

Beyond core banking: The digital financial services platform

A selection and evaluation guide

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The crisis in core banking systems

Unprecedented disruption in the banking industry is happening across every market, every distribution channel and every single product line - CIO magazine¹

Digital financial services are coming. Every bank, credit union and financial institution will have to offer them in order to thrive and grow, and even to survive. As the Economist Intelligence Unit² puts it, “If you don’t have a digital strategy, your bank is already dead.”

Unfortunately, this transition to digital financial services is coming at the exact same time as core banking systems have reached their end of life. As Forrester Research³ puts it, “Far too many banks are held back by their own legacy systems.” With the architecture of the 1980s and 1990s, they do not have the capacity, flexibility or expandability that’s needed today.

Three solutions

There are three possible paths forward.

- **Stopgap.** Leave your current core banking system in place for now and build on top of it, with software from your current vendor and others. The more you add, though, the harder it will be to support and to build out further. This is only a temporary solution.
- **Short term.** Move to an extended banking system. These are traditional core banking systems with extended functionality; some are quite mature and offer a lot of features. They are constrained though by their underlying architecture, and do not have the flexibility to keep up with the accelerating pace of change.
- **Strategic.** Move to a DFSP, a digital financial services platform. DFSPs are the leading solution to the crisis in banking systems. Built with the same cloud native technology that powers Google, Facebook, Amazon and Apple, DFSPs provide all the capabilities needed for moving beyond today’s core banking systems.

This guide is for the third option, moving to a true cloud native DFSP. It addresses the power of cloud native applications for banking, and addresses how to evaluate and select a DFSP.

An RFI (request for information) template that you can use with potential vendors is attached, plus a key to the most important questions.

The time for waiting is over. Now is the time for a bold move to the cloud - Accenture⁴

¹ [The 2017 state of strategic digital banking](#), CIO

² [The Reality of Digital Banking](#), Economist Intelligence Unit

³ [Leading Banks Embrace Digital Core Banking](#), Forrester Research

⁴ [Moving to the Cloud](#), Accenture

The business value of cloud native banking

In an age where business velocity and innovation are critical to success, the banking industry is embracing a cloud-native approach. 88% of cloud-native leaders say it has improved their agility. 84% say it helped increase revenues and cut operating costs.⁵

The move to cloud banking is well under way. Thirteen of the world's top twenty banks started moving to the cloud as early as 2013.⁶ The results are compelling: JP Morgan Chase, for example, shortened its time-to-market by 59 days and cut infrastructure costs by 45%, all while maintaining 100% uptime.⁷

Cloud spending by banks is forecast to pass \$12 billion by 2021. Even regulators, including the Financial Industry Regulatory Authority, are using the cloud.⁸

Barriers to cloud native banking

Chase's move to the cloud was not easy. It moved some applications to the cloud using traditional migration methodologies. Other applications had to be remediated or even re-architected. Yet others were simply replaced by an equivalent service.

Chase could do all this because they have over 500 development teams, more technologists than Microsoft, \$100 billion in annual revenue and over \$2.5 trillion in total assets. Few banks have that level of resources though. How, then, can they become cloud native? The answer is the cloud native platform for digital financial services.

Removing the barriers: The cloud native DFSP

Digital financial services platforms (DFSPs) have emerged as the leading cloud native solution.

A DFSP provides all the functionality needed for a bank - not just core banking - and delivers it as a service. With Facebook, Amazon and Uber, for example, you don't install any software. All you need is a PC, tablet or mobile phone. DFSPs use the same model, where all the software runs in the cloud. You just use the DFSP service, and you only pay for the amount you use.

⁵ [Cloud Native Comes Of Age In Banking](#), Capgemini

⁶ [Apprenda at Finovate](#), BusinessWire

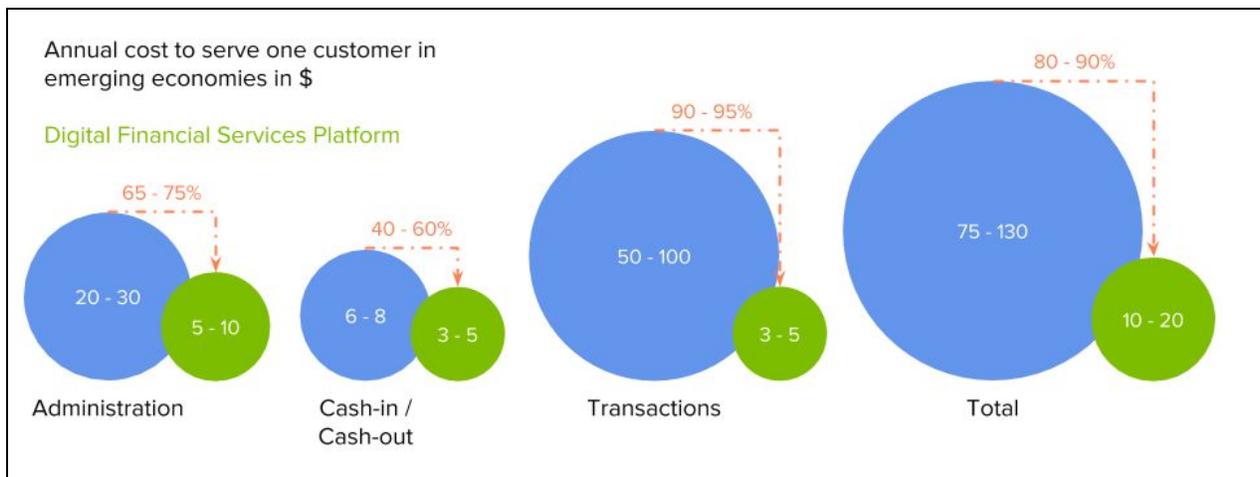
⁷ [JP Morgan Chase: Next Generation Enterprise IT](#), Apprenda

⁸ [Why Amazon and Google Haven't Attacked Banks](#), Wall Street Journal

Cloud native DFSPs for credit unions

The global potential of credit unions and digital finance

The McKinsey Global Institute published the industry's leading report⁹ on the critical role of digital finance in emerging economies. McKinsey found that digital finance could bring 1.6 billion people into financial inclusion. It could cut costs and generate \$4.2 trillion in deposits, \$2.1 trillion in credit, 95 million jobs, and a \$3.7 trillion increase in GDP by 2025.



Digital finance could cut operational costs by 80 to 90% - McKinsey Global Institute

When it comes to delivering the benefits of digital finance, credit unions are perfectly positioned. They have the trust, the community relationships, and the social mission.

Unlocking the credit union's global potential

Credit unions can not, unfortunately, accomplish this with today's core banking systems. Access is too hard, costs are too high, and innovation is too slow.

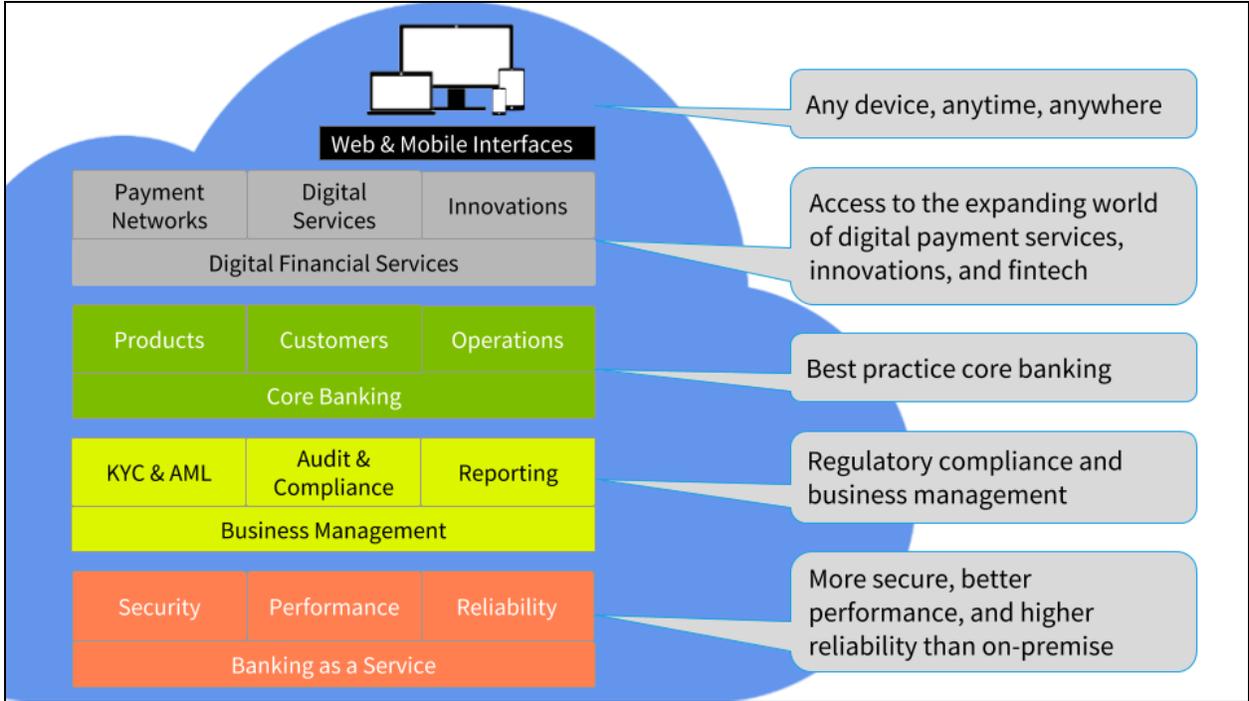
To unlock the potential of digital finance, credit unions need DFSPs.

- **Access.** Mobile, web, and digital are built into a DFSP from the ground up.
- **Costs.** The DFSP delivers banking as a service, on a pay-by-usage basis.
- **Innovation.** DFSPs are built for rapid and easy innovation, both by the credit union and by the vendor.

⁹ [Digital finance for all: powering inclusive growth in emerging economies](#), McKinsey Global Institute

DFSPs: Powerful features for banking

DFSPs support all the credit union’s essential business processes, not just core banking.



Web and mobile interfaces

Today’s consumers do not want to come in to a bank. To meet their expectations, banks will come meet them where they are - on their tablets, PCs and phones.

All the needed mobile and web functionality is built into the DFSP.

Digital financial services

Because a DFSP is a platform, it serves as a single point of connection to digital financial services. This gives banks and their customers access to the expanding marketplace of card processing and payment networks, emoney and ewallets, and new fintech services.

Core banking

DFSPs are complete platforms, and they include all the functionality for core banking.

- Products. Configurable loan and deposit products , teller cash-in/cash-out, ACH and standing orders.

- Customers. Member onboarding, a customizable database for full CRM, and government and biometric identity records.
- Operations. Employee roles, permissions, and workflow; accounting; and configuration control for offices, branches, and corresponding banks.

Business management

A DFSP supports the management of the bank or credit union, including for regulatory compliance and management reporting.

- KYC and AML. KYC workflow for customer on-boarding, integration with watchlist services, and profiles and alerts for accounts and transactions.
- Audit and compliance. Configurable policies and permissions, and a complete and detailed audit trail.
- Reporting. A full set of standard reports that draw on the DFSP's 'single source of truth' for operational, transactional and business data, plus custom report capability.

The speed of innovation

We've learned that if you can't get it to market quickly, there is no doubt that the market will have changed. No matter how well you've engineered it or built it or deployed it or trained your folks, it's not going to be quite right because it's just a little too late - James McGlennon, Executive VP and CIO, Liberty Mutual Insurance Group¹⁰

The rapid pace of change is a key challenge for banks. To meet that challenge, DFSPs have streamlined the process for configuring and launching innovative financial products.

The DFSP itself can also be easily upgraded and extended by the provider, without stopping or interrupting the bank. Amazon, for example, with the same cloud native architecture as a DFSP, deploys new code every 11.7 seconds¹¹ on average, without ever interrupting service.

Security, reliability and continuity

DFSPs, like other platforms, run in the cloud. With providers such as Google and Microsoft, they deliver a level of security, reliability and continuity beyond anything that can be achieved on premise.

¹⁰ [Developing the Technology to Keep Up with Evolving Risk Models](#), Pivotal

¹¹ [10 companies killing it at DevOps](#), TechBeacon

DFSPs: Powerful architecture for banking

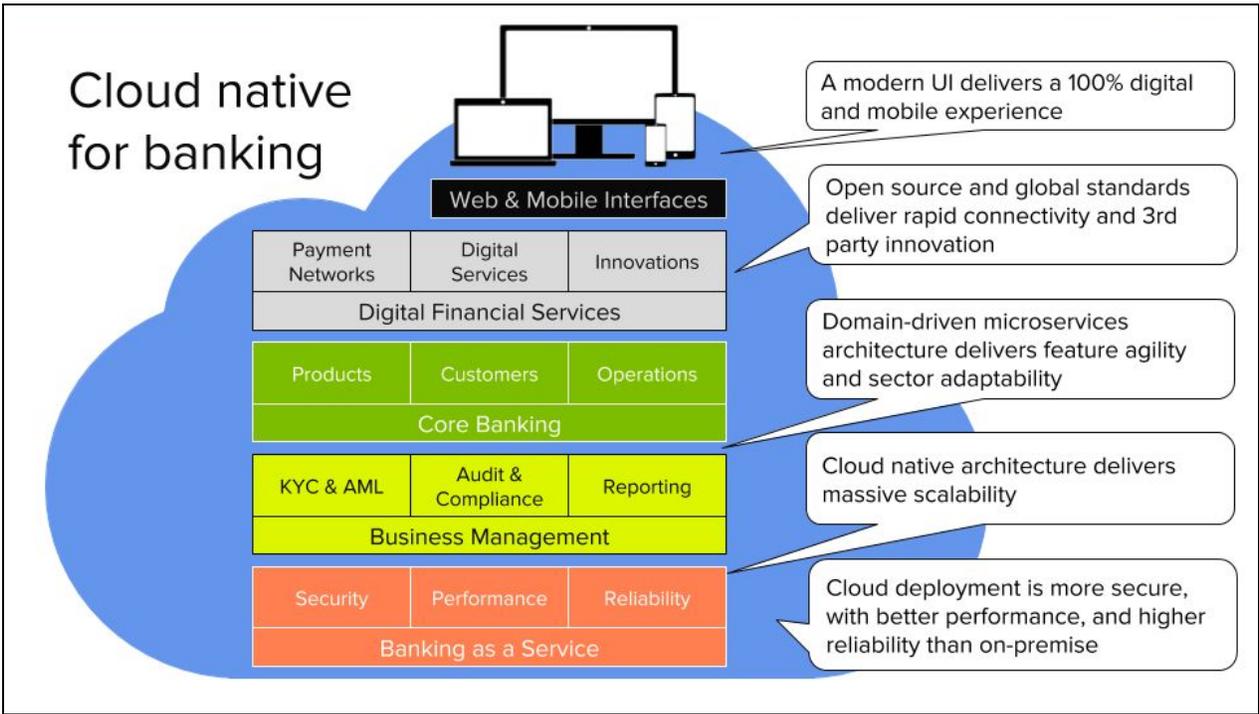
The power of any application comes not only from its features, but also from its architecture.

Traditional or legacy architecture is rigid and monolithic. That makes the feature set hard to change, and in today’s environment that’s a liability. Even if a vendor provides the features you need today, that doesn’t mean it will be able to deliver the features you need tomorrow and the day after.

Simply moving an application to the cloud, known as cloud wrapping, is a step forward. But even in the cloud, a traditional application still has a rigid and monolithic architecture; it’s just as hard to support, maintain and change as before.

True cloud native applications are architected for the cloud from the ground up. This makes them both robust and flexible.

The flexibility means that a DFSP can serve you both now and into the future. The robustness is equally important, which is why the world’s leading software companies are all cloud native: it gives them world-class reliability, security, and performance.



How to evaluate and select a DFSP

Evaluating DFSPs

The Request for Information

The selection of a major new application typically has three stages: a broad RFI (request for information) followed by a focused RFP (request for proposal), and then finally by an in-depth test or evaluation.

Start the selection process with an RFI. This will help serve as a qualification filter for vendors that don't meet your baseline criteria and can be ruled out. An RFI template is attached.

Though used in many industries, an RFI is especially useful for software. Technology is advancing so fast that questions which were useful for earlier technologies may no longer even make sense. Because it is open-ended, an RFI can help you discover good questions to add to an RFP.

Digitalist magazine gives a final word of guidance¹² on RFIs: “the biggest headache is too much information.” For that reason, the attached RFI template is brief.

The RFI template

You can use the attached template to create your RFI.

- Copy the Request for Information template, beginning on page 13.
- Fill in the blanks and the information in brackets.
- Copy the email template, and fill in the information in brackets.

Email the RFI, and the cover email, to each vendor.

An evaluation key: Cloud native vs cloud wrapped

Some of the RFI questions are critical for determining whether a solution is truly cloud native or just cloud wrapped. [Evaluating cloud native vs cloud wrapped](#), on the following pages, will help you evaluate the RFI responses that you get to the RFI.

¹² [Do's And Don'ts Of Selecting A Core Banking System](#), Digitalist magazine

Evaluating cloud native vs cloud wrapped

The RFI has some key questions¹³ that will help you distinguish cloud native applications from those that are merely cloud wrapped.

48: Number of versions of the solution in production

The answer should be one. Cloud native applications are built as a collection of services on one platform, and shared by many clients. This means that the only version is the current version; you can never run an out of date version because there isn't one.

If there is more than one version of the software, it is not cloud native.

49: Elastic cloud computing for scalability

Traditional vendors use a fixed base of installed computers, and a fixed amount of computing power. They can add servers to increase capacity, but this takes time, money and effort.

With elastic computing, more servers come online whenever they're needed, and are released after. This means the performance never needs to lag, even during times of high usage.

50, 51: Software updates

A cloud native solution can be updated frequently, and without any downtime.

Traditional on-premise and cloud wrapped software have painful and difficult updates. IT may get involved, and may even need to schedule some downtime to install the update. If updates are infrequent, and if they require any work on your part, the solution is not cloud native.

A true cloud native service can be frequently updated, without any interruption: this is how Amazon can update its software hundreds of times a day and still keep its systems running.

41, 42: Security

Cloud native applications are more secure than traditional on-premise software, and more secure than traditional software that has been wrapped in the cloud. Google and other cloud providers spend billions of dollars a year on their systems, and have specialized security teams that few companies can match.

¹³ [Cloud Native vs Cloud Wrapped](#), Statpro

47: Integration

No software solution can do everything you need across your entire business. You will probably have applications that you want to integrate.

The integration method should be via an API. Modern, cloud native applications do this is via open APIs, which allow for seamless integration with your current applications.

Delivery as a service

14, 53: Device, hardware and software requirements

If you need to provide any hardware, then the solution is not delivered as a service and is not cloud native. You should only need a browser and an internet connection.

Web and mobile

15: Steps needed for delivery to PCs, phone or tablets

No steps or work should be needed for delivery to mobile or desktop devices. The system should support PCs, phones and tablets natively.

Digital financial services

17: Connecting to payment networks and financial services

The system should serve as a single point of contact to digital financial service providers. No work on your part should be required.

Third-party application integration

47: Integration to third-party applications

The answer should be that any third party application with an API can be integrated.

Email template

Hello,

The [Financial Cooperative] (“we” or “us”) has decided to replace its core banking system. We have selected you as a potential vendor.

Please reply to our attached Request for Information. Your answers will help us decide who to include for our next step, which will be a Request for Proposal.

Please return the completed RFI by [Date].

You may email all questions and responses to [Name] at [Email Address].

Regards,

[Name]

[Title]

[Name of Financial Cooperative] Request for Information

Our Credit Union

About us

[Name]

[Location]

- Staff size: [number]
- Offices and branches: [number]
- Total members: [number]
- Total accounts: [number]
- Total transactions per month: [number]

Our products and services

Loans

[List the types of loans such as individual, business, savings secured, flat rate, balloon payment, and group loans]

Savings and deposits

[List the types of savings and deposit products, such as shares, ordinary deposits, passbook savings, and term deposits]

Other products and services

[List any other products and services]

Our current applications

Current core banking system: [name]

Other applications: [list]

RFI: Questions to Vendors

Category	Question	Response
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Vendor Information		
1	Vendor General Information	Vendor Name
2	Vendor General Information	Vendor Address
3	Vendor General Information	Phone Number
4	Vendor General Information	Web Address
5	Vendor General Information	Name of CEO
6	Vendor General Information	CEO Email Address
7	Vendor General Information	Contact Name
8	Vendor General Information	Contact Phone Number
9	Vendor General Information	Contact Email Address
10	Vendor General Information	Current number of employees
11	Vendor General Information	Vendor history and experience with financial applications
12	Vendor General Information	Products and services
13	Vendor General Information	Current customer base
Digital Requirements		
14	Web and Mobile	Which devices are supported, and what are the device requirements?
15	Web and Mobile	Describe the steps needed for web and mobile connectivity
16	Digital Financial Services	List the available card processing and payment networks
17	Digital Financial Services	Describe the process for connecting other financial services
Core Banking		
18	Saving and Deposit Products	List the available type of savings and deposit products
19	Saving and Deposit Products	List the available parameters for savings and deposit products
20	Saving and Deposit Products	Describe the process for configuring savings and deposit products
21	Saving and Deposit Products	What is the maximum possible number of savings and deposit products?
22	Loan Products	List the available types of loan products: individual, group, secured, unsecured, balloon, etc
23	Loan Products	List the available parameters for loan product
24	Loan Products	Describe the process for configuring loan products

25	Loan Products	What is the maximum possible number of loan products?	
26	Operations	Describe the process for setting employee roles and permissions	
27	Operations	Describe the workflow for member onboarding and for loan approval	
28	Operations	Describe the process for configuring offices, branches, and corresponding banks	
	Business Management		
29	KYC & AML	List the standard member data fields	
30	KYC & AML	Describe the process for adding custom fields	
31	KYC & AML	Describe how the system stores photos and other member ID images	
32	KYC & AML	Describe the process for integrating with watchlists	
33	KYC & AML	What alerts are provided for suspicious transactions?	
34	KYC & AML	Describe the process for Suspicious Transaction Reports	
35	Accounting	Describe the accounting capabilities	
36	Accounting	What accounting standards are supported?	
37	Accounting	What data is captured in the financial audit trail?	
38	Reporting	What standard reports are built in?	
39	Reporting	Describe the process for modifying a standard report	
40	Reporting	Describe the process for creating a custom report	
	Banking as a Service		
41	Security	Describe your security model	
42	Security	What security standards do you implement	
43	Performance	Describe how your system maintains good performance under high demand	
44	Reliability	Recovery time objective: What is the system's RTO, the maximum amount of time it can be down, and how is this achieved?	

45	Reliability	Recovery point objective: What is the system's RPO, the maximum amount of data that can be lost, and how is this achieved?	
46	Continuity	Explain how the system assures data and service continuity	
	Technology & Architecture		
47	System	Describe the process for integrating third-party applications	
48	System	How many versions of the solution are in production with customers?	
49	System	Describe your approach to elastic computing for scalability	
50	System	How many updates are made available each year?	
51	System	What is the process for delivering and installing updates	
52	System	What data is captured in the information audit trail	
53	Requirements	What are the hardware, software and network requirements?	