a unified and protected network infrastructure. When the bakery company opted to deploy Zscaler for managing and securing its internet access, it required a method to route all its locations' internet traffic through Zscaler. This necessitated a central point for managing and securing internet traffic from all sites.

To achieve this, Generic Routing Encapsulation (GRE) tunnels were created from Versa routers (devices that manage network traffic) to Zscaler, allowing internet traffic to be securely transmitted through these tunnels. This use of GRE tunnels to connect to Zscaler represented a new approach for Baker & Baker. Tata Communications collaborated closely with the company for about two months to implement this solution. As a result, the security and SDWAN overlays are now seamlessly integrated. Outbound traffic from Baker & Baker facilities is routed through Zscaler, while remote users connect via Zscaler ZPA and route back into the network through app connectors.

We had the chance to design a greenfield network from scratch. We identified that one of the major issues was our reliance on just three Internet breakouts—located in the US, China, and Europe—which left us vulnerable to regional outages which meant we couldn't get emails or communicate with each other. It was critical to eliminate the single point of failure for our infrastructure. Collaborating with Tata Communications' network engineering team, we envisioned a solution with local breakouts at every site. This network design ensured that if one site experienced an outage, the rest of the company could continue operating seamlessly. The implementation of this network has greatly improved our resilience and operational efficiency.

Anthony DeDiego,
Director IT Infrastructure,
Invasystems (Baker & Baker Consultant)

When a circuit failure occurs, BGP automatically fails over to the backup circuit, rerouting traffic seamlessly. This failover process typically takes less than 10 seconds—often as quick as 4 or 5 seconds—so users rarely notice any disruption. The high reliability of the SDWAN solution has led users to expect consistent performance, much like expecting the lights to turn on when they flip the switch.

Danny McCarthy,
Director of IT Technical Services,
Baker & Baker

High network availability, low latency ensured uninterrupted production

Earlier, during our transition to SAP with the old network, we encountered significant latency issues. Manufacturing kiosks on the production floor, where workers logged directly into SAP, experienced slow performance due to limited bandwidth and high network contention. This made it difficult for workers to quickly input data and load information into the production line, sometimes leading to failed transfers. When these interruptions occurred, the production line would sometimes halt. However, with our new, improved network, we never experienced loss of connectivity to critical production systems, ensuring that the production line operates smoothly without interruptions.

Danny McCarthy,
Director of IT Technical Services,
Baker & Baker

The implementation of the IZO™ SDWAN solution not only resolved connectivity issues for Baker & Baker but also accelerated the company's IT transformation. With the network running smoothly, Baker & Baker was also able to outsource a significant portion of its IT operations.

Centralizing infrastructure management—encompassing PCs, network operations, and security—has greatly streamlined the company's processes. With a single team overseeing the entire environment, Baker & Baker has achieved significant efficiencies. This centralization has proven effective, as evidenced by the minimal issues experienced by end users.

The benefits are several:



Rapid deployment: The SDWAN solution enabled Baker & Baker to quickly integrate new sites with minimal lead times. Thanks to Tata Communications' flexibility, facilities could be connected within two weeks using temporary 4G or LTE connections while awaiting permanent circuits.



High availability: With the new network, Baker & Baker reduced network outages to nearly zero from 8 hrs earlier. This reliability ensured uninterrupted production and minimised financial losses associated with downtime.



Reduced total cost of ownership and improved overall efficiency due to centralised network management.



Enhanced user experience: With minimal disruptions due to seamless network failovers, improved bandwidth and reduced latency, the user experience was significantly enhanced. Issues like bandwidth hogging could be easily managed.

The flexibility that Tata Communications offers, including access to various technologies to meet our connectivity needs, has greatly enabled us to maintain our business operations with very short lead times in many cases. The partnership with Tata Communications has proven to be a strategic asset, supporting our ongoing growth and digital initiatives.

Danny McCarthy,
Director of IT Technical Services,
Baker & Baker

Build your future through a digital customer experience

If you are an enterprise looking to transform the way your customers experience your product, talk to your Tata Communications representative about your company's digital transformation.

- How you can reach your high value customers in the most convenient way?

Transform Now

About Tata Communications

A part of the Tata Group, Tata Communications (NSE: TATACOMM; BSE: 500483) is a leading global commtech (communications technology) player powering today's fast-growing digital economy in more than 190 countries and territories. Leading with trust, it enables digital transformation of enterprises globally with collaboration and connected solutions, core and next gen connectivity, cloud hosting and security solutions and media services. 300 of the Fortune 500 companies are its customers and the company connects businesses to 80% of the world's cloud giants. For more information, please visit www.tatacommunications.com

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