

# Innovation and Immediate Payments

## The cornerstone of a successful digitalization strategy for financial services



Digitalization is creating a new frontier in banking, as speed, convenience and integration across online, mobile and partner channels go from “perks” to prerequisites.

### Overview

What if every customer expected to be able to instantly buy products and services from any merchant, at any time, using any payment method and any device? And what if every corporate customer expected more than commodity payment processing services from the bank? Could you meet these expectations? These are not rhetorical questions, because the digital economy is already here: IDC indicates that in 2014, one in four consumers in key European markets made regular use of digital wallets to perform transactions<sup>1</sup>.

For today's financial services providers, the ability to support immediate mobile payments (m-payments), electronic payments (e-payments) and virtual currencies is quickly becoming essential to remaining competitive and creating new revenue streams. But providing immediate payments as a key foundation for digitalization presents significant challenges:

- **An impatient market won't wait.** Consumers and businesses are already demanding seamless and fast payment options that improve the customer experience. In 2015, m-payments are expected to grow by more than 60% and e-payments by more than 15%<sup>2</sup>. The longer an organization delays its digital transformation, the more likely it is to be disintermediated by more customer-oriented and agile competitors and digital-native newcomers.
- **Security and regulatory requirements are growing.** It will be difficult to successfully meet new market expectations and keep up with emerging trends while ensuring data security and complying with new regulatory rules.
- **Legacy core IT systems won't make it easy.** Most organizations still rely on payment technologies and applications that were designed and deployed long before the advent of the cloud, mobile devices, the Internet of Things (IoT) and up-coming virtual currencies — or the new security, compliance, integration, scalability and governance concerns that come with these modern technologies.

<sup>1</sup> IDC, Speed to Revenue and Improved Customer Service: How Data Agility Underpins Success for Financial Institutions in the New Digital Economy (Doc #IDCWP23W), July 2014

<sup>2</sup> The World Payment Report 2014

What is your strategy for innovation and growth in the digital economy? Enabling seamless, immediate payment services is a good place to start, but how will you:

- Manage the huge increase in financial data flows?
- Integrate with partners and link enterprise services for digital delivery and monetization?
- Improve efficiency, ensure security and comply with changing regulations?

Furthermore, velocity in payments is only the tip of the iceberg when it comes to digital transformation in banking — consumers and businesses are demanding a host of services at their fingertips today, and who knows what they will expect tomorrow? As the lines between the physical and digital worlds begin to blur, bridging the gap between “old” and “new” structures and applications will require a new level of API-driven agility that enables transformational change to IT architectures and business processes.

## What does digitalization mean for existing IT systems?

Digitalization is changing the face of trade, retail, commerce, business and social interactions all over the world. And it is creating a new frontier in banking, as speed, convenience and integration across online, mobile and partner channels go from “perks” to prerequisites.

So far, there is no single, agreed-upon path forward. But there is a common reality facing established retail and corporate banks: the core legacy IT systems that have been in place for the last 10, 20 or 30 years are nowhere-near agile enough to enable successful digitalization on their own.

A recent study from Finextra found that more than 78% of banks agree that “Modernizing the bank can be achieved by investing in multi-channel and front-end customer engagement,”<sup>3</sup> emphasizing the need to introduce modern technology throughout the bank. This creates a difficult dilemma: Re-designing the front-office and re-engineering the back-office is not going to be fast or easy, but the market wants new omni-channel digital services *now*.

If you move ahead by building on top of existing legacy systems without understanding all of the ramifications, what will happen as the speed and volume of payments and other transactions soar? And if you wait to see if a consensus for digitalization in banking materializes, will you end up watching your customer base slip away?

A savvy IT and business-process transformation is the only way to solve this dilemma. To deliver ubiquitous, fast, efficient and secure digital services, banks will need to commit to a digitalization strategy that will:

- Connect legacy back-end applications and third-party systems with new cloud-based apps, mobile devices and Internet-connected “things”
- Adapt IT services to support new front-end digital business processes and self-service capabilities across mobile, cloud and partner channels
- Scale to support more users, clients, data flows and transactions



<sup>3</sup> Source: “Invigorating Banking: Report on a Survey by Finextra and Five Degrees” 2015

## Where to begin?

Newcomers and early movers are already implementing customer-centric digitalization strategies that are reshaping the market with disruptive business models. So, while it might be tempting to “wait and see” what will happen next, it is wise to determine where to begin, and start charting a course toward digitalization now.

**Listen to the market.** Above all the noise, the global e-commerce market is sending a clear message: consumers and businesses want fast, seamless payment services that are available all the time, everywhere, from any device. Take the example of virtual money, where growing acceptance of a payment method that was considered quite exotic not too long ago is demonstrating that person-to-person and account-to-account payments can be quasi-immediate, not to mention cheap.

**The continued growth in volumes of e-payments and m-payments is putting pressure on all industry stakeholders to rapidly adopt these channels.**

**According to The World Payment Report 2014, m-payments transactions are expected to grow by 60.8% annually through to 2015. E-payments growth will decelerate to 15.9% growth during the same period.**

Considering that payment is the common denominator for any business transaction, and there is such strong demand for e-payments and m-payments, banks need to deliver sooner rather than later. Replacing clumsy, complex and slow payments with high-velocity and secured links with these new payment systems and schemes is a logical — and smart — place to begin your digital transformation.

## All around the world, payments are getting faster

Just as there is no single strategy for digitalization as a whole, there is no single model for creating and delivering a fast payment system. For example:

- In some countries, the private sector is leading the charge for fast payments. In others, the initiative is spearheaded by government agencies and central banks.
- Some projects are supported by all local banks, some are driven by a small group, and others are the initial offerings of newcomers that have digital strategies right out of the gate.
- Some handle only domestic payments, some are designed for cross-border payments, and some process only central bank money.
- Some are built from scratch and some extend existing infrastructure via cloud and mobile APIs.
- Some emphasize low prices and basic services while others seek value pricing through new incremental services.



## Fast Payments Around the World

Country	Fast Payment Platform	Results
<b>Australia</b> New Payments Platform (NPP)	<p>Consumers and businesses in Australia make 17 billion non-cash payments a year for a value of \$AU 100 trillion (US\$ 82 trillion).</p> <p>NPP will connect all authorized deposit-taking institutions (ADIs) to a fast payment system with enhanced data and the ability to rapidly develop new market-driven value-added services.</p>	<ul style="list-style-type: none"> <li>17 ADIs of different sizes and types (including 4 major Australian banks, alternative payment providers and the Reserve Bank of Australia) are developing the NPP</li> <li>The platform will be opened to all ADIs</li> </ul>
<b>Brazil</b> Funds Transfer System (SITRAF)	<p>One of the first fast payments systems in the world, SITRAF is a hybrid settlement system using mostly RTGS, and continuous clearing of obligations every 5 minutes.</p> <p>SITRAF is not a retail payments system, but a net settlement system used for relatively high transactions (5,000 to 1 million reales; 1,900 to 380,000 dollars).</p>	<ul style="list-style-type: none"> <li>Operated by the Camara Interbancaria de Pagamentos (CIP), a non-profit association owned by banks</li> <li>Processes 930,000 operations a day</li> <li>97% are released in less than 1 minute</li> <li>Daily amount of 16 billion reales (6.1 billion dollars)</li> </ul>
<b>Germany</b> Sofort Banking	<p>Sofort Banking is an online payment solution allowing authorization of direct transfers of funds without requiring registration or opening a new account.</p> <p>Customers who select the Sofort Banking method of payment are directed to a form and invited to enter their usual banking details. The bank receives encrypted information, and the online merchant gets the transfer confirmation in real time.</p>	<ul style="list-style-type: none"> <li>45 million customers from 11 European countries including Germany, Austria, Switzerland, Belgium, the Netherlands, Italy, France and the UK</li> <li>Customers can buy goods from 30,000 online shops</li> <li>100 million transactions to date</li> </ul>
<b>Republic of Korea</b> Electronic Banking HOFINET	<p>HOFINET is operated by Korea Financial Telecommunication &amp; Clearings Institute (KFTC), a non-profit organization jointly owned by its member banks, and managing most of the Korean retail payment systems.</p> <p>The high penetration of mobile since the introduction of HOFINET helped the system rapidly become the vehicle for mobile payments, replacing other electronic payment methods.</p>	<ul style="list-style-type: none"> <li>46 million immediate transactions per day, for a daily amount of KRW 33 trillion (US\$ 32 billions)</li> <li>Operation can be up to KRW 1 billion (US\$ 930,000 ) for corporate users and KRW 100,000 (US\$ 93,000) in retail</li> <li>Payments are posted immediately and settled the next day</li> </ul>
<b>India</b> Immediate Payment Service (IMPS)	<p>Operated by the National Payments Corporation of India (NPCI), IMPS was initially launched by 7 banks to allow immediate transfer of funds via mobile. It rapidly became a multi-channel payments platform for 59 participating Indian banks, and many Indian mobile banking services will rely on its infrastructure.</p>	<ul style="list-style-type: none"> <li>84,000 daily payments for a total amount of Rs 547 million (US\$ 9 million)</li> <li>When end-to-end encryption is used, the maximum value of transactions is set by banks. When not, it is set to Rs 5,000 (US\$ 81)</li> </ul>
<b>Japan</b> Zengin System	<p>Zengin is operated by the Japanese Banks' Payment Clearing Network (Zengin-Net), an association owned by banks. Now in its 6th generation, the system supports ISO 20222.</p> <p>Consumers and businesses can initiate fast domestic payments and collections (direct debits) using various methods (paper-based, ATM, online, mobile).</p>	<ul style="list-style-type: none"> <li>6 million operations per day for a total value of ¥ 1.1 trillion (US\$ 10.8 billion), each transaction being up to ¥ 100 million (US\$ 850,000)</li> <li>Payments are posted in real time and settled at the end of the day</li> </ul>

Country	Fast Payment Platform	Results
<b>Mexico</b> Sistema de pagos electronicos interbancarios (SPEI)	<p>Operated by Mexico's central bank (Banco de Mexico), SPEI was created to clear and settle a large volume of payments in real time, for all types of customers and many payment methods.</p> <p>To improve transparency, the SPEI website provides daily connection statistics for each participating bank.</p>	<ul style="list-style-type: none"> <li>700,000 payments a day, 640 billion pesos (US\$ 48 billion)</li> <li>Payments are posted in approximately 1 minute and settled within seconds</li> </ul>
<b>Singapore</b> FAST payment system	<p>FAST is operated by the Banking Computer Services (BCS) on behalf of the 145-member Singapore Clearing House Association (SCA). It stems from a government initiative.</p> <p>The system offers fast, highly available and almost universal access.</p>	<ul style="list-style-type: none"> <li>Allows transfers up to S\$ 10,000 (US\$ 7500)</li> <li>Posting to accounts is almost real time</li> <li>Settlement occurs twice a day, with more cycles expected in the future</li> </ul>
<b>UK</b> Faster Payments (FP)	<p>FP is operated by Faster Payments Scheme Ltd, a non-profit association owned by banks. The system, which offers 24x7 universal access to all UK banks through direct or indirect participation, has revolutionized payments in the UK.</p> <p>It was very quickly adopted and volumes continue to grow by approximately 30% each year. Innovative solutions based on FP include Paym, Pingit and Zapp.</p>	<ul style="list-style-type: none"> <li>2.9 million payments a day, for a total amount of £ 2.3 billion (US\$ 3.5 billion)</li> <li>Posting time is 15 seconds</li> <li>Funds are available within 2 hours</li> </ul>
<b>USA</b> Dwolla	<p>Dwolla is a start-up based in Des Moines, Iowa. Its solution allows users to send money to an email address or phone number.</p> <p>Money is transferred for free for transactions up to US\$ 10, and for US\$ 0.25 per transaction over this amount. Money can be transferred between two Dwolla accounts in real-time, or between Dwolla and a bank account in a few days.</p>	<ul style="list-style-type: none"> <li>At the end of 2013, approximately 250,000 people, businesses and financial institutions were using Dwolla</li> <li>A total of US\$ 1 billion in transactions was processed in 2013</li> <li>A mass pay functionality allows users to initiate payments to up to 5,000 people at once</li> </ul>

## There are many routes to velocity in payments, but they have common requirements, challenges, goals and benefits

Again, there are currently no formal standards for the new e-commerce and payment services that are gaining momentum around the world. But emerging trends, collective goals and high-profile successes are informally defining some common criteria. For example, fast payment platforms are expected to provide:

- A domestic interbank payment infrastructure that is purely electronic
- Account-to-account transfer of irrevocable funds
- End-to-end payment processing — including interbank settlement, account-to-account payment, and remittance or acknowledgment— in seconds
- An agile environment that paves the way for outbound omni-channel services (online, web, cloud and partner) that are open to integration and innovation via web APIs
- Enhanced data-routing solutions that add value to payments



Financial services institutions and governments are opting to implement fast payment systems for many reasons, but most have four main goals in common:

1. Joining the digital revolution to keep up with new technologies and how people, businesses and devices use them
2. Reducing systemic risk
3. Improving the efficiency of the payment system
4. Answering the demand from markets, end users and governments for better payment and settlement services

Each of these milestones comes with technical challenges that must be addressed by specialists in financial data flow management and infrastructure. Achieving velocity in payments will require financial services organizations to be consistent, organized and in control on the one hand, and extremely agile and innovative on the other. This will require fast payment platforms that can provide:

- 24x7 availability
- Rapid and elastic scalability to handle huge increases in data volume
- Sophisticated routing to facilitate the entire transaction value chain, from the purchasing decision to the financing decision to delivery
- The flexibility to meet current and future regulatory and industry requirements, including support for the ISO 20022 message format, which is now a must-have for cross-border payments
- Security and authentication to prevent fraud, money-laundering and cyberattacks
- Real-time, end-to-end visibility and control of all financial data flows

**Security will be especially critical for success.** For banks and other payment service providers, speeding the movement of omni-channel payments means less time to detect unauthorized access and fraudulent transactions across a wider attack surface that now includes cloud and mobile, in addition to legacy payment architectures, web applications and third-party systems.

Users will want to access various applications without having to log in multiple times, even if they have different identities for different services. Providing this capability without jeopardizing security can be complicated, especially when people want to access composite apps that consume multiple services.

Application managers will need to reduce the attack surface with uniform policy mechanisms, including ID federation and credentials management, to allow application components to deal with privileges and reduce the chance they will be exploited, or that exploits will compromise other content. This requires policies to isolate applications from vulnerabilities in content that might otherwise be within the same security boundaries.



Key Benefits of Fast Payments	
<b>For consumers</b>	<ul style="list-style-type: none"> <li>▪ Ability to make payments securely in any situation, anywhere, anytime, from any device</li> <li>▪ Guarantees aside to the payment (for instance escrow in e-purchasing and delivery)</li> <li>▪ Privacy</li> <li>▪ Instant payment notifications</li> <li>▪ Seamless link with financial account management</li> </ul>
<b>For businesses</b>	<ul style="list-style-type: none"> <li>▪ Opportunity to provide new value via personalized interactions and bundled services with seamless instant payments</li> <li>▪ Fast availability of funds</li> <li>▪ Safety in management of sensitive financial data flows</li> <li>▪ Improvement of added enhanced payment information</li> <li>▪ Data analysis and operational intelligence to help manage supply chain</li> </ul>
<b>For both</b>	<ul style="list-style-type: none"> <li>▪ Ubiquity and omni-channel solutions</li> <li>▪ Cheap, easy and fast (60 seconds or less) payment solutions</li> <li>▪ Ability to pay without sharing detailed account information between payers and payees</li> <li>▪ Multiple currency options</li> </ul>
<b>For the economy as a whole</b>	<ul style="list-style-type: none"> <li>▪ Enhanced security in payments</li> <li>▪ Reduction in float</li> </ul>

## Beyond fast payments — linking with other services is a win-win strategy

Velocity in payments is a strategic digitalization initiative to increase the speed and efficiency of business and improve the customer experience through seamless m-payments and e-payments — all while mitigating risk and orchestrating financial data flows throughout a complex global ecosystem.

As non-cash payment types and fast-payment initiatives gain traction, providing innovative, omni-channel payment services will be critical for banks looking to engage “connected” consumers, expand processing relationships with and through partners, and transform payments management into bona fide revenue-generating lines of business.

But financial institutions have even greater opportunity for innovation when immediate payment is linked with the services eventually provided to the end customer. A fast, seamless and interactive process that bundles various services together — from choosing a product or service, to payment and delivery — delivers value for both sides of e-commerce.

This is a win-win-win strategy: End customers have a better experience, corporate customers get a better transformation ratio (and more revenue), and the bank gains and retains business by meeting — or exceeding — customer expectations.



## What does it all mean — in practical terms — for your digital transformation?

We have discussed the demand for fast payments, what the market expects, how institutions around the world are responding, common challenges and requirements and the opportunity to improve the customer experience and drive innovation and growth by linking immediate payment with other services. But when it comes down to it, what does it all mean?

The bottom line is that instant remittance or acknowledgment of an irrevocable payment — in one minute or less — is now a “must offer” around the world. Achieving this level of velocity in payments will require major improvements in front-office processes and legacy back-office architectures.

**Security and compliance** — Security and compliance will be significant challenges for the success of near-real-time payment projects. In practical terms, this means:

- Policy-based security and control of messaging across routes and devices, including identity federation and credentials management
- Manageability and flexibility to meet changing security-policy and regulatory-compliance requirements
- Fraud and money-laundering checks in real-time
- Exception processes that are fast, user friendly and secured

**Agility** — The pressure for high-velocity, low-cost payments seamlessly linked with value-added services will require banks to implement new business models around omni-channel interaction and data reutilization. In practical terms, this means:

- Agile connections with individuals, partners, co-opetitors and other organizations throughout the ecosystem
- New models for interbank liquidity and settlement
- Flexible mapping of services (external and internal) through lightweight APIs to enable easier omni-channel management
- Adaptability to accommodate unpredictable changes in customer habits, regulatory requirements and industry services
- Enabling clear revenue models while entering into new alliances

**Efficiency and operational excellence** — Near-real-time payments require the ability to deliver an actual and complete service, from immediate messaging to clearing and settlement. In practical terms, this means:

- Real-time data processing, 24x7 availability and rapid scalability
- The ability to route unique transaction messages containing the clearing instructions to originating and receiving financial institutions
- End-to-end monitoring of transactions, particularly to manage irrevocability of remitted funds



## Ready to begin your digital transformation with velocity in payments?

The rate of change across the financial services industry is accelerating as organizations race to meet market expectations and introduce new engagement models using every available physical, partner and digital channel. In the digital arena, advances in mobile, cloud, IoT and integration technologies have ramped up competition and opened the door to new opportunities, including innovative, high-velocity payment services that leverage existing services to enhance the customer experience, improve efficiency and create new revenue streams.



The challenge is to overcome the limitations of legacy core IT systems by transforming front-office business processes and back-office infrastructure into an agile, secure platform for velocity in payments and other digitalization initiatives. The solution is to apply API-centric strategies and technologies consistently across all channels.

Here's how two leading companies in the FSI sector are already benefitting:

### Storebrand – Handling over 600,000 transactions a month using Axway API Gateway

Storebrand — a leading player in the Nordic market for long-term savings and insurance — uses Axway API Gateway to speed time-to-market, optimize processes and secure all internet communications within their ecosystem. The digitalization solution enables the company to:

- Work with the Norwegian Labor and Welfare Administration (NAV) to calculate Storebrand's contribution to a retiree's pension
- Help Norwegians compare rates for car loans and insurance
- Offer retirees a single view of their different pension sources
- Enable customers to directly access NASDAQ and carry out trades via the Storebrand site
- Empower consumers and companies to use digital signatures

### Lessons learned from early adopters

**Be innovative:** Use market and organizational momentum to advance e-commerce for buyers, suppliers and merchants. Regulation can also be an impetus for innovation.

**Be scalable:** Transforming both IT and business processes for scalability also improves internal efficiency and regulatory compliance.

**Be agile and open to omni-channel flow:** Mapping services across siloed systems — including on-premise, partner and cloud — will provide the ability to quickly deploy new services and implement new business models for interbank liquidity and settlement.



## ANZ Bank – Deploying an Axway API First solution to drive success and value with partners

With a history that dates back over 175 years, 50,000 employees worldwide and more than 9 million customers in 33 countries, B2B relationships are the cornerstone of success for ANZ Bank (Australia and New Zealand Banking Group Limited).

Using web APIs for real-time partner integration, ANZ's New Payments Platform (NPP) initiative in Australia enables bank-to-bank transfers in less than 10 seconds, significantly improving the customer experience compared to the traditional overnight clearing process.

In addition, web APIs enable ANZ Bank and third-party service providers to offer value-added services associated with real-time transactions, such as delivering an auto insurance offer when a customer makes the first payment on a new car. These types of new digital business opportunities are a perfect example of how web APIs are impacting B2B relationships and enabling organizations to do business in a more real-time world.

### Axway can help.

In the digital economy, agility is the key to achieving and maintaining a competitive stance. Axway 5 Suite can help your financial services organization quickly adapt to change, respond to customer demands and bring innovative new services to market. You can use it to:

**Enable outbound omni-channel services:** To reach connected consumers, partners and field forces, your API strategy should ensure that your information services and data (e.g. the payment network for credit-card processing) are available and functional via each channel, and implement the security required to protect personal information and identity.

**Secure digital business with partners:** While EDI and other B2B integration interfaces will be around for years to come, new web-oriented technologies are seeing rapid adoption across the financial services industry. By migrating to API-centric partner integration, or adding this option to an existing business process, you can securely access partners' services and provide your own services to them.

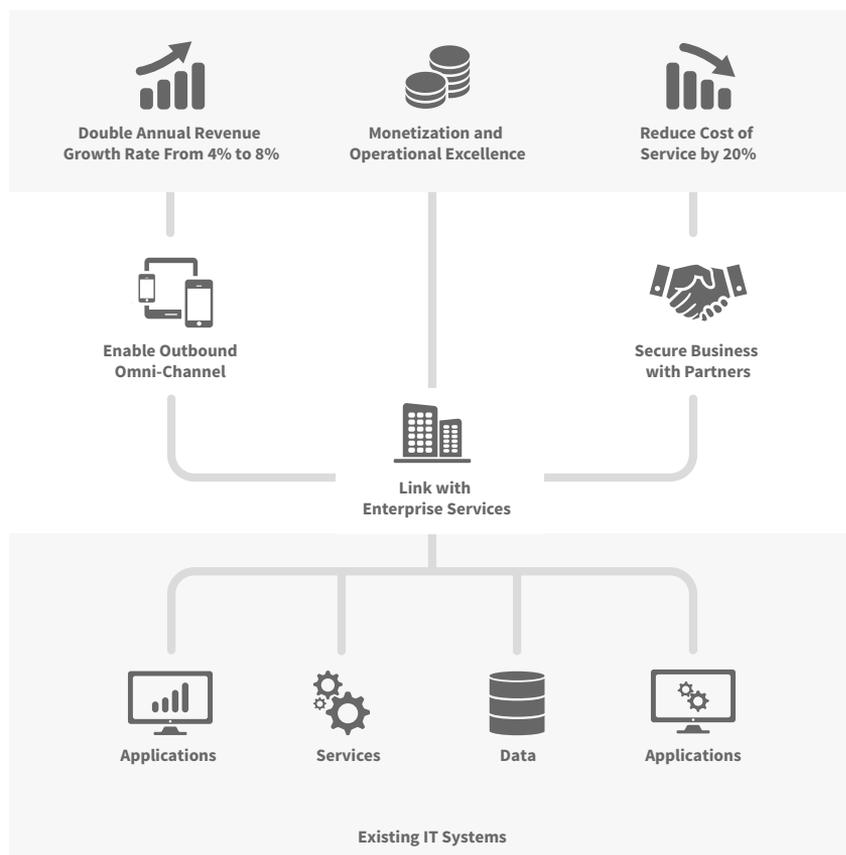
**Link with enterprise services:** Bundling partner data and applications with your own services can provide unique value to your customers. To do this right means:

- Federating identity management systems and enforcing corporate and regulatory compliance
- Orchestrating how applications/systems/cloud are accessed and delivered, with minimal investment in designing policies



**Develop operational excellence:** The digital economy is increasing the number and velocity of data flows, while reducing the time available to identify and react to disruptions. Highly proactive and lean operational intelligence capabilities are essential as you seek to continuously improve processes and achieve operational excellence.

**Enable data and services monetization:** Monetization is fueled by real-time data-flow monitoring that provides the detailed information necessary for generating incremental revenue. The more detail that is available, the more flexible and agile the business model becomes.



Contact us to learn more about how Axway 5 Suite can help you implement a successful digitalization strategy for velocity in payments and beyond.

For more information, visit [www.axway.com](http://www.axway.com)

Copyright © Axway 2015. All rights reserved.

