

## MARKET NOTE

# Telkomsel (Indonesia) Monetization Transformation Completing in Record Time with No Customer Experience Problems

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## EXECUTIVE SNAPSHOT

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### FIGURE 1

#### Executive Snapshot: IT Business Transformation Enables Telkomsel (Indonesia) to Address Complexity and Improve the Customer Experience

This IDC Market Note explains how Telkomsel, the largest communications service provider in Indonesia, successfully retooled its business management and monetization solution and rapidly migrated its multimillion prepaid/postpaid subscriber base without causing a customer-affecting service disruption. Telkomsel believes that as new network technology becomes available, the "secret sauce" in getting customers to spend more comes from a network operator's ability to make service offerings customer relevant and engaging by using pricing strategies and payment methods that go well beyond a simple charge for voice, text, and data consumption. Agile monetization systems play a kingpin role.

#### Key Takeaways

- Telkomsel is the largest cellular provider in Indonesia by customer count, though its market is very crowded with five other competitors. Telkomsel's total customer base, 170+ million at the completion of billing solution update project, consists mostly (97%) of prepaid subscribers.
- Telkomsel's transformation vision is to become a digital communications company and remain strategic in the eyes of the company's customers. In 2018, this transformation was advanced externally through several digital investments and key initiatives in the areas of digital lifestyle, digital advertising, mobile banking, IoT, mobile financial services, big data, and an API business.
- Through early 2019, to better address the service validation and interaction needs of its growing customer audience, Telkomsel enhanced its internal capabilities and processes using digital technology to improve its real-time charging, bundling, low-latency interactions (top-ups, recharges, and offers), payments, partner ecosystems, and personalization functions.
- Telkomsel successfully partnered with Amdocs to migrate its 170+ million customers to the latest omni-monetization solution. They jointly achieved this project — one of the largest of its kind in the world — through tight collaboration between their IT technology and business management teams, as well as the implementation of a modern IT solution architecture that included the last production release of the Amdocs Convergent Charging 10 solution. This feat was accomplished over an industry-leading period of several weeks without affecting the experience of a single customer.

Source: IDC, 2019

## IN THIS MARKET NOTE

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Telkomsel, one of Indonesia's largest mobile network operators, recently redefined its customer experience and business management processes to gain a deeper relationship with its customers, position for future business opportunities, and drive additional cost out of its operations. Telkomsel's transformation involved the changeout of the company's eight-year-old charging and billing systems to the latest Amdocs Omni-Monetization solution. The solution is designed to help the company provide its customers what they want in a more flexible manner while positioning to address new business needs from IoT, virtualized network (NFV) technology, and 5G.

This document explains how Telkomsel transitioned its charging and billing processes by migrating all 170+ million customers to a new business solution. The company accomplished this effort with near-zero downtime and without affecting the experience of a single customer. This document also explains why Telkomsel's new omni-monetization business solution differentiates the company by enabling it to interact with new and existing customers using nontraditional offering strategies and payment options.

## IDC'S POINT OF VIEW

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### Global Market Change and Digital Business Transformation Are Inevitable

Digital transformation can take on many personas but usually involves systems and process updates designed to satisfy evolving customer needs. Business management systems – charging, billing, customer self-care, catalog, policy management, and partner management – are receiving update attention today across many industries. Through digital transformation, organizations can satisfy changing business models and find new ways to meet customer expectations. For example, no longer is it the sale of an automobile but rather the delivery of transportation services mixed with autonomous control, logistics insight, entertainment services, and even loyalty rewards. Medical devices and prosthetics are no longer standalone in purpose or function but are connected on multiple levels for insight delivery to the patient, healthcare provider, insurance company, and even device manufacturer.

Within the communications sector, organizations attempting to transform into digital businesses without updating their installed systems or commissioning new ones usually fail to efficiently monetize new service offerings. Although many transformation projects have been engaged over the past 10 years, only a small number of projects have yielded expected results, mostly because of process complexity and systems inflexibility. Yet today's business environment and customer audience expect back-end change to address the management needs of customer lifestyle and enterprise business enablement solutions from 5G and IoT services the communications industry is starting to bring to light.

### Telkomsel's Focus on Digital Services and the Customer Experience

In September 2017, Telkomsel recognized that its six-year-old business management solution suite needed an architecture and functionality refresh to keep the company current with market evolution, better meet the service validation and interaction needs of its growing customer base, and deliver the infrastructure performance upgrades the business team needed to maintain a positive customer experience. The functions tied to real-time charging, bundling, low-latency interactions (top-ups, recharges, and offers), payments, partner ecosystems, and personalization were the monetization functions of concern. Telkomsel believes these capabilities best help customers interact with the company and for Telkomsel to provide the best service offers to customers both now and in the future.

The challenge with executing on this strategy centered on the transition of Telkomsel's prepaid and postpaid customer base to the new solution without affecting the experience of a single customer. This mantra was extremely important for Telkomsel to preserve its brand image and maintain a market leadership role in offering customers better pricing offers and new service options.

Delivery execution is hard to get right, especially when it comes to a transformation project of this magnitude. Accomplishing Telkomsel's goal involved deep collaboration with Telkomsel's billing and charging supplier, Amdocs. The key to project success was in the planning, testing, comparative analysis of results from the incumbent systems, and the new monetization solution, as well as continuous interaction between the company's business and IT teams. With this high degree of preparation and planning, all 5+ million postpaid customers were migrated to the new system in a flash cut without an issue. Then groups of prepaid customers were consecutively migrated at an aggressive rate of 12-16 million per week until the cutover was complete.

With each "batch" of customers, various transformation issues came up. Anticipating that such issues could occur, Telkomsel and Amdocs planned to have the "right people" in place to resolve them before they became bigger problems. As a result, no service-affecting incidents were created, and the customer impact across the total transformation period was negligible. To enforce minimized impact, when each transformation cycle completed, the Telkomsel IT team along with members of the Amdocs team met with the operations stakeholders to walk through each completed action and then collectively decide on proceeding to the next batch of customer transitions. The overall project had some unanticipated glitches, but key members of each team were always available to resolve those issues before proceeding further. The successful transition of all customers to the new solution was noticeably different from the set of pain points Telkomsel experienced with its previous monetization solution cutover eight years earlier.

The new solution transition was successful – no customer-noticeable service downtime – due to Telkomsel's and Amdocs' collaborative methodology between work teams and their joint delivery planning effort. Such a large customer migration is a strong testament to Telkomsel's avid planning process, aided by deep collaboration with Amdocs and tight interaction between the Telkomsel technology and business teams. IDC believes that a few communications SP organizations facing such a massive service-enabling technology refresh and customer migration challenge have been as successful in as short a time. We further believe that over the coming weeks and months, this type of systems and business process transformation effort will need to occur repeatedly and frequently across all global regions in a hope for delivering on the 5G and IoT new revenue promises that many 5G business case deployments are now based.

With the new omni-monetization solution at the heart of its future business management stack, Telkomsel is set to engage its customers in traditional and very nontraditional ways pertaining to service offers and payment options. This degree of service offer, business model, and payment flexibility – simple for the customer but complex to manage and execute – is what omni-monetization entails.

Telkomsel believes that as the network becomes more virtualized, there will be new ways to implement charging. Figure 2 provides a summary concerning Telkomsel and the company's transformation accomplishments. Some organizations believe that in addition to traditional time and volume-based billing triggers, other factors such as latency and even packet loss (jitter) will soon be monetization measures. Without the right charging system (agile, flexible, and able to address the latest feature functionality), the future of any communications SP business will be in doubt as new charging needs

will mean quick-action configuration changes. One such example of new charging/billing models is enabling enterprise customers to provide their customers with what was once sold to them as widgets but now offered as services (XaaS). Another example is billing-on-behalf models, which will continue to be developed by communications SPs such as Telkomsel over the coming months.

**FIGURE 2**

## Telkomsel by the Numbers



Telkomsel is the largest mobile network operator in Indonesia with an active customer base of 163 million subscribers according to its 2018 annual report that increased to 170 million subscribers by the end of the transformation project. Of these, 97% were prepaid and 3% were postpaid customers.

The company established an "omni-monetization" digital foundation to satisfy the charging and billing needs from traditional customer models and new partner-based models.

The new charging and billing solution enables Telkomsel to launch new products in as little as a day using business analysts compared with weeks of effort by its IT team as in the past.

The new monetization solution now addresses 100 million digital interactions per day (offers, recharges, top-ups), processes 2–4 billion transactions per day, and has reduced bill processing time from 45 to 10 hours.

Solution scalability presently supports growth to 200+ million customers in addition to addressing the needs of IoT, M2M, and other new lines of business, but can expand as needed.

The charging system incorporates the new IFRS functionality, which enables Telkomsel to have real-time reporting and campaign management.

With such a high number (97%) of prepaid customers, minimizing customer experience impacts was very important. Telkomsel's full customer base was migrated to the new solution over a few weeks without service disruption to a single customer.

All bills were successfully dispatched to customers on time in the first month of operation while achieving 99.99999% billing accuracy between old and new systems.

Using open source database technology and elastic compute capacity with the new charging and billing system, Telkomsel eliminated two datacenters and reduced its server footprint by 65%.

Source: IDC, 2019

## Omni-Monetization Is the Next Step in Providing Customer Choice

For many industries, the omni-channel customer experience has been a major effort in getting an organization's customer interaction systems to start, further along, finish, review, and commit customers to a purchase decision regardless of channel, whether it is a web portal, mobile app, retail store, care representative, reseller, or social media. For several years now, major investments of time, money, and resources have been dedicated to the integration of these channels and in improving the customer interaction process.

Expanding on the omni-channel experience to provide customers with consumption options and payment flexibility empowers organizations such as Telkomsel to differentiate their offers in crowded markets and provide an identity in others that are currently not addressed. Payment flexibility, loyalty program management, nontraditional pricing offers, and partner-involved offerings can now be used to attract customers to opportunities previously thought to be impossible to deliver when subscription and pay-for-usage models were the only ways to address customer payment needs.

Amdocs vision for what it terms "omni-monetization" is a collection of business capabilities that enable a communications SP to grow revenue and provide a collaborative customer experience that pushes personalization and customer focus to the forefront of consciousness. Omni-monetization defines solutions capable of supporting one or more of the following:

- **Flexible monetization models** – payments based on immediate pay, bill, credit card, alternate payment, split payment, purchase with points/rewards, advertising sponsored, and social sharing

- **Business agility and time to market** – new offerings configured by business users in hours and launched in days, for all services for all customers, flexible pricing attributes, and E2E federation
- **Pricing agility and personalization** – personalized (and optimized) pricing based on customer profile, consumption (usage) patterns, spending behavior, social interactions, and advertising
- **Partner ecosystem enablement** – onboard partners, define resources, create offers, sell through any channel, fulfill, bill using any pricing model, collect revenue, and partner settlement
- **New technology evolution and revenue generation** – enterprise potential and new revenue dimensions (partner funded, service embedded, edge, NaaS, latency, QoS) and E2E solutions using IoT and virtualized network functionality

As business needs evolve, incumbent solutions that do not incorporate the potential for change in business models, service offerings, and payment strategies lose a level of effectiveness. A business offering may start out as a simple subscription but evolve to more elaborate usage-based and partner-enabled interrelationship models with time. Flexibility to support such change is essential as technology advances, market conditions are redefined, business relationships evolve, and organizational structures are transformed.

## LEARN MORE

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### Related Research

- Delivering Partner-Enabled Digital Services: New Business Models Change the Face of BSS for Communications Service Providers (IDC #US45340819, July 2019)
- Worldwide Communications Service Provider Operations and Monetization Solution Forecast, 2019-2023 (IDC #US45093319, May 2019)
- Amdocs Repositions for 5G, IoT, and Virtual Networks Convergence – Unified Operations, Monetization, and Business Management Cloud-Native Solution Delivery (IDC #US44479418, December 2018)

### Synopsis

This IDC Market Note explains how Telkomsel refreshed its six-year-old business management and monetization systems with new architecture and market competitive functionality. Migrating its multimillion prepaid and postpaid customer bases to a new monetization solution in mass, and rapidly doing so without causing a customer-affecting problem, was an industry-leading accomplishment. Telkomsel attributes the success of this transformation in large part to extensive planning and collaboration with its solution supplier, Amdocs, and in facilitating continuous interaction between its technical and business teams.

"The latest network technology wave is capable of redefining how business is conducted in every industry. For the first time, connectivity is pushing organizations to become digital and to change how they interact with their respective customers. New ways to deliver value, improved solutions for addressing industry problems, and innovative approaches with how customers pay for services are capturing the attention of network operators such as Telkomsel and also companies in other industries. Systems that are agile and able to rapidly accommodate change as business needs arise are essential for helping companies remain vibrant and tuned to their customers' needs," says Karl Whitelock, research vice president, Communications Service Provider Operations and Monetization.

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