



ENCOURAGING INNOVATION IN PAYMENTS THROUGH THE PSD2 INITIATIVE

Abstract

Revised Directive on Payment Services (PSD2) is primarily aimed at bringing new, online modes of payments initiation under payment regulations. It emphasizes on gaining transparency across products and services offered by payment service providers (PSPs) and the charges levied by them on their customers for availing these services. PSD2 is also leveling the playing field for smaller payment service providers who can now directly take on the established players. Third-party providers (TPPs) like account information service providers (AISPs) and payments service providers (PSPs) can use application programming interface (API) based services to launch their digital payments offerings and more to their customers. Since the initiative encourages innovation in the online payment mode and offers better payments services to end customers, PSD2 is gaining momentum in other geographies without the presence of any mandatory regulations.



Overview

In October 2015, the European Parliament agreed to the European Commission's proposal to create safer and more innovative payments by adopting PSD2. As a part of PSD2, new rules will be drafted that are aimed at the following:

- Protecting customers when they use digital devices for making payments
- Promoting the development and use of innovative online and mobile payments
- Making cross-border European payment services safer

The PSD2 revises and complements the EU rules that were put in place by the PSD in 2007. It also widens the scope of the PSD by covering new services and players, and by extending the scope of existing services. The details of PSD2 are covered in the subsequent sections.

With PSD already in place, PSD2 brings in the following additional things for payments players to comply with:

- Coverage for new modes of payment initiations through mobile phones, digital

wallets, e-commerce sites, and social media channels

- Introduction of new payments players such as payment initiation providers (PISPs) and AISPs
- Ceiling on transaction fees and implementation of strict rules to maintain transparency
- Mandate on European banks to open their payment infrastructure and customer data to third-party providers (may mostly happen through APIs)

PSD2: Ushering in new changes to European payments

Table - 1 highlights changes introduced by PSD2 and the potential impact on existing and new parties involved in the European payments space.

What's new?	Change details	Potential results
New services in scope	<ul style="list-style-type: none"> • Payment initiation service (PIS) • Account information service (AIS) 	Access to account (XS2A) will force account servicing payment service providers (AS PSPs) to offer open payment systems
New regulated roles in payment ecosystems, i.e., TPPs	<ul style="list-style-type: none"> • Payment initiation service providers (PISPs) • Account information service providers (AISPs) 	Parties other than AS PSPs can: <ul style="list-style-type: none"> • Authenticate account holder • Initiate Single Euro Payment Cards (SEPA) credit transfers (SCT) or retrieve information from account
Limited interactions between AS PSPs and customers	AS PSPs required to grant TPPs access to customers' payment accounts	Third-party service providers will directly interact with customers and collect required information from AS PSPs in the back end. This will limit the role of AS PSPs as primary service providers to consumers and businesses
Enhanced security for electronic payments or online account access	Stronger approach to security to reduce the risk of fraud for new and traditional means of payment and to protect the confidentiality of the user's data	Strong two- or three-factor customer authentication accompanied by the AISP or PISP authentication

Table - 1: PSD2 changes and the potential results



Drivers for PSD2 initiative

The primary drivers behind the initiative are:

- Need for supporting digital payments / channels
- Customer progression toward 'everyday payments' forcing banks to become more customer-focused.
- Emergence of non-bank PSPs
- Need for better customer offerings in terms of cost, convenience, speed, and availability of funds
- Reduction in payment processing charges by promoting healthy competition among players
- Encouraging innovation in payments and seeking new sources of revenue



Need for banks to pursue PSD2

The entry of non-bank players in the payments space is posing major challenges to established banks across the globe. During the first quarter of 2016,

PricewaterhouseCoopers (PwC) in Europe conducted a survey which clearly indicates that customers are open to avail payments services from non-conventional players.

In the survey, more than 80 percent of respondents reacted positively to payments services offered by non-banks:



Figure - 1: Customer feedback on payments services offered by non-bank players

All these factors put established banks in direct competition with new players who do not even have the underlying payments

infrastructure to clear and settle requests. This is completely changing the payments landscape in the European region. However,

the change is also providing opportunities to FinTechs and banks that are planning to expand services in the digital banking space.

PSD2 implementation timeline

PSD2 is expected to be implemented in all the banks by January 2018. Figure - 2 shows other milestones in the overall PSD2 implementation journey.

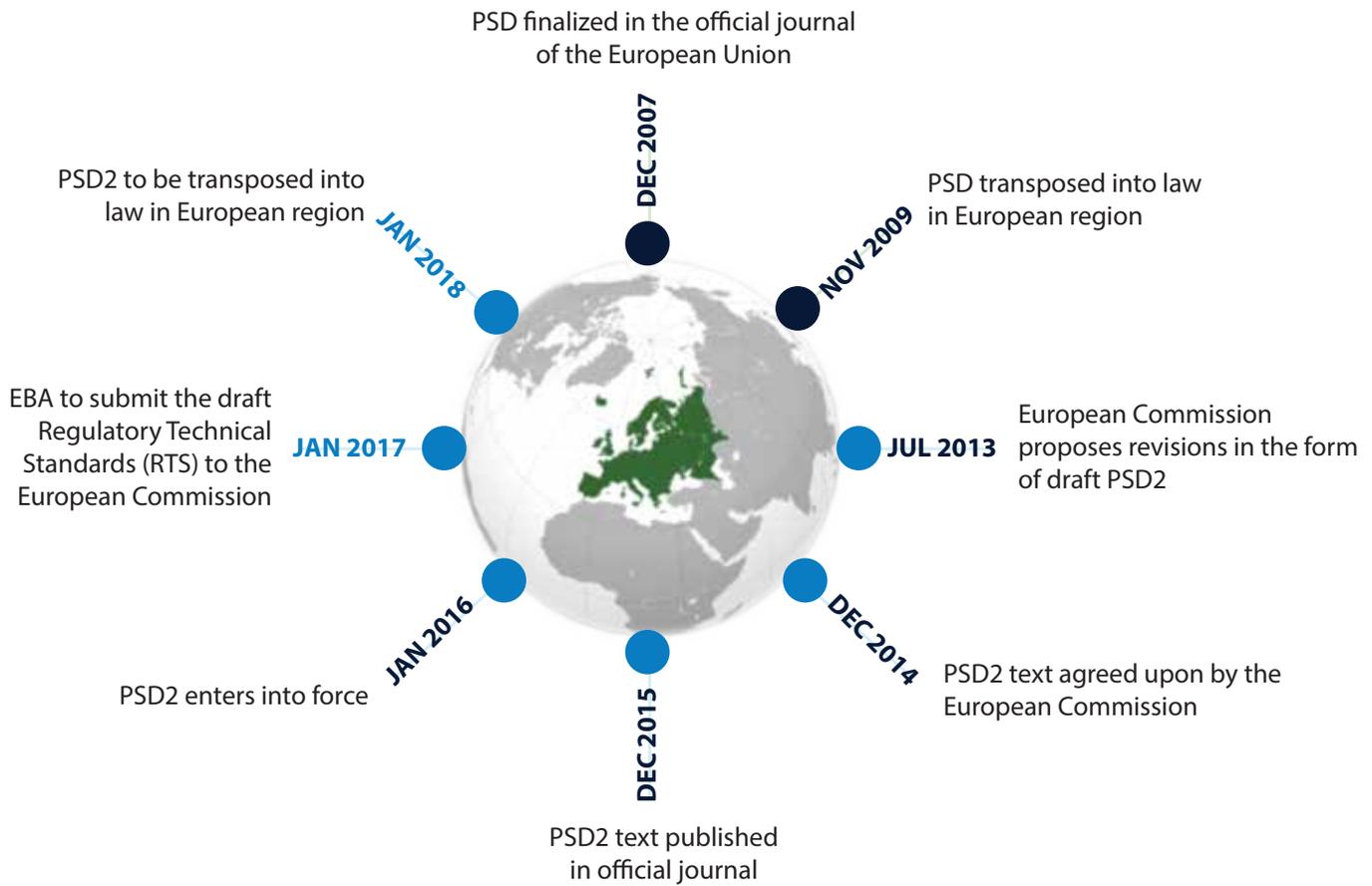


Figure - 2: Milestones in the PSD2 implementation journey



Similar payments initiatives in other regions

Opening the payments market to smaller players by leveraging trends like availability of immediate payments infrastructure, increasing smartphone adoption, and better access to Internet / data is a major disruptor in many economies. Central banks or regulators are providing payments

infrastructure (as illustrated in Figure - 3) and encouraging participants, both banks and non-banks, to design their own API-based solutions. This approach allows banks and other players to innovate and offer a superior customer experience to make electronic payments convenient and secure.

On similar lines, National Payments Corporation of India (NPCI) has launched a unified payments interface (UPI). This system powers multiple bank accounts into a single mobile application of any participating bank, merging several banking features, seamless fund routing, and merchant payments under a single hood.

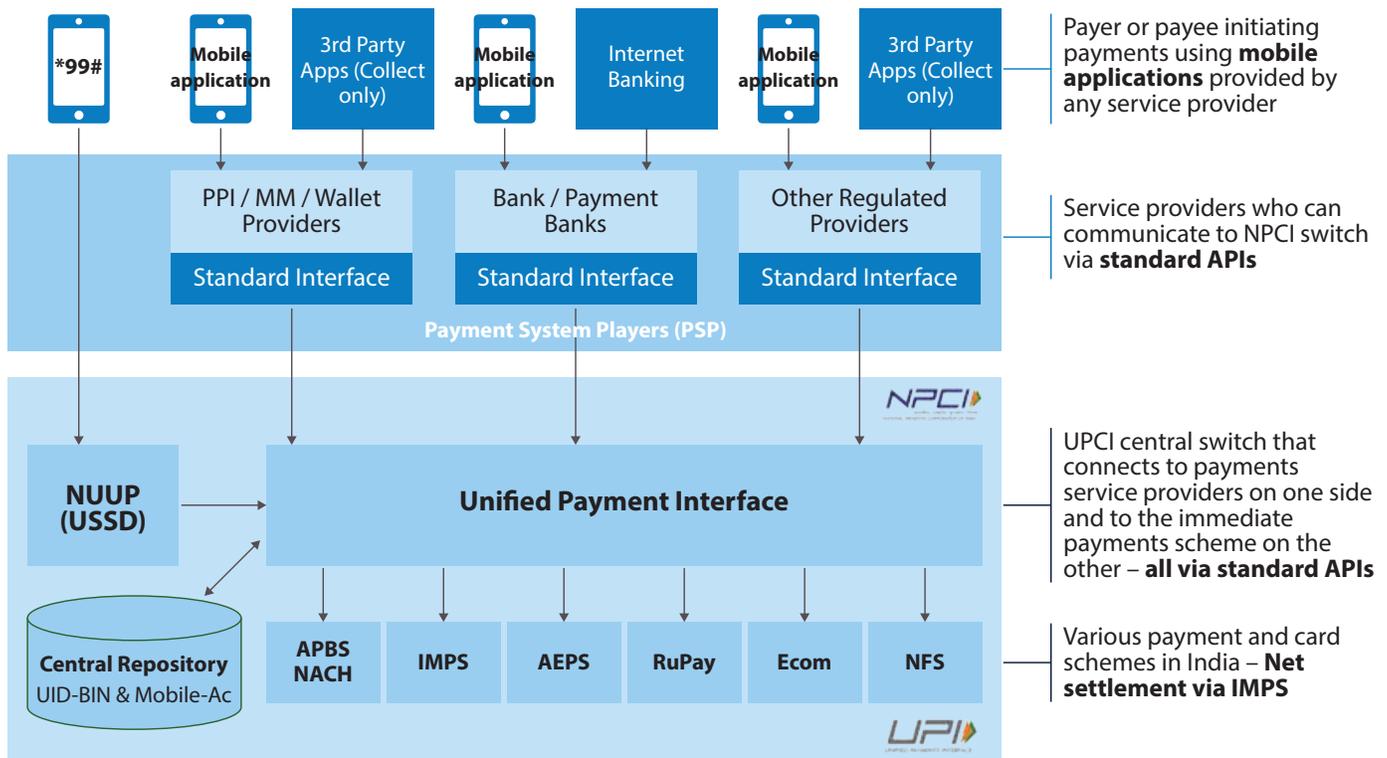


Figure - 3: Unified payments interface: High-level architecture

Some of the key features of UPI are listed below:

- Support for person-to-person, person-to-entity, and entity-to-person payments
- Provides both payment (push) and collection (pull) options
- Make / receive payments using virtual payments address or actual beneficiary account details

- Support for pre-authorization of multiple recurring payments (utilities, subscriptions, etc.) with a one-time secure authentication and rule-based access
- All PSPs to use a standard set of APIs for any-to-any¹ push- and pull-payments
- PSP-provided mobile applications that allow payments from any account using

any number of virtual addresses through credentials such as passwords, PINs, or biometrics

- Fully interoperable system across all PSPs without having silos and closed systems
- Use of 1-click 2-factor authentication just by using a personal phone without any acquiring devices or physical tokens

¹'any-to-any' refers to payments 'from' and 'to' any entity, i.e., P2P, P2B, B2B, B2P, merchant, government payments, etc.

Banks' strategy to participate in PSD2

Payments

Banks, based on their capabilities and long-term vision, can adopt one of the four strategies listed in Figure - 4. The basic strategy for any bank is to meet regulatory requirements and act as a facilitator or a 'service-focused' bank in providing accounts / payment services. However, banks can

also strategize to offer innovative payment solutions and continuously enhance them as per customer needs, thus becoming a 'customer-focused' organization.

As shown in Figure - 4, banks can either focus on offering regulatory payments /

account services to their customers or gear up completely to be a digital bank and offer new / value-added services. The right strategy of Comply-Compete-Strengthen-Digitize is explained in the following sections.

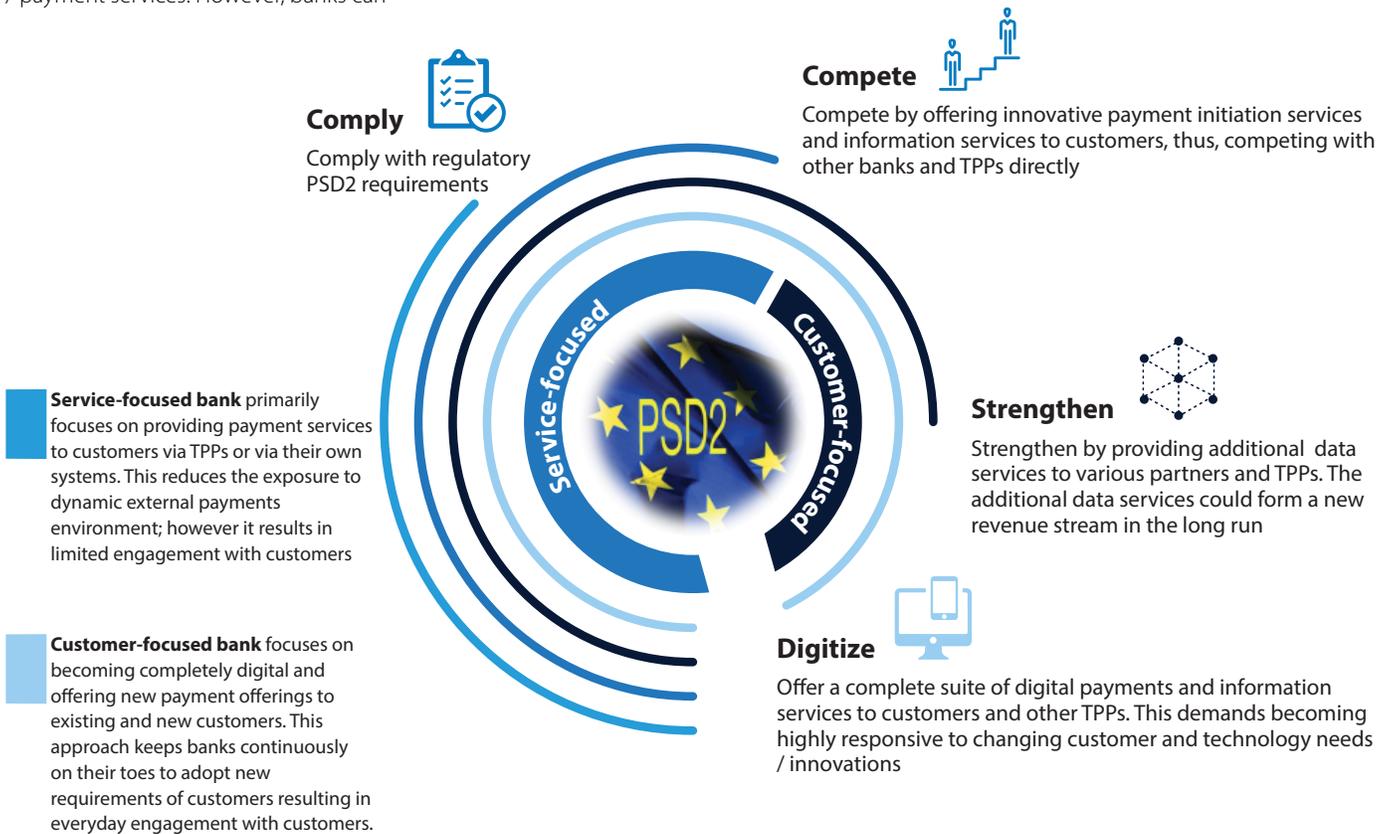


Figure - 4: Bank strategy to participate in PSD2

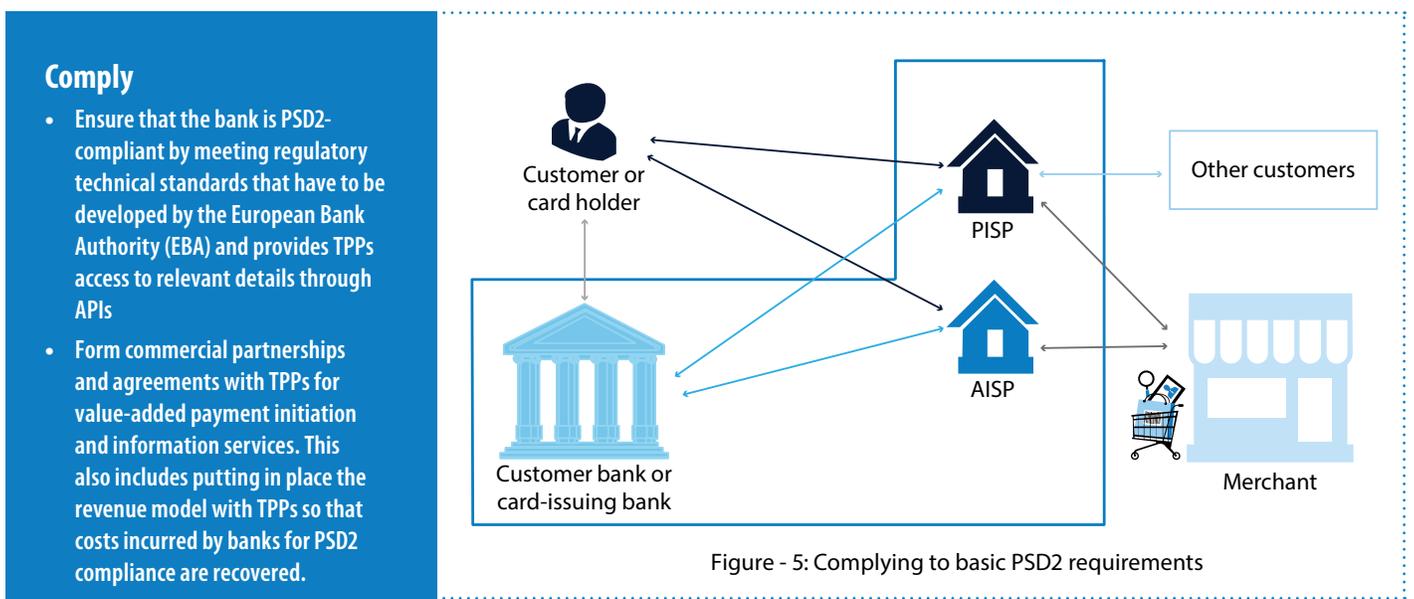


Figure - 5: Complying to basic PSD2 requirements

Compete

- Provide the minimum mandated services to TPPs and start offering innovative payment initiation and information services to compete with other TPPs
- Design the offerings such that the customers holding accounts with other banks can also avail payment services, thus directly competing with established banks and players in the e/m-commerce space. This is explained in Figure - 6

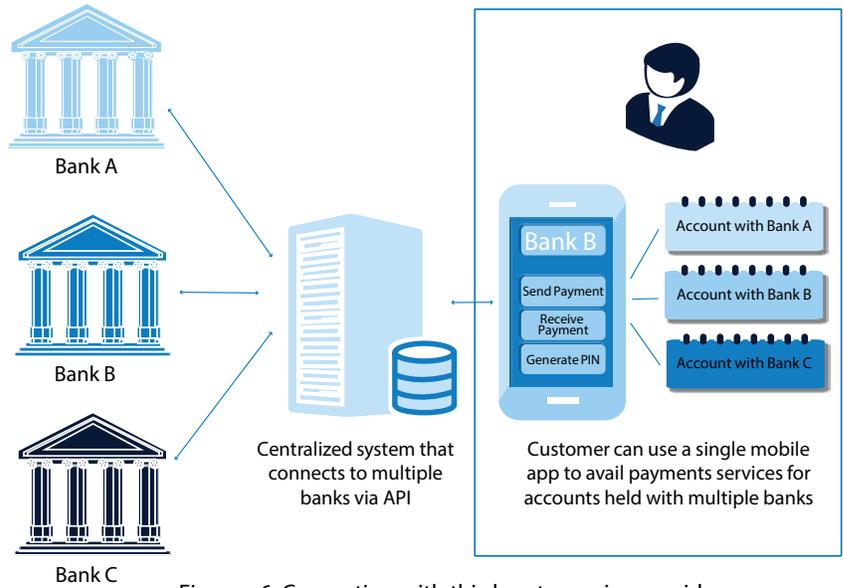


Figure - 6: Competing with third party service providers

Strengthen

- Develop and expose APIs that go beyond basic payment and account information services mandated by PSD2
- Share additional details, post gaining customer consent, with TPPs and generate additional sources of revenue with customer consent. This indirectly refers to monetizing the information that banks already have in their multiple internal systems

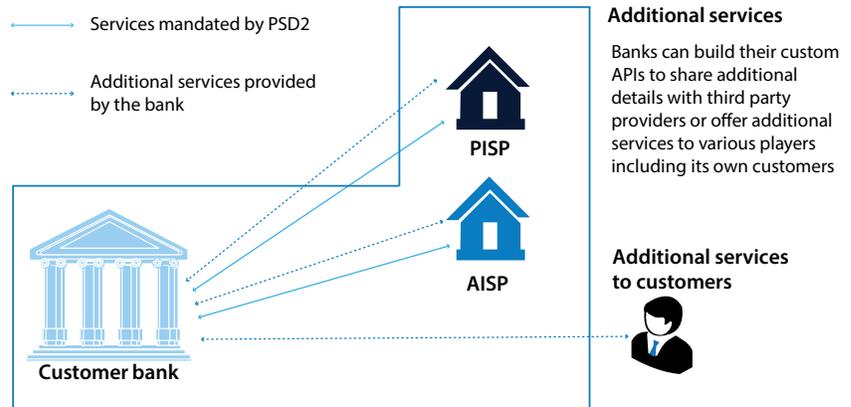


Figure - 7: Strengthening bank offerings via additional services



Digitize

- Become a complete digital player by offering innovative payment and information services to customers and other TPPs. Under this option, the bank can provide an enhanced digital channel solution that forms a highly flexible and customer-appealing user interface (UI) layer. This layer supports new ways of payment initiation such as mobiles, tablets, and e-wallets that are integrated with banks' legacy systems and hides back-end complexities. It can also connect with multiple old and new bank systems using predefined APIs and provide better access to information / processes
- Enable third parties to build applications and services around financial institutions based on open APIs. The TPPs can be encouraged to use these APIs and design their own solutions
- Define new business models using technologies like near field communication (NFC), blockchain, quick response (QR) codes, and wearables and integrate them into customers' daily transactions. This will keep banks relevant in the new payments world

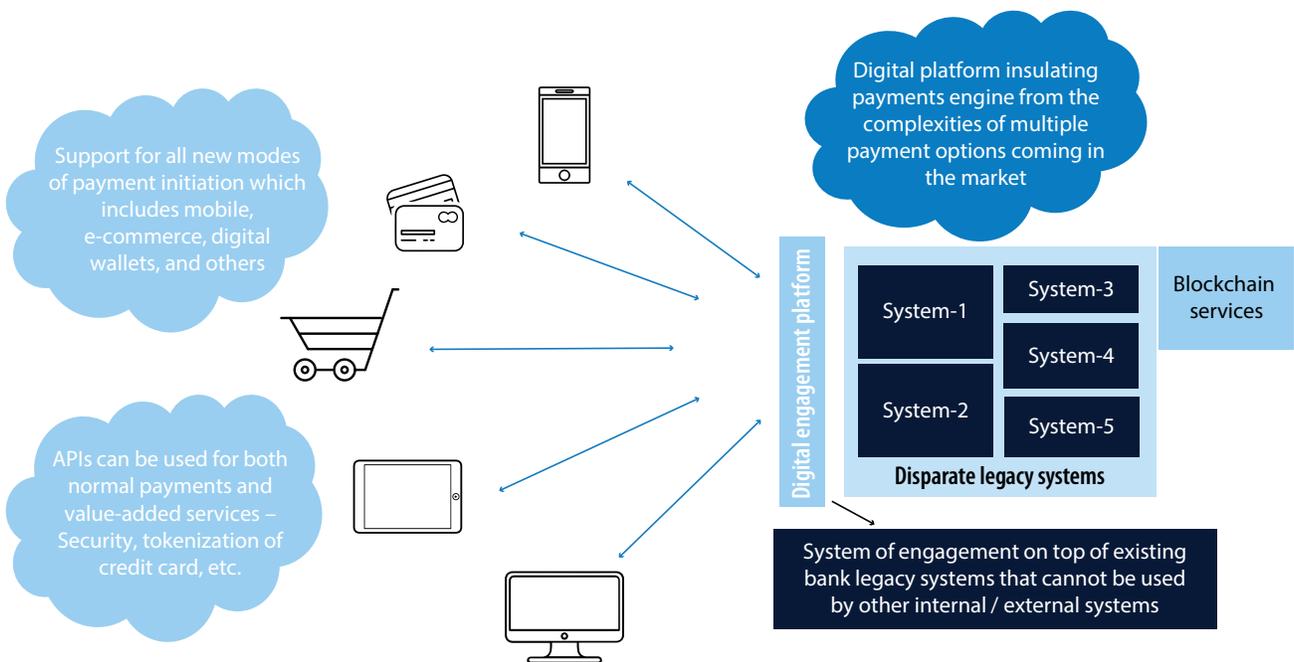


Figure - 8: Becoming a completely digital bank

Cards

In the cards space, card-issuing or merchant-acquiring banks can explore multiple options while complying with PSD2. Figure - 9 highlights the cards processing workflow pre- and post-PSD2 implementation.

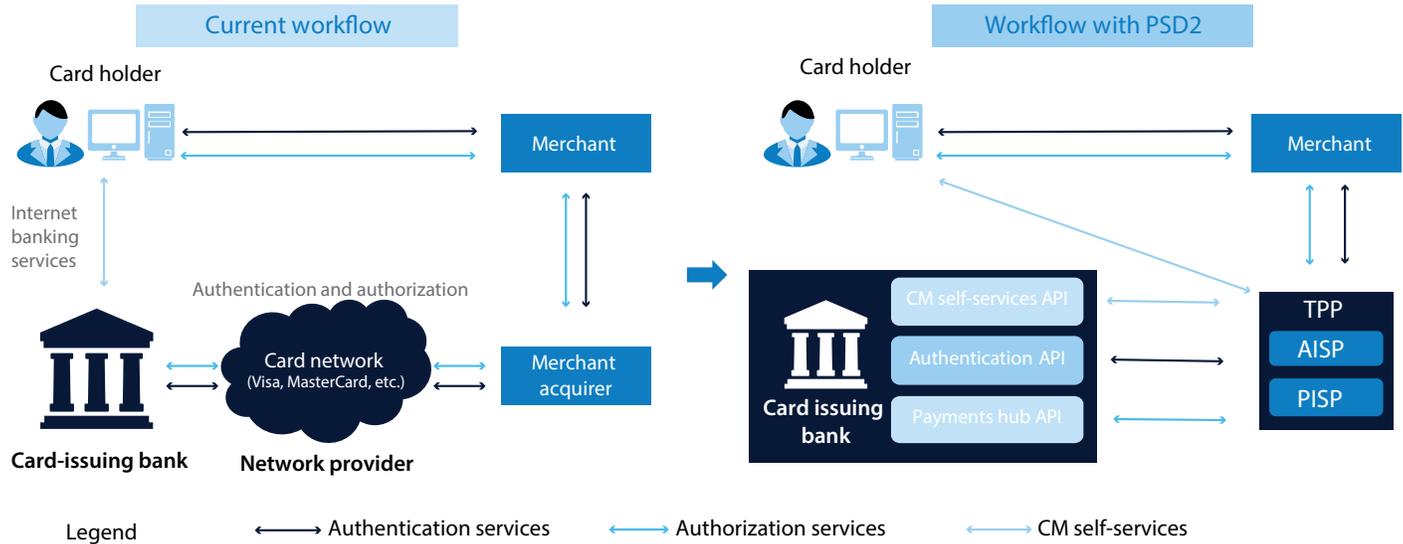


Figure - 9: Cards processing workflow pre- and post-PSD2 implementation

Hosted services for AISP / PISP

- Card-issuing banks offer API hosting services of smaller banks to AISP / PISP
- Card-issuing banks tie up with smaller banks for hosted services and cross-sell new product offerings for smaller banking customers

Merchant acquisition

- Banks launch TPP services and compete with other card processing companies / FinTechs for market share in TPP services
- Data analytics on customer / transaction TPP data provides opportunities for launching merchant offers / coupons through tie-ups with merchants to access existing card base. Customer insights obtained through data analytics assist in cross-sell opportunities and fraud prevention

Merchant data analytics

- Banks offering TPP services leverage data analytics and provide insights to merchants — insights on merchant sales performance, 360-degree view of merchant's customer, and new store locations



Focus areas for banks that align with PSD2

Existing banks may need to upgrade their legacy / current capabilities in order to support PSD2 within the given timelines. They may need to focus on some of the following critical areas:



Security

- Meeting security and authentication demands of PSD2
- Adopting new ways of performing authorization and authentication
- Performing real-time fraud and compliance checks with existing bank systems

Infrastructure

- Support for open API infrastructure
- Ability of new API gateway or engagement layer to integrate with legacy core banking systems
- Capability to scale existing infrastructure to cope with millions of transactions that new modes of payment initiation and new business use-cases will bring

- High availability of systems to ensure there is no downtime for TPPs (both AISPs and PSPs), while continuously accessing the bank systems for customer or payments information
- Data protection and encryption capabilities within the bank and ability to extend them further to meet the regulatory requirements
- Capability to go a step ahead and provide more API-based services to other participants

Customer / payments data management

- Availability of single store of customer and account information or ability to fetch data from multiple systems and responding to the API requests sent by AISPs

- Frequency and mechanism of customer / account data maintenance / update within the system and ability to make it as real-time as possible

Other

- Evaluating technical specification documents to be released by EBA and understanding the core PSD2 requirements
- Resourcing, budgeting, and staff training at various stages
- Complaint-handling and alternative dispute resolution procedures for other participants and end customers
- Preparing marketing material and documentation around customers' terms and conditions and their education and training needs

Conclusion

Europe, through PSD2, is one of the first regions mandating the use of open APIs for sharing information with third-party payment providers. However, there are other drivers for banks and TPPs to opt for API-based solutions globally. Rapid worldwide growth of the FinTech industry is continuously mandating innovation to meet customers' payment needs more effectively. Customers, too, are welcoming payment solutions by non-bank providers, as they perceive them to be more efficient and secure than traditional bank offerings.

In order to offer quick and flexible solutions to customers, service providers are moving away from purpose-built solutions to an environment where they can procure solutions from multiple vendors using open APIs and create the experience their customers seek. Changing customer preferences / needs (such as use of immediate payments, instant availability of funds, timely notifications, etc.) are also driving adoption of APIs. At this stage, other regions do not have a formal regulation for using open APIs. However, bank and non-bank players in these regions are adopting the same approach to keep up with leading trends and remain relevant to their customers at all times.



About the Authors



Vijay Anand

Head – Cards and Payments Practice, Infosys

Vijay heads the Cards and Payments Practice at Infosys. He has over 20 years of experience in IT services and cards and payments. He has deep experience across the value chain and in delivering cutting-edge solutions to global payment providers and banks across mobile payments, cards, loyalty, and channels. He brings in expertise across the cards and payments value chain, and has been instrumental in managing large cards and payment relationships in Infosys.



Abhijeet Athanikar

Principal Consultant – Domain Consulting Group, Financial Services, Infosys

Abhijeet is a Principal Consultant with the Domain Consulting Group within Financial Services at Infosys. Based in Pune, he has ten plus years of experience in large-scale payments transformation programs across the Europe and Asia Pacific regions. Abhijeet's areas of expertise include core transaction processing, payments product consulting, and global messaging standards consulting. He has worked as a subject matter expert and functional architect in multiple payments hub consulting / modernization initiatives.

For more information, contact askus@infosys.com

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