THE PAYPAL PHENOMENON

Lessons from the Leading Edge of Online Payments

NOVEMBER 2001

In a brief two years, PayPal has emerged as the most successful new payment service provider on the Internet. Growing at a rate of 18,000 new accounts per day atop a base of 10 million registered users, PayPal, more than any other service, is shaping how the online community thinks about consumer payments. While the traditional financial services industry looks on—partly in contempt, partly in awe—PayPal continues to bear down: focusing on customer needs, methodically expanding its service, and steering toward profitability.

This research report examines PayPal's clear market success to determine what lessons can be taken away by others in the financial services industry. After describing how the service has evolved into a point-to-point payment service, it looks at the company's customer value proposition, innovative marketing approach, and overall positioning in the payments industry. The report concludes by distilling the lessons learned from PayPal into six simple rules for developing new payment services.

. . . . . .

In the innovation-to-market journey, The NuVantage Group assists clients in understanding their market context and its dynamics; developing strategies and processes to enter and respond to market evolution; guiding their organizations amidst chaos and turbulence; and building the organizational culture that allows ongoing, leading edge innovation. NuVantage works with clients on strategy development, market analysis, business model development, product positioning, competitive analysis, and product management. The NuVantage Group is based in Palo Alto, California.

www.nuvantage.com

In a brief two years, PayPal has emerged as the most successful new payment service provider on the Internet. Growing at 18,000 new accounts per day atop a base of 10 million registered users, PayPal, more than any other service, is shaping how the online community thinks about consumer payments. The company created, and now dominates, the market for a new type of payment service—person-to-person payments—that is widely recognized as the first Internet-centric payment mechanism.

With no background in financial services but with a deep understanding of the nature of the Internet, founders CEO Peter Thiel and CTO Max Levchin have built PayPal into an eCommerce payments engine that handles $10 million per day in online payments. Despite an increasingly sluggish Internet economy, analysts still project that $3.5 billion in online payments will flow through the PayPal network in 2001.

Often referred to as e-mail money, because it sends payment instructions person-to-person via e-mail messages, PayPal today handles 200,000 transactions per day—nearly three out of every four e-mail money transactions on the Internet. Investment firm Robertson Stephens projects 100 million e-mail money transactions across all payment service providers in 2001. The same firm projects that the total market for person-to-person payments will grow to four billion transactions by 2005, at which point 42 million people will be using e-mail money.

Today, many consider PayPal the industry thought leader in emerging alternative payment services—a profile based on its success, but also on its inventive approach, its flexibility in addressing real-world customer problems, and its willingness to explore alternative business models in pursuit of profitability.

Incumbents in the financial services industry debate whether this success is based on strategic planning, pragmatic opportunism, or old-fashioned dumb luck. When PayPal was founded, the concept of e-mail money was not new, having been conceptualized five years earlier by First Virtual, perhaps the first Internet payment service to fail. Other startups were quick to form, emulate PayPal's technology, and fade into dot-com history. Established financial service leaders have successfully replicated PayPal's service, only to struggle with customer acceptance. So why did PayPal succeed where others failed?

The secret to PayPal's success is surprisingly uncomplicated. The company identified a *clear customer problem*, devised a *simple, cost-effective solution*, and then let *customers create market demand* and drive adoption.

Though the opportunity to lead in person-to-person payment services has passed for the traditional financial-services industry, it is not too late to understand and internalize what PayPal did right and wrong—and to apply the resulting lessons to future products and services. The lessons learned from PayPal can be distilled into six simple rules for developing new payment services:

- **Focus on the customer**. Understand the market; be responsive to real-world needs; act with an obsessive customer orientation.

- **Keep it simple**. Keep it understandable; make it easy to use; let simplicity itself be the key competitive edge.

- **Exploit the Internet**. Play by Internet rules; develop new features that leverage the Internet; use the Internet as the dominant go-to-market channel.

- **Design for adoption**. Eliminate as many adoption dependencies as possible; make it easy for target customers to become registered users; keep providing compelling reasons for registered users to increase their use of the service.

- **Think incrementally**. Start small, get market feedback, and then incrementally make it a little better. Remember that big things grow from lots of little things.

- **Costs matter.** Price the service to reach critical mass first; adjust the pricing for profitability later; obsessively drive down internal costs at every opportunity.

There is nothing magical about this approach; others in the financial services industry should be able to follow the philosophy behind these rules—and the many lessons learned along the way—as they develop and introduce new online payment services.

How Person-to-Person Payments Work

PayPal was originally conceived as, and remains in part, a person-to-person payment service built on the back of the existing credit-card system. Users went through a simple registration process to create a PayPal account, then moved funds into the account with a credit-card transaction. The user's e-mail address doubled as the account name and a simple, user-assigned passphrase protected the account balance.

To send a payment to another person, a user first went to the PayPal Web site, accessing his or her account through a SSL connection. After entering an e-mail address and passphrase, the user then directed a specific amount of funds to be transferred to another party (as keyed by the payee's e-mail address). PayPal then sent the payee an e-mail notifying that funds were awaiting transfer to the payee's account. The transaction amount was frozen until the payee accepted the payment. If the payee did not yet have a PayPal account, the e-mail notification served as the viral trigger that prompted him or her to register with PayPal, and thus accept the funds.

The e-mail notification created the illusion of money being sent via electronic mail. In spite of all the analyst talk of "e-mail money," however, at this level PayPal was a notational system that simply debited and credited accounts, with e-mail used only for notification.

Once a payment was accepted into the payee's account, the payee could leave the funds there for later use, use the funds within PayPal to pay another user, or withdraw the funds for delivery via paper check, sent through the U.S. Postal Service.

To encourage users to leave funds with PayPal, the company later offered a money-market account into which new funds were automatically swept each night. When a payment was made, the appropriate funds were automatically pulled back into the user's PayPal account before being sent on to the payee. The interest-bearing account also illustrates how PayPal weaves service features together. In order to take advantage of the interest-bearing account, users must surrender their social security number. This serves as one more anti-fraud measure, incrementally getting to know more and more about each user.

Consistent with PayPal's market-development strategy, all services were initially free. Users did not pay to open an account, move money into accounts, send money to or receive money from another person, or withdraw funds from an account. Instead, PayPal's original business model hinged on earning float interest on the funds held in accounts and circulated within the system.

Payment Service Evolution

As acceptance grew, PayPal's original service evolved to better meet users' needs in a way that was more cost-effective. Users were given the option to fund their PayPal accounts with ACH bank-account debits, a move that signaled PayPal's intention to move away from the credit card as its sole funding instrument (and major source of fraud), while dramatically lowering its behind-the-scenes cost of funds. Eventually, users were given the ability to pay sellers directly with a single credit-card transaction, eliminating the need to pre-fund a PayPal account before making a payment.

In addition to offering users more flexibility, bank-account debits also significantly lower PayPal's cost to fund accounts. Instead of a credit-card processing cost of $0.18 plus 1.9%, PayPal incurs a flat ACH debit processing cost of $0.03 per transaction.

Realizing that float was not a viable long-term business model, PayPal eventually tiered its user structure. Casual users were given personal accounts, while a new tier of professional users was given access to business accounts that came with added features but carried associated fees. Users wanting access to such features were encouraged to upgrade their personal accounts. High-volume users, those accepting more than $100 per month in credit-card payments, were forced to upgrade to this new type of revenue-producing account.

In addition to offering richer features to users, PayPal business accounts are structured to partially mitigate the company's fraud risk. Upgrading from a personal account requires a user to authenticate an account through two additional financial instruments:

- **Credit card**. Linking a valid credit card number and billing address to a PayPal account helps validate a user's identity.

- **Bank account**. Linking a bank account to a PayPal account further validates a user's identity. Once such a link is established, PayPal makes two ACH deposits of arbitrary amounts to the user's bank account. By determining the value of the two deposits and relaying that information back to PayPal, the user confirms his or her identity to PayPal.

In addition to mitigating potential fraud by further identifying the account owner, the activation process removes the $1000 limit on credit-card spending and configures the user to fund purchases out of a bank account (with no potential for chargebacks) and to use direct ACH deposits for settlement.

Once upgraded, business accounts let users:

- **Use a business identity**. Business users can present payment requests using a business identity instead of a personal name, thus reinforcing branding.

- **Accept unlimited credit-card payments**. With confirmed identity there is less risk of seller fraud and, consequently, no restrictions on the volume of credit-card payments users may accept.

- **Accept payments to a Web site**. PayPal payment requests can be automatically triggered from a merchant's Web site without sending a manual e-mail payment request to the buyer.

- **Access a PayPal shopping cart**. Payment requests for multiple items, described through a merchant's Web site, can be automatically aggregated using the standard online shopping-cart metaphor. Upon checkout, PayPal calculates shipping uplift charges and presents a single payment request to the buyer.

- **Send mass payments**. Rather than manually entering and sending hundreds of payments to individuals, a business user can simply upload a mass payment file of sequential e-mail addresses and payment amounts; PayPal takes care of the rest.

- **Establish multiple login privileges**. A business user can give PayPal account access to up to 200 employees, each with a unique login ID and level of authority. This lets power sellers give some employees access to account balance and payment history, but no authority to move funds.

Further differentiating the two tiers of service, business accounts have access to a round-the-clock telephone call center, while personal accounts must rely on e-mail for customer support.

With a business account, users can still (at no cost) move funds into or out of an account and send payments to others—but must now pay a per-transaction fee of $0.30 plus 2.9% of the payment amount on every payment received—the so-called standard rate. To further tier its payment service offering, PayPal has recently begun differentiating between its standard rate and merchant rate. Business users qualifying for the merchant rate have been PayPal members for at least 90 days and average $1000 per month in transactions. For qualified accounts, the merchant rate drops the transaction fee to $0.30 plus 2.2% of the payment amount.

The availability of these business account features creates new market dynamics and potentially even new applications for online payments. A good example of this is PayPal's mass payment capability, which provides a cost-effective mechanism for small businesses to handle affiliate commissions, pay-to-surf rewards, and survey participation incentives. A Web site operator might develop an affiliate marketing program that rewards participants $0.03 for each referred link to their Web site. At the end of the month, the Web site operator could send a mass payment of $863 to 62 affiliates. The total cost to the Web site operator to do this through a PayPal mass payment is $0.00.

In the business account's twelve months of availability, two million of PayPal's 10 million users have upgraded from personal accounts to business accounts. Though comprising only 20% of the user community, these business accounts—many of which are eBay power sellers—drive 90% of transactions in the system. With a $50 average transaction value, PayPal earns $1.23 in fees, on average, per transaction.

In making this transition, PayPal has demonstrated tremendous dexterity. While retaining nearly free services for those making casual payments, the company has evolved its business model to the point where nine in 10 payments generate transaction revenue without necessarily incurring any real-world transaction costs.

By distinguishing between personal accounts and business accounts, allowing funding of payments from multiple sources, and extending payments to merchants, PayPal effectively transformed its original *person-to-person* payment service into a *point-to-point* payment service for small business.

Value Proposition

Today, PayPal offers two related value propositions, one for sellers and one for buyers. The seller's primary value proposition is based on several factors:

- **Convenience**. Payment requests can be sent to buyers, and merchants can manage their account using nothing more than a browser. For merchants operating Web sites, simple cut-and-paste PayPal payment triggers can be embedded into HTML with no need to install or use a payment-processing gateway.

- **Low cost**. The two-minute signup process is quick and painless, and can be done directly online. No significant time is needed to sign up with PayPal or to learn to use or administer a PayPal account. Ongoing transaction fees are low compared to those of traditional credit-card processors and, in many cases, more competitive than what the merchant could negotiate alone.

- **Security**. With all payment processing pushed out to PayPal, merchants need not maintain a credit-card database, hold online records, or take extraordinary steps to protect consumer financial information from hackers. They do not even need to authenticate the buyer, since that is handled by PayPal, and they receive notification that the payment has been made before having to deliver services or ship goods.

The corresponding buyer's primary value proposition follows:

- **Convenience**. Using nothing more than a Web browser, buyers can make a payment to any of two million small businesses and eight million other individuals. Signup is entirely online and takes only seconds.

- **Flexibility**. Buyers have the flexibility to make payments from a PayPal account balance, from a banking account, or with a credit card.

- **Security**. Buyers need never reveal financial information to merchants and need not worry about the ongoing exposure that might allow merchants to mismanage, misuse, or leak credit-card information. Neither are buyers required to reveal a social security number when opening an account.

To further underscore the importance of security to both buyers and sellers, PayPal offers up to $100,000 of account insurance to protect against unauthorized withdrawals from any PayPal account, including unauthorized withdrawals from any checking account linked to PayPal.

Circling back to PayPal's original vision for person-to-person payments, buyers can be sellers and sellers can be buyers as circumstances dictate. This completely differentiates point-to-point payment services from traditional card processing, and underscores the similarities between point-to-point services and peer-to-peer systems.

Dealing with Online Fraud

The hallmark of casual commerce—easy, low-hurdle registration and quick account activation—is also its Achilles' heel. Minimal requirements for both buyers and sellers mean that online fraud is a major challenge. Not surprisingly, for PayPal, both buyer fraud and seller fraud have been an ongoing headache. Its approach to both has evolved over time as the company has adjusted its fraud prevention policies, monitored the results, and tweaked them further in a never-ending cycle.

Buyer Fraud

To protect sellers from fraudulent buyers, PayPal initially tried—perhaps naively—to assure that all funds entering the network were final. The User Agreement was structured so that, in order to open a PayPal account, users had to forfeit their right to issue chargebacks. In addition to being unworkable in practice, this approach was disallowed by the card associations, which required PayPal, as the merchant of record and the *master merchant* on all transactions, to handle all chargebacks.

PayPal then switched strategies. To make all payments to sellers final, the company absorbed chargebacks itself—rather than passing them on to merchants—and guaranteed payment on all transactions to sellers. Although noble, this approach to fraud prevention was, in practice, a disaster—lasting only six months as PayPal soon realized that it was attempting, in its words, to "insure the Internet" against bad transactions.

Finally, PayPal hit on its current approach to buyer fraud: protect merchants from chargebacks due to fraud (including payments made with stolen credit-card numbers and false claims of non-shipment) when they ship to confirmed buyer addresses and follow the complete rules of PayPal's Seller Protection Policy. Though PayPal does not require sellers to ship only to confirmed addresses, by eliminating the potential for downstream chargebacks on these transactions, it provides a strong incentive for merchants. Unfortunately, when shipping to international buyers, merchants are not protected from seller fraud and must absorb any potential chargebacks.

PayPal's large percentage of purchases using alternative funding sources—those beyond credit cards—finalize transactions sooner and eliminate the potential for chargebacks.

Combined with the buyer protection program, this approach appears to be working. Though the Gartner Group reports that 2.6% of all Internet transactions are fraudulent, PayPal has today achieved a 0.5% fraud rate as seen by sellers. The following table illustrates the source of funds used to settle purchases made through PayPal today.

Funding Sources for PayPal Transactions		
Source of Funds	**Payment Risk**	**Frequency**
ACH debit to bank account	Low (no chargebacks)	27%
Debit against PayPal account balance	Low (no chargebacks)	23%
Direct credit-card charge	High (chargeback potential)	50%

In addition to shifting the funding source mix, PayPal also leverages its volume to identify potentially fraudulent credit-card purchases—using proprietary fraud pattern-matching software, developed in-house, to scour relevant transactions in the background and look for potential credit-card fraud.

Seller Fraud

To protect buyers from fraudulent sellers, PayPal provides a Buyer Complaint Process that helps buyers escalate merchant problems through PayPal. Although PayPal will attempt to recover any funds owed to the buyer, it offers no guarantee. Buyers may gauge potential problems with sellers by examining the seller's account type (personal or business), status (verified or non-verified), and amount of time as a PayPal user. This information is presented to the buyer as an integral part of the purchase process.

Also to help mitigate fraud, PayPal has recently deployed a reputation-management system that uses the number of non-contested transactions a user has participated in as both a buyer and a seller—in effect, the user's reputation within the PayPal network—as an indicator of his or her trustworthiness. Buyers use these reputation indicators to assess a seller's reliability, while sellers use them to judge the likelihood of downstream chargebacks (if not shipping to a confirmed domestic address). Exposing transaction history through a reputation service is an Internet-centric approach that helps both buyers and sellers be better-informed participants in online payment transactions.

It is interesting to note that PayPal decided to use a reputation-based trust model, instead of the more traditional escrow model.

Target Markets and New Applications

Igniting PayPal's initial growth was the viral nature of person-to-person payment, and its exact fit with the needs of users buying and selling goods through auction sites such as eBay. PayPal is the dominant payment service used in online auctions, with 68% of all eBay auctions now accepting it as a payment mechanism. Auction buyers chose PayPal to settle one out of every four purchases on eBay.

While grudgingly admitting the company's success in online auctions, critics have been skeptical that anyone can build new payment services exclusively around auctions. Sensing that this may be true, PayPal is methodically expanding its services and reaching out to new target markets:

- **Merchant payments**. With the introduction of business accounts, PayPal is now clearly targeting online merchants. In just twelve months, two million small merchants now accept PayPal as a form of online payment. 20,000 of these small merchants are listed in PayPal Shops, a directory of Web sites that accept PayPal. These small merchants represent an incremental market that is one tier below that served by traditional merchant processors and payment-service providers.

- **International payments**. With the extension of its payment network into 36 countries, PayPal has begun to address the needs of individuals who want a cost-effective way to send funds to family and friends abroad. PayPal claims that about 9% of its transaction volume now comes from international payments—a market long dominated by Western Union.

- **Small businesses**. To directly target small business owners, PayPal established an alliance with Intuit in which PayPal is the exclusive payment partner for Intuit small-business products such as QuickBooks. QuickBooks 2001 lets small businesses directly invoice customers via e-mail, with the PayPal payment option embedded in the invoice. More than three million small businesses use QuickBooks.

PayPal has now diversified to the point that 30% of its business comes from non-auction payments.

International Expansion

To address international person-to-person payments, PayPal has stretched its payment service—one originally constrained to, and in many ways designed for, U.S. domestic use—to support international transactions. Although all transactions are still denominated in U.S. dollars and conducted entirely in English, PayPal now supports payments between users in 36 countries. The company's approach to international payments is consistent with its "start small, get feedback, add functionality" strategy.

International users are constrained to credit-card payment, with no opportunity to fund purchases through bank-account debits. The ability to withdraw funds is country-specific: users in seven countries can withdraw funds to a local bank account, while those in 28 countries can withdraw funds to a U.S.

domestic bank account only. Users in four countries cannot withdraw funds, and PayPal can only be used to make payments. However, one presumes that even a payment-only service in a country is positioning PayPal to later expand its offering, perhaps through local partners.

PayPal international coverage gives merchants the theoretical ability to support purchases from 83% of those online in the world. In practice, however, coverage is more limited. In some countries, PayPal only supports payments sent from credit cards and PayPal accounts, with no ability to fund purchases from local bank accounts. This is problematic for many international users who do not use or have access to credit cards.

As all transactions are denominated in a single currency, funds moving into or out of non-U.S. PayPal accounts must first go through currency conversion from the local currency to U.S. dollars. PayPal offers no support for inter-country payments in the local currency, although it hopes to evolve the service to the point that some international users could hold funds denominated in pounds sterling, euros, and yen.

PayPal is clearly attempting to leverage its low-cost, casual-payment approach in the international person-to-person payment market. Western Union, the established leader in this market segment, has recently increased its business at a compound annual rate of 48%, from $250 million in 1997 to more than $800 million in 2000. It projects handling more than $1.1 billion in international money orders in 2001.

Western Union, however, currently charges a consumer $43 to transfer $500 out of the country—effectively an 8.5% transaction fee. PayPal believes it will be able to dramatically undercut Western Union's traditional transaction pricing.

Customer Adoption

To build its user community, PayPal leveraged the Internet as its dominant marketing channel. Through a combination of viral marketing and structured incentive programs, customer-acquisition costs initially ran on the low side—$3.95 for each new customer acquired. Today, with less emphasis on structured incentives, customer adoption is driven by the market demand created from its growing portfolio of online merchants. PayPal now spends an almost unheard of $0.15 for each new customer acquired.

Structured Incentives

PayPal launched its online payment service with a heavy emphasis on a structured incentive program, in which users received a $10 bonus for opening a PayPal account and another $10 for every other person they referred into the network. Many in the banking industry scoffed at the very notion of this approach, claiming that users were being bribed to open accounts—but conveniently forgetting that at one time they had offered consumers free toasters for opening checking accounts. With early adoption coming mostly from individuals participating in online auctions, first-time users viewed the incentives as complementary shipping if they used PayPal as the payment mechanism. As a way to create user excitement and drive initial transactions, the incentives worked.

After four months, PayPal scaled back the incentives to a $5 bonus on signup and another $5 for each referral. Interestingly, this change in the incentive program had no effect on the customer-adoption rate. Later the incentive program was again revised so that in order to receive the bonus, new users had to confirm both an e-mail address and checking account information. Still, this had no effect on the adoption rate.

Today, PayPal continues to provide an incentive program that awards existing users $5 for each referral and rewards new users with $5 for opening an account. The requirements have been tightened to the point that, in order to earn a reward, a new user must confirm e-mail address and checking account information, add $250 to their PayPal account by checking account debit, and sign up for PayPal's Money Market Reserve Fund. For PayPal, the $5 incentive is a low-cost way to mitigate buyer fraud.

The evolution of PayPal's incentive program is a reflection of its drive toward profitability. While the company still rewards users for doing its outbound marketing, it has fundamentally restructured the program to mitigate its own downstream costs. And although incentives have become progressively harder to earn, the changes have had no impact on the customer-adoption rate. Eighteen months ago PayPal was signing up 18,000 new users a day—a pace that continues today without change.

Viral Marketing

More important than structured incentives has been the inherent viral nature of person-to-person payments. When a user sends money via e-mail to a non-registered friend or family member, that person must open his or her own PayPal account in order to receive the funds.

With viral marketing, as the name implies, existing users infect new users in a seemingly never-ending cycle. Viral marketing experts are quick to point out that, in order for viral marketing to actually work, the underlying value proposition to the user must actually be compelling. This seems to be the case with PayPal based on repetitive transaction volume.

As critical as it was for early customer adoption, viral marketing is not what drives PayPal adoption today. Instead, with the company's current focus on commercial point-to-point payments, adoption is driven through market demand. With small merchants now accepting PayPal payments on their Web sites—many as their only accepted form of payment—a tremendous amount of demand is created through traditional market pull.

Customer Support

From the beginning, PayPal has had to expend a tremendous amount of energy on creating a customer-support organization that can keep pace with its growing base of registered users. And to handle the customer-support load that comes with 200,000 transactions per day, the company has had to push as much of its customer support load onto the Internet as possible.

The PayPal online service is designed to encourage customers to service their own accounts with minimum assistance. The user interface is clean and simple, with as much online help as possible delivered through simple frequently asked question documents (FAQs). Improvements to the user interface go through both usability and focus-group testing to gauge their effectiveness before being introduced network-wide.

Beyond this basic level of support, PayPal tiers its support strategy to match its user levels. Users with personal accounts are encouraged to use e-mail, with its longer cycle times, for hard-to-resolve problems. Those with business accounts are given access to a round-the-clock telephone support center in Omaha, Nebraska. Four hundred of PayPal's 650 employees work in customer support and operations.

PayPal's Role in the Payments Industry

The banking industry views PayPal as an unregulated bank that is free to quickly develop new services and respond to changing market conditions without the shackles of regulatory overhead. PayPal disagrees. It positions itself not as a bank, but as a payment service. It believes that its responsiveness to customers and its Internet-centric approach are a reflection of how innovation is delivered in financial services today.

Like Western Union, the company moves money from point to point for a transaction fee. The key difference: it does so online. Like Charles Schwab and Fidelity, the company lets users keep funds in accounts that are protected through private insurance, move funds into money-market accounts that earn a rate of return, and draw on funds through checks and debit cards. PayPal certainly agrees that it is part of the financial services industry but, like Western Union, Charles Schwab, and Fidelity, it is not a bank. While such financial-service companies are technically not regulated as banks, they—like PayPal—still enjoy plenty of government oversight from the Securities and Exchange Commission (SEC).

On the other hand, PayPal has significantly restructured its original service so that it is less bank-like and more transaction-oriented. Users no longer draw funds exclusively from demand accounts to pay for purchases. Consumers do not necessarily have to place or keep money in accounts to find the payment network useful.

That factor aside, PayPal clearly believes that as a financial-services company it operates in an industry that is subject to government regulation. It follows all U.S. regulatory rulings and operating recommendations that apply to financial-services companies. For example, as a result of the recent Gramm-Leach legislation, PayPal changed and clarified its privacy policy, as did all other financial-services companies. The company believes that it is subject to, and follows, all U.S. federal electronic-funds transfer and money-laundering regulations.

PayPal claims that the best way to think of the company is as a cross between Western Union and Fidelity.

While the financial service industry continues to complain, and PayPal maneuvers to avoid government regulation, its clear role is that of a thought leader in emerging, Internet-centric payment services. It was the first to understand—and now serves—the needs of a whole new class of customers previously ignored by traditional payment processors.

Lessons for Financial Service Providers

Regardless of PayPal's role in the financial service industry—and to what degree it is subject to regulatory oversight—its success is based on how customers perceive it as solving their problems and providing value. The company follows six simple rules:

Rule #1: Focus on the customer.

There is no feature in PayPal that is not a direct response to a customer problem.

PayPal is obsessively oriented toward its customers' needs, their day-to-day requirements, and their view of the world. Nothing illustrates this better than the way a customer's e-mail address is effectively used in place of a traditional account number. An e-mail address is globally unique—the Internet guarantees this—and is extremely customer-oriented. Contrast this with the clumsiness of bank routing numbers and demand deposit account numbers prevalent throughout the banking industry. E-mail addresses are customer-oriented; fourteen-digit routing/account and sixteen-digit credit/debit card numbers are bank-oriented.

PayPal actually takes the e-mail address as account identification one step further by letting customers accept money at up to eight different e-mail addresses and control the primary e-mail address they use to send funds.

Listening to the requests of customers who needed to settle with many different affiliates, PayPal extended its original service to support mass payments. By extending the payee field to support distribution lists, PayPal provided a low-tech solution to a pressing customer need. Likewise, a number of customers preferred to accept payments at their Web sites without having to invoice buyers via e-mail. PayPal developed WebAccept—a low-tech solution, with no merchant software to install—in response to this problem.

To pick up ideas for new services or the need to improve existing services, PayPal passively monitors discussion boards and other forums where customers talk about how to accept payments, how to handle fraud, and the best way to work around the problems with existing online payment services. PayPal's customer-support organization, comprising more than two-thirds of the company, also contributes product and service ideas directly based on customer feedback.

Rule #2: Keep it simple.

PayPal is conceptually simple; a current user can easily describe it to a potential user in one or two sentences.

PayPal's service itself is straightforward and easy to use. The account activation process can be completed in a few minutes. Recognizing that customers will have different requirements, the company has tiered its registration process, asking for no more information than is absolutely necessary to open a non-verified, spending-limit-enabled account. Although high-volume sellers are eventually asked to divulge their social security numbers, this information is not necessary to open a low-end account.

The service doesn't depend on Java-enabled browsers, installed ActiveX controls, or downloadable thin clients. Combined with SSL, simple passphrase authorization provides the level of protection required for a low-end payment service. Client certificates are not required, nor is the presence of a smart-card reader assumed. There is no assumption that the customer even owns or controls the personal computer or cellular phone that is being used to access the payment services.

Keeping it simple not only accelerates user adoption, it also maximizes the coverage of the service in the marketplace and mitigates downstream customer-support problems.

Rule #3: Exploit the Internet.

With more than half a billion people using the Internet, PayPal takes the Internet as a given and is designed and optimized accordingly.

PayPal's process for sending and receiving money embraces both the Web and e-mail, with all account management handled online and most payment notifications handled via e-mail. Payment requests can be sent through e-mail, embedded in e-mail, or cut-and-pasted into Web pages. Both buyer and seller fraud are partially mitigated by delivering reputation information to the other party in real time.

Given the global reach of the Internet—and with more than two-thirds of all Internet users outside the United States—the payment service is expanding into other countries. Due to national differences in regulations and underlying payment systems, each country presents unique requirements and challenges—but PayPal continues to expand internationally. The company focuses on providing what services it can deliver, as opposed to dwelling on services that cannot be offered.

PayPal also handles customer account activation, problem resolution, and customer support online.

Rule #4: Design for adoption.

Ingrained in PayPal are the notions of viral adoption and market pull, which affordably push most go-to-market spending out to the users of the service.

Of all the innovations behind PayPal, breaking through the customer-adoption barrier is perhaps the most significant. The viral adoption inherent in person-to-person payments was critical in the company's explosive first-year user growth. But others, notably Microsoft's Hotmail, have successfully demonstrated the merits of viral adoption. Where PayPal excelled, either by design or good fortune, was in eliminating the dual buyer/seller ramp-up problem, often characterized as the early-market chicken-and-egg problem—no buyers when there are no sellers and no sellers when there are no buyers.

PayPal eliminated the problem by removing the distinction between buyer and seller, replacing it with the single notion of a user that could both buy and sell. Instead of 300,000 buyers and 100 sellers, there were simply 300,100 users. Effectively, PayPal collapsed two independent adoption variables into a single parameter, which could be increased through viral marketing, through seller demand-pull, and by building overall awareness.

Once PayPal attained approximately four million users, it casually reintroduced the distinction between buyers and sellers, providing value-added features specifically designed for business accounts. Over the next several quarters, 20% of its user community signed up for the business accounts. Today, user adoption is driven by the demand generated from its large community of online merchants.

Rule #5: Think incrementally.

With dozens of different payment mechanisms and services to build on, PayPal creates value by linking existing payment services and Internet technologies together in innovative ways.

PayPal did not invent a new way to fund purchases, authorize payments, or settle transactions. Instead, it built a new service on the back of the existing payment and Internet infrastructures. And rather than thinking big and undertaking a massive multi-year development program, the company started small, got real-world feedback from actual users, and then incrementally made the service better on a month-by-month basis.

Not really knowing how users would attempt to defraud the payment network, PayPal put an initial stake into the ground regarding fraud prevention and then incrementally adjusted it, successfully bringing its fraud rate down to a manageable level.

Not only did this approach give PayPal a better chance of getting to the market sooner—and establishing first-mover advantage—it also assures that the final functionality directly matches what the marketplace and business model require of a successful business. As PayPal evolved its payment service, what started as bare-bones became *good enough*. And good enough is all that is required.

Rule #6: Costs matter.

As price competition proliferates throughout online payment services, PayPal continues to look for ways to drive recurring costs out of the system.

PayPal understands the difference between early market development and long-term profitability. In the first six months of operation, it provided free service to all customers and spent tens of millions on structured incentives, with little regard for cost containment. As millions of visitors registered and began using the system, PayPal scaled back incentives, slowly introduced a fee structure for power sellers, and began to focus on operational costs.

While the company initially relied heavily on credit cards to fund accounts, it quickly moved away from an exclusive credit card orientation and processing cost structure. As a result, for the past year, PayPal's transaction processing expenses—what it costs the company when users move funds into and out of PayPal accounts—have dropped from 2.1% to 1.4% of payment volume.

Efforts to combat online fraud have also had a dramatic effect on PayPal's cost structure. In the last year, while the company's total payment volume increased by 76%, fraud losses as a percentage of payment volume decreased by 55%. As a result of the adjustments made to service policies and procedures, fraud losses directly absorbed by PayPal decreased consistently on a quarter-to-quarter basis, moving from a high of 1.28% to 0.33% of payment volume—and saving the company more than $20 million.

By continually driving recurring costs out of the system, PayPal hopes to maintain its ability to competitively price services in response to new market entrants or in anticipation of entering new markets.

Conclusions

PayPal's success is based on a three-legged approach to building a new online payment service.

- PayPal identified a clear customer problem—low-cost, low-volume payments for small merchants and businesses. In many cases, customers recently empowered by the Internet and not historically served by the financial services industry did not see themselves as merchants.
- PayPal responded with a cost-effective solution that favored simplicity over sophistication, online over offline usage paradigms, and bare-bones functionality over excess features.
- PayPal designed a go-to-market strategy that encouraged existing customers to virally drive adoption from new users, and in the process transitioned significant market development costs to its online community.

Successfully executed, this strategy created a customer base of 10 million registered users that continues to expand by 18,000 new accounts per day. Throughout the journey, PayPal has introduced new features and capabilities designed to expand its payment service into new markets. It has also incrementally adjusted its policies in order to mitigate fraud and evolve towards profitability.

Financial services organizations will be hard-pressed to replicate PayPal's success by duplicating its functionality. However, the company's attitude is instructive and can serve as a guidepost for the development and introduction of new online payment services in today's market.

The company obsessively focused on the needs of underserved customers; it kept the solution simple in spite of the human tendency to chase the hard problems; it leveraged the Internet to deliver, market, and support its service; it made sure that viral adoption was integral to the underlying design; it incrementally improved the payment service on a month-to-month basis, based on real-world feedback and actual usage; it continually drove costs out of its internal operations; and it refused to listen to industry experts who said it couldn't be done.

PayPal By The Numbers

- Ten million total registered users [4]
- Eight million personal users [3]
- Two million business users [3]
- 18,000 new accounts per day [1]
- 20,000 online merchants are listed in the Web Shops directory [4]
- 200,000 transactions per day [4]
- 90% of transactions are commercial with transaction fees [1]
- $10 million per day in online payments [4]
- $3.5 billion in online payments will flow through PayPal in 2001 [2]
- $50 average transaction value [3]
- $1.23 in revenue per transaction (on average) [3]
- 27% of payments are drawn from a bank account [3]
- 23% of payments are drawn from a PayPal account balance [3]
- 50% of payments are charged to a credit card [3]
- 70% of payments are associated with an online auction [3]
- 68% of all eBay auctions accept PayPal as payment [2]
- 25% of all eBay auctions settle through PayPal [4]
- 0.5% consumer fraud rate (as seen by merchants and payees) [1]
- <10% of transactions are international [1]
- >90% of transactions are U.S. domestic [1]
- 400 customer-support representatives [1]
- $0.18 plus 1.9% per transaction credit card processing cost as absorbed by PayPal [3]
- $0.03 per transaction ACH debit/credit processing cost as absorbed by PayPal [3]
- 650 employees [1]
- 36 countries [4]

About the Author

Russ Jones is a general partner with The NuVantage Group, an innovation-to-market consulting group located in Palo Alto, California. Russ is one of the pioneers in commercial use of the Internet, having led the creation of the first commercial Web site in 1993 and developed many online marketing techniques now used throughout the industry. He describes the lessons learned from this experience in *The Internet Strategy Handbook*. He currently works with companies in the information economy on strategy development. Russ can be reached at *rjones@nuvantage.com*.

Acknowledgements

This research report was developed under commission from CommerceNet. It would not have been possible without the insights and encouragement of Chuck Wade, CommerceNet; Mark Manasse, Compaq; and Scott Loftesness, Glenbrook Partners.

Copyright

References

1. Vince Sollitto, Vice President Corporate Communications, PayPal
   Interviewed August 8, 2001

2. Wired Magazine, September 2001, The Money Shot
   http://www.wired.com/wired/archive/9.09/paypal.html

3. PayPal, Inc., SEC Filing, Form S-1, September 28, 2001
   http://www.edgar-online.com/

4. PayPal Web site
   http://www.paypal.com/, accessed October 15, 2001