



# MATRIXX jump-starts operator digital service endeavors

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For mobile operators, the next wave of change is in the air. Today's business is all about data, but simply hoping to swap out eroding voice and SMS revenue with new 4G data charges isn't enough. Tomorrow's 'offering driven operator' needs something more: the ability to engage customers with targeted, real-time, responsive propositions for their own services and on behalf of partners. The problem is that yesterday's back-office infrastructure isn't up to the task. MATRIXX Software has been pitching its vision of real-time digital services enablement for a while now, driven by its high-speed transaction-processing engine and integrated policy and charging platform. The market may be catching up at last. Operators such as Australia's Telstra are using the MATRIXX Convergent Charging platform to support more real-time service rating, charging and notifications, enabling operators to foster the type of offering-driven customer relationships that today's digital service environments require.

## The 451 Take

MATRIXX is among a small set of telecom software vendors that have turned the old sawhorse of 'telco billing' into something much sexier – digital service enablement. Selling such a grand vision to culturally hidebound, business-challenged and financially conservative telecom operators is a tough proposition. But times are changing. The boardrooms of operators are strewn with business plans supporting new digital service initiatives, and the age of what we call the offering-driven operator is clearly upon us. MATRIXX has the policy/charging stack to get the job done, and the transaction-processing engine to do it at scale. The time has come for it to move beyond its initial investors/customers and land a more visible share of major operators making digital service moves.

## Context

MATRIXX Software was founded in 2008 by CEO/CTO Dave Labuda and VP of marketing Jennifer Kyriakakis. The pair started together at Portal Software, which made an early stab at transforming carrier billing and was subsequently sold off to Oracle. From the start, MATRIXX focused on helping operators get out ahead of the data-services tsunami. The key was swapping out old-school, batch-oriented billing systems for something much more transaction-intensive and real-time. While operators knew that new world was coming, getting their 3G and then 4G networks deployed was job one – both in terms of executive focus and capital investment. That too often left the transformation of the telco back office as an afterthought – and MATRIXX stuck in a waiting game. But times may at last be changing.

To date, MATRIXX has closed five rounds of funding, including \$9m series A in 2010 from Greylock Partners and Tugboat Ventures; \$12m series B in 2011 from Innovacom and Adams Street Partners; and telco venture funding from Swisscom, and most recently in May 2014 from Telstra. Today, it has about 100 employees, mostly in Mountain View, California, with sales and support offices in London, Malaysia, Singapore, New Zealand and Dubai.

## Technology

At its core, the MATRIXX platform is all about transaction processing. And that makes sense, because today's offering-driven operator is all about driving transactions – big-data analytics to profile the customer; proactive outreach and notification to nail down just the right offering; and real-time network execution to rate, deliver and charge exactly the service the user desires. Underlying its platform is the vendor's Parallel-MATRIX engine, built on transaction-intensive capabilities such as a contention-free in-memory database; algebraic processing and decision engines; and system clustering to enable greater scalability. The result is a transaction-processing platform that can scale to 5,000 events per second on a single blade server while ensuring the data accuracy, availability and low latency required to support a rapid-decision and execution environment.

Layered on top of that transaction-processing engine is a BSS stack built for real-time provisioning of unified policy (policy control rule function) and charging (online charging system) functions. That system provides a range of functionality that serves as new service building blocks, including a single customer profile that can span all BSS systems; centralized balance management and balance-sharing rules to support shared data and family plans; GUI-based catalog tools for creating and serving new customer propositions; digital self-care interfaces and capabilities; and the ability to integrate with analytics platforms to enable real-time upsell/cross-sell opportunities.

What's most important for operators is the type of services and business model that such a platform can enable – many of these now sit at the center of operator 4G data services innovation. They include: application-based pricing; QoS tiers and sponsored data; shared data and family plans; spending controls and customized data plans; roaming services such as out-of-region 'roam like home'; or any service an operator can imagine centered around greater levels of personalization, real-time notifications and customer self-care interactions.

## Customers

Such capabilities sit at the center of today's offering-based operators – but getting there can be a challenge. The idea of telecom operators 'transforming' their back-end systems to enable business model innovation is hardly new. The roadblocks are also well understood: decades-old – yet still mission-critical – legacy, siloed systems; daunting capex and long project times for overhauling those systems; corporate cultures that are slow to change; and quarter-to-quarter financial pressures that discourage risk. But the pressure to make progress toward becoming digital service providers is also strong.

Key MATRIXX reference customers include Swisscom and Telstra (both also investors), as well as Netherlands-based Teleena, which calls itself a mobile service enabler, a spin on the 'mobile virtual network operator' model with a focus on helping partners deliver a range of digital services. But it's Telstra that has made the most noise about its MATRIXX-enabled progress. The operator is using the platform to offer real-time data-usage alerts and controls to its customers. Although protecting customers from surprise data charges hardly seems groundbreaking, delivering such alerts in real time is extremely transaction-intensive, requiring Telstra to rethink its approach to billing software. It also sets the path for its next step: mixing core data services with third-party media and information, and packaging content, data, and apps in bundles – all of which will drive even more transactions.

Overall, Telstra's moves have not only reduced call-center calls, but they are beginning to impact top-line revenue as well, because customers are bumping up their data usage as control and visibility have improved. In its latest half-year earnings report covering year-end 2014, Telstra said its postpaid mobile service revenue was up 8.3%, driven largely by improved data monetization and customer migration to higher-value data plans. Telstra has even begun tracking the number of interactions it has with customers, noting it now has about 800,000 customer touches every day – with ever greater numbers of them coming via digital channels.

## Competition

MATRIXX faces the same challenge as any telecom software upstart – competition not only from other specialists but from larger players that can freeze the market with roadmaps upgrading legacy systems into the new world. On the best-of-breed front, vendors such as ItsOn and Redknee are pitching similar software stacks promising to jump-start operator digital service efforts. The bigger challenge, though, comes from bigger players: Amdocs and Oracle with deep OSS/BSS roots; IBM and HP with IT and data management chops; and Ericsson, Nokia and Huawei, which are combining 4G assets with evolving software platforms to monetize those network services. The best-of-breed pitch from vendors such as MATRIXX to operators is clear, and gaining traction: set up a parallel software stack to jump-start data and digital service opportunities today, and then move legacy services onto the new platform tomorrow. Concepts such as network functions virtualization, which helps disaggregate the network and supporting software while driving down costs, make that approach more palatable. But players such as Amdocs and Ericsson are hardly sitting idly by.

## SWOT Analysis

## Strengths

MATRIX's focus on supporting a huge volume of transactions may have been overkill a few years ago, but sets it apart now. Today's offering-driven operator is all about delivering the right proposition at the right time.

## Opportunities

After half a decade of waiting for the market to catch up, MATRIX is at the right place at the right time. 4G networks are the norm across the globe, and the time to move beyond monetizing them with mere simple data plans is now.

## Weaknesses

Weaknesses are size and scale, and use cases that must move beyond simple balance management and usage alerts. MATRIX must demonstrate it can enable the coming wave of more-complex, multitier digital services that operators require.

## Threats

Evangelizing a new market such as digital services enablement is hard work – and heartbreakingly hazardous if deeper-pocketed rivals with better connections swoop in just as the opportunity goes mainstream.

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