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The future ain't what it used to be: Why tier one investment banks need fundamental operating model changes

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Executive summary

Firms face tough choices about their operating models, but often aren't set up to make the big-bet changes they need.

It's time to revamp the front-to-back operating model.

Tier one investment banks face cost and regulatory pressures in their core trading businesses. But many find themselves in an uphill battle to make the changes they need.

Among other challenges, we've seen firms struggle to figure out regulatory reporting or find ways to simplify settlements and other areas that rely on costly legacy platforms. They also have a hard time winning support for proposed changes that cross functions. Many have inadequate incentives for investing in sound solutions for the enterprise. And, when changes do happen, it's hard to tie them to measurable results.

Firms face fundamental questions about how to move forward:

- How will they balance mounting regulatory requirements against falling revenues?
- How can they execute their internal front-to-back operating models at a significantly different price point?
- How can they implement cross-divisional initiatives, if they are not positioned to execute transformational changes?

Simply stated, many firms are not prepared to take on cross-divisional initiatives or big-bet changes.

Clearing the high bar: Jumping over hurdles in front-to-back architecture.

Firms have little choice but to consider major shifts in their operating infrastructure. In particular, firms may need to use third-party providers much more extensively for both platforms and business process execution.

These operating model changes should be done in a way that cuts long-term operating costs, supports business model changes, and improves new product rollouts. They should also provide the flexibility to keep pace with future regulatory changes.

It's not easy—but it needs to happen. As firms consider major transformational investments, they should establish the right building blocks to realize the benefits they set out to achieve.

Time to transform.

In our view, these five building blocks are essential:

- Project governance and delivery—put together a structure and process for managing cross-divisional projects.
- Data architecture—build a single data model that supports all products and operations.
- Business capabilities—figure out what the target operating model—people, process, and technology—should look like.
- Solution providers—find the right vendors that can support your current and future needs.
- Cost and control transparency—work out the metrics that can help you keep an eye on costs and risks.

Point of view

Investment banks have their backs against the wall. How will they balance mounting regulatory requirements against falling revenues?

In our experience, most firms have been unable to come up with a comprehensive approach to investing in the front-to-back operating model. Instead, projects tend to focus on short-term deadlines and immediate return due to many industry challenges:

Regulatory pressure continues to intensify.

- Industry analysts warned in 2013 that the cost and complexity involved in adapting to "disjointed" international regulations amounted to $15 billion, reducing banks' return on equity between 2% and 3%.[1]
- Regulatory compliance and focus on the changing regulatory landscape has climbed to the top of the investment list, as firms struggle to implement solutions to Dodd-Frank, Basel III, Solvency II, FATCA, and others.
  - Basel III introduces new capital target ratios, capital quality, and a new leverage ratio, further pressuring net margins.
  - The shift in over-the-counter derivative products to exchanges or central clearing, as well as the Volcker rule, heighten costs further.
  - Pressure to improve trade reporting and overall data quality and standardization continues to grow.
- Operating model costs tied to increased regulatory oversight—such as legal entity registration, new risk infrastructure (for example, the Federal Reserve's Comprehensive Capital Analysis and Review) and reporting structures—are creeping steadily upwards.

Revenues have stagnated, driving firms to look for new cost-cutting measures to hit profit goals.

- Many firms lack significant new product innovation. The focus on client businesses has shifted the revenue source to more fee-based businesses.
- New investments focus on low-margin businesses, such as fixed income products in electronic trading channels, central clearing, and client servicing.
- Cost takeout efforts have been focused on low-cost/low-reward IT initiatives and realignment of organizational models. Benefits from larger staff cost-reduction efforts, such as near- and off-shoring, have already been absorbed.

1 "Gloomy future for Europe's banks as costs, regs mount up," Euroweek, April 12, 2013, www.factiva.com, accessed April 11, 2014.

We have also observed that many investment banks struggle with implementing cross-divisional initiatives and are not set up to execute big-bet transformational changes.

Business leaders face considerable challenges in identifying the most effective approaches to common enterprise-wide business processes.

Firms have historically focused investment on change initiatives that address cost, scalability, and control within a given business and product line. This approach has enabled an entrepreneurial culture in business lines that produced best-in-class platforms in revenue-generating areas, at the expense of efficient enterprise-wide operations.

Firms are laboring under significant redundancy in business processes and platforms. This is driving up costs, as is the need to respond to regulatory change, especially cross-divisional change. At the same time, it has become more difficult to address these challenges through traditional methods, such as funding the development of a new in-house, business-aligned platform.

We've seen many peer firms wrestle with ways to simplify areas such as:

- Middle-office and settlements-related processing, which often operate on expensive legacy platforms.
- Books and records (sub-ledger/general ledger) processing, which has struggled to maintain proper traceability to front office and operations activities.
- Regulatory reporting (transactional and point-in-time reporting), with difficulties in consolidating activities at appropriate levels of granularity by product.

There are many challenges that stand in the way of smarter, more strategic investments in front-to-back architecture:

Organizational silos

- Firms have trouble finding cohesive support for these initiatives across all revenue and non-revenue producing functions (such as trading, finance, operations, enterprise risk, and compliance), resulting in a build up of platform silos.
- Firms find it hard to determine how to internally allocate cross-product and business-line investments.

Few incentives for cross-divisional efforts

- Individuals are not rewarded for improvements made across divisions. This limits incentives for investing in solutions that are best for the enterprise.

Difficulty prioritizing over immediate needs

- In aggressive growth periods, time-to-market on new products receives priority over longer term strategic implementations. This can lead to greater operational complexity over time.
- In leaner times, given the typical discretionary classification, transformational programs are usually reduced or eliminated.

Execution and change management

- Firms have often fallen short when executing major change programs, with timelines and scope frequently not tied to benefits. As a result, they fail to develop an effective program that suits their business needs.

Leading firms implement governance structures needed to manage cross-divisional projects that span business lines, products, and support functions.

"To succeed today, you have to set priorities."
– Lee Iacocca

In our view, several leading foundational practices can help enable the kind of larger game-changing initiatives that support long-term success:

Engage the right stakeholders and reward collaboration and success.

- Involve an array of stakeholders (front-office, technology, support, and control functions) in defining architecture and making program decisions.
- Reward cross-divisional collaboration rather than divisional performance. Define clear cross-divisional metrics to measure investment success (potentially extending past quarterly or yearly budget cycles), and reward employees for success in meeting goals.

Ensure a solid governance structure is in place to oversee changes.

- Institute a central organizational function that powers architectural change in the enterprise—both in functional/technical architectural definition and in managing high-risk project execution.

Emphasize metrics throughout the project, from defining the business issue to executing upon the project plan.

- Define the business issue with clear metrics for what success looks like. While it's tempting to try to please all stakeholders, scope creep is often one of the biggest causes of project failure.
- Manage implementations in appropriate increments to enable measurements against the business case.
- Draw on accurate methodologies that measure the impact of cost per trade under both straight through processing scenarios and exception/break conditions.

Simplify architecture integration points with clearly defined trade data standards.

- Make use of front-to-back data standards to identify clear integration points (for example, fully figured trade and resulting accounting entries).

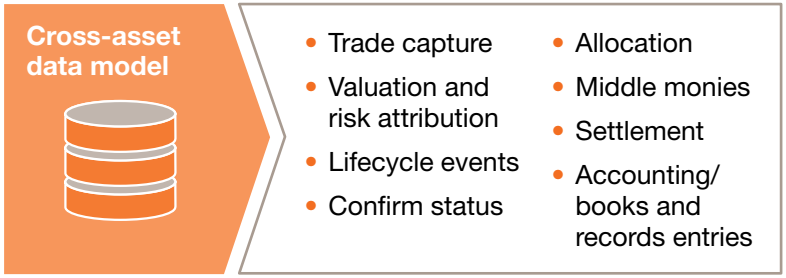
In our view, investment banks need to make far-reaching changes in their front-to-back operating models in today's intensely dynamic business world.

We have found that capital market firms that rationalize their trade-processing value chain, and invest—sooner, rather than later—see more success in the long run. To realize the full potential of this type of transformation, firms should consider taking the following actions:

- Separate competitive, differentiated functions from utility business functions.
- Turn common functions within multiple business units—such as the asset servicing function within institutional and wealth management businesses—into shared service functions.
- Leverage third-party solutions to help identify technology and business process improvements in areas previously considered "untouchable" from an operating model perspective.
- Expand the role of industry utilities in the trade value chain, filling in any gaps that third-party outsourcing vendors often cannot provide at the appropriate level of cost and quality.

Effective change relies on significant foundational work, and firms that address architecture projects early can better ease the road ahead. Figure 1 and 2 show examples of foundational investments that can lay the groundwork for transformational success.

Figure 1: Example of an investment in architecture and data

Area of investment	Illustrative example
Architecture and data foundations: • Implement a common trade, lifecycle, and reference data taxonomy across all front-to-back functions. • Define a common or standard front-to-back integration architecture for all points within the trade value chain.	

In our view, investment banks need to make far-reaching changes in their front-to-back operating models in today's intensely dynamic business world. (continued)

Figure 2: Example of an investment in program execution governance

Area of investment	Illustrative example
Program execution governance: • Develop an effective channel for managing cross-divisional projects and architecture across the front office, operations, risk, finance, and the like. • Make strategic project prioritization decisions from a firm-level, long-term perspective; business-unit incentives should be based on firm-level decisions, not just on profit and loss. • Technology and user functions should develop the "next generation business analyst"—a role that should evolve from one that focuses on detailed business rules to one that serves as a cross-divisional architect and third-party sourcing specialist.	

Service providers should also focus on evolving their own offerings to solve the unique business problems of investment banks.

Vendors that provide third-party solutions should invest in their solutions so they are prepared to support the full suite of capabilities of a large sell-side firm.

They should demonstrate the ability to meet a clear set of defined benefits within reasonable timeframes:

- Cost savings per transaction per function at differing levels of volume.
- An increased level of operational control, evidenced by reduction in service incidents.
- Expedited resolution of regulatory issues at lower costs.
- Ability to help firms accelerate the launch of new products.

Vendors also should provide functional capabilities that meet the needs of large institutions and varied client constituencies:

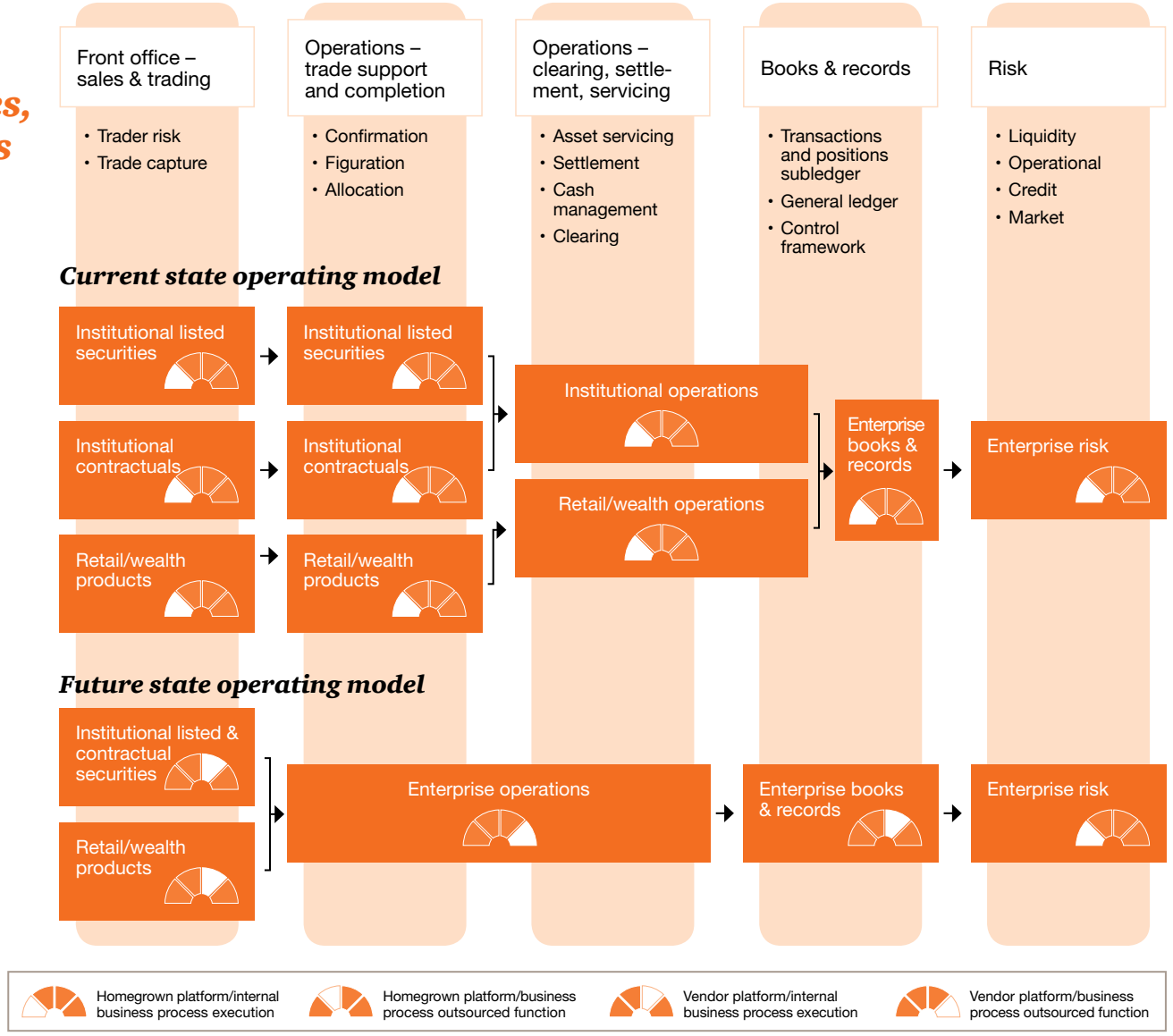
- Diverse reporting and service capabilities across different client sets (wealth management, prime brokerage, and the like).
- Product flexibility, especially with regard to derivatives reporting.
- Ability to plug into a comprehensive front-to-back architecture that has platforms that will stay proprietary to a sell-side firm (enterprise risk management, pricing systems, etc.)

"Obstacles are those frightful things you see when you take your eyes off your goal."

– Henry Ford

With this new approach, the front-to-back architecture landscape can leverage consolidated platforms, vendor packages, and heavier use of business process outsourcing.

Figure 3: Firms can simplify their operating models by moving to a future state that consolidates platforms and makes more use of third-party service providers.



Investment banks that simplify their infrastructures can achieve sustainability and other benefits.

> *"That's been one of my mantras—focus and simplicity."*
>
> *– Steve Jobs*

In addition to improving current-state returns, investments in infrastructure can reduce future operational spend for business model changes, cut new product rollout timeframes, and enable greater agility in managing future regulatory changes.

These investments can also enable new capabilities that could not be supported by many firms' existing infrastructures. Those that embrace these recommendations are likely to reap significant benefits.

Benefits		Metrics
Cost and efficiency	Reduction in overall trade processing costs throughout the entire trade value chain.	• Individual activity-based cost. • Cost per trade.
	Lower project execution costs in meeting future business and regulatory demands (new product rollouts, regulatory rulings, etc.).	• Number and complexity of known future renovation efforts. • Cost of regulatory-driven projects over time. • Time-to-market for new products.
Risk and control	Reduction in trade breaks, aging, and client impact of break.	• Risk-weighted cost per trade.
	Lower number of regulatory matters requiring attention by demonstrating to regulators the ability to solve issues on a strategic basis, reducing the risk of future regulatory findings in a given area.	• Improved ratio of strategic versus tactical regulatory responses. • Reduced regulatory findings over time.
	Reduction in operational risk incidents—where infrastructure shortcomings are a primary or secondary cause.	• Number of incidents by category. • Severity of incidents.
New capabilities	For example, firms can grow their data analytics capabilities. This can help with historical challenges they've had in gaining a complete profile of liquidity management or having a cohesive view of the customer.	• N/A

We've seen clients encounter several obstacles along the way. By navigating wisely, investment banks can discover a better way forward.

While some of the obstacles require behavioral and cultural change on the part of investment banks, third-party providers should "up their game" in proving cost savings, satisfying risk concerns, and sharing the risk and rewards of implementation.

Obstacle	Potential mitigating factors
The business case is hard to prove because promised cost savings with earlier projects often were not realized.	• The business case should be clearly defined up front and implementation plans should tie directly to it. • To prove the business case, new industry solutions (such as partnerships between platform providers and business process outsourcing providers) should gain sufficient scale. • Solution providers should take on cost savings risk/rewards. If savings fail to emerge, the bank shouldn't carry the whole burden. • Cost-per-trade metrics should be scrutinized to ensure they break down the cost of retained functions versus moved functions. Volume swings should also be taken into account to show cost per trade in a different business environment.
Cost chargeback methodologies for cross-business and product initiatives are immature and tend to discourage the right investment.	• Develop methodologies that reward support for cross-divisional change programs. Business unit stakeholders should not be penalized during periods of change and should reap the rewards of cost savings. On the flip side, they should be held accountable if they're unable to drive down cost. • The traditional business analyst role is narrowly focused on defining business rules. It should evolve as a cross-divisional architect and third-party sourcing specialist.
For political or operational risk reasons, firms are reluctant to give up control of functions that have historically served in house.	• Find career opportunities for top performers in areas targeted for change. Firms that harness top talent can drive initiatives that create competitive advantage. • Mandate that third-party providers implement best-in-class operational risk practices to improve the risk profile of their clients.
Firms are not prepared architecturally to plug vendor solutions into their architecture.	• Firms should define their current-state challenges and future-state roadmaps for data-quality issues related to trade data, customer data, and product data. • These challenges should be addressed across product lines, businesses, and regions.
Articulating benefits beyond cost efficiency is difficult.	• Define metrics for the business case beyond standard return on investment, tailored to strategic investment (project execution efficiency, responses to regulatory inquiries, and operational risk metrics).

There are serious consequences for tier one investment banks that fail to invest in simplifying their front-to-back architecture.

In our view, financial institutions have no choice but to invest in simplifying their front-to-back trade architecture. While this message has been heard before, this time it is different. Firms that do not significantly alter their cost structure may be forced to evaluate the need to exit businesses and see their sales and trading businesses shrink.

What's more, firms' reluctance to simplify their trade architecture can continue to fuel operational risk and leave them behind the competition in meeting regulatory demands and expectations.

Competitive intelligence

Our observations of industry practices.

An industry comparison across peers: cross-divisional investment approaches and associated results.

	Peer firm A	Peer firm B	Peer firm C
Organization profiles	The organization has executed transformational projects and built a strategic front-to-back architecture, and has the opportunity to rationalize across asset classes and middle- and back-office processing.	The organization has developed leading go-to-market platforms and has identified the opportunity to better streamline cross-divisional efficiency.	The organization has developed several leading go-to-market platforms, but is highly siloed by product, geography, and function.
Program governance	The organization has a centralized approach to maintain control and consistency; proper incentives for all stakeholders; and a direct tie in to broader architectural strategy.	The organization relies heavily on siloed divisions. This decentralized control means that investments are not rationalized, leading to repeated program failures arise.	The organization relies heavily on siloed divisions. This decentralized control means that investments are not rationalized, leading to repeated program failures arise.
Architecture governance	The organization has a formal architecture governance body with business and technology stakeholders and there is clear linkage between the project budget and execution strategy.	The organization focuses on architecture governance in certain functional domains. This has resulted in a well defined strategy but mixed execution results.	The organization lacks a formal architecture governance body and has an inconsistent architecture approach among different projects, functions, and business units.
Architecture readiness	The organization has made some progress on establishing consistent front-to-back taxonomies, but significant differences exist among product lines and businesses.	Platforms have not been historically architected for cross-divisional efficiency.	There is only limited architecture blue-printing and it has been largely narrow in scope (for example, single function, single product, and single geography). The concept of a cross-divisional architecture blueprint does not exist.
Middle- and back-office function investment	Non-discretionary work in control functions takes priority over all work, including front-office, new business work. Discretionary work in control functions often gets deprioritized behind front-office work.	The organization has a mixed track record with cross-divisional project execution as the organization gives priority to meeting end users in single functions, not cross-divisional functions.	For each project, the organization does not clearly define upfront the business case. Front-office projects get prioritized ahead of all other work. Non-discretionary work is often implemented non-strategically.

Leading On par Lagging

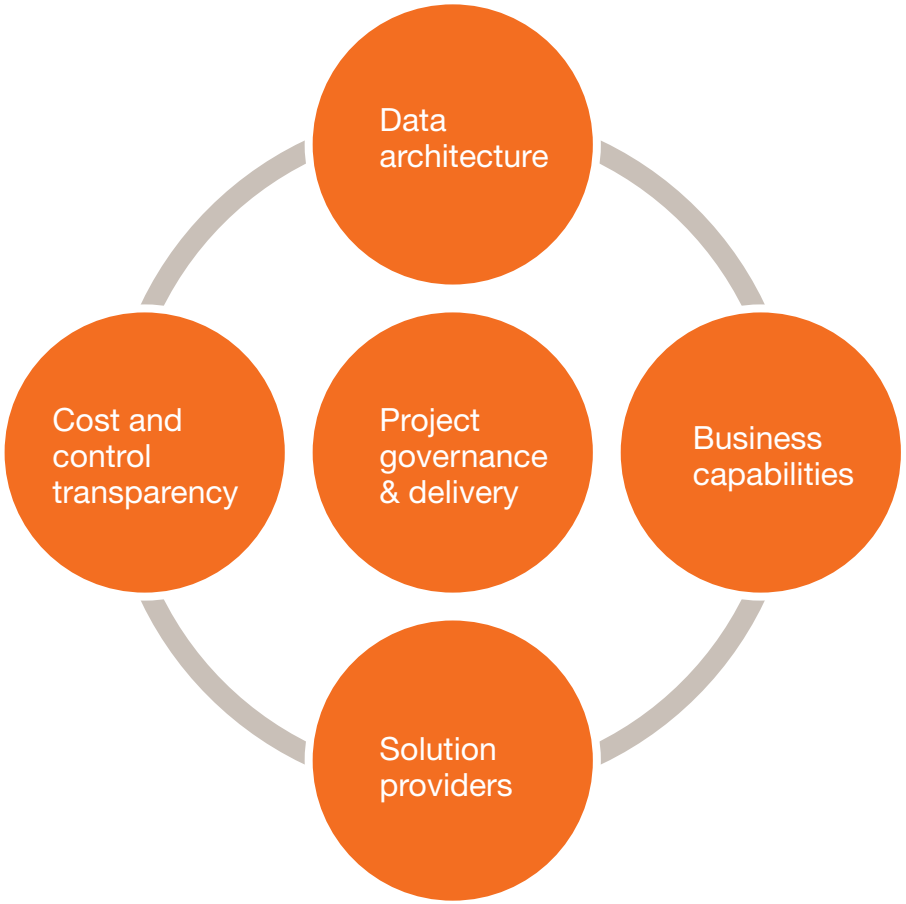
A framework for response

Our recommended approach to the issue.

A multi-disciplinary approach is needed to drive the significant trade architecture changes called for today.

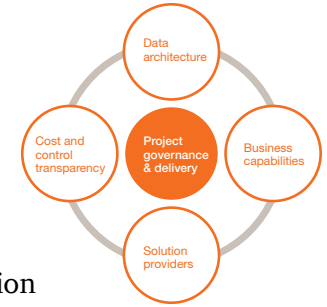
As firms are driven to consider more radical transformational investments, they should set up the underlying building blocks. In our view, these building blocks can help firms improve their abilities to meet project goals, while lowering overall project costs.

Figure 4: Our transformation approach



Project governance and delivery

Establish project governance and delivery function to manage cross-divisional change.

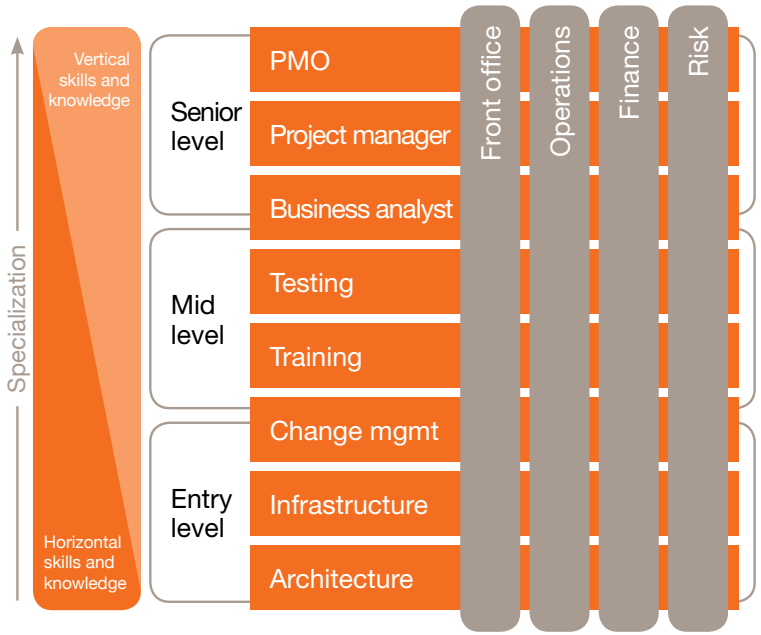


Objectives:

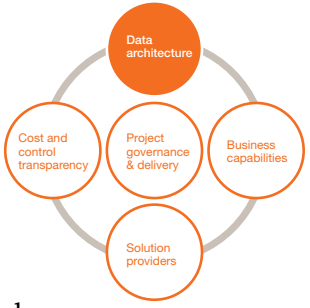
- Develop a project delivery structure that effectively delivers cross-divisional projects consistently and repeatedly across functions.
- Develop and reward employees for skills that promote effective execution of cross-divisional projects.

A centralized project governance and delivery function focuses project involvement from line personnel to appropriate subject matter specialist roles. It helps avoid multiple project organizations across the enterprise. It also improves flexibility by forming a pool of resources who can be assigned to various projects depending on the project phase and level of staffing needed.

Figure 5: The project governance and delivery function should promote role- and skill-based staffing.



Define objectives, roles, and responsibilities	• Clearly define the group's mission beyond being a "project management organization." For example, this could be advancing a strategic business, improving technical architecture, or maintaining regulatory compliance. • Establish project roles to promote cross-divisional collaboration, such as front-to-back business analysis, architecture design, and testing. • Influence overall business strategy and alignment by providing input on project prioritization and timelines to steering committees.
Manage staffing	• Supply initial group with experienced resources with the right background in facilitation, architecture planning, operating model change, and project management. • Develop a career path to attract the right talent. • Build a compensation structure that rewards progress and cost savings achieved across divisions. This should include processes for identifying contributions made in other divisions, measuring their impact, and differentiating and rewarding desired behaviors.
Refine operations	• Capture repeatable processes—such as standard systems development life cycle activities/tools, typical analysis activities, and testing protocols—to improve performance on future initiatives. • Provide frequent training to help group stay up-to-date with functional knowledge. • Promote collaboration between related initiatives to share leading practices and reduce duplication of efforts.



Data architecture

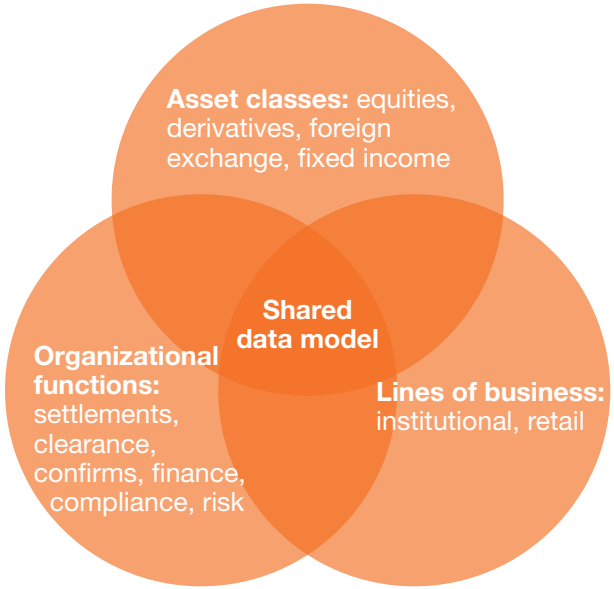
Simplify architecture by developing a single data model that supports all business events.

Objective:

Standardize the data model across products and operations to support streamlined operations and enable greater flexibility.

A top-down approach to data architecture can help firms simplify the data model and enable "plug and play" components to better meet end-user needs. In addition, it develops realistic data models that improve data quality and enable adherence to the standard in all front-to-back platforms.

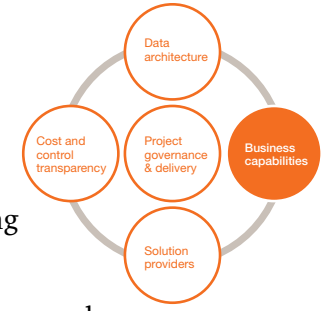
Figure 6: A standardized data model across all products and operations.



Establish data governance roles and responsibilities	• Define roles and responsibilities for overseeing the data strategy firm-wide. This might include, for example, roles for managing data access/usage, architecture, metadata, quality, and training. • Depending on the size of the effort, establish data governance steering committees and working groups to facilitate among different divisions.
Implement enterprise-wide data strategy	• Develop common logical data model for trade and other lifecycle events. • Roll-out messaging standards between front-, middle-, and back-office systems for trade events and operations. • Clearly define the functional architecture needed to support the shared data model. • Adopt standard industry taxonomy to describe business events, messaging formats, and functional architecture.
Simplify integration architecture	• Specify data inputs and outputs for all functions, enterprise-wide. • Deploy consistent enterprise messaging and routing architecture. • Perform process re-engineering between and within functions to enable simplified architecture, where needed.

Business capabilities

Determine how business capabilities can be simplified and what the target operating model looks like.



Objectives:

- Develop an overall strategy for how business capabilities can be simplified—for example, by combining back-office functions, outsourcing business processes, or implementing a new technology platform.
- Gain an understanding of how the firm will be impacted by these changes and how it should adapt to maintain a high-performing operating model.

Business capabilities encompass five main areas:

Process

- Process
- Policies

Technology

- Application
- Infrastructure
- Integration

Information

- Reports & analytics
- Data
- Semantics

Organization

- Organization structure
- Networks & interdependencies
- Roles & accountabilities
- Governance arrangements
- Physical environment
- Suppliers

People capabilities

- Competencies
- Reward
- Workforce & talent
- Culture & behaviors

Process	• Assess the functional architecture—asset classes, lines of business, and organizational functions—to determine which areas should be targeted for change. Factors may include complexity, operational risk, cost, and need for differentiation. • Define standard measurement criteria for operational risk and complexity that can be used to compare functions across asset classes and businesses. For example, what is considered a trade break? Who should be responsible for system outages?
Technology and integration approach	• Define key requirements for vendor solutions (for example, fully figured trade for middle-office solutions). Be sure to consider the level of data granularity available and required by a given vendor solution, as well as timing (for example, real-time versus end-of-day batch cycles). • Assess whether data inputs to books and records will meet all financial, regulatory, and management reporting requirements.
Organization and people capabilities	• Assess how the organizational structure and people capabilities will be impacted by the changes, and develop a strategy for retaining, retraining, or letting go of employees. • Identify top performers that should be relocated to other parts of the firm. Consider the need for institutional knowledge (for example, knowledge of a specific client) and how this knowledge should be transferred for any outsourced function. • Prepare for challenges, such as addressing morale issues in the face of headcount reductions or job changes.

Solution providers

Assess various providers' abilities to meet current and future needs.

What are the high level functions and services?

- Advisory
- Asset management
- Books & records
- Clearing & settlement
- Client account management
- Finance
- Legal & compliance
- Pre trade
- Product management
- Risk management
- Trade execution
- Trade support
- Treasury

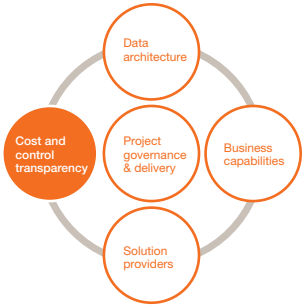
Objectives:

- Reduce risk of vendor solution implementations through clear definition of functions, business, and technical requirements.
- Establish clear expectations for how operational risk issues should be defined, and who will be accountable for them.

Define functional and non-functional requirements	• Identify functional requirements of areas being considered for change. Include requirements of specific products (such as structured or customized products) and clients. • Confirm that solutions can handle expected volumes, throughput, security, and other non-functional requirements.
Consider impact of future business changes	• Assess economic model for future potential business changes (volumes, products, etc.). • Define potential cost savings—both in the current state and in upward- and downward-trending markets (volumes, product mixes, etc.).
Evaluate how operational risk will be managed	• Determine how operational risk scenarios (such as trade breaks, trades booked in error, system outages, etc.) will be handled both internally and by the vendor. • Clearly define who will be responsible for resolving issues, both financially and operationally. In many cases, vendors expect that they will not be held financially accountable for operational risk issues. • Consider how the vendor's solvency may be impacted under various scenarios.

Cost and control transparency

Identify and monitor metrics that provide insight into cost and operational risk.

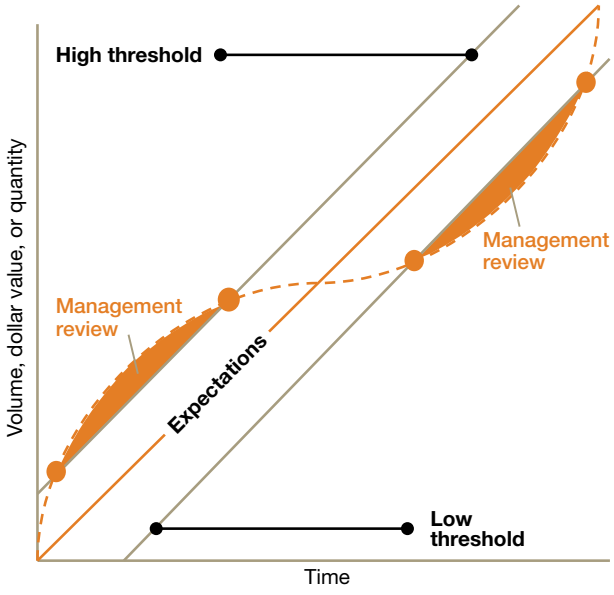


Objectives:

Provide transparency into how the simplified organizational structure and business processes are driving down costs and/or improving management of operational risk.

Define cost metrics	• Identify accurate and repeatable cost-per-trade metrics at an appropriate level of granularity. For example: – Cost per trade, broken down by asset class, function, and geography. – Operational costs outside of standard trade costs, such as asset servicing, trade cancel/corrects, and break resolution costs. • Confirm that metrics are comparable between internal functions and outsourced functions/platforms (for example, consistent granularity).
Define control metrics	• Identify control metrics that provide meaningful insight into operational risk. For example: – Trade breaks—number, aging, sizing – Trade fails—number, sizing – Position breaks—number, aging, sizing – Cancel/correct volume – System outages—number, length, impact – Compliance issues

Figure 7: Develop expectations about how each metric should behave and when alerts should be triggered.



Case study—a deeper dive into the books and records (B&R) operating model.

Many firms struggle to implement a robust B&R architecture that supports finance, operations, and risk.

Vendor offerings have fallen short; most have not provided enterprise-wide, sub-ledger solutions that can support the breadth of products and businesses of a large financial institution. What's more, the gray boundary between the role of finance and operations has made it difficult to explore bigger-bet, cost-reduction opportunities such as outsourcing in upstream areas. This has led many firms to build their platforms in house—in most cases, a long, difficult journey that is expensive and has produced mixed results.

In this case study, we apply our framework to this complex area and highlight some of the leading practices and challenges we've observed at our clients.

Framework component	Leading practices we've observed	Potential challenges
Project governance and delivery	• Functional team members have a combination of product control, operations (particularly settlements and control), and front-office trading and risk experience.	• There are many dependencies between the functions that impact B&R. Clear governance is needed to understand these dependencies and monitor associated renovation efforts to support a successful implementation.
Data architecture	• Common trade data models incorporate finance and risk requirements. • Data quality governance is established to support proper ownership of B&R input streams.	• The front office is willing to comply with data standards when data is readily available, but often struggles with prioritizing investment to improve data quality.
Business capabilities	• Sub-ledger infrastructure is often categorized among different dimensions. These categories can include firm versus client versus depot, as well as institutional versus retail or product line.	• Lack of clear organizational ownership will create challenges in understanding the complete set of functional and technical requirements for a third-party solution to address.
Solution providers	• Vendor packages adhere to industry standards for trade events to drive accounting logic. • To limit the cost of sub-ledger implementations, vendors leverage infrastructure that is already built, for example, by purchasing leading technology from other firms.	• No clear leader has been established for books and records solutions; different vendors dominate in the general ledger area and the operations processing area; the middle ground has not been determined. • Existing sub-ledger packages generally don't account for a broad set of products and capabilities. • Vendors need to learn lessons from failed or undelivered B&R implementations.
Cost and control transparency	• Key product and operational control metrics are defined to monitor and improve efficiency. These include adjustment volume, break volume/time to resolution, and T+0/T+1 profit and loss variances.	• Unclear division of responsibilities between finance and operations often leads to issues where accountability is unclear, allowing inefficient practices to linger.

Appendix

Select qualifications.

Cross-divisional projects and architectural support—Global investment bank

Issues	This investment bank wanted to be able to respond quickly to potential growth and profit opportunities, such as the rollout of new entities or acquiring new businesses, and also wanted to adapt more rapidly to changes in the regulatory environment. Increasingly complex trading strategies, products, and risk management tools already had increased data processing demands for this bank, which pointed to the need for large-scale, technical architecture upgrades and platform migration requiring strategic oversight and management. To meet these business demands, the client wanted to create a function to manage high-risk, highly complex projects across divisions.
Approach	PwC worked with the client for two purposes: • To drive an overall front-to-back functional architecture definition that could be used as a guide to identify potential projects or investments, and to provide an approach for undertaking those projects. • To enhance project management, including user test management, for selected projects. PwC created a long-term relationship with the client to serve in both roles, providing the client with significant flexibility and capacity in its architectural function, while assisting the bank in its efforts to evolve its architectural blueprints in a cost-effective manner.
Benefits	As a result of the relationship with PwC, the bank successfully implemented a number of initiatives and was highly competitive with its peers in sustaining and showing the value of strategic investment over long periods. The bank acquired the ability to balance a mixture of new business and regulatory demand with required, long-term infrastructure work.

Third-party trade processing implementation—Large global banking institution

Issues	The client's new business and financing opportunities were limited because its cash securities, post-trade architecture constrained revenues and margins. This constraint also increased operating risk and expense. These architecture challenges reflected the fact that the banking institution's existing infrastructure had reached the end of its natural life expectancy and could not support the institution's business goals.
Approach	The client asked for PwC's assistance in analyzing options for leveraging internal infrastructure components to provide a core settlement infrastructure. PwC's assistance extended to reviewing buy and build solutions. The build solution consisted of consolidating systems and then building out a large internal platform. The buy solution included the purchase of a third-party clearance and settlement platform that would be supported internally.
Benefits	PwC's analysis of the buy and build solutions helped the client adopt an integrated client and vendor-hosted system. The new system helped the client in these specific ways: • Avoided the build of a commoditized functionality that might fail to adequately track large projects. • Lowered the cost of the solution to a range of between $125 million and $150 million. Focused investment dollars on building differentiated capabilities (for example, cross-product margin). • Allowed the institution to focus IT resources on strategic initiatives by contracting out to vendors the hardware and system support functions.

Strategic books and records (B&R) architecture—Global investment bank

Issues

A large investment banking client had a number of historical issues with its B&R infrastructure. These issues included:

- Lack of ability to systematically trace business events from trade capture through to financial statements.
- Inconsistencies among views of business events across operations, risk, and finance divisions.
- Redundancy in functions such as position keeping across multiple divisions and platforms. Redundancies extended to asset servicing, settlements, product control, and regulatory reporting.
- Inability to fully achieve complete value from strategic front-to-back investments because of requirements to plug into existing infrastructure.

Approach

PwC, working with the client, played a major role in defining the bank's strategic B&R architecture blueprint and subsequent mobilization plans. The PwC team also served in an implementation management capacity for the platform.

As part of the blueprint definition, PwC facilitated a cross-divisional exercise among operations, finance, and risk to agree on the sources and uses of a books and records infrastructure. This allowed the organization to consolidate around the goal of a single platform, overcoming tendencies to invest in piecemeal solutions.

As part of the mobilization and execution phases, PwC played a significant role in the overall program management, as well as participating in a cross-divisional business analysis and user testing management capacity. In addition, continuous updating of both the architecture and long-term implementation approach were instituted within the execution phase of the project.

Benefits

The new B&R infrastructure is a major component of the bank's overall systems strategy and control framework, integrating information flow across major control functions. Some of the advantages of the new infrastructure included:

- Posting the general ledger from a single source, allowing for seamless drill-back to underlying business events.
- Improved ability to reconcile daily profit and loss between the front office and product controllers.
- Ability to provide current and past views of firm B&R.
- Reduction in number of position-keeping data stores and associated reconciliations within the front-to-back architecture.

Functional assessment and global operating model—Global investment bank

Issues	A large European investment bank was investing heavily in migrating to a new global, services-based technical architecture from a regional, siloed model that disrupted the operating model's functions, technology, and organization. Under the old model, regional roles were redundant, and minimal global coordination added costs to client services and product delivery.
Approach	PwC assisted the client in undertaking a high-level functional assessment of its challenges and in the development of a new global operating model. The PwC team undertook six key tasks for the client: • Interviewed the bank's management to assess the current state of relevant back- and middle-office functions. • Developed a functional heat-map and gathered insights on functions requiring review and/or immediate attention. • Analyzed a targeted pool of competitors on the global functional alignment and delivery models used, as well as the current level of technology integration employed. • Developed a future operating model and three-year roadmap for implementing it. • Incorporated operational improvement requirements to address various issues that emerged throughout the study. • Developed an operating model that addressed strategic goals for offshore/onshore target staff ratios, global functional leadership, and greater operational controls in regions. The model focused on strategic goals pertaining to scalable core processing in settlements, asset servicing, fails management, confirmations, and reconciliations. The model also provided for the creation of a center of excellence for business process management.
Benefits	PwC's efforts assisted the client in designing a functionally aligned, regional model that was characterized by strong global leadership. The PwC team also recommended establishing a global management role for select functions, as well as developing consistent functional centers in regions with global utilities.

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"The future ain't what it used to be: Why tier one investment banks need fundamental operating model changes," PwC FS Viewpoint, May 2014. www.pwc.com/fsi.

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