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Payments 3.0

Re-invent your Payments Landscape

Issue 2

Featuring research from
Gartner

Payments 3.0 – Re-invent your Payments Landscape

For years, banks have struggled to invent and re-invent their payments infrastructure to meet the challenges of a continuously evolving industry. Growing customer base, increased diversity in the services offered, fast diminishing margins and product silos have led banks to single out technology as their single differentiating lever to move towards a customer centric payments ecosystem.

The biggest challenge in the industry today is the continuous improvisation of customer service levels while ensuring multi-fold cost reduction and risk mitigation through Straight Through Processing (STP). In the payments business, high operational costs leave little scope for profit margins. Also, being a commodity business, it is not highly charge-driven and does not offer revenue generation options.

Most banks in the developed markets are seen to have heavily invested in payments systems in the period between the 70's and 80's which were monolithic and tied to a specific processing hardware such as mainframes. As the payments industry evolved, applications in newer technologies and varied processing platforms were implemented alongside these. This led to an irreversible state of 'payment systems spaghetti' which was plagued with inefficiency and high levels of data duplication. Replacing this chaotic infrastructure was close to impossible as it was a cost-intensive and high risk initiative.

Banks were on the lookout for a solution that needed to be introduced into this existing ecosystem in a non-disruptive mode and this led to the conceptualization of the Payments Hub. However, the Payments Services Hub initially designed to be a silo-breaker has manifested itself into one of the biggest payment innovations of recent times. It not only enables payments consolidation and standardization but has emerged as a key enabler to meet the paradigm shift in the bank to corporate connectivity while carving out newer streams of revenue generation.

From Payments to Payments Services Hub (PSH)

The PSH enables banks to seamlessly integrate payment channels to payment networks and payment processors by acting as the central orchestration mechanism. This SOA driven framework essentially aims to offer flexibility while allowing differentiation. The key factor that remains common across all payments hubs conceptualized and implemented so far is the standardization and centralization of payments. One of the key success factors of a PSH becomes its process management framework which enables banks adopt an entirely customizable approach to resolving their payments needs and achieve quick time-to-market atlower TCO.

A new age PSH should be built to support data validations, transformation and enrichment of industry standard payment file and message formats like EDIFACT, SAP iDOC, ISO20022 XML, SWIFTNet FIN etc. and proprietary messages from corporate systems. It positions itself an efficient means of initiation, preprocessing, orchestration, identification of points-of-failure, exceptions and investigation, tracking and monitoring thus offering end-to-end control of the payments landscape.

Build or Buy

Banks that seek to build may opt for a basic vendor-supplied framework that may not be vertical specific in nature to facilitate in-house development of component services. Based on the banks need, these PSHs and their underlying frameworks can be used to create packaged applications. Polaris strongly advocates the 'buy' method.

Packaged Applications

Packaged applications built around the PSH will drive the payment value chain for banks in the near future – ERP H2H, Funds Control, Accounts Pooling, Fraud monitoring and AML, Centralized Billing solution etc. A recent survey by Polaris has indicated that 90% of all European banks are exploring ways to renew their banking platforms, including payment systems. The US banks are also reviewing their existing systems to implement payment hubs.

As IT vendors across the world are still in the conceptualization and build phase of the PSH, IntellectTM PSH by Polaris is one of the first of its kind to have been built and implemented in top global banks. As a market leader and technology evangelist, Polaris strives to enable banks drive business innovation through out-of the-box solutions built on the PSH. Polaris delivered Payments Services Hub for a global bank with multiple payment engines processing payment instructions with a peak throughput in excess of 1 million transactions per day and over 95% STP.

Source: Polaris

Enabling Business Innovation through Payments Consolidation

The Payments 'Spaghetti'

Most banks in the developed markets invested significantly in designing payments systems during the 70's and 80's. The design was largely monolithic and tied to a specific processing hardware such as mainframes. As the payments industry evolved applications in newer technologies and varied processing platforms were implemented alongside these legacy systems to meet business needs and complement existing systems. This led to an irreversible state of payment systems 'spaghetti' which was plagued with inefficiency and high level of data duplication.

Some of the challenges faced by banks in their payments business are:

- Multiple Payments systems leading to fragmented MIS reporting and tracking
- Bank systems not integrated with Customer ERP systems for payables/receivables
- Slower go-to-market for new channels and products in a continuously changing marketplace
- Lower STP for Payments leading to higher costs of operations
- No real-time balances and status updates provided to customers
- Manual and time consuming exception processing adding to the operational risk, costs and time
- Regulatory changes compliance is costly and time consuming exercise

Growing customer bases, increased diversity in the services offered, fast diminishing margins and product silos have led banks to single out technology as their single differentiating lever to move towards a customer centric payments ecosystem.

Banks could not afford to tear down their existing infrastructure and replace it with new age payment systems. The solution they sought needed to be introduced into the existing payments ecosystem in a non-disruptive mode while ensuring it addressed the business challenges effectively and left scope for further value addition. This solution came to be conceptualized as an Enterprise Payments Hub delivered on a SOA model.

Payment Hub shows the way

Payment Hub enables banks to seamlessly integrate payment channels to payment networks and payment processors by acting as the central orchestrating mechanism. A Payment Hub established at the centre of a payments infrastructure would enable the bank to grow and adapt its payment systems over time. It turns a silo-based infrastructure into an Enterprise Payments solution, through a process of managed migration. This Services Oriented Architecture (SOA) driven framework essentially aims to offer flexibility while allowing differentiation.

The introduction of a Payment Hub into a bank's existing payments infrastructure provides both the flexibility to support future changes as well as the reusability of existing infrastructure components.

Next Level - Payment Hub to Payments Services Hub (PSH)

A payments hub in itself can be looked upon as a silo-breaker but when integrated with a Business Process Management (BPM) tool as its method of delivery, it becomes a key process improvement initiative that offers banks the much sought-after value proposition of quick time-to-market at lower TCO. The potential of the payments hub as a SOA framework can be leveraged further as a SOA+BPM framework.

Top Outcomes that PSH offers to payments processing landscape

The outcomes discussed here are available in Polaris' Intellect Payment Services Hub and validated by complex global implementations.

- Single Payment Platform and Orchestration across multiple systems

The PSH manages the processing for multiple entities, geographies, payment types across all products and customer segments. It becomes a common repository for all your processing, monitoring and reporting needs. Orchestration is possible due to in-built BPM capability that aids design and management of different payment workflows centrally. The workflows manage with interfaces with multiple internal systems like CRM, Credit, AML, Core/DDA, Billing Engine, etc. to deliver the required payment services required. The business rules and processing logic are consolidated at one single place, increasing reuse and eliminating duplicity. PSH also enables supervision and control of liquidity, allowing for better cash management, which is a primary objective for both the bank and the bank's customers. The payment hub must provide end-to-end connectivity to corporate ERP systems.

- High STP and Real-time business activity monitoring

PSH provide a flexible and configurable BRE to define and manage the business processing rules, an end-to-end rule driven processing of payments from initiation to fulfillment. The hub offers a solution to increase STP rates to reduce time and costs per transaction processing. High STP rates of over 95% can be achieved. The solution provides end to end payment status tracking and monitoring of payment traffic. Visual dashboards, automatic SMS/Email alerts make it easier to manage entire business monitoring functions effectively.

- Monitor funds and prevent frauds

PSH provides a funds monitoring mechanism for informed credit decision with consolidated view of the payments and balances to maximize customer benefit and minimize exposure risk to the bank. The funds monitoring module can bring together the Payment transactions, Account Group Structures, Limits, Real-time Balances, Credit policies in the form of Business Rules to automate the Payments decisioning. Referrals can be managed via integrated BPM capability, which includes flexible process flow definition, configurable UI, automated alerts and notification to ensure the most critical exceptions are resolved first. PSH can develop integrated online payment fraud detection and interception capabilities. Bank can define known fraud patterns, customer transaction behaviors and other system thresholds. All transactions can be verified against the configured rules and suspect fraud transactions can be moved to exception queue for manual verification.

- Open Technology benefits of flexibility & adaptability

Provides ability to integrate seamlessly with multiple bank and customer systems, with an open architecture built on latest technology to achieve scalability and availability to support growing business volumes and complexities. Provides flexibility to adapt to new regulations, process changes and launch new products and services by managing the system configuration in the payment services hub.

How to have your own Payment Services Hub?

Banks with mainframe, legacy payment processing platforms are loath to rip and replace with new solutions. Over the years, these systems are integrated with multiple channels and systems in the processing chain and lot of critical business processes are supported by them. The “big bang” approach to rip and replace these is just a highly risky, too complex and prohibitively costly route. The preferable approach would be use a phased migration approach to introduce a payment services hub and gradually integrate into the payments processing. Another dilemma facing the banks is the BUY/BUILD/ ASSEMBLE question.

For the payment hub initiative to succeed in its objectives, the solution needs to deliver on all functional, technical requirements. The solutions should be flexible and configurable but at the same time deliver demonstrable payment services in its off-the-shelf form. The banks should be able to introduce it seamlessly into its ecosystem and build integrated solutions and processing capabilities by leveraging the existing IT assets.

Based on the banks need, the PSH and its underlying frame of SOA and BPM can be used to create packaged applications. Banks that seek the buy option will focus on such packaged applications built on the PSH. On the contrary, banks that seek to build will opt for a basic vendor-supplied framework that may not be vertical specific in nature to facilitate in-house development of component services.

Polaris recommends a “BUY” approach for faster ROI and reduced implementation risk. The open architecture of the framework should support the reuse, integration with other IT systems to deliver customized processing needs through configuration.

Polaris Software is providing thought leadership in evolving and shaping the concept of Payment Services Hub. We were among the first to comprehend the need and role of Payment Services Hub in the Payment architecture of a Bank. IntellctTM Payment Services Hub from Polaris Software is a feature-rich solution that addresses the critical need for a scalable, flexible and customer centric centralized payments platform that could be a perfect ally to banks aiming for sustainable growth with efficiency. Intellect PSH is a state-of-the-art solution that provides end-to-end connectivity to customer ERP systems, manage multi-entity, multi-currency and multi-country payments. Intellect PSH has advanced features viz anti money laundering check and funds monitoring to make informed credit decision to maximize customer benefit and minimize risk for the bank.

Source: Polaris

Intellect™ Drives More Efficient Banking and Insurance

For over 25 years Polaris has continually built expertise and delivered efficiency in Banking and insurance, through the use of innovative and contemporary financial technology. This commitment has resulted in powerful relationships and among the longest Customer engagement tenures in the industry.

Polaris offers sophisticated and comprehensive solutions for Core Banking, corporate Banking, wealth and asset management and insurance. We work with leading banks and insurance companies across 29 countries. We have worked on the most complex business solutions. And have repeatedly demonstrated globalization is possible – smoothly and efficiently!

In a world of product silos and limited functionality, Polaris is unique in its comprehensive lifecycle assurance. The revolutionary Intellect™ GUB M180 is the most comprehensive enterprise Banking architecture - distinctly superior in technology and functionality.

The highly commended Intellect suite of bank and insurance products span full spectrum, sub process and point solutions. We set industry standards in IP development and investments in R&D, working on modern technologies and protecting Customers from technology obsolescence. Accountable and transparent relationship models, proprietary COPARIS application efficiency protocols, and D-3 OTIF proactive delivery processes, contribute to exemplary execution reliability, backed by multi-stage C-sat ratings.

Over 1,000 engineers across four R&D centres, work on Service Oriented Architecture (SOA), enabling non-disruptive modernization at the lowest total cost of ownership. Polaris 'agile infrastructure' has dramatically improved project management, eliminating traditional delays and irrelevant IT facility spend levels.

This is an era of transformation in Banking and insurance. There is a more efficient way of leveraging your financial technology to achieve your business goals. That's where we come in!

Source: Polaris

From the Gartner Files:

Payment Frameworks: A Critical Tool for Guiding In-House Assembly of the Payment Services Hub

This research, which provides an overview of payment framework offerings that support the assembly approach to achieving the payment services hub (PSH) will assist business owners and payment application developers to understand and assess the alternatives that are available, and what exactly vendors mean by providing a "framework."

Key Findings

- There is no such thing as a consistently defined framework. The panel of tools and services provided varies significantly by vendor, as well as each vendor's degree of vertical specialization.
- Provision of the framework to partners and as a stand-alone offering is a strong indicator of a more open ecosystem approach to the support of payment initiatives.
- Taking into account the lack of standardization and initial stages of most PSH projects, a semiopen ecosystem approach carries less risk while providing sufficient flexibility, compared to a fully open or fully closed approach.
- Utilization of a framework as part of a PSH initiative can shape the business-IT alignments beyond PSH modernization, and improve the quality of the management of payment operations.

Recommendations

- To achieve differentiation via payment operations, limit payment modernization risks and achieve time to market over the life span of the PSH, prioritize frameworks with a semiopen approach.
- If initial time to market for a set of new payment applications and operational efficiency is the sole purpose of your payment system modernization, prioritize frameworks supporting a closed approach.
- Use the framework components to improve your existing payment governance model.

STRATEGIC PLANNING ASSUMPTIONS

Through 2013, firms that employ a framework that supports a semiopen approach will be more successful in implementing a flexible and sustainable PSH than those using a framework that supports a fully open or fully closed approach.

Through 2013, a closed approach to achieving a PSH will provide faster initial time to market and greater operational efficiency than a semiopen or fully open approach.

ANALYSIS

1.0 Introduction

1.1 Purpose of This Research

This research continues our investigation of the PSH, and its supporting technologies and vendor solutions. Here, we look specifically at the framework component of vendor software solutions that support the assembly approach to achieving a PSH. Clients can use this research to assist in understanding the importance of and evaluating:

- Whether an assembly approach is suitable for their PSH initiatives
- Vendors offering solutions that support an assembly approach, related to the strength and focus of their frameworks
- The frameworks that underlie various packaged applications that affect the extensibility of these packages, and the ease and timeliness of vendor upgrades to meet changing requirements
- Whether the vendors they are considering will be in a position to support their transformation road maps

For a discussion of the relative merits of packaged applications versus solutions that support an assembly approach, see "Payment Services Hub: Build, Buy or Assemble?"

1.2 Methodology

We surveyed the 14 vendors identified as supporting the assembly approach to achieving a PSH (see "Payment Services Hub: Build, Buy or Assemble?"). We asked them specifically about the use of frameworks in their solutions that support the assembly approach. Questions included:

- The scope of the framework – whether it is payments-specific, or part of a broader framework
- To whom the framework is available – customers, application partners and/or professional services partners – and whether that is on a stand-alone basis, or part of a broader application or services offering

- How the framework is delivered, and how it is being used by customers and partners
- The purposes for which they use their frameworks internally (such as supporting their own development and the sales process)

Table 1 lists representative vendors identified as supporting an assembly approach to the achievement of a PSH and their associated solutions. A pointer is also included to a table of additional information in Appendix A about the framework aspect of their solutions.

2.0 What Is a Framework? The Answer Is as Varied as the Providers

Gartner defines a payments framework as:

"A payment-domain-specific tool that guides the development of a PSH. The framework does not contain the functional components but, instead, defines the components and the relationships between them. The framework is of particular importance as it facilitates incremental build-out of the PSH. It helps architects and developers conform to the long-term goals of the PSH while focusing on designing and implementing an application on a more tactical basis."

Table 1. Representative Vendors That Support the Assembly Approach to Achieving a PSH

Representative Vendor and Web Site	Assembly Solution Name (note, some of these vendors also provide a packaged payments application)	Additional Information in Appendix A
Axway (www.axway.com)	Axway Financial Services Framework	Table 2
Clear2Pay (www.clear2pay.com)	Open Payment Framework	Table 3
Dell Services (www.dell.com/perotsystems)	Payments System Transformation Services	Table 4
Distra Pty (www.distra.com)	Distra Toolkit	Table 5
Dovetail (www.dovetailsystems.com)	Dovetail Payments Framework	Table 6
Fundtech (www.fundtech.com)	Global PAYplus Services Platform	Table 7
IBM (www.ibm.com)	IBM Banking Industry Framework for payments and securities	Table 8
Microsoft (www.microsoft.com)	Payment Services Factory	Table 9
Misys (www.misys.com)	Misys Payment Manager Misys Message Manager	Table 10
Oracle (www.oracle.com)	Oracles Services Bus for Financial Services	Not available
Polaris (www.polaris.com.in)	Intellect Payment Services Hub	Table 11
Tata Consultancy Services (www.tcs.com)	TCS BaNCS Service Integrator	Not available
Unisys (www.unisys.com)	Open Payments Platform	Table 12

Source: Gartner (June 2010)

This is a fairly broad definition, because these tools can range from documentation to business process management technologies for modeling and managing process component relationships and workflows.

In addition to the framework itself, vendors often round out their offerings with:

- A software development toolkit
- Functional service components
- Underlying middleware, servers, and databases
- Additional business process management technologies
- Professional services offerings

Reviewing the vendors' responses to our requests for information, which included the Gartner definition, it is clear that what vendors are calling a framework varies considerably in terms of what may be actually delivered to the client, and the required or optional nature of the functionality as part of the framework itself. While Gartner's definition, as presented, is broad, the definitions of many vendors are even broader. This is reflected throughout this research.

In some cases, when vendors say they are offering a framework, not only are they referring to the tool for guiding development, but also they may be including supporting infrastructure, such as an enterprise service bus, or the functional application services components. Clear2Pay is a notable example. Its product, which includes a range of functionality beyond Gartner's definition of a framework – such as supporting infrastructure and functional solutions – is named Open Payment Framework. In some cases, such as Dell Services, professional services are also included as part of the vendor's framework definition.

Recommendations Related to the Framework Definition:

- Carefully examine the framework capabilities of (1) vendors that support the assembly approach to achieving a PSH, and (2) vendors that support the packaged application approach. It is key to managing a multiphased PSH initiative, and subsequent extension and modification of the PSH.
- In examining a vendor's framework offering, make certain you understand how it is defining the term, and the actual functionality that is provided by the solution. There is no industry-standard definition; making assumptions is dangerous.

3.0 A Critical Consideration: How Open Should Your Framework Be?

The richness of the guiding framework is critical for the development of payments platforms that are based on a service-oriented architecture (SOA; which the PSH is by definition), and that are flexible enough to be extended and modified as requirements change. Regardless of whether the framework is an offering from a vendor that supports the assembly approach to the achievement of a PSH, or is part of a packaged application (which Gartner has noted can serve as a proxy for a framework), firms that are undertaking the design and implementation of a PSH should evaluate the framework capabilities of vendor solutions under consideration and their level of openness to ensure that the vendor approach and capabilities map to their own requirements.

At the two extremes are frameworks that support:

- A closed ecosystem, so that the tools and guidelines significantly limit the ability of firms to work with other vendors, incorporate in-house development or reuse services that already exist as part of their SOA environments as they seek to differentiate their payment services in the marketplace. This may come from the requirement to use the framework vendors' accompanying technologies (such as their payments applications, middleware or professional services), or rigid architectural requirements. A closed approach will speed initial time to market and operational efficiencies because of the more packaged nature of the approach and limited requirements to integrate technologies. However, firms adopting frameworks with this approach will limit their abilities to pursue best-of-breed functionality, and to extend their PSHs over time.
- A fully open ecosystem, so that firms using the framework are able to work with any number of vendors and in-house development, and any set or sets of architectural guidelines to create differentiating payments capabilities. While this conforms with the ideals of an open ecosystem approach to application and application platform development, the realities regarding shared industry understandings and standardization make this highly problematic. These initiatives risk falling into total chaos due to the need to integrate across disparate offerings and cope with gaps and overlaps across various vendor offerings.

A more moderate approach – a semiopen ecosystem in which a set of specified architectural guidelines, based on existing industry standards and maintained in alignment with the work of industry standards-setting bodies, is used to certify a range of partners and define acceptable and sustainable alternatives in the delivery of a PSH.

The level of openness is reflected across a number of the framework capabilities presented in this report and summarized in Figure 1.

Recommendations Regarding Framework Openness:

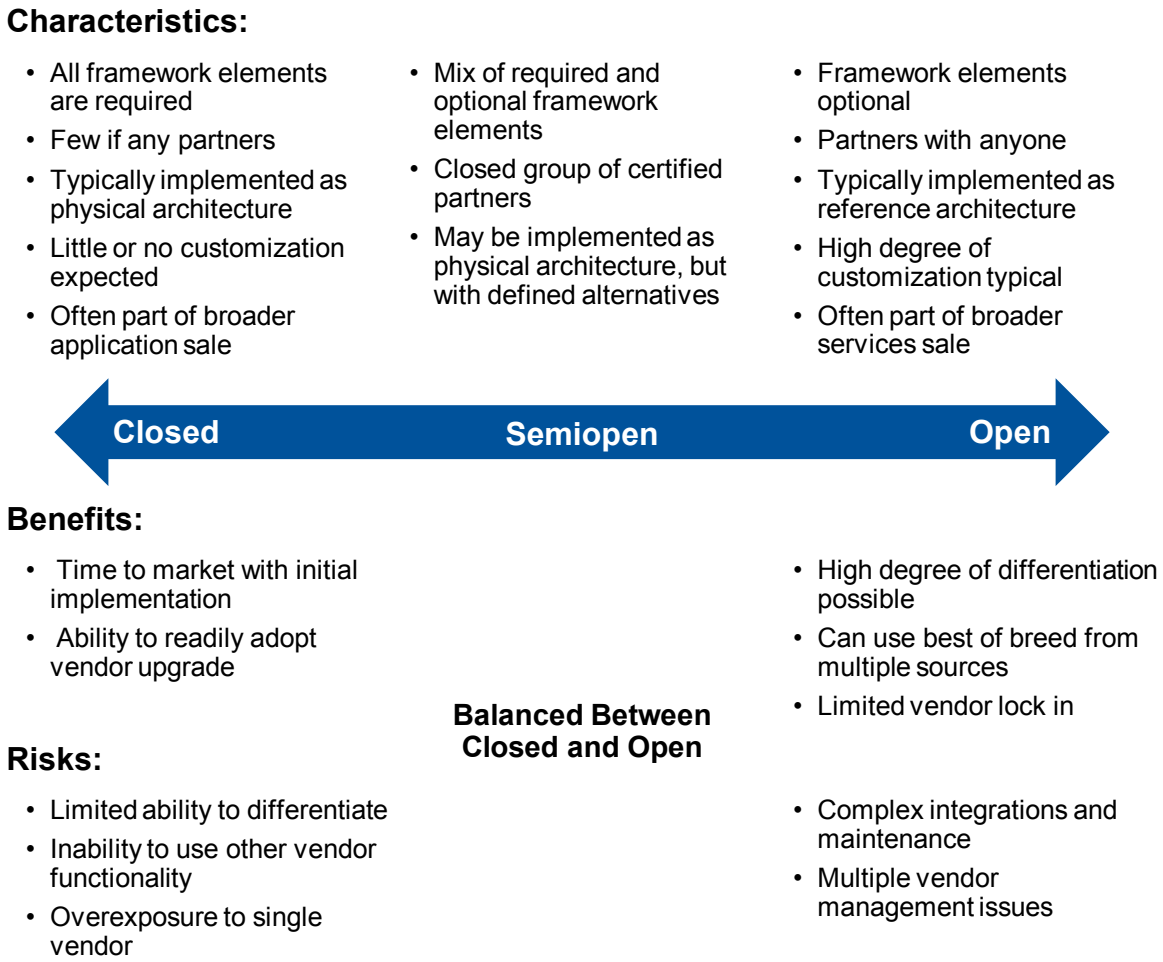
- To receive differentiation via payment operations, limit payment modernization risks, and achieve time-to-market over the life span of the PSH, prioritize frameworks with a semiopen approach.
- If initial time to market for a set of payments applications and operational efficiency is the sole purpose of your payments systems modernization, prioritize frameworks that support a closed approach.

4.0 Framework Scope

4.1 Framework Elements Included

Gartner has identified a range of elements that make up a framework capable of supporting the flexible and phased implementation of a PSH. Vendors responding to our survey vary in their support of these elements, whether these elements are a required or optional part of their offerings, and if they support the elements through partnerships (either as an alternative to their own offering, or as a substitute to offering the element themselves).

Figure 1 | Characteristics, Benefits and Risks Associated with Different Framework Approaches



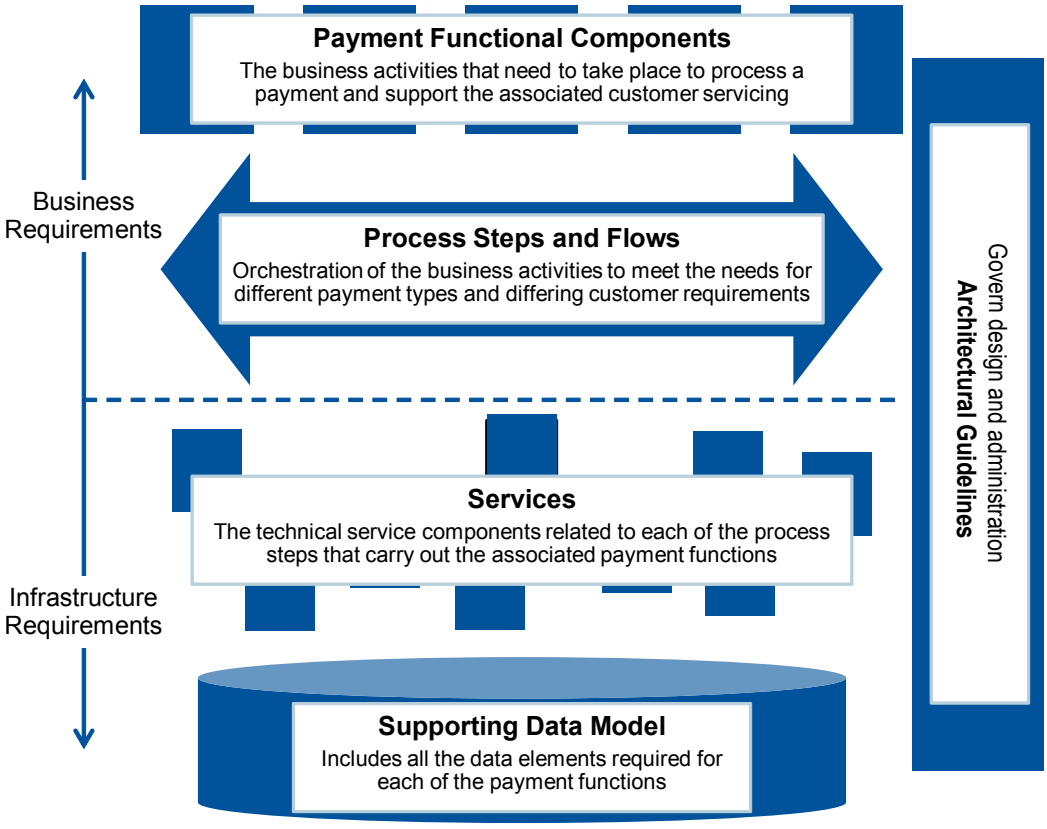
Source: Gartner (June 2010)

Figure 2 introduces the key framework components and their focus on the business-to-infrastructure requirements continuum.

These elements are fulfilling these roles, with the objective of aligning the business requirements to the underlying payment platform and supporting infrastructure:

- Identification of payment functional components (the business activities required for processing a payment and related customer services) is supported by all responding vendors as a required or optional element. The identification of these components is critical for mapping functional requirements.
- Identification of process steps and flow is supported by all responding vendors as a required or optional element. The identification of process steps and flow underlies the ability to orchestrate the processing of different payment types on a single platform and allow for personalization of these flows to meet the requirements of individual customers – and customers' customers.
- Identification of the services that relate to each of the process steps is supported by all responding vendors as a required or optional element. This identification assists in the assembly and reuse of services components at design and runtime.
- Architectural guidelines in general are supported by all responding vendors as a required or optional element for implementation of the vendor's framework:
  - For component interfaces and messaging standards that are critical for ensuring interoperability across different vendor-supplied and in-house-developed components.
  - For supporting infrastructure that aids in determining what infrastructure will be suitable for supporting the PSH. When these are required they are one indication of a vendor's propensity to use its framework as a means of selling its own infrastructure.

Figure 2 | Framework Components and Their Focus



Source: Gartner (June 2010)

- For the scope of service components or modules. These are critical guidelines for ensuring the ability to support a vendor ecosystem, as opposed to a single-vendor-dependent PSH. While challenged due to the lack of industry standards on component scope, these guidelines help determine and guard against functional overlaps and gaps.
- For reuse of service components. These guidelines help ensure development efficiency and dependencies.
- For measuring progress and return on investment (ROI). The least likely of the guidelines to be supported, they can be valuable for building support for the PSH and ensuring that it delivers business value.

- Supporting data model. The data model is a foundational element of the PSH, and is one determinant of the degree to which customized workflows and personalized services can be supported through the creation of a detailed and complete payment object.

These framework elements can be supported through the vendor's own capabilities or through partnerships. These partnerships may be an alternative to or a substitute for the framework vendor's offering.

The degree to which elements are required, and the degree to which a partner's offering can be substituted, are other indicators of the propensity to promote an ecosystem approach to the design of the PSH, and the openness of the approach.

However, the use of multiple vendor guidelines and definitions, or their optional use, may result in additional complexity, particularly because standards for payments are not well-developed beyond the messaging layer. This openness to multiple vendors' guidelines and definitions may also create a longer time to market, because the various vendor offerings must be mapped to each other and integrated.

Recommendations Related to Framework Elements:

- Carefully weigh your firm's appetite for the support of an ecosystem approach to the design and implementation of a PSH versus a single-vendor approach.
- Examine how the vendor's architectural guidelines conform to your own established architectural guidelines and, if and where these are well-established in your firm, the ability for you to use your own specifications while benefiting from the vendor's offerings in other areas.

More Information: Detailed information on the framework elements included in the various surveyed vendors' offerings is contained in Lines 3a through 3f of the tables in Appendix A.

4.2 Framework Scope: Degree of Payments Specificity

The breadth of vendor frameworks varies (see Figure 3).

- Some are payments-specific, such as from Clear2Pay, Dell Services, Fundtech, Polaris and Unisys.
- Some are broader, designed to cover virtually any functional area in financial services, such as Axway, or financial messaging, such as Microsoft. This class of vendors, in some cases, represents the verticalization of what is a broader cross-industry offering. For example, Microsoft has incorporated payments specificity with A4Swift in BizTalk.
- Some represent more of a hybrid approach. For example, while Dovetail and Misys have a strong focus on payments, they are also designed to support other financial messaging. Another example is IBM, which includes payments as one of four focal areas of its banking framework.

This has significant implications:

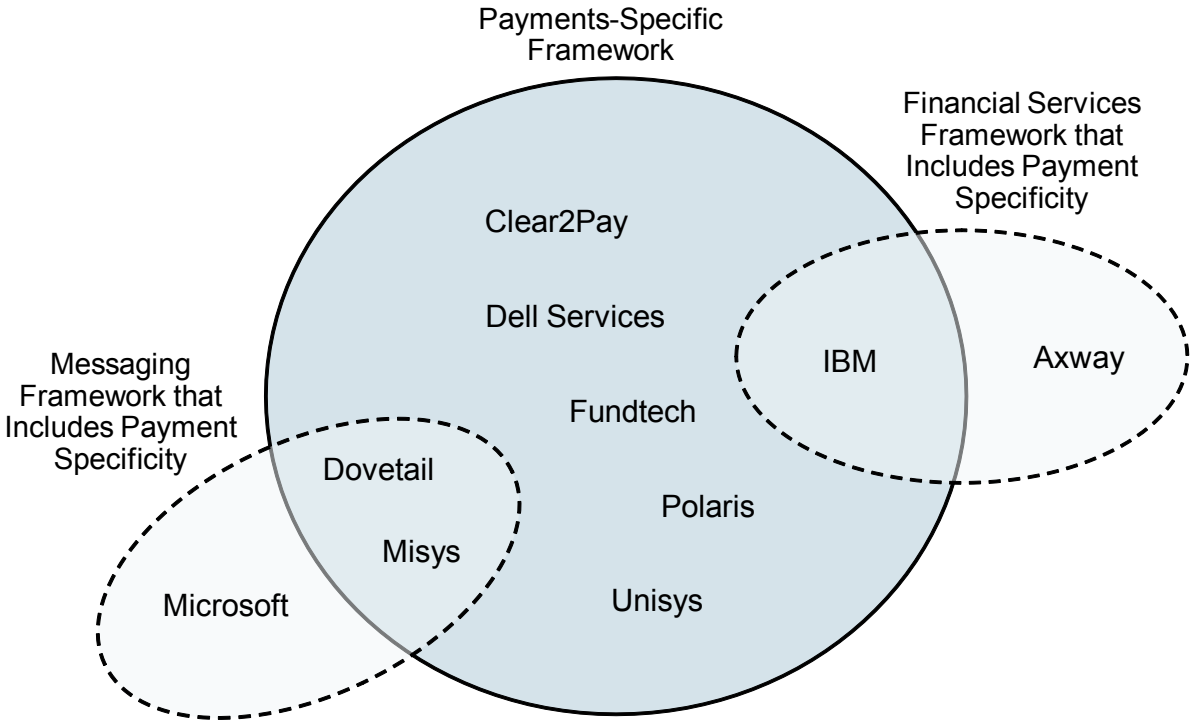
- Generic and hybrid approach frameworks are more likely to be able to be extended to support broader, enterprise SOA initiatives, and the integration of the PSH with other applications and functional areas in the firm.
- Payments-specific frameworks are more likely to embed a strong payments expertise, given the concentration of their focus.

For a deeper discussion of the source of payments functionality, which applies to payment frameworks, see "Vendors Support Different Starting Points for Building a Payment Services Hub."

4.3 Recommendations Regarding Payments Specificity

- Beyond payments, consider your bank's future strategy for reusability of components across the enterprise.
- If you are pursuing a broader SOA strategy, place priority on those frameworks that are part of a broader offering to promote future coordination and reuse across domains, and on those payments-

Figure 3 | Scope of Payment Frameworks



Source: Gartner (June 2010)

specific framework providers that may partner with vendors that have broader frameworks.

- Exercise caution. In some cases (but not all), a broader framework may come at the expense of payments specificity.

More Information: Detailed information on the payments specificity of the various surveyed vendor offerings is contained in Line 1a of the tables in Appendix A.

4.4 Framework Scope: Who It Is Designed to Support, and How

Vendor frameworks can be used to support a range of users, including customers, partners and internal support. While the vendors surveyed for the purpose of this report all provide frameworks to customers, frameworks may also be used by vendors of payments applications for guiding their own development.

Not all vendors responding to our survey provide their framework to partners:

- Application partners are not provided with the framework by Polaris
- Professional services partners are not provided with the frameworks by Axway, Polaris or Unisys

This may reflect how vendors are using their frameworks to drive their own sales of applications, infrastructure or professional services. It may also reflect the degree of "openness" of the framework, and should be examined as one indication of a customer's ability to use the framework in conjunction with an ecosystem of vendors.

Frameworks may be provided as:

- Stand-alone offerings, including for example, architectural guidelines, specification of process steps and flows, and supporting data models, as discussed in Section 4.1. In addition, some vendors that state they make their frameworks available on a stand-alone basis may also be including supporting infrastructure, such as an enterprise service bus (ESB), as part of their stand-alone offerings, based on how they are defining a framework (see Section 2). All vendors responding

to our request for information, with the exception of Dell Services, provide their frameworks in this fashion to customers, though not necessarily partners.

- Part of a broader application sale, bundling the framework in with functional payment components. All vendors surveyed support customers in this fashion, and all those that report providing the framework to application and infrastructure partners do so in this fashion.
- Part of a broader professional services sale, using the framework to guide design and implementation services. All vendors surveyed support customers in this fashion.

Recommendation Regarding to Whom and the Way in Which Frameworks Are Delivered:

Carefully examine to whom the framework is provided and the range of ways in which it is provided, including what the vendor defines as a "stand-alone" offering. Provision of the framework to partners, and as a stand-alone offering, is suggestive of a more open ecosystem approach to the support of payment initiatives.

More Information: Detailed information on the provision of various surveyed vendor offerings to customers and partners is contained in Line 2a of the tables in Appendix A.

5.0 Delivery and Use of Frameworks

5.1 How Frameworks Are Delivered

There are three basic ways by which vendors deliver their frameworks to customers and partners:

1. As a text or electronic document. These may take the form, for example, of user guides, training guides and white papers. All vendors responding to our request for information provide documentation to customers and partners.
2. In a process modeling or business process management (BPM) tool, which allows for easier customer and partner manipulation of services components and workflow. All vendors support this means of delivery, except Axway, Dell Services and Distra. (It should be noted, however, that in some cases these vendors may support use of their frameworks with third-party BPM tools.)
3. As part of a professional services engagement. All vendors support this means.

Recommendations Regarding the Delivery and Use of Frameworks:

- If you are only planning to implement and maintain a framework utilizing the framework vendor or a professional services provider, provision of the framework within a BPM tool may not be required.
- If you wish to customize or personalize workflows, or extend the PSH over time, including the possible use of components from other vendors, seek BPM tool support.

More Information: Detailed information on how frameworks are delivered is in Line 6a of the tables in Appendix A.

5.2 How Frameworks Are Used

Frameworks may be used as a reference architecture – to guide the in-house design and development of a bank's PSH, including the specification of its own customized framework or architectural specifications, or as a physical architecture where the framework elements are primarily accepted and implemented as specified by the vendor. This capability relates to the required or optional nature of the framework elements discussed in Section 4.1, and openness to partners as discussed in Section 4.3.

There are risks with both approaches:

- Use of a framework as a reference architecture, but modified and extended to meet the firm's individual requirements, risks the inability to use products and services that have been built on top of the framework by the framework vendor or its partners, or to incorporate future upgrades to the framework by the supplying vendor.
- Use of a framework as a physical architecture, particularly if that framework has not been well socialized among a broader vendor ecosystem but, instead, is solely dependent on the framework vendor's definitions and guidelines (see Section 4.1), risks vendor lock-in. It may also not be consistent with broader architectural guidelines in your firm, risking the inability to easily integrate into your firm's broader technical and business environment, and to leverage already existing technologies and non-payment-specific services.

These risks are compounded by the fact that payments standards, particularly at the services definition level, are very immature. As a result, least risky may be to implement as a physical architecture, using a framework from a vendor that supports a broad ecosystem of certified partners (see Section 6.0 regarding partner certification).

Recommendations on Use of Frameworks as a Reference or Physical Architecture:

- Carefully weigh the risks associated with the use of a framework as a reference or physical architecture. If using as a physical architecture, weigh the framework's compatibility with existing architectural and technical standards in your firm.
- While the optional nature of framework elements, as identified in Section 4.3, give guidance on the capability to use the framework as a reference architecture, evaluate as well the actual experience of the framework being used in this fashion, if this is your intent.

More Information: Detailed information on partner use of the framework is contained in Lines 4a, 4b and 5a of the tables in Appendix A.

5.3 Vendor-Provided Tools and Services to Help With Framework Implementation, and Skills Typically Required by Customers and Partners

Vendors may provide a range of tools and services to assist in framework implementation and maintenance. The level of customer expertise needed will vary based on the level of professional services required, use of user-friendly tools such as those with graphical user interfaces (GUIs) and drag-and-drop functionality, and the complexity of the individual implementation. Regardless, strong business expertise in payment processes is needed if the firm is not to become totally reliant on the framework vendor and its partners.

Recommendation Regarding Framework Tools:

Carefully evaluate the range of tools provided and your ability to use tools of your choice if you have already standardized within your firm. Regardless of your chosen method of implementation and use of third parties, invest in business payment process expertise.

More Information: Detailed information on tool and service provision, as well as needed skills, is contained in Lines 6b through 6e of the tables in Appendix A.

5.4 Level of Customization Typically Required

The level of customization required is closely linked to the individual firm's payments strategy and the degree to which it is seeking to differentiate itself in the market. Vendor responses, however, shed light on the degree to which their own customers typically customize the applications, and thus the expertise they have in customization and possibly the sophistication of provided tools. In addition, the framework elements supported (see Section 4.3) and whether they are optional or required, or available through partners as an alternative, provide an indication of the degree to which the framework supports differentiation in its design. Completeness and granularity of the framework will determine the degree to which customization is required versus configuration.

Recommendation Regarding Framework Customization:

First, recognize the degree to which you are seeking a differentiating payments processing capability with customized design, or if you are focused on operational efficiency. Use this to evaluate the trade-offs between the need for and ability to customize, and the time-to-market efficiencies of a more standard implementation.

More Information: Detailed information on level of customization typically required is contained in Line 6f of the tables in Appendix A.

6.0 Vendors' Internal Use of Their Frameworks

Framework vendors use their offerings to support a range of their own requirements, from guiding their own application and service component development and professional services engagements, communication with partners, certifying partners, as a sales tool, and as a tool for assessing customers' current and desired to-be states as part of sales or preimplementation work.

Recommendation Regarding Vendors' Internal Use of Their Frameworks:

If you are pursuing a vendor ecosystem approach to building the PSH, as opposed to relying solely or predominantly on a single vendor, pay particular attention to the vendor's use of its framework to certify partners. While overall lack of industry standardization makes certification across different vendors problematic, it does enable an understanding of functional overlaps and gaps.

More Information: Detailed information on how framework vendors are using their offerings to support their own requirements is contained in Lines 7a through 7f of the tables in Appendix A.

7.0 Closing Recommendations

Firms that are seeking to develop a PSH with a focus on offering differentiating products and services should:

- Place particular emphasis on the ability to use alternative sources of functionality, partner certification and delivery outside of a broader application or services sale.

Firms that are seeking to develop a PSH with a focus on time-to-market and operational efficiency (but not necessarily differentiating products and services) should:

- Place particular emphasis on the provision of a broad set of supporting infrastructure and services offerings from a single vendor, while enabling customization through use of supplied tools.

All banks, regardless of their focus, should:

- Use the framework components to improve their existing payment governance models. Payments frameworks provide a blueprint to align business and IT requirements. Their utilization as part of a PSH initiative can shape the business-IT alignments beyond the PSH modernization and improve the quality of the management of payment operations.

8.0 Appendix A: Individual Vendor Profiles

Following are profiles for vendors that responded to our request for information. Vendor responses have been edited for length and consistency. The information, however, is based on the vendor's own claims.

Table 2. Profile for Axway

Profile for Axway					
1. Breadth of Offering: Payments Specific or Broader?					
1a.	Broader, designed to encompass any business functional area, including cash management, account management, payment processing, lending, treasury, and extension of core banking to other sectors.				
2. To whom the payments framework is sold or provided	Customers	Application Partners	Infrastructure Partners	Professional Services Partners	Other
2a.	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	No	No others
3. Framework Components	Provided	Required or optional	Made available through partner		
3a. Identification of payment functional components	Yes, through Axway professional services	Optional	No		
3b. Identification of process steps and flow	Yes, through Axway professional services	Optional	No		
3c. Identification of the services that relate to each of the process steps	Yes, through Axway professional services	Optional	No		
3d. Architectural Guidelines:					
• Guidelines for component interfaces	Yes	Required	No		
• Guidelines for messaging standards	Yes	Optional	No		
• Guidelines for supporting infrastructure	Yes	Required	No		
• Guidelines for scope of service components or modules	Yes	Required	No		
• Guidelines for reuse of service components	Yes	Required	No		

continued

Profile for Axway				
• Guidelines for measuring progress	Yes	Optional	No	
• Guidelines for measuring ROI	Yes	Optional	No	
• Other	No other architectural guidelines			
3e. Supporting data model	Yes, each tool/component comes with its data model that one can extend if necessary	Required	No	
3f. Other	No others			
4. Customers Using Framework				
4a. Estimated number of customers currently using framework	About one-half of the top 500 banks and financial institutions in the world.			
4b. How using framework	As a reference architecture. Axway's B2B framework is set up as a central or distributed engine allowing users to set up and operate flow exchange architectures, including for inbound/outbound payments.			
5. Partners Using Framework				
5a. How using framework	As a reference architecture as they develop or promote value-added business services for their customers or ecosystem partners.			
6. Delivery of Framework	Text or electronic document	In a process modeling or BPM tool	As part of a professional services engagement	Other
6a. How framework is delivered to customers and partners	Yes, Axway provides associated documentation and training guides	No; however, configuration solution guides are delivered with the solution	As a software platform, supported by ad hoc professional services/consulting engagement, training and documentation, that sustain customers/partners all throughout their projects, from design to deployment phases	
6b. Tools provided to customers or partners for implementing the framework	Axway MFT and Axway B2Bi, Axway Composer, Axway Passport, Axway Sentinel, and Axway Mapping Services			
6c. Professional services provided by vendor or vendor partners to customers or partners for implementing the framework	Axway's B2Bi framework deployment requires a minimum set of professional services to interface to customer legacy banking applications and model customer's sales, operations and prudential rules policy. Also, additional professional services may be required for message format mapping for brokering purposes (specific in-house, local standards, etc.).			

continued

Profile for Axway	
6d. Tools or professional services provided by vendor or vendor partners to customers or partners for maintaining the framework	Axway MFT and Axway B2Bi, Axway Composer, Axway Passport, Axway Sentinel, and Axway Mapping Services. From this modular system, Axway tailors a solution to serve each individual customer's needs.
6e. Kinds and levels of skills typically needed by customers or partners to implement the framework, and to modify the framework as requirements change, on their own	Customers or partners must have acquired a global understanding of the capabilities of Axway's B2Bi framework's capabilities through training or from previous projects. A solid experience of application integration, SOA and B2B, as well as a good expertise in Java, XML, and process modeling are also required on the customer's or partner's side.
6f. Level of customization typically required as it is implemented at customers' sites	Additional professional services may be required for message format mapping or transformation of data into specific formats and standards if not conforming to the expected formats. The level of services efforts will very much depend on complexity of transformation and other validations expected to be placed within the B2Bi framework. From a business visibility perspective, additional requirements for detailed business activity reporting may also require Axway's professional services support.
7. How the Vendor as a Software Provider or Professional Services Provider Uses This Framework	
7a. To guide the development of payment applications or services components	Yes. Packaged horizontal and vertical solutions are based on Axway's B2Bi framework, comprising a broad range of reusable components (BAM, user and partner management, cryptography, protocol adaptors, etc.).
7b. To guide its professional services engagements for implementing payment applications	Yes. See information regarding professional services.
7c. To communicate to or guide partners in implementing their payment services components or applications	Yes. See line 7a.
7d. To assess the suitability of or certify (potential) partners	No. Not seen by vendor as applicable.
7e. As a sales tool to describe their offering	No. Not seen by vendor as applicable.
7f. For assessing customers' current state as part of sales or preimplementation work	No. Not seen by vendor as applicable.

Source: Axway

Table 3. Profile for Clear2Pay

Profile for Clear2Pay					
1. Breadth of Offering: Payments Specific or Broader?					
1a.	It is by definition a payments-oriented solution.				
2. To whom the payments framework is sold or provided	Customers	Application Partners	Infrastructure Partners	Professional Services Partners	Other
2a.	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	No
3. Framework Components	Provided	Required or optional	Made available through partner		
3a. Identification of payment functional components	Yes	Optional	Yes		
3b. Identification of process steps and flow	Yes	Optional	Yes		
3c. Identification of the services that relate to each of the process steps	Yes	Optional	Yes		
3d. Architectural Guidelines:					
• Guidelines for component interfaces	Yes	Optional	Yes		
• Guidelines for messaging standards	Yes	Optional	Yes		
• Guidelines for supporting infrastructure	Yes	Optional	Yes		
• Guidelines for scope of service components or modules	Yes	Optional	Yes		
• Guidelines for reuse of service components	Yes	Optional	Yes		
• Guidelines for measuring progress	No		No		
• Guidelines for measuring ROI	No		No		
• Other	Guideline for extending and adapting functional components				
3e. Supporting data model	Yes	Required	Yes		

continued

Profile for Clear2Pay				
3f. Other	The OPF contains a wide range of functional components providing out-of-the-box functionality. Examples include the Routing Service, Parsers & Submitters, Validation Service, Enrichment Service, Reconciliation Service, etc.; OPF also provides a complete GUI along with complete user authentication and authorization functionality			
4. Customers Using Framework				
4a. Estimated number of customers currently using framework	12 to 16 full hub projects. However, as many of these customers also process the payments of other banks, in all over 200 banks process their payments on the Open Payment Framework.			
4b. How using framework	As a reference and physical architecture, utilizing the software development kit (SDK) with which it ships.			
5. Partners Using Framework				
5a. How using framework	As a reference and physical architecture, as some of their implementation partners have development licenses allowing them to create custom-made payment solutions.			
6. Delivery of Framework	Text or electronic document	In a process modeling or BPM tool	As part of a professional services engagement	Other
6a. How framework is delivered to customers and partners	Yes, across a suite of media	Yes, it utilizes the IBM WebSphere Process Server for all process modeling and orchestration	Yes, using either Clear2Pay or third-party system integrators	No others
6b. Tools provided to customers or partners for implementing the framework	The Open Payment Framework comes with a software developer's kit (SDK), which is optional. IBM WebSphere Process Server is required to be installed.			
6c. Professional services provided by vendor or vendor partners to customers or partners for implementing the framework	If Clear2Pay is used for implementation, would expect to supply both business analysts and software engineers for all phases of the implementation. Professional services are not required; customers can choose to implement on their own.			

continued

Profile for Clear2Pay	
6d. Tools or professional services provided by vendor or vendor partners to customers or partners for maintaining the framework	The SDK lets banks customize their implementations without the need for a full software release from Clear2Pay.
6e. Kinds and levels of skills typically needed by customers or partners to implement the framework, and to modify the framework as requirements change, on their own	Familiarity with SOA, industry standards such as Java EE, BPEL, WSDL and XML.
6f. Level of customization typically required as it is implemented at customers' sites	The Open Payment Framework is sometimes sold as a prepackaged solution with limited customization options for tactical implementations. More strategic sales include the SDK which delivers documented APIs, customization patterns, and a suite of reusable frameworks that offer the ability to add change, and round out components.
7. How the Vendor as a Software Provider or Professional Services Provider Uses This Framework	
7a. To guide their development of payment applications or services components	Yes. Develops entire product range on the Open Payment Framework, including enhancement of existing solutions, new development, and regional offerings and localization of generic product.
7b. To guide its professional services engagements for implementing payment applications	The Open Payment Framework forms the fundamental base component to all implementations, with professional services groups trained on all aspects of the Framework.
7c. To communicate to or guide partners in implementing their payment services components or applications.	Partners receive extensive training on the Open Payment Framework.
7d. To assess the suitability of or certify (potential) partners	Preference is given, when developing new partnerships, to those with prior experience in the Open Payment Framework, but it is not mandatory.
7e. As a sales tool to describe its offering.	Yes, with all product demonstrations created on the platform.
7f. For assessing customers' current state as part of sales or preimplementation work.	Yes, The first phase of any implementation is usually a project definition study to define the detailed requirements, utilizing the Framework.

Source: Clear2Pay

Table 4. Profile for Dell Services

Profile for Dell Services					
1. Breadth of Offering: Payments Specific or Broader?					
1a.	Specific to payments, covering all types of payments.				
2. To whom the payments framework is sold or provided	Customers	Application Partners	Infrastructure Partners	Professional Services Partners	Other
2a.	Yes, as part of a broader application or professional services sale only	Yes, as part of a broader application or professional services sale only	Yes, as part of a broader application or professional services sale only	Yes, as part of a broader application or professional services sale only	No other
3. Framework Components	Provided		Required or optional	Made available through partner	
3a. Identification of payment functional components	Yes		Required as part of current state assessment	Yes	
3b. Identification of process steps and flow	Yes		Required, as part of current state assessment	No	
3c. Identification of the services that relate to each of the process steps	Yes		Required, as part of current state assessment	No	
3d. Architectural Guidelines:					
• Guidelines for component interfaces	Yes		Optional, depending on engagement scope	Possible	
• Guidelines for messaging standards	Yes		Optional, depending on engagement scope	Possible	
• Guidelines for supporting infrastructure	Yes		Optional, depending on engagement scope	Possible	
• Guidelines for scope of service components or modules	Yes		Optional, depending on engagement scope	Possible	
• Guidelines for reuse of service components	Yes		Optional, depending on engagement scope	Possible	
• Guidelines for measuring progress	Yes		Optional, depending on engagement scope	Yes	
• Guidelines for measuring ROI	Yes		Optional, depending on engagement scope	Yes	
• Other	No other architectural guidelines				
3e. Supporting data model	Yes		Optional	Possible	
3f. Other	No other				
4. Customers Using Framework					

continued

Profile for Dell Services				
4a. Estimated number of customers currently using framework	8, through Dell Services' professional services.			
4b. How using framework	Only available through professional services model.			
5. Partners Using Framework				
5a. How using framework	Not identified			
6. Delivery of Framework	Text document	In a process modeling or BPM tool	As part of a professional services engagement	Other
6a. How framework is delivered to customers and partners	Yes	No	Yes. A consultative lead engagement	No other
6b. Tools provided to customers or partners for implementing the framework	Flexible in terms of the tools used.			
6c. Professional services provided by vendor or vendor partners to customers or partners for implementing the framework	Consulting services, application services, solution accelerators, and point solutions.			
6d. Tools or professional services provided by vendor or vendor partners to customers or partners for maintaining the framework	Flexible in providing maintenance of applications developed using the framework.			
6e. Kinds and levels of skills typically needed by customers or partners to implement the framework, and to modify the framework as requirements change, on their own	Payments subject matter experts, systems architects, project managers, business analysts, application developers, testers, etc.			
6f. Level of customization typically required as it is implemented at customers' sites	Varies, depending on desired end state for a customer.			
7. How the Vendor as a Software Provider or Professional Services Provider Uses This Framework				
7a. To guide its development of payment applications or services components	Leverage the reference architecture to guide systems and applications architecture. Dell derives functional and nonfunctional guidelines. As part of a services-based architecture, Dell provides guidance as to which layer of the stack the business logic should reside, and whether the services would be coarse- or fine-grained for the purpose of reusability. Dell also makes its proprietary SOA framework available to augment customer architectures.			
7b. To guide its professional services engagements for implementing payment applications	Dell uses its reference architecture as a guide to future-state definition. The process begins with a definition of the current state from the domain level to the service component level, to the business process. These artifacts and deliverables are used to guide the road map and prioritization discussions with the various stakeholders.			

continued

Profile for Dell Services	
7c. To communicate to or guide partners in implementing their payment services components or applications	Guidance is provided in terms of architectural standards, interfaces, functionality and performance.
7d. To assess the suitability of or certify (potential) partners	We assess the fit and function of the application components considered for use in our framework. A set of partners have been successfully integrated. Dell states, however, that it recognizes its customers have a point of view regarding partners.
7e. As a sales tool to describe its offering	Use to differentiate its payments systems transformation as a modernization activity that seeks to reuse as much of its customer's current assets as possible.
7f. For assessing customers' current state as part of sales or preimplementation work	The framework helps Dell envision customers' ideal future state, used when setting initial scope and priorities. The framework is used to help customers understand the variables and options available.

Source: Dell Services

Table 5. Profile for Distra

Profile for Distra					
1. Breadth of Offering: Payments Specific or Broader?					
1a.	Information not provided.				
2. To whom the payments framework is sold or provided	Customers	Application Partners	Infrastructure Partners	Professional Services Partners	Other
2a.	Yes, as stand-alone offering, or part of a broader application or services sale	Yes, as part of a broader application or services sale only	Yes, as part of a broader application or services sale only	Yes, as stand-alone offering, or part of a broader application or services sale	No other
3. Framework Components	Provided		Required or optional	Made available through partner	
3a. Identification of payment functional components	Yes		Optional	Yes	
3b. Identification of process steps and flow	Yes		Optional	Yes	
3c. Identification of the services that relate to each of the process steps	Yes		Optional	Yes	
3d. Architectural Guidelines:					
• Guidelines for component interfaces	Yes		Optional	Yes	
• Guidelines for messaging standards	Yes		Optional	Yes	

continued

Profile for Distra				
• Guidelines for supporting infrastructure	Yes	Optional		Yes
• Guidelines for scope of service components or modules	No			No
• Guidelines for reuse of service components	Yes	Optional		Yes
• Guidelines for measuring progress	No			No
• Guidelines for measuring ROI	No			No
• Other	No other architectural guidelines			
3e. Supporting data model	Yes	Optional		Yes
3f. Other				
4. Customers Using Framework				
4a. Estimated number of customers currently using framework	12			
4b. How using framework	As a reference architecture (all 12 customers), and also as a physical architecture (10 customers) in that the multi-site architecture for automatic disaster recovery is driven by the distributed nature of the Distra product running simultaneously across geographically distributed sites. But the Distra product will run on any contemporary hardware with Java Virtual Machine.			
5. Partners Using Framework				
5a. How using framework	As a reference architecture to design and develop applications in the wholesale payments and telco areas. Also as a physical architecture as described in 4b.			
6. Delivery of Framework	Text or electronic document	In a process modeling or BPM tool	As part of a professional services engagement	Other
6a. How framework is delivered to customers and partners	Yes, including on how to customize each product framework and add the resulting services to the Distra switching platform	No	Yes, the Distra professional services team provides consulting, management, training, support and customization and development services	No other.

continued

Profile for Distra	
6b. Tools provided to customers or partners for implementing the framework	Distra provides installation, customization, configuration, management and test tools. Configuration and customization may be performed by adjusting existing templates.
6c. Professional services provided by vendor or vendor partners to customers or partners for implementing the framework	Distra offers professional services across the entire project life cycle. A minimum of initial implementation support and business-as-usual third-level support are required.
6d. Tools or professional services provided by vendor or vendor partners to customers or partners for maintaining the framework	Distra provides its Switch Builder tool for customization and its Switch Master tool for management as part of the basic package.
6e. Kinds and levels of skills typically needed by customers or partners to implement the framework, and to modify the framework as requirements change, on their own	Skills required for customization and configuration are business oriented and the critical knowledge is related to details about how the system should behave. Operational skills are centered on the health of servers, databases, etc.
6f. Level of customization typically required as it is implemented at customers' sites	A high level of configurability is supported.
7. How the Vendor as a Software Provider or Professional Services Provider Uses This Framework	
7a. To guide its development of payment applications or services components	Distra uses its frameworks for development of all its real-time, nonstop application and services components.
7b. To guide its professional services engagements for implementing payment applications	The frameworks, along with the templates and components in the Distra portfolio, dictate the approach to implementation by professional services.
7c. To communicate to or guide partners in implementing its payment services components or applications.	Distra partners are provided with the same tools and documentation, and follow the same solution approach as Distra professional services.
7d. To assess the suitability of or certify (potential) partners	Not used in this way.
7e. As a sales tool to describe its offering.	Used to demonstrate the architecture, functionality and fault tolerance by showing an actual running system.
7f. For assessing customers' current state as part of sales or preimplementation work.	The framework includes a number of standard endpoints, which form the basis for gap analysis in determining what configuration will be required. This is driven by business analysis.

Source: Distra

Table 6. Profile for Dovetail

Profile for Dovetail					
1. Breadth of Offering: Payments Specific or Broader?					
1a.	Includes domain-aware specialization for payments and securities, as well as more generic solutions in the messaging space.				
2. To whom the payments framework is sold or provided	Customers	Application Partners	Infrastructure Partners	Professional Services Partners	Other
2a.	Yes, either as a stand-alone offering, or part of a broader application sale	Yes, either as a stand-alone offering, or part of a broader application or services sale	Yes, either as a stand-alone offering, or part of a broader application or services sale	Yes, either as a stand-alone offering, or part of a broader application or services sale	No other
3. Framework Components	Provided	Required or optional	Made available through partner		
3a. Identification of payment functional components	Yes	Optional	Yes		
3b. Identification of process steps and flow	Yes	Required	Yes		
3c. Identification of the services that relate to each of the process steps	Yes	Required	Yes		
3d. Architectural Guidelines:					
• Guidelines for component interfaces	Yes	Optional	Yes		
• Guidelines for messaging standards	Yes	Optional	Yes		
• Guidelines for supporting infrastructure	Yes	Optional	Yes		
• Guidelines for scope of service components or modules	Yes	Optional	Yes		
• Guidelines for reuse of service components	Yes	Optional	Yes		
• Guidelines for measuring progress	Yes	Optional	Yes		
• Guidelines for measuring ROI	Yes	Optional	Yes		
• Other	Yes	Optional	Yes		
3e. Supporting data model	Yes	Optional	Yes		

continued

Profile for Dovetail				
3f. Other	No other			
4. Customers Using Framework				
4a. Estimated number of customers currently using framework	6			
4b. How using framework	As a reference solution (3 customers), using Dovetail's workflow framework. Customers can readjust the workflow and add new components as they build their own unique application. Also can use as a physical architecture (3 customers), using Dovetail's clearing framework, interface framework, and workflow framework to define the physical architecture that will be used.			
5. Partners Using Framework				
5a. How using framework	Yes, similar to the use by customers.			
6. Delivery of Framework	Text document	In a process modeling or BPM tool	As part of a professional services engagement	Other
6a. How framework is delivered to customers and partners	Yes, provide framework reference documentation	Yes, the Dovetail Framework process modeling for fine grain component uses XML configured workflows. For enterprise wide orchestration/ modeling the bank's choice of BPM tools is supported	Yes, Dovetail professional services can be engaged	The actual framework software is a set of tools and code that is delivered and installed electronically on the customer or partner site
6b. Tools provided to customers or partners for implementing the framework	A comprehensive SDK is provided, but not required.			
6c. Professional services provided by vendor or vendor partners to customers or partners for implementing the framework	Professional services are provided across the life cycle, but not required.			
6d. Tools or professional services provided by vendor or vendor partners to customers or partners for maintaining the framework	Banks can mix use of their own components with standard components from Dovetail. The data model is extendable by the bank. Testing of upgrades is carried out using Dovetail's automated testing framework.			

continued

Profile for Dovetail	
6e. Kinds and levels of skills typically needed by customers or partners to implement the framework, and to modify the framework as requirements change, on their own	To implement or personalize the solutions requires some or all the following skills: project management, subject matter expertise/business analysts, report writers, testers and system management. To customize the solution or framework requires development skills specifically in Java, Java EE and relational databases.
6f. Level of customization typically required as it is implemented at customers' sites	Minimal customization of the framework has been required by any of our customers.
7. How the Vendor as a Software Provider or Professional Services Provider Uses This Framework	
7a. To guide its development of payment applications or services components	Yes
7b. To guide its professional services engagements for implementing payment applications	Yes
7c. To communicate to or guide partners in implementing their payment services components or applications	Yes
7d. To assess the suitability of or certify (potential) partners	Yes
7e. As a sales tool to describe its offering	Yes
7f. For assessing customers' current state as part of sales or preimplementation work	Yes, to determine technical or functional gaps.
7g. Other	To quickly implement and perform proof of concepts.

Source: Dovetail

Table 7. Profile for Fundtech

Profile for Fundtech					
1. Breadth of Offering: Payments Specific or Broader?					
1a.	Primarily a payment management framework, orchestrating core banking services such as reservation of funds, treasury including real-time liquidity and multichannel delivery.				
2. To whom the payments framework is sold or provided	Customers	Application Partners	Infrastructure Partners	Professional Services Partners	Other

continued

Profile for Fundtech					
2a.	Yes, as a stand-alone offering or part of a broader application or services sale	Yes, as a stand-alone offering or part of a broader application or services sale	Yes, as a stand-alone offering or part of a broader application or services sale	Yes, as a stand-alone offering or part of a broader application or services sale	No
3. Framework Components	Provided	Required or optional	Made available through partner		
3a. Identification of payment functional components	Yes	Optional	Yes		
3b. Identification of process steps and flow	Yes	Required	Yes		
3c. Identification of the services that relate to each of the process steps	Yes	Required	Yes		
3d. Architectural Guidelines:					
• Guidelines for component interfaces	Yes	Optional	Yes		
• Guidelines for messaging standards	Yes	Optional	Yes		
• Guidelines for supporting infrastructure	Yes	Optional	Yes		
• Guidelines for scope of service components or modules	Yes	Optional	Yes		
• Guidelines for reuse of service components	Yes	Optional	Yes		
• Guidelines for measuring progress	Yes	Optional	Yes		
• Guidelines for measuring ROI	Yes	Optional	Yes		
• Other	No other architectural guidelines				
3e. Supporting data model	Yes	Optional	Yes		
3f. Other					
4. Customers Using Framework					
4a. Estimated number of customers currently using framework	Information not supplied.				
4b. How using framework	Being used as both a reference and a physical architecture.				
5. Partners Using Framework					

continued

Profile for Fundtech				
5a. How using framework	Yes, as a reference or physical architecture.			
6. Delivery of Framework	Text or electronic document	In a process modeling or BPM tool	As part of a professional services engagement	Other
6a. How framework is delivered to customers and partners	Yes, either hard or soft copy format	Yes, using any standards compliant tool (at present tools from IBM and Oracle have been used)	Yes, either Fundtech's or a third-party partner	No other
6b. Tools provided to customers or partners for implementing the framework	As a standards-based solution, the purchase of any specific tool or infrastructure is not required. To implement the framework, however, a specific runtime stack needs to be selected. Fundtech delivers application templates through services, either directly or through a partner.			
6c. Professional services provided by vendor or vendor partners to customers or partners for implementing the framework	Fundtech or its partners can support the entire implementation life cycle from early requirements to testing. These services are optional.			
6d. Tools or professional services provided by vendor or vendor partners to customers or partners for maintaining the framework	Pre- and postimplementation support, performance testing, hardware sizing, capacity modeling, etc. Industry-standard tools are used for these activities.			
6e. Kinds and levels of skills typically needed by customers or partners to implement the framework, and to modify the framework as requirements change, on their own	Business skills in interacting with the framework and modifying its processing parameters. Business and some IT skills to deploy new products, services, and/or payment execution and payment clearing channels.			
6f. Level of customization typically required as it is implemented at customers' sites	The level of customization is highly dependent on the customer's individual use case(s). It can be deployed turnkey or integrated into existing workflows with new workflows being created as needed.			
7. How the Vendor as a Software Provider or Professional Services Provider Uses This Framework				
7a. To guide its development of payment applications or services components	Yes			
7b. To guide its professional services engagements for implementing payment applications	Yes			

continued

Profile for Fundtech	
7c. To communicate to or guide partners in implementing their payment services components or applications	Yes
7d. To assess the suitability of or certify (potential) partners	Yes
7e. As a sales tool to describe its offering	Yes
7f. For assessing customers' current state as part of sales or preimplementation work	Yes

Source: Fundtech

Table 8. Profile for IBM

Profile for IBM					
1. Breadth of Offering: Payments Specific or Broader?					
1a.	Part of the IBM Banking Industry Framework, which covers integrated risk management, customer care and insight, core systems renovations, and payments and securities processing.				
2. To whom the payments framework is sold or provided	Customers	Application Partners	Infrastructure Partners	Professional Services Partners	Other
2a.	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	Yes, as part of a broader application or services sale only	Yes, as part of a broader application or services sale only	Yes, as part of a broader application or services sale only	No
3. Framework Components	Provided		Required or optional	Made available through partner	
3a. Identification of payment functional components	Yes		Optional	Yes	
3b. Identification of process steps and flow	Yes		Optional	Yes	
3c. Identification of the services that relate to each of the process steps	Yes		Optional	Yes	
3d. Architectural Guidelines:					
• Guidelines for component interfaces	Yes		Optional	Yes	

continued

Profile for IBM				
• Guidelines for messaging standards	Yes	Optional	Yes	
• Guidelines for supporting infrastructure	Yes	Optional	Yes	
• Guidelines for scope of service by components or modules	Yes	Optional	Yes	
• Guidelines for reuse of service components	Yes	Optional	Yes	
• Guidelines for measuring progress	Yes	Optional	Yes	
• Guidelines for measuring ROI	Yes	Optional	Yes	
• Other	Yes	Optional	Yes	
• 3e. Supporting data model	Yes	Optional	Yes	
• 3f. Other	Yes, services model (IFW)	Optional	Possibly	
4. Customers Using Framework				
4a. Estimated number of customers currently using framework	Nearly 150 accounts use elements of the Banking Industry Framework for payments and securities.			
4b. How using framework	Being used as both a reference architecture (by approximately 75 customers) and as a physical architecture (by approximately 75 customers). Customers using as a physical architecture are deploying specific services available from IBM and its partners.			
5. Partners Using Framework				
5a. How using framework	As a reference architecture though some implement as a physical architecture to reduce runtime development requirements for the production of their assets or application.			
6. Delivery of Framework	Text or electronic document	In a process modeling or BPM tool	As part of a professional services engagement	Other
6a. How framework is delivered to customers and partners	Yes, architectural documents and standards for integration through text documents and services interface definitions	Yes, process and data models can be directly consumed into BPM tooling and modeling tools	Yes	No other

continued

Profile for IBM	
6b. Tools provided to customers or partners for implementing the framework	IBM software tools and services applications built on this middleware, which are provided as software code directly to the customer, or developed specifically for the customer based on unique requirements. Several tools are Industry Packs, which have specific payments processing content and can be deployed for specific needs of the SOA that serves as the platform for the framework.
6c. Professional services provided by vendor or vendor partners to customers or partners for implementing the framework	A complete array of professional services from business consulting to organizational planning through development, deployment and hosting of applications derived from or based on the framework.
6d. Tools or professional services provided by vendor or vendor partners to customers or partners for maintaining the framework	Through IBM's Rational and Tivoli brands, a complete set of end-to-end monitoring, maintenance and development tools is provided. Tools that already understand and use the standards and maintenance requirements of the defined framework are provided.
6e. Kinds and levels of skills typically needed by customers or partners to implement the framework, and to modify the framework as requirements change, on their own	IBM provides clients with governance, development and design skills to use the framework and related products. Also, documentation, online courses and manuals are provided.
6f. Level of customization typically required as it is implemented at customers' sites	Nearly all customers have complex and unique needs that are customized for their specific needs. While most customers have a customized usage of the framework, they can reuse those customized portions when created with the Framework standards.
7. How the Vendor as a Software Provider or Professional Services Provider Uses This Framework	
7a. To guide its development of payment applications or services components	The planning, creation and delivery of all IBM solutions in the framework space are guided by an integrated product development team governed by the industry framework. The entire planning and investment cycle is now by a central offering team that manages the IBM Banking Industry Framework for each domain with one specifically for payments and securities processing. This reaches to IBM middleware for advice, design and investment to each product and brand.
7b. To guide its professional services engagements for implementing payment applications	The reference architecture is used as the basis for development and deployment consulting.
7c. To communicate to or guide partners in implementing their payment services components or applications	The IBM Partner Program for the Banking Industry Framework uses the reference architecture to guide the integration of its services and/or components in the framework. This is done in technical and sales documents.
7d. To assess the suitability of or certify (potential) partners	Yes, the framework reference architecture is used to evaluate where possible gaps in the architecture might exist and be filled with partner content.
7e. As a sales tool to describe its offering	All offerings are described through the Banking Industry Framework.

continued

Profile for IBM	
7f. For assessing customers' current state as part of sales or preimplementation work	Yes, through the models from the framework in IBM's business modeling tool. This is used for business value assessments that provide as-is and to-be models with costing for ROI analysis and planning.

Source: IBM

Table 9. Profile for Microsoft

Profile for Microsoft					
1. Breadth of Offering: Payments Specific or Broader?					
1a.	All forms of financial messages are covered within the framework, including payments, securities and cash reporting. Payments-specific functionality is provided by A4SWIFT functionality built into BizTalk Server core as well as the Financial Messaging Services Bus (FMSB) accelerator				
2. To whom the payments framework is sold or provided	Customers	Application Partners	Infrastructure Partners	Professional Services Partners	Other
2a.	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	Yes, as a separate, stand-alone offering, or as part of a broader application sale only	No
3. Framework Components	Provided		Required or optional	Made available through partner	
3a. Identification of payment functional components	Yes		Optional	Yes	
3b. Identification of process steps and flow	Yes		Optional	Yes	
3c. Identification of the services that relate to each of the process steps	Yes		Optional	Yes	
3d. Architectural Guidelines:					
• Guidelines for component interfaces	Yes		Optional	Yes	
• Guidelines for messaging standards	Yes		Optional	Yes	
• Guidelines for supporting infrastructure	Yes		Yes, guidance is provided for the Framework's supporting infrastructure	Yes	

continued

Profile for Microsoft				
• Guidelines for scope of service components or modules	Yes	Optional	Yes	
• Guidelines for reuse of service components	Yes	Optional	Yes	
• Guidelines for measuring progress	Yes (supported by Business Activity Monitoring capabilities in framework)	Optional	Yes	
• Guidelines for measuring ROI	Yes	Optional	Potentially, based on enhanced partner offering	
• Other	Yes, performance benchmarks	Optional	Yes (solution-specific performance benchmarks, implementation guidelines)	
3e. Supporting data model	Yes (for transaction messages)	Optional	Yes (for transaction messages)	
3f. Other	The frameworks provided include pre-developed example transaction capabilities, user interfaces and monitoring modules, reference workflows, etc.			
4. Customers Using Framework				
4a. Estimated number of customers currently using framework	Information not supplied.			
4b. How using framework	As a physical architecture, as the foundation messaging infrastructure for the development of a payments or capital markets framework where integration technology, data transformation, and workflow management are used to orchestrate transaction flows.			
5. Partners Using Framework				
5a. How using framework	As a reference architecture as they develop services that can be consumed by implementers of the framework, and as a physical architecture, using the framework to accelerate development, add value to the partner application, and provide extended integration to a bank's payment infrastructure.			
6. Delivery of Framework	Text document	In a process modeling or BPM tool	As part of a professional services engagement	Other

continued

Profile for Microsoft				
6a. How framework is delivered to customers and partners	Yes, a white paper showing how ESB services for payments and SWIFT messages can be built on top of BizTalk 2009	Yes	Yes, as part of BizTalk framework implementation via Microsoft or partner services	The framework is delivered as software (BizTalk Server) with built-in capabilities for Financial Service Payments, reference code, data for implementing ESB services for payments and SWIFT messages. Also as prebuilt assemblies and installation packages
6b. Tools provided to customers or partners for implementing the framework	The message mapping functionality of BizTalk and Accelerator for SWIFT. Also, FMSB contains prebuilt message services and itineraries for transaction processing. White papers and architectural guidance are also available. Software application development or solution integration partners may further extend this functionality to offer additional payments services. Only BizTalk is required, with FMSB components being optional.			
6c. Professional services provided by vendor or vendor partners to customers or partners for implementing the framework	Architecture, development and implementation services are available from Microsoft, but not required.			
6d. Tools or professional services provided by vendor or vendor partners to customers or partners for maintaining the framework	Microsoft's Premier Mission Critical Program and Premier Support are available to provide ongoing architecture guidance and operational support for any mission-critical applications on the Microsoft platform. These services are optional.			
6e. Kinds and levels of skills typically needed by customers or partners to implement the framework, and to modify the framework as requirements change, on their own	Familiarity with BizTalk and the Enterprise Service Bus Toolkit available on BizTalk 2009. Knowledge of SWIFT messages and BizTalk Accelerator for SWIFT is advantageous.			
6f. Level of customization typically required as it is implemented at customers' sites	Based on the diversity of banks, payment types and technology environments, Microsoft does not believe there is an installable framework requiring no configuration or extension. FMSB contains some prebuilt components to ease the development efforts, but is extensible to local and proprietary business needs.			
7. How the Vendor as a Software Provider or Professional Services Provider Uses This Framework				
7a. To guide its development of payment applications or services components	The guidance and software assets which are provided as a framework to customers and partners are assumed as a foundation for developing payments-related capabilities to the marketplace.			

continued

Profile for Microsoft	
7b. To guide its professional services engagements for implementing payment applications	The guidance and software assets that are provided as a framework to customers and partners are leveraged by professional services for implementations.
7c. To communicate to or guide partners in implementing their payment services components or applications	The same guidance and software assets that are leveraged by our own professional services is maintained, and enhanced regularly and a framework to partners for guiding their implementations.
7d. To assess the suitability of or certify (potential) partners	Information not supplied.
7e. As a sales tool to describe its offering	Information not supplied.
7f. For assessing customers' current state as part of sales or preimplementation work	Information not supplied.

Source: Microsoft

Table 10. Profile for Misys

Profile for Misys					
1. Breadth of Offering: Payments Specific or Broader?					
1a.	Targeted to payments, based on Misys Message Manager, which is designed to support all financial messaging requirements, including treasury, trading, trade services, channels, lending, etc.				
2. To whom the payments framework is sold or provided	Customers	Application Partners	Infrastructure Partners	Professional Services Partners	Other
2a.	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	Yes, as part of a broader application sale only	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	No other
3. Framework Components	Provided	Required or optional	Made available through partner		
3a. Identification of payment functional components	Yes	Optional	Yes		
3b. Identification of process steps and flow	Yes	Optional	Yes		
3c. Identification of the services that relate to each of the process steps	Yes	Optional	Yes		

continued

Profile for Misys				
3d. Architectural Guidelines:				
• Guidelines for component interfaces	Yes	Optional	Yes	
• Guidelines for messaging standards	Yes	Optional	Yes	
• Guidelines for supporting infrastructure	Yes	Optional	Yes	
• Guidelines for scope of service components or modules	Yes	Optional	Yes	
• Guidelines for reuse of service components	Yes	Optional	Yes	
• Guidelines for measuring progress	Yes	Optional	Yes	
• Guidelines for measuring ROI	Yes	Optional	Yes	
• Other	No other			
3e. Supporting data model	Yes, based on ISO 20022	Optional	Yes	
3f. Other	No other			
4. Customers Using Framework				
4a. Estimated number of customers currently using framework	Misys Message Manager is in use by more than 200 banks; Misys Payment Manager is being installed in its first bank as a new packaged offering. However, many of the Message Manager clients have extended its use to manage their high-value and domestic payments using the framework.			
4b. How using framework	As a physical architecture (10; remainder use as part of packaged application).			
5. Partners Using Framework				
5a. How using framework	As physical architecture, in developing gateways.			
6. Delivery of Framework	Text document	In a process modeling or BPM tool	As part of a professional services engagement	Other
6a. How framework is delivered to customers and partners	Yes, user and implementation guides	Yes, own workflow tool	Yes, can help customers build solutions or train them	No other
6b. Tools provided to customers or partners for implementing the framework	MPM, a package built on top of Misys Message Manager, includes a packaged workflow and canonical payment format based on ISO 20022.			

continued

Profile for Misys	
6c. Professional services provided by vendor or vendor partners to customers or partners for implementing the framework	Full project, implementation and development services can be provided.
6d. Tools or professional services provided by vendor or vendor partners to customers or partners for maintaining the framework	Standards-based product, training, professional services, consultancy and health checks.
6e. Kinds and levels of skills typically needed by customers or partners to implement the framework, and to modify the framework as requirements change, on their own	Java, messaging, SOA, enterprise architecture, payments/banking knowledge.
6f. Level of customization typically required as it is implemented at customers' sites	When used outside of Misys applications, or when options instead of the default packages and workflows are used, it can be extensive.
7. How the Vendor as a Software Provider or Professional Services Provider Uses This Framework	
7a. To guide its development of payment applications or services components	Yes
7b. To guide its professional services engagements for implementing payment applications	Yes
7c. To communicate to or guide partners in implementing their payment services components or applications	Yes
7d. To assess the suitability of or certify (potential) partners	No
7e. As a sales tool to describe its offering	Yes
7f. For assessing customers' current state as part of sales or preimplementation work	No

Source: Misys

Table 11. Profile for Polaris

Profile for Polaris					
1. Breadth of Offering: Payments Specific or Broader?					
Profile for Polaris					
1a.	The Intellect Payment Services Hub framework is specific to payments. Polaris also has frameworks that can support a range of financial services domains.				
2. To whom the payments framework is sold or provided	Customers	Application Partners	Infrastructure Partners	Professional Services Partners	Other
2a.	Yes, as a separate, stand-alone offering, or as part of a broader applications sale only	No	Yes, as a separate, stand-alone offering, or as part of a broader application sale only	Yes	No
3. Framework Components	Provided		Required or optional	Made available through partner	
3a. Identification of payment functional components	Yes		Required	Yes, as required	
3b. Identification of process steps and flow	Yes		Required	No	
3c. Identification of the services that relate to each of the process steps	Yes		Required	No	
3d. Architectural Guidelines:					
• Guidelines for component interfaces	Yes		Required	No	
• Guidelines for messaging standards	Yes		Required	No	
• Guidelines for supporting infrastructure	Yes		Required	No	
• Guidelines for scope of service components or modules	Yes		Required	No	
• Guidelines for reuse of service components	Yes		Optional	No	
• Guidelines for measuring progress	Yes		Optional	No	
• Guidelines for measuring ROI	Yes		Optional	No	

continued

Profile for Polaris				
• Other	Yes, a standard Java EE-based architectural framework, which all products that are part of the suite adhere to	Required	No	
3e. Supporting data model	Yes	Required	No	
3f. Other	No other			
4. Customers Using Framework				
4a. Estimated number of customers currently using framework	25, with three additional implementing.			
4b. How using framework	As both a reference architecture (1 customer) and as a physical architecture (the majority of customers).			
5. Partners Using Framework				
5a. How using framework	Not provided to application or professional services partners.			
6. Delivery of Framework	Text or electronic document	In a process modeling or BPM tool	As part of a professional services engagement	Other
6a. How framework is delivered to customers and partners	Yes, user manuals, training manuals, deployment manuals, FAQs, and capability documents in electronic or text form	Yes, in a process modeling BPM, allowing customers to define workflows using a simple "drag and drop" tool	Yes, through Polaris consulting, implementation, progressive modernization, postproduction support and complete data center, application development and maintenance, testing, application monitoring, on demand banking (SaaS), and BPO services, and Polaris centers of excellence	No other
6b. Tools provided to customers or partners for implementing the framework	Polaris product experts are always involved in implementing Polaris solutions. No additional third-party tools are required. Polaris provides application templates as part of the framework, which can be used for rapid development of PSHs. Also, Polaris provides code generation tools for generating code using these frameworks, which can reduce development efforts and timelines.			
6c. Professional services provided by vendor or vendor partners to customers or partners for implementing the framework	End-to-end product/solution development professional services using the frameworks. Includes product design/requirement engineering, architecture and design, framework fit and adaptation, development, testing, performance tuning and benchmarking, migration, training and implementation.			

continued

Profile for Polaris	
6d. Tools or professional services provided by vendor or vendor partners to customers or partners for maintaining the framework	Maintenance is done by users using an interactive GUI. The solution also has a BPM modeler that can be used to define workflow processes. No other maintenance toolkit is required. Polaris provides various types of postproduction services both on and off-site, and data center services.
6e. Kinds and levels of skills typically needed by customers or partners to implement the framework, and to modify the framework as requirements change, on their own	If customer uses the framework for building its own PSH, Java and Java EE development skills. Alternatively, Polaris can manage the implementation, and the firm may choose to make its own business analysts part of the implementation team.
6f. Level of customization typically required as it is implemented at customers' sites	Fitment in the range of 75% and above in all implementations. For the remaining requirements, try to see the possibility of changing processes at customer end to reduce the level of customization needed to maintain product purity. If this is not possible, the product can be customized, such as customization of message formats, user interfaces, entitlements, and workflow, as well as product specific customizations.
7. How the Vendor as a Software Provider or Professional Services Provider Uses This Framework	
7a. To guide its development of payment applications or services components	The framework serves as a component of deriving Polaris' payment solutions. As an SOA-based application developed on the Java EE framework, it is highly componentized and can act as a stand-alone component, or deployed along with third-party products or in solutions developed by using different components of Polaris' Intellect Global Universal Baking Suite 10.0.
7b. To guide its professional services engagements for implementing payment applications	Work closely with the Polaris professional services engagement teams to highlight how the Polaris Payment Services Hub or any of its components can be used to provide additional value to the customer.
7c. To communicate to or guide partners in implementing their payment services components or applications	Polaris regularly guides partners regarding the application benefits by conducting proof of concepts, explaining how the solution will help customers with improving their payment services and generating revenue from value-added services. Partners are given a complete briefing on the transaction handling capabilities, the technical architecture, and the infrastructure requirements.
7d. To assess the suitability of or certify (potential) partners	No.
7e. As a sales tool to describe its offering	Polaris guides partners and sales team regarding the application benefits by conducting demonstrations, proof of concepts, explaining how the solution will help customers with improving their payment services and generating revenue from value-added services. Partners and sales teams are briefed on the transaction-handling capabilities and the technical and infrastructure requirements.
7f. For assessing customers' current state as part of sales or preimplementation work	All discussions with customers are documented, and functional requirements collected through a questionnaire to help better understand customer needs and implementation requirements.

Source: Polaris

Table 12. Profile for Unisys

Profile for Unisys					
1. Breadth of Offering: Payments Specific or Broader?					
1a.	Payments, utilizing the Dovetail Payment System as the underlying Payment Hub on the Open Payment Platform. In addition, Unisys provides high-volume message switching, SWIFT interfaces, card management and check preprocessing.				
2. To whom the payments framework is sold or provided	Customers	Application Partners	Infrastructure Partners	Professional Services Partners	Other
2a.	Yes, as a separate, stand-alone offering, or as part of a broader application or services sale	Yes, as part of a broader application or services sale only	Yes, as part of a broader application or services sale	No	No
3. Framework Components	Provided		Required or optional	Made available through partner	
3a. Identification of payment functional components	Yes		Required	Yes	
3b. Identification of process steps and flow	Yes		Required	Yes	
3c. Identification of the services that relate to each of the process steps	Yes		Optional	Yes	
3d. Architectural Guidelines:					
• Guidelines for component interfaces	Yes		Optional	Yes	
• Guidelines for messaging standards	Yes		Optional	Yes	
• Guidelines for supporting infrastructure	Yes		Optional	Yes	
• Guidelines for scope of service components or modules	Yes		Required	Yes	
• Guidelines for reuse of service components	Yes		Optional	Yes	
• Guidelines for measuring progress	Yes		Optional	Yes	
• Guidelines for measuring ROI	Yes		Optional	Yes, if provided Cost Calculation modules from Business Blueprinting	

continued

Profile for Unisys				
• Other	No other architectural guidelines			
3e. Supporting data model	Yes	Required		Yes
3f. Other	No others			
4. Customers Using Framework				
4a. Estimated number of customers currently using framework	2 Major international banks, as part of the Unisys Dovetail partnership.			
4b. How using framework	As a physical architecture.			
5. Partners Using Framework				
5a. How using framework	Not supplied to partners.			
6. Delivery of Framework	Text document	In a process modeling or BPM tool	As part of a professional services engagement	Other
6a. How framework is delivered to customers and partners	Provided as part of a solution sale: Unisys provides text documents and consulting as required to explain how to adapt the framework, modules, and interfaces to meet the client's specific needs and requirements. Reference solutions (Target2, Step2, Euro1, CHAPS, etc.) provide ready-to-go modules.			
6b. Tools provided to customers or partners for implementing the framework	Depending on customer needs, Unisys may provide business process modeling as part of a solution sale or an independent engagement. The Payment Hub includes an optional test framework that facilitates automated testing of payment transactions for function and performance. An SDK with extensive documentation is available.			
6c. Professional services provided by vendor or vendor partners to customers or partners for implementing the framework	Unisys provides a full suite of payment modernization services using its 3D Blueprinting methodology, which makes visible the relationships between the business and the technology that supports it. This enables seeing ahead of decision points, understanding cause and effect, and minimizing risk. Services include impact analysis, scenario planning, business modeling including simulations, application portfolio analysis, application modernization, application outsourcing, and infrastructure model-based transformation planning.			
6d. Tools or professional services provided by vendor or vendor partners to customers or partners for maintaining the framework	Unisys application modernization services assist clients in prioritizing and delivering modernization initiatives. The approach is focused on leveraging existing IT investments. Services include application portfolio assessment, code improvement, technology re-engineering and migration, and refactoring and restructuring.			
6e. Kinds and levels of skills typically needed by customers or partners to implement the framework, and to modify the framework as requirements change, on their own	To customize and deploy a new payment system, including project management, domain expertise, bank specific requirement and practices expertise, report developers, interface developers, test and quality assurance. Unisys professional services can provide many of these skills if desired. Client need the following technical expertise: Java, Java EE application server (either WebSphere or WebLogic), relational database, IBM MQ or messaging system of client's choice, data transformation/ESB of client's choice.			

continued

Profile for Unisys	
6f. Level of customization typically required as it is implemented at customers' sites	Depends on requirements, but usually, parameterized settings in the user interface for authorization/role-based access, payment products and agreements, account specific overrides to products and agreements, payment prioritization schemes, reference data; user authentication, XML-based parameterization for workflow, transformation of standard interfaces, custom modules, specialized gateways.
7. How the Vendor as a Software Provider or Professional Services Provider Uses This Framework	
7a. To guide its development of payment applications or services components	Yes, to a lesser extent.
7b. To guide its professional services engagements for implementing payment applications	Yes, a primary use.
7c. To communicate to or guide partners in implementing their payment services components or applications.	Yes, to a lesser extent.
7d. To assess the suitability of or certify (potential) partners	Yes, to a lesser extent.
7e. As a sales tool to describe its offering	Yes, to a lesser extent.
7f. For assessing customers' current state as part of sales or preimplementation work	Yes, a primary use.

Source: Unisys

Source: Industry Research Note G00201343, Mary Knox, Christophe Uzureau, 28 June 2010

About Polaris

Polaris Software Lab Limited ('Polaris') is a leading Financial Technology company, with its comprehensive portfolio of products, smart legacy modernization services and consulting. Polaris is ranked among the premier IT solution and service providers with a successful track record of implementing solutions and services for 200 of the world's largest financial institutions. Polaris is the chosen outsourcing partner for 10 of the top 15 global banks and 6 of the 10 top global insurance companies. World's top analysts have recognized Polaris amongst the global leaders in banking and insurance software.

The company offers state-of-the-art, comprehensive solutions for core banking, corporate banking, wealth & asset management and insurance. With talent strength of over 10,000 solution architects, domain consultants and technology experts, the company owns the largest set of Intellectual Properties in the form of a comprehensive product suite, IntellectTM Global Universal Banking (GUB) M180. The highly commended IntellectTM GUB M180 suite for banking products span full spectrum, sub processes and point solutions. It is engineered to provide 15 years in-built solution longevity with concurrent and subsequent technology upgrades.

Polaris specialises in platform/ technology modernisation using a progressive and non-disruptive approach. Some of the services include SOA Re-engineering, Application development, Implementation, Maintenance, Performance diagnostics and Managed Testing Services and BPO.

Polaris' strength lies in its people comprising world-class bankers, peerless information technology experts and quality assurance champions who ensure the best possible outcomes for their customers. Intellect Global Universal Banking (GUB) provides the assured security and peace-of-mind that comes with healthy ROI that only a banker can truly appreciate.

Polaris is headquartered in Chennai and has a strong global reach, with Sales & Marketing and Development centers spanning across 29 locations in over 16 countries including all major financial hubs globally. Polaris is organized into 9 Business Solution Centers within India each specializing in specific areas of the Financial Technology domain. At any point in time, there are over 400 projects executed across these Business Solution Centers.

This is an era of transformation in banking. There is a more efficient way of leveraging Financial Technology to achieve business goals. That's where we come in!

For more information, please visit http://www.polaris.co.in