The Power of a Platform-Centric Approach to Monetization

Solving the Challenges of Legacy Monetization Solutions

With the shift to 5G and cloud native networks comes the reality that telecommunications solution vendors need to fundamentally rethink their go-to-market strategy to better align with the operating models of digital companies. Delivering a monetization solution that truly supports critical digital capabilities requires a different approach not only from a vendor's technology perspective, but also in the way they do business.

Over the past decade, the business model for most vendors of monetization solutions has migrated in a direction in conflict with most, if not all, of these critical capabilities. From an IT software perspective, many have shifted toward a customized, services-led business model. In order to sustain a long-term return on their investments, these vendors have used expensive change requests to fund ongoing development efforts.

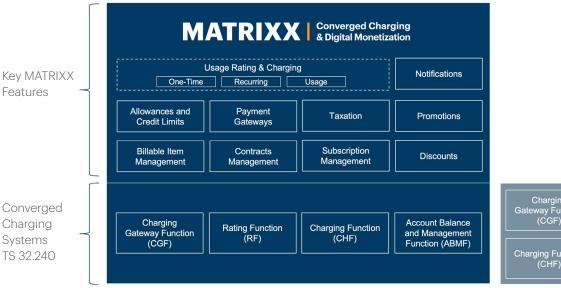
This creates two problems for today's telcos. First, it destroys business agility since it requires a negotiate/develop/test/deploy cycle before a new service can be launched and monetized — a process that can often take months. Secondly, it results in a more complex and customized version of the solution over time, making it extremely difficult to upgrade or leverage innovations and developments from different projects.

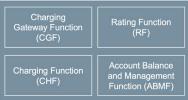


The MATRIXX Software Approach to Monetization

MATRIXX Software's approach to monetization is unique. The company's founding principles were based on building and delivering an architecturally integrated platform solution for telcos' monetization needs. This goes well beyond the basic rating and charging capabilities of legacy charging and billing systems, as it includes a range of rich digital commerce and monetization features that work right out-of-the-box.

The MATRIXX digital monetization solution delivers operational autonomy, putting the power of local decision-making in the hands of the telcos technology teams, not the vendor. Gone are the six-month delays for vendor custom feature development, hidden change-request costs, lost market opportunity and the ensuing friction between the telcos technology, commercial and leadership teams.





MATRIXX Digital Monetization Solution

Competitors' CCS Offer

The vast majority of charging and billing vendors make money through building custom solutions via large services organizations. With business models based on 70-80% or more of total revenue coming from these services, these vendors are only profitable through consistent change-request projects. Their initial offering consists of a development framework, often positioned with a small number of prototype use cases that are "lab test" quality rather than production-ready.

History has shown that, as soon as any adaptation or change is required to these use cases, it can take months of development effort via change requests before they can be made operationally live, leading to delay, frustration and lost opportunity. This often manifests itself most vividly in proof-of-concept trials, where telcos request examples of use cases to be adapted and delivered on short notice. The MATRIXX digital monetization solution allows for these to be configured and demonstrated within 24 hours.

Legacy vendors with development framework approaches fail to deliver.



Five Key Reasons to Consider MATRIXX Software

The feedback from technology teams in telcos deploying MATRIXX at the heart of their monetization strategy can be summarized as follows:

1. Empowering Operational Autonomy

At a time of high growth and ROI expectations around areas such as 5G, agility and speed to market are everything. Telecommunications network teams are being pushed hard by their commercial counterparts to get services out to market quickly and not be seen as revenue "blockers" as they wait for vendor change requests to be initiated. To achieve this, technology teams need the operational autonomy to launch and monetize services quickly on their own.

In demonstrations of the MATRIXX solution, network administrators were "blown away" (their words, not ours) by how quickly new offers and services could be configured and launched — in many cases, less than 48 hours. The product-centric nature and out-of-the-box configurability of the platform are at the heart of this. With many of our customers, this has given them the confidence to operate their digital commerce solution independently of MATRIXX Software, resulting in true operational autonomy.

2. Cloud Native Support

Most billing and charging solutions on the market today are refactored, monolithic software systems that are positioned as cloud native but, in fact, lack true microservice flexibility and scaling characteristics, resulting in major project bottlenecks and delays. Re-engineering monolithic systems consisting of a series of non-integrated components into a true cloud native solution is a non-trivial task, at best requiring a major engineering redesign and, at worst, being completely unfeasible. Meanwhile, cloud native "vaporware" solutions have cost telcos heavily in terms of delayed market entry and increased, unforeseen fees.

The MATRIXX solution was engineered from the beginning to be modular and extensible, with a microservice-centric, cloud native architecture deployable on a range of bare metal, private and public clouds. The software is deployed on Kubernetes using 100% native controls and without plugins or external provisioning overlays. This is made possible due to the platform's inherent microservices design—even with the inclusion of stateful in-memory database components—and is achieved through the use of Deployments and the Operator Framework. The result is a powerful combination of flexibility, scalability and portability using industry-standard, cloud native containerization and orchestration technologies that run on a wide variety of infrastructures.

Customer Case Studies swisscom TELUS dish orange Orange Poland orange Orange Romania verizon\(^{\sqrt{}}



The MATRIXX solution is currently certified on and operating in the following cloud native architectures: Google GKE, Amazon EKS, Microsoft Azure AKS, Red Hat OpenShift Container Platform and VMware TKG. MATRIXX also offers an Embedded Kubernetes option, including services and support for telcos without cloud native expertise.

Notably, MATRIXX was the world's first monetization engine to run on Google's Confidential Cloud Computing service — an important consideration for telcos that want to capitalize on the flexibility of cloud deployments for their digital monetization but also have to meet stringent national security requirements before doing so.

3. Real-World 5G Experience

5G presents a new world of revenue opportunities for telcos. In order to fully explore these 5G revenue opportunities, telcos must break free from the slow, customized development timelines of legacy vendors. Given the focus on rapidly monetizing 5G and delivering early returns on the major investments made, 5G-ready monetization is a critical strategy.

MATRIXX Software was an early pioneer of 5G charging systems. It was the first monetization vendor to demonstrate a working 5G Converged Charging System (CCS) and, today, is the Chair of the 3GPP SA5 charging working group. Since shipping its first 5G CCS capabilities (based on 3GPP R15) in 2019, there is now support on the platform for R16 and R17 functionality, with R18 being planned.

Currently, MATRIXX supports key 5G standalone core SBA interfaces to the Session Management Function (SMF), Policy Control Function (PCF), Network Data and Analytics Function (NWDAF), Access and Mobility Function (AMF) and Network Exposure Function (NEF). This enables telcos to develop new monetization ideas and use cases across B2C, B2B, IoT and B2B2X 5G-centric opportunities — one monetization platform for all business segments.

MATRIXX has firsthand, detailed experience integrating its CHF interface into a number of the leading 5G standalone core vendor platforms. Publicly declared customers that have deployed MATRIXX within a 5G standalone core network include TPG Telecom, Telstra, O₂ Telefónica and DISH.

4. Cost Flexibility and Control

The MATRIXX pricing model is "SaaS-like" but with the added benefit of software ownership and the option of autonomous deployment for the telco. MATRIXX software is licensed on a subscription basis over a fixed period of time and includes full access to the complete set of product capabilities, including new versions, updates and support, just like a SaaS offering. In addition, advanced features such as prioritized promotions, balance sharing and bundled discounts are already activated and can be configured by the telco to meet their specific needs.

Customer Case Studies

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There are several important benefits to this pricing model:

It eliminates expensive change requests.

There are many factors that can cause a solution to run over budget and off schedule. If the vendor has already collected the perpetual license value and is now racking up additional revenue for change requests and project extensions, their business model runs counter to the telco's interests. The MATRIXX model turns that around by charging a set license fee annually for the solution. Instead of being forced to sign expensive change requests to make forward progress, cost is predetermined, and MATRIXX is incentivized to deliver any necessary enhancements as quickly and efficiently as possible.

It doesn't limit innovation to select use cases.

MATRIXX customers have access to new capabilities that MATRIXX continually builds into the product, even if the customer didn't originally request the enhancement. Since development efforts are leveraged across the entire customer base instead of being project-specific, MATRIXX focuses on innovating constantly ahead of industry trends and emerging business models. Customers automatically participate in both driving and benefiting from product enhancements. MATRIXX has also invested in making the upgrade process manageable, with key capabilities like fully automatic data migration and guaranteed API compatibility.

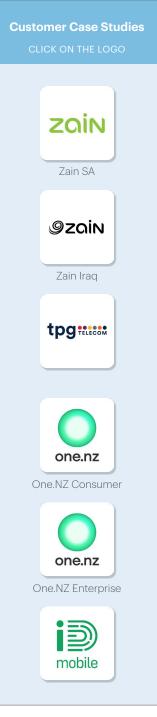
It ensures constant value creation.

Perpetual licenses generally require a telco to pay for the entire license up front and only pay annually for support. In contrast, MATRIXX license costs are spread out over the life of the relationship, so MATRIXX is highly motivated to continue providing value year over year to ensure customers renew their subscriptions.

The advantages of this approach cover both operational and financial considerations. A product-centric approach, by its nature, will offer a lower total cost of ownership (TCO) over a period of time. Clear Consulting modeled a comparison between the MATRIXX Software approach and a legacy services-led approach based on a five-million-subscriber telco over a five-year period. Their findings suggest a saving of 26% or up to \$10 million in TCO over that period for MATRIXX.

Five-Million-Subscriber Telco







5. A Complete Platform

Platform business models have become increasingly important and interesting to telcos due to the ease of extensibility, cost efficiency and the operational benefits of a "deploy once, use many" model. The complete platform-in-a-box nature of the MATRIXX solution offers those same benefits in a strategic monetization engine. MATRIXX customers use the MATRIXX solution to deliver B2C, B2B, wholesale B2B2X and IoT services from the same product, leveraging the same extensible database and data model.

Other vendors offer a "platform" solution that relies on third-party databases and billing systems in order to replicate the same functionality that MATRIXX offers. In reality, these solutions are complex, expensive and fail to deliver the agility, flexibility and operational autonomy that telcos crave.

MATRIXX was designed from the ground up to be much more than a standard online charging or converged charging system. Its inherent platform nature and the company's years of experience in commercial feature development put it well ahead of the competition. For example, the MATRIXX solution even features secure logical partitioning and multitenancy for wholesale MVNO/MVNA/MVNE applications as well as fixed network deployments.

The Future Is Digital Monetization

MATRIXX Software believes that, for telcos to sustainably grow over the coming years, fundamental changes are required within their revenue management model. Postpaid billing for services in telcos is a *revenue collection* model that has hardly changed in 20 years and offers zero differentiation. A far more dynamic, on-demand and real-time model is required, one built on the principles of *revenue generation*. The question is: can current architectures really adapt, and if not, what is the path forward?

That path is digital monetization, the transformation of billing and revenue management. Digital monetization unifies all charging into a single solution for all usage and non-usage charges for all customer types, networks, payment methods and lines of business. This provides customers with real-time access to their services, balances and transactions, delivering the digital-first experience expected today with instantly available and accurate data and end-to-end self-service capabilities.

"Partnering with MATRIXX will provide us with one of the best monetization solutions for our next-generation network and services. It's one of the best technology solutions for meeting our evolving needs as we strive for new and better ways to connect customers across our rapidly expanding 5G network and offer whatever businesses and customers want next. MATRIXX will help reduce our operational costs and improve our products at a faster pace than traditional software, with a step change improvement in our delivery efficiency."

Hesham Fahmy Chief Information Officer TELUS



System consolidation is a part of this path, but it also requires functions and processes that today are split across charging, billing and other systems to be re-imagined. Digital monetization transforms passive utility-style billing and collections processes into active engagement that will drive more revenue while simplifying and improving how customers buy, use and pay for products and services.

Digital monetization is being adopted by leading telcos who recognize that change is needed to drive innovation with simpler, more dynamic revenue generation processes that can be reused and adapted across the business.

Digital Postpaid Typical Legacy BSS Environment Self-Care **Customer Care** Customer Care & Self-Care Charging Monetization Rating Calculation Usage Allowances & Credit Limits Recurring One-Time Balance Management Payments Taxation Event MATRIXX Converged Charging & Digital Monetization Payments/ Top-ups

From Revenue Collection to Real-Time Digital Monetization

MATRIXX Software is uniquely positioned to deliver a digital monetization strategy based on:

- The significant investments the company has made and continues to make in digital monetization features and support on the platform, which is years ahead of any competitive offering. Support for usage-based, subscription-based and recurring charging models, "pay now or pay later" flexibility and rerating are examples.
- The company has no billing product or revenue to protect. The vast majority of billing vendors have large investments in legacy products that severely limit their innovation in this space. MATRIXX Software is solely focused on excellence in converged charging.
- The scalable product-centric foundation and additional features the company has developed are the very essence of a scalable platform model.



A Call to Action

The fast-changing dynamics of the telecommunications market dictate a need for telcos to constantly review strategy and operational readiness for new opportunities in the market. Predicting the future is impossible, but preparing for that change through an approach that is flexible, adaptable, agile and, crucially, gives telcos the autonomy to make rapid local decisions is paramount.

Decisions made on monetization systems within the past few years may now be due for review and re-assessment. Given the increasingly competitive and dynamic nature of the telecommunications market, there is an opportunity for technology teams in telcos to consider a different approach, one that fundamentally delivers a best-in-class solution to a broad range of monetization needs, both now and in the future.

The Team at MATRIXX Software Stands Ready to Help

Click here to learn more about MATRIXX Digital Monetization Solution.

"We are on a mission to better serve Germany's dynamic and fast-moving enterprise market. We combined the flexibility and configurability of MATRIXX and the scalability and privacy capabilities of Google Cloud. As a result, we are now able to offer our B2B customers unmatched confidentiality delivered by a highly configurable charging product running on a massively scalable public cloud platform."

Mallik Rao CTIO O₂ Telefónica "Playing to our strengths as a leading digital service provider, we are boldly scaling up agility across our systems, building a fully-digital ecosystem that is ready to evolve for whatever customers want next, from speed and responsiveness to truly personalized experiences as part of our DARE+ strategy. MATRIXX has been a proven partner with giga!, and we look forward to working together to embed game-changing flexibility in our platforms, to deliver end-to-end enriching experiences to our entire customer base."

Johan Buse Chief, Consumer Business Group StarHub

About MATRIXX Software

MATRIXX Software delivers a modern converged charging and digital monetization solution proven at scale. Global operators like Telefónica and Telstra, IoT providers like Tata Communications and network-as-a-service (NaaS) providers like DISH rely on the platform to overcome the limitations of traditional Business Support Systems (BSS). With MATRIXX, service providers can rapidly configure, deploy and monetize personalized, innovative offerings. Its cloud native platform delivers accurate, real-time information that improves customer engagement. MATRIXX enables commercial innovation and real-time customer experiences that drive revenue and growth opportunities across multiple markets.

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