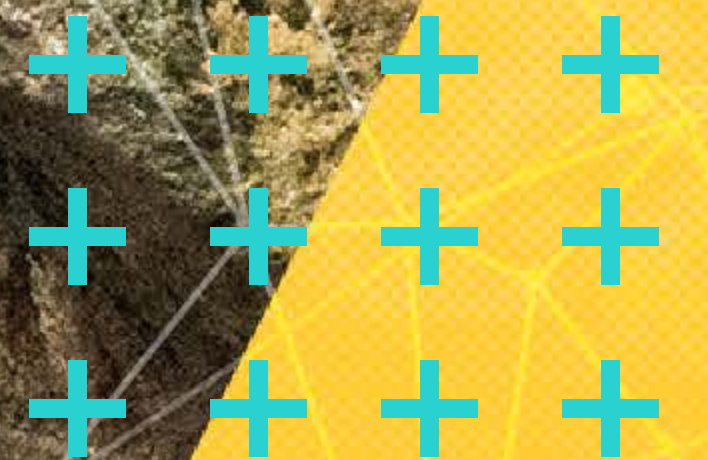




**HYPERAUTOMATION
FOR COMMUNICATIONS
SERVICE PROVIDERS**

HYPERAUTOMATION: BELIEVE THE HYPE

Hyperautomation is a key enabler for CSPs to deliver the digital enterprise by intelligently orchestrating and streamlining complex business processes.



BEYOND AUTOMATION



As 5G networks come online, communications service providers (CSPs) know that the key to their future success will be their ability to monetise this step-change in network technology—while continuing to refine and optimise the customer experience.

That's why CSPs are positioning themselves to take advantage of new capabilities such as network slicing, which will enable them to offer bespoke services with bandwidth and latency characteristics tailored for individual customer use cases. This has the potential to transform the business-to-business (B2B) market for CSPs by unlocking new possibilities and revenue streams, especially at the edge of the network.

However, seizing these opportunities isn't just a matter of building out the 5G network itself; it requires CSPs to transform their core business processes too. With ownership of 5G masts split between mobile network operators (MNOs), tower companies (towercos) and other players, companies will need to be able to coordinate across the whole ecosystem in real time to ensure optimal utilisation of the network and maintain quality of experience (QoE) for consumers and corporate customers alike.

In short, both network management and customer care processes will need to become more dynamic, and the speed and scale of operations will make it impossible to continue to rely primarily on human decision-making. CSPs will need to move towards autonomous networks that make services quicker, cheaper, and simpler to deploy and manage, as well as guaranteeing "zero wait, zero touch, zero trouble" service for customers.¹

¹ <https://www.tmforum.org/collaboration/autonomous-networks-project/>

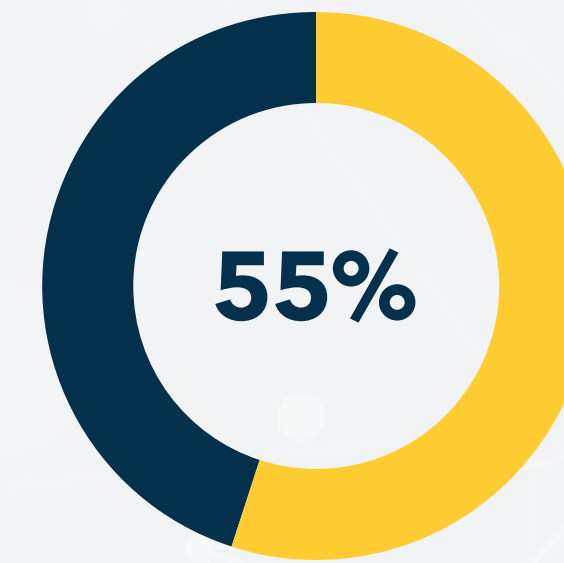


AN APPETITE FOR AUTOMATION

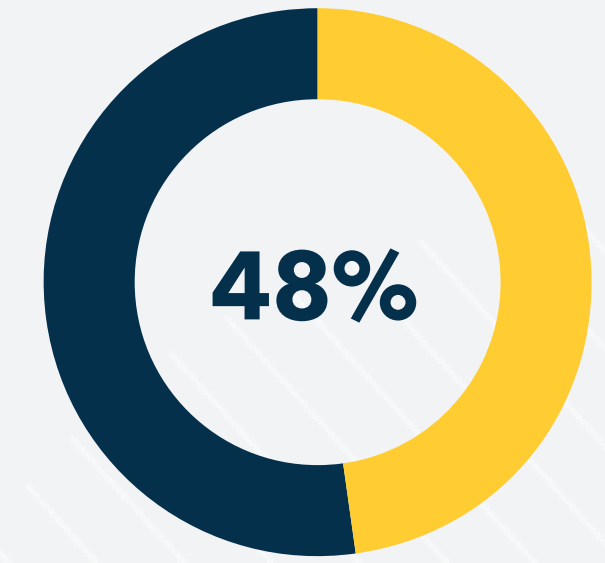
To power this evolution, analysts such as Gartner are increasingly recommending a shift to a new paradigm: hyperautomation.² Hyperautomation is the convergence of digital operating systems, workflows, robotic process automation (RPA), and artificial intelligence (AI), to deliver high value autonomous processes through intelligent decisions.

We're seeing the hype for hyperautomation take hold not only in communications, but across all industries. However, turning that hype into true digital transformation will require intelligent decisioning at the core of every workflow. That's why SAS and Microsoft are partnering to help CSPs deliver the digital enterprise through autonomous processes and decisioning.

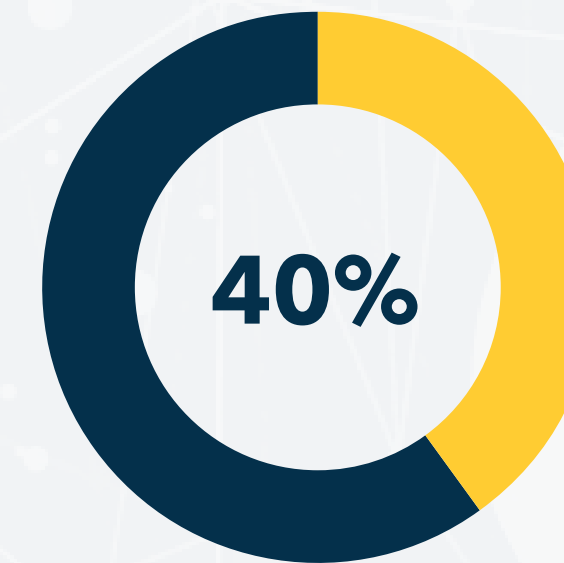
In this eBook, we'll explore how SAS Intelligent Decisioning and the Microsoft Power Platform can combine to provide a low-code hyperautomation platform. Our ready-integrated solution not only helps CSPs introduce intelligent automation quickly, but also ensures that all decisions are auditable and explainable—earning the confidence of customers, employees, and regulators alike.



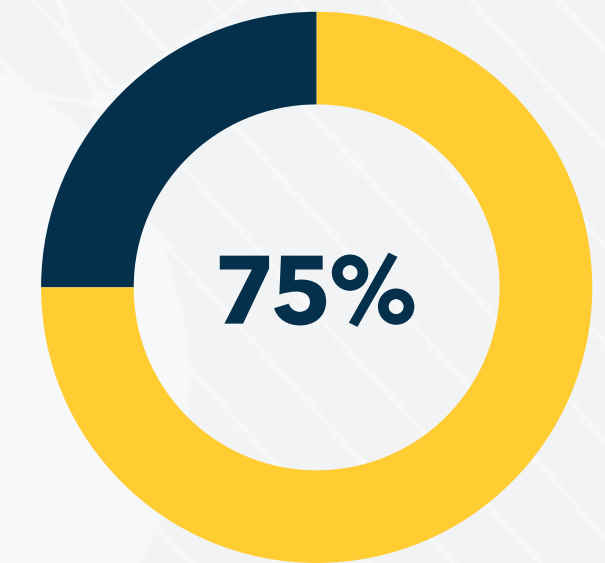
of customers now primarily engage with their CSP using digital channels



of customers trust CSPs' automated customer service tools such as AI chatbots



of customers prefer using an automated customer service tool over a human if it provides faster, more convenient service



of customers would consider switching to another provider that can offer faster customer service

² <https://www.gartner.com/en/information-technology/glossary/hyperautomation>

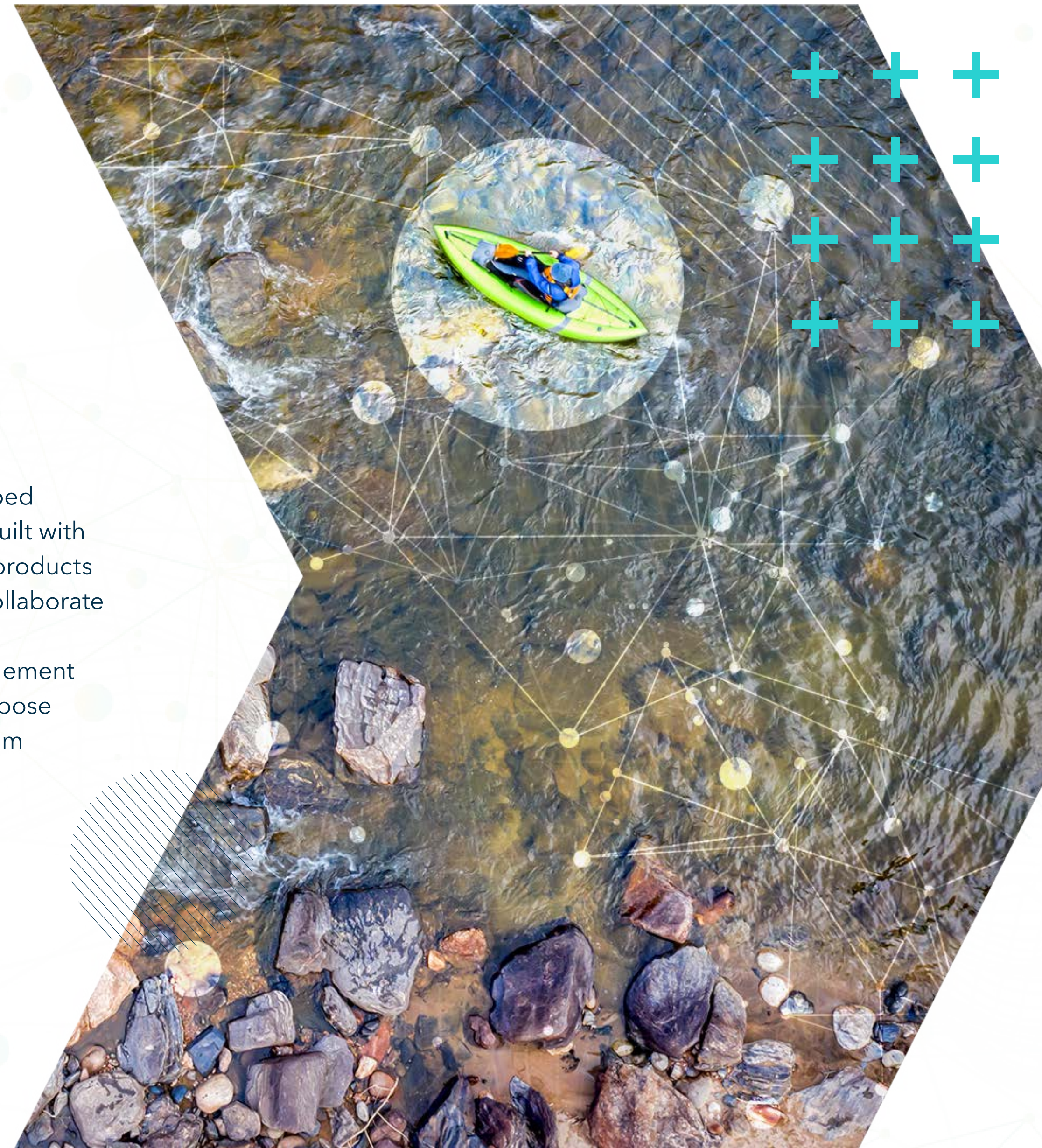
WHAT DO CSPs NEED?

Motivated by the 5G rollout and other factors, many CSPs are currently in the midst of a digital transformation, gradually shifting from their legacy operations support systems (OSS) and business support systems (BSS) to more flexible, cloud-based solutions that can evolve with the needs of the industry.

This new generation of systems transforms the old vertically layered, siloed architecture into a set of horizontal reusable architecture components built with standardised, open APIs.³ This makes it easier for CSPs to develop new products and services to serve customers, empower their own employees, and collaborate with partners and suppliers throughout the complex communications ecosystem. However, to make this work, CSPs need to map out and implement hundreds of user journeys for different ecosystem participants and compose sophisticated workflows that can manage business-critical processes from end to end.

For example, imagine a CSP wants to launch a new product to support Industrial Internet of Things (IIoT) use cases at the edge of the 5G network. Getting this product to market will not only involve customer care processes such as onboarding, billing, and customer support, but also network management of the CSP's own 5G masts, as well as potentially managing contracts with other 5G infrastructure providers, dynamically requesting network capacity when needed, and monitoring service levels.

² See, for example, TM Forum's Open Digital Framework, <https://www.tmforum.org/opendigitalframework/>



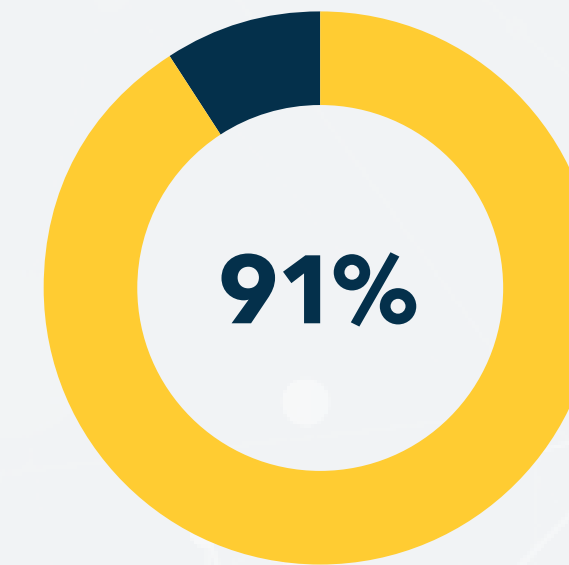
2 WHAT DO CSPs NEED? >

To coordinate all these moving parts at the speed and scale that customers will demand, CSPs will need to take automation to the next level. Simple approaches based on RPA and business rules will not be enough—what’s needed is a more powerful approach that can integrate AI models to make intelligent decisions as standard.

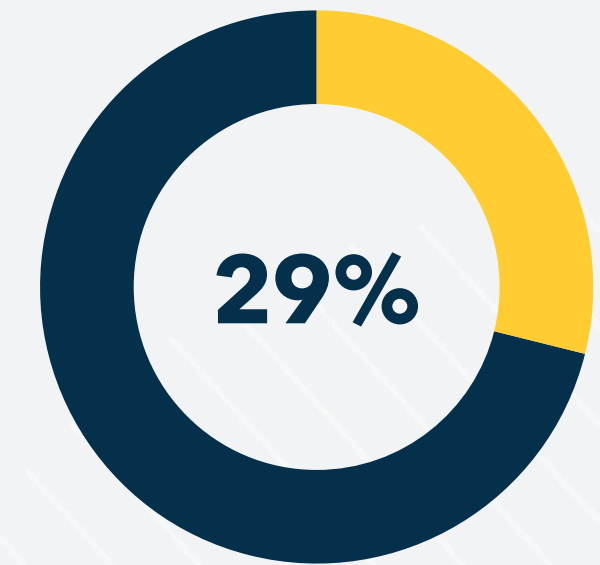
At the same time, the pace of change in the market means that CSPs can no longer afford to spend months building and deploying these new automated processes. Instead of relying on scarce data science and application development resources, they need to put power in the hands of business process owners by making it easy to design, deploy, monitor, and refine automations using low-code software.

Governance will be critical too. In the event of a data privacy breach or security incident, CSPs will need to be able to explain to regulators why their algorithm took the decisions it did. An explainable, responsible approach to the use of AI needs to be built into the core of the solution.

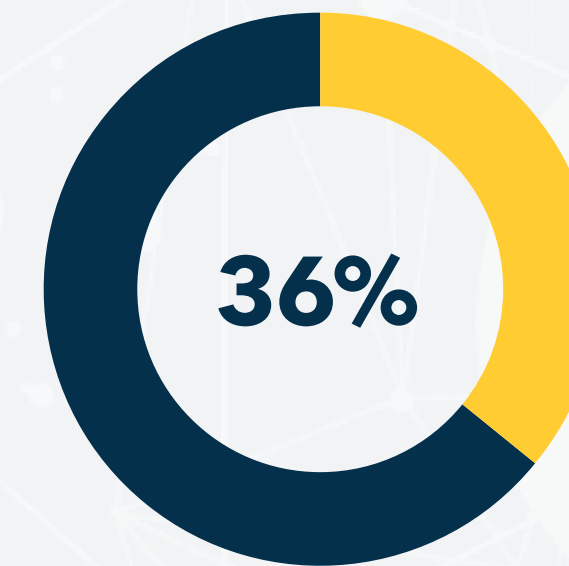
HYPERAUTOMATION IN PROSPECT



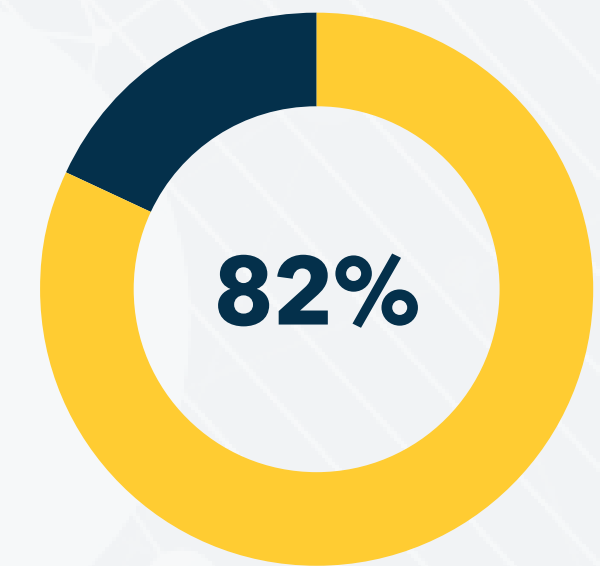
of the C-suite are convinced that hyperautomation will have benefits for their business



of businesses see hyperautomation as key to reducing time to market for new products



of businesses expect hyperautomation to drive improvements in customer experience



of businesses believe hyperautomation will be an important topic in the next 12 months

WHAT CAN HYPERAUTOMATION DO FOR CSPs?

By combining traditional automation tools with AI and cloud technologies, hyperautomation makes it possible to scale up beyond simple linear workflows and embrace the full complexity of communications processes.

- **Gain a 360-degree view of each customer.** By leveraging static and streaming data with computer vision, machine learning and natural language understanding, you can capture information from digital interactions, video, audio, images, and documents instantly, enabling you to make better customer care decisions.
- **Eliminate manual workflows.** Business process orchestration enables you to define, coordinate, monitor, and audit complex branching workflows and manage long-running processes, with automatic retries and exception management in case of unexpected issues.
- **Automate processes efficiently.** Robotic process automation enables you to programmatically control and execute linear workflows involving multiple front- and back-office services, without needing to build direct integrations—avoiding the need for costly changes to legacy OSS and BSS systems.
- **Make intelligent decisions.** By applying a combination of business rules and predictive models to all your available data, decision-making takes place automatically, making it possible to extend the scope of automation to even the most complex use cases. For example, the 3GPP standard for the Network Data Analytics Function (NWDAF) 5G standalone core component currently defines 10 analytics services that could be used in hyperautomated decision-making.
- **Empower business process owners.** With low-code interfaces, your business process owners can design, deploy, and refine automated processes without support from IT. This dramatically accelerates the adoption of automation and increases ownership and accountability.
- **Interact seamlessly with partners.** Always-on, always-connected cloud platforms enable you to scale seamlessly and integrate easily with external applications and data—critical in a communications ecosystem where optimising the utilisation of network resources requires real-time coordination between potentially dozens of partners.

HYPERAUTOMATION OPPORTUNITIES IN COMMUNICATIONS

4 HYPERAUTOMATION OPPORTUNITIES IN COMMUNICATIONS >



TAILOR SERVICE DELIVERY TO CUSTOMER NEEDS

With 5G network slicing, CSPs can move away from a one-size-fits-all approach to service provision and create tailored offerings for specific customer use cases. Hyperautomation enables you to build real-time decisioning systems that optimise your utilisation of network resources and balance the needs of multiple users before the conversation with the customer begins.



ENHANCE QOE FOR CUSTOMERS

Hyperautomation is a key enabler for the creation of autonomous networks that can self-manage, self-optimize and self-heal, with minimal need for manual intervention from human engineers. By integrating AI models into network management processes such as NWDAF and connecting them with the orchestrators of virtual network functions, hyperautomation allows network to react and reshape traffic in real time as network conditions and demand patterns change.



DELIVER BETTER USER EXPERIENCES

As the number of products and services you offer increases, so does the number and complexity of user journeys that you need to support. Hyperautomation makes it quick and easy to compose and orchestrate workflows with intelligent decisioning—creating a consistent, end-to-end experience for customers, employees, and partners alike.



STRENGTHEN NETWORK SECURITY

Network security is paramount for CSPs, especially as new edge computing use cases are likely to introduce millions of new devices to operators' networks. Hyperautomation enables you to develop processes that can assess risks and respond to threats proactively to shut down denial of service attempts and other attacks before they can affect your partners, your customers, and your business.

THE SAS AND MICROSOFT ADVANTAGE

While many technology companies are eagerly jumping on the hyperautomation bandwagon, SAS and Microsoft are in a unique position to deliver real value beyond the hype by combining intelligent decisioning, analytics lifecycle management, responsible AI, low-code/no-code platforms, and industry expertise in a seamless fashion.

With intelligent decisioning and real time supervised and unsupervised machine learning at the core of every workflow, CSPs can scale from simple linear workflows to the full complexity of business-critical processes, providing a real and sustainable source of competitive advantage.

³ <https://www.sas.com/en/whitepapers/operationalizing-analytics-111317.html>

ENTERPRISE DECISIONING AND NWDAF

SAS Intelligent Decisioning acts as the central brain that empowers you to integrate automated decision-making and decision support into all your automated processes. It provides access to a comprehensive range of advanced analytics tools and techniques, from traditional statistical modelling to forecasting and optimization, machine learning and deep learning—so you can always choose the right tool for the job. Together with SAS Event Stream Processing, the SAS Viya platform, and a data collection layer from DigitalRoute, Intelligent Decisioning will be the key component of SAS's upcoming 5G NWDAF solution.

ENTERPRISE ANALYTICS LIFECYCLE MANAGEMENT

Building the right model is only the first step—you also need to be able to train, test, deploy, manage, and retrain it. Analyst firms estimate that only 35% (IDC) to 50% (Gartner) of models are fully deployed, while SAS research has discovered that 44% of models take more than seven months to deploy.³ SAS is a leader in operationalising AI, helping CSPs get models to production faster and keep them accurate, unbiased and fit-for-purpose as business and customer needs evolve.

RESPONSIBLE AI

To meet the expectations of your customers, partners, and regulators, your hyperautomation initiatives must be designed to ensure fair and ethical decision-making, especially when vulnerable service users are involved. Every automated process you build needs to be fully auditable, and every decision made during that process must be explainable. SAS and Microsoft offer a unique, end-to-end governance model for responsible AI-powered hyperautomation.



LOW-CODE/NO-CODE PLATFORMS

Most traditional RPA and AI tools are developer-focused, requiring deep technical expertise to code automation scripts and machine learning models. Microsoft enables you to build hyperautomation flows with Power Automate and Power Apps—and embed SAS Intelligent Decisioning technology within them using intuitive no-code and low-code software. This puts hyperautomation in the hands of process owners, reducing the pressure of maintaining developer-written code, whilst also delivering technology to support the composable enterprise.

INDUSTRY EXPERTISE

With years of experience in helping CSPs address decisioning and automation challenges, SAS and Microsoft are already trusted partners to many of the industry's leading players. By building on existing investments, relationships and expertise, SAS and Microsoft can help clients accelerate their adoption of hyperautomation and hit the ground running—in many cases, delivering meaningful improvements in weeks, not months.



HYPERAUTOMATION IN ACTION

TELENOR NORWAY

CHALLENGE

As Norway's number-one supplier of telecommunications and data services, Telenor puts its customers at the centre of everything it does. The company sees personalisation as a key tool in its ability to develop and offer relevant services to clients and adapt its products to their needs.

SOLUTION

By establishing an event-based hyperautomation platform based on SAS Viya, Telenor is now able to automate its customer care activities based on contextual triggers. This is helping the company deliver more efficient and seamless customer journeys—for example, implementing next best offers across all touchpoints and channels.

BENEFITS

The solution has enabled Telenor to send over 50 million personalised next best offers to its customers in 12 months, correlating with a period where Telenor has seen 40% to 50% growth in personalised upselling.



“It is about meeting the customer with the right message, at the right time, in the preferred channel. To reach this level of personalisation, everything we do and don't do needs to be based on insight.”

Liv Elise Saue Tøftum, Director of Analytics & Customer Lifecycle Management, Telenor Norway

NEXT STEPS ON YOUR HYPER AUTOMATION JOURNEY

Leading CSPs are already working with SAS and Microsoft to build hyperautomation into their business models and unlock significant competitive advantage. In fact, 53% of businesses that have embarked on their hyperautomation journey are already using Microsoft Power Automate, and 76% report that they have found hyperautomation easier to implement than expected.⁴

By accelerating both the routine aspects of business processes and the decision-making that guides them, hyperautomation finally gives your business the tools it needs to succeed in today's dynamic market landscape. Among early adopters of hyperautomation, the benefits are clear: 36% expect to deliver a better customer experience, 32% expect greater product innovation, and 29% expect a reduction in time to market for new products.

By democratising access to automation and analytics tools, multimodal hyperautomation platforms from SAS and Microsoft can help you overcome any shortage of resources in data science, decisioning or application development. With end-to-end intelligent automation, you can build and expand your services for customers, partners, and employees faster, more cost-efficiently, and with full confidence that your processes are responsible, reliable, and robust.

To learn more about how SAS and Microsoft can help you see beyond the hype and realise the full potential of hyperautomation, reach out to Shelley Hackwood at shelley.hackwood@sas.com or search **SAS Hyperautomation**.



⁴ <https://www.sas.com/content/dam/SAS/documents/marketing-whitepapers-ebooks/sas-whitepapers/en/hyperautomation-report-112877.pdf>

HYPERAUTOMATION FOR COMMUNICATIONS SERVICE PROVIDERS

