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NEXT-GEN ACQUIRING PROCESSING

SUCCESS FACTORS IN MERCHANT ACQUIRING PROCESSING IN TODAY'S MARKET

REPORT — MARCH 2026

INDEX

Arkwright

Next-Gen Acquiring Processing
Success Factors in Merchant Acquiring Processing in Today's Market
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1. FOREWORD

In an ever-evolving payments industry, a fundamental question emerges: what defines best practice in payment acceptance technology?

Merchant acquiring relies on its processing infrastructure to function effectively. What began as largely in-house, monolithic platforms has evolved into a far more complex landscape. As transaction types have diversified and the value-chain has fragmented into specialised providers, technology and operating models have had to adapt. Many organisations today operate with a patchwork of legacy systems, while others are moving toward what can be described as Next-Gen Acquiring Processing capabilities.

This report, developed in partnership with Arkwright, examines that structural shift. Through industry analysis and executive perspectives, it proposes a clearer understanding of how modular architectures, API-based orchestration, and ecosystem collaboration are reshaping merchant acquiring.

At Merchant Payments Ecosystem (MPE), our role is to provide a platform where these developments are examined rigorously and discussed openly across the merchant and acquiring community. We are pleased to present this research ahead of MPE 2026 and look forward to continuing the conversation in Berlin.

We hope you find this report insightful and thought-provoking.

Natalia Ivanis
CMO & Partner

MERCHANT PAYMENTS ECOSYSTEM

2. EXECUTIVE SUMMARY

THE ACQUIRING INDUSTRY, HAS MOVED ON FROM LEGACY, MONOLITHIC INFRASTRUCTURE TO A FLEXIBLE, MODULAR, AND API-DRIVEN ARCHITECTURE

Following previous research that defined Next-Gen Card Processing[1] from an issuing perspective, this report is based on the working hypothesis that a similar concept may be applicable to acquiring processing too. Based on an analysis of the industry and interviews with merchant acquiring and acceptance executives from merchants, the conclusion is that there are some defining characteristics for what can be considered "Next-Gen Acquiring Processing".

The acquiring industry, and the underlying payment processing platforms, have moved on from legacy, monolithic infrastructure to a flexible, modular, and API-driven architecture. This evolution responds to the growing number of transaction types that merchants need to accept within the increasing number of channels and customer interfaces consumers use to make purchases. Moreover, robust integration with retail back-end systems stands as a critical, non-negotiable demand from merchants seeking operational excellence.

Based on the above points, we propose a definition of Next-Gen Acquiring Processing grounded in the ability to compose, orchestrate, and standardise best-of-breed components from a broader ecosystem, rather than relying on outright system and technology ownership that characterized the industry up to the "dotcom" days.

In this context, we define Next-Gen Acquiring Processing as built on three key capabilities:

- **Best-Fit Modular Architecture**: Ability to tailor the acquiring processing offering based on the unique requirements of target merchant segments through an architecture that decouples services into discrete, reusable microservices. These are developed, sourced and assembled strategically.
- **API-driven Orchestration**: APIs as the operational control and unified connectivity layer of the infrastructure, standardising data exchange and efficiently routing transaction flows, ensuring consistency and governance, thereby enabling scalability.

[1] Next-Generation Card Processing, 2024. https://www.arkwright.com/project/next-generation-card-processing.

- **Collaboration-centric**: Strategically leveraging third-party suppliers and partners to extend the reach of organisational capabilities and increase operational resilience, enabling market responsiveness through an "ecosystem-based" approach to compliance and risk management.

These are becoming ever more critical in view of the upcoming wave of agentic commerce disruption, where many merchants risk being degraded to fulfilment partners for AI chatbots. The ability to meet transaction functional requirements and to integrate with agents, for example by complying with emerging standards and protocols such as the Universal Commerce Protocol or the Agentic Commerce Protocol, will determine their ability to succeed within agentic commerce business models.

The transition of acquiring operations toward Next-Gen Acquiring Processing requires a strategically mandated, deliberate, phased re-platforming journey. This is based on four steps: prioritise modularisation, establish orchestration governance, implement a strategic partnership framework, and culturally align operations to strategically sourced modularity as a key to competitive advantage.

In merchant acquiring, as in any other industry, success is driven by the ability to address clients' needs effectively and efficiently. Success is defined by integration competency and the capacity to deliver highly customised, composite payment services at speed.

3. INTRODUCTION
WIDE RANGE OF TRANSACTION TYPES

FOR MERCHANTS, THE PAYMENT PLAYS A VITAL ROLE IN CLOSING A SALE.

Merchant acquiring is a fundamental component of any payment ecosystem, enabling merchants to accept electronic payments, which are a prerequisite for the functioning of digital payment systems.
It is a complex business whose success relies on the ability to support a wide range of transaction processing needs across different types of transactions, commonly referred to as “use cases”, and different channels. Merchants across industries exhibit distinct transaction characteristics.

Figures 1 and 2 present a non-exhaustive illustration comparing payment acceptance differences among selected merchants based on three transaction characteristics.

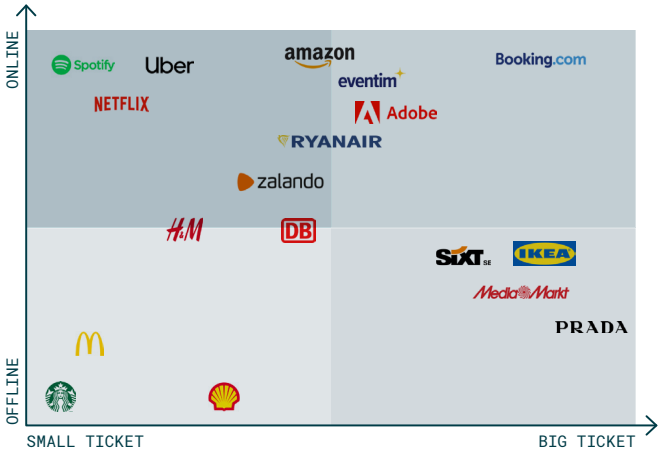


Fig. 1 — Sample of merchants operating across online/offline and small/big ticket value transactions.[2]

Fig. 2 — Sample of merchants operating across small/big ticket value and instant/deferred fulfilment transactions.[3]

Merchants conduct transactions across multiple channels, both online and in-store. Some channels operate unattended, while others involve transactions that require pre-authorisation or occur on a recurring basis. These transactions can vary by geographical reach and fulfilment timing. Each merchant industry, referred to as a “category” in merchant acquiring, has distinct transaction characteristics.

Figure 3 illustrates the main dimensions that define these types of transactions.

[2] Source: Arkwright analysis.

[3] Ibid.

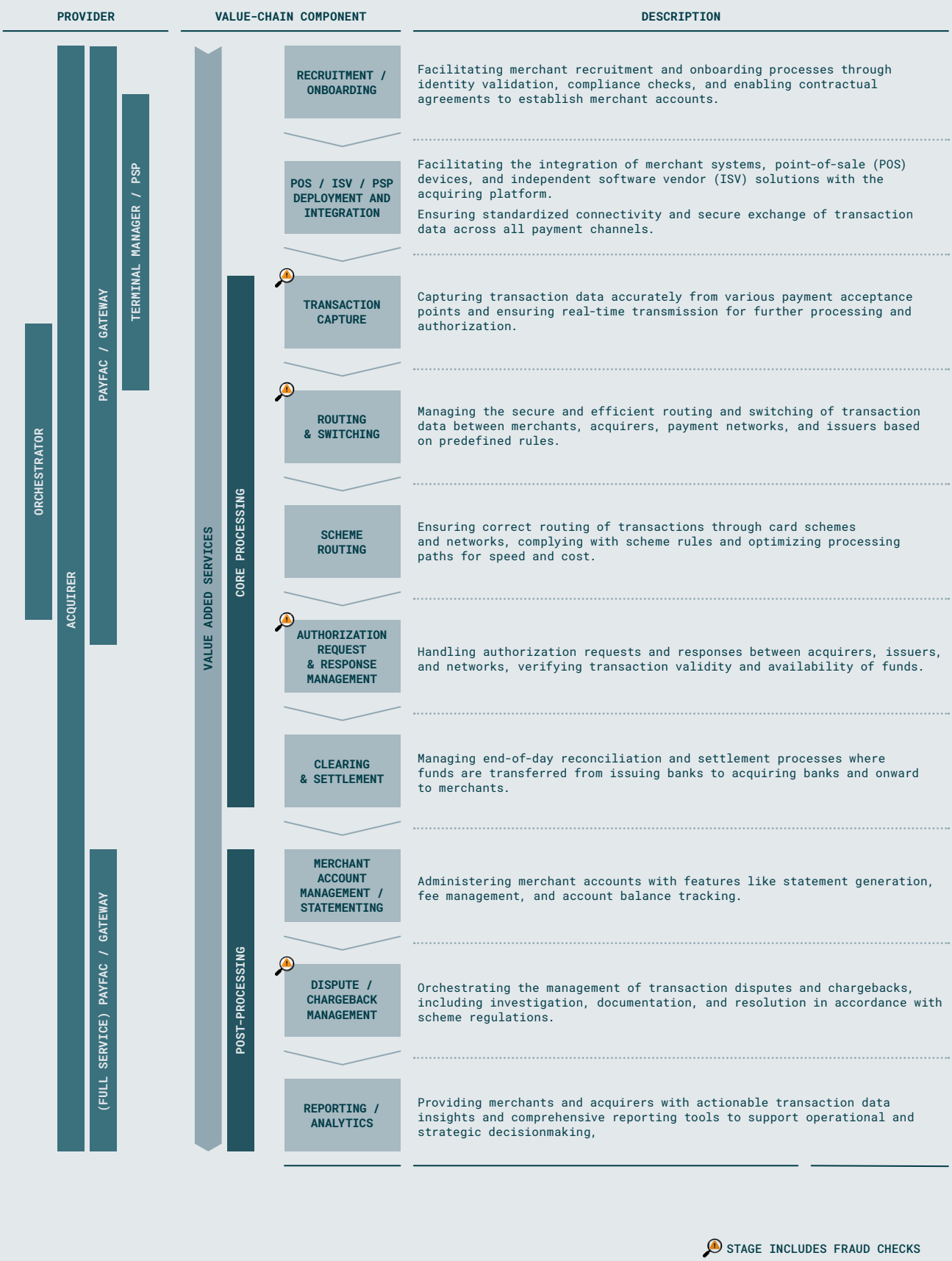
Different transaction characteristics necessitate distinct processing requirements and corresponding capabilities from the acquiring platform. While core functions such as transaction routing, authorization and response handling, pricing and interchange management, clearing and settlement, statementing, dispute management, and customer service form the foundational capabilities, they often vary significantly depending on the specific transaction use case.

This complexity is further compounded by emerging transaction types, such as Buy Now Pay Later (BNPL) and account-to-account (A2A) wallets, which require seamless integration into POS terminals and checkout flows.

Fig. 3 — Dimensions of electronic payments (illustrative).[4]

DIMENSION	CHARACTERISTICS	PAYMENT PROCESSING IMPLICATIONS
CHANNEL	ONLINE / OFFLINE / OMNI- / MULTICHANNEL	• ONLINE: API INTEGRATION, 3DS, TOKENIZATION, CARD-ON-FILE, ETC. • OFFLINE: POS DEPLOYMENT & MANAGEMENT, HARDWARE, ETC. • OMNI-/MULTICHANNEL: ORCHESTRATION ACROSS CHANNELS, ETC.
PAYMENT TYPE	CARDS / WALLETS / VIRTUAL CURRENCIES	• TRANSACTION CAPTURE: CARD, QR CODE, ETC • SWITCHING: INTEGRATION OF MULTIPLE PAYMENT RAILS, ETC. • SERVICING: STATEMENTING, DISPUTE MANAGEMENT, ETC.
INTERACTION	FACE-TO-FACE / SELF-SERVICE	• FACE-TO-FACE: STANDARD POS FLOW, LOW COMPLEXITY, ETC. • SELF-SERVICE: OFFLINE FALLBACK, HIGH AVAILABILITY, REMOTE MONITORING, ETC.
TICKET SIZE	LOW / HIGH VALUE	• LOW-TICKET: COST-EFFICIENT ROUTING/PROCESSING, ETC. • HIGH-TICKET: AUTHENTICATION INTEGRITY, DELAYED CAPTURE, ETC. EXTENDED FRAUD CHECKS/RISK MANAGEMENT, ETC.
PAYMENT TYPE	ONE-TIME / RECURRING	• ONE-TIME: STANDARD PROCESSING, ETC. • RECURRING: TOKEN VAULTS, CREDENTIAL LIFECYCLE, AUTOMATED RETRIES, ETC.
FULFILMENT / DELIVERY	INSTANT / DELAYED	• INSTANT: REAL-TIME AUTHORIZATION/CAPTURE, LOW LATENCY, ETC. • DELAYED: PREAUTHORIZATION, FLEXIBLE CAPTURE (AUTH/CAPTURE SPLITTING), LIABILITY HANDLING, ETC.
GEOGRAPHY	DOMESTIC / CROSS-BORDER	• DOMESTIC: SIMPLE SETTLEMENT, ETC. • CROSS-BORDER: MULTI-CURRENCY/DCC, LOCAL/CROSS-NETWORK ROUTING, MORE COMPLEX COMPLIANCE, ETC.

[4] Ibid.


PROVIDER
VALUE-CHAIN COMPONENT
DESCRIPTION
ORCHESTRATOR
ACQUIRER
PAYFAC / GATEWAY
TERMINAL MANAGER / PSP
(FULL SERVICE) PAYFAC / GATEWAY
VALUE ADDED SERVICES
CORE PROCESSING
POST-PROCESSING
RECRUITMENT / ONBOARDING
Facilitating merchant recruitment and onboarding processes through identity validation, compliance checks, and enabling contractual agreements to establish merchant accounts.
POS / ISV / PSP DEPLOYMENT AND INTEGRATION
Facilitating the integration of merchant systems, point-of-sale (POS) devices, and independent software vendor (ISV) solutions with the acquiring platform.
Ensuring standardized connectivity and secure exchange of transaction data across all payment channels.
TRANSACTION CAPTURE
Capturing transaction data accurately from various payment acceptance points and ensuring real-time transmission for further processing and authorization.
ROUTING & SWITCHING
Managing the secure and efficient routing and switching of transaction data between merchants, acquirers, payment networks, and issuers based on predefined rules.
SCHEME ROUTING
Ensuring correct routing of transactions through card schemes and networks, complying with scheme rules and optimizing processing paths for speed and cost.
AUTHORIZATION REQUEST & RESPONSE MANAGEMENT
Handling authorization requests and responses between acquirers, issuers, and networks, verifying transaction validity and availability of funds.
CLEARING & SETTLEMENT
Managing end-of-day reconciliation and settlement processes where funds are transferred from issuing banks to acquiring banks and onward to merchants.
MERCHANT ACCOUNT MANAGEMENT / STATEMENTING
Administering merchant accounts with features like statement generation, fee management, and account balance tracking.
DISPUTE / CHARGEBACK MANAGEMENT
Orchestrating the management of transaction disputes and chargebacks, including investigation, documentation, and resolution in accordance with scheme regulations.
REPORTING / ANALYTICS
Providing merchants and acquirers with actionable transaction data insights and comprehensive reporting tools to support operational and strategic decisionmaking,
STAGE INCLUDES FRAUD CHECKS

4. SPECIALISATION ALONG THE TRANSACTION LIFECYCLE

Fig. 4 — The merchant acquiring value-chain (illustrative).[6]

Specialization in transaction processing and acquiring technology stems from two key drivers. First, the acquiring industry has fragmented into specialized business models.[5] Second, payment interfaces now integrate many more transaction and service types. Recent developments in agentic commerce are making the ability to connect seamlessly in the context of an incoming wave of value-chain reconfiguration and further convergence of the retail, media and payment industries.

4.1. Specialisation within the Acquiring Value-chain

The merchant acquiring value-chain is complex and involves several key steps. It starts with recruiting and onboarding merchants, followed by integrating checkout devices and online interfaces. These steps align with the transaction lifecycle, as shown in Figure 4.

Historically, merchant acquirers handled these activities almost entirely themselves—except for specialist companies managing POS terminal delivery and integration. Over the past 20 years, however, the industry has evolved significantly. Specialist players have emerged, each focusing on specific parts of the transaction lifecycle and leveraging highly specialized technical and functional capabilities. Figure 5 (on next page) illustrates service and technology providers that focus on one or more steps of the acquiring value-chain, each with varying degrees of specialization.

Specialization has led to companies focusing on specific transaction types such as online transaction processing (e.g., PSP solutions), in-store payments, or terminal management services, as well as particular functions like fraud prevention or dispute management. Unlike in earlier stages of industry evolution, as detailed in the previous report “Merchant Acquiring Industry Dynamics”,[7] transaction processing specialization has developed in parallel with evolving merchant acquiring business models, the rise of new payment rails, and the emergence of new channels and interfaces.

[5] Merchant Acquiring Industry Dynamics, 2023. https://www.arkwright.com/project/merchant-acquiring-industry-dynamics.

[6] Ibid.

[7] Ibid.

ROLE	EXAMPLES	FUNCTION
TERMINAL MANAGER	verifone, nmi, ingenico, WORLDLINE, Aevi, PAX	Manages, updates, and monitors POS terminals.
ROUTING AND SWITCHING	ACI Worldwide, VOCALINK, Euronet	Connectivity and routing layer in the payment transaction infrastructure. Routes payment transaction messages.
PAYMENT SERVICE PROVIDER (PSP)	checkout.com, mollie, tyro, PAYONE, PayU, sumup, nuvei	Provides merchants with integration to multiple payment methods, risk management, and reporting.
PAYFAC	Fawry, BlueSnap, Razorpay, Fortis, wepay	Operates a master merchant account, onboards sub-merchants, and manages risk and compliance on their behalf.
PAYMENT GATEWAY	CyberSource, authorize.net, Braintree, Payoneer, mastercard Payment Gateway Services, shopify	Technical interface between merchant and acquirer, encrypts and routes transaction data.
ORCHESTRATOR	AKURATECO, IXOPAY, tribe, Primer, TRANZZO, JUSPAY, paynt, spreedly, IFPoS	Central layer that manages routing across multiple PSPs and acquirers, optimizing transactions.
INDEPENDENT SOFTWARE VENDOR (ISV)	NCR, retail pro, Zettle by PayPal, shopify, vend	Develops and sells software solutions that integrate with payment systems or POS hardware.
PROCESSOR	fiserv., WORLDLINE, tietoevry, Payoneer, nexi, BPC, COMPASS PLUS, TSYS, RS2	Handles the technical processing of payment transactions between merchants, acquirers, and card networks, incl. authorization, clearing, and settlement.
FRAUD SOLUTIONS	Ravelin, FICO, FEATURE SPACE, riskified, feedzai, Signifyd	Delivers tools to detect, prevent, and manage fraudulent transactions.
CHARGEBACK	Chargebacks911, VERIFI, chargeflow, ethoca by mastercard, justt, CHARGEBACK GURUS	Manages disputed transactions and chargeback processes on behalf of merchants. Tracks, responds, and provides evidence to contest or resolve disputes.
OTHER SERVICES (BILLING, DASHBOARD, BUSINESS INTELLIGENCE)	ZUORA, chargebee, ChartMogul	Value-added tools for operations, reporting, and analytics.

FULL-STACK PAYMENT SERVICE PROVIDERS: PayPal, adyen, stripe, helcim, Square, toast

Fig. 5 — Business models along the acquiring value-chain (illustrative).[8]

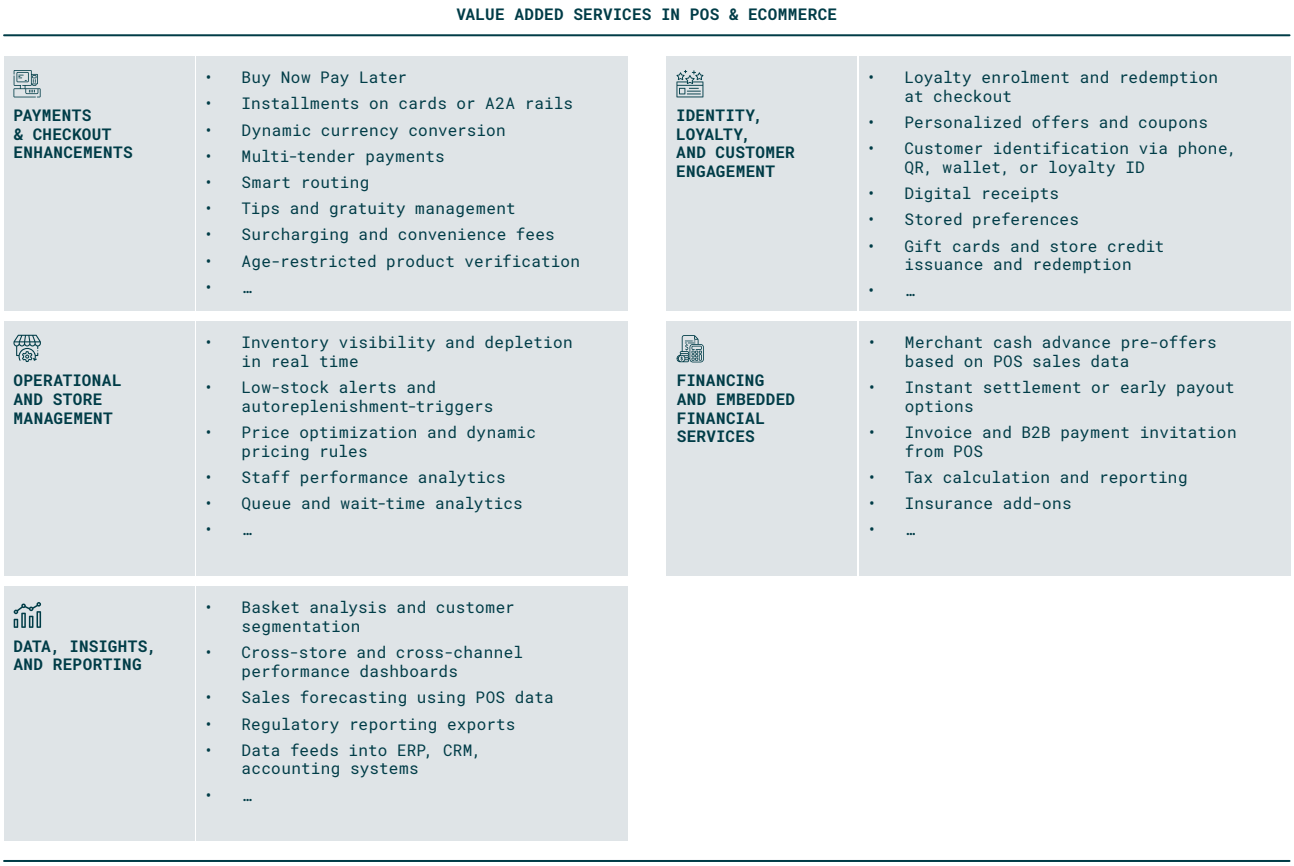
4.2. Value added services (VAS)

POS devices have evolved into distribution channels for value-added services (VAS), enabling VAS-centric business models that rely on connecting and embedding diverse services within a single interface. While this report does not delve into merchant super apps and smart terminals in particular, the topic has been analysed in detail in a previous report focused on platform ecosystem value propositions.[9] However, any discussion of acquiring processing would be incomplete without addressing VAS.

VAS comprises a variety of services embedded in payment interfaces that complement the shopping journey. Figure 6 provides a non-exhaustive illustration of key VAS integrated within payment interfaces or devices.

The implication –once again– is that merchant acquirers must integrate services and technologies from various specialized suppliers to deliver the comprehensive payment acceptance capabilities their merchants require.

Fig. 6 — VAS distributed through payment interfaces or devices (illustrative).[10]



[8] Ibid.

[9] From Platforms To Ecosystems (Developing High Value Business Models), 2021. https://www.arkwright.com/project/from-platforms-to-ecosystems-developing-high-value-business-models.

[10] Arkwright analysis.

Fig. 7 — AI in the merchant acquiring transaction lifecycle (illustrative).[11]

4.3. Artificial Intelligence

Artificial Intelligence (AI) has been integrated into payment companies' technology stacks for over 20 years. Initially focused on fraud prevention, AI is now standard across most stages of the transaction processing lifecycle for industry players.

Figure 7 illustrates the key functional steps of the transaction value-chain where AI is applied. While non-exhaustive and focused on common use cases, it highlights that seamless integration of AI technologies –whether in-house or from third-party specialists– is essential for modern core processing stacks and operations in payment acceptance.

AI-driven agentic commerce[12] is expected to reconfigure the retail, media, and payments industries, potentially reducing many merchants to fulfilment partners for AI-driven shopping agents.
The ability to meet transaction requirements and integrate with agentic systems, for example through emerging standards such as the Universal Commerce Protocol or the Agentic Commerce Protocol, will determine whether acquirers can participate in new retail business models or risk being sidelined over time.

In practice, this requires integrating transaction initiation and capture with an agentic commerce system that runs outside the acquirer's or merchant's stack, within third-party environments such as customer devices or retailer technology.

[11] Ibid.

[12] "Agentic commerce is an approach to buying and selling in which AI agents act on behalf of consumers or businesses to research, negotiate and complete purchases, often without direct human intervention." https://www.ibm.com/think/topics/agentic-commerce.

AGENTIC COMMERCE

OpenAI stripe | Google shopify

- AI-driven autonomous checkout allows agents to initiate payments for users while keeping the existing process unchanged, all card data remains stored with the PSP
- Live in the U.S.; ChatGPT partnering with Stripe and Google with PayPal

PROCESS		AI OPTIMIZATION STACK
CAPTURE TRANSACTION & PAYMENT DETAILS	STOREFRONT / CHECKOUT	**RISK-BASED CHECKOUT ORCHESTRATION** • AI profiles customers and transactions in real time, dynamically determining required checkout security **PRE-AUTHORIZATION OPTIMIZATION** • AI optimizes transaction data pre-issuer to match network and issuer requirements, improving authorization success
SELECT OPTIMAL ACQUIRER / NETWORK & SECURITY CHECKS	ROUTING / ORCHESTRATION	**AI-DRIVEN ROUTING** • AI dynamically routes transactions by selecting the optimal payment routing based on issuer behavior, risk signals, and cost efficiency **SMART ACCEPTANCE & DECLINE SUPPRESSION** • AI prioritizes high-success transactions and blocks low-probability ones before acquirer submission, reducing false declines and increasing approvals
ASSESS RISK & FLAG SUSPICIOUS ACTIVITY	FRAUD & RISK	**REAL-TIME FRAUD DECISIONING** • AI replaces set rules with dynamic risk scoring across behavior, network, and issuer signals to decide about transactions **ADAPTIVE SECURITY** • AI applies risk-based authentication and dynamic 3DS only where needed, minimizing friction for legitimate payments while optimizing acquirer submissions
PROCESS ISSUER DECISION & RETRIES	PROCESSING	**INTELLIGENT RETRY LOGIC** • AI evaluates declined transactions and determines optimal retry strategies to maximize approvals **POST-DECLINE OPTIMIZATION** • AI drives smart messaging, dynamic retries, and context-sensitive SCA exceptions, leveraging device, behavioral, and IP risk signals to reduce false declines and improve overall authorization efficiency
TRANSFER FUNDS & RECONCILE ACCOUNTS	SETTLEMENT	
CHARGE-BACKS	EXCEPTION MANAGEMENT	**AUTOMATED DISPUTE MANAGEMENT** • AI generates and submits evidence, reducing merchant effort and covering chargeback costs **PROACTIVE CHARGEBACK MITIGATION** • AI predicts high-risk transactions and triggers targeted interventions to minimize chargeback fees

PayPal | adyen | stripe | checkout.com | riskified

5. EXAMPLES OF SPECIALIZED ACCEPTANCE VALUE PROPOSITIONS

There are countless examples of specialized acceptance value propositions aimed at specific industries or focused on defined functionalities addressing particular merchant challenges. This chapter presents three examples: one focusing on an industry-specific solution, another on high modularity and flexibility, and the third on integrating AI to optimize payment cost efficiency and effectiveness.

5.1. Airline Payment Acceptance: Elavon

Elavon is a global payment service provider that specializes, among others, in acquiring solutions for the airline industry. Airlines face a unique payment environment: payments often occur long before service delivery, alongside stringent international compliance and complex risk management requirements. This acceptance proposition is illustrated in Figure 8.

Fig. 8 — Illustrative description of Elavon's airline acceptance value proposition.[13]

BACKGROUND
• ELAVON is a global paymem processor with strong roots in retail, hospitality, and increasingly in the airline segment • The company serves numerous major airlines worldwide with specialised payment solutions handling complex prepayment models with long-term service cycles • Paymemts are made well in advance of service provision (up to one year in advance), leading to complex risk management • Fraud prevention requirements, especially in international paymemts with diverse compliance regulations (e.g., PSD2 in Europe) and security standards • Complex multi currency treasury operations
SOLUTION
• Development of specialized risk management tools tailored to airline industry specific paymemTs acceptance • Digital integration with the airline systems enabling insight, controllability and rapid response to paymemt incidents • Integration with technology providers such as Digital Line (Audico), which offer AI-based digitaL assistants and advanced automation • Integration of embedded treasury finance such as working capital or loans are embedded directly into the paymemt system
OUTCOME
• Monitored risk management safeguarding the prepaymemt depended business model • Integration and embedded finance enabling more flexible payment processing

[13] https://www.electronicpaymentsinternational.com/features/interview-elavons-scott-frisby-on-embedded-finance-and-airline-payments/, Arkwright analysis.

5.2. Modular Payment Technology Stack: Checkout.com

Technology developments and changing customer channel priorities and purchasing behaviours require operational adaptability by merchants and their suppliers.

This demonstrates that monolithic, one-size-fits-all acceptance solutions have limitations in terms of adaptability, while a modular approach to payment platform architecture enables in practice flexibility, enabling merchants to select, integrate, and replace payment components independently based on their specific requirements.

An illustration of Checkout.com's modular approach is shown in Figure 9.

Fig. 9 — Illustrative description of Elavon's airline acceptance value proposition.[14]

BACKGROUND

- Modular approach decoupling payment functions into independently operating components that can operate separately or collectively mirroring the modular architecture typical of other technology industries (e.g. computing) providing merchants with flexibility to assemble a target technology stack without vendor lock-in or feature bloat

MODULAR PLATFORM STRATEGY

- Checkout.com's solution is built on a modular payments platform architecture that gives merchants the flexibility to tailor their technology stack to their specific payment acceptance strategies.

  It offers two deployment models:
  - merchants can either use a comprehensive end-to-end payment processing solution that manages the entire payment lifecycle
  - or adopt a modular approach that integrates selected Checkout.com components such as authentication as a standalone service with third party infrastructure and payment solutions
- A modular foundation provides the flexibility to add, remove, or swap suppliers at any stage of the payment lifecycle. This capability helps to avoid lock-in with a single payments partner while enabling merchants to manage functions based on requirements and related performance

OUTCOME

- Flexibility and single service economics with competitive pressure driving best performance (subject to APIs standardization across suppliers, this is a pre-condition to enable modules interoperability)
- Each product must compete on its own merits rather than relying on bundling or integration lock-in to retain customers

[14] https://www.checkout.com/blog/modular-payments, Arkwright analysis.

5.3. AI Integration: Adyen

Adyen Uplift is a machine learning solution addressing the core tensions in payment processing: balancing payment conversion, fraud prevention, and cost efficiency. Uplift leverages Adyen's transaction dataset to optimize all three dimensions simultaneously.
Launched in January 2025, Uplift integrates AI decisioning throughout the entire payment lifecycle.

Figure 10 illustrates its value proposition.

Fig. 10 — Illustrative description of Adyen Uplift.[15]

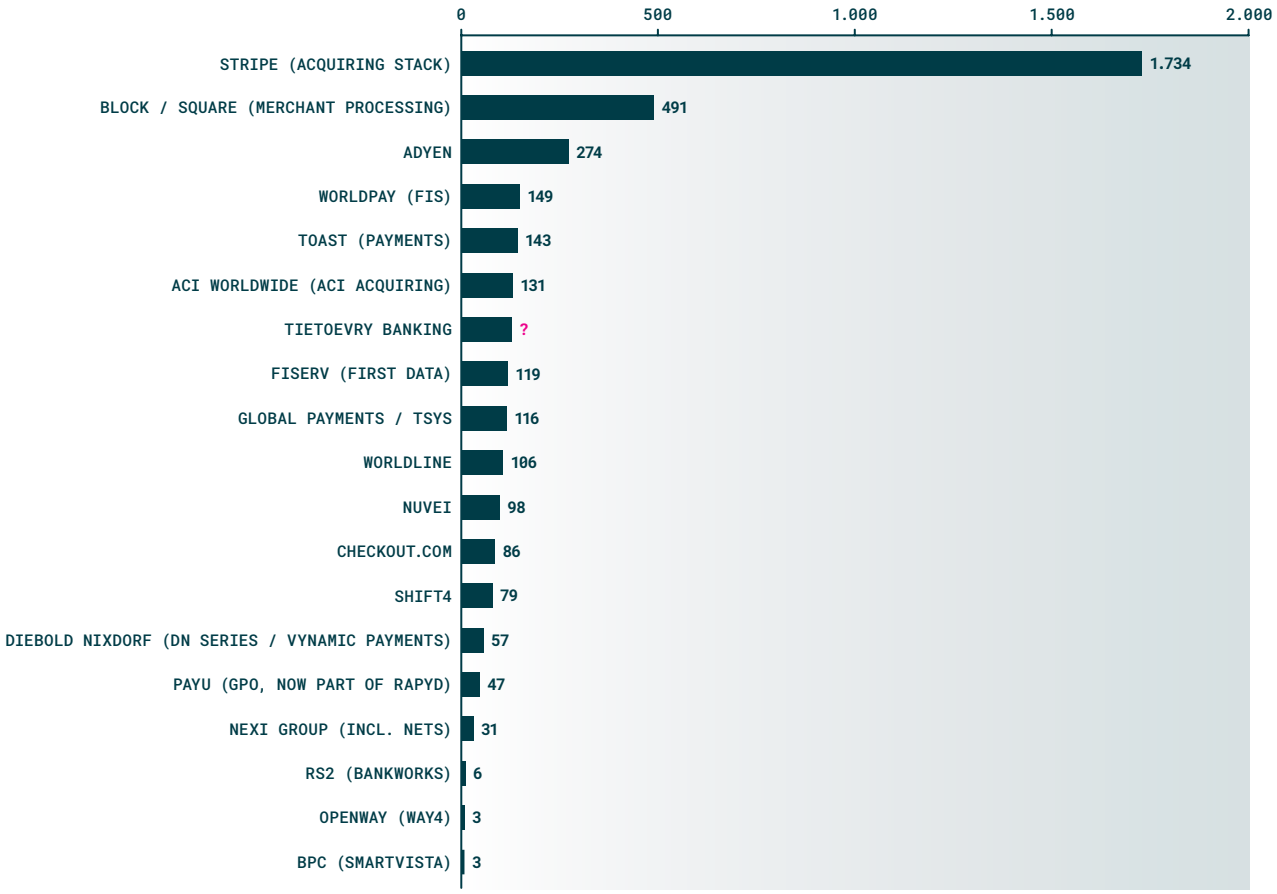
[15] https://www.ecebis.com/posts/adyen-launches-ai-powered-payment-platform-13012025aipayments ; https://www.adyen.com/press-and-media/adyen-uplift-launch ; https://www.adyen.com/uplift ; https://www.adyen.com/knowledge-hub/the-ai-behind-uplift, Arkwright analysis.

6. MARKET SNAPSHOT

We have analysed the extent to which acquirers source part of their technical processing capabilities from third parties and their API interface reach to see if there were differences across players. While no precise data exists on the number of suppliers an organization connects to or the external composition of processing infrastructure components, baseline research is available on the number of third-party organizations companies engage with.

This is illustrated in Figure 11.

Fig. 11 — Sample of acquiring processing providers by number of connected third-party organizations.[16]

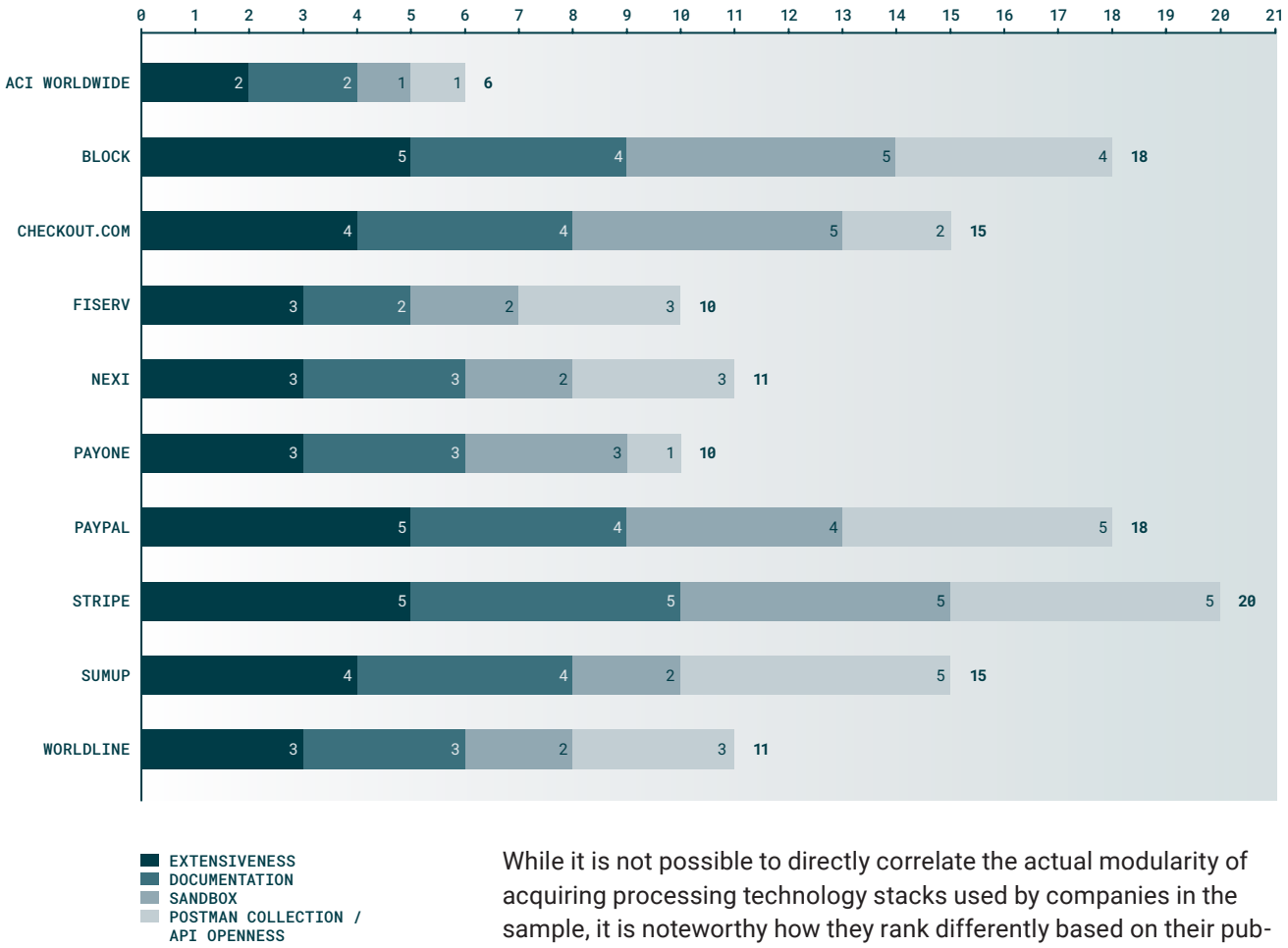


[16] www.partnerbase.com, Arkwright Analysis. Note that connected organizations are defined as “partners” by Partnerbase. The source does not specify the nature of the partnership and the working hypothesis is that this may include connected organizations in the context of embedded finance distribution as well as supplier relationships.

While it is not possible to directly correlate information from public sources with the modularity of underlying acquiring processing platforms, some organizations appear more partnership-focused than others.

Looking at published API documentation, it is possible to assess the sophistication of API interfaces offered by companies in the merchant acquiring industry. We analysed and ranked organizations based on their published APIs and documentation, evaluating extensiveness, documentation quality, sandbox availability, and API openness using data from Postman.[17] Figure 12 illustrates the scoring for a sample of organizations based on their published APIs.

Fig. 12 — Organizations ranked by published API characteristics.[18]



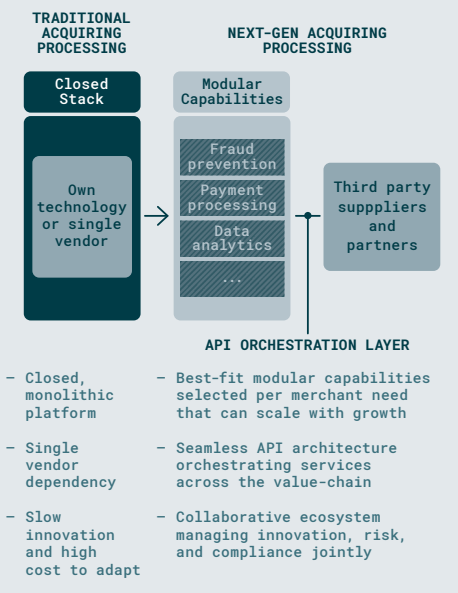
While it is not possible to directly correlate the actual modularity of acquiring processing technology stacks used by companies in the sample, it is noteworthy how they rank differently based on their published APIs. Organizations pursue varied distribution (e.g., embedded finance) and product (e.g., smart POS terminals) strategies, but the number and sophistication of APIs can be assumed to serve as a directional indicator of their relative positioning in terms of offering modularity.

[17] https://www.postman.com/, Arkwright analysis.

[18] Technical documentation available by respective companies, Postman.com, partnerbase.com, Arkwright analysis.

7. FROM CLOSED STACK TO MODULAR CAPABILITIES

Fig. 13 — From traditional acquiring operating model to Next-Gen Acquiring.[19]



In the early days of the acquiring industry, the operating model relied on a closed stack consisting mainly of in-house processing technology or sourcing from a single processing vendor.
The era of the traditional acquiring operating model has given way to modular operating models.
In-house capabilities have been replaced in many functions by a combination of internal technologies and functionalities from third-party suppliers and partners.

Figure 13 illustrates this shift in operational architecture.

The advantage of moving to an infrastructure with an API orchestration layer is modularity and the ability to select the most suitable capabilities required to meet a merchant's acceptance needs and scale as the business grows.
A seamless API architecture enables orchestration of services across the transaction lifecycle with strategically selected suppliers and partners.

The table in Figure 14 provides a comparative illustration of the characteristics of Next-Gen Acquiring Processing infrastructure.

Fig. 14 — Characteristics of traditional and Next-Gen acquiring processing infrastructures.[20]

FEATURE	TRADITIONAL ACQUIRING	NEXT-GEN ACQUIRING
ARCHITECTURE	MONOLITHIC, VERTICALLY INTEGRATED	MODULAR, DECOUPLED, API-DRIVEN
STRATEGY	SYSTEM OWNERSHIP	SYSTEM COMPOSITION & ORCHESTRATION
INNOVATION SOURCE	INTERNAL DEVELOPMENT	ECOSYSTEM PARTNERSHIP & BUY
COMPETITIVE FOCUS	INFRASTRUCTURE CONTROL	INTEGRATION & STANDARDISATION

[19] Arkwright analysis.

[20] Ibid.

8. CONCLUSIONS

The acquiring industry and its underlying payment processing platforms have evolved from legacy, monolithic infrastructure to flexible, modular, and API-driven architectures. This shift addresses the growing variety of transaction types merchants must accept across expanding channels and customer interfaces used for purchases. Integration with retail back-end infrastructure has also become a key requirement for many merchants.

Building on prior research defining Next-Gen Card Processing[21] from an issuing perspective, this report hypothesizes that a similar concept applies to acquiring processing. Based on the analysis above, we propose Next-Gen Acquiring Processing as the ability to compose, orchestrate, and standardise best-of-breed components from a broader ecosystem, rather than relying on the full ownership of systems and technology that defined the industry through the "dotcom" era.
In this context, we define Next-Gen Acquiring Processing as being built on three characteristics, each defined by four key capabilities (see Figure 15).

The transition of acquiring operations toward Next-Gen Acquiring Processing requires a strategically mandated, deliberate, phased re-platforming journey. This approach is based on four steps:

1. **Prioritise Modularisation**: Define core and non-core capabilities and operational areas, focusing on areas where open APIs will yield the fastest gains in agility and cost reduction (e.g., fraud, KYC/onboarding).
2. **Establish Orchestration Governance**: Define and build the core orchestration layer first. Establish clear governance models for data quality, API security, and performance standards for all connected components.
3. **Implement a Strategic Partnership Framework**: Formalise a "Buy vs. Partner vs. Build" decision matrix. Source capabilities selectively from specialised suppliers aiming to achieve “best performance”, speed, and flexibility.
4. **Cultural Alignment**: Drive a cultural shift from a technology-ownership mindset to one that masters integration and standardisation of needs-tailored solutions as a key competitive advantage.

[21] https://www.arkwright.com/project/next-generation-card-processing.

In merchant acquiring, as in any other industry, success is driven by the ability to address clients' needs effectively and efficiently. Success is defined by integration competency and the capacity to deliver highly customised, composite payment services at speed.

Fig. 15 — The Next-Gen Acquiring Processing key capabilities.

BEST-FIT MODULAR ARCHITECTURE	API-BASED ORCHESTRATION	COLLABORATION CENTRIC
SEGMENTATION Capabilities are perfectly tailored to the unique requirements of specific target merchant segments	**OPERATIONAL CONTROL** APIs as the operational control and as a unified connectivity layer of the infrastructure	**EXTERNAL LEVERAGE** Strategically leveraging 3rd party suppliers and partners
TAILORED SOLUTION Based on the selection and combination of specialised, marketlea-ding components	**STANDARDISATION** Utilises APIs to standardise data exchange and efficiently route transaction and data flows	**REACH & RESILIENCE** Extends organisational capabilities reach and increases operational resilience
DECOUPLING Core services (e.g., authorization management, fraud prevention, settlement, etc.) are decoupled into discrete, reusable microservices	**COMPLIANCE** Enforces real-time compliance policies across all components	**FEATURE VELOCITY** Enables accelerated deployment of new features increasing market responsiveness
STRATEGIC FOCUS Built and managed on the basis of a shifts from system maintenance to strategic system assembly	**CONTROL** Ensures consistency and governance allowing scalability across a range of suppliers and ecosystem	**RISK MANAGEMENT** Facilitates shared management of evolving regulatory and operational risk profiles jointly with customers, suppliers and partners

ABOUT MPE

Merchant Payments Ecosystem (MPE) in Berlin is Europe's #1 merchant payments conference, bringing together 1,600+ senior payments professionals, including 500+ global merchants.

Focused exclusively on merchant payments and payment acceptance, MPE connects merchants with acquirers, PSPs, POS software and hardware providers, financial institutions, fintech innovators, and start-ups from 50+ countries.

For 19 years, MPE has served as a barometer of the industry, highlighting the trends, innovations, and strategic shifts that will shape merchant payments over the next 12 months.
Through three days of high-level content and curated networking, MPE provides a platform where ideas are challenged, partnerships are formed, and business gets done.

Find out more at: https://www.merchantpaymentsecosystem.com/

ABOUT ARKWRIGHT

WE BELIEVE IN PRAGMATISM, METICULOUSNESS AND DEEP KNOWLEDGE OF THE INDUSTRIES IN WHICH WE OPERATE

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Arkwright is a management consulting firm offering strategy advisory services to private corporations, NGOs, investors and start-up companies. Amongst a number of different industry-dedicated teams, our Digital, Payments and Digital Banking practice is one of the most experienced globally, positioning Arkwright as a high-end digital financial services and payments specialist strategy boutique.

With clients that include major financial institutions, central banks, technology providers and institutional investors as well as internet market places and media organisations, Arkwright has hands-on experience in leading and supporting the development of digital strategies and digital transformation.

Our knowledge of global cases and best practices, proprietary ideation methodologies and the hands-on experience of our management consultants and industry experts is able to support throughout the strategy and implementation phases.

We believe in pragmatism, meticulousness and in deep knowledge of the industries in which we operate. At the heart of our mission is the development and implementation of enduring performance improvements and growth strategies, in partnership with our clients.

When we founded Arkwright in 1987, we did so with a strong belief that clients' sustained success requires deeper collaboration and a different working model than what we experienced at the time. Since then, our focus on deep-rooted, long-term partnerships with selective clients has formed the basis of our approach and helped us grow to what we are today: an international consultancy with Nordic roots, operating truly globally, from our offices in Hamburg, Oslo and Stockholm and with additional operational presence based in the Middle East and the US.