ARE YOU REALLY READY FOR IMPLEMENTING DIGITALIZATION?

LESSONS FROM THE "MACHINERY ROOM"

ALVAREZ & MARSAL

The digitalization dilemma for banks

With consumer ease-of-access to technology rapidly growing, business models across all industries are being redefined to address consumer expectations in terms of their experience and fulfilment.

Banks across the globe are increasingly adopting digital strategies to transform channels, products, processes and back-end systems for a higher level of customer experience, to remain relevant in the market, to acquire new customer segments and to lower their cost base.

The race for digitalization is further accelerated by the need to achieve year-on-year efficiency in operating costs, which digital transformation helps achieve through automation. Hence, digital transformation needs to go together with IT transformation and that requires investment in new technologies.

A key challenge for many banks however, is that there is a fundamental dilemma involved in making capital outlays on technology to expedite lower operating expenditures. At Alvarez & Marsal (A&M) we have seen this problem particularly within medium sized banks globally as well as banks linked through sector associations or shared service providers with a federated ownership structure.

Research has shown that while, on average, digitalization can help achieve around 40 percent EBITDA improvement, this is largely driven by cost reduction, despite capital expenditure incurred on IT, rather than revenue increase. This is particularly difficult for Boards of banks where the capital required for transformation is so significant due to previous underinvestment and/or legacy IT infrastructure issues. (see Chart 1)

Depending on the size and business model complexity of the bank and the age of the IT infrastructure, the investment required to achieve what we refer to as a "foundational digital capability" is in the range of around $USD 30-50 million for mid-sized and developing markets' banks versus $USD 100-500 million for larger universal banks and those in developed markets, over an average four- to five-year period. Some benefits begin to materialize in the first 18 months, but overall digitalization should be viewed as a medium-to-long term investment commitment.

Chart 1 – The differing impact of digitalization on a bank's costs and revenues

Current business		Impact of digitalization	Rationale
Interest income		▲	Revenues from new segments increase
Fee income		▲	Revenues from cross-selling increase due to improved analytics and customer intelligence
Personnel costs	Branch dedicated personnel	▽	With increased capacity through technology and automation, staff are allocated to front-end revenue-generating activities
	Head office dedicated personnel	▽	
IT systems (Head Office)	Depreciation	▲	Increased investment in new and improved systems
	Amortization	▲	
	Annual Maintenance	▲	
Physical infrastructure (Branches)	Depreciation and annual maintenance costs	▽	Branch functions will be reduced
Utilities (Branches)	Cost of utilities such as electricity, telephone, internet etc.	▲ ▽	Data center utility costs rise; Branch utility costs may reduce
Personnel costs		▽	Staff are reallocated as systems take over manual operations
IT systems (Head Office)		—	Largely not affected by digitalization
Physical infrastructure (Branches)		▽	Eventually, savings will be made through less real estate
Utilities (Branches)		—	

Revenues | Direct Costs | Indirect Costs

▲ Increase in costs/revenues ▽ Reduction in costs

Source: A&M analysis and experience

While the age and complexity of legacy IT infrastructures predominantly drives the scale of investment and complexity of the digital transformation, our experience has shown that these are just the obvious challenges. Many hidden issues create larger challenges and need to be addressed from the outset, when setting a timeline and investment plan for the transformation roadmap.

From our experience in developing and implementing digital and IT transformation strategies, these typically include: an organizational structure that needs to be realigned for the digital business model; an acknowledgement of the limited understanding of technology amongst business heads and other senior management including, in most cases, the Board; a limited commitment from management and the Board beyond the initial steps of such a program; a resistance to changing the culture of the bank, particularly in the decision making process, to adopt the new digital business model created; and, probably the most underestimated, capacity constraints created through quality and quantity limitations in human capital.

A&M has found that Board and management typically raise similar questions when presented with digital transformation plans and budgets, which include:

- "Is it necessary to agree to the full investment budget or can it be done in pieces and phases?"
- "Will this investment enable us to become the best digital bank around?"
- "How quickly can we expect to see positive P&L results from the investment?"
- "Why do we need to hire resources if digital transformation is expected to give us automation and lower headcount?"
- "If we do hire with specific skill sets in mind, can we up-skill our existing resources?"
- "Instead of acquiring new systems, why don't we upgrade the existing system through further customization?"
- "Why don't we just focus on digitalizing the front-end to address customer and market needs and decide on the back-end later, as transaction volumes increase?"
- "Do we really need to go for digitalization, considering we will always have regulatory protection?"
- "How do we deal with on- and offline customers and processes in parallel and when can we start to force customers to make the shift to digital processes?"

In working with small, mid-sized and large banks across both developed and developing markets, A&M has helped management and shareholders of banks answer these questions and address the multiple challenges involved when embarking upon digital transformation journeys.

In our experience, it is through the eyes of teams involved behind the scenes – the project managers, the people involved in the IT specifications, analysts, etc. – that possess the knowledge that can make the difference between success and failure. It is those who are closely involved, in the day-to-day transformation of the operations that have the important insights. Invariably they are working behind the scenes and their views often not heard early enough in the change process. Here then are our most important lessons from the "machinery room" for successful digital transformations.

Re-entry of a machinery room capability – the renewed IT challenge

Lesson 1

Conducting a readiness assessment will save time and effort in the long run.

As the adage goes, "the only constant in life is change." For banks, however, it has been a question of how frequent change is necessary in specific areas, particularly IT infrastructure and software architecture. In addition to the large ticket size involved, it is the painful and time-consuming process of changing technology platforms along with business disruption and substantial time commitments from management that scares banks away from making decisions to change technology. Given high barriers for entry, such as regulatory considerations, this level of caution may be justified to some extent. It is always important for acquired technology to be scalable from a long-term perspective, as excessive delay and reluctance to make changes can prove more damaging and expensive.

As technology has progressed in recent years, ageing systems are now largely redundant as they create numerous issues and high maintenance costs for banks. However, many banks have historically under-invested and are still stuck in their old main frame architectures, with issues piling up. Moreover, new technologies allow for efficiency in the IT architecture, which legacy systems are not capable of allowing. In fact, remaining with very old and highly customized core banking systems makes it extremely difficult to simply adapt to a new architecture and, thus, to efficiently adopt new technologies.

Banks should therefore start by conducting a technology readiness assessment, to identify gaps that may hinder implementation of a digitalization strategy. See Chart 2 below.

Chart 2 – Overview of A&M's technology readiness assessment approach

Develop and assess enterprise architecture

Define enterprise architecture
Define functional architecture and map applications to supported functions

Document platform connectivity
Document inter-connectivity of identified platforms

Document hosting infrastructure
Document hardware used to host the identified application platforms

Assess development team and resources

Understand IT's development capability
Document the size, structure and capability of the IT development team

Define enterprise architecture
Compare against similarly sized local competitor bank

Assess project management performance

Understand IT project portfolio
Understand the size of the IT project portfolio including number of projects, current stage of each project and current status against plan

Typically, issues identified during this readiness assessment include:

- Dated and highly customized legacy technology, particularly core banking systems, with archaic, monolithic and integrated architectures which create high dependence on the core banking system. Quite often, the system is also highly customized, as part of the bank's way to address evolving needs without investing in changing/upgrading the system.
- Hardware issues with old servers with capacity constraints, assembled in an inefficient manner which results in slow access to data.
- Limited in-house development capabilities and lack of extra test resources and environments. As a result, there is heavy reliance on third-party vendors who, in turn, hold the bank ransom and charge high costs for both projects and ongoing operating support.
- For many banks, particularly in developing markets, banks lack robust Program Management Office functions and personnel to manage and deliver multiple IT projects on time and within budget. Often, we have found that an overall project discipline is missing with limited, if any, business relationship management functions in the IT department.
- We have found that while banks realize IT transformation goes together with digital transformation, there is a relatively low understanding that "change-the-bank" and "run-the-bank" activities need to be handled separately. Hence, many "change-the-bank" initiatives get de-prioritized due to "run-the-bank" firefighting issues. However, digital transformation is a radical change in the bank's business model that includes processes, product development, building technology solutions and decision-making. This requires a dedicated "digital-change-the-bank" organization within the bank, increasing dedicated resource levels beyond the normal "IT change-the-bank-team."
- Generally, a lot of banks' IT organizations have not yet evolved from the traditional mindset of being focused on just technology instead of business solutions.
- Various business units in a bank tend to run their own technology initiatives in isolation, for either data analytics or solution development or process digitalization. As these initiatives are operated without coordination or communication within the bank, the result often is duplication of effort and increased costs for the bank.
- Organization structures including roles and responsibilities are rarely changed for digitalization. Assessing the maturity and performance level relative to digitalization requirements can serve as a useful starting point for introducing changes.

Summarize findings and gaps and define investment plan

Lesson 2

Establish parallel teams to "run the bank" and "change the bank" activities.

The responsibility for digital transformation varies from bank to bank. Across larger European banks we have seen predominantly two models: either the Chief Operating Officer takes the lead, or the Chief Information Officer / Chief Technology Officer is the person tasked with the job.

Where banks hire a Chief Digital Officer, this position often reports to either the COO or the CIO/CTO, depending on who is responsible for digital transformation. This approach clearly demonstrates the problems that emerge where "digital-change-the-bank" and "business-as-usual/run-the-bank" functions are not separate. This typically results in a very slow digital transformation with higher costs incurred.

Lesson 3

The "change the bank" leader must have Executive Management status.

In our opinion, systematic and lasting Board and management commitment and attention are necessary for digital transformation; organization which is best achieved by way of a dedicated head nominated solely for the "change-the-bank" digital transformation program, reporting directly to the CEO and made part of the bank's Executive Management.

This should also mean bundling all the digitalization enabling functions with this one role during the transformation period, with a dedicated budget for development and operations.

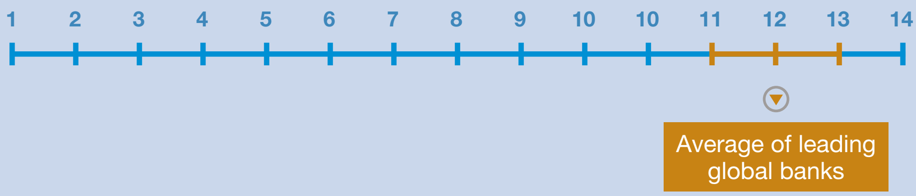
While small to medium sized institutions may struggle to put this dedicated role into action, the order of magnitude of the transformation requires a person with a reporting line direct to the CEO. Otherwise, banks are unlikely to achieve the level of maturity required to turn digital technologies into a sustainable new business model.

As Chart 3 illustrates, whilst the very best banks score highly in readiness to embrace digital change, the majority of banks that A&M has seen are only scoring in the five to eight points range – much to do to teach "giants how to dance."

Chart 3 – A&M Framework for assessing digital change readiness

Framework for assessment

Metrics	Bank assessment (0 None, 1 Initiated, 2 Full)
Senior management commitment	**0-2** Dedicated senior resource made responsible for digital transformation, reporting to the CEO and part of the Executive Management
Bundled digitalization-enabling functions	**0-2** All channels for digitalization (ATMs, cards, e-banking, mobile) should be in one unit, with common functional reporting
Dedicated budget for development and operations	**0-2** Approved dedicated budget should be in place to show Board and management commitment and understanding
Ability to provide unified customer experience across all functions	**0-2** Commitment and understanding to invest in technology, from a customer-centric perspective (e.g. Omni-channels)
Significant headcount allocation with relevant skills (Business, Ops and IT)	**0-2** The budget should include allocation for high-calibre headcount (quality and quantity) necessary for digital transformation and operation
Clear functional ownership and roles with cross functional alignment and governance	**0-2** Clear functional ownership to ensure roles and esponsibilities are clear and allow for ese of decision-making
Defined innovation strategy	**0-2** An overarching innovation strategy, with a digital strategy as part of it, needs to be in place for sustainable innovation



Source: A&M analysis and experience

Lesson 4

The market has moved from a VC-like rising of fintechs to a more strategic corporate venturing and M&A environment.

With disruption on the rise from new startups, established players have started to acquire fintechs (e.g. Worldpay was acquired by Vanitiv, the largest U.S. merchant acquirer, to gain greater exposure to e-commerce retailers). Small businesses and technology investment firms are seeking strategic partnerships to benefit from the increase in transaction volumes. In fact, fintech research and development is bigger than ever, with capital and incentives increasingly being made available.

Add to this the already 800+ registered cryptocurrencies along with the incremental proof-of-concept and application of blockchain technology, and it becomes clear that the financial services industry is more rapidly transforming than ever. Banks need to quickly follow suit to remain relevant. And while larger banks may find it attractive to operate their own incubators for both operational and investment purposes, small to medium-sized institutions will need to build a partnership network to deliver a matching digital proposition.

How to really get it done

It is never easy to implement large scale transformations in any bank, keeping in mind the general resistance to change one faces in almost any organization.

Digital transformation appears to be even more difficult, given long transformation lead times are easily subject to risks of external disruption. Also, the transformation team needs to change the internal view that digitalization is nothing more that upgrading technology which need not be rushed. Hence, successful implementation of digital transformation requires the management and Board of banks to ensure a few key measures and disciplines are addressed as part of the digital transformation journey. And while some would argue that these measures are self-evident, in A&M's experience there is a repeated failure to make these upfront investments in time.

The key steps in our view involve:

1. Set clear goals for digitalization and understand why the bank needs to digitalize. Typically, the goals would be a mix of internal operating efficiency, enhanced customer experience, targeting new customer segments and lower operating costs (e.g. number of processes and products to be digitized, cost savings to be realized, etc.); a fundamental objective, however, should be the need to remain relevant in response to rapidly changing consumer demand. The objectives should be communicated and reinforced regularly across the bank, at every level.

   As an example, where achieving efficiency in operational costs is a key objective, with focus on reducing the per-transaction cost, it is important to ascertain the extent to which cost reduction is expected to be achieved. While research has shown per-transactions costs can reduce by up to 99 percent of existing costs, the objective needs to take into account the level of digitalization and, through a realistic mix of manual teller-based transactions and digitalization, determine and target a significant reduction in per-transaction costs. (See Chart 4)

2. Appoint a dedicated and specialist/head for digital transformation, who is made a member of the Executive Management, reports directly to the CEO and is sufficiently empowered to drive digitalization. This will mean finding an experienced professional in business technology, who has been involved in successful digitalization and transformation projects. It is also important to give this person a team of qualified professionals with whom he can manage the transformation project; this team may be a mix of internal resources reassigned to the digitalization project, and recruiting new talent. Especially for digitalization, getting the right people onboard is crucial. High demand, speed of development and disruptive nature of digital technologies, however, make this even more challenging than standard project staffing. In most of our client institutions, regardless of size and geography, digitalization has made it necessary to partner with external service providers to mobilize the required number of qualified IT staff.

3. Establish a joint decision-making body with senior cross-functional representation, tasked with reviewing and approving initiatives necessary for digitalization. The participation of all the functions/SBUs of the bank will help ensure all digitalization initiatives are reviewed by the joint body, and prioritized to align with the digitalization goals set by the bank. Cross-functional representation will also help get buy-in across the functions of the bank.

4. Build a PMO function for digitalization and ensure a PMO discipline is followed for onboarding new projects and monitoring progress and performance.

5. Build cross-functional working teams, using experienced and competent resources from SBUs within the bank, to work on various initiatives identified for digitalization – for example, to prioritize and provide input on digitally redesigning products and processes. Nominate representatives from different functions as leaders of various initiatives. These cross-functional teams should help break silos created within the organization and, to speed up the cycle for developing new products, processes and solutions, should follow non-traditional methodologies such as “Agile” and “Scrum.” See to it that these people can depart from their day-jobs for long enough to make an impact in the digital transformation journey.

6. Consultants tend to complicate matters by creating a hype via the use of terminology not readily and clearly explained. “Agile,” “scrum” and “hackathon” are just some such examples. Banks need to adopt simple and practical approaches which can be easily understood and adopted. Hence, a fundamental understanding of new methodologies is required, which banks may then adapt to their needs instead of following a precise way prescribed by external sources. “Steal tools shamelessly and avoid conceptual overload.”

Chart 4 – Illustrative examples of transactions savings for different bank types

Transaction cost overview

Case example	Cost per transaction	
Large, fully automated bank	**USD 0.011**	
	o/w FO[1]:	USD 0.001
	o/w MO/BO[2]:	USD 0.01
Medium-sized, fully automated bank	**USD 0.03 - 0.23**	
	o/w FO[1]:	USD 0.02 – 0.03
	o/w MO/BO[2]:	USD 0.01 – 0.20[3]
Medium-sized "paper-scan" bank	**USD 0.27 - 0.90**	
	o/w FO[1]:	USD 0.07 – 0.10
	o/w MO/BO[2]:	USD 0.20 – 0.80[3]
Teller-handled transaction, **mid sized** bank, **manual** middle-office/back-office	**USD 5.20 - 7.00**	
	o/w FO[1]:	USD 2.20 – 3.00
	o/w MO/BO[2]:	USD 3.00 – 4.00[3]
Teller-handled transaction, **mid sized** bank, **regional** middle-office/back-office	**USD 4.80 - 6.25**	
	o/w FO[1]:	USD 4.00 – 4.25
	o/w MO/BO[2]:	USD 0.80 – 2.00[3]
Teller-handled transaction, **mid sized** bank, **centralized** middle-office/back-office	**USD 5.70 - 7.30**	
	o/w FO[1]:	USD 5.50 – 6.50
	o/w MO/BO[2]:	USD 0.20 – 0.80[3]

Potential savings in cost per transaction

Example	Base rate	Scenario 1	Scenario 2
Manual – teller-based transactions Mid-sized bank, manual MO/BO	**100%** USD 5.20 – 7.00	**75%** USD 3.90 – 5.25	**20%** USD 1.04 – 1.40
Digitalised – STP Mid-sized bank, fully automated	**100%** USD 0.23	**25%** USD 0.058	**80%** USD 0.184
Total	USD 5.20 – 7.00 / USD 0.23	USD 3.96 – 5.31	USD 1.22 – 1.58
% savings	Up to 97%	~24%	~77%

Emerging makets

(1) Front Office, (2) Middle & Back Office, (3) Degree of centralisation

Note:

- Labor cost in developed countries is much higher than labor cost in developing countries, hence the significant reduction in cost in moving from manual to digital transactions
- A&M analysis is in line with Bill and Melinda Gates Foundation Special Report on Financial Services for the Poor, September 2013

Source: A&M analysis and experience

7. Develop an IT roadmap that is aligned with the digital transformation roadmap, after assessing the current state and determining gaps for the target operating model. The Board and management should understand and accept the IT roadmap and remain committed to supporting it. Based on priorities and path dependencies, an investment plan with budget should be approved by the management and Board of the bank. If required, make a couple of bold changes to the IT architecture early on, invest in backbone infrastructure and open architecture frames and move away from patching legacy systems.
8. As mentioned earlier, acquiring new talent is both challenging and important. It is therefore important for banks to make themselves attractive for the talent required. This is particularly challenging for the banking sector as new tech-savvy professionals tend to find the industry archaic and boring. Banks committed to digital transformation should consider changing their culture, working style and office environment to attract such talent.
9. It is not just attracting the right quality of talent that is important, but exciting and motivating existing talent is equally, if not more important. Constant communication across the bank is therefore necessary, to keep everyone informed on the digital journey the bank is embarking upon. Gradually, seeking participation from an increased number of people in the bank (internal idea competitions, internal business plan challenges, Agile project team participation, etc.) will enhance the commitment of bank employees, with a stronger sense of ownership in the new digital operating model of the bank.

These are just some key elements to bear in mind for successful digital transformation. There are, however, several other considerations and challenges that may lead to additional initiatives and approaches for a bank to consider when embarking upon a digital transformation journey.

In summary, digitalization compounds the typical lack of IT and technology skills in banks compared to technology providers or manufacturing companies. Strengthening "machinery room capabilities," both technical and project management related - and managing both internal and external resource pools to deliver a large and complex IT project portfolio driving digitalization - becomes a core capability for banks.

Re-entry of a machinery room capability – the renewed IT challenge

From our perspective, banks should still be able to win in a digital world.

Focusing digitalization investments on the issues of identification and authentication will give banks a seat at the table, even if the financial services value chains of the future will include more technology players and distributed activities rather than monolithic, integrated banks. However, once data analytics and technology have been on everyone’s mind for some time, it will become evident that owning customer relationships and not data remains the fuel in any economy. Banks will achieve digital transformation for as long as the objectives for digitalization are clear (cost reduction and happier customers) and the unwavering management commitment is in place.

The transformation journey, however, will prove to be a quicker and easier one if a bank learns from cross-industry experiences and challenges. ING DiBa buying a minority stake in Scalable Capital, the digital investment platform, is just one example of applying the pharma-versus-biotech strategies we have witnessed in the past.

Other banks can learn from this by putting their digitalization efforts (probably now in year three) to the following test by asking: “What cost reductions have we achieved by digitalizing processes and products?” and “Which service and functionalities show pick-up rates and satisfaction scores by customers which merit the hopes of eventually increasing market share and growing a service revenue model?” Finally, looking at the new challengers, banks should be adopting, more than ever, the view that "if you cannot outright beat them, join them, surround them, swallow them."

Why A&M?

A&M has global experience in helping banks transform. Unlike other advisors, our focus is on working with the operating teams and equipping them to make change a reality. Our approach to digitalization is proven and we can deliver change in months, not years. If you would like to hear more about our work, get in contact with the individuals listed below:

Dr Frank Heideloff
Managing Director
A&M Germany, Frankfurt Office

+49 171 6751572
fheideloff@alvarezandmarsal.com

Dr. Heideloff is a Managing Director with A&M in Europe, based in Frankfurt, with over 20 years of experience both as a line manager in financial institutions and as a consultant in performance improvement and technology/ digitalization enabled FS business models.

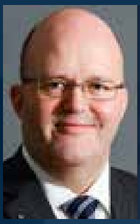
He has helped create a digital retail banking division (including products and processes) from scratch in the Middle East, defined the forward strategy (including products and IT) for a leading online bank (Western Europe) and defined retail deposit gathering strategies in a distressed market environment. He recently helped frame a leading European bank's thinking on how to approach an acquisition in the FinTech space and co-led the development of a digital and innovation strategy for several large commercial banks in Asia.

Tariq Hameed
Senior Director
A&M Middle East, Dubai Office

+971 55 842 6333
thameed@alvarezandmarsal.com

Mr. Hameed is a Senior Director with A&M in the Middle East, based in Dubai, with over 20 years of experience in the financial services sector across Asia, the U.K. and the Middle East at global financial institutions.

He recently co-led a project to develop a comprehensive digital banking and innovation strategy for a leading commercial bank in Southeast Asia, led the diagnostic phase for an IT transformation project for another large commercial bank and led a transaction banking transformation project for a large Sharia-compliant commercial bank in the Middle East.



DR FRANK HEIDELOFF
MANAGING DIRECTOR
A&M GERMANY, FRANKFURT OFFICE
+49 171 6751572
fheideloff@alvarezandmarsal.com

TARIQ HAMEED
SENIOR DIRECTOR
A&M MIDDLE EAST, DUBAI OFFICE
+971 55 842 6333
thameed@alvarezandmarsal.com

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With over 3000 people across four continents, we deliver tangible results for corporates, boards, private equity firms, law firms and government agencies facing complex challenges. Our senior leaders, and their teams, help organizations transform operations, catapult growth and accelerate results through decisive action. Comprised of experienced operators, world-class consultants, former regulators and industry authorities, A&M leverages its restructuring heritage to turn change into a strategic business asset, manage risk and unlock value at every stage of growth.

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