



Achieving Digital Transformation in European Payment Schemes

 **payconiq**

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Payments are the fuel that powers business and commerce. As the world's economy becomes ever more interconnected, competitive and accelerated, European payments schemes face new challenges in providing the coverage, speed and flexibility the market demands in order to keep up with the rest of the world.

The demands on payment schemes are changing rapidly due to new technology, customer expectations and evolving consumer dynamics, to the point that domestic payment schemes need to consider themselves as global-first. However, competing on a wider stage brings new requirements for their solutions.

In this increasingly competitive business landscape, domestic payment schemes must adapt their systems in order to stay relevant.

In this guide we'll explore:

- The key drivers of change in the payment market
- Why it's urgent that payment schemes update their systems
- Practical challenges seen by one of our clients from legacy systems
- The principal challenges involved in transformation
- How to pursue transformation strategically

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1 Demands on European payment schemes are changing

Payment schemes play a key role in connecting stakeholders in the financial ecosystem, connecting payment providers and banks with the necessary rails and capabilities to allow buyers/payers and sellers/payees to transact. Until now, many European payment systems have operated on a domestic level as joint ventures of banks and technology providers to facilitate local transactions.

However, as the commercial landscape becomes increasingly global, distributed and technology-driven, these providers face new pressures from consumers and businesses, both at home and abroad.



1. Digital-first payments are on the rise



While digital acceleration has been progressing for decades in nearly every sector, the global pandemic has accelerated progress for the payment industry. Consumers and businesses are embracing new channels and platforms as they diversify their transactions, driven by e-commerce adoption, mobile payments and new providers, with some countries even mandating that companies offer digital payment methods.



- The number of digital banking users in Europe has increased by 23% since the start of the pandemic as users embraced online services. This shift to online also opens the door to new entrants, such as fintech firms and big tech platforms – which are able to develop attractive and easy-to-use customer interfaces for their services.



- The European mobile payments market is anticipated to grow at a CAGR of 26.3% between 2022 – 2027 as retailers across the European region adopt mobile payment applications to accept and transfer payments.

In a digital-first market, payment providers need to be able to offer a seamless experience between channels, devices and platforms to meet modern users' expectations.

2. Payments are increasingly international



€718bn

European e-commerce in 2021
Ecommerce Europe

As supply chains, customer networks and workforces become distributed globally, payments need to keep up. Domestic payment schemes are now working on a broader scale, as consumers and businesses embrace global commercial opportunities.

Consumers will likely continue their embrace of international purchases too, with total European e-commerce growing to €718bn in 2021 – a growth rate of 13%. This is up from €633bn in 2020. In 2022, growth rates are forecast to continue their upward trend.


3. Alternative payment methods are gaining market share

20% predicted decline in proportion of card payments over the next 4 years
TrueLayer



In the modern world of payments, transactions increasingly go beyond debit and credit cards. Alternative payments are increasingly popular, with Buy-Now-Pay-Later, Digital Wallets and Bank Payments all predicted to play a greater role in online commerce. Payment schemes need to be able to adapt to this new landscape with flexible technology and integrations.

- Mobile wallet payments are predicted to account for 53% of e-commerce payments by 2025.
- The European BNPL market is set to grow to €300bn by 2025.



Now is the time for payment schemes to evolve

The technological transformation of the market has opened the door for new entrants, including fintechs, telecommunications companies, GAFA¹, BATX² and online retailers.

These businesses are able to rapidly add new services and update user experience in line with new expectations without lengthy transformation projects, growing quickly and increasing their market share. Banks and payment service providers are under pressure to keep up with these new challengers, but often end up limited by their existing infrastructure.

How is technology holding payment systems back?

The majority of payments systems were built over a decade ago, meaning they are now out of step with the needs of modern payments. Domestic payment schemes being developed, tested and rolled out in isolation in local markets has resulted in a highly fragmented landscape where each scheme runs with its own infrastructure, rails and rules.

We saw this in action with a recent client that relied on a network of individual connections between all Acquirers and Issuers.

¹ GAFA is an acronym for Google, Apple, Facebook and Amazon, the four largest American tech companies

² BATX is an acronym standing for Baidu, Alibaba, Tencent, and Xiaomi, the four biggest tech firms in China

- These complex, one-to-one connection systems required each connection to be treated as an individual unit. This type of payment network made it increasingly hard to introduce updates or add new members to the scheme, as it must be done on an individual basis.
- This means that in recent years, Issuers and Acquirers had to introduce fringe UX improvements via their own environments, such as webshops or bank apps, because any fundamental upgrade through the scheme itself depends on the ability of the slowest member to migrate.

In an era where users expect new functionality and flexible platforms, traditional players like this risk losing market share to other international schemes who are able to bring value-added services and continuously improve on the payment experience.

We saw these challenges in practice with one of our payment partners:

1. Mobile Integration: Over the last five years more users have moved to mobile payments, with in many markets 80% of users now working via mobile to confirm their payments, but the systems behind these transactions remain primarily web-based.

2. Reduced scalability: Their complex system architecture – based on one-to-one bank connections – meant any changes or innovation had to be implemented on a one-by-one basis. This limited scalability and innovation, and increased time-to-market for scheme changes.

3. Limited innovation: The network structure made it impossible to integrate value-add services for consumers and merchants, due to a lack of a centralised processing platform, which limits the ability to compete with dynamic, agile international players.



What do payment schemes need to compete?

Domestic payments schemes need help to expand beyond their domestic market, implementing strategic capabilities that can help them evolve progressively with their customers and market.

- 1.** Providing consumers with a trusted and recognisable payment solution for their whole payment journey, from early in the checkout process to later in the shopping process. E.g. a fast check-out solution or receipt storage after a purchase.
- 2.** Improving User eXperience (UX) to reduce friction and streamline the customer journey to just a few clicks, on par with best-in-class competing solutions –including intuitive, or implicit, issuer and account selection and Strong Customer Authentication (SCA).
- 3.** Introduce value-added services for all ecosystem parties to evolve service levels and adapt to changing consumer and business needs.

3 How to choose the right transformation partner

The challenges facing payment schemes present differently based on market, existing systems and regulatory environments – every transformation project is unique. To maximise the benefit of new technology implementation, schemes need to make the right strategic decisions, backed up with targeted digital transformation and industry knowledge.

Payconiq is an experienced, international leader in providing personalised account-to-account payment solutions, offering a full stack of services based on the latest API standard to optimise your infrastructure and adapt your payment journey to the needs of your clients.



**Market-leading technology:**

With our in-house developed and maintained proprietary technology, we handle our customers' essential activities, delivering transformation while maintaining continuity and reducing transformation risk through proactive planning and technical safeguards such as our Bridge.

Proven expertise:

With our deep track record working with regulators and industry stakeholders, we deliver projects to the highest standard, taking into account security, compliance and service to remove risk and accelerate progress.

**Tailored service:**

Our dedicated agile teams can plan, review and iterate services based on market developments and schemes' unique needs to create unique solutions that future-proof your business.

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Approaching Strategic Transformation for Payment Schemes

Payconiq works with payment providers to move from a one-to-one system of partner networking to a centralised hub. This model routes all innovation, UX changes and scaling updates through a central access point. This enables the rapid rollout of new features, including value-add services such as loyalty schemes or meal vouchers, and centralised control of the entire process.

How we approach solution design

The Payconiq product team works closely with client product teams to determine the scope of the project and build a bespoke approach:

- 1. Assessment:** Analyse the current system, existing protocols and APIs to determine functionality and limits.
- 2. Identification:** Determine any problems and define the key focus areas and tasks of transformation
- 3. Enrichment:** Investigate focus areas in more detail with client-side teams to determine a roadmap for each.
- 4. Connection:** Finalising API specification that each protocol will use as a technical contract.

How to achieve transformation in key capabilities

Payconiq's technology is based around the core needs of payment schemes to deliver the capabilities they need to scale revenue, customers and service levels for their users.

Seamless migration

Given the need for continuous uptime for the platform, including during the migration process, Payconiq has developed a new transition hub to ensure continuous uptime – the Bridge.

- The Bridge enables a seamless transfer between legacy and new solutions, leveraging existing connected and networks, through a single access source, to reduce the impact of scheme innovations and changes for issuers and acquirers.
- The Bridge sits between existing one-to-one connections, providing continuous functionality for all stakeholders while still moving the network to a hub-model.
- Old connections remain fully functional, with entry points now directed through the Bridge to their destination, ready for full transfer to the central hub model.

Reliable scalability

In order to make sure that the stack is fully scalable across transaction volumes, geographies and availability, Payconiq focuses on using cloud servers that combine flexibility with full reliability.

- Payconiq's solutions are built on public cloud & managed solutions, using AWS public cloud for the components we build and operate.
- The AWS global presence is distributed over multiple datacenters to prevent vulnerabilities – in most cases one region has three or four availability zones to mitigate risk and maximise uptime.
- Availability zones are engineered to be isolated from failures in other zones, providing inexpensive, low-latency network connectivity to other Availability Zones in the same AWS Region.
- To achieve the required availability set out by Clients, Payconiq deploys all its components in an active-active setup in one or more Regions, using all available Availability Zones.

In-depth security

Given the sensitive and highly regulated nature of financial services, security and compliance are a key concern at every stage of the planning and development process, ensuring alignment with all relevant security regulations in target territories.



The Payconiq dedicated security team looks into all designs and features from security POV, including:

- Integrating best-practice security and application development practices into the existing DevOps and agile processes in every stage of the development lifecycle – from the initial plan all the way to testing and launch.
- Payconiq is ISO 27001 certified, implementing the highest security standards for protocols and processes. All data is encrypted and secured by PIN or fingerprint, we only transfer necessary payment data and use the highest level of encryption in rest and transfer states.
- Implementing threat modelling and automated security scanning throughout our app development lifecycle, using technological and human review to proactively monitor potential risks.

Quality Assurance

During the development, every feature is rigorously tested to ensure it meets the quality standards needed to achieve the project goals and provide the necessary value to the client and to their customers.

- In our work, we utilise the “Green builds” policy – a feature is never deployed further if there are failures on any stages of the continuous integration and delivery process. By this, we ensure that it complies to the functional requirements defined by the customer at each stage.
- Our platform goes through rigorous performance testing to ensure our products and services perform well under the agreed load and scenarios.
- We minimise errors and risks by involving quality assurance engineers early in the development process, starting from the requirements testing and participating in the design sessions. Proper planning and testing, integrated on the initial design stage, help us catch issues earlier and, hence, reduce the time and cost of their resolution.
- We test our product on real world situations and users to maximise usability. We work with testing groups to monitor how they use the platform in practice, updating features and workflows to ensure we’re solving our users problems and delivering a smooth user experience.
- We utilise the best test automation and security practices to ensure any code change is secure and safe from known vulnerabilities before it goes to production.

Keeping up with the payment market

After a rapid phase of innovation in the last decade, the payment market is now consolidating around proven solutions. It's increasingly clear that the future is not one of fintech replacing incumbent providers, but augmenting them. This can be seen also in the way regulators, schemes and governments are actively shaping the market, with initiatives such as the [European Payments Initiative](#) and [European Mobile Payments Schemes Association](#) working to harmonise institutions through the European Union.

Payconiq is more than a technology company – fostered by some of Europe's leading banking groups, we operate as a complete transformation partner, taking institutions from planning, through technology development and ticking all the compliance and regulatory boxes to build a solution that can grow with your business and deliver long term value to your users.

Combining industry experience and expertise with technology and agile development, we ensure that our projects prepare you for the future in Europe and beyond.

To find out more, visit www.payconiq.com.