WHITEPAPER

Why operators must redefine revenue management for the cloud and AI economy

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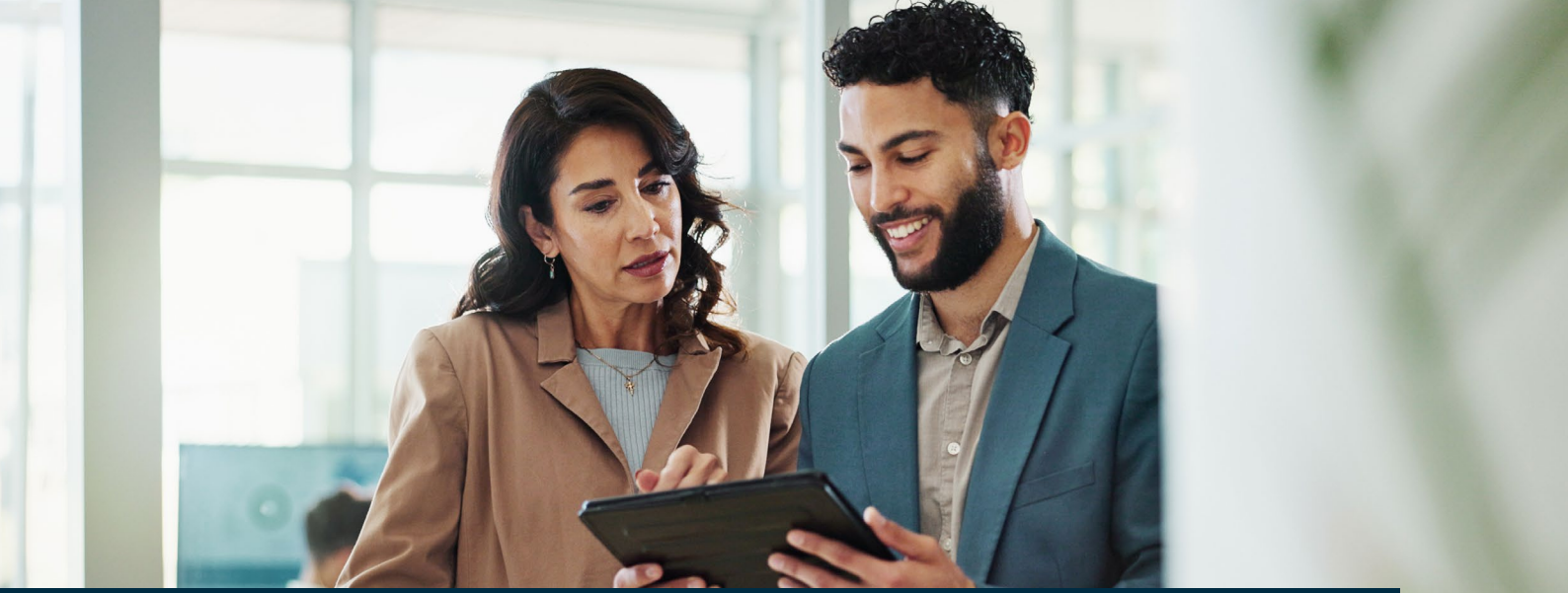


Opening comment: Peter Jarich, GSMA Intelligence

At the Cambridge 6G Symposium in early 2025, Nvidia took to the stage for a keynote and shared a fairly controversial viewpoint: there has never been a better time to be in telecoms.

Against the backdrop of slow revenue growth, continued traffic growth, intense competition (from inside and outside the industry), and patchy success with 5G monetisation, this statement was engineered to be shocking. But there was also a solid logic behind it. 5G has set the stage for an era of radical network evolution based on cloudified software and AI innovations. Tomorrow's evolved networks – programmable networks, thanks to network API exposure – in turn, will be foundational to supporting the AI-powered services for consumers and enterprise users that are poised to fundamentally alter the way we live, work and play.

That's a lot to unpack. Let's dig into one part – telco's role in AI.

While nobody knows exactly how AI will impact telco services and networks, a handful of implications seem clear.

- **Traffic Growth and Diversity** AI will drive more traffic across communications networks, particularly as queries and outputs become richer and multi-modal.
- **Digital and Physical Use Cases** AI will increasingly impact real world, physical objects, while also being applied to digital processes. Think digital twins of cities, vehicle analytics, or any AI process utilising data from widely distributed sensors.
- **Demanding Use Cases** Mobile connectivity is increasingly characterised by strict performance requirements. For many AI applications, meeting those requirements is more than a nice to have; it is critical to their operation.
- **Diverse and Differentiated Value** It's already evident that some AI applications have more value than others. Consider a simple ChatGPT query versus an AI agent working to keep consumers safe or free from fraud. As AI gets further integrated into the way businesses work, we will see even more low-value and high-value applications.

Mobile networks and mobile connectivity, alone, will not be enough to address all of these dynamics. But, they will play a critical role.

Enabling AI's growth will require new technologies and network innovations: Standalone 5G, 5G-Advanced, low-cost IoT (including RedCap), slicing, distributed AI processing. Those technologies and innovations represent substantial investments. That investment, however, is linked to a massive opportunity – the opportunity to deliver on AI's promise, but also to monetise networks in a new way, extracting returns from the value created.

The AI opportunity is just one of many in front of operators today including network API exposure and enterprise vertical services. But it's a reminder that a monetisation mindset must be part of all those conversations, including the assets required to bill for these new capabilities and increasingly complex services on a flexible, granular basis while providing robust visibility to customers who will want to know that they got what they paid for.

Introduction

Telecoms services are starting to become decoupled from network consumption because their value is increasingly in the functionality delivered.

This shift presents a compelling opportunity for telecoms operators to monetise their networks not only by selling bandwidth in the traditional way but by providing value that supports customers – whatever they want to do. This direction of travel is taking place across multiple dimensions and include, among others, enablement of distributed AI workloads, cloud and edge computing and the utilisation of network applications programme interfaces (APIs). In support of these emerging opportunities and to optimise delivery of traditional telecoms services, new ways of monetising the value operators provide are required.

Operators have the opportunity to reset network monetisation away from simple, static billing towards a dynamic real-time insights view of all payment models and spend activity as a critical step towards a fully-flexible future. That flexibility enables operators to engage in a wide range of real-time, usage-based models on their own and with partners via open APIs. However, two significant barriers exist: Operators' current monetisation systems lack the necessary capabilities and there is substantial fear of bill shock associated with moving to broader real-time, usage-based models.

Operators face additional challenges as their service portfolios become more complex because unclear charging and billing results in a high volume of queries to the call centre. Operators need to be able to clearly and accurately set out what has been consumed and what has been provided. They can't charge an enterprise for a low latency network slice if the defined level of latency has not been delivered.

The revenue rethink

The need for real-time observability

Operators therefore need systems that can support a unified revenue management approach for any and all payment models and spend, delivering 'of the moment' accuracy at any point in the bill cycle and one that accrues any one-off or usage type spend activity towards the final monthly bill. That new commercial experience is vital for operators' own processes while simultaneously providing customers with transparent billing information. For enterprises, this is especially important because they need to have real-time information on usage by user, device, department and across the entire company in order to avoid bill shock. Visibility and observability put them in control and demystify the broader move to usage-based charging.

The potential is significant, particularly in the enterprise sector. GSMA Intelligence, for example, has reported that operators have an addressable market of more than US$400 billion in the enterprise market through selling B2B technology services. Current core telecoms services, such as SD-WAN, unified communications and mobile voice and data contributed approximately 70% of B2B revenues in 2023 but offer limited growth with a CAGR of 3% expected between now and 2030[1].

In contrast, enterprises spent US$1.16 trillion in 2023 on technology services across cloud, datacentres, cybersecurity, IoT, analytics, AI, blockchain and network APIs. Encouragingly, these services have a predicted CAGR of 14% in the period to 2030, by which time the market will be worth US$2.91 trillion.

Consulting firm McKinsey also sees the opportunity and estimates that, between 2024 and 2029-2031, the network API market could unlock around US$100 billion to US$300 billion in connectivity and edge computing-related revenue for operators while generating an additional US$10 billion to US$30 billion from APIs. Operators won't have the opportunity all to themselves with the market structure currently in place and the firm warns operators would cede as much as two-thirds of the value creation to other players in the ecosystem, such as cloud providers and API aggregators, unless they change their market approach[2].

[1]https://www.gsma.com/newsroom/press-release/telcos-eye-400bn-enterprise-opportunity-says-gsma-intelligence/
[2]https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/what-it-will-take-for-telcos-to-unlock-value-from-network-apis

If operators can deliver these services and monetise them effectively, the impact on their balance sheets will be transformative. However, getting there with current BSS and revenue management systems isn't realistic.

From static to dynamic revenue management

For existing revenue management, charging and billing systems, value or outcome-based monetisation isn't achievable, certainly to the granularity that emerging propositions demand. Traditional systems were designed for the era of metered bandwidth and, while they can handle a monthly subscription or bill for xGBs of network usage, they can't handle a one-time charge for a low latency burst communication that has a different cost at a busy time than it does during an uncongested time and deliver that insight in real-time to the end user.

Flexible, dynamic systems that enable revenue management based on the value of the service delivered, the complexity of its demands and the level of demand for network resources are required. This landscape isn't more of the same, it's a situation in which a service and a device will request connectivity from the operator to enable specific tasks. Revenue management has to be able to manage this at scale, understand what to charge and who pays for what. Then, accurate reporting of and billing for consumption needs to be presented in real-time so the customer has confidence that they are paying fairly and accurately for services received.

Moving from the traditional, static monthly billing model that has endured for the life of the telecoms industry to a dynamic model that encapsulates usage and spend in real-time and covers all payments and billable items with transparency and accuracy enables operators to not only serve customers well but also to optimise their costs. By providing real-time clarity, operators will reduce the current volume of billing-related calls to their call centres, which currently accounts for almost 50% of call centre interactions. Recent research from STL Partners has estimated that these savings will run into millions of dollars annually and for tier 1 operators, close to US$50 million per annum*.

Operators recognise that the clock is ticking and are looking to modernise their monetisation. Consulting firm Deloitte says operators are rethinking their foundational infrastructure to keep up with shifting customer expectations and the pursuit of digital growth. The firm points out that historically, operators have operated separate BSS and OSS, creating a fragmented system that wasn't always agile or cost-effective.

Now, modernisation is on the horizon, the firm says. Operators may be increasingly looking to integrate automation and intelligence, with the potential to merge BSS and OSS into a single, seamless platform. This shift could help streamline processes and capture new revenue streams in a rapidly evolving digital landscape. Deloitte predicts that, by 2025, the

combined OSS and BSS market will be worth US$70 billion, with cloud-based solutions, APIs and a unified, service-centric model leading the way. This push toward modernisation could accelerate growth and offer operators greater efficiency, enhanced security and, importantly, a better customer experience, the firm says[3].

New commercial engagement models

CSPs are engaging with the opportunity to develop outcome-based or value pricing. Although it is still early in development of these propositions, operators are looking to price applications and networking services based on tangible business outcomes. One example of this could be a real-time proof of value use case where an enterprise pays for a specific traffic treatment – for example high-speed transport of a large data set at a guaranteed minimum speed. In this scenario, the operator would need to provide proof of delivery and if the criteria are not met, the enterprise would not be required to pay for the service.

Enablement of this needs a highly granular and real-time dynamic approach to monetisation. The value delivered must be proven so the service can be charged – and paid – for. Operators add value in these situations by enabling the service and proving value was delivered, not by providing the capacity. They can price for this value delivery dynamically and reap the rewards through new billing models.

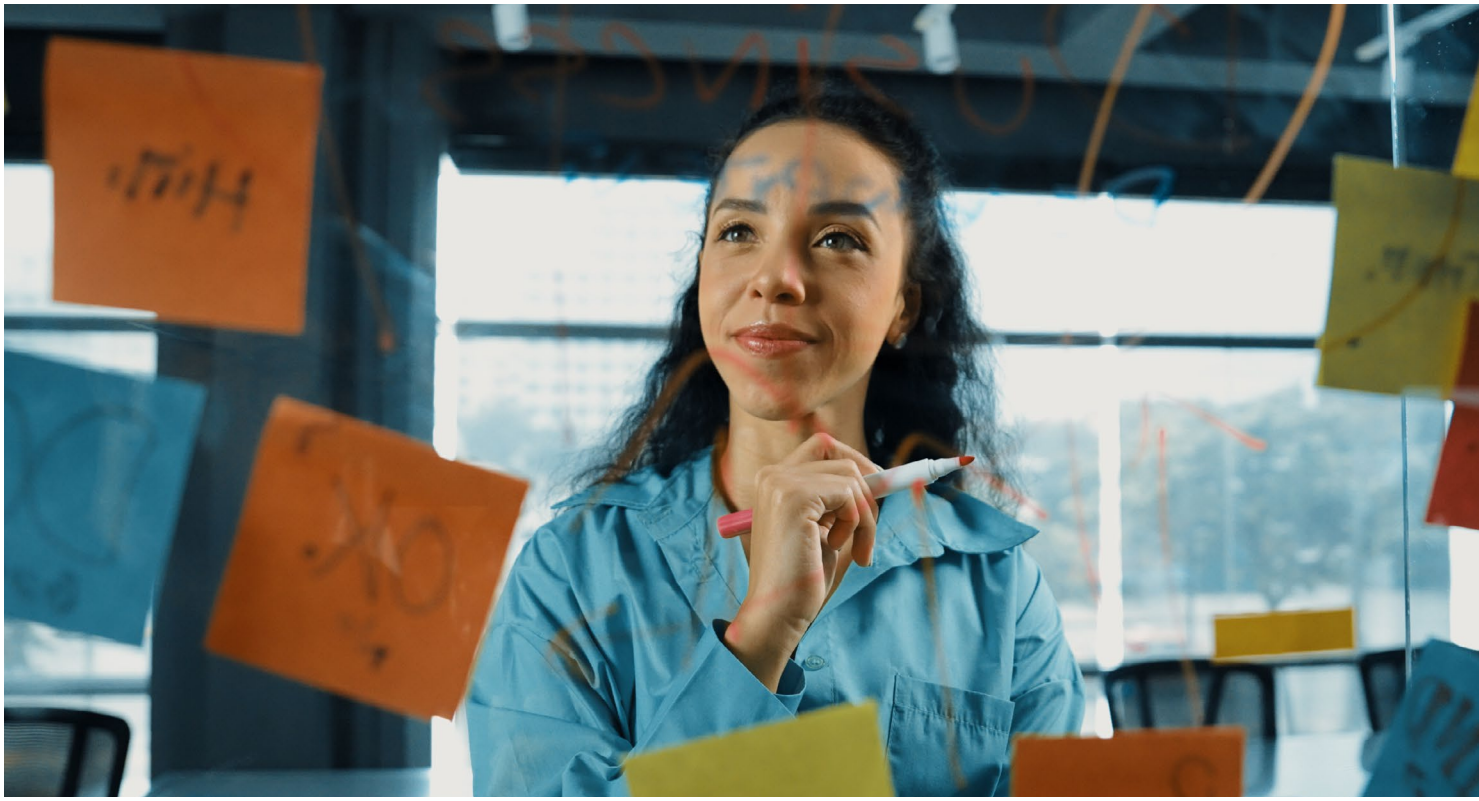
AI adds urgency

The need to address revenue management is becoming acute with the arrival of AI workloads which are placing significant demands on the network. These demands include transmission of enormous data volumes, greater requirements for guaranteed low latency and the flexibility to handle peaks and troughs. Revenue management systems will need to handle and charge dynamically for each of these usage profiles and it is critical that each billing occurrence is communicated in real-time to avoid surprises and bill shock.

Systems that are fit for purpose and enable operators to accurately and efficiently monetise their network assets need to be able to handle an AI agent that autonomously initiates network consumption in support of a use case and ensure they are paid for the service provided. For example, if an AI agent decides to set up a connection – or even cloud computing resources – to enable processing of a large, distributed AI workload, the operator needs to understand if this is an approved action, that payment is authorised and that an accurate billing communication can be raised to the appropriate payer.

Next level revenue management must address the issue of who calls the tune, who pays the piper, who gets prioritised and who gets nothing. To add complexity, these parameters must be addressed continuously, dynamically and with minimal friction to deliver the flexibility customers need.

[3] *https://www2.deloitte.com/us/en/insights/industry/technology/technology-media-telecom-outlooks/telecommunications-industry-outlook-2025.html*



How MATRIXX Dynamic Billing helps

MATRIXX Dynamic Billing uniquely solves the challenges of inflexible, costly and siloed billing platforms. It provides a unified solution that manages all usage, one-time, subscription, recurring and non-monetary bill items and produces bills at the touch of a button: on-demand, on a recurring subscription basis or for a traditional bill cycle. This delivers the digital-first experience customers demand today and provides the transparency needed to prevent customer confusion, disputes and churn. The shift to dynamic billing is a fundamental step in an enterprise transformation to achieving a more cost-effective, responsive and flexible IT architecture.

What's next for operators?

New models are far outside of the scope of traditional revenue management but it's essential that operators upgrade their revenue management, billing and monetisation capabilities so they can go beyond simply selling bandwidth-based offerings to traditional customers. The operator is becoming the enabler of AI-triggered processes and workloads, data analysis across multiple clouds, secure and assured processes so revenue management needs to be able to track and account for connectivity activities across a business.

This level of scale and agility is out of the remit of current systems and architectures but the opportunity to enable real-time configurability alongside pricing and payment models that go in multiple directions to customers, partners and suppliers will radically transform operators' prospects. In fact, this redefined revenue platform is the foundational enabler of the AI-fuelled, network-centred, cloud-dependent technological era we are emerging into while also an essential tool for optimising monetisation of existing telecoms services and optimising operators' operational costs.

Implications

GSMA Intelligence's Peter Jarich sets out his view of how dynamic revenue will impact operators and enterprises:

Operators

Re-prioritise BSS

Compared with AI, 5G Standalone (SA) or 5G-Advanced, BSS transformation ranks lower in terms of a technology priority for operators in enabling consumer or enterprise use cases per GSMA Intelligence research. Given the newness of 5G and AI innovations, that might be understandable but it's a mistake. As operators look to monetise their 5G and AI investments (including via API exposure) ensuring that their billing systems are ready to address new service opportunities and complexities will be critical.

Pair Standalone with Visibility.

After a relatively slow start, 5G Standalone launches appear to be poised to accelerate. Network evolutions and upgrades are

always an opportunity to introduce new and adjacent capabilities into a network. Against this backdrop, network and service visibility should be part of SA launch plans. Rated as one of the top capabilities for enabling enterprise and consumer use cases in the future, visibility will be key for executing on SA's promise including slicing and service differentiation.

Don't Forget the Consumers.

B2B services and enterprise verticals represent an immense opportunity for operators and their 5G monetisation plans. Consumer services, however, continue to power upwards of 70% of their business. They are also becoming increasingly sophisticated as operators look to differentiate the connectivity delivered to diverse consumer use cases in order to capture the full value being delivered. Any BSS evolution plans need to focus on both consumer and enterprise users to ensure the solutions adopted can address all key opportunities.

Enterprises

Partners and Capabilities.

Building on the promise – and technical capabilities – of 5G, companies across diverse vertical industries are building out new use cases which take advantage of differentiated mobile broadband services. The viability of these use cases rests on the capabilities of their connectivity partners; ensuring partners can deliver and accurately bill for advanced 5G capabilities is a must in building out innovative B2B use cases.

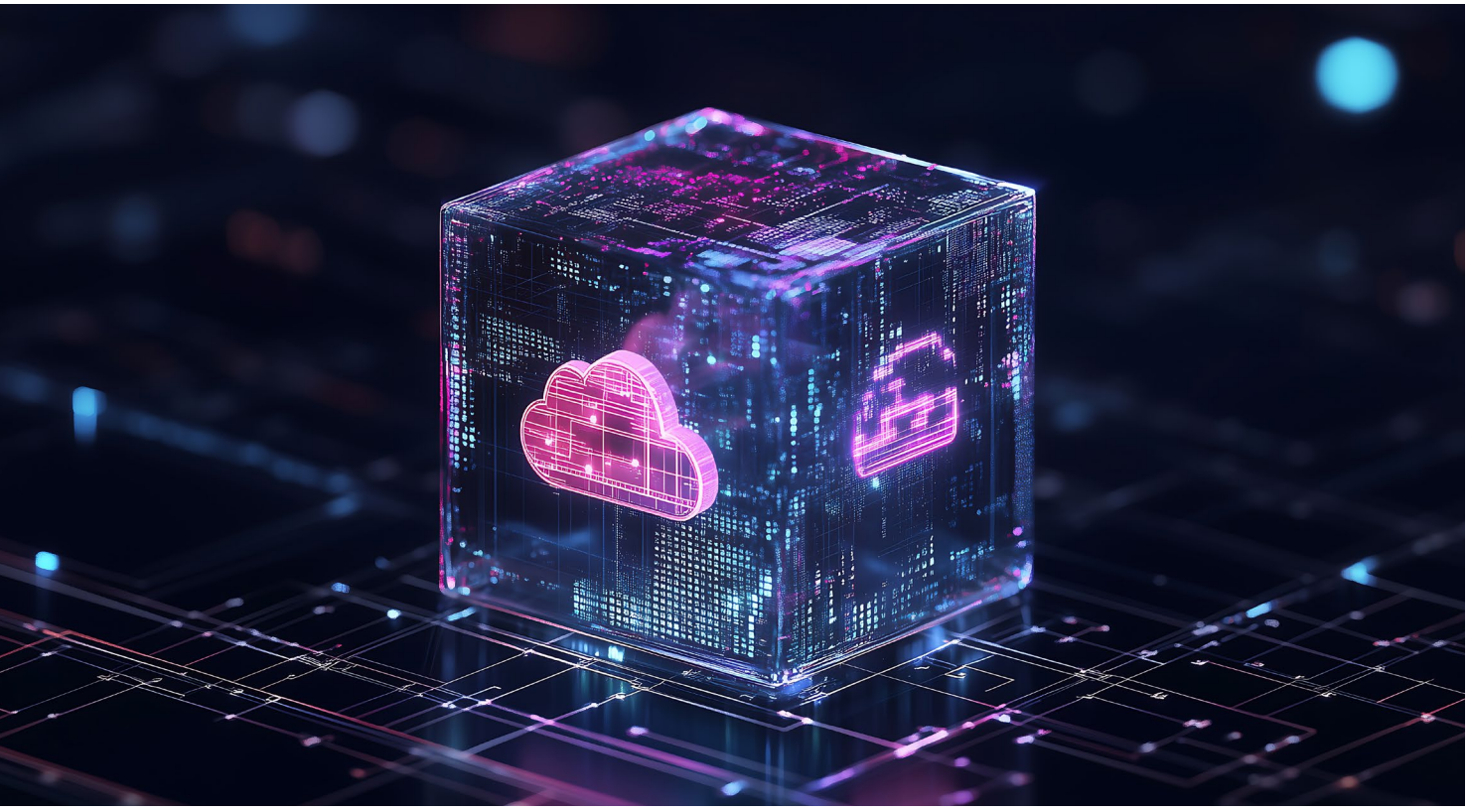
Make SLAs Mean Something.

Operators have built SLAs into wireless contracts for years. However, they have often been based on high-level criteria (dropped calls or service outages) which do not align with the performance requirements of complex or demanding enterprise use cases. In selecting a connectivity provider to support their digital transformation strategies, enterprises should look for performance SLAs to be built upon network visibility capabilities which are tied into service billing structures. Operators who cannot deliver against this requirement should be able to provide a roadmap and timeline for doing so.

Plan for API Monetisation.

AI and enterprise digital transformation represent well-publicised opportunities for telco revenue diversification and 5G network monetisation. Similarly, network API exposure has been a slow-burning business opportunity given new relevance. Operators have been quick to sign on to the GSMA's Open Gateway initiative and new ventures like Aduna promise to simplify API exposure. Enterprises are already making use of APIs across their business processes and should look to add mobile network APIs into the mix to ensure they can take advantage of the capabilities available.

*STL Partners: 'Why legacy billing restricts telco growth'



MATRIXX Software delivers a dynamic billing, monetization and charging solution proven at scale. Global service providers like Telefónica, IoT providers like Tata Communications and network-as-a-service providers like DISH rely on MATRIXX to overcome the limitations of existing billing applications. MATRIXX provides a unified platform that transforms and simplifies billing operations across consumer, enterprise and wholesale businesses. With MATRIXX, operators can rapidly configure, deploy and monetize personalized offerings, enabling commercial innovation and real-time customer experiences that drive revenue and growth.

Find out more at www.matrixx.com

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