Definitive Guide to Payments Orchestration
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Introduction

A Strategic Transformation
Payments Orchestration is the strategic transformation and/or routing of payment transactions across multiple payments providers. Like any solid multi-tool, it has immediate practical uses to meet current needs, along with a wealth of functionality embedded for future utility and projects. This guide will walk you through each use case in employing orchestration to its best effect in your payments ecosystem.

Payment Optimization Suite
Payments Orchestration is a pillar of VGS Payment Optimization, a suite of products designed to fine-tune every aspect of your payments environment. Collectively, these products are designed to optimize approval rates (sales throughput), increase local acceptance, maximize accepted payment methods, lower processing costs, and identify and manage risk while providing an exceptional customer experience.

Take Control of Your Payments Business
If you are exploring Payments Orchestration you may already be familiar with the concept and may have integrated with one or more payment service providers (PSPs) or gateways. This guide will provide additional context around concepts you are already using and introduce new, innovative ways to incorporate a network of PSPs.

Stripe and Braintree revolutionized ecommerce payments by allowing merchants to accept digital payments with just a few added lines of code. Today, with that same light lift from your developers, your business can take control of your payments business.

Payment Orchestration
Developing and deploying a robust payment strategy to determine where, when, and how you route your payment requests to achieve a range of business objectives.
Optimize Throughout

Chief among the benefits of Payment Orchestration is that it turns potential transactions into approvals, directly impacting your revenue and enabling your customers to swiftly and efficiently purchase the goods or services they are interested in.

Transactions may be declined for many reasons. Payment Orchestration focuses on minimizing false declines and, in an increasingly digital world, fraud-prevention is constantly balanced against onerous restrictions that can hamper digital payment growth. In a 2020 LexisNexis report, over 70% of ecommerce merchants (and over 90% of physical-goods only ecommerce merchants) indicated that false positives were a “challenge” with their payment service providers.


1 LexisNexis® Risk Solutions 2020 True Cost of Fraud™ Study North America Retail Edition June 2020
Optimize Throughout (cont.)

Payment orchestration makes sure that transactions route where they will be approved. This takes a number of forms:

**Direct Payments Away From Gateways Experiencing Peak Hours, Latency, or Down-time**
Gateways experience the same load-issues that all servers do. While rare, cases of latency or inactivity do occur. Payment Orchestration makes sure those issues stay contained at their source and do not impact your business. Failover routing automatically re-routes transactions to a secondary or tertiary provider.

**Transaction Details Determine Success Rates**
Information such as card type, transaction amount, card brand, currency, and the country-of-issue for the payment credential can all be used to determine which endpoint a transaction should be routed to based on approval-rate data.

**A Global Suite of Providers at Hand**
Route transactions using partners best-equipped to approve a given transaction with VGS’s 200+ supported payment providers. This network provides not only globally recognized electronic payment methods but also localized methods such as SOFORT or Giropay (Germany), WeChat Pay or Alipay (China), and Paylib (France).

**Local Acquiring Networks Support Cross-Border Payments**
When acquirers in a specific geo-location request authorization from an issuing processor elsewhere, decline rates generally increase. By transacting to processors with local acquiring relationships in a region, the authorization requests are treated as local instead of international and approved at a higher rate.

Each of these methods is quick and easy to employ. Individually and collectively, these simple approaches add up, decreasing false positives that result in higher approval rates and boosting sales volume.
Reduce Processing Costs

The most apparent benefit of Payment Orchestration comes from payment processing cost reduction. The impact of processing costs (thus savings) can be significant. As an example, for a merchant operating on a 15% profit margin for transactions involving card payments the processing fees could reduce their profit margin by 20% if they are paying 3% or more of processing fees just to accept digital payments. Using cost-based orchestration could reduce those costs by 1-2%, putting more revenue into your profit line item on day 1.

The swelling costs to process card payments reached a boiling point in 2011, when the Durbin Amendment was enacted to cap the Interchange Reimbursement Fees (IRF) – card processing fees paid to issuing banks – for debit card transactions. Unfortunately, this cap did not apply to credit card interchange fees or the fees that PSPs can charge a merchant. Processing costs can vary significantly. Some providers offer a flat pricing model like Stripe's 2.90% + $0.30 and some offer interchange-plus based models like Adyen's flat markup on interchange. Hybrid models, volume-based tiering, and potential revenue-sharing agreements may also be in place.

Effectively, this means routing low-cost card-credentials, such as debit-cards, to PSPs that offer a small markup on interchange instead of flat-fee providers like Stripe (where the cost to transact may be multiples of the actual costs to run of the transaction). This simple tweak could result in savings of over 2.0% for Durbin-regulated and 1.0% for non-Durbin regulated cards. Additionally, non-Durbin regulated debit cards could be processed over the Debit PIN networks for additional savings of ~1.0%. So whether you are optimizing your payments for approval rates or for process costs, with the VGS orchestration platform you can quickly build and deploy the logic you want to optimize and achieve your desired outcome. A 1-2% increase in revenue can be just a few clicks away with no other changes.

### Credit Card Processing Fees (2021)

<table>
<thead>
<tr>
<th>Credit Card</th>
<th>Fee Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastercard</td>
<td>1.55% – 2.6%</td>
</tr>
<tr>
<td>Visa</td>
<td>1.43% – 2.4%</td>
</tr>
<tr>
<td>Discover</td>
<td>1.56% – 2.3%</td>
</tr>
<tr>
<td>American Express</td>
<td>2.5% – 3.5%</td>
</tr>
</tbody>
</table>

Fees are estimated as of Q1 2022 via [ValuePenguin](https://www.valuelpenguin.com) and include interchange, dues, and assessment approximations.
Reduce Processing Costs (cont.)

Payment Orchestration lets you make cost-based routing decisions in each individual case. You can make the rules logic you use as basic or complex as you choose and base it on any information available for a single transaction. Below we have illustrated several scenarios of processing costs relative to a given transaction and how these minor differences in a few basis points can mean the difference between an operating gain or loss at year-end.

<table>
<thead>
<tr>
<th>Pricing Model</th>
<th>Provider</th>
<th>Debit IRF*</th>
<th>Visa Credit IRF</th>
<th>Amex Credit IRF**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interchange Plus</td>
<td>Adyen</td>
<td>IRF + 0.50% + $0.12</td>
<td>IRF + 0.50% + $0.12</td>
<td>3.30% + $0.10 + $0.12</td>
</tr>
<tr>
<td>Flat Pricing</td>
<td>Stripe</td>
<td>2.90% + $0.30</td>
<td>2.90% + $0.30</td>
<td>2.90% + $0.30</td>
</tr>
</tbody>
</table>

*IRF is the Interchange Reimbursement Fee which is the fee that gets paid to the Issuer. IRF varies by Merchant Category Code (MCC). For this example, we will use the Retail MCC CNP Rate. All rates are based on published rates as of Q2 2020.
**American Express interchange tables are not published publicly. We are using Q1 2022 Adyen pricing of 3.50%+$0.10 for a payment method fee and a processing fee of $0.12. Please note that pricing is subject to regular change, which could mean differences in the rates used throughout this guide.

$3MM ($1m Debit, $1m Visa Credit, & $1m Amex) CNP transactions at an online retailer, $100 average ticket size

<table>
<thead>
<tr>
<th>Pricing Model</th>
<th>Provider</th>
<th>Effective Debit Cost</th>
<th>Effective Visa Credit Cost</th>
<th>Effective Amex Cost</th>
<th>Total Processing Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interchange Plus</td>
<td>Adyen</td>
<td>$8,700</td>
<td>$27,700</td>
<td>$35,200</td>
<td>$71,600</td>
</tr>
<tr>
<td>Flat Pricing</td>
<td>Stripe</td>
<td>$32,000</td>
<td>$32,000</td>
<td>$32,000</td>
<td>$96,000</td>
</tr>
<tr>
<td>Optimized Pricing</td>
<td>Using VGS Payment Orchestration to route to the best provider</td>
<td>$8,700</td>
<td>$27,700</td>
<td>$32,000</td>
<td>$68,400</td>
</tr>
</tbody>
</table>

| Cost Savings with Payment Orchestration |  | $23,300 | $4,300 | $3,200 | $24,400 |

Simple steps to save basis points on processing costs make a huge difference when scaled to the size of a medium or large ecommerce merchant. You can begin optimizing these costs from the first day of using VGS Payment Orchestration. As outlined in the table above, the potential benefits of directing payments to low-cost providers are substantial.
Grow Your Business by Going Global

VGS Payment Optimization offers solutions for your business today and in the future. Even as you build an orchestration layer to maximize throughput and lower costs in your current environment, your business will likely diversify and expand vertically, horizontally, and/or globally. Payment Orchestration can be both the doorway and the accelerant to those developing regions of your business.

Cross-Border Business

As the digital economy continues to grow, your business is likely seeing an expansion of physical or digital orders from around the globe. As mentioned above, cross-border payments can present a series of problems for merchants including heightened fraud awareness, lack of local regulatory environments or behavior, and onerous controls mean more false-positive declines and frustration for merchant and customer alike. In addition, domestic payment providers may not support the preferred payment methods of cardholders. Transactions marked as cross-border also typically have additional and prohibitive costs associated with accepting them and currency conversion service is often slow and expensive for all parties.

Global providers into your hands so you can:

- You can route transactions to partners more likely to approve or competitively price transactions in specific currencies or originating from specific countries.
- Obtain local acquiring partnerships that reduce the "cross-border risks" that heighten false declines.
- Get transactions treated as local, regardless of where they originate, meaning higher success rates, lower costs, and a better experience for all parties.

Horizontal & Vertical Growth

Perhaps your business is expanding into new verticals and markets or releasing products to a completely new set of consumers. Either way, Payment Orchestration can support your growth.

Diverse Payments

As your customer base grows, so will the diversity of payment methods they submit. Perhaps new segments will be using a greater share of debit cards, EBT, buy-now-pay-later; you will want to offer the preferred payment methods of your new segments in a simple and cost-effective model.

Non-card Payment

If you are entering the B2B space, offering a non-card payment form such as ACH may be a core component of your new approach. You can route ACH payments for timing and costs across providers.

High Risk Areas

If you’re expanding into higher-risk areas of the market, you will want to integrate with processors that understand their specific sector and the consumers supporting it. Certain providers specialize in transacting in higher-risk market areas and serve as long-term partners in entering a new market.

VGS supports over 200+ payment providers that provide globally recognized electronic payment methods and localized methods such as SOFORT or Giropay (Germany), WeChat Pay or Alipay (China), and Paylib (France).
Control Your Data

Payments has traditionally been seen as a utility, a simple plug-in to accept digital transactions. As outlined in the above sections, payments has moved from a utility to a business driver with Payment Orchestration: increasing revenue, reducing costs, and streamlining growth. With Payment Orchestration come new levels of control and ownership of your data.

Your Data is an Asset You Own

In many cases, when merchants have one or more direct processor integrations, they are forfeiting the rights to their data - they do not own the transaction information that passes through their system. This can serve as leverage processors maintain over their merchant clients. It also keeps merchants from fully understanding their client behavior in making business decisions. VGS provides full data ownership to you across all your processing environments.

Reducing Business Dependencies

Having just 1-2 direct integrations means business dependencies on specific providers. While this has an immediate impact during, say, latency with a particular gateway, it has larger implications over how to run a business. Payments Orchestration can effectively mirror your current processing environment with an abstraction layer that reduces counterparty dependency. Just having the optionality to swiftly integrate to other providers to achieve any of the business objectives discussed in this guide provides peace of mind and the agility in addressing payments issues. A problem that could be potentially devastating in a single-integration payments system becomes no great cause for concern.

Your data is an asset. With VGS, that asset is yours across your entire processing ecosystem. By abstracting your payments environment, VGS provides merchants flexibility and independence on top of the tangible benefits of cost-saving and revenue generation.
The Payment Optimization Gestalt

Payments Orchestration, just like your payments ecosystem does not exist in a vacuum at VGS. The entire VGS Payments Optimization suite, is built on the Very Good Security vault, which aliases, stores, and transmits not just sensitive payment data (eliminating PCI scope), but also any other fields you wish to secure. This ensures that your data remains secure and your firm in compliance with popular standards like PCI, GDPR, and CCPA as your business grows.

Payment Orchestration is a product that evolves with your business; it responds to your current and future business objectives by offering multiple layers of customization that can fine tune many aspects of your payments apparatus. Similarly, as part of the VGS Payments Optimization suite of products, orchestration, while a powerful driver in itself, synergizes with the rest of the VGS Payments Optimization products to accelerate growth, lower costs, increase security, and manage risk.
Glossary

**ACH Payment**
An ACH (Automated Clearing House) payment is a type of electronic bank-to-bank payment. The ACH system is a way to transfer money between bank accounts, rather than going through card networks or using wire transfers, paper checks, or cash.

**CCPA**
The California Consumer Privacy Act (CCPA) is a state statute intended to enhance privacy rights and consumer protection for residents of California, United States.

**Cross Border Payment**
Refers to transactions involving individuals, companies, banks or settlement institutions operating in at least two different countries.

**Flat Pricing**
A pricing model that charges businesses a fixed percentage fee and fixed transaction fee for each transaction. Flat pricing is different from Interchange Plus pricing where businesses pay a different fee per transaction.

**GDPR**
The General Data Protection Regulation (GDPR) is a legal framework that sets guidelines for the collection and processing of personal information from individuals who live in the European Union (EU). Since the Regulation applies regardless of where websites are based, it must be heeded by all sites that attract European visitors, even if they don’t market goods or services to EU residents.

**Interchange Plus Pricing**
The markup that a processor charges on top of the interchange reimbursement fee to cover their costs of doing business. Interchange Plus pricing is also known as cost plus pricing.

**Interchange Reimbursement Fees (IRF)**
A fee paid by an acquirer (a financial institution that processes card transactions on behalf of a merchant) and the acquirer's processor to an issuer (a financial institution that issues cards to cardholders).

**Optimized Pricing**
A pricing model that allows businesses to reduce transaction fees through cost-optimized routing with Payment Orchestration.
Glossary (cont.)

Payment Gateway
A payment gateway is the "virtual" equivalent of a physical credit and debit card reader that connects the issuing bank account with the receiving bank account to transmit online payment information and securely authorize the transactions. A Payment Gateway communicates the approval or decline of transactions between businesses and their customers.

Payments Orchestration
The strategic transformation and/or routing of payment transactions across multiple payments providers to improve transaction success, increase sales conversions, and lower transaction fees.

Payment Service Provider
A third-party company that assists businesses to accept a wide range of online payment methods including online banking, credit cards, debit cards, digital wallets, cash cards, virtual cards and more.

PCI DSS
The Payment Card Industry Data Security Standard (PCI DSS) is a set of security standards designed to ensure that ALL companies that accept, process, store or transmit credit card information maintain a secure environment.