tuum.

KPMG × MIA FINTECH

Beyond Traditional Banking:

Digital Wallets and Core Technologies Redefining Finance

Executive Summary

Amid rapid technological advancement and shifting regulatory frameworks, financial institutions face the imperative to modernise their payment systems. This white paper, developed through a collaborative effort between KPMG, Tuum, and Mia-Fintech, demonstrates how modern core banking solutions and advanced orchestration capabilities are essential in creating sophisticated digital payment solutions. With a focus on digital wallets as a pivotal use case, we illustrate how these technologies offer the necessary flexibility, speed, and simplicity to meet today's financial service demands and anticipate future challenges.

The financial services industry is currently navigating a regulatory evolution, underscored by initiatives such as PSD3 and Instant Payments, which mandate a robust, adaptable, and scalable technology infrastructure. By integrating Tuum's advanced core banking platforms with Mia-Fintech's innovative orchestration capabilities, financial institutions can transform their payment functions to efficiently handle both traditional and digital currencies. This integration not only enhances transactional efficiency and customer experience but also ensures compliance with rapidly changing regulations.

*Our discussion provides **financial institutions with a clear roadmap** for leveraging modern digital tools to stay competitive in a **digital-first world**, ensuring that they are well-equipped to lead in financial innovation and customer satisfaction.*

Payment Regulatory Landscape

	Overview	*Goals / Opportunities*
1 **ISO20022**	SWIFT outlines that deadlines for migration implementation will carry on throughout 2023 and 2024, with CBPR+ coexistence coming to an end in late 2025.	• **Global scale** (This standard is about uniformity and setting the stage for next-level financial services globally) • **Harmonisation across networks** (by adopting ISO 20022, financial institutions can ensure compatibility and interoperability between their existing systems and blockchain/DLT networks) • **Data enrichment** (banks can harness the full potential of the data-rich standard to streamline operations and seize opportunities for market growth)
2 **SCT Instant**	Banks and PSP offering standard euro credit transfers must also provide instant euro payment services. The key elements include a timeline for banks to send and receive instant payments (10 sec), price parity with regular transfers, payee information validation and daily screening for EU-sanctioned entities.	• To promote the adoption of instant euro payments, making these services **more accessible** to consumers and businesses across Europe, through price parity (universal **availability** and **affordability**) • To **increase trust** in this kind of payment, through matching of IBAN and beneficiary name for error and fraud prevention • To ensure a **streamlined processing** while ensuring **compliance with EU sanctions lists**
3 **PSD2/PSD3**	PSD3 will impact financial institutions as it would place a system to check IBANs, and design a platform to enable payment service providers to share fraud-related information. Timelines for PSD3 enforcement are expected by 2026.	• To grant **fintechs** (Payment Institutions and E-money institutions) access to EU payment systems and ensure their right to **hold a bank account** (subject to safeguards); merge of the legal frameworks that apply to EM issuers and PIs • To introduce **common rules** on open banking interfaces for **data sharing** and **customer control** over their data. • To introduce a **common platform** for **fraud-related** information sharing among PSPs • Introduction of **new benchmarks** to improve **the performance of the Open Banking API** and to remove existing obstacles

Banks, aggregators, fintech, consumer associations and regulations in Europe need to understand the new triumvirate of open banking regulations that will start to come into effect next year: Instant Payments, Digital Wallets and PSD3 (which also includes a Payment Services Regulation and a Financial Data Access framework regulation).

The changes in payments regulation are only examples of forces shaping the market of financial institutions, payment service providers and companies enabling payment capabilities for their customers and partners.

The present and the future of money is digital. Our move towards digitization has presented us with new forms of money (i.e. stablecoins), to be able to work with traditional money systems and to move easily between different banks, payment providers and wallet accounts.

In general, within the realm of a bank or fintech organization, the payment function plays a crucial role intertwined with various dependencies across different facets of the organization, intricately connected to the underlying infrastructure. At the same time, having a **robust and flexible core banking layer**, able to **store value**, in more general terms, and enabling real-time funds transfer, will be a critical success factor for companies of different industries, not only financial services, enabling different use cases.

For example:

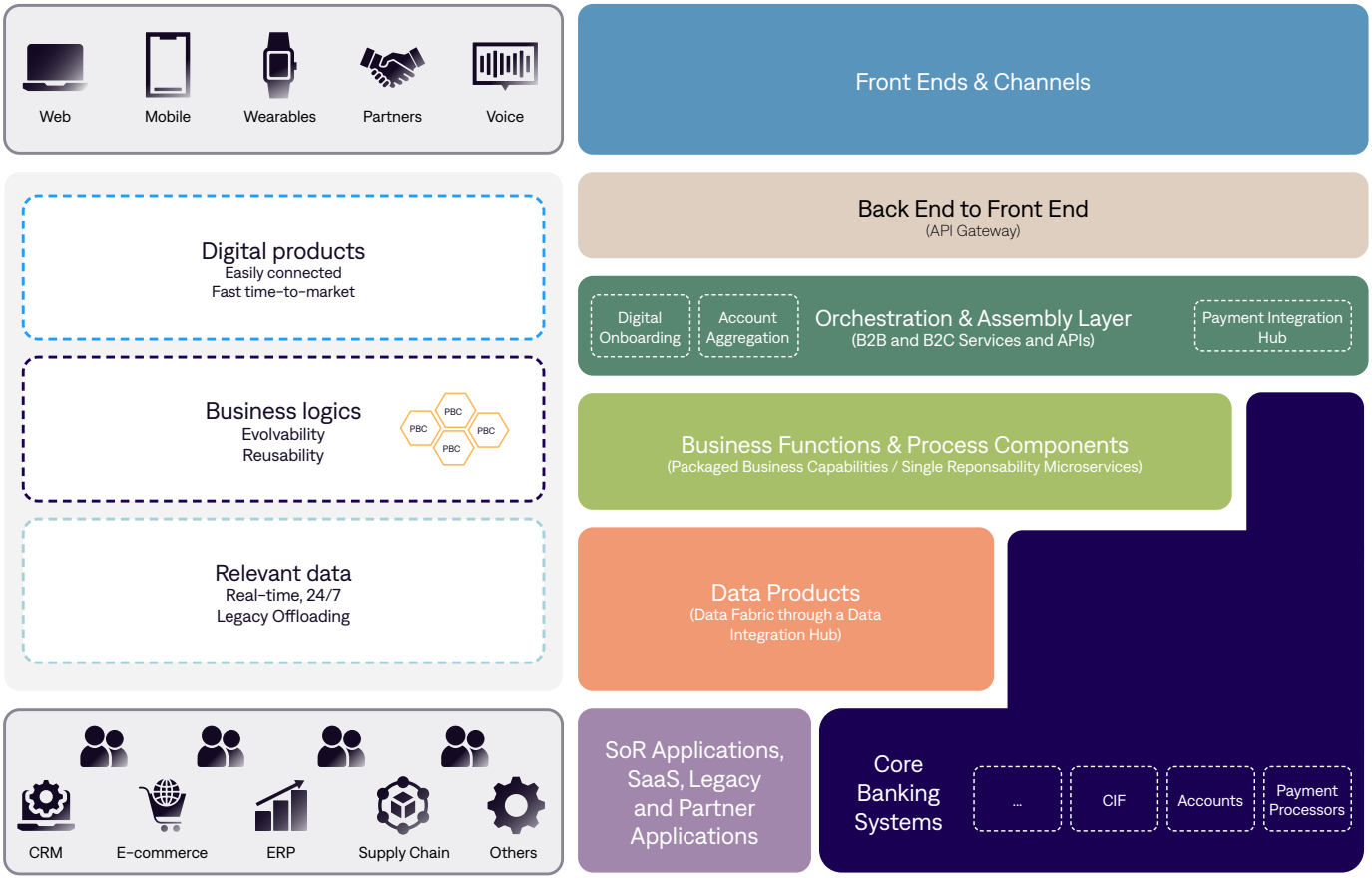
- Utilities companies can use a digital wallet account in order to manage rewards points for the customers, enabling conversion between reward points.
- Insurance companies can create digital wallet accounts for the customers, where they can store money, receive immediate refunds form the insurance company and from where they can pay for insurance contracts subscriptions/renewals. The digital wallet account adoption shall be able to increase the interactions between the company and customer and enhance the customer experience and the customer knowledge thanks to the customer behaviour data.

Importance of a modern core banking layer

Core banking forms the foundation of a financial institution, handling essential banking functions like customer data, KYC data, customer accounts, deposits, account withdraws, account balances, transactions, and its history. The payment function relies heavily on this core banking infrastructure to facilitate the movement of funds and ensure accurate recording of transactions. For example, every payment transaction involves a balance check, and credit/debit transactions between two “values storage”.

Importance of a platform strategy

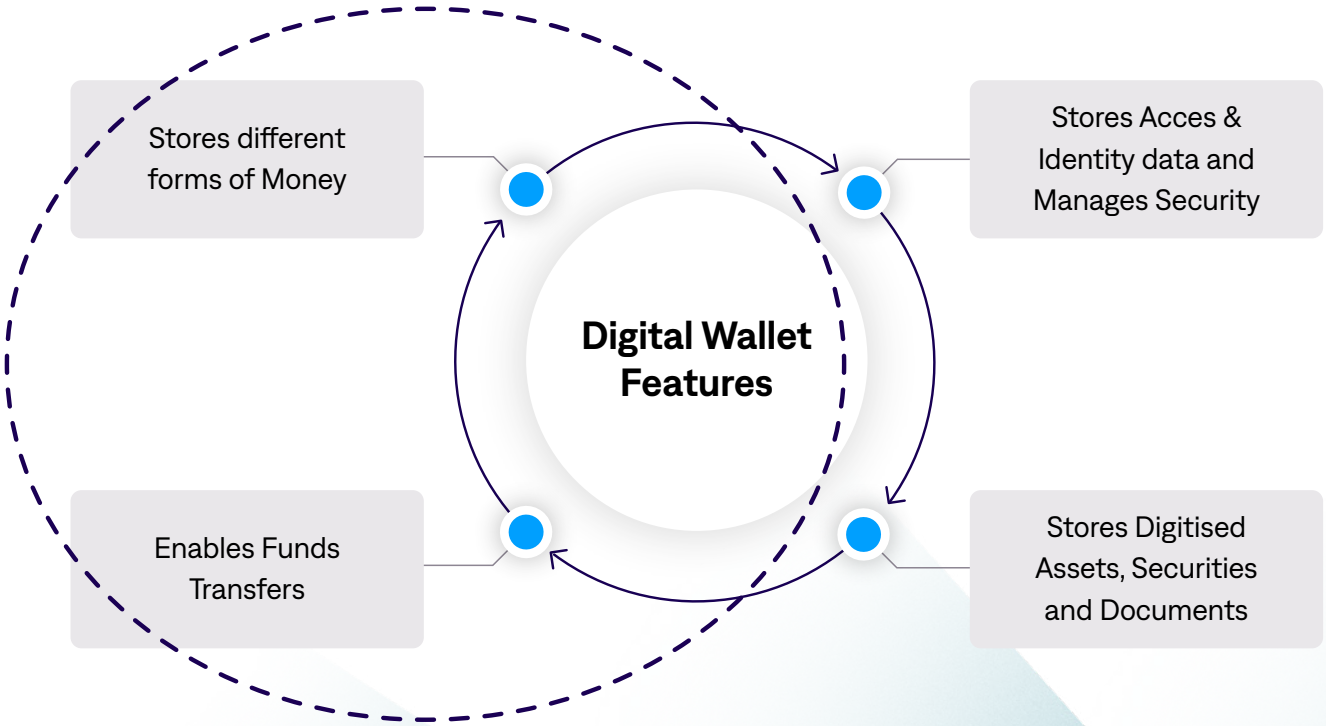
Banks and financial players aim to bridge the gap between legacy systems and digital experiences. A Digital Platform helps to fill this gap. A **Digital Platform** is an **incremental layer** of all the digital assets of a company, continuously **growing** and **evolving** over time. Companies that act as a digital platform are **more effective** in developing new **digital products** and responding to market changes.



A Digital Wallet Account Use Case

Digital Wallets are essential in today's financial ecosystem as they cater to the increasing demand for instantaneous, secure, and versatile financial transactions. They simplify the management of diverse assets, from traditional currencies to emerging digital forms like stablecoins and central bank digital currencies. By offering a unified interface for storing and transacting various forms of value, digital wallets enhance user convenience, improve security measures, and expand financial accessibility. Their adaptability makes them indispensable for both financial and non-financial entities looking to stay competitive in a rapidly digitising world.

Digital Wallets grant different capabilities; they store access and identity data, manage security, can store documents, cards, digitized asset and securities. They can store also different forms of money and enable the transfer of funds. Focusing on these two features, a Digital Wallet Account can be simply created leveraging Tuum flexibility and capability richness, in particular configuring Accounts and Payments modules.



A new kind of currency and other forms of money/value can be easily configured and assigned to a Digital Wallet Accounts, natively multi-currency, and therefore "multi-forms of money".

1

Wallet Request / Dashboards

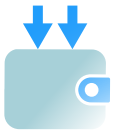
The user can view the requests that have been received by other wallet users for fund transfers as well as those requests that have been made to other wallets to receive funds, with the status.

Transfer Money From Wallets

- Existing Payee – Internal & Domestic transfers
- My Accounts – to their own accounts held in the PSP.New Payee

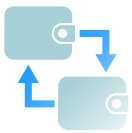
2

3



Recharge Wallet

- From the user's own Accounts (for existing Accounts users of the same PSP)
- Request for funds from other users' wallets (Wallet ID or Mobile Number or SEPA Instant Request-To-Pay)
- Funding from external sources such as credit cards, debit cards, other bank accounts (depending on Payment Aggregator support)



Transfer Money Between Wallets

- This feature enables the retail user having a wallet account with the PSP, to initiate the payments from his wallet to the other user's wallet by specifying his mobile number without adding him as a payee.

4

5

Wallet Details

Contract Data (Ids, Master Data, Address, Primary Bank IBAN, ...)

Reward Calculation Method

Multi-Currency / Virtual Accounts

Amount Block and Release

Interchange Commission Calculation & Liquidation

Electronic bill presentment and payment (EBPP)

Integrating Core Banking capabilities with MIA Payment Orchestration Hub capabilities may enable the exposure of Digital Wallet APIs. The setup of a multi-currency basic Digital Wallet Account, with a complete set of exposed APIs for its life-cycle management is a very fast process and enables financial services companies and non-financial players to manage the digital age in a cost-effective, flexible and fast fashion.

Financial Services Digital Transformation should start from the core

Modern Core Banking Platforms

Tuum is a 4th generation core banking technology provider. It's cloud-native, API-first, modular, highly configurable platform liberates banks from legacy limitations enabling the quick launch of new client -centric offerings and the introduction of new revenue streams and business models. Solutions built on these modern technology architectures are fundamental in helping financial institutions modernise and to compete with challenger, disruptive fintechs born in the cloud.

Importance of a modern core banking layer

Legacy platforms hinder performance of a digital company in four main areas:

Cost

Manual processes and low straight-through-processing rates result in unnecessary costs

Time to Market

Monolithic architectures and undocumented legacy code lead to slow product launches

Personalisation

Storing customer data in separate systems makes it hard to offer tailored experiences

Ecosystem

Partnerships are crucial for innovation, but existing architectures lack the necessary connectivity to third-party services

Main features and benefits of a modern core banking platform supporting the digital age

The main features of a modern core banking layer are:

- Accelerates **Time to Market**, and **reduced IT costs**, through flexibility of the parameterization. **Flexibility** enables and fuels **scalable** and sustainable growth and **adapting** to future requirements and regulations.
- **Product Standardization & Innovation**: the core layer of the platform is completely segregated from the added customizations/business logics added and it will be maintained by the core banking vendor in terms of new releases/patches.
- Enables **Modularisation** and **Composability**: Modularization and Composability refer to the existence of numerous players in a decentralized value chain, each using digital technology to provide a specialized service that meets the need of other value-chain players or end-customers. Modularization represents an alternative to the vertically integrated model, traditionally offered by incumbent financial institutions. A modern, modular, cloud native banking platform which supports APIs such as Tuum enables Modularization and Composability, helped both by platform-based marketplace like the one offered by MIA Platform and by Open Banking standards and practices. It also makes the traditional model more flexible and scalable. Types of Modular Banking Services include: Digital Wallets, Deposits, P2P Payments, B2B Payments, Identity Management, AML, KYC, Retail Lending, Liquidity Management.
- Enables **Connectivity** with the other layers of the digital platform and with third party services, through APIs. This will enable Open Banking and Open Finance.
- Is **Cloud Native and Multi-Tenant**: Cost savings and efficiency through 'elasticity', promised by the cloud, are only fully realized when businesses adopt 'cloud-native' systems capable of things like scaling up and down with no downtime. Systems that are complex, inflexible, and resistant to elasticity are not cloud native, and therefore cannot leverage the full advantages of cloud computing. All banks can benefit from a solution that is multi-tenant, whether they use the capability for themselves or whether they actually share tenancy with other banks. For themselves, a multi-tenant solution should allow a bank to run one core for all their products, customer segments, and geographies, while also enabling data segmentation.

A modern core banking solution, within a digital platform is a composable architecture bringing a number of benefits in terms of business agility.

Conclusion

The digital transformation in the financial services industry is not merely a trend; it is an essential shift that all institutions must embrace to thrive in an increasingly competitive and regulated environment. Advanced technologies like digital wallets, powered by modern core banking platforms such as Tuum, represent more than just a technical upgrade—they are a fundamental reimagining of how financial services can and should operate in the digital age.

The integration of Tuum's Core Banking platform with digital wallet functionalities offers unprecedented opportunities to enhance financial interactions. These technologies provide financial institutions with the tools to deliver more fluid, secure, and customer-centric services. Furthermore, they pave the way for financial services to include broader segments of society, particularly those who have been underserved by traditional banking systems, thereby expanding financial inclusion, and enabling economic empowerment at a larger scale.

As the industry moves forward, leveraging such technologies will be key not only to meeting the evolving demands of consumers but also in leading the charge towards innovation. The ability to rapidly respond to market changes and regulatory requirements with agility and reduced operational costs will set apart leaders from followers. Institutions that adopt these modern solutions will gain a competitive edge, achieving faster time-to-market and creating personalized experiences that resonate with customers, thereby fostering loyalty and trust.

In conclusion, the call to action for financial institutions is clear: **Embrace the digital revolution**, not as a series of incremental changes, but as **a comprehensive transformation strategy** that integrates advanced digital wallets, embraces open banking standards, and utilizes cloud-native platforms. By doing so, institutions will not only survive the current shifts but will **set the stage for a new era of financial innovation and customer engagement.**

About KPMG Advisory

The global KPMG Network is committed to a common growth agenda to consolidate its international leadership position in professional services. **KPMG** is more than the common methodologies and tools that we share. It's a **global approach** for our multinational clients **combined** with **local expertise**.

KPMG belongs to the **KPMG International** network, with more than **273.000 professionals around the globe and $36,4 billion** income during last fiscal year, operating in **143** countries. KPMG International shares, through the global intranet network (KGlobal) a wide set of knowledge, methodologies and research.

KPMG has a **global practice** specialized in the **Financial Services** and **Capital Markets industry**, focused on banking and insurance institutions, with more than **40.000 professionals** sharing knowledge and best practices through periodical updates, online forum and global events.

KPMG is committed to quality and service excellence, bringing our best to clients and earning the public's trust through our actions and behaviours both professionally and personally. We lead with a commitment to quality and integrity across the KPMG global organization, bringing a passion for client success and a purpose to serve and improve the communities in which KPMG firms operate.

In Italy our Network counts on 5.400 professionals and is represented by a network of 4 entities which offer **audit, tax & legal, accounting, and advisory services**.

KPMG Advisory **in Italy** with its more than **2.500 professionals** is a **market leader** within the "**Big Four**", and operates in the **management consulting** field, offering strategic, organizational, finance, risk and IT services.

KPMG Advisory, leader in Italy, in 1997 made a strategic decision: to complete its functional capabilities with strong IT expertise and focalization. This, nowadays, has turned up as a winning choice, as business performance improvement cannot be separated from enabling technologies.

In **Italy**, KPMG Advisory helps the main financial services and insurance institutions with a dedicated Business Line of Services ("***KPMG Financial Services***") with more than **500 professionals**, with specialized skills in industry vertical services. More in detail, in Italy KPMG has a core banking competence centre composed by a leading team with a strong design and implementation experience on core banking transformation projects, with different skills and capabilities, providing a single source for end-to-end services.

KPMG multidisciplinary competencies provide our customers with end-to-end solutions, and we think that our deep functional/organizational knowledge, combined with our IT design and development skills and our Program and Project Management methodologies and capabilities enable KPMG as a **global partner from strategy to implementation** including IT.

About Tuum

At **Tuum**, we're dedicated to liberating banks from legacy systems, reducing maintenance costs, and fostering digital innovation. **Our cutting-edge cloud-native, API-first, and microservices-driven platform** offers unmatched flexibility and scalability. With Tuum, there are no compromises – our comprehensive solution extends beyond core functions to include robust modules for accounts, lending, cards, and payments. **Our 'customization via configuration' approach** empowers banks to quickly tailor client-focused offerings and seize market opportunities with agility. Through our **API-first design** and **smart migration methodology**, we ensure seamless integration and fast, predictable migrations, with clients typically going live within 7 months. **Tuum enables business transformation**, allowing banks to launch new products and models with ease, setting them free to innovate continuously.

Tuum.
Core banking.
Without limits.

About Mia-FinTech

*Mia-Fintech is the **tech startup that has revolutionized the end-to-end creation of regulated digital platforms** in the banking and financial industries.*

Its cloud native software enables financial institutions to develop and create new digital services in a fast and scalable way, evolving towards innovative business models like **Open Finance** in full compliance with applicable laws and regulations.

Mia-FinTech solutions focus on a modular and composable approach, based on:

1. **Service Catalog** – a collection of ready-to-use software components for the financial sector. Accelerate the creation of digital services by leveraging cutting edge plugins developed and optimized by industry leaders
2. **Internal Developer Portal** – all your tools, services, applications, and data in one place. Streamline cloud native best practices to raise productivity. Rule your platform ecosystem to ensure quality and reliability of your digital services.
3. **Fast Data** — a modern Data Fabric to reduce the time of integrated data delivery, unlock legacy modernization and bring speed and scale to your applications.

Learn More

If you're ready to unlock the full potential of Tuum and experience our platform first hand, don't hesitate to reach out to our team at **contact@tuum.com** or visit our website.

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