



2020 builds hope, 2021 ignites imagination.

**Modernization of
Digital Payments infrastructure accelerates**



Forward-looking statement

In this Annual Report we have disclosed forward-looking information to enable investors to comprehend our prospects and take informed investment decisions. This report and other statements - written and oral - that we periodically make, contain forward-looking statements that set out anticipated results based on the management's plans and assumptions. We have tried, wherever possible, to identify such statements by using words such as 'anticipates', 'estimates', 'expects', 'projects', 'intends', 'plans', 'believes' and words of similar substance in connection with any discussion of future performance. We cannot guarantee that these forward-looking statements will be realized, although we believe we have been prudent in assumptions. The achievement of results is subject to risks, uncertainties and even inaccurate assumptions. Should known or unknown risks or uncertainties materialize, or should underlying assumptions prove inaccurate, actual results could vary materially from those anticipated, estimated or projected. Readers should bear this in mind.

We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

Contents

2	Payments modernization accelerates
10	RS Software lays foundation for transformation of developed world payment infrastructure
12	RS Software first company globally to build multi-rail payment system
14	Should Nordics be learning payments innovation from India?
18	Surge in global RTP transactions by 41% during the pandemic year
20	Digital payment trends in 2021
22	Chairman's overview
26	RS Software Growth strategy -> Revenue quality transformed -> Higher earning power -> Closer to profitability.
27	RS product suite finding global validation
28	Addressing business risks
30	The connected economy
40	RS Software product suite for the Connected economy
42	Innovation
44	Innovation – Blockchain at RS Software
46	RS Software Continuing to serve the nation in these critical times of Volatility, Uncertainty, Complexity and Ambiguity (VUCA)
48	Management Discussion Analysis
54	Board of Directors
56	Senior Executive Profiles
60	Notice
71	Director's report
123	Standalone Financial statement
210	Consolidated Financial statement

“

Hope lies in dreams, in imagination, and in the courage
of those who dare to make dreams into reality.

Optimism is the faith that leads to achievements.

”



- **There is no sector with a greater opportunity for technological advancement than the payments industry**
- **Existing infrastructure - cash, ACH, instant, cross-border payments, and card networks must converge and get rationalised → payments modernization**
- **RS Software achieves small wins to gain larger wins in this multi-decade opportunity**

Payments modernization accelerates

Payment products are the connective tissue of financial institutions, serving as a major source of core revenue. But what are the business and technology priorities and market dynamics that drive this array of payment services? This is what payments modernisation achieves, and drives the opportunities for RS Software. Primary focus here is on real-time payments, rationalization of payment flows, digital ledger technology, central bank digital currencies, proximity payments and mobile wallets.

*The pandemic environment for the past year has been particularly favorable to payments modernization, with 79% of surveyed executives by Mercator indicating that payments technology modernization efforts have been boosted by the pandemic. Additionally, the advent of real-time and faster payments is similarly turning up the urgency of infrastructure modernization. If you fast forward to what the world might look like in two-five years, most of the world's payment flows, including B2B, B2C, C2B payments, if they all happen instantly and the efficiency gains across the payments landscape across treasury management, **we think there is seismic shift about to happen.***



This urgency corresponds with rising consumer expectations for new services, which will translate into new revenue streams for financial institutions. For example, most executives agree that real-time payments will drive new revenue streams and that they are already receiving client requests for this service.

Digital transformation continues to alter traditional business models across several industries such as retail, transport, and travel, to name a few. While the financial services industry is yet to experience a sea change of equal measure, **a number of payments processes and business banking touchpoints**

are indeed undergoing transformation.

As clients demand speedier transaction processing, convenient access to information and accurate tracking at a low cost, these customer requirements have been a catalyst for banks yearning to explore new ways to create efficiency, manage margin and price compressions better.

Banks, in their current myopia, must deliver an efficient consumer experience for all parties across the entire value chain and determine the core technologies needed to digitally transform their infrastructure, enabling scalability, interoperability and ubiquity.

The Instant Payments narrative



The instant payments trend has picked up pace, and the narrative around the benefits has evolved. Much has been made of the benefits of instant payments for businesses through incremental liquidity gains – and these are certainly valuable. But today, as we continue to explore the use cases and in the context of an ultra-low-interest-rate environment, many businesses are concluding that the most compelling edge that instant payments offer comes from the ability to significantly improve customer service. As an example in e-commerce which is growing at a very fast pace, especially in the Covid-19 era, online retailers can offer instant refunds, and in insurance, a driver can cover payment of a rental car after an accident, are some great use cases. Request to Pay decreases the time taken for the customer to fish out credit cards or log into various banking portals in favour of giving a simple set of bank details and confirming the transaction.

In years to come, instant payments will be the new normal. The new generation of treasurers will not accept that in an instant world a payment takes one to two days or even longer to reach the beneficiary. This will have an impact on the processes of corporate treasuries

when they are currently not prepared to receive payments on weekends, for example.

So, what should the roadmap to increased uptake of instant payments look like? In terms of the next steps, there is the importance of systematic and measured advancement across the industry: The rails need to be the foundation onto which everything else is built - we can't drive the value in the rails themselves. Yes, we need 24/7, clean settlement, and a ubiquitous reach across the industry, but that is where the instant payment rails themselves need to focus. The financial institutions and the fintechs are the ones that need to create the value on top of those rails. For example, when the rail tracks were built a couple of centuries ago, no one built those tracks for fun. They were built to connect communities, which enabled new ways of conducting trade. That is exactly how we need to look at instant payments. Today, we have the rails, but we need Request to Pay, QR code payments, more merchant engagement, more corporate engagement in instant payments, and so on. That's not going to happen just because the rails are there.

The pandemic deeply entrenched the digital agenda, especially for payments, and financial institutions recognise that **the effects of Covid-19 are likely to have a permanent impact on the industry**. 74% of European banks see an increased need to enhance their digital services, and 65% believe that banks must increase their speed of innovation. **This immense pressure to digitise is being played out across the globe, as regulators and industry bodies scramble to expedite timelines for the modernisation of payments systems.** *Currently, the industry runs several types of infrastructure, including automated clearing houses (ACHs), instant, cross-border payments, and card networks, leaving plenty of scope for rationalising the cost base. There is a great case to make one infrastructure serve all the relevant markets.*

Rationalisation with ISO 20222

During a recent panel discussion at an important industry event of European banking association, moderator Tanja Haase, customer engagement lead - transaction management, SWIFT said, **“In a few years we will have similar ISO 20022 formats and processes for mass payments, instant payments, high value payments, and cross border payments all around the world.**

Yes, there will be local flavours, but in the end, this is only a minor issue. ISO 20022 is the common language for financial messaging, I would say it is the lingua franca of payments.”

The most fitting word is 'opportunity' for Neil Brady, head of transition and surveillance operations, Deutsche Bank. He explained that ISO 20022 is an opportunity for the industry to rationalise processes and the legacy infrastructure that we have across many of our institutions.

“We can do this as a result of the enriched data, **the more structured data that we'll receive in the future within the payment landscape.** Also, with any opportunity there's going to be risks and challenges, but at the end of the day I think this is basically one opportunity that we all have to embrace.”

Daniele Pasqualini head of GTB RFP and onboarding, Intesa Sanpaolo, argued that 'awareness' is the is the key word here. “This is because we're working in several ISO projects and working groups such as TARGET2 and correspondent banking.”

Do we really need Central Bank Digital Currencies?

Considering the ECB's recent public consultation on the digital euro, Facebook's progress with the Diem Association, El Salvador becoming the first country to adopt Bitcoin, cryptocurrency exchange Binance ordered to cease UK activity, Sweden potentially participating in ICOs, the Bahamas having issued the Sand Dollar and JP Morgan creating digital coin JPM Coin, do we really need central bank digital currencies?



Sophia Bantanidis, head of regulatory strategy and policy, TTS innovation, treasury and trade solutions, Citi also referred to the BIS taxonomy: “There is no legal definition of what a CBDC is, there's a taxonomy around it, but there is no clear, precise definition because it could refer to a number of different concepts. The fact is that we could end up with a combination of new forms of central bank money in the form of CBDCs, alongside existing central bank money like we have today.”

While it is evident that there is a power play occurring between different types of digital money and there are several approaches across the globe, Naveen Mallela, global head of coin systems, ONYX, JP Morgan draws attention to commercial bank digital currencies, namely JPM Coin. In addition to the four dimensions of the money flower, Mallela said **“it is about creating new infrastructure, creating new rails, providing the ability to have value-added products and services, leveraging programmability, the ability to offer our clients better express ability, especially as we move towards an economy of things and machine to machine payments.”**

Trends in global payments innovation leading to better customer experience, and influencing regulators

Are Open banking and PSD2 , pushed by EU regulator key innovations that will transform the customer experience in the payments world ? Can these innovations be just as applicable globally? Is the push for real-time/ instant payments the innovation that will transform the payments world globally? These are some of the questions that were brainstormed during a recent panel discussion at a global industry event. Sabrina Small, managing consultant of Lipis Advisors set the tone of the session as she stated that what remains important about innovation, is that the best technical solution or flash of inspiration will come to solving a customer problem. Achieving economic success and solving a problem is what innovation should be about, “that is its real goal,” she argued.

Yet, the conundrum of global innovation as a concept, Small acknowledged that “the idea that innovation can be global, is often trumped by what the specificities of a given payments environment are, and the banking environment itself.

On the back of this observation, Small posited her first question, asking Michel Vaja, head of payments consulting, Icon Solutions, what he feels is the most interesting payments innovation of the past five years. Vaja responded that the answer is clearly open banking and the PSD2 evolution. Why? “Because the bottom line is, that it pushed banks to rethink their definition of value.” He argued that it has encouraged banks to rethink the way they serve their customers and that it has shifted the thinking around what they can do with the data they hold. The bank accounts have become data commodities of sorts.

Jon Levine, co-head of institutional banking, Banking Circle, countered that while Vaja's suggestion was strong it wouldn't make any of Levine's top three choices. For him it's all about instant payments for low value clearing. “To me, this is the seminal event. While it isn't 100% adopted everywhere yet, it is fundamentally such a game changer.”

Turning the conversation to regulation, Small asked Adrian Smyth, head of innovation and strategic partnerships, NatWest, about the role regulation should play in promoting innovation.

While banks like regulation, Smyth noted that “we're missing the benefits of customers is where it goes appropriate above that.” He explained that open banking in the UK has been a great example of where banks were directed to open up via those API's to accounting details, payment details, service details etc. “What you then see is the innovation above that, which is where they've taken the opportunity to drive different opportunities for customers in the payment acceptance space and the payment disbursement space.” “There is a clear view of where banks can just be compliant but need to look at the opportunity to see what you can do better for your customers.”

Beyond these examples, Smyth added that regulation around keeping customers safe and secure with Confirmation of Payee to counter push payment scams has been hugely beneficial in terms of leveraging the

open banking regulation, standards and standardisation, and enabling the industry to respond fairly quickly to that threat.

When it comes to considering how this regulation should be rolled out, Christian Schafer, head of global payments, corporate cash manager, Deutsche Bank, commented that the European Commission, has been focused on coming up with a clear, stakeholder-based strategy which sets a clear picture for the next couple of years.

“When it comes to the particular issuance of new regulation, I would feel that a stakeholder-based approach is key, and this approach would take some time. Also, I will say that the EU is fast enough in terms of coming up with new regulation or regulatory change. I also feel, particularly in Europe, the approach of stakeholder engagement and listening to the different interests and coming up with good solutions has gone very well - especially given the complexity we have in Europe.”



Technology that delivers – Cloud technology, data, Artificial intelligence and deep machine learning



How can cloud services and artificial intelligence help PSPs turn their big data into customer insights, and thereby enhance service provisions? How can predictive analytics aid in the fight against financial crime?

These are just some of the questions that came up for major discussion at an industry event. Moderator Kate Pohl, managing director, Senior Advisory, explored with panel speakers Sean Devaney, vice president strategy for banking and financial markets, CGI; Adrian Lovney, CEO, New Payments Platform Australia; Martin Moeller, senior financial services transformation executive, Microsoft; and Jan Pilbauer, CEO, BankservAfrica.

Kicking off proceedings, Devaney commented that cloud technology should be about helping businesses deliver on their core aims, and drive value for shareholders: "Cloud means spending less time on running IT," he said. "Big organisations – especially banks – often have bigger IT shops than most IT suppliers. So, leveraging technology infrastructures to support business aims can only be a good thing. Innovations like robotic process automation (RPA) and artificial intelligence (AI) can free up staff time, enabling them to focus on better and more interesting jobs. Cloud can remove that administrative and bureaucratic element."

Moeller also believes in the efficiency-driving potential of cloud services: "The idea of cloud is to make advanced technology a commodity, so that banks can focus on innovation. For instance, technology has made it cheaper and quicker to build a new bank from the ground up – this is something we have always assumed takes a considerable amount of time, whether it be via the greenfield or brownfield route. Once again, cloud has shifted the game."

Moeller's case study is yet another proof point of cloud technology making processes more streamlined. What's more, thanks to the support of cloud technology, Flowe is already fully data and AI-driven. "Even incumbent banks still struggle to do this," noted Moeller.

Lovney, however, was more cautious in his appraisal of cloud technology: "Yes, cloud makes processes easier and cheaper, but when you're running payments infrastructure projects from end-to-end, does agility really make things faster? We want things to develop in a sequential way. Stakeholders in the ecosystem need to get to certain milestones at the same time.

Agility makes it difficult to synchronise these efforts. While cloud is great for managing data, reinforcing security measures, and streamlining certain areas of DevOps, payments infrastructures are best built in a waterfall manner."

Indeed, many central payments infrastructures are yet to take advantage of cloud technology. Pilbauer, unlike Lovney, feels this is a missed opportunity: **"Cloud has the potential to enable us to be much faster.** But look around – how many national payments systems and solutions are actually running in the cloud? If they are running in the cloud, are they actually leveraging native cloud technology to deliver value, or have they simply moved into the cloud?"

Pilbauer likened the mindset toward cloud technology to handing the fastest axeman in a felling company a chainsaw. The axeman's felling speed drops, and after investigation, headquarters realises he has not turned the chainsaw on. "Like the axeman, we need to start the engine," he said.

Clearly, financial players need to focus more deeply on the implications of cloud, as opposed to just its implementation. So what exact benefits does cloud technology offer?

Moeller resonated with Pilbauer's analogy: **"Cloud spans many different areas in financial services," he said. "For me, data, and the insights you get out of it, is key. Having data alone is like having a barrel of oil in the garage. It's really only valuable if you have an engine to bring horsepower to the road." Indeed, data should be harnessed by cloud technology to create efficiencies, fight fraud, and upscale customer service.**

"We are working with shifting goal posts," continued Moeller. "When we talk about breaking down silos, we are often referring to banks, insurers, or PSPs, bringing together the vast amounts of structured data they possess internally. Five years ago, you'd have been in the middle of the pack if you'd managed that. You were at the top of the pack if you could augment that with unstructured data. Our industry is still moving along this line, but in reality, **the true goalpost is breaking down even more silos by augmenting internal data with external data.**"

Yet, this may be one area where technology does not always solve the problem, contested Pilbauer. "Technology makes it possible to get more data – take ISO 20022, for instance," he responded. "But, we are struggling with bigger questions that need to be answered first, and technology cannot help us with them. Who owns the data? Who should be allowed to work with the data? How do we protect consumers' privacy?"

These are the challenges we need to overcome now."

Moeller agreed: "Technology is always just an enabler," he said. "If you want to be truly customer driven, you need to be data driven. Firms need to go above and beyond to really serve customers' needs."

Devaney pointed to the need to open access to data – particularly in the fraud space, where information sharing is lacking. "Banks don't see much benefit in this, because they are already working with a large number of transactions," he said. "But, many smaller organisations don't have access to that volume of data. Opening the space up – and allowing smaller organisations to operate on the same level playing field as large banks – will really help the industry as a whole serve and protect consumers."

Naturally, industry-wide data sharing will facilitate the growth and innovation we all expect from open banking, and regulators will be pivotal in encouraging data sharing going forward.

Diving deeper into the theme of financial crime, Moeller pointed out that further AI adoption is necessary for banks to continue "stepping up" to the high volume and sophistication of cyber criminals. "Some are so sophisticated, they're outplaying many banks," he warned. **The panel agreed that AI and machine learning technologies are a sure-fire way to tackle this rising tide of financial crime with speed, rigour, and cost effectiveness – particularly when compared to more traditional, manual methods.**



Proximity payments

As the popularity of card and mobile-based proximity payments has increased, so has the POS infrastructure. **Between 2015 and 2019, the POS installed base grew from 47 million to 137 million units, and should keep expanding as Covid-19 pandemic bolstered contactless transactions.** In particular the percentage of mobile POS (mPOS) among total payment terminals shipments rose from 21% to 48%, with a six-fold increase in the number of units deployed per year. And by 2025, the annual volume of mPOS shipments is expected to grow by 50%, to reach 93 million units. **These rising trends in the mPOS infrastructure indicate the rapid migration towards a cashless system in the near future as well as the emergence of new in-person payment experiences.**

Emerging Use Cases -Mobile first world

While at the table payments at restaurants and bars have been around for quite some time, or more recently in-aisle payments, to shorten the checkout queues in-store, many merchants are moving away from traditional - heavy, non-portable payment terminals with small screens, to provide their customers with a smooth checkout experience. Additionally, many small actors, who heavily relied on cash, such as taxi drivers, doctors, solicitors, etc, are also adapting to the new cashless society often using lightweight POS. Other areas involving mobile payments include click-and-collect, home delivery services, cashless events and on-the-spot fines.

There's a myriad of examples of how the cashless transition is taking place in the most unconventional and fascinating way. In 2019, a sports event at Mercedes Benz Stadium in the USA went completely cashless, resulting in savings of \$350,000 and significantly shorter queues at refreshment kiosks. In London, staff at fashion retailer Zara carry iPads that accept payments, thus creating mobile checkouts throughout the store. At Blue Cross, a UK animal welfare charity incorporated

'Tap Dogs' wearing special fundraising jackets to accept donations.

Even tech giants are actively driving this transition through NFC wallets such as Apple Pay and Google Pay, and merchant-presented QR codes such as AliPay and WeChat. Some other notable examples include PIX, a government-backed QR code-based instant payment scheme in Brazil, or BHIM in India. Mobile wallets are accelerating in adoption.



The Pioneers driving the Innovation



Thanks to these actors leading the innovation, the payment industry is now able to mirror the latest consumption trends, hence providing the best possible payment experience to the merchants as well as the customers.

Mobile wallets

More than one in two people will use a mobile wallet by 2025, as cash is increasingly displaced, finds a study from mobile payments company, Boku. **This equates to an increase of 2.7 to 4.8 billion wallets in use globally in the next four years.** There are many different types of mobile wallet ranging from dematerialised card containers such as Apple Pay to stored e-money accounts such as PayPal mobile, to telco wallets to crypto wallets.

Although mobile wallets are less obvious in Europe it is easy to see how Google Pay, Apple Pay etc will supersede plastic for card transactions; but look to Asia and Latin America for how the future will look with mass adoption of mobile payments. Following are global leaders.

Alipay 870m mobile users, Wechat 800m, Paytm 450m, Apple Pay 383m.

Leading the way in this transition is Southeast Asia, with a 25.5% compound annual growth rate (CAGR) and an expected overall growth of 311% in the next five years. The rise in e-commerce, and the dominance of super-apps like Grab and Gojek – particularly in markets such as the Philippines and Indonesia – are just some of the drivers of wallet adoption in this region.

Following closely behind – in areas where wallets are offering access to financial services for the underbanked – is Latin America, and Africa and the Middle East. These two regions are due to expand their usage of mobile wallets by 166% and 147%, respectively, by 2025. In Africa and the Middle East, adoption is being catalysed by the increasing usage of mobile money services, such as M-Pesa, which are offering improved access to e-commerce.

In Western Europe and North America, however, wallet uptake is moving more slowly – at 65% and 50% by 2025, respectively. This is a result of high levels of card penetration and contactless usage at physical points of sale. Nevertheless, markets such as the UK are seeing a spike in card-based mobile wallets, due to the adoption of contactless spurred on by the pandemic. Thanks to shifts like



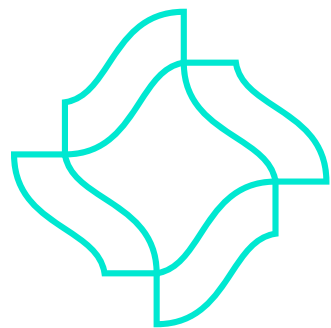
this, Boku predicts that three quarters of Europeans will be using a digital wallet by 2025.

"We are witnessing a paradigm shift in payments driven by mobile wallets," says Jon Prideaux, CEO at Boku. **"Mobile wallets have lowered the barrier to making digital payments and ushered billions of new consumers into e-commerce. These consumers are not in North America or Western Europe, they are in emerging markets, and while they don't have credit cards, they overwhelmingly have mobile wallets.** For global merchants, mobile payment acceptance is not about accepting one type of mobile wallet or another, but ensuring that consumers in every market will have the required selection on payment types in order to monetize transactions."

Boku's report follows an eventful week for the mobile wallets sector in Europe, with the merger of Vipps, MobilePay and Pivo as they look to compete against the likes of Alipay, Apple and Google.

Nordic regulators demonstrate leadership in matching pace between regulation and payments modernisation

P27 initiative presents a situation where the Nordics' biggest banks have come together and tried to build an innovative framework. Navigating this landscape has been no utopia, and during this process it has been obligated to consider a future regulatory regime and account for legacy systems and basic infrastructure. Paul Thomalla, global head of payments at Finastra, argued that rather than regulation following innovation, it should be the other way around. Modernisation may turn regulation on its head. lot of work still to be done, creating significant market opportunities for companies like RS Software.



Starting in 2010, RS Software invested in building RS Innovation Lab and RS School of Payments. One of the primary reasons was to **prepare the organization for the decades to follow**. The research identified the need for capabilities to build a mobile-first, API-first, and cloud-first world. Importantly, the vision was to respond quickly to global innovations and regulatory driven changes that followed, like faster payments, open banking, PSD2, GDPR, bill payments network, multi-channel, and fraud and risk management. Essentially, creation of a new world order in payments.

During the last 5 years RS Software has invested a significant amount in building suite of products that comply with international standards across the space of Real-time Payments, Electronic Invoice and Bill Presentment and Payment, Acquiring Platform both for in-premise and cloud-native deployment, Fraud and Risk Management platform with capability for deterministic rule-based detection as well as AI/ML/DL based probabilistic detection and much more.

Success building hope - strategy and investments coming together

Some of these products have been deployed in building a leadership payment infrastructure that is transforming the lives of a billion+ people, and that country is India. Some products are deployed to help banks and FIs to connect to the payment rails; while other products are powering businesses to launch their services with faster time-to-market. Please read the case studies in this report, in the section RS Software Continuing to serve the nation in these critical times of Volatility, Uncertainty, Complexity and Ambiguity (VUCA). These products are now creating global opportunities, and the most recent success has come where RS Software has designed the real-time payments system for a leading developed world country. This is testimony to the company achieving success on two fronts:

- * Winning opportunity in developed world against global leaders
- * Breakthrough in working with global partnerships

The product suite of RS Software is designed to achieve the following:

- * Modernization of national payment infrastructure
- * Modernization of banking infrastructure and building value added capabilities
- * Modernization of acceptance payment infrastructure

The company has demonstrated success in winning both in developing and developed world, and is now engaging in strategic partnerships to expand its global reach on one hand, and at the same time addressing the risk management concerns of central banks implementing national level payment infrastructure. CEOs of major global payment companies recognize that this is a multi-decade opportunity to build a new world of digital payments. China is the first country in the world where Ecommerce/digital retail dominates over physical retail. This is where modernization of acceptance infrastructure is needed.

RS Software lays foundation for modernization of developed world payment infrastructure

The RS iFinSwitch™ and RS MerchantEdge™ power a US acquirer that specializes in G2C space. RS Test2Pay™(3DS2), a next generation security verification product is in use for the largest payment processor in Japan. RS BillAbhi™ the Electronic Invoice and Bill Presentment and Payment product is competing with global leaders in yet another developed world region, and that is Nordics.

RS product suite is seeing success across the continents of North America, Asia-Japan, Europe-Nordics, and India. These are initial testimonies, building hope and igniting passion to achieve success in this multi-decade opportunity.

RS Software first company globally to build multi-rail payment system

Historically, payment infrastructures were built powered by technologies suitable for single payment rail. Specific technologies and communication networks were chosen to implement the services – be it card based payments, or wire transfer, or cross-border, or electronic cheques, etc. all were specialized services. Banks and FIs had to have specific connectors for each of the services they subscribe to. It is very recently that ubiquitous use of the internet, adoption of standards globally, availability of hyper-personal mobile devices, availability of open-source rugged frameworks, and the like have made it possible to build multi-rail payment systems, where the service differentiations exist, but the access to the services are unified. Hence, banks and FIs will use a single connector to avail different services reducing the overhead for the banks and FIs thus driving down costs. **This is a significant breakthrough to enhance productivity, resulting in significant financial savings.**

RS Software has demonstrated leadership globally to build multi-rail payment system

RS Software exclusively built the UPI (Unified Payment Interface) rail for Real-time Payments (RTP) for India. This has been recognized globally as a leadership product, and the first of its kind. Recently RS Software earned another first by building multi-rail capability for the UPI rail to connect to other rails like IMPS and AEPS (biometric based payments), thus making UPI a true Unified Payment Interface. This multi-rail has significantly reduced the overhead for the banks in India, so critical and important in a developing country like India in particular. While global players are talking about implementing multi-rail system, RS Software has already built and made it functional.

RS Software has built yet another multi-rail support, and this one is in the area of fraud and risk management for India, for all the digital payment channels in the nation (8 online channels and 1 offline channel). There is a single interface which is invoked by any of the multiple payment rails that are run centrally, and the platform can detect the rail, process the message, get it scored for fraud and return the score appropriately to the calling system. The advantage of having this is beyond cost saving. The system applies intelligence on the data associated with payments across the payment rails; this capability does not exist in any other implementation globally today.

Note:

The difference between omni-channel and multi-rail is that the multi-rail is a feature up in the flow, close to the hub, while omni-channel is an implementation in the downstream. Having it upstream streamlines the access and flows and hence reduces total cost of ownership significantly. Omni-channel helps end-points to connect to the payment service provider (PSP) infrastructure – which is to increase convenience for end-customers.

Should Nordics be learning payments innovation from India?

Blog article published in Finextra on January 19, 2021

India has completely renewed its digital payments infrastructure and created a model which the rest of the world - including the Nordic - could and should learn from when designing the payment services for the future.



The Nordic countries are the most digitised in the world. This has put the Nordic countries in a first-mover position especially when it comes to financial and payment services (among other digital services like e.g. eID). But the first-mover position has also meant that most of the digital payment systems are built on infrastructure that would today be considered legacy systems and long overdue for renewal. This is especially true when it comes to the dominating bill-payment systems currently in operation across the Nordic countries. Our first-mover position should not prevent us from learning from cutting-edge innovation in other geographies, especially when we look to replace our current legacy.

Another factor that shapes the future of payments is the increasing regulation on financial services in recent years. In Europe, PSD2 (the Revised Payment Services Directive) has mandated banks to open their systems to third parties, and the IFR (Interchange Fee Regulation) reduced the transaction-driven revenue from card payments significantly. And most recently the EU's new Retail Payments Strategy is putting account-based real-time payments front and centre. These and similar regulatory initiatives in other countries have forced banks to revisit their strategies for payments while at the same time creating opportunities for banks to re-invent and recapture parts of the payments ecosystem through new and improved bill-payment and other account-based payment solutions.

This new paradigm for payments and the increased strategic focus on payments among the banks is also what has driven a group of the largest Nordic banks to set up the P27 initiative to fundamentally

rebuild the inter-bank payments infrastructure and replace the many legacy systems in the different countries with one common real-time, cross-currency and cross-border system. The P27 Nordic Payments Platform (NPP) project is well underway to deliver the real-time payments platform, and while this in itself will be a major step forward, now it is time for the Nordic banks to make strategic choices as to how to leverage this new infrastructure, and become even stronger in the area of payments. This is especially critical since revenues from payments represent ~ 33% of European banks' total revenue. Nordic banks must consider the strategic and business opportunities that this new platform can enable for their leadership, especially in the area of bill payments, which is key to the banks' overall customer relationship strategy.

To seek inspiration and benefit from the learnings of others, the Nordic banks should have a look at some of the most interesting developments in the payments industry across the globe. While we have, to a certain degree, rested on our "digital laurels", a country like India has leapfrogged generations of legacy payment systems and successfully implemented a full-fledged next-generation digital payments infrastructure with a strong foundation in three major platforms, which together today process 60+ Billion annual transactions and growing in double digits. The three platforms are:

- Real-time payments – Unified Payment Interface (UPI) platform
- Bill payments – Bharat Bill Payments System (BBPS) platform
- Fraud and risk – Enterprise Fraud and Risk Management (EFRM) platform

Payments innovation in India

I recently had the pleasure of learning more about how India's digital payment infrastructure has earned high appreciation from the global community, and how in a very short time it has demonstrated success in delivering results to transform the lives of a billion+ people. I spoke to Raj Jain, CEO of RS Software, the company that has exclusively built the three platforms for National Payments Corporation of India (NPCI). My conversation with Raj Jain left me thinking about how we in the Nordic financial services industry can learn from the Indian model and the company behind that built it.

When discussing the possible learnings from his company's journey to build UPI for India and enable the Indian banks to benefit from innovative overlay services when connecting to the real-time payments rails, Raj Jain pointed out that he believes real-time payments is not an end in itself, but rather an opportunity for banks to deliver innovative products and services in both consumer and corporate payments, and thereby transforming the customer relationship paradigm and accelerating digital commerce.

While the scale of UPI in itself is very impressive - the underlying architecture is even more interesting from a payments strategy perspective, as the entire setup has been designed with an outside-in approach that factors in the needs of all the user groups - including banks, corporates and even end-consumers. UPI is built from the ground up applying an open and federated design, which is a significant improvement from the standard and more siloed design of the legacy bill payment systems as the ones we know in the Nordics.

The principles and open architecture of India's real-time payments platform UPI are already making headlines in the payments industry. The international tech giants Google, Amazon, Alibaba and Facebook have all taken great interest in UPI and benefited from its design. Google has very successfully used UPI to shift e-commerce payments in India from card-based to account-based. Their success in India has led to Google directly encouraging the United States' Fed to adopt a similar approach when implementing the next generation of payments infrastructure in the US.

The current bill payment solutions active in most countries are owned and operated by third parties. They have provided banks with good revenues, but the solutions have not been to the benefits of the banks' corporate clients who have suffered from the lack of innovation and a related lack of viable alternatives. Electronic bill payments, that is estimated in the US alone at a market size of \$ 4+ Trillion, is transforming itself to be best served with platform architecture. Platforms like marketplaces have innate characteristics to enhance the user experience, improve efficiencies of scale, provide comprehensive fraud and risk management, and trigger innovation through secure yet open interfaces where the ecosystem can contribute. The bill payment platform is no exception. This design and architecture allow the participating banks to focus on developing and strengthening the relationship to their corporate clients by delivering value-driven bill payment solutions tailored to the clients' needs and with the banks in full control of the relationship with the corporate clients rather than a third party with its own commercial agenda.



With account-based payments moving up the strategic ladder, and with an ambitious infrastructure initiative like P27, the Nordic banks can learn how services like bill payments can be reimagined and implemented in a way that delivers value to banks, corporates and consumers alike. They now have a real opportunity to re-engage actively and directly in bill payments, thereby strengthening their relationships with their corporate clients and in the process building completely new transaction-based revenue streams. The banks in the Nordics should seize this opportunity to ensure and strengthen their future role in payments - both retail and bill payments. The alternative will be a continuation of the current paradigm, where most banks have left much of the payments infrastructure and customer dialogues to global payment schemes, consequently leaving the banks with rapidly reducing margins and a higher risk of disintermediation.

The creation of P27 is the most significant development for the Nordic countries to maintain and enhance its leadership in digital payments. From what it appears, P27 is committed to ensuring that the Nordic banks have strategic control allowing the banks the opportunity to pursue a bolder and more ambitious payments strategy and lead from the front in value-added services, starting with bill payments.

(Source: <https://www.finextra.com/blogposting/19775/is-it-time-for-the-nordics-to-learn-payments-innovation-from-india>)