



FIS

WHITE PAPER

## Realizing the Value from Your Current State

How to build and benefit from a technology ecosystem at your financial institution

Alison Bettisworth  
FIS Consulting Services

800.822.6758

## Introduction

A technology ecosystem includes application solutions, interfaces, integrations, and services that interact with one another within a bank's environment to support business and technology processes and strategies. This paper explores which banks, and who within them, should have a technology ecosystem. It then discusses how to construct technology ecosystems in a bank and how to realize the value from that effort. The paper closes with use case examples of technology ecosystems within certain financial institutions today.

## Who should have a technology ecosystem

A prevalence of ecosystem terminology exists within financial institutions today. They range from Aite research on Fintech's ecosystems, to a study of auto finance ecosystems by Boston Consulting. For purposes of this paper, we will consider the bank's technology ecosystem internal to a specific enterprise.

The size of a financial institution does not matter when one considers defining a bank's ecosystem. At some point, small, medium, or global institutions must all understand the data contained within ecosystem documentation. And having their current ecosystem defined, facilitates more efficient and productive dialog within any organization.



## Benefits of knowing your current state

Four broad benefits drive the need for the ecosystem in an institution, creating more effective ways to discuss changes to a bank's technology environment. A bank technology ecosystem should offer the following benefits:

- **Aids in the assessment of the impacts of transformational new technology.** It provides the ability for integration and development teams to move quickly and effectively when a new application interface or service is being introduced.
- **Mitigates unexpected issues during a project while supporting more effective troubleshooting.** In addition, it can raise possible negative impacts of new technology or current systems.
- **Develops a standardized knowledge base for cross-functional teams.**
- **Improves communication between business teams and technology teams.**

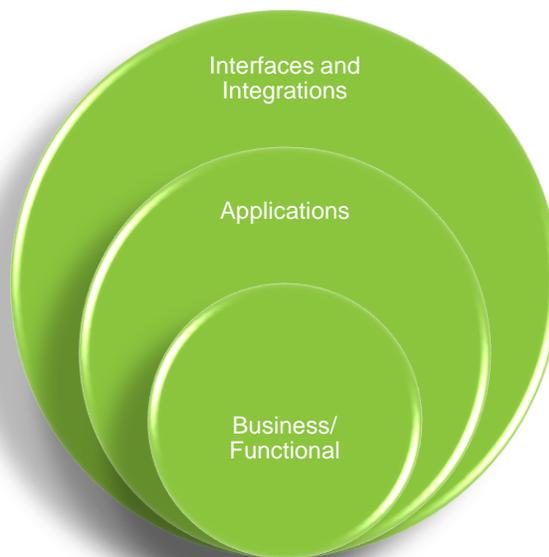
## Creating the technology ecosystem model

As your bank evaluates how to create an ecosystem model, six actions are key to building a technology ecosystem. It is important to follow the steps as they each build on one another to create the holistic picture of your current environment.

1. **Create a cross-functional team that will build and maintain the model.** Include application Subject Matter Experts, and application, system and technology owners.
2. **Decide on a format for the findings.** (e.g. Excel, Access or SQL database, Visio, PowerPoint)
3. **Identify business and functional areas.** This includes business department stakeholders, technology partners, and third-party service providers
4. **Create an application inventory.** Include data points.
5. **Create an interface inventory.** Include data points.
6. **Build integrated diagrams.**

Questions to answer as a bank begins their ecosystem process include: who will build and own the model, what will the model look like, how information should be consolidated, what are the applications, what are the interfaces between the applications, and what do they look like on a diagram.

The dependency of the areas of questions are shown in the following graphic:



The initial starting point to building the hierarchy is determining how the information should be grouped. The following guidelines and benefits allow bankers to determine how to assemble the applications and interfaces at the highest level for their respective organizations.

#### Guidelines for the business/functional area inventory format:

- Agree to the categorization for the business functional area inventory
- Ensure all business and technology departments are accounted for
- Identify key stakeholders (sponsors) for each department

#### Benefits of the business/functional area inventory format:

- Identification and visualization of the operational structure
- Facilitation of cross-functional collaboration and communication
- Knowledge-sharing between teams
- Identification of application dependencies between business units (data providers and data users)

The format for the inventory can be done by department and the functions within the departments. This approach is the most simplistic manner to work through the process. Alternatively, the inventory can be conducted by functional areas. This approach is more complex to start but could be more appropriate as you identify who owns the applications within an institution.

The following graphics contrast the two approaches:

Example of building an inventory format by business area:

Department	Function
1.1 Deposits	1.1.1 Deposit Origination
	1.1.2 Deposit Servicing
	1.1.3 Cash Management
	1.1.4 Item Processing
2.1 Lending	2.1.1 Loan Origination - Mortgage
	2.1.2 Loan Servicing - Mortgage
	2.1.3 Collateral Management
	2.1.4 Loan Origination - Consumer
	2.1.5 Loan Servicing - Consumer
	2.1.6 Loan Origination - Commercial
	2.1.7 Loan Servicing - Commercial
3.1 Finance	3.1.1 Finance
	3.1.2 Accounting
	3.1.3 Budget
	3.1.4 Profitability
	3.1.5 Fixed Assets
	3.1.6 Accounts Payable

Example of building an inventory format by functional areas:



Gathering the applications that reside in the business or functional areas:

Once the inventory format is completed, the next step in building the ecosystem is to collect the applications that reside within the business or functional areas identified. As you consider the applications to include in the ecosystem, target to include more rather than less.

The guidelines for collecting application data include: capture every application for each department within your bank, align application details with the functional area owning the application, engage all business stakeholders, capture all applications that have data and note

similar applications performing similar functions. Many within your organization will be surprised at the number of applications they have on their lists.

Describing the following benefits helps guide your conversation with application owners as the detail is collected. The benefits of the application detail inventory include:

- Identifying the following:
  - All applications supplied by the same vendor
  - Multiple accounts performing the same business purpose
  - Applications that have interfaces to core systems
  - Business departments using the application
  - Critical applications, including those with direct customer impact or are core systems
  - Applications fulfilling the same function
  - Applications that have a disaster recovery or business continuity plan
- Tracking the status of the application (active, replaced, or sunset)

To make the best use of the application list, a bank must consider the data elements for each application captured. Each application should have an identification number corresponding to the business/functional area, the application name, a description of the application, and the vendor providing the application. Including descriptors, such as product status (e.g., active, being replaced, being sunset), and noting interfaces with the core system helps provide a way to filter the list when seeking to address a specific situation.

For instance, if someone in your bank is looking for those applications that have a disaster recovery plan, you could filter on that element and have a succinct list across all business/functional units with that trait. Once applications are identified, new information can be added to the document as updates occur.

### Identifying interfaces and integration between the applications

After identifying business/functional areas and linking the applications to those areas, the final component of data gathering is to identify interfaces/integration between all the applications. Reviewing daily files that are traded between applications to process transactions or update data can be time-consuming, but it is ultimately worth the effort.

These guidelines can manage to a methodical approach to finding the relevant data:

- Leverage the business/functional application inventory
- Interview both business and technical teams
- Collect interfaces where data is moved between applications or services

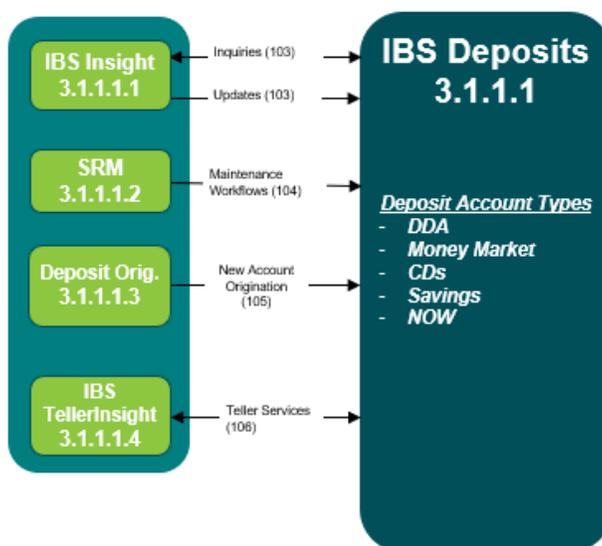
### Adding the data features for interfaces

Like each application, you must ensure capture of any data pertinent to the interface, and that you note an identifier that links the interface:

- To the application and the business/functional area
- To the systems where the file/data flows “to and from”
- And note whether the interface is batch or real time, how often does it run, and is it customer facing

Like the applications list, the integration inventory must be enabled to filter the data gathered. This aids in identifying batch processing that could move to real time processing. If a bank is replacing an application, staff will need to understand all the interfaces that must be replaced or modified to the new application and will need to sort using the “to and from” application filters.

3.0 Operational Services		
Ref #	Service/System Category	FIS Systems
3.1	Product/Account Processing	
3.1.1	Deposit Processing	
3.1.1.1	Basic Deposit Processing and Account Maintenance	
3.1.1.1.1	Bank staff UI for maintenance	IBS Insight
3.1.1.1.2	Bank staff UI for maintenance	SAS Service Request Manager (SRM)
3.1.1.1.3	Bank staff UI opening new deposit accounts	IBS Deposit Origination
3.1.1.1.4	Bank teller UI for inquiries/maintenance	IBS TellerInsight



The preceding diagram identifies flow from the business/functional area through to the interfaces. This example tracks from the business/functional category through to the interface as follows:

Business/Functional Identifier = 3.1 for Product/Account Processing, 3.1.1 for Deposits Processing

Application Identifier = 3.1.1.1 for IBS Deposits

Interface Identifier = 3.1.1.1.1 for IBS Insight

The diagram also shows a small piece of the ecosystem blueprint that is the final piece of the documentation. For each business/functional area, it's important to be able to see how the applications interact with one another. This provides a quick way to review components in detail when engaged in troubleshooting activities.

### Ecosystem Use Cases

As you review the components of the ecosystem, some of the ways to leverage the information are highlighted in the following use cases. They offer ways a financial institution was able to quickly see what the impact would be of switching out one application for another by using the ecosystem model.

#### Use Case 1: Evaluation of loan origination and collateral management replacement

A bank wanted to evaluate a future-state solution if they replaced their current loan origination and collateral management application. FIS Consulting had worked with the bank previously, and by using the current ecosystem diagrams, we were quickly able to locate all the integration points with the legacy application. Using this information, the team uncovered the specific interfaces and determined the impact of integrating with a new application. Subject Matter Experts (SMEs) were quickly identified to discuss the risks and issues with the bank and to provide a high-level solution for their review and commentary.

Without the documentation readily at hand, the conversations would have been very different. Before moving to a future state, the current state would have to be constructed to establish a base from which to build out. Having their current ecosystem documented, allowed the bank to quickly provide their management with an impact statement from the change they were evaluating.

#### Use Case 2: Data missing from a user interface

A financial institution contacted FIS Consulting one morning saying they had identified that savings account data was missing from a customer-facing User Interface (UI). The bank needed to understand why this happened and to solve the issue quickly. The team at the bank had run through all the normal trouble-shooting questions and answers but to no avail. Somehow, somewhere, something had impacted how data was being presented to the UI.

Using the bank's ecosystem diagram, consultants isolated the interfaces that fed into the bank's client-facing application. The FIS team discussed with the bank the changes that they had completed and discovered the bank had changed a description in a savings account product field in the core system. Reviewing the interface inventory, FIS was able to pinpoint the interface file that took the information from the core system to the client-facing application, pull up the file specifications, and review what the rules were for the field. We found that the field had rules built for specific values in the field, and once the bank had changed the description, those accounts with the new description became orphans that fell outside of the rules; the receiving application did not know what to do with them, so they were suspended.

Having the information in a consolidated format provided an effective way to track through the bank's ecosystem to determine the interfaces from the core to the client-facing application. FIS was then able to review the file specification details to help provide a timely solution.

### Use Case 3: Providing consistent documentation to aid in core system evaluation

A large financial institution considering moving from one core application to another had not updated the documentation of their current-state environment. The bank determined that estimating the size of the program needed to convert from one core to another would be difficult without completely understanding all their current applications and interfaces.

The bank also wanted to review their ecosystem and not design their future state by replicating their current state. They desired more real-time processing and were planning to take advantage of new feature/functionality from the new core banking system they were evaluating. The bank also needed to find the duplicate applications throughout their organization to determine how to consolidate, and they wanted to see how they could best leverage other applications that had been implemented but not optimized in the current state.

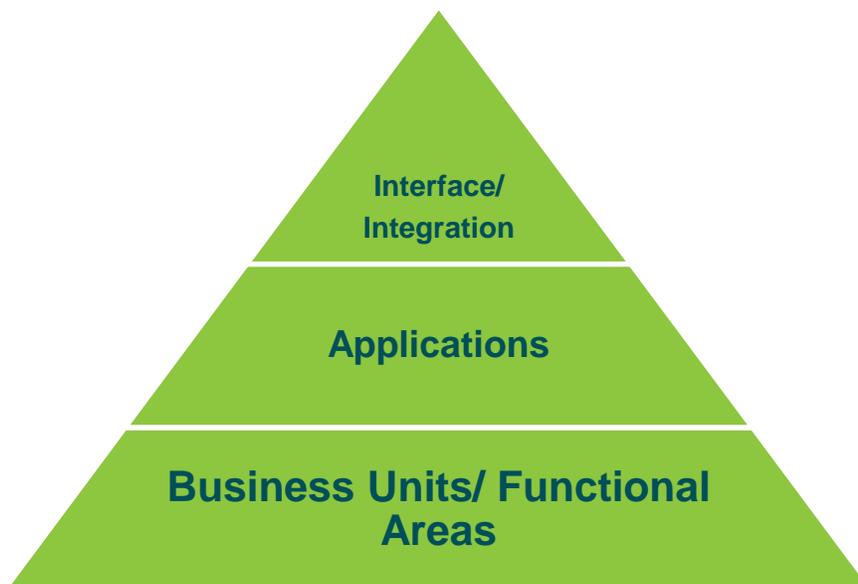
Starting with the documentation the bank had from a previous engagement, a team of FIS consultants worked with bank business resources to validate their current state. Relevant documentation was updated and developed such that it provided consistency across the bank's business units.

The current ecosystem documentation became centralized so that updates could be managed centrally. The final documentation helped the bank to analyze and determine how they wanted to move forward as they designed and planned their future ecosystem. Having an updated current ecosystem, allowed the bank to set up a project that enabled a plan for their future. And the updated ecosystem now enables the bank to better understand the impact of the changes to their current state, providing the basis for their future-state discussions.

## Summary

Having a documented view of a technology ecosystem will provide you with the ability to move quickly and effectively when a new technology, application, interface, or service is being introduced into your environment.

The benefits to having a current ecosystem certainly outweigh the effort it takes to build one out. A bank could take this on alone; however, it would be wise to evaluate if they have the time and resources to dedicate to pulling all the required information together. Outside experts working with your bank as one team can efficiently gather and confirm the information needed to create the documentation for a technology ecosystem at your bank. Your team then manages the documentation going forward. Having this current-state documentation avoids the situation of an executive asking a question and you responding, "If only we had all this information in one place it would be so easy."



## Contact Us

For information about FIS Consulting and building a technology ecosystem, call 800.822.6758, or visit [www.fisglobal.com](http://www.fisglobal.com).