



Rebooting IT: Why financial institutions need a new technology model

Old IT models are unlikely to deliver the competitive edge that banks, insurers and wealth management firms need from technology. Most will need a complete reboot if they want to emerge as digital leaders.

By Mike Baxter, Steve Berez and Vishy Padmanabhan

Mike Baxter is a partner with Bain & Company in New York, where he leads the firm's Financial Services practice in the Americas. Steve Berez is a Bain partner in Boston, where he leads the firm's IT practice in the Americas. Vishy Padmanabhan is a partner in Bain's Dallas office.

The authors are grateful for the contributions of Edmund Lin, a partner in Bain's Singapore office who co-leads the firm's Global Financial Services practice, and Rudy Puryear, a Bain partner in Chicago who leads the Global IT practice.

The authors would also like to acknowledge the contributions of Jacob Teplin, a manager in Bain's Dallas office.

Customer expectations for banks, wealth management companies and insurers are on the rise. In 2013, more than half of consumer bank interactions around the world took place through online or mobile channels, according to Bain & Company customer surveys. Include ATMs and the share of electronic, digital interactions exceeds 85% today and could hit 95% by 2020.

Technology is at the heart of this transformation, and with the right capabilities financial firms can compete against nimble, technologically sophisticated start-ups that are reimagining ways to serve customers' financial needs. Executives see the opportunity to deliver differentiated customer experiences and “wow” moments—like the ability to deposit checks with a mobile phone camera, remote bill pay or even basic transactions delivered through a good mobile app. And this trend accelerates for younger customers: 39% of those over the age of 45 considered the quality of a mobile app when switching banks, but 58% of those younger than 45 took it into account.

However, in most financial institutions, significant gaps exist between the business's aspirations and what they can realistically accomplish. Executives demand greater speed and agility, but their IT departments are unable to deliver, resulting in frustrations and mutual distrust. The C-suite demands for faster, cheaper, better grow louder as the IT function has become slow, expensive and, in some extreme instances, paralyzed. Many factors contribute to this immobilization, including rapidly increasing volumes of business and regulatory demands, a growing need to support complex business processes and products, inflexible legacy systems architectures, onerous internal processes and talent limitations.

We believe this problem is larger than IT; it is a strategic business challenge as well as a great opportunity. Technology executives now have a platform and an environment in which company leadership is keen to listen and support IT initiatives. Business executives will need to work with IT more closely than ever before, supporting technology recommendations and gaining a clear understanding of the challenges and opportunities that technology affords. Working together, they can move quickly to bring their banks, insurance companies and other

financial institutions forward into the rapidly evolving digital age.

A new digital IT operating model

In our view, the frustrations expressed by business and IT executives are largely due to a mismatch between the business's expectations about how to consistently and rapidly deliver superior digital customer experiences and IT's inability to fulfill these expectations. Financial institutions did not design their current IT operating models to deliver daily functionality updates or allow change to be an ongoing theme in development. The current model was designed to deliver stability, predictability, risk mitigation and efficiency—and most banks have delivered on those design principles.

From our work with banks, insurers and wealth management companies facing this challenge, we find that many need to “reboot” their technology organizations. The transformation required—to the business, technology and organizational culture—is so great that it demands leaders challenge traditional assumptions about the ways IT and the business work together. As executives move through this critical transformation toward their goal of becoming digital leaders, an interesting thing happens: They begin to think, hire, collaborate and operate more like technology companies.

As executives move through this critical transformation toward their goal of becoming digital leaders, an interesting thing happens: They begin to think, hire, collaborate and operate more like technology companies.

What does this transformation aim to achieve? Some say it's all about enabling speed. While speed is critical, we think that oversimplifies the challenge. As guardians of

Rebooting IT: Why financial institutions need a new technology model

customers' financial security, financial services companies must maintain client trust in their brands, which is the foundation of their customer relationship. Toward that end, IT leaders must worry about cybersecurity capabilities to counter increasingly sophisticated threats. They must be able to provide anytime-anywhere access while continuing to meet regulatory demands. They have to do all of this and construct a scalable and intelligent environment that delivers on mobile, Web, social and advanced analytic considerations. IT leaders aren't getting a free pass on these other priorities.

So how can IT functions respond to this challenge? Large financial institutions do not have the luxury of throwing out everything and starting fresh, nor can they achieve what they want through minor tweaks. In our view, very few financial services companies have made significant progress in meeting technology challenges and most need a full-scale IT operating model transformation. However, our research indicates that emerging leaders are differentiating themselves from the competition and are already capturing benefits (*see sidebar*). These leaders:

- Make twice as many digital sales (as a percentage of total sales);
- See revenue growth rates three times as high as the industry average;
- Feel 60% more confident they will be able to reach the desired future state;
- Are 70% more likely to meet customer needs through technology;
- Manage costs by avoiding non-critical projects, optimizing outsourcing, retiring legacy systems and adopting cloud-based infrastructure.

These emerging leaders recognize the importance of technology and, rather than chasing fads, make thoughtful changes to their technology operating model (*see Figure 1*). They understand the value inherent in legacy systems but also have a plan to move forward to gain the benefits of more flexible architecture. Most crucial, they believe a cultural change is necessary within their

organizations to improve the ways that business and technology work together.

Priorities and alignment. The new operating model used by leaders relies on a detailed, multiyear view of the technology roadmap, guided by the institution's digital and non-digital strategic priorities. The model should strengthen the organization's existing demand-management processes, ensuring that projects and investments align directly with priorities.

Perhaps most challenging of all, this new model requires a closer, more nimble working relationship between the business and technology groups, transitioning from a long-term project development mindset to a flexible model that releases new products quickly, absorbs customer and frontline feedback, and improves and re-releases products—a constantly moving target that is difficult for competitors to emulate. At one global financial institution, leaders of the investment banking and trading operation transformed the way IT and the business units work together by involving business leaders in technical design stages and organizing small, highly committed joint teams. This setup provided full alignment and visibility for both sides, lowered costs and decreased cycle times.

Prioritization is also critical to ensure that management and the broader organization are rowing together and not distracted by non-critical or redundant initiatives. One leading European bank was able to stop about 40% of projects after identifying them as non-critical, which released capacity and funding for more important digital projects and architectural enhancement.

Delivery capabilities. The new operating model places a premium on speed, agility and the ability to develop new products and services quickly and efficiently. The trend is toward nimble delivery models that largely move from traditional waterfall approaches to Agile wherever possible and iterative for most other development. Many companies struggle with this transition because their governance and audit processes are tuned to executing large programs. To deliver functionality in bite-sized chunks, the current need is to adopt a "fit for purpose"

Rebooting IT: Why financial institutions need a new technology model

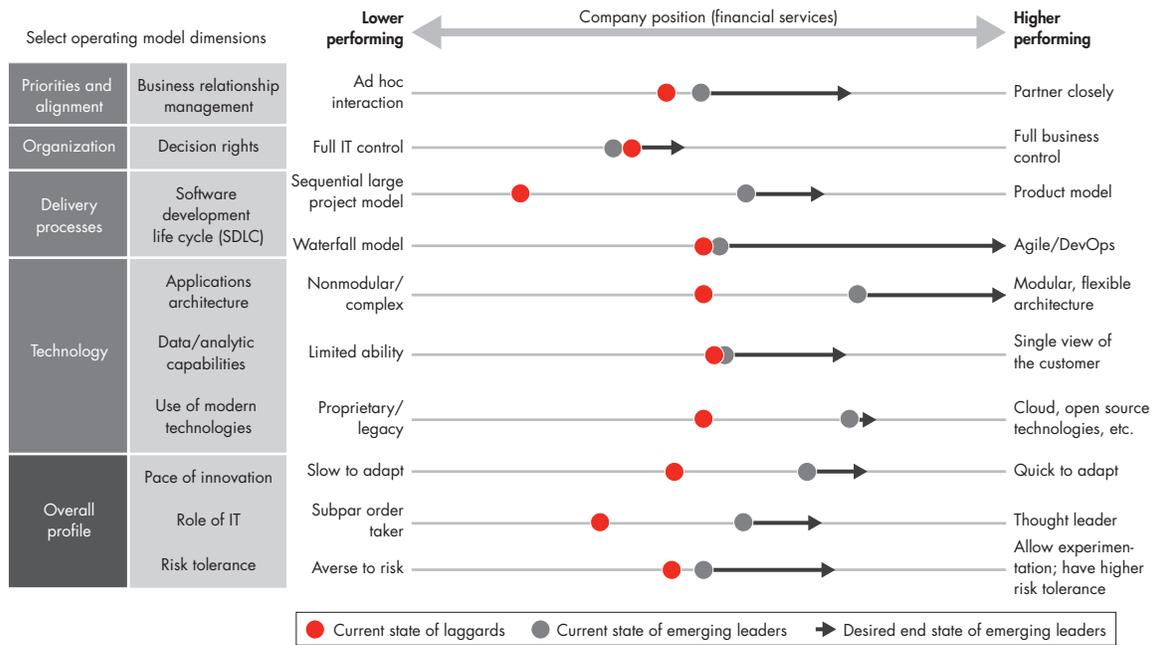
Figure 1: Five dimensions of the digital technology operating model

IT operating model dimensions		What good looks like
Priorities and alignment	IT strategic planning	<ul style="list-style-type: none"> • Multiyear view of technology investments • Clarity on where IT must be world class vs. good enough
	Portfolio and demand management	<ul style="list-style-type: none"> • Clear prioritization on IT initiatives, resources and spending: <ul style="list-style-type: none"> ✓ Strategic and differentiation projects ✓ Foundational investments ✓ Meeting regulatory requirements ✓ Continuous improvement initiatives
	Business relationship management	<ul style="list-style-type: none"> • Flexibility and ability to work with ambiguity • Joint accountability and risk sharing • Greater mutual understanding of each other's domains
Delivery capabilities	Software delivery life cycle (SDLC)	<ul style="list-style-type: none"> • Increased throughput, speed, resiliency and repeatability • Accelerated adoption of Agile development models • Selective migration to a product model from the project model
	Architecture and engineering processes	<ul style="list-style-type: none"> • Governance to ensure consistency of efforts across the stack and ongoing reduction in technical debt
Operations capabilities	IT operations	<ul style="list-style-type: none"> • Enable a continuous delivery pipeline by leveraging cloud-based provisioning and development environments • Adopt DevOps practices to enable frequent, speedy deployment through automation and standardization
	Security and risk management	<ul style="list-style-type: none"> • Capabilities that protect from cyber-security threats and comply with regulatory needs
Organization	Roles and structure	<ul style="list-style-type: none"> • Organizational structure designed to meet digital business needs and appropriately integrate or separates roles and responsibilities • Shared services where appropriate to capture cost benefits
	Decision rights	<ul style="list-style-type: none"> • Clarity on decision rights for key decisions • Seat at the table for IT at all levels
	Skills and talent sourcing	<ul style="list-style-type: none"> • Refine talent model (add business-enabled IT talent and IT-enabled business talent; hire/train for new skills) • Identify and partner with new breed of vendors with niche digital skill sets (e.g., analytics, mobile, other apps)
Technology	Applications	<ul style="list-style-type: none"> • Front-end, mid-tier and back-end systems that enable delivery of digital (online, mobile, social), omnichannel capabilities and straight-through paperless processing via automation • Flexible and modular architecture
	Data	<ul style="list-style-type: none"> • Single view of the customer • Ability to deliver everyday analytics and advanced analytics • Integrated data layer
	Infrastructure	<ul style="list-style-type: none"> • Fully virtualized infrastructure • Hybrid cloud capabilities (public, private, virtual private) • Automated testing and standardization of environments • Software-defined data center

Rebooting IT: Why financial institutions need a new technology model

Traits of a digital leader

Some financial service companies are beginning to separate from the pack (see figure below). From these companies, we begin to see best practices emerging. Bain & Company recently conducted primary research with 40 financial services companies and found that emerging leaders are taking thoughtful actions across many IT operating model dimensions.



Source: Bain digital technology operating model C-suite survey, January 2014 (n=201; for financial services, n=40)

software development life cycle (SDLC) strategy. The future state could involve several models: some that suit large projects with clear scope, some for more flexible development projects with evolving scope, and some that are very light on governance and support rapid testing of new ideas that may or may not be pursued. A one-size-fits-all approach protected with rigid governance is a dangerous crutch for financial companies. It will keep development slow, expensive and ineffective.

For one leading financial institution in North America, the right solution was to institutionalize Agile development across the business, reducing time-to-market for new products and services by 70%. The company now has several thousand people trained in Agile practices

and runs projects with mixed teams of eight to 10 people from IT and business.

In addition to flexible and rapid development, companies are increasingly adopting scalable, cloud-based development environments to reduce cycle times for provisioning, development and testing. For example, one leading US bank has adopted a platform-as-a-service model for more than 2,000 .NET applications, clipping two months off the average provisioning time and doubling utilization of the development environment. Other financial institutions are selectively adopting a product model for software development that mimics the approach many consumer Internet companies employ. They assign responsibility for some aspect of a Web service, for

example, to an ongoing team. The team receives direction not in specific functionality but instead in business outcome (for example, increased cross-sell); the team is then free to pursue the outcome through trial and experimentation.

Operations capabilities. Rapid, iterative software development is not enough to reduce cycle time and improve agility. Companies also need to seamlessly integrate development and operations via automation, standardization and transparent resource allocation. Many infrastructure leaders tell us that they want to get out of their developers' way by creating self-provisioned, rapidly scalable and automated development and test capabilities for a manageable number of environments. Just like developers, they are tired of technology proliferation, version-control issues and long wait times for hardware and software setup. A continuous delivery pipeline built on a cloud environment and managed using DevOps practices can dramatically shorten delivery cycle times, reduce manual errors and decrease costs. Capabilities like automated testing and on-demand service catalogs now allow developers to spin up environments and rapidly develop and test new functionality.

This model must also increase focus on security and risk management, a facet of digital operations that has risen to the top levels of executive and board scrutiny. No senior executive aware of the past year's data breaches—and the consequences in the management suite—can afford to ignore data security. (See the Bain Brief “Why cybersecurity is a strategic issue.”)

Organization. At the organizational level, the new operating model redefines roles and responsibilities around digital models rather than the often outmoded pattern of aligning with technology domains. This helps clarify decision rights and accountability—considerations that are more important than ever, as an increasing number of products and services cross functional lines, creating the risk of poor transparency and weak accountability.

Digital initiatives require IT experts who deeply understand customers' needs as well as business executives who grasp what technology can do. In other words, companies need more business-enabled talent within IT and

more IT-enabled talent within the business. Current IT staff will need to learn new skills, and new expertise will need to be brought in from the outside. Companies must evolve their labor-sourcing models to identify partners who can contribute to design, in contrast with today's IT sourcing model, which typically defines a spec for a contractor or outsourcing firm to deliver against.

Many companies debate whether they need a two-track operating model to deliver on digital priorities. Our research indicates that about two-thirds of emerging leaders have adopted some type of two-track system (separate organization, separate systems or both) and closely manage the interdependencies. We also see companies that resist this idea, but it need not become a source of conflict. If IT isn't prepared to deliver on basic digital priorities, there may be a strong case for a second track. However, the model should be set up with clear guidelines on responsibilities, funding and duration to avoid driving up costs and creating a schism of winners and losers within IT.

Financial companies are also harnessing mergers and acquisitions (M&As) and partnerships to access the talent they need. A global bank has investments in many start-ups across 40 countries and in a venture capital fund active in 10 countries. The message is clear: Landing the right skills and mindset for digital innovation may require access to nontraditional sources.

Technology. Most banks and insurance companies run their businesses on complex IT architectures that have been modified and patched to help their systems keep up with business demands. Starting fresh is rarely an option, but most financial institutions will need to update and adapt their IT architectures over the next few years to make them more modular and flexible—an essential action for providing the rapid responses necessary to succeed in the digital era. Our research suggests that although 62% of companies lack the modular and flexible architectures needed to succeed in digital, only 8% have committed to a complete core systems replacement.

We believe that most financial institutions will need to replace or transform their IT architecture over the next 10 years or so. This challenge is daunting, but there are

Rebooting IT: Why financial institutions need a new technology model

thoughtful approaches to reduce the risks. Best practices we see include:

- Adopting a **pace-layered approach** in which IT builds a scalable and flexible middle tier, separating its systems of record from its systems of engagement with a focus on creating a single view of the customer and enabling straight-through processing;
- **Retiring or consolidating legacy systems** whenever possible;
- **Moving non-mainframe workloads** and new development to cloud-based models.

Across the financial industry, we're seeing a range of innovative approaches to reduce cost and complexity and increase speed and flexibility. A leading global insurance company on a drive to double its business is implementing a multi-tenant architecture while reducing its legacy footprint from 11 distinct stacks to a single, well-architected and modular stack. A leading European bank is transforming its IT architecture from fixed, coded processes to more flexible ones, from application-oriented to service-oriented methods and from high-variety to industrialized, low-cost architectures. In India, a leading bank built a single customer view by leveraging a CRM solution. A British bank has built a platform that enables a single view of the customer, captures client documentation digitally at the point of interaction and secures biometric data when customers open accounts. Regardless of the approach, these architecture transformations are multiyear projects and must be very carefully planned and managed.

Another important trend is the shift in infrastructure toward hybrid cloud architectures and software-defined data centers (SDDCs) to reduce cycle times, increase resiliency and reduce costs. Hybrid designs might include an on-premise private cloud for performance and risk-sensitive workloads, vendor-hosted virtual private clouds for "bursty" workloads and public clouds for generic, low-risk workloads. Financial institutions are also eyeing the cloud as a way of delivering services, and IT vendors are beginning to commercialize enterprise-grade cloud capabilities that deliver security, control and perfor-

mance agreements at levels demanded by the financial industry. One global financial institution with insurance, wealth management and banking businesses expects to reduce infrastructure and software delivery costs by 15% to 20% by adopting hybrid cloud technology. At least one North American bank has also said it wants to transform the way it manages resources from the data center to the desktop using hybrid cloud and SDDC technologies.

Once executives have identified the elements that need to change, they can begin the transformation program, which starts with an assessment of their current capabilities.

Once executives have identified the elements that need to change, they can begin the transformation program, which starts with an assessment of their current capabilities.

Rebooting the organization

Transformations at this scale don't come easily. Financial institutions should not think of this as an IT project—rather, the whole organization has to work together to develop an integrated technology roadmap for a new era of digital customer engagement. Only with the focused attention of senior executives from IT and the rest of the business can companies set the right strategic goals and define the appropriate organizational models to reach them.

Executives can think of rebooting IT as a journey that comprises four phases. The first step is acknowledging the starting point and aligning the C-suite with a sense of urgency about the opportunity at hand.

Acknowledgment involves:

- Changing the mindset within the C-suite so that technology is a top priority;

Rebooting IT: Why financial institutions need a new technology model

- Understanding how technology is impacting the business model;
- Articulating the value at stake and the urgency for action.

Leaders set out to gain a common understanding of where the organization’s technology capabilities stand compared with others in the same market. They can then begin to discuss the scale, scope and associated costs and benefits of implementing a digital technology transformation agenda. Our research finds that this level of attention by C-suite executives is critical (see Figure 2).

Once senior leaders have a clear understanding of their current position, they need to align their vision of the future. What do they want to accomplish, and what capabilities will they need to get there? These questions open a broad and detailed discussion about the gaps between

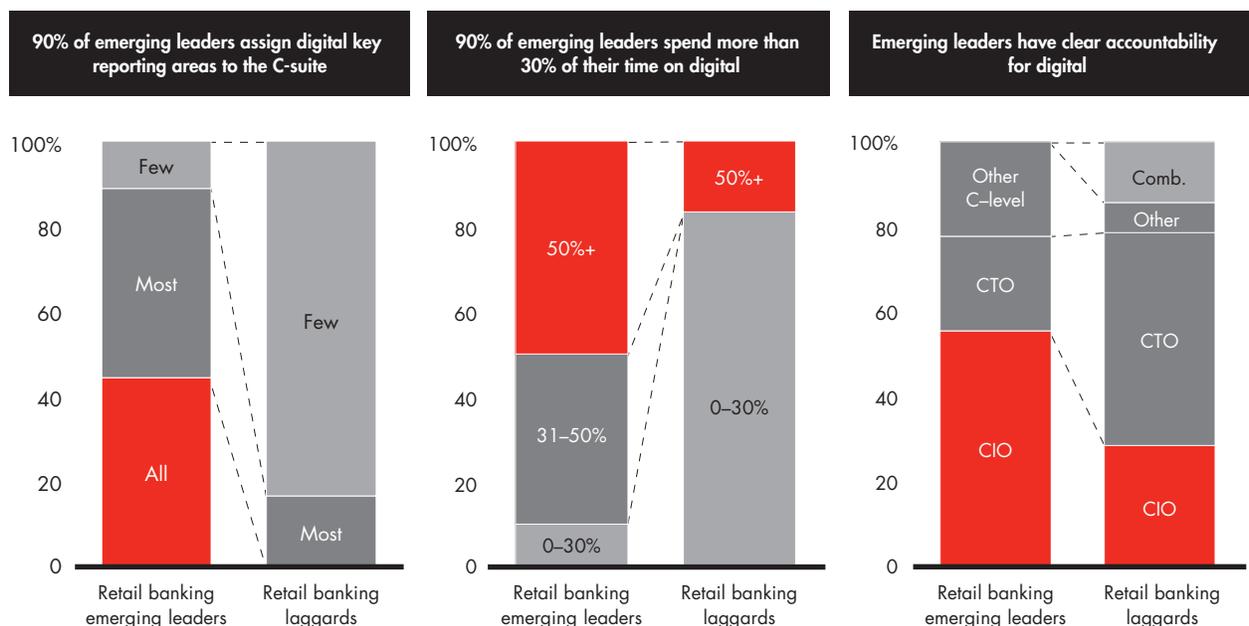
current and future state as well as the funding necessary to bridge them.

Alignment involves:

- Defining the critical business capabilities needed to meet customer needs and then assessing the business’s ability to deliver against these critical business capabilities;
- Conducting a diagnostic on the company’s technology and operating model to understand the extent of change necessary.

As the organization aligns strategic and tactical directions, the third step is to clearly define and activate the transformation initiatives. This type of transformation can be analogous to changing the tires on a car while it’s moving down the freeway. In this case, it’s more like changing the entire engine too. The way to begin activation is with bite-sized changes to the operating model.

Figure 2: At banks that are leaders in the digital realm, senior leaders have a strong focus on digital initiatives



Source: Bain Disruptive IT survey (Jan 2014, n = 201, retail n = 90)

Rebooting IT: Why financial institutions need a new technology model

Activation involves:



- Making clear trade-offs around where technology capabilities must be best-in-class vs. good enough;
- Defining the future-state technology operating model;
- Creating the roadmap of necessary changes, which can be modest or significant.

The final step is a perennial one: deploy the new capabilities and achieve the goals that were set out early in the process. As with any transformation, it's important to capture quick wins to build support and momentum, a record that also helps ensure senior executives remain supportive of the initiative and continue to own it. Successful transformations lead into programs of continuous improvement, refining processes with feedback from customers, the front line and managers.

Achievement involves:

- Sustaining the focused attention of the C-suite and assigning clear ownership of the change program;
- Establishing and tracking leading indicators of success;
- Prioritizing and redirecting as appropriate through active feedback loops.

One of the biggest challenges in this step is to maintain a design that eliminates complexity. In most companies, rewards accrue primarily to those who create new things. But a new operating model should also recognize those who find ways to decommission legacy products and services that consume resources while adding little value to future business.

Bain's work with financial organizations—helping them make decisions about their goals and the ways to achieve them—suggests that it takes from six months to a year to build the organizational momentum behind a transformation of this magnitude, depending on the organization and its appetite for change. It not uncommon to have false starts, and some organizations have two or more before momentum builds and change begins to turn the organization. All things considered, executives should expect that it will take three to five years to complete the transformation.

The challenge of the first months lies in building support, and the goal of the remaining period is to maintain that focus and make change sustainable. Senior leadership must maintain its commitment to the transformation, but just as important is endorsement at all levels of the organization. A sponsorship spine—a chain of committed and accountable sponsors that runs across the organization from the front line to the management suite—can help ensure sustained attention to the effort.

Finally, it's important to remember that change is ultimately about human emotion—not about tools or technology. The people who work in an organization must believe they are getting full information, understand how the change affects them and feel they are being treated fairly—even when changes are difficult. They must feel that after all is said and done, the goal—a thriving financial institution that meets and exceeds the requirements of its customers—is worth the journey. 

Shared Ambition, True Results

Bain & Company is the management consulting firm that the world's business leaders come to when they want results.

Bain advises clients on strategy, operations, technology, organization, private equity and mergers and acquisitions. We develop practical, customized insights that clients act on and transfer skills that make change stick. Founded in 1973, Bain has 50 offices in 32 countries, and our deep expertise and client roster cross every industry and economic sector. Our clients have outperformed the stock market 4 to 1.

What sets us apart

We believe a consulting firm should be more than an adviser. So we put ourselves in our clients' shoes, selling outcomes, not projects. We align our incentives with our clients' by linking our fees to their results and collaborate to unlock the full potential of their business. Our Results Delivery® process builds our clients' capabilities, and our True North values mean we do the right thing for our clients, people and communities—always.



Contacts in Bain's Global Information Technology practice:

Americas: **Steve Berez** in Boston (*steve.berez@bain.com*)
Vishy Padmanabhan in Dallas (*vishy.padmanabhan@bain.com*)
Rudy Puryear in Chicago (*rudy.puryear@bain.com*)

Asia-Pacific: **Arpan Sheth** in Mumbai (*arpan.sheth@bain.com*)

Europe, Middle East and Africa: **Stephen Phillips** in London (*stephen.phillips@bain.com*)
Marc van der Vleugel in Brussels (*marc.vandervleugel@bain.com*)
Sachin Shah in London (*sachin.shah@bain.com*)

Contacts in Bain's Global Financial Services practice:

Americas: **Mike Baxter** in New York (*mike.baxter@bain.com*)

Asia-Pacific: **Edmund Lin** in Singapore (*edmund.lin@bain.com*)
Peter Stumbles in Sydney (*peter.stumbles@bain.com*)

Europe, Middle East and Africa: **Dirk Vater** in Frankfurt (*dirk.vater@bain.com*)

For more information, visit www.bain.com