


# Future-Proofing Your Data Strategy

A Guide for Payment Service Providers





The payments landscape is undergoing a seismic shift. Merchant customer expectations are evolving rapidly, with a growing demand for seamless, secure, and personalized payment experiences.

Payments firms are seeking innovative solutions to optimize operations, mitigate fraud, and unlock new revenue streams. Imagine a world where your payments platform isn't just processing transactions — it's unlocking a trove of customer insights to personalize products, map customer behavior, and deliver the value-added services merchants need.

In this dynamic environment, payment service providers (PSPs) face a critical imperative: developing a future-proof data strategy to thrive in the face of constant change. However, PSPs face numerous data obstacles that hinder their ability to harness their full potential.

Implementing a comprehensive data strategy that addresses PSPs' core data requirements is a complex challenge. But with next-generation technology solutions and a data-centric approach, firms can tackle their most persistent data challenges. From unifying fragmented data to providing merchant reporting to leveraging AI for advanced analytics, CDOs can map a future-proof data strategy tailored to PSPs' unique needs.



# The Evolving Landscape & the Data Strategy Imperative

**Several key forces are driving the need for a strategic approach to data in the payments industry.**

## Fragmented Data Landscape

PSP data often resides in diverse locations and formats across the business. This is because many payment solutions and databases of the past were built without a cohesive data strategy in mind.

Mergers and acquisitions further compound the problem, with acquired companies bringing their own disparate data silos. Integrating this data into a unified platform poses a significant challenge.

## Merchant Dashboards & Visibility

Merchants working with PSPs increasingly expect a unified view of their payments data, including collections, payouts, chargebacks, refunds, and required actions.

This means PSPs must provide a single dashboard view by consolidating data from multiple systems.



## Risk Management Complexities

PSPs can leverage data to enhance merchant underwriting, create risk profiles, and perform real-time transaction monitoring. However, this requires sophisticated data capabilities that many companies struggle with. By implementing effective risk management, PSPs can minimize required reserves withheld from merchants.

## Transaction Routing & Reconciliation

PSPs often work with dozens of acquiring partners, sometimes over 100. They face major challenges in routing transactions to the optimal provider and reconciling data from all these sources. Reconciliation and consolidation of acquirer data into a single platform is one of the biggest ongoing challenges PSPs face on a daily basis.

## Billing & Invoicing Difficulties

Calculating transaction fees based on various factors like type, risk, processor, and payment method, and then applying the correct fee schedule is an incredibly complex task — which only increases for large PSPs. The billing and invoicing process is an equally complex, time-consuming challenge. Providing a unified invoice to merchants using different products across multiple gateways is far from straightforward.



Future-proofing your data strategy: A guide for PSPs

## Fragmented Data Landscape

Advanced data capabilities allow PSPs to provide value-added services to merchants. Examples include:

- Offering merchants loans or tailored advice based on their cash flow data.
- Enabling card-linked loyalty programs that leverage past transaction data.
- Providing granular customer insights based on analyzing buying behavior across merchants.
- Optimizing transaction routing and approval rates using machine learning.

However, achieving this requires significant investment in data infrastructure, advanced analytics, and AI/ML capabilities that many PSPs currently lack.

# Unlocking the Data Challenge

## Solutions for PSP Success

**Data holds immense power, but payments firms must strategically navigate the path to unlocking its full value. Understanding these challenges is crucial to navigating the data landscape.**

Consider these approaches to the unique data challenges faced by PSPs.

### 1. Overcoming Data Fragmentation

The data fragmentation challenge is vivid, with PSP data scattered across disconnected systems in varying formats.

Overcoming data silos and unifying data assets through strategic integration initiatives is key. This approach involves implementing robust data quality controls and establishing a strong governance framework to ensure data accuracy, consistency, and accessibility.





## 2. Enabling Merchant Reporting

Merchants today expect their PSPs to provide a consolidated view of their payment operations data.

PSPs can become valued partners by building robust merchant reporting platforms with intuitive dashboards that unify data across multiple systems. These solutions empower merchants with self-service analytics, enabling them to access granular transaction-level data for reconciliation and decision-making. PSPs should also expose this data to merchants through user-friendly APIs.



## 3. Strengthening Risk Management

Data capabilities are critical to an effective risk management strategy.

Risk management approaches should center on harnessing AI and machine learning to create powerful predictive models. With AI-driven solutions, PSPs can identify and prevent fraud in real-time, proactively detect suspicious activities, and optimize risk decisioning. Risk management practices must also comply with ever-evolving data protection and privacy regulations.

## 4. Streamlining Transaction Flows

The intricacies of transaction routing and reconciliation across multiple acquirers pose major challenges for PSPs.

Designing an optimal transaction routing architecture that minimizes costs and maximizes approvals is crucial. Leveraging a unified data platform enables seamless integration and reconciliation of data from all acquiring partners, replacing manual processes with automated workflows. PSPs can streamline transaction flows and focus on delivering a superior merchant experience.

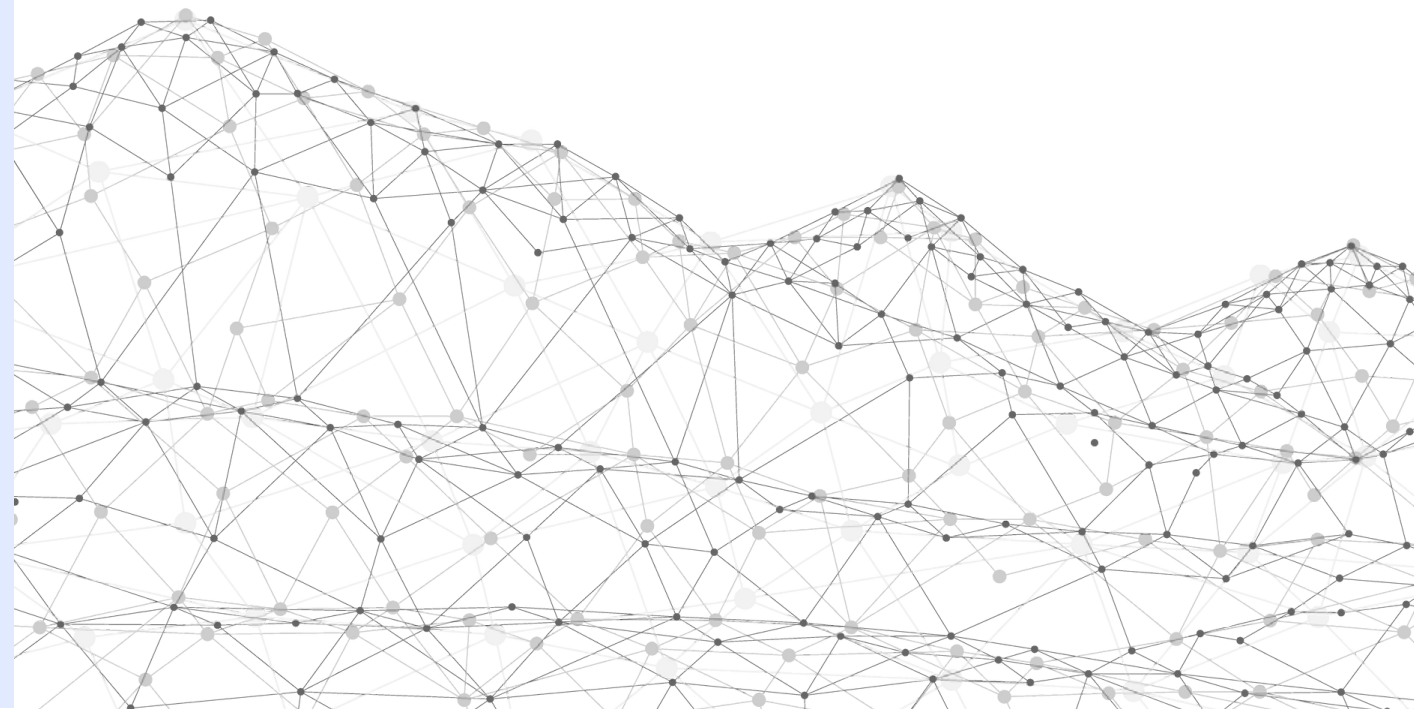
## 6. Unleashing Advanced Analytics

While PSPs often struggle with fundamental data challenges, advanced analytics hold immense potential to deliver value-added services. From merchant lending to loyalty programs to AI-driven personalization, data-powered insights can unlock new revenue streams and transform the merchant experience.

## 5. Optimizing Billing & Invoicing

Calculating transaction fees and generating accurate invoices is an immense challenge and a critical pain point.

PSPs can streamline their billing and invoicing processes through intelligent data automation. Solutions that consolidate transaction data across multiple systems, apply complex fee structures, and generate unified merchant invoices can reduce errors, improve efficiency, and ultimately deliver a more transparent and satisfying merchant experience.



# A Comprehensive Approach: Bringing Data Transformation Across the Organization

The path to data maturity is complex, requiring significant investment in technology, processes, and people.

By taking a holistic, strategic approach to developing data capabilities, PSPs can become truly data-driven organizations prepared for the future of payments. Consider the following eight areas crucial for mapping a unified data strategy across the organization — and harnessing its potential.



## Develop a Clear Data Vision

Define how data will be used to achieve business goals, whether that's powering new products, improving efficiency, or reducing risk. Ensure alignment across stakeholders.





## Assess Current Capabilities

Evaluate the maturity of current data infrastructure, governance, and literacy. Identify gaps and develop a roadmap to address them. Don't forget to assess data security as well.



## Upgrade Data Infrastructure

Many PSPs need to modernize legacy systems to handle growing data volumes and enable real-time processing. Key considerations include:

- Migrating data warehouses to the cloud for scalability and flexibility.
- Adopting API-driven microservices architectures for agility.
- Leveraging data lakes to cost-effectively store unstructured data.
- Implementing streaming data pipelines for real-time analytics.



## Unify Data from Disparate Sources

Integrating fragmented data is a major challenge, but essential to unlock its value. Best practices include:

- Establishing a single source of truth by reconciling data across systems.
- Leveraging data virtualization to create a unified data layer.
- Implementing master data management to ensure consistency.
- Exploring new approaches like data meshes and data fabrics.





## **Instill Data Governance & Quality Controls**

Putting the right governance framework in place is critical to ensure data is secure, compliant, and fit for purpose. Key elements include:

- Defining data owners, stewards, and custodians.
- Establishing and enforcing data quality standards.
- Implementing access controls and data protection measures.
- Creating a data catalog to drive discoverability.
- Developing policies for data retention and deletion.



## **Embrace AI & Machine Learning**

AI can be a game-changer for PSPs — but it requires high-quality data. Use cases include:

- Building predictive risk models to proactively prevent fraud.
- Optimizing transaction routing and approval rates.
- Personalizing customer experiences based on behavior.
- Detecting anomalies and preventing money laundering.



## Democratize Data Across the Organization

Data is only valuable if it's accessible and usable by stakeholders. Improving data accessibility may involve:

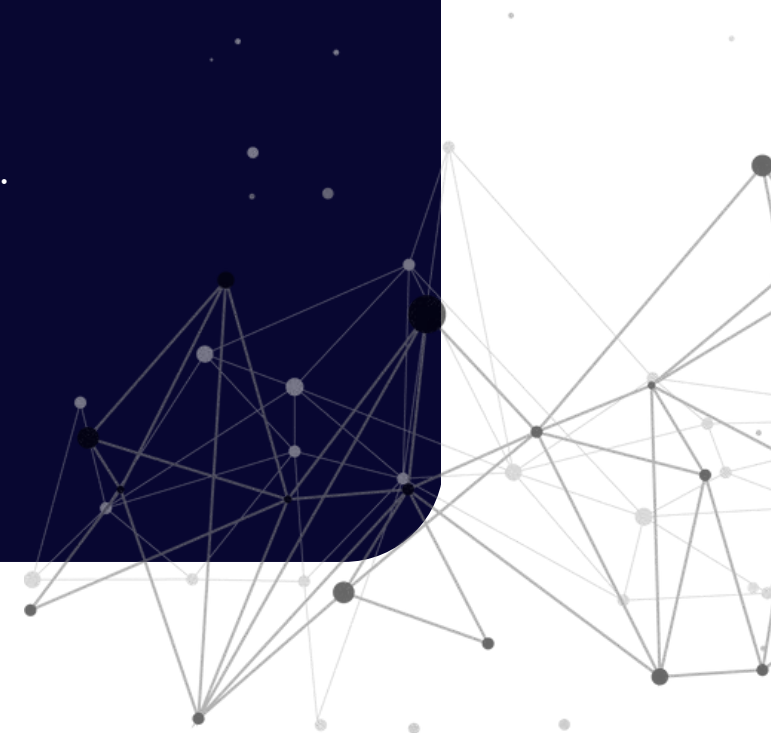
- Investing in self-service analytics and BI platforms.
- Training employees on data tools and driving data literacy.
- Establishing "analytics pods" aligned to specific business units.
- Hiring data evangelists to promote a data-driven culture.




## Future-Proof Your Data Platforms

As data volumes grow and use cases evolve, PSPs need adaptable, scalable data platforms. Key considerations include:

- Leveraging cloud data platforms for elastic scalability.
- Adopting containerization and serverless computing for efficiency.
- Implementing DataOps practices to streamline development.
- Exploring emerging technologies like edge computing and blockchain.





At Blankfactor, we understand the unique challenges PSPs face in unlocking the full potential of their data. Our team of industry experts and data specialists can help guide your organization's data transformation journey, from strategy to execution.

Whether you're grappling with data fragmentation, seeking to enable merchant reporting and analytics, or striving to harness advanced AI capabilities, Blankfactor has the experience and expertise to help you succeed. Let us be your partner in navigating the exciting future of data-powered payments.





# About Blankfactor

At Blankfactor, we are trusted by industry giants to engineer impact for the betterment of all. The fuel that propels us is building best-in-class tech solutions for companies looking to transform, innovate, and scale. Our practice leads have decades of experience across the payments ecosystem. From mobile apps for major card networks and smart routing for the acquirer value chain to card issuing for merchants, we've helped enterprises and fintechs unlock value and drive impact.

We are headquartered in Miami, Florida, with offices in Bulgaria, Colombia, and India, and we are rapidly expanding our global footprint. Our culture of engineering excellence, technical expertise, and care for both our clients and our talented workforce has made us one of the fastest-growing companies in America.

## Let's talk

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Book a [strategy session](#) with an industry expert and technical consultant today, or reach us at [415-625-2888](tel:415-625-2888).

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