How OSS/BSS reinvention unlocks revenue and customer loyalty

Telecoms are under pressure to move beyond delivering reliable connectivity and start competing on customer experience. By reimagining OSS/BSS as engines of insight, CSPs can unlock new revenue streams while building loyalty that lasts.

For decades, OSS and BSS were seen primarily as the plumbing of the telecom world — the hidden systems that kept billing accurate and services delivered. Essential, yes, but hardly glamorous. That's changing. Today, operators are discovering that the same platforms can be powerful engines of growth, provided they are modernised, connected, and infused with customer journey mapping (CJM).

Data-driven personalisation at scale

Graeme Hughes, MD at We Are CORTEX, believes this shift is overdue: "we encourage and assist telcos to move from transactional analysis of certain legs, or aspects, in a customer journey, to an end-to-end appreciation. That means automating and orchestrating across domains, technologies, operating companies and third parties. Once you build

that appreciation of context and the customer's intent, you can really start to lift the customer experience."

It's the difference between treating a subscriber as a billing record and recognising them as an individual with needs, preferences, and pain points. Are they gamers who demand low latency? Travellers who rely on seamless roaming? Content creators frustrated by slow uploads? Without that insight, frustrations mount — and the next telco suddenly looks more appealing.

"Integrating CJM into an OSS/BSS platform gives providers a complete picture of how customers interact with their services - from signup to daily usage and renewals," explains Splynx CEO Alex Vishnyakov. "When this data is linked with billing, service, and support information, it becomes much easier to spot new revenue opportunities and personalise offerings."

With Splynx, for example, providers

can see who consistently hits data limits, who regularly upgrades, or who struggles with service quality.

"That insight allows them to launch targeted upsells and cross-sells, like offering higher-speed plans to heavy users or value-added services such as secure DNS or content filtering to customers who need them," says Vishnyakov. "This approach improves customer experience and increases ARPU at the same time."

The promise is clear: personalisation not just as a 'nice to have' but as a competitive advantage that keeps subscribers loyal and grows ARPU.

"When telcos integrate customer journey mapping in their BSS/OSS systems, they get a much clearer and real-time view of every interaction across all touchpoints," agrees Dominic Smith, Marketing Director at Cerillion. "From signing up and paying bills to getting help or upgrading a service, it's easier to spot where things

might go wrong — or where there's a chance to offer something extra, such as upselling a roaming package when the customer is travelling abroad."

Adding CJM to digital channels also opens the door to self-service, which is increasingly what customers prefer, adds Smith: "for the operator, this creates more engagement and more data points to analyse, opening up new opportunities to monetise each stage of the customer journey."

Automation: the non-negotiable

Data and insight are powerful, but without automation they risk getting stuck in slow, manual processes. Telcos are discovering that automation within OSS/BSS is no longer optional.

"Automation is a non-negotiable for telcos looking to evolve from traditional connectivity providers to agile digital service enablers,"

says Letchu Narayanan at CSG. "By automating billing and service delivery with modernised OSS/BSS, operators can improve accuracy and reduce time-to-market, opening the door to innovation at scale. Crucially, AI-powered automation also enables a deeper understanding of the customer across regions and product lines."

Indeed, when billing and service workflows are fully automated, everything runs smoother. Billing becomes effortless · invoices, reminders, dunning flows, and payments are handled automatically; as do new installations, activating a new plan or upgrading an existing one takes seconds, not days. Notably, errors disappear, cutting billing errors and frustrated customers.

The benefits ripple outward. Faster service delivery, fewer errors, and a connected journey improve satisfaction while sustaining revenue growth.

Smith echoes this, highlighting the everyday headaches automation solves: "BSS/OSS automation takes the headache out of billing and service delivery. It ensures accurate, real-time charging and efficient payment processing, while zero-touch workflows enable rapid, error-free provisioning. It is also the foundation for successful self-service strategies, providing the means to launch and scale digital channels that customers actually enjoy using."

Breaking down silos to monetise insights

Even the best insights lose impact if they remain siloed. OSS/BSS modernisation is about more than systems — it's about tearing down barriers between teams.

"To truly innovate on pace with market demands, telcos must break down internal silos and ensure alignment across every department, from marketing to sales to finance to customer service," says Narayanan. "A key benefit of a modernised OSS/BSS solution is the ability to gain a unified, contextualised view of customer behaviour."

"A big challenge is when customer data sits in silos · billing in one system, usage in another, support somewhere else," agrees Vishnyakov. "An OSS/BSS platform solves this by becoming the central source of customer insights, and the real value comes when this data is actively used by marketing and sales teams. The best practice is to connect OSS/BSS data directly with

marketing and sales tools so that every decision is based on real customer behaviour. Sales teams have full customer context · when they contact a lead or existing client, they already know their usage patterns, billing history, and pain points."

That unity enables flexibility: "with the deeper understanding of the customer, telcos can more effectively personalise offerings and anticipate future market demands," adds Narayanan. "A catalogue-driven architecture is key to give operators the flexibility to quickly launch new services, test personalised bundles and accelerate time to value."

The solution? Automation and orchestration layers that cut across vendors and domains.

"Processes need to be vendor-agnostic and domain-agnostic," argues Hughes. "You need to decouple your processes from your tools and technologies, and call on the technology you need through a single pane of glass for your whole organisation to recognise and build on."

This, he says, is how leading telcos are leveraging hyperscalers, integrating AI, and future-proofing their businesses.

Smarter, targeted communication

Customers don't want more messages — they want better ones. The ability to personalise communication with precision is where OSS/BSS insight pays off.

"We live in a 'convenience' culture," Hughes says. "It is easier than ever to prompt spend with a customer in favour of maintaining and improving their connectivity and services. But less is more when it comes to consistent and targeted communication that is not founded on real-time data. Don't write to customers about new data bundles unless you know they use a lot of data. The same applies to cross-selling and up-selling any service."

By analysing the customer journey inside an OSS/BSS platform, telcos can see how customers use services, when they upgrade, and where they drop off.

"For example, if data shows that many customers consistently hit usage limits, providers can introduce tiered plans or top-up options instead of forcing them to upgrade to a full higher package," says Vishnyakov. "If families or businesses use multiple services under one account, creating bundled offers · combining internet,

VoIP, security, or content filtering · increases value for the customer while boosting ARPU."

"Timely, personalised messages — like balance notifications, top-up prompts or airtime loans — keep customers engaged and reduce churn, especially in regions like Africa, where many customers are prepaid and price-sensitive," notes Pieter Welgemoed, Head of sub-Saharan Africa at CSG. "When communication is based on real-time account activity and preferences, it transforms from a retention tool into one that also drives upsell opportunities."

Real-time monetisation moments

Real-time OSS/BSS data doesn't just improve communication — it creates entirely new monetisation opportunities.

"Similar to consistent messaging, when you have customer-impacting events, the timing could not be better," says Hughes. He gives the example of offering extra data when a subscriber nears their limit, or even providing a free coffee-shop connectivity voucher during an outage.

"These can be very powerful opportunities," says Hughes. "You can either get out ahead of issues and build confidence, or react when customers call you, already frustrated. No matter how well you set up a reactive CX, it will be a negative experience."

Smith sees AI as a force multiplier: "instead of pushing out generic campaigns, operators can upsell personalised offers when the timing is right. Add AI and machine learning, and these promotions get even better, predicting what's most likely to appeal."

"When an OSS/BSS platform becomes the source of truth, it gives providers the right data to make smarter decisions about cross-selling and upselling," asserts Vishnyakov. "The real power comes from integrations. With open APIs, we can connect to tools like LibreQoS or Preseem. These tools optimise latency, buffer bloat, and throughput while linking this information directly to customer and billing data."

Another example is security-driven upselling. Integrating with secure DNS services allows providers to block malicious domains, inform customers about it, and offer advanced security or content-filtering packages in a natural, value-driven way.

According to Vishnyakov, it comes

down to two points: having a system that brings together the right data and tools; and being proactive and using that data to create value for both the provider and the customer.

Welgemoed points out that in Africa, where usage habits are fluid, micro-segmentation is particularly powerful: "real-time data empowers providers to respond to actual behaviours, not assumptions. This increases conversion and customer satisfaction while maximising wallet share."

OSS/BSS as a growth engine

The consensus is striking: OSS/BSS can no longer be treated as background systems. They are front-line enablers of growth.

Customer experience is one of the biggest differentiators in the telecom market, especially in Africa, where competition is growing and expectations are rising. Many providers lose the battle in the communication aspect · inconsistent updates, missed billing reminders, or fragmented support channels directly impact retention.

"This is where a modern OSS/BSS platform becomes critical. By consolidating all customer data and communication in one ecosystem · calls, emails, SMS, WhatsApp, billing notifications, support tickets, and even automated chatbots · service providers can finally move away from juggling disconnected systems," asserts Alex Vishnyakov. "Beyond retention, consistent and targeted communication opens the door to new monetisation opportunities. By segmenting customers based on their plans, usage patterns, or payment history, providers can proactively upsell new packages, cross-sell value-added services, and recover revenue through automated dunning flows. In short, centralised communication + targeted automation = stronger customer relationships, less churn, and higher ARPU."

By embedding CJM, fuelling it with real-time data, automating processes, breaking down silos, and personalising engagement, CSPs can make the leap from being utility providers to trusted digital partners. The results? Higher revenue, stronger loyalty, and the agility to compete in a fast-moving digital economy.

Or, as Hughes puts it: "this is what customers need — and what they will pay a premium for." ∎