Progressive Transformation

Building a flexible bank operating model for efficiency and growth
**About this paper**

This paper addresses one of the most serious challenges that banks face today: How to deliver their strategic objectives while being hindered by increasingly complex and inflexible business and technology operating models.

The opportunity cost is high, particularly when inflexible operating models reduce speed to market and the ability to realize the full potential benefits from scale or acquisitions.

Achieving full potential benefits is not a small challenge and there are many examples of failure, particularly when large ‘big bang’ transformation initiatives have been applied. Those who have been successful have adopted a progressive transformation approach at the business and technology levels. Such an approach is based on:

- A clear understanding of existing value drivers and constraints
- A componentized view of the bank’s business and technology environment in order to have common building blocks that can be reused across product and business silos
- Defined and sustainable interim states which provide measurable benefits and flexible path to the end goal
- Strong governance to manage and deliver the change

Technology developments such as the increasing use of open standards and the industry acceptance of these standards have made it possible for banks to move towards the Component Business Model (CBM)* built on a Service Oriented Architecture (SOA)* foundation. These flexible business and technology models are the building blocks for the progressive transformation journey.

The size of the opportunity in terms of business value is very significant and for some banks, if the complexity and inflexibility of their operating model are not dealt with, the issue becomes one of survival.

IBM outlines in this paper some of the key decisions and actions that banks need to take in their progressive transformation journey illustrated by banking industry examples. By undertaking such a journey, banks will ensure that today’s investments are adding value towards a long term vision rather than adding to the complexity of their current operating environment.

**The problem facing banks today**

After years of concerted cost-cutting, sustained and consistent revenue growth has returned to the agenda of many banks. However, new products, channels and geographies have made operating models too complex.

For many banks, products, channels and lines of business are only partially integrated, and organizations continue to be structured along product or geographic lines rather than customer segments. Investment budgets are often driven by this organization structure. The result is increased complexity and a lack of horizontal leverage across the enterprise.

* Definitions of CBM and SOA are outlined in ‘Simplifying the business model – the Component Business Model’ and ‘Simplifying the technology model – Service Oriented Architecture’ sections in this paper
In fact, during the past decade complexity has increased dramatically, to the point that hidden costs have begun to limit the benefits of economic scale. Banks suffer from significant duplication of process activities across products, which often lead to replicated IT applications and infrastructure. This happens even after process optimization initiatives as these initiatives are often uncoordinated. The result is increased costs associated with people, processes and technologies, as well as limited flexibility. Figure 1 outlines an example of cost breakdown of processing and manufacturing of a European retail bank. Components such as account maintenance and account opening are over 40% of the cost base of processing and manufacturing. In this particular bank, the potential cost reduction of account maintenance was 35% due to the significant level of duplication across different products.1

![Total Manufacturing & Processing Cost Base](image)

The industry is experiencing a strong drive for simplified operating models, whose aim is to leverage scale and realign capabilities across internal business silos. Equally important, banks are trying to increase the level of flexibility of their operating environment to accommodate fast business change while experiencing the least amount of pain. A complex and inflexible operating environment is a significant inhibitor to change. It generally results in higher cost and loss of potential revenue in terms of speed to market, improvement of customer service and operational risk.

A key challenge is to adopt and deliver a flexible business and technology architecture that can optimize the re-use of common building blocks, or components, at the business and technology levels.

**Progressive Transformation**

The objectives of progressively transforming your operations are to reduce implementation risks, optimize benefits and provide a flexible operating model which can respond to changes in market conditions or business strategy.

Many transformation failures where projected benefits were not realized or costs spiralled are due to large scale multi-year programs which are difficult to manage. In such programs it is often difficult to maintain focus on vision, costs, benefits and end solution. Additionally, the end solution may not be relevant should the business environment change.

Progressive transformation differs from such large scale change programs by breaking down the transformation journey into incremental steps that provide the flexibility to change direction should the business or technology environment change. These sequences of progressive changes drive quick benefits and collectively lead to a long term vision that provides banks with efficiency and flexibility advantages which are difficult to copy by competitors.
Progressive transformation drives toward an architecture based on open standards, enabling the re-use of common components and services at the process, application and infrastructure levels. Usually it is possible to develop a solution based on a mix of package components, build or legacy system components, as long as they adhere to architecture requirements.

In addition, progressive transformation adopts program management and governance approaches based on a clear understanding of an integrated business and IT architecture. These differ from traditional program management and governance in several areas including:

- Incorporating an integrated business and IT architecture in the decision making and management process
- Using common tools and methods that provide consistency for process, data, applications and project implementation. This is key for operational models which are based on common components/building blocks
- Avoiding the separation of the business design from the IT design
- Clearly quantifying business value based on measurable project milestones

IBM has supported many banks in their progressive transformation journey resulting in simplified operating models delivering revenue and cost benefits.

Simplifying the business model – the Component Business Model

Simplifying an operating model requires deconstructing it into a set of building blocks, or components that may be re-used across business units and products. Under a component-based structure, the business is divided into autonomous yet interdependent parts that can be optimized individually to produce greater value for the whole business.

*Figure 2 – Competency layers in retail banking, IBM Research.*

Horizontal competencies – composed of interlinked components – make up the general operational framework, as opposed to a traditional product-oriented structure. Those layers form the organizational units in which components can be grouped to be more horizontally leveraged across business and product silos (Figure 2). Within those layers, banks can subdivide their activities into components, which will enable enterprises to respond rapidly to change, reconfiguring as required.
The framework is focused on increasing customer loyalty and wallet share. Re-use of manufacturing capabilities and processing operations achieves enterprise-wide economies of scale.

**What is a component?**
Componentizing is a concept that other industries, particularly manufacturing, have adopted to deal with complexity. A component is a group of cohesive business activities supported by appropriate information systems, processes, organizational structure and performance measures. Using common messaging standards, information systems and service agreements, each component serves a unique purpose and is tied to other enterprise components (Figure 3). On average, there are 60-90 components in a typical banking business model.²

![Figure 3 – Business component, IBM Research](image)

Increased flexibility of the operating model is realized as banks begin to restructure themselves into component-based businesses and learn to leverage best-in-class components from potential sources throughout the networked industry. Seamless connectivity and efficiencies previously confined within a component-based business are combined with specialization and scale made possible by a fully networked industry.
In this flexible operating environment, internal components compete on equal footing with external providers, and as the provision of a particular component becomes routine, the choice of provider eventually migrates to the best value. Movement to a Component Business Model (CBM) already has started in many banks (Figure 4 outlines an example of the Component Business Model for a retail bank). IBM, in fact, has supported numerous banks, helping to develop and implement their target business architectures based on CBM.
Case Study 1 – The Component Business Model

One such bank – a major European institution that employs more than 25,000 people and operates retail, commercial and wholesale banking businesses internationally – is rationalizing its operating model in terms of processes, applications and infrastructure.

The bank has adopted a CBM approach in designing its transformation program, with a key focus on achieving best-of-breed capabilities in core banking and product manufacturing components. Its strategic priorities include:

- Inorganic growth – Realizing significant revenue growth through acquisition and achieving scale through efficient post-merger integration
- Organic growth – Achieving significant revenue growth through customer focus, retention and cross-selling
- Productivity and efficiency – Implementing world-class manufacturing and processing capability for core activities, and using world-class suppliers for non-core activities

The challenge

The root of many of the bank’s challenges lay in the complexity of its operations, caused in large part by its siloed business model and multiple underlying technical platforms that resulted from a number of acquisitions. Compared to its peers, the banking group in question was burdened with a relatively high fixed-cost base, and as a result the institution was exposed to fluctuations in revenue. Cost and revenue analyses showed that if revenues fell by just 8 percent, profitability could fall by as much as 20 percent because a significant proportion of the bank’s cost base was fixed.

The CEO of the bank declared that his objective was to maximize the bank’s revenue and cost opportunities by achieving scale and working as one bank.

The approach

The bank required a dynamic business model that would enable it to:

- Focus on core and non-core operations
- Respond to market trends and changes in customer needs
- Be resilient in the face of a growing customer base and operational complexity
- Offer variable responses to peaks and troughs in business demand

A component view of the business revealed a very significant degree of duplication in infrastructure, processing, manufacturing and distribution.

IBM Global Business Services worked with the bank to define key business and IT capabilities required to deliver an operational model that supports the overall business strategy. Those capabilities included a single integration platform with strong migration capabilities that would enable the bank to effectively pursue its acquisition strategy in addition to optimizing economies of scale. Critical components were analyzed and decisions were made on component strategy.

The bank also required one industrialized platform for product manufacturing, underpinned by a single technical platform or core banking application that would replace different business applications, platforms and legacy systems. In practical terms, the operating model would be componentized across different product silos to make the most of synergies. For example, the account maintenance component in terms of staff, process, applications and infrastructure would be standardized across all product sets and franchises.

While cost was not the major driver in this case, IBM identified up to US$350 million a year in initial benefits out of a total annual operational and IT cost base of US$1.8 billion – This would help provide a cost-income ratio of 45 percent that would bring the bank in line with best-of-breed competitors.

The bank also identified 12 key initiatives fundamental to the achievement of its target operating model. The bank is currently implementing a number of those initiatives in a progressive transformation approach focusing on common reusable components across its business and IT layers.

Key insights and conclusions

Total benefits will lead to a step change in overall performance in terms of cost, income and customer experience, enabling the bank to be best-of-breed in several areas where it was lagging behind the competition. CBM provided:

- A framework that enabled the bank’s IT and business operations to effectively communicate and work together to build the target model
- A better understanding of the level of complexity and duplication in terms of people, processes and technology
- A more realistic view of cost and duplication, which enabled the bank to prioritize and agree upon initiatives within a short period of time
- An opportunity to the IT team to be more proactive in terms of developing a target architecture based on Service Oriented Architecture and identifying IT-driven initiatives
Simplifying the technology model – Service Oriented Architecture

To obtain the maximum value from componentization, many banks are underpinning CBM with a flexible IT architecture based on common reusable services, ultimately leading to a Service Oriented Architecture (SOA).

As outlined earlier, the problems of complexity and duplication in the operating model extend to IT layers (applications and infrastructure). One consequence of complexity and monolithic IT applications is that any business change requires significant IT amendments.

One mid-sized retail bank, for instance, initiated a program to replace its legacy systems with a common account opening application for current accounts and savings products in the company’s home country. The business case in terms of revenue generation and overall Net Present Value (NPV) was very attractive, with a 10 percent revenue increase within 12 months of implementation. However, the program was stopped due to at least 60 large-scale interaction points and integration interfaces that needed to be addressed. Those interaction points, in turn, impacted various other systems in the bank, increasing the potential for significant operational and implementation risk. Such an outcome is not unusual in banking; changes can be very complex as a result of a monolithic setup and numerous connections between applications.

An industry move toward a layered and componentized IT architecture is a response to that kind of problem. The main objective is to simplify the IT model and increase flexibility through the use of common IT components, and to break down the monolithic application architecture into a layered architecture for re-use. SOA has been a strong factor in banks’ decisions to componetize their business models. As more and more banks attempt to simplify their models through CBM or similar approaches, a strong case can be made for alignment with IT.
What is Service Oriented Architecture?
SOA is a way of designing and operating software so that it supports the various individual and interrelated business functions that are needed to operate a particular enterprise. SOA enables the modeling of business tasks in terms of discrete and reusable services, which can be securely interfaced and integrated with other applications over the Internet or another suitable network infrastructure (examples of reusable services include customer credit check and get balance). These services can be combined and recombined as the business needs change.

SOA allows these services, no matter how different their supporting systems and technologies are, to talk to each other via the open communication environment it creates, and to “interoperate” so that IT supports interrelated business processes. SOA makes it possible to share information not only across an enterprise but with customers, suppliers and partners.

Why do it? The benefits of service orientation
Although there are significant IT benefits associated with SOA, most of the value is derived from business benefits. The goal of SOA is to componentize key business processes so they can be more easily changed to meet new business conditions, at the same time lowering the cost needed to manage and change applications. SOA is well suited for application scenarios that span enterprise boundaries and business silos.

Typical areas where SOA can add value include:

- **Business change** – SOA facilitates re-use and easier adaptation to change, thereby enabling a high degree of flexibility. With implementation-independent interfaces based on open standards, SOA also facilitates change to business systems with minimal side-effects to other systems and the overall business.
- **Product time to market** – SOA can help accelerate product development exploiting common processes and IT components. The corporate division of one leading European bank took an average 18 months to develop new business banking products. Through the implementation of common business components in product manufacturing supported by SOA, the bank reduced its product-to-market cycle to a few weeks.
- **Improved customer centricity** through one way of managing data and customer service process consistency across different channels. One medium-sized European bank is currently implementing a common account opening approach across several retail banking products, applying CBM principles with SOA as a foundation. Business benefits have included:
  - Reduction of average account opening process from 40 minutes to 10 minutes
  - Reduction in data collection parameters by 66 percent and a cutback in data input screens from 18 to 9
  - Improved customer information at expression of interest (5 percent revenue gain) and reduced customer attrition (10 percent revenue gain)
  - Improved sales capability through increased capacity
  - Potential account opening cost savings of nearly 40 percent and revenue improvement of about 20 percent
  - The use of automation to facilitate decongestion of branch activities by 20 percent

Other areas where SOA can add value include:

- **Flexibility and reduced duplication** resulting from SOA can lead to significant cost reduction. A leading European Internet bank, for example, estimates that a CBM model supported by SOA will change its cost-income ratio from 63 percent to 37 percent over three years. Key opportunities included 25% reduction in FTE costs, 60% reduction in application maintenance costs, 50% reduction in design and development costs.
- **Operational risk.** The standardization resulting from SOA reduces the burden in managing operational risk, compliance and control.
Architectural strategy for SOA

Many banks are addressing SOA as a staged journey where benefits can be achieved in milestones. But starting the journey requires an architectural strategy that combines a top-down approach with a comprehensive IT assessment. CBM can help drive business priorities, define core and non-core components, and link the business architecture to the IT architecture. A number of approaches can be considered to determine an appropriate IT architectural strategy for transformation.

One such approach is “Business as Usual”. In this case, there is no change in the current way of delivering business and IT solutions to meet business needs, and siloed processes and applications continue to be utilized for each platform. The Business As Usual approach is relevant where existing applications are likely to be retired, and where standalone components do not provide significant leverage.

A separate “Transform by Platform” approach features adoption of SOA for each platform. It offers only slight improvements over “Business as Usual,” since changes are made in isolation; there is no sharing, and duplication of functionality still continues. However, in platforms such as core banking engines with a high level of functional duplication and maintenance cost, it may be a valid option. Platform transformation also represents a starting point to rationalize duplicated functionality of other applications as part of a progressive transformation plan.

A third approach to SOA is to implement across business units, product or channel.

Business units Medium-sized organizations may be able to conduct SOA programs within business units such as private or business banking. For large banks a number of programs will be required, and they most likely will need to work within divisional units.

Products One large US bank is developing SOA for its electronic payments products, with the idea of extending it to the entire payment function over the long term.

Channels SOA also can help to deliver products and services consistently, irrespective of channels. The process could start with one channel and then evolve to a wider variety of channels, as in the case of a leading US bank that has begun with the Internet and expects to grow through Web services deployment to deliver SOA to other channels.

The last approach is “SOA by Enterprise,” which involves a number of prerequisites, including organization-wide governance, strong mandate from the top of the organization and a focus on manageable scale. Workable scenarios include:

- Common components across the enterprise, such as account opening or maintenance, particularly if new applications are being implemented
- New enterprises or industry ventures
- The advent of new capabilities and products

The path to SOA

Once architectural strategy is clear, a number of actions are necessary to move successfully in the direction of SOA. First, banks need to apply business value prioritization, being sure to take a top-down approach. The advantage of starting with CBM is the associated direct linkage with IT services, which results in clearly understood roles and traceable actions and benefits.

A financial services company also would need to define where it was in the journey to CBM and service orientation. CBM can help a bank identify operational strategy in terms of core and non-core components, areas of benefits, sourcing strategy and overall target operating model. It also will help lay out a roadmap for the target IT model.
Using IBM’s Service Integration Maturity Model (SIMM) provides a framework for increasing levels of integration in an organization’s IT landscape (see Figure 5). SIMM describes several levels, each of which can help an organization build components once and leverage them across products, applications and business processes.

Figure 5 – IBM Service Integration Maturity Model

A CBM view and a Service Maturity view both are key to driving a plan based on progressive transformation principles outlined earlier. The first step is to set up a governance framework – one of the most important prerequisites for success. A componentized approach at the business and IT architecture levels requires cultural changes and a willingness to operate differently in several areas, including:

- **Budgeting, investment decisions and defining ownership of business components that cut across products and divisions**
- **Relationship management of partners.** Organizations applying CBM often are successful at identifying non-core components that may be outsourced to partners who can deliver better value
- **Defining and maintaining common architectural standards, an activity that covers standards, common language in process design and data**
- **Setting up a governance structure that brings together implementation teams with business teams at early stages of design to make decisions about appropriate priorities**

Some of those decisions will involve the application of open standards-based technology such as Java™, Web services, Business Process Execution Language (BPEL) and Web Services Description Language. Those standards enable componentization of IT business and IT services, as well as an industry-accepted means of integration.

Decisions also will have to be made about applying standards and readying for process and application development using BPEL or middleware tools based on open standards approaches (such as Eclipse). In addition, the organization must decide what kind of technology infrastructure (applications, middleware and hardware) is required to enable componentization and a layered architecture. This will include Web services deployment in the intranet environment.

Lastly, banking organizations will have to determine whether to start small in areas where maximum value can be achieved and risk of delivery is acceptable, and how to prove the infrastructure and create the platform for scale. That means common services can be implemented in one area and then expanded across different areas that use the same services.

In many organizations, much of the infrastructure required for an SOA implementation most likely will be in place. However, realizing SOA in its truest sense requires a whole new set of open standards-based technologies, and considerations will need to be made regarding integration, security and other requirements.
Case Study 2 – building a Service Oriented Architecture model

SIMM describes several levels of integration in a banking environment, each of which provides distinct benefits when it comes to building components a single time and leveraging them across products, applications and business processes. One bank used SIMM to help transform its Internet electronic payments operation to SOA, and IBM’s recommend roadmap included the following key activities:

1. Create an SOA architectural framework (guidelines, standards) to guide implementation projects
2. Implement portal architecture to support an SOA target state using the architectural framework
3. Apply the component architectural framework to in-flight projects where the architecture is not hardened
4. Apply SOA to a small project to demonstrate component reuse while minimizing the risk of new architecture adoption (e.g. Bill Pay & Transfers)
5. Apply SOA to larger projects to realize re-use benefits
6. Establish an SOA governance framework, a process that involves implementing changes for system development life cycles; formulating an organizational model to sustain the SOA environment; establishing guidelines for service-oriented business applications; and identifying any new technology requirements
7. Re-use developed components for other projects where appropriate

Figure 6 outlines the staged approach towards service orientation moving from SIMM levels 1 and 2 to level 4 (SOA).

The bank’s rationale for an incremental adoption was to lower risk and identify projects where the investment fit the potential financial benefits. The bank established guidelines for development that included component architecture and services specification, some examples of which revolved around gaps in skills, technology and development processes that could be identified and remedied without risk to the project. That approach minimized risk and allowed SOA development guidelines to be introduced incrementally.

Defining guidelines for the portal architecture facilitated a common user experience for the bank’s customers while creating a framework for business logic re-use. Re-use requires the identification of projects in which functionality can be leveraged by multiple business lines and the benefits of business logic re-use can be realized.

The bank is at the implementation stage, projected benefits include:

- Improvement of customer satisfaction due to better customer service levels
- Overall 50 percent cost savings of IT maintenance and development
- And a reduction in project lifecycles by up to 50 percent due to significant reuse of business functionality
Key decisions banks must make today to be ready for the future

The opportunity-cost to a bank of not dealing with complexity and inflexibility of the operating model is potentially significant. Uncoordinated and siloed projects only add to complexity, and will not prove sustainable over time.

Changes in technology such as open standards and componentized applications have made it possible to attack the problems of complexity and inflexibility from the top down (CBM) and from the bottom up (SOA), and many banks already have started on the journey. The benefits they realize could include moving products to market in a fraction of the time it currently takes; greater innovation and a wider variety of products; significantly improved customer service; greater flexibility in process change; cost reductions of up to 50 percent (cost-income ratios may register at less than 35 percent); and the ability to merge with or acquire other businesses that are following similar architectural standards in a much more flexible way.9

Progressive transformation is a journey that can last years, but before a bank can begin that longer journey it must make several key steps.

- Create a vision for growth, flexibility and the capability of leveraging the entire enterprise
- Build a governance structure and begin the cultural change for this transformation
- Transform in a progressive manner based on business value
- Ensure that duplication and complexity are intercepted right at the business level. CBM asks key questions about common business components across products, processes and business units
- Build an IT foundation that will link to CBM based on SOA

For banks planning a decade of growth, it is important to drive benefits early and build on them. Nearly one out of four banks today has taken serious steps toward simplifying their operating models based on the principles of progressive transformation. Another one out of four is either in decision or design stages, or is applying progressive transformation principles at the business-unit level.
The math is inescapable. Fully half the number of banks operating in today’s more complex and highly competitive business environment are lagging behind in the march to a more flexible, cost-efficient, service-oriented business model. These banks risk not just delayed arrival, but serious consequences in terms of their level of competitiveness and the ability to survive in such a volatile market.

Authors
Rash Gandhi is a consultant with IBM Global Business Services in the UK. His e-mail address is rash@uk.ibm.com

Keith Tutton is a consultant with IBM Global Business Services in the UK. His e-mail address is keith.tutton@uk.ibm.com

US Contact
Shanker Ramamurthy is the Global Practice Leader for the Financial Services Strategy and Change Practice for IBM Global Business Services. His e-mail address is shanker.ramamurthy@us.ibm.com
Sources and Footnotes

1 Statistics are derived from a European retail bank where IBM Global Business Services has led a client engagement.

2 IBM client engagement experience.

3 The information in the case study is from a major European bank customer and was gathered as part of a client engagement.

4 Statistics are derived from a mid-sized retail bank where IBM Global Business Services has led a client engagement.

5 IT components are a subset of components in the Component Business Model. As a result business architecture defined by CBM can help drive the target SOA model and clearly align it to quantified business value.

6 Statistics are derived from a medium-sized European bank where IBM Global Business Services has led a client engagement.

7 Statistics are derived from a leading European Internet bank where IBM Global Business Services has led a client engagement.

8 Statistics are derived from a retail bank where IBM Global Business Services has led a client engagement.

9 IBM client engagement experience.