

# Fit for the future: re-platforming payments

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# Introduction



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# Introduction

**Banks must manage their technology environment against a backdrop of near-constant change. This in itself is nothing new. However, the pace of change is quickening and its impact becoming more significant.**

Every bank faces external challenges, such as the move to open banking and cloud-based services. Plus the need to stay competitive amid changing expectations from customers, colleagues, regulators and policymakers among others. Internally, there are mergers and acquisitions, half-implemented projects and decades of piecemeal upgrades across multiple systems.

Doing a spring clean, clearing the decks and starting over is not always possible. In any case, it may not even be necessary. Nevertheless, there is acknowledgement that no bank can run a modern payment infrastructure on 20-30-year-old systems.

In this white paper, we examine the decision-making process around when to transition away from existing back-office banking and payment systems. We offer recommendations and actionable insights on what to do, who to involve and how to re-platform. This includes key learnings based on our extensive experience working with clients worldwide on re-platforming assignments.



# Why re-platform?



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# Why re-platform?

**Legacy IT infrastructure is a practical reality for many banks. Incumbents know that their technology, some of it 30+ years old, is hindering their ability to grow, bring new products to market quickly and support regulatory change.**

The main three drivers for digital transformation conform to the Olympic motto: faster, higher, stronger. Advances in technology are making everything faster. Customer expectations are higher and regulation stronger. As such, the gap between market demands and market capabilities is growing.

## Legacy versus modernity

As new entrants – FinTechs, non-banks and Big Tech companies – using the latest IT technology disrupt the market, incumbent banks risk falling behind. Cumbersome core banking systems or transaction processing solutions built in the 1970s and 1980s are simply no match for newer, cloud-based, modular systems.



## Re-platforming defined

Re-platforming means moving critical functions (e.g. account management, payments aggregation, payment card authorisation, clearing, settlement, fraud management) from older or end-of-life systems to new, modern ones. This can be done in a variety of ways, including a big-bang style 'rip and replace', which substitutes old systems for brand-new ones. Or via a phased implementation where new products or services run alongside older software until the latter is gradually phased out.

# Why re-platform?

Legacy banking systems were developed to allow banks to manage information across the enterprise. As banks grew and as the products they offered grew, so did the number and complexity of their systems. Integration between the different systems was usually point-to-point. Each system had its own communications protocol, so they were not unified.

Additionally, core systems have been continuously and heavily modified over the last 30 years. Duplicate processes, layers of extra functionality and lack of adequate documentation have compounded the complexity behind-the-scenes. Maintaining these point-to-point connections became complex, costly and time-consuming. This is still the case today – perhaps even more so. Unsurprisingly around 90 percent of bank IT spend goes on maintaining legacy systems, according to industry insiders.

FinTech companies do not have a technology legacy. They start from a green field, unencumbered by technology, budget or mindset constraints. Thus they can grow and adapt more easily to the current and future demands of customers and regulators. Banks can emulate this strategy by casting aside their legacy and building a new future-proofed IT infrastructure. The future will be not so much a technology arms race between FinTechs and banks. Rather technology will become a ‘ticket to the game’. The future is open, instant and networked, among other things. No organisation can hope to power their future on a 30-year-old mainframe.

After they have stepped away from their

legacy systems, banks can also step away from their legacy processes and thinking. The huge opportunity is migrating staff and business processes to improve the end-customer experience without the technical constraints of the past. If an organisation sees re-platforming as merely an exercise to make existing processes better or faster, they are squandering an opportunity.

One way of how to achieve that is creating ‘internal start-up’ teams who are shielded from legacy process of operating and decision making. If needed – such teams can be staffed by completely new people coming from outside the organisation to bring a fresh perspectives. An alternative way is to partner with a nimble fin-tech company for that same purpose – bring in new ideas and concepts. A fin-tech will benefit from the scale and reach of an incumbent organization, while the organization can skip the pains of building a completely new team and having to wait for the first success they produce – a win – win approach.

## Open and instant

The battleground for new customers will be fought on the front-end. Every company needs compelling customer propositions to attract, retain and deepen customer relationships. However, it is the back-end systems that power front-end capabilities. Regulatory change in Europe, particularly around the PSD2 and open banking, will have widespread implications for front- and back-end services.

# Why re-platform?

The need to re-platform is as much about the capability of core systems as capacity. The basic movement of almost everything – data, physical inventory, service – is becoming faster. Banking and payments is not immune to this trend. Where they were batched, now transactions are sent individually. Where clearing and settlement happened in days, now funds are available to the beneficiary in seconds.

The future of financial services will run on instant payment rails. Yet banks' existing mainframe systems may not be able to support a faster future. Such systems may struggle with 24x7x365 availability, online processing and the fast response times required. There are also issues around system resilience and robustness.

Banks may add more middleware and sleek, customer-facing front-end interfaces. But if the back-end core systems are stuck in the last century, this puts huge pressure on legacy systems, which is unsustainable over the medium- to long-term.

The internal barriers to re-platforming are as much managerial, cultural and structural as they are technical. If they are honest, most banks acknowledge that re-platforming is the way to address legacy limitations and become future-fit. This it is less about why re-platform, more when and how to do so.

## Instant payments

Instant payments (also known as real-time payments) are electronic retail payment solutions that are available 24/7/365. They result in the immediate or close-to-immediate interbank clearing of the transaction and crediting of the payee's account with confirmation to the payer within seconds.

Moving from a batch-based to an instant environment means much more than the same old payments done faster. There are opportunities to create new value-added products and services, and re-configure up- and down-stream processes for greater efficiencies.

# When to re-platform



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# When to re-platform

**When it comes to core systems and payment infrastructure, every bank is subject to the law of diminishing returns. Eventually the profits or benefits gained will be less than the time, effort and cost invested.**

Banks cannot continue to maintain core systems indefinitely. At a certain point, this will cost more than if they were to be replaced. Smart, forward-thinking banks do not wait until they are approaching or have passed their breaking point to re-platform. They plan for and pre-empt it.

An experienced technology partner can help banks with this process. They can help build the business case to counter internal objections that re-platforming is too expensive and/or too difficult.

A wholesale 'rip and replace' of systems may not be necessary. A partner can offer advice on the approach to mitigate the risks of replacing core systems. Guidance on prioritising quick wins may also help defray the costs of re-platforming through savings and greater efficiencies.

Specifically, a technology partner can help:

- **Gather input data**

This is usually a mixture of qualitative and quantitative data from key stakeholder interviews, schematics of internal IT systems and current and projected costings (operational, licensing, staff, depreciation etc.).

- **Evaluate the options**

There is no single, best way to re-platform. There will always be options, each with its own pros, cons and dependencies to evaluate.

- **Build the business case**

This includes capturing the benefits of possible new business long-term and solving short-term problems and, of course, striking the right balance between the two. The bank's IT and business specialists need to work together here. This will ensure cost savings from operating new, modern platforms as well as revenue from new business opportunities are accounted for.

- **Sell in the decision**

This includes internal sell-in within the organisation and/or across external associations and stakeholders, as obtaining buy-in is critical.

- **Prepare the project plan**

This is informed by the above and in turn informs the scope, vendor selection, schedule, costs, resources, risks, management methodology etc.

## Typical solution areas where modernization is often sought:

- Core banking
- Payment systems (incl. card and merchant management)
- Lending solutions

# A Future Proof Retail Payment Platform for Growth



## CHANNELS

E-commerce,  
Mobile, ATM,  
POS, IoT

## FUNCTIONALITY

Secure authentication,  
Account management,  
Data analytics and machine  
learning, Clearing and  
settlement, Dispute and  
Fraud management, Data  
Lakes, Instant Payments,  
Open API

Current and Future channel  
support, Able to scale to with a  
high volume business, Support  
latest technical standards,  
Adopt market requirements,  
Integration with other systems,  
Supports local and international  
regulation, Flexible business  
process management and  
control, Cost reduction and  
increased efficiency

## BENEFITS

## ECOSYSTEM

GAFAs, Open  
Banking, Credit &  
Leasing, National  
Infrastructures,  
Fintech,  
International Card  
Schemes

# How to re-platform



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# How to re-platform

**There is no one course of action or route to the future in a re-platforming project. A good re-platforming partner can help define a bank's strategic and tactical approach, ensuring that they complement one another. They can advise on different approaches and the inevitable trade-offs on time, cost and quality.**

## Pre-study

Each bank plans and executes its digital transformation strategy differently. Each also starts at a different place and has a different history, culture and legacy. When it comes to core technology, two banks may use the same back-end software and systems. Yet the way they configure and maintain them may differ.

The main purpose of a pre-study is to analyse the current state to inform how to re-platform. This involves analysing current systems and business flows. A chosen re-platforming partner will be able to facilitate workshops with different business units. These will capture input from the different teams responsible for different systems.

Certain rules and processes implemented in legacy solutions may not always be obvious. This is compounded if the people who implemented them are no longer working at the company. For larger banks, the pre-study phase could take up to six months or more. For smaller banks, it could be a 1-2 month exercise followed by project execution.

## Strategy

By their very nature, strategies are forward-looking. They anticipate what type of business will be possible in the future. And where the bank wants to be in three, five or ten years' time. A good partner can help to define the strategy. They can warn against being too cautious, if the bank merely sees re-platforming as the same processes done better or faster. And conversely against being not cautious enough, if appropriate risk controls are not in place.

### Aktia completes first core banking replacement in the Nordics

In 2013, Finnish bank Aktia decided to change their banking system to deliver more cost-efficient processes and annual IT savings of around €5 million. For the end-customer, the re-platforming would mean faster service across all channels. After deciding on a big bang go-live approach, the entire core system was migrated and put into production over one weekend. Tieto was the partner chosen to perform the complex migration of all customers, loans, credits, guarantees etc. to the new platform.

# How to re-platform

There is also the need to consider regulation as part of the strategic approach. There was a regulatory alert every 12 minutes in 2015, according to Thomson Reuters. The pace of regulatory change is growing and showing no signs of let-up. Around \$80 billion is spent globally on governance, risk and compliance each year, and this is set to reach \$120 billion in the next five years, according to FinTech research firm Let's Talk Payments. Greater technological capabilities are required to support data protection, privacy rules, compliance, auditing, anti-money laundering and know-your-customer provisions.

The main reason for undertaking a re-platforming project is to solve problems posed by legacy systems. A partial solution may involve wrapping legacy applications and leveraging legacy data on to the desktop through some form of federated database system or data warehouse. However, this may not go far enough in helping the bank to become agile.



One of the most important things about re-platforming is the change in company mindset that it brings about. Something so fundamental – something that changes business culture, models, processes and how a company operates – must be treated as a company-wide change management project.

The strategy helps determine the choice of long-term re-platforming partner. Such as partner should have experience of negotiating with and influencing at all levels.

## First Investment Bank migrates legacy payment card switch

First Investment Bank (Fibank) is the biggest bank with Bulgarian capital, the second largest ATM acquirer and the third largest by cards issued. For about seven years, the bank's card business operations were split between two vendors. Fibank wanted to migrate these to a single, in-house platform to reduce transaction processing costs and increase speed-to-market for new services. Given the multiple vendor specifications and approaches behind-the-scenes, the main challenge was to define the best method for a seamless migrating. Tieto accomplished the project in 14 months, which included a three-month migration period and two-and-a-half-month card scheme end-of-year freeze.

# How to re-platform

This is in addition to experience of managing complex systems and multi-stakeholder projects.

## Migration plan

The migration plan is how the re-platforming will be executed. Naturally, this should include immediate, known priorities, such as new functionality required by regulation. It should also be future-proofed for as yet unknown requirements.

Although legacy solution migration is a major area of research, most methods tend to fall by the wayside. Either they are so general that they omit many of the specifics, or they are too complex to be applied in practice. There are generally only a handful of migration methods. These include a step-by-step migration, full one-time migration (big bang), or phased migration with systems running in parallel prior to the legacy systems being phased out.

The main issues to be addressed during the transition to a new platform are:

- Integrations
- Business processes and logic
- Staff training
- Data migration
- Regulatory requirements

In general terms, determining user requirements for the migration and the target solution are the most important. The next stage would be preparing the target hardware system. In the case of a card payment system migration, the PCI DSS (payment card industry data security standard) environment must be deployed and the respective software installed, probably at this stage. With cloud-based platforms, the provisioning of the respective hardware and software would happen at this stage.

## Co-operative Bank consolidates multiple payment systems into one

The Co-operative Bank of Kenya is one of the largest Kenyan banks serving the needs of co-operative societies, unions, individuals, small businesses, Government & public sector and institutions. Co-operative Bank needed to ensure and improve operational efficiency to its 150+ shareholders, issuing small numbers of cards by migrating to one card management system.

Within eight months 150 member banks went online, connecting to its core systems and allowing them to issue VISA credit and debit cards via a single switch and as a result the bank has been able to grow its business by 60% in a year without additional staff.

# How to re-platform

It is then necessary to understand the specific of the legacy solution. This includes the interfaces and applications to identify redundancies and the functionality of the new build. It also includes legacy data flows to identify redundancies as well as the data to be migrated. Business processes and how they are performed should be analysed. This is to find equivalents or improvements within the new solution and/or to map any gaps.

Focus and prioritisation can help solve critical issues and secure quick wins, before moving forward with the greater migration. Successful companies may generate more savings or revenues than are needed to fund a transformation. An experienced re-platforming partner should be able to provide guidance on defraying costs as part of a migration plan.

## Five secrets to a successful core system replacement

- 1.** Detailed pre-study and scoping leads to early and continuous delivery. It also helps avoid things being discovered too late.
- 2.** True collaboration between all dedicated stakeholders with no egos or finger-pointing. Strong project organisation and communication between the different teams. Clear project governance, escalation and decision-making structure on all sides.
- 3.** Prioritisation. Never lost sight of the business objectives to be always driving development forward.
- 4.** Testing done early and after every delivery to reduce the risk and effort in the final acceptance stages.
- 5.** Constantly adapt to change instead of fighting it together with a customer who sees the benefits of a core system replacement and commits wholeheartedly to it.

## Local Tapiola created Nippu – a agile unit within the company

Local Tapiola enabled a new approach to its current business model and allowed the Finnish finance and wellbeing services provider and financial services provider to evolve with a fully developed digital insurance company Nippu. Local Tapiola combined the company's heritage and market strength with an agile unit within its existing business framework.

# Recommendations and actionable insights



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# Recommendations and actionable insights

**Learning from mistakes is one of life's lessons – luxuries even. Yet in business when projects have to be delivered on budget and on time, it is not always possible or desirable to make mistakes in order to learn.**

At Tieto, we believe that there is no substitute for knowledge and experience. We help our clients learn from their mistakes. But our experience and proven methodologies also help them short-cut mistakes to learn from ours and other people's.

This is relevant to a re-platforming project because clients almost need to know the end before they start. Output is a function of input. Clearly, without having got to the end of a project, it is hard to have the learnings clients wish they had known at the start.

Here are ten recommendations when undertaking a re-platforming project, based on our experience working with clients worldwide.

## 1. Think big

A re-platforming initiative is no place for small thinkers. Thinking small becomes a self-fulfilling prophecy. Re-platforming has the potential to transform business models, processes and how the entire company works. This requires a change in company mindset – sometimes a big change.

So, re-platforming cannot be regarded as merely an IT project. It is a company-wide undertaking and should be managed as such. Secondly, it also needs senior management and board support. Often large-scale projects stall or fail through lack

of buy-in and cross-functional support at a senior level. Big thinking requires big top-down support.

## 2. Take appropriate risks

The best companies manage risks best. They take known, calculated risks. Moreover, companies with robust risk management structures and confidence in them invariably can be more enterprising and entrepreneurial, i.e. take more controlled risk.

Risk is good. If a company is too cautious and not taking enough risk, this could be as detrimental to its long-term health as taking too much risk. Each company must determine its risk appetite and what is appropriate. However, there is nothing wrong with being bold and taking big, bet-the-farm risks as long as the company knows that it is betting the farm – and has the appropriate mitigating risk controls in place.

## 3. Expand your ecosystem

Talk of 'ecosystems' was once confined to geography or biology textbooks. Now the term is common within the financial services sector to describe the network of organisations that compete and co-operate to deliver specific products or services. It has given rise to new 'co-petition' thinking, where companies both co-operate and compete.

# Recommendations and actionable insights

Nowadays no company can hope to go it alone and deliver everything itself. Smart outsourcing and collaborations are the order of the day. As business has moved from a linear supply chain to a plural existence as part of a network, consider how a platform or ecosystem strategy would leverage assets. Collaborate close and wide.

## 4. Be clear

Strategy informs direction and execution. It is important to be clear on both. So, take time to determine the strategy. At the systems level, understand the structures and workflows in the old systems before deciding on the new one. Be open-minded by inviting and listening before forming a view. Once the strategy has been decided, focus and prioritise work packages. Ensure that roles and responsibilities are crystal clear.

## 5. Iterate

It is not merely a question of failing fast, but learning fast. Encourage continual improvement, as no company gets it right straight away. Do not be afraid of encountering gaps or issues – they will always be there. Focus on resolving them as a team and building the right ‘fail and learn fast’ culture, rather than pointing fingers and attributing blame.

## 6. Practice good project management discipline

Good project management essentially balances time, cost and quality. The balance in a re-platforming initiative may

change as the project progresses. It may also vary between tasks and between organisations. However tried and tested the project management methodology, one company’s approach cannot and should not be replicated wholesale by every company.

Practicing good project management discipline means clearly articulating, documenting and communicating the aims of the project and how they will be achieved. This includes the project summary, scope, schedule, costs, resources, risks and controls, quality objectives, project management processes and so on. It sounds obvious but in our experience, this is so difficult to get right.

## 7. Build in regular reviews

In the case of a large-scale card issuing, acquiring or instant payments project, it could take 2-5 years to migrate all elements to a new platform. Build in regular reviews with internal and external stakeholders, vendors etc. to inform the response to new opportunities, threats or requirements.

## 8. Monetise data

The Big Data era is here and brings with it new business, profit-sharing and revenue models. This is only set to continue, so consider how data can be mined for insight and/or profit. New standards, such as ISO 20022 allows the passing of much richer additional data with each transaction – data that should be put to good use.

Timeliness is key to monetising data. The real-time world increasingly requires real-time data. It has moved from forecasting to

# Recommendations and actionable insights

'nowcasting'. Think about how quickly data can be accessed. Ideally, processes and outcomes should be measured with real-time data, as opposed to stale, historical data passed its useful-by date.

## 9. Budget

An unfortunate truth about large-scale technical projects is that they tend to run over budget. Getting the budget right has much to do with being clear on strategy, practicing good project management and having regular reviews (see above). However, also draw on the experience of your chosen re-platforming partner.

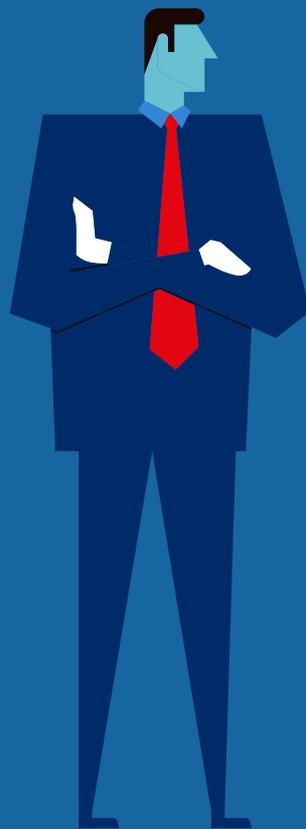
They can bring their learnings from other projects, similar in type and scope to yours. They may have data on core costs and can offer advice on tracking these against budget. They may even have developed modelling tools for calculating budget, payback etc.

## 10. Invest in people

Last but certainly not least, attract and retain the right people. A re-platforming initiative requires the right type of talent before, during and after the roll-out. Identify what problems you are solving for to inform when to hire and develop the talent pipeline.

When looking for a long-term re-platforming partner, consider their record in managing complex systems projects. Consider also the experience of their staff on the ground and their commitment to a particular region. A partner familiar with local culture and procurement processes, as well as experience of negotiating and influencing at the most senior level with multiple stakeholders is desirable.

# Summary



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# Summary

**Re-platforming is really a question of when not if. Advances in technology are making everything faster. Customer expectations are higher and regulation stronger. As such, the gap between market demands and market capabilities is growing.**

Banks realise that it is no longer cost-effective, efficient or even possible to compete with new entrants on last century's systems. Legacy systems have proven stable and served them well in the past. But the demands of customers, colleagues, regulators and policymakers mean that the future will be different.

Traditional banks are generally not well-placed to win a price fight. New, digital players can operate at a fraction of the cost, or can afford to burn through venture capital funding without turning a profit. Unless they act decisively, incumbents face disintermediation on both the front- and back-end. This happened in the mobile industry when MNOs became sucked into a downward spiral on price and became a 'dumb pipe' utility.

There is no one course of action or route to the future in a re-platforming project. A good re-platforming partner can help define a bank's strategic and tactical approach, ensuring that they complement one another. They can advise on different approaches and the inevitable trade-offs on time, cost and quality.

Selecting the right long-term partner with whom to undertake a re-platforming project is essential. There is no substitute for knowledge and experience. This makes the choice of a partner that has experience in managing similar complex, multi-stakeholder projects a pre-requisite. Banking and payments is strongly national. So, partners who can draw on what worked and did not work from other markets, and have good local and technical knowledge are desirable.

# About the research

## Payments Cards & Mobile

In business since 1994, Payments Cards & Mobile is an established hub for global payments news, research and consulting. We work with recognized industry experts to provide impartial, up-to-date and relevant information and analysis on every area of payments.

Personal relationships have been the hallmark of our business. We remain committed to working closely with our many long-standing customers and welcome new customers in producing quality business intelligence and providing a variety of ways in which you can consume this information. Our aim is to provide you with the highest quality data so you can position your business and key personalities in this increasingly competitive industry.

## PCM Research

Payments Cards and Mobile Research offers comprehensive, in-depth research into topics which are relevant and tailored to our clients' needs.

Our in-house research facility is available for short term projects. We specialize in M&A activity, market entry data, country report analysis and statistics. Research reports on banking, payments and mobile payments worldwide.

Topics range across the measurement of efficiency and performance, card and payment service related information, the role of brands in banking and the impact of non-banks such as retailers and FinTechs on the financial services and mobile financial services market.

Payments Cards and Mobile offers specific research on all aspects of banking, card payments, card-less digital payments, Issuing/ Acquiring, financial services and the mobile financial services market.

## Tieto

Tieto aims to capture the significant opportunities of the data-driven world and turn them into life-long value for people, businesses and society. We aim to be customers' first choice for business renewal by combining software and services capabilities with a strong drive for co-innovation and ecosystems.

Building on a strong Nordic heritage, Tieto combines global capabilities with local presence. Headquartered in Espoo, Finland, Tieto has around 14,000 experts in close to 20 countries. Turnover is approximately €1.5 billion. Tieto's shares are listed on NASDAQ in Helsinki and Stockholm

Leverage on our digital retail payments business development experience powering everyday payment transactions for more than 500 financial institutions in more than 30 countries globally.

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PAYMENTS INDUSTRY INTELLIGENCE

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