

PSD2

CONSUMER SOLUTION

FOR PAYMENT PLAYERS ADOPTING PSD2 AS A STEP TOWARDS OPEN BANKING SERVICES & REVENUE STREAMS

WHAT IS IT ABOUT

This white paper describes challenges and strategies of banks, merchants and other financial institutions who serve consumers within the PSD2 payment ecosystem.

1

Top business challenges imposed by the market's shift towards Open Banking

- Attracting new customers that have a new service consumption mentality
- Understanding PSD2 and Open Banking service paradigm
- Adopting new business models

2

Technological foundation for your new service offering

- Relying on the established processing leaders
- Key service components packaged strategically for various types of players in the PSD2 ecosystem
 - Benefits as seen by innovators vs pragmatists

3

Monetizing your Open Banking-oriented infrastructure

- New and reinforced revenue streams
- Emerging monetization drivers – consumer data and cross-industry alliances
- Enabling advanced consumer liquidity with innovative credit product range

MEET THE AUTHORS



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CMS PRODUCT AND BUSINESS DEVELOPMENT / [NETS](#)

Nets is a leading provider of digital payment services and related technology solutions across the Nordic region.

Nets sits at the centre of the digital payments ecosystem and operates a deeply entrenched network, which connects merchants, corporate customers, financial institutions and consumers enabling them to make and receive payments as well as, increasingly, utilize value-added services to help them improve their respective activities.



Alexander Tikhomirov

BUSINESS DEVELOPMENT / [OPENWAY GROUP](#)

OpenWay Group develops WAY4 payment processing solutions. We serve 135 banks, processors, payment switching, telecom and oil companies in Europe, the Americas, Asia, the Middle East, and Africa. Nets is among our clients.

OpenWay holds #1 global ranking in Card Issuing and Merchant Management and top global ranking in White-Label Digital Wallets*.

* According to Gartner and Ovum reports in 2009-2017





THE ERA OF PSD2 & OPEN BANKING

EVOLVING CUSTOMER MENTALITY

THE CONSUMER MENTALITY HAS SHIFTED

Attracting new customers is one of the top two challenges for financial institutions worldwide, according to PwC's research 'Retail Banking 2020 – Evolution or Revolution?' Working closely with banks, merchants and emerging PSPs (Payment Service Providers), we hear the same observation from them all: The consumer mentality has shifted.

While evaluating a service, consumers are influenced more by the practical and social aspects – the immediate value received and the peer network opinions/trends. Consumers are ready to accept a financial service from a trusted operator, disassociating themselves from the conventional 'banking is banks' paradigm. 40% of Gen Y

respondents would consider banking with Google or Amazon. The number is taken from Accenture's report 'Financial providers: Transforming distribution models for the evolving consumer'. This report issued in 2017 'highlights significant shifts in what consumers expect from the sector.

Merchants are no less affected by this mentality shift. Buyers welcome the 'Buy' buttons embedded in their social networks and other popular virtual spaces – rather than visiting brick and mortar stores or dedicated e-commerce websites. Consumers' trust of a third party online platform is often more important than their familiarity with the retail brand behind the offer.

The PSD2 reality, with its open banking APIs, opens doors even wider for players from telcos, service integrators, insurance, gaming, utilities, debt collection, travel, and others industries.

PwC concludes that 'customer expectations are being shaped by their interactions outside of the banking industry – they increasingly want the type and quality of service they receive from industries that place significant focus on customer experience (e.g. <...> the seamless integration of Apple products across products and channels).'

EVOLVING SERVICE PARADIGM

Understanding the changes in service paradigm is necessary not only to attract new customers but also to retain the existing ones and to secure conventional revenue streams. In our opinion, this concerns equally all the payment market players, whether they act as ASPSP, AISP or PISP.

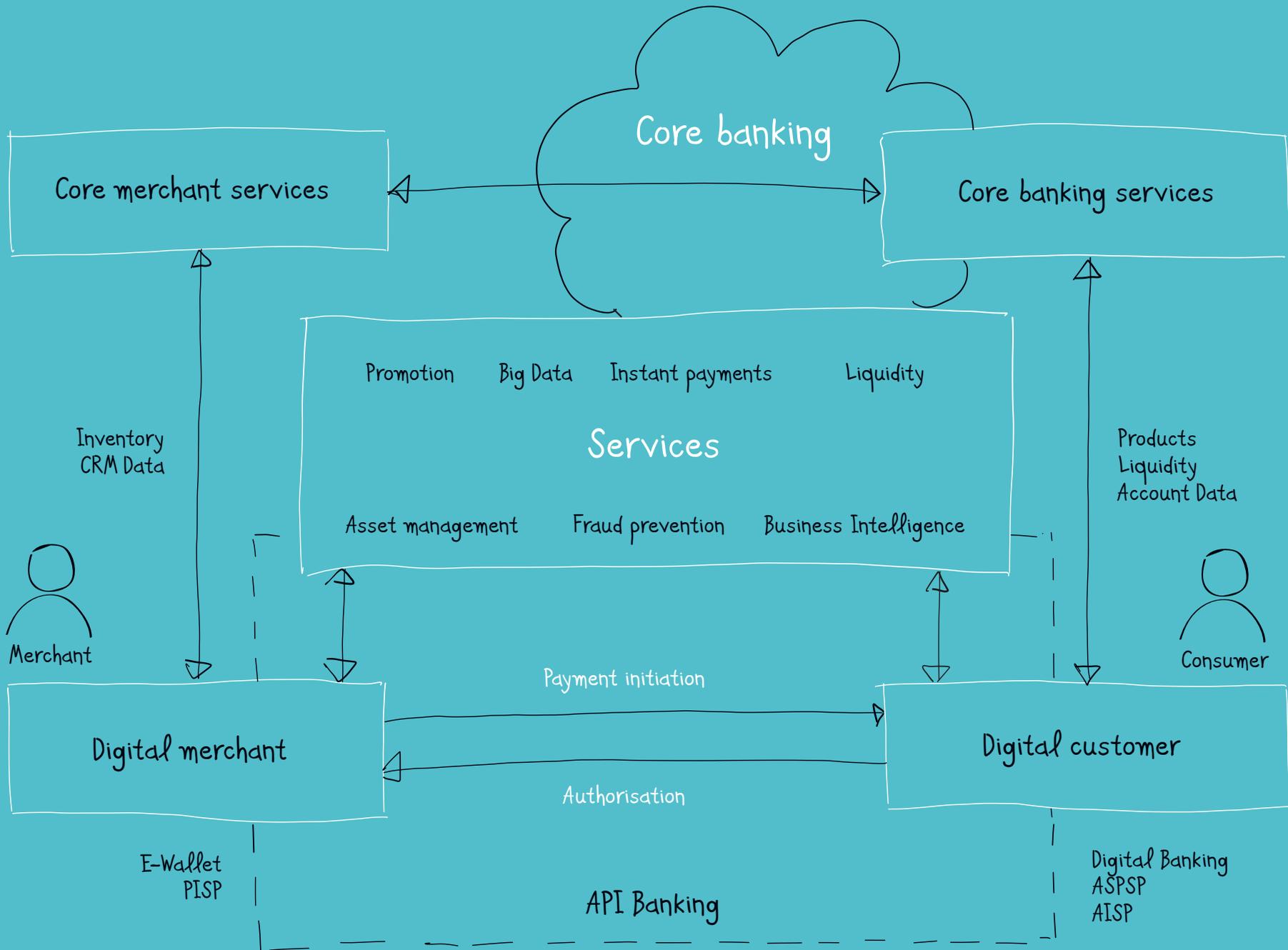
ASPSP – ACCOUNT SERVICING PAYMENT SERVICE PROVIDER AISP – ACCOUNT INFORMATION SERVICE PROVIDER PISP – PAYMENT INITIATION SERVICE PROVIDER

B2C SERVICES IN GENERAL

- ❶ Instant initiation of services – 24/7 turnaround
- ❷ Personalised services
- ❸ Lower market entry cost and reduced time-to-market
- ❹ ‘Ground’ services go digital, virtual hide-and-see habit
- ❺ New consumer-retaining models – a strive for service stickiness
- ❻ Higher service attrition –
lower consumer thresholds to change vendors
- ❼ Increased competition – service disruption
- ❽ Openness of services due
to crowd-sourcing, open APIs

PAYMENT SERVICES

- ❶ De-centralisation of registration and transactional ledgers
- ❷ Growing demand for open API architectures
- ❸ Increased accessibility of financial services for users
- ❹ Convergence of providers in a payment value chain
- ❺ Regulatory focus shift from the payment process
to the trusted node management
- ❻ Unification and simplification of user cross-vendor,
cross-channel experience
- ❼ New forms of asset value (cryptocurrencies)
- ❽ Instantiation of payments & payment clearing cycles
- ❾ New distribution models for financial services



API BANKING IS ONLY THE FIRST STEP

The open-service concept applies to the financial services sector in a form of API banking architecture. However, providing digital interfaces to well-established banking services and complying with evolving regulations is no longer sufficient to stay competitive in the market. It is the service offering that matters.

Many banks had already started transforming their services, long before the PSD2 regulations were finalised. In 2014 PwC surveyed 560 client executives from leading financial institutions across 17 markets and revealed the following. 'Enhancing customer service' was a top-2 investment priority, and this pattern was consistent globally. 75% of

banks were already making investments in the customer-centric business model. Yet only 17% felt 'very prepared'.

The numbers are taken from the previously mentioned PwC's research.

PRIORITIZING FAST CUSTOMER ONBOARDING

One of the key objectives is to provide fast customer onboarding and promote spending on the basis of the enhanced service cycle.

→ CONVENTIONAL SERVICE CYCLE

- 1 perfect and digitalize product and services offering
- 2 understand users' sentiment, analyse behavioural data
- 3 conventional promotion
- 4 enrolment of users into merchant programs and payment methods
- 5 bring purchase availability close at hand
- 6 push-to-buy – the peak moment of interaction with the customer
- 7 follow-up: buying and post-purchase experience

→ NEW SERVICE CYCLE SUPPORTED BY PSD2 FRAMEWORK

- 1 analyse market elasticity, search for 'arbitrage' opportunities, explore options of collaboration with TPPs, create disruption
- 2 low-cost proof-of-concept of consumer value and its supporting solution(s) with open API(s)
- 3 scale up the solution, create accessible value-for-many propositions
- 4 engage and enrol users 'as you go'
- 5 collect data and analyse the expanded consumer profile for scaling up the service without sacrifices in customer data security

'ELASTIC' USER JOURNEY

The acronym **ELASTIC** summarizes perfectly what consumers want from any service provider along their payment journey.

Ease of use → have a friendly, frictionless payment experience

Liquidity → be able to get the goods that I like, even if I do not have immediate funds for them

Availability → have a global reach to pay for anything anywhere at any time

Safety → be sure my identity is safe, my purchase is reliable and my funds are secured

Transparency → understand the implications of my purchase

Instant result → make fast payments completed in real-time

Convergence → get extra value from making this purchase redeemable against future or other services

Below we explain how every value in the **ELASTIC** service paradigm can be supported by the open banking architecture.

Ease of use implies a continuously enhanced user experience, the accessibility of payment service and the bridging of the distance between payer and payee.

This ongoing shift is transforming the payment cycle in two ways:

- ① unification of payment and delivery channels across all service interfaces, providing a unified user experience in e-commerce and retail channels
- ② simplification of transaction processes through minimized friction and real-time digital identity, which is a credible alternative to a strong authentication cycle

An open banking architecture incorporating omni-channel payment service interfaces also promotes the repetitiveness of a service to increase return and conversion rates.

Liquidity The liquidity of user funds may be ensured by a payment institution (holder of user accounts). These include options such as multiple credit products, multi-currency options, credit restructuring – as well as through channelling of liquidity services from a TPP (Third Party Provider). These range from micro-loans, automatically offered and available to a user at the time of payment, to macro-level credit, such as investment programs and asset management offers.

Availability The growing market elasticity is driven by the many-to-many principle. The PSD2 provides well-defined grounds for interaction, allowing PISPs to reach virtually any ASPSPs.

From the standpoint of an open architecture, this means:

- Open API: true 24/7/365 availability of accounting services with an ASPSP interface for conventional PSPs, the ability to extend their offering to support the PISP function and onboard for PSD2 payment initiation
- synergetic scenarios of accounting (ASPSP, AISP) and payment initiation (PISP) services being available in real-time at the moment of payment

Safety PSD2 (Title IV) introduces strict requirements around the security of electronic payments and consumer data protection. It mandates Strong Customer Authentication (SCA) to be adopted by ASPSPs in all cases, with the exclusion of specific trusted transaction-based authentication mechanisms.

SCA mandates adoption of 2FA – the 2-factor authentication. Two out of three authentication elements must be independently applied:

- knowledge – something a user knows (for example, a password)
- possession – something a user holds (for example, a token)
- inherence – something only a user is (for example, a fingerprint)

Exemptions from the 2FA mandate may include:

- low-value payments below 30 EUR
- outgoing payments to beneficiaries explicitly whitelisted by consumers
- ‘close-loop’ payments for one consumer within the same PSP
- for services that do not operate sensitive payment data

The requirement for a new architecture is to provide a frictionless user journey within the supporting regulations and without sacrifices in

- strong customer authentication incorporating fraud prevention
- security of consumer financial data compliant with GDPR regulations

The balance of having a strong yet frictionless authentication may be achieved via optimizing risk management methods and introducing tokenization.

Risk scoring in the new architecture means a risk engine that:

- Acts upon consumer-related data across user payment channels and utilizes supplementary data sources. This task is completed on the payment initiation side (PISPs).
- Normalizes the data and process it in real-time or near-real-time to obtain the correct scoring for a given transaction. This task is traditionally solved by calculating static scoring against pre-provisioned thresholds as well as dynamic (behavioural) patterns for a consumer or a consumer transaction.

Introduction of new authentication methods, including biometrics such as user voice or ambient sound, image, as part of a combination of multiple methods to:

- provide a smart choice of methods to a user without the sacrifice in user friction and security
- normalization of data and scoring across different authentication methods
- resolution of the 'weighted trust' problem – trusted reliability of a given authentication method when combined with other methods
- independence of methods – to not compromise reliability of an adjacent authentication method within the x-factor authentication principle
- support 'positive scoring' capabilities to promote services to trusted spenders

The overall task for the new service architecture is to provide a balanced and well-designed risk management and fraud prevention mechanism that steps from static analysis – e.g. a digital footprint of a consumer or device – further to the real-time dynamics of a digital identity engine.

Transparency In the context of PSD2, the relevant tasks are

- a user-friendly digital banking interface, with instant feedback and up-to-date reflection of transactional data and account liquidity
- availability of functions on the service interfaces of TPPs to support user requests

The key factor in these tasks is to prioritize user experience-driven workflows, rather than build 'cost-effective' data model-driven interfaces.

Instant result Fast or instant payments, driven by the increased competitiveness of the market, demand the following new capabilities from ASPSP:

- true online availability of PSD2 ASPSP interface – public API (response in milliseconds)
- adoption of the SEPA Instant Credit Transfer (SCT Inst)
- instant update of the user's payment history across all channels within the omni-channel system

Convergence Financial inclusion – creating value for new types of consumers – through seamless engagement is an essential element of an open service architecture.

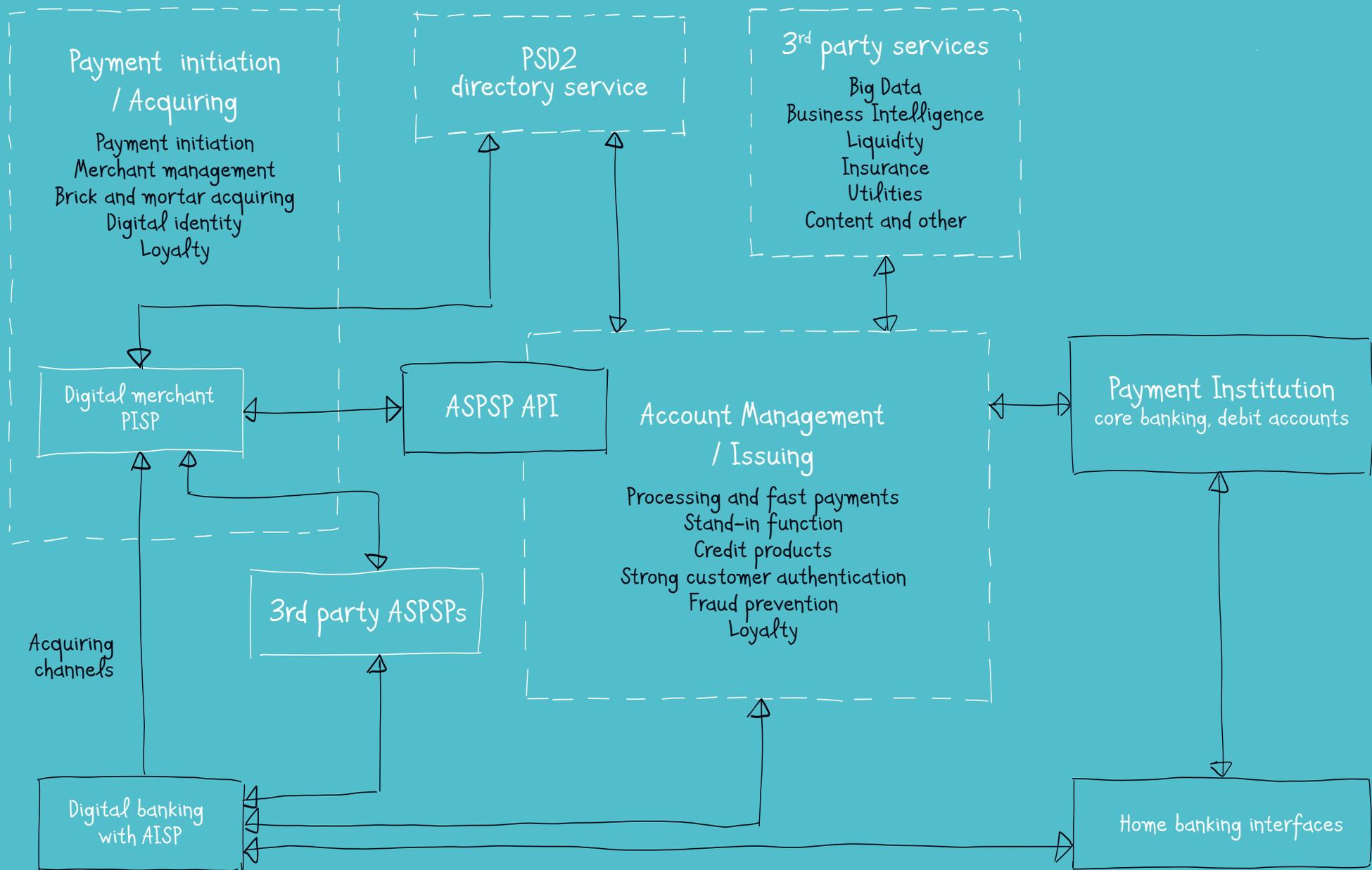
Service convergence is achieved by

- bridging the gap between the merchant and payment institution sides in the payment process and providing seamless customer engagement
- channelling of services from different providers
- providing services to users early enough in the payment process
- leveraging on cross-vendor and cross-service loyalty programs
- recurring service model

With the development of Open APIs, service convergence – aggregation, selection – is expected to be further expanding in the market, which presents both opportunities and risks for conventional players in the payment industry.

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PSD2 CONSUMER SOLUTION



TECHNOLOGICAL SOLUTION BEHIND YOUR PSD2 SERVICES

Payment processors are well-positioned to provide a complete solution that is both PSD2-compliant and Open Banking-oriented. Relying on their technological leadership and market knowledge is a good approach for banks and merchants to manage the early-adopter risk.

PSD2 Consumer is not a unified solution per se. It combines and utilizes many service packages differently in each project, to ensure maximum benefits for each PSD2 role – PISP, AISP and ASPSP. Basically, we are extending the Business-as-Usual service perimeter of banks and merchants with new or adapted elements.

CHECKLIST FOR BANKS

& other payment institutions – your PSD2 and open banking readiness:

SERVICE PACKAGE	SCOPE
Access to accounts (XS2A)	Base package to provide for PSD2-mandated workflow as part of the ASPSP function, with own SCA or with possible reuse of bank's strong customer authentication methods
	Stand-in function for PSD2 payments against core banking/debit accounts
	True 24/7 availability for the ASPSP interface to interact with own or 3rd party PISPs and AISP
Strong Customer Authentication	Strong authentication methods with open API for integration with bank's own web/mobile banking
Liquidity	Enriched product portfolio onboarding: options in credit and loan management and disbursement
	Instant credit lines and loans via own account or channeled from third-party loan providers
	Seamless extensions to immediately available funds
Digital banking	Customized web and mobile banking. Includes Strong Customer Authentication support (as in Service Pack 2)
	AISP account aggregation with open API
Risk management	Smart transaction-based risk (TRA) and authentication engine to prevent fraud and reduce friction for bank clients
Fast payments	Fast payments via SEPA Instant Credit Transfer

CHECKLIST FOR MERCHANTS

& other payment initiators – your PSD2 and open banking readiness:

SERVICE PACKAGE	SCOPE
E-Commerce	Enabler of PSD2 as a payment method for e-commerce (PISP function) Support of SEPA-wide and local payment methods / iDEAL
In-Store	Enabler of PSD2-based PISP function at retail POS terminals
Digital merchant	A mobile solution and a wallet for merchants in the world of Instant payments: cross-method (P2P/PSD2) payments in real-time at POS, finance management, instant loans from liquidity providers
Fraud prevention	Digital Identity: deep cross-channel analysis for early fraud prevention and frictionless payments Leveraging a global behavioural database
Loyalty	Cross-merchant and cross-bank or own loyalty programs, integrated into the unified customer experience

KEY BENEFITS

Implementing the components from the abovementioned checklists will result in long-term business benefits that go beyond PSD2 compliance:

Retaining and expanding your customer base with the adapted or new service architecture.

Building a flexible service offering. Being truly omni-channel, as demanded by consumers.

Being open to cross-industry proposition and profitable partnerships.

If your company aims to be the market innovator, support this image with the below outcomes:

- New service value obtained through a gateway to TPPs or whole ecosystems of different services. Your traditional offering can be combined with new tie-ins. For example, bundle credit-based payments with the advanced credit scoring.
- Strengthened ability to introduce or adapt your services across the omni-channel user interfaces.
- New distribution channels for financial services.

If your approach to fintech innovations is more pragmatic, the below outcomes will be your priority:

- Fast regulatory compliance and shorter time-to-market. This is possible due to adaptation of the current service architecture (as opposed to launching a whole new platform).
- Optimised introduction costs and TCO, leveraging on the system architecture and service models already in place.
- Ensured usability and integrity of the resulting architecture, maintaining service perimeter for banks.

MAKE YOUR SERVICE 'ELASTIC'

1 Improved omni-channel interfaces.

Clear payment workflow with minimum friction via strong authentication and digital identity.

2 Enriched and personalised credit products, accessible to a user at the buying decision moment.

3 True 24/7 availability of payment and accounting services via Open public API with a global reach to user payment accounts, liquidity and payment methods.

4 Strong customer authentication complemented by dynamic cross-channel means of fraud prevention.

5 A clear service workflow across omni-channel user interfaces with transparent personal finance management and user data access.

6 Fast payment' hub covering closed-loop and global payment scenarios, utilizing SEPA instant payments.

7 Unified user experience across omni-channel digital banking interfaces, complemented by cross-provider loyalty programs.

3

**LET'S
MONETISE**

NEW & REINFORCED REVENUE STREAMS

PAYMENT & FINANCIAL INSTITUTIONS

- ✓ **Paid XS2A access and services**
 - ✓ **Interchange fees**
- ✓ **Reduced loss via strong fraud prevention**
 - ✓ **Expanded customer base via fast customer onboarding**
 - ✓ **Reinforced service offer with increased market footprint**
 - ✓ **New credit product revenues**
 - ✓ **More tailored rates on different customer segments**
- ✓ **Reselling fees of partners' financial and non-financial products**

ISSUING SIDE

PAYMENT INITIATORS

- ✓ **New acquiring and payment methods**
- ✓ **Merchant onboarding and transaction fees**
 - ✓ **Reduced cost of fraud**
 - ✓ **Increased market and customer segment footprint**
- ✓ **Reselling fees of partners' financial and non-financial products**

ACQUIRING SIDE

EMERGING MONETISATION DRIVERS

CONSUMER DATA & CROSS-INDUSTRY ALLIANCES

The Open Banking ecosystem allows every player to obtain relevant consumer data from TPPs. If banks and merchants utilize the data strategically, they can secure higher revenues from targeted offers.

A good example of data-driven revenue is provided by PwC in the abovementioned research. While many credit card providers 'still send customers multiple product offers in the hope that something will stick', only 'few can analyse a customer's deposit account, see that his or her salary deposit has increased, and send a note congratulating the customer on his or her promotion together with an offer of a premium card and a higher credit limit.'

The better service consumers receive, the more data they are willing to share. Eventually, supported by the open banking infrastructure, banks and other PSPs can accumulate solid data assets and monetize them in new cross-industry collaborations.

Partnership between banks and retailers, especially in the area of mobile banking and mobile wallet, enables the monetization of various consumer needs. For example, the value-added services such as location-based offers, convenient in-app 'air miles' tracking or real-time price comparison during shopping.

Some banks are already embedding themselves in other multi-industry ecosystems – such as the smart/digital city models (in Amsterdam and Boston), energy management projects (in Germany), and so on.

Accenture states that 'alliances between companies from different industries can guarantee differentiation and create novel, distinctive offers', in addition to the benefit of shared costs and risks. This is a 'fundamental, long-term trend', according to Accenture's report 'Cross-industry collaboration: Creating the enablers for disruptive models'.

THE REVENUE FROM CREDIT BASED PRODUCT

Banks may benefit greatly if they move from the product-silo paradigm towards thinking more about holistic credit line/liquidity management.

Today 'credit' primarily means cards or loans. In the future, credit can be distributed easily across different products.

The new credit offering can also carry different flexible fees and interests to enable higher revenues.

It seems safe to assume that consumers in the PSD2 and Open Banking era will not necessarily have any more liquid assets than before. Banks and merchants still need to enable consumers' to buy the things they want, even though they may not have immediate funds for the purchase. The new flexible and dynamic ecosystem will provide a fluid platform for product distribution, which is a great opportunity for banks to enhance their credit offering.

LET'S
TALK

This white paper is a brief introduction to the Open Banking opportunities, not an exhaustive guideline. For even more business cases and ideas, please get in touch with our team. We are also ready to address the technology questions related to PSD2 compliance and strategic development of your fintech infrastructure.

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