Intelligent Interconnection and Engagement in the Digital Economy

Enabling Digital Transformation with SAP Digital Interconnect
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When discussing the digital economy, it’s impossible not to have mobile technology ("mobile") at the center of the conversation. Much as electrical power enabled the industrial revolution in the 20th century, mobile is at the heart of today’s digital world.

As the world becomes more digital, mobile opens new powerful pathways for enterprises and telcos. Mobile messaging is a vital conduit for engaging with customers, subscribers, and constituents and connecting reliably and securely in our global digital economy. See Figure 1.

Figure 1: Multichannel Engagements Empower the Digital Economy
Mobile is how we connect and engage in both our personal and business lives. It has become so essential to our day that 74% of mobile users cannot do without their mobile phones and 65% regularly use them to transact business online. Organizations that can tap into those mobile habits and intelligently interconnect and engage with the billions of unique global mobile subscribers will more than survive in our rapidly changing digital economy – they will excel.

Within the next few years, as mobile usage continues to heat up, nearly everyone will have a mobile device – and there’s considerable evidence that they won’t just be talking on them. They will be chatting, requesting a car service, paying the mortgage, ordering groceries, scheduling a dentist appointment, researching a new purchase, buying a concert ticket, and so much more with a press or a swipe of a finger. All of the activities most likely will happen within a messaging app.

Joining this human-driven mobile traffic will be a vast amount of machine-to-machine conversations that will start to occur as the Internet of Things (IoT) reaches scale in the digital world. Just as mobile has had a huge impact on our lives, the IoT has the potential to transform everything from how appliances are operated and maintained to the way we drive cars and manage our personal health.

In the digital economy, mobile messaging will be the primary channel for governments to update their citizens, retailers to engage with shoppers, universities to communicate with students, and banks to notify their customers.

Mobile messages – created by humans and machines – bridge the last mile of connectivity to the billions of global mobile subscribers and IoT, and they are at the center of engaging people on a personal, immediate, and ongoing level. In the emerging digital economy, mobile messaging will be the primary channel, even more than the Internet and Web sites, for governments to update their citizens, retailers to engage with shoppers, universities to communicate with students, and banks to notify their customers. See Figure 2.

Every organization will need a multichannel engagement strategy that encompasses short message service (SMS), multimedia messaging service (MMS), application-to-person (A2P) messaging, trusted multifactor authentication, messaging apps, chat bots, and Web chat capabilities, as well as voice and e-mail. Beyond the types of messages, the engagement strategy will succeed or fail based on its ability to reach across the globe, to reliably send messages over carrier-grade networks, to secure message transactions, and to understand customer data through analytics. Mobile messaging is so much more than pressing “send.”

Figure 2: Mobile Messages as the Starting Point of Customer Engagement

Mobile is still the most reliable and easiest way of engaging with customers.

Ensuring consumers and business are secured in these mobile engagements is essential.

Give customers choices on how they want to engage.

Follow up with effective analysis and corrective actions.
Creating High-Quality Engagements

Messaging delivers an ease and simplicity that mobile users want, and it provides the seamless, transparent, frictionless means organizations need to engage with their customers. For mobile consumers, what happens behind the tap or swipe holds little interest. They are drawn in by the immediacy and the convenience of engaging with others through their mobile devices. They react positively or negatively to the speed of the connection, the safety of the transaction, and the quality of the engagement.

To meet those expectations, enterprises must carefully choose the type of message they want to send so that personal information is kept private, financial data is secure, and critical notifications arrive in real time. SMS and MMS are hugely popular with consumers, and according to Ovum, many (70.6%) would use SMS the same or more often than they do now.2 According to research from Loudhouse, consumers view SMS as a quick (67%) and convenient (56%) way for companies to communicate.3

Consumers also like MMS and want to use it more. Usage for SMS, MMS, and A2P SMS is forecast to increase. In its 2016 report, Ovum forecasts that A2P SMS will reach 1.42 trillion in 2018 and will be a key communication channel for banking and finance, retail, social networking, media, travel, transportation, and healthcare. Popular use cases for A2P SMS will be notifications, alerts, authentication, verification, competitions, promotions, payments, fund transfers, information, content delivery, and emergency broadcasts.

A significant portion of the messages, especially in regulated markets such as healthcare, banking, and retail, will require a higher level of security.

Two-factor authentication ensures the message recipient’s identity through a personal identification number, and multifactor authentication ups the security ante by adding a fingerprint, voice recognition, or eye scan.

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Two-factor authentication (2FA) ensures the message recipient’s identity through a personal identification number, and multifactor authentication (MFA) ups the security ante by adding a fingerprint, voice recognition, or eye scan. Call centers, banks, financial services, retail, travel, and healthcare have already begun sending these types of messages.

Web chat has become extremely popular with consumers and will also be a factor in a multichannel messaging strategy, joining SMS, MMS, voice, and e-mail. Facebook Messenger, Viber, and WhatsApp, plus WeChat, Kakao, and Line may soon find their way into enterprises, as companies open up those platforms for business use.

In our already hyperconnected world, people exchange billions of messages every day. While we appear to be experts at sending and receiving messages, mobile messaging is still maturing and has considerable room for improvement – especially for businesses. Chat bots and messenger apps are becoming much more prevalent within enterprises and hold considerable promise for businesses that want to create positive connections with their customers. Mobile messaging readily translates into enterprise use cases for customer support; notifications, alerts, and activations; marketing promotions, loyalty, and engagement; and security and identify verification.

In the next wave of digital advancement, communications will be enhanced by consumer insights that provide valuable, meaningful information. Location information, purchase histories, income levels, and more will make for much richer, loyalty-centric customer engagements.

While we appear to be experts at sending and receiving messages, mobile messaging is still maturing and has considerable room for improvement – especially for businesses.
While mobile messages provide incredible engagement opportunities, they yield no returns unless the messages reach their intended audience at the right time and the right place. Intelligent interconnection is a necessity, as a message cannot be sent or received without ubiquitous, reliable connectivity. Every type of message must travel across networks efficiently and securely to maintain their premium position with consumers.

Intelligent connectivity is a must-have requirement for human interactions, and it is central to the increasing machine-to-machine conversations happening on the IoT. Some IoT devices may require intermittent connectivity to transfer small amounts of data, while others need constant connectivity and the capacity to exchange large amounts of data.

Devices may be relatively static or be constantly on the move, even between continents. Imagine shipping containers traveling across the globe to transport goods. In urban environments, connectivity is a given; but in harsh and inaccessible locations, such as where oil and mineral assets often are located, companies must pay close attention to network capabilities and reach.

Enterprises deploying IoT devices will want to avoid the complexities of multioperator connectivity. With thousands of operators in the world, and a requirement of at least three operators to have full coverage in a single country, the IoT can open up some thorny issues, such as mobile subscription updates, connectivity management over wireless networks, and connectivity to internal Big Data platforms. Intelligent interconnections address these IoT concerns and help ensure a successful experience for business messages by securely and reliably connecting the last mile.
Intelligent Interconnection and Engagement in the Digital Economy

**Enabling Digital Transformation with the SAP Digital Interconnect Group**

The SAP Digital Interconnect group, formerly SAP Mobile Services, aims to interconnect not only people but also machines and things around the globe. As a next step to this interconnection, SAP Digital Interconnect provides intelligent engagement with business applications, social networks, and messaging apps with programmable services built on the foundation of the global messaging network from SAP.

SAP Digital Interconnect offers a compelling set of services that unleash the power of digital technology and enable operators and enterprises to intelligently interconnect and engage with both people and machines. With SAP Digital Interconnect, you gain a multidimensional framework that supports developing and executing a digital business strategy through mobile. Depending on your digital business goals, SAP Digital Interconnect can help operators and enterprises achieve intelligent interconnections and high-quality engagements through secure messaging, global connectivity, and insightful, intelligent market research.

**SAP Digital Interconnect:**
- Connects with more than 1,000 operators
- Reaches 220 countries
- Processes 1 billion messages daily
- Engages with more than 500 enterprise customers
- Supports more than 500 operators over IPX
- Touches 99% of mobile subscribers

By embracing a digital strategy that is enabled by SAP Digital Interconnect, you can reimagine customer engagement, reimagine business processes, and reimagine work. This digital transformation is already under way with several SAP customers.

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**Figure 3: SAP Digital Interconnect Simplifies and Clarifies Complex Technologies and Processes**

More than 14,100 consumer products companies in 134 countries use SAP® solutions

87% of Forbes Global 2000 companies are SAP customers

US$16 trillion of consumer purchases worldwide use SAP software systems

98% of the top 100 most valued brands in the world are SAP customers

1 billion messages processed daily

220 countries reached

More than 1,000 mobile Operators connected

More than 500 enterprise customers

Top 3 social networks and messaging ecosystems

99% of all mobile subscribers reached

Global e-mail delivery
Once reimagination begins, telcos and enterprises can deliver the high-quality experiences that customers want. Engagements become more personal with less effort. Sharing information or triggering workflows becomes easy and seamless. Customers can deposit a check, purchase a coffee, or request a credit line from a smartphone without any technology snarls or roadblocks. Businesses can change a campaign on the fly based on real-time customer information. And, homeowners can adjust their home temperature settings from 100 miles away.

THE REIMAGINED ENTERPRISE

Customer engagement – Banks in developed and developing economies are transforming how they engage with customers. Unbanked consumers are exchanging funds through mobile messaging and realizing economic stability that they’ve never achieved in the past. In developed economies, banks are offering credit line increases, mortgages, and new credit cards to existing consumers based on their banking activities.

Banks are appealing to customers with a variety of engagement options that are both secure and personal. When onboarding mobile customers, two-factor authentication reassures customers that the payment setup and account information are accurate and safe. Once the setup is complete, customers select how and when they want to engage with the bank. Notifications about a new purchase can arrive by e-mail or text after every purchase or only at the end of the billing period. For transactions, a 2FA with a PIN ensures customer identity. Additional engagement opportunities will appear as banks expand their product offers, banking activity updates, and more.

Business processes – Global shipping companies are constantly looking for ways to edge out their competitors and strengthen their engagements with customers through fast, accurate shipments. Customer support centers are adding messenger apps and chat bots to communicate in real time with customers and quickly address their needs. Companies are also using other messaging options for one-to-one interactions.
For one global provider, SMS notifications are proving to be the best channel for letting customers know about their order status in real time. Internally, extending the business process to include SMS notifications decreased call center volumes significantly. Customers have also responded very positively to being informed of their package’s journey from purchase to shipment on their mobile devices. The process change demonstrates the company’s commitment to personal service, and the customer engagement has increased both satisfaction and loyalty.

**New business models** – Insurance agencies have been offering a consistent set of automobile, home, and health services for decades. New models are appearing, based on short-term rental needs or age-based policy requirements.

When insurance agencies have insight into consumer behavior, such as time spent in cars, popular locations visited, or median salaries, they can launch creative, personalized campaigns to engage with their existing customers and attract new ones. The more personal customer engagements are changing how insurance agencies work and opening up more targeted service and product offerings to appeal to a broader segment of customers.

**THE REIMAGINED OPERATOR**

**Customer engagement** – Vast numbers of SMS messages travel over operator networks each day, but handling nonmonetized SMS continues to challenge operators. Low-cost aggregators often use grey routes or subscriber identity module (SIM) farms to deliver A2P SMS. While the costs may be lower, enterprises risk fraudulent activity, such as spam or phishing.

Telcos offer enterprises intelligent interconnection options that authenticate the messages and provide reliable routes for the enterprise messages, as well as receipt of messages including time stamps. These reassurances are extremely appealing for critical or time-sensitive offers and messages. With a higher rate of delivery and lower fraud and spam, enterprise customers have a more positive experience.
Telcos can also reduce the load on the network resources and protect their subscribers from messaging abuse by connecting more intelligently with consumers.

Business processes – The IoT is introducing vast changes in business processes, as machine-to-machine conversations eliminate delays that were previously caused by human intervention. In manufacturing, the IoT is especially viable. A washing machine manufacturer, for example, can connect its products to the IoT to track their lifecycle and facilitate maintenance and fault management. Manufacturers that rely on intelligent interconnections can avoid the higher costs of splitting the inventory items and having messages travel over two or more mobile networks.

With intelligent interconnections, the manufacturer can insert a neutral SIM in every machine and maintain a single inventory item. Once the machine is delivered and turned on, the washing machine can be dynamically managed and updated over the life of the machine. A single point of connection between all the manufacturer’s devices and its service platforms supports and manages all the interconnected devices, regardless of mobile network or technology used to connect each device.

New business models – Digital monetization adds a revenue stream for operators beyond dwindling voice and data services. Telcos can use the data that they already store about their subscribers and can monetize consumer insights and market intelligence to third parties. Marketing agencies, retailers, and others are hungry for valuable demographic information, such as where consumers shop, when they make purchases, and what they are searching for online. Telcos have this information available and can ensure privacy and security by aggregating anonymized customer data. These digital monetization services enhance telco offerings beyond the big pipe services that merely carry voice, data, and video traffic; and unlike the network, these services require minimal capital and operational investment in technology.

To survive in the digital economy, businesses must be digital.
Establishing the New Order in the Digital Economy

With SAP Digital Interconnect as a digital enabler, enterprises and operators can reimagine business models that embrace the Internet of Things, the dynamic mobile world, and Big Data. They can create better customer engagements based on mobile marketing research that offers insights on consumer behavior and market intelligence. Intelligent interconnections can link partners and customers across the globe at the right time and the right place, and improve and strengthen engagements. Ultimately, the IoT will not be so overwhelming, as companies can securely connect sensors, machines, robots, or any device.

To survive in the digital economy, businesses must be digital. Companies that rely on SAP Digital Interconnect can embrace mobile innovations and mobile communications to help ensure long-lasting success.
LEARN MORE
The SAP Digital Interconnect group provides interconnection services to help operators worldwide simplify and optimize connectivity, monetize messaging services, and reduce network costs without additional capital expenditure. Our cloud-based engagement services enable enterprises to connect the “last mile” with their customers, and anonymized mobile-sourced data and analytics services provide near-real-time consumer insight to brands and agencies around the globe. In addition, SAP operates one of the world’s largest, most reliable cloud messaging networks, reaching 7.3 billion subscribers with more than 1,000 operators in more than 220 countries and processing over 1 billion messages daily.

For more details about how SAP Digital Interconnect can help transform your business and improve customer experiences in the digital economy, please contact us at sapdigitalinterconnect@sap.com or visit us online. To learn more about intelligent and interconnected mobile engagements, join the SAP Digital Interconnect Community at https://community.sapmobileservices.com and follow us on Twitter at @SAPInterconnect.

ABOUT SAP
As market leader in enterprise application software, SAP helps companies of all sizes and industries run better. From back office to boardroom, warehouse to storefront, desktop to mobile device – SAP empowers people and organizations to work together more efficiently and use business insight more effectively to stay ahead of the competition. SAP applications and services enable customers to operate profitably, adapt continuously, and grow sustainably. For more information, visit www.sap.com.