High performance. Delivered.
Investment banking is an information business. The adoption of new information technology (IT) enabled the industry’s growth before the financial crisis. Since then, IT has been instrumental in helping the industry respond to new regulatory controls and reporting requirements. However, the continuous accumulation of IT systems over the last generation has created technology estates that are vast in scale and complexity. In current market conditions, where returns increasingly depend on lower cost-income ratios, the cost burden of maintaining these estates is proving unsustainable. The underlying “legacy architecture”–including specific technology choices, platforms and standards–is also inhibiting innovation and responsiveness to new digital competition.

In recent years, banks have struggled to simplify their IT estates and lower their cost bases, and their efforts have been undermined by the need to prioritize tactical responses to regulatory requirements. Having already exhausted many short-term cost reductions, bank executives need to start considering more radical approaches. By combining new advances in cloud technology with emerging best practices in legacy decommissioning, banks could shrink their costs and create space for digital innovation.

**A generation of technology accumulation**

The rise of investment banking has been driven, to a great extent, by the industry’s ability to introduce new asset classes and trading strategies, price trades more accurately, execute more efficiently, and measure risk with greater speed and sophistication. Capabilities in these areas have developed partly through advances in financial mathematics and partly through technological innovation. Given the competitive advantages demonstrated by IT, investment in technology has always been strong. Banks have been quick to innovate and adopt new programming languages, databases, messaging platforms, operating systems and hardware technologies. IT has also played a central role in less fortunate times. Since the global financial crisis of 2007–2008, compliance with new regulatory reforms has largely depended on the introduction of new trade and risk reporting systems.

**In Short**

Investment banking is an information business. The adoption of new information technology (IT) enabled the industry’s growth before the financial crisis. Since then, IT has been instrumental in helping the industry respond to new regulatory controls and reporting requirements. However, the continuous accumulation of IT systems over the last generation has created technology estates that are vast in scale and complexity. In current market conditions, where returns increasingly depend on lower cost-income ratios, the cost burden of maintaining these estates is proving unsustainable. The underlying “legacy architecture”–including specific technology choices, platforms and standards–is also inhibiting innovation and responsiveness to new digital competition.

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**How Equipped Do Banks Feel to Address Digital Innovation Challenges?**

48%

Somewhat equipped for technology challenges

**Take Action**

Banks will need to industrialize their decommissioning activities and may find it valuable to establish a different operating model for legacy applications.
Jettisoning legacy systems requires a cohesive and well-coordinated program of activities, and an institutional culture that values strategic investment and embraces lean principles.

For many organizations, the accumulation of IT systems has been uncontrolled. Under the Basel II capital regime, investment banks could operate as collections of linked but separate businesses. Individual business lines were run as semi-independent entities, often separated according to geography and asset class. System architectures were built to support individual businesses, with little consideration given to how they would operate across entities. This situation has limited the ability of chief information officers (CIOs) and chief technology officers (CTOs) to implement common architectural standards and control global IT spending. As a result, banks have been in a poor position to respond to changes in regulatory regimes. The urgency and importance of those new requirements had forced organizations to build new reporting systems on top of legacy architecture, compounding problems of IT complexity and cost.

The technology ratchet

A generation of technology accumulation has resulted in costly and complex system architectures that are unsustainable for most investment banks. Unfortunately, legacy IT systems are also proving to be a lot harder to switch off than switch on. Figure 1 shows that as spending on new IT systems keeps rising, support costs will too. Trying to decommission legacy systems while responding to new regulatory requirements and a new digital era has proven to be one challenge too many. IT accumulation has ratcheted up cost and complexity to weigh heavily on cost-income ratios.

This situation is also inhibiting the ability of banks to respond quickly to value chain disruption and new digital opportunities. With the bulk of IT spending being consumed by high support costs and regulatory implementation, the level of discretionary funding and key staff available for innovation and new application development is suboptimal. Legacy architecture also increases the cost and time to market for new technology applications, with testing having to stretch over a complex network of application interdependencies. These factors inflate the risk posed by digital disruption and new market entrants. Results from a recent Accenture study suggest that banks feel "somewhat equipped" at best to address the issues associated with next-generation digital technologies (see Figure 2).
Virtualizing the problem

Recent IT simplification initiatives have attempted to tackle legacy application and data architectures head on, creating target states and roadmaps to evolve or even reinvent the enterprise. While this approach can be valuable in terms of establishing centralized standards and control over IT spending, many organizations struggle to gain traction. In particular, banks’ institutional dependencies on legacy systems often make it impossible for them to be changed while in use. Simultaneously, the cost burdens they impose make it difficult to fund full replacements. Essentially, strategic investment is often deprioritized in favor of operational necessity.

Accenture advocates a new approach to the problem that has the potential to lower the cost base of legacy systems, create breathing space for greenfield replacement systems to be developed and ultimately enable legacy systems to be decommissioned. New cloud technologies and a more mature cloud computing sector are making it possible to virtualize legacy applications on an industrial scale using low-cost agile infrastructure. Systems and data can be migrated into portable “containers” using automated tools and industrialized migration factories. These cloud containers can be securely and fluidly deployed across a hybrid cloud of internal and external best-in-class infrastructure providers. This solution not only provides a low-cost basis for phasing out legacy systems, it also removes physical IT assets from the balance sheet and radically simplifies IT infrastructure operations, potentially in partnership with lower-cost service providers.

As an example of this trend, Deutsche Bank recently signed a multibillion-dollar agreement with HP to take over their core IT infrastructure operations and migrate their legacy applications to the cloud. According to Henry Ritchotte, Deutsche Bank’s chief operating officer, “Having a more modern and agile technology platform will further improve the bank’s ability to launch new products and services and lay the foundation for the next phase of its digital strategy.”

Figure 3 confirms that spending on cloud technologies in capital markets is expected to rise significantly over the next four years.

By combining new advances in cloud technology with emerging best practices in legacy decommissioning, banks could shrink their costs and create space for digital innovation.
IT leadership that communicates a clear technology vision, interacts well with the business and establishes good global governance is key.

**Finishing the job**

Jettisoning legacy systems requires a cohesive and well-coordinated program of activities, and an institutional culture that values strategic investment and embraces lean principles. IT leadership that communicates a clear technology vision, interacts well with the business and establishes good global governance is key. It is also important to build a broad coalition of executive support: business leaders who recognize the impact of legacy technology on their digital capabilities and the bottom line, chief operating officers who can reduce operational dependencies on legacy solutions, and chief financial officers who can structure the IT cost base to create financial incentives for transformation.

Banks will need to industrialize their decommissioning activities. A “factory” model can help organizations centralize services in a cost-effective and controlled way. Factory functions typically include a technical analysis of applications (application discovery), cloud migration, deactivation of production services and retention of business records. A factory can also serve as a central point for cataloguing systems and tracking decommissioning progress.

Banks may also find it valuable to establish a different operating model for legacy applications. A “run-to-kill” approach involves managing legacy applications so that they are resilient and fit for business, while emphasizing cost-effectiveness and constraining system changes. Run-to-kill operations can also be outsourced to lower-cost application maintenance and support vendors, freeing up skilled and experienced staff for work on greenfield replacements.

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Contact Us

To discuss any of the ideas presented in this paper, please contact:

James Burrows
London
james.e.burrows@accenture.com

Richard Lewis
London
richard.lewis@accenture.com

Chris Cox
London
chris.r.cox@accenture.com

Read all the Top Ten Challenges
www.accenture.com/10challenges

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