

Digital Payments Transformation: PaaS vs In-House

Introduction

Banks and Financial Institutions [FIs] are acknowledging that the systems they currently use to process digital payments are not always ready to address the requirements and opportunities of the future, and we've reached the point where the risks of delaying the required generational change outweigh those of the change itself.

For Banks/FIs with legacy systems and infrastructure, the obvious way forward is an upgrade to "in-house" systems. However, an emerging business model has given them the opportunity to achieve the goals of digital payment transformation without the need for CAPEX investment. This paper highlights the typical challenges of a conventional transformational process based on experiences with similar projects and why the option of Payment as a Service [PaaS] as an alternative approach should be highly considered. It provides a high-level understanding of the multiple cost factors associated with this transformation and how the new model [PaaS] with an established payment processor (partner) should be evaluated before re-investing along traditional lines.

Traditionally, Banks and FIs feel enormous pressure to grow their digital payments penetration in a landscape that is radically different from even five years ago. This pressure is accentuated when Fintechs and wallet operators are added to the mix. Everything from regulatory requirements, competitive landscape and consumer expectations to product innovations has upended the "business as usual" outlook for digital payment providers. The industry is fraught with challenges that payments leaders must carefully navigate.

We are still in the midst of very challenging global economic conditions which have resulted in more industry scrutiny and government regulations than ever before. COVID-19 has accelerated digital payments transformation across the board. Regulatory and compliance requirements are not only reducing the amount of capital available for internal investment on a new payment platform, but are also dictating the terms of how available funds are allocated in certain cases. These modifications exacerbate or are exacerbated by other challenges such as aging technology and a scarcity of qualified people to make and test the necessary system changes.

Aside from these, the typical consumer profile is changing as customers become more tech-savvy and more interested in convenience in their always-connected mobile lifestyles. According to a Consumer Experience Report focused on retail banking, consumers want a more seamless and personalised customer experience. "Convenient access" is a top attribute that customers want from their payment providers, in addition to expecting future payments services to combine high tech and high touch across all delivery channels, with a frictionless experience. Payment providers need a single view of their clients to find ways to enhance their customer relationships/experience and make them more profitable.



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Massive technology changes in recent years are causing upheaval in the payment industry, especially in the areas of increased competition and product innovations. Traditional Issuers are being challenged for business by new competitors that didn't – or couldn't – exist just five years ago, such as Fintechs or eWallet providers. Today's digital payment climate is fraught with challenges as more non-traditional competitors find their way to markets. There is a concern about an entire generation of consumers who may have limited engagement with traditional payment instruments.

The lifecycle of technology maturity is shortening, forcing Banks and FIs to respond to innovations quicker than ever to avoid being left behind. Innovation is good, but there's a substantial burden on legacy infrastructure where every new product requires custom coding and significant integration efforts. Old platforms are keeping payment providers trapped in processes, lifecycles and ways of thinking that were designed 20 years ago.

Banks/FIs are experiencing front-end technology constraints that now affect their agility and ability to adapt to the changing payments landscape. Making a change at the front-end processing platform to serve customers better or to drive differentiation has become a major consideration. However, with each change comes additional complexity and risk. Layering complexity is arguably not a sensible approach, but how else can Issuers with heavily-customised payments processing infrastructures move forward? How can the front-end be made more agile while also allowing Banks/FIs to de-risk the operations supporting the business functions?

Many Banks/FIs still operate on a legacy platform not designed for the world of multichannel integration. Layers of Issuer-specific functionality have been added over the years, resulting in accumulated “technical debt”. In some cases – mobile payments, for example – Issuers have to work with third party service providers to facilitate different ways for those transactions and associated payments to be fulfilled. All of this drives the risk associated with further change as the skill sets available to understand the complex legacy and test the new developments have become thin on the ground. Due to the age of the software concerned and the programming languages that underpin them, the volume of available skilled resource to support these legacy systems has been diminishing and consequently raising the cost of support. The cost of vendor support for senescent technologies has also increased tremendously. Perhaps more importantly, it’s a big risk for Banks/FIs to run any critical business process on infrastructure or software that is not able to cope with changes and the current requirements of this digital payments era.

So what should be done?



This paper highlights the typical challenges of a conventional transformational process based on experiences with similar projects and why the option of Payment as a Service [PaaS] as an alternative approach should be highly considered.



Digital Transformation: what is in scope

Further to what's been previously highlighted, the focus shifts to the cost of digital transformation. Upgrading or replacing a processing platform to keep up with evolving trends in digital payments and re-integrating all the systems, processes, and people is quite a daunting and costly exercise. The exact components will vary significantly for each Bank/FI but will include the core platform itself, the directly interfaced management and back-office systems, infrastructure and digital channels along with resources and processes that regulate and operate these systems. Banks/FIs that undertake the work of an end-to-end digital payment platform transformation project internally (i.e., upgrading or replacing their existing system with a new one) often underestimate the total cost of ownership (TCO). It's relatively easy to calculate the cost of software licenses and hardware for a dedicated platform, but this is only one part of the total cost of a transformation project. There are other multiple costs related to people, processes and time involved to integrate these systems. These costs are usually hidden internally and only become apparent once the transformation project is underway.



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The Costs of Digital Transformation

Banks/FIs typically spend over \$10 million on a new end-to-end front-end system implementation. About 60-75% of a typical transformation project's costs are external expenses, depending on how much of the implementation effort is performed externally, and the remaining 25-40% are internal expenses. Of course, every Bank/FI categorises costs differently and what gets charged to CAPEX versus OPEX can vary based on accounting regulations.



Typical spend is over
\$10 million



External expenses account for
75 -60% of a
typical transformation's costs



External Expenses



Switch software – The switch software may be something like ACI's BASE24-eps or another commercial product that handles the processing of transactions.



Enterprise systems – There are core systems such as Card Management systems (CMS) and Value-Added Services (VAS) such as Fraud Monitoring and Loyalty.



Infrastructure – Most legacy solutions run on HP NonStop servers or an IBM mainframe. Depending on the platform in use, an upgrade of the switch software might also require a hardware platform change. Depending on the hardware selected, the overall cost of this infrastructure could exceed \$2 million.



Device upgrades and hardware upgrades to cope with new software – New software such as that which drives ATM communication with the switch will require hardware and software changes on the devices themselves. For example, making an upgrade to the ATM operating environment may require an update to the whole PC core inside the ATM. At the very least, Banks / FIs will need to create a software stack (a build), test it extensively, and then distribute it to all the ATMs.



Network infrastructure – This bucket includes all the network infrastructure switches, cabling and other components needed to support an enterprise computing environment. This major area of cost covers not just communications but also server infrastructure, security zones (logical and physical), command and control of the applications and reintegration.

Internal Expenses

Between 25-40% of the total expenses of a payment's transformation project are internal expenses. They account for the time people spend implementing the systems as well as retraining and re-engineering their processes to take advantage of the new systems' potential.

Some of the typical internal costs are:



Pre-Project – Determination of the new platform strategy, involvement of all stakeholders in decision making and the process of system selection all entail multiple resources and time from senior management.



Testing – A competent Issuer de-risks change by testing. Of course, this applies to any change that is made to an enterprise system but even more so when the entire system is going through transformation.



Personnel reorganisation – Realising the benefits associated with such a project necessitates impacting the organisational structures, operating model, relevant experts (legal, financial, premises, HR) and more.



Hidden Costs

Apart from these fairly obvious costs, there may also be hidden costs such as:



Process Design – Implementing a new front-end payments infrastructure is more than just installing new hardware and software. It also involves designing new business processes that support or are enabled by the new infrastructure.



Implementation – The process of putting the new system into production often requires more time and resources than any Issuer budgets for.



Process Change and Training – When the new system is in place, the Issuer has both a technical solution and a business solution. There are many resources who interact with that system at one level or the other on a daily basis. Issuers need to educate them about the new system and how it works, and each person needs job-specific training.



Program Management – A program or project like this could have up to 10 work streams or more, all of which have to be managed and coordinated with each other.



Peripheral Activities – This includes the cost of the people who take care of reconciliations or dispute handling because they see that as part of the card's organisation, but they are investing their time.



In-house Resource Limitations – Most financial institutions that are making an internal transformation start the project with their own in-house resources and suppliers. They set off thinking the internal front-end team can manage this program, and then well into the project they discover that the front-end team only knows how their own system works. They lack the knowledge of how other interdependent systems work or even how IT systems in general work. So they end up hiring expert systems integrators, which leads to potential delays and increased costs.



Re-certification – Banks/FIs have to certify the new systems and comply with regulations.

In a nutshell, they have to think carefully about the digital transformation project, taking into consideration external, internal and hidden costs. They should be able to fairly assess the potential implications and be able to calculate the Cost-to-Reward Ratio.

Further to what was emphasised in the earlier sections regarding the driving forces and cost components associated with Digital Payments Transformation, namely, internal, external, and hidden costs, let's examine where we go from here. Do Banks/FIs invest in an in-house transformational programme or should they rely on an outsource option? What should they be looking for in the decision-making process? The brief discussion hereunder attempts to respond to these key questions...



PaaS or In-House



A typical outsourcing proposal for a front-end credential management system will migrate the current “in-house” systems of the processing services to a trusted Third Party Processor [TPP]. If the processor is selected appropriately, their processing capabilities will be based on the latest technology that Banks/FIs would utilise themselves without the need to invest in CAPEX to procure new platforms/solutions. Not only that, but PaaS provides the flexibility of selecting the required services/solution and pay as you consume, away from the traditional CAPEX model.

Moreover, the skills required to manage the migration process and run the new platform would be inherent to the processor’s capabilities. PaaS, therefore, could address large components of the capital expenditure required for the digital transformation and massively reduce both the impact and efforts required within the Banks/FIs compared to an in-house transformation programme. It will not, however, remove the need to interface the new platform to the Issuer’s surrounding systems or with the resources and processes associated with the services within the Banks/FIs to reflect the transformation. Yet there is an opportunity to utilise some of the existing capabilities within the Banks/FIs through Middleware/APIs to interact with the new systems.

If the processor is selected appropriately, the digital offering will be based on the latest technology platforms that will provide for more agile and flexible development of new solutions, reducing both the cost of development and time to market (maximising new revenue opportunities). A well-established TPP may also take on certain elements of the compliance requirements (for example those related to Schemes), thus reducing upside cost.

But ...

Of course, outsourcing is not always the remedy, and the risks of poor implementation, poor service and unforeseen developments need to be managed through a thorough process and with trusted partner/processor who has done it successfully before; it is, however, worthy of serious consideration.

Conclusion

Banks/FIs would NOT want to put themselves through a costly and lengthy transformation process without proper assessment of the implications, but, in reality, their backs are against the wall on this issue today, with almost no scope to delay the inevitable. A Digital Payment Platform affects many crucial channels, and Banks/FIs must modernize and simplify their systems to remain competitive and relevant. Many Banks/FIs that choose to upgrade or replace their aging front-end payments platform with a new in-house system often underestimate the time, money, and resources required to complete such an undertaking. Many don’t consider all the ancillary (and often hidden) costs that make up the vast majority of the expenses. In comparison, they are always skeptical when it comes to outsourcing these processes.

They are right, the process is not easy and finding a credible partner that could undertake such a project could be daunting. However, PaaS could offer a good alternative that is somehow transparent with an appropriate cost model for large elements of the project, moving away from CAPEX to OPEX, reducing the risks involved in implementation, and delivering savings in the total cost of ownership. PaaS can also have strategic benefits in the simplification of internal systems, leveraging the capabilities of a key strategic specialist partner to gain competitive advantage. Nevertheless, it does not abrogate Banks/FIs from responsibility for and involvement in the services delivered and needs proper management to ensure success.

