THE INTELLIGENT ENTERPRISE IN THE EXPERIENCE ECONOMY FOR THE BANKING INDUSTRY

Helping to create superior customer experiences through tailor-made solutions delivered at scale and as a service

THE BEST RUN SAP

WELCOME

Dear Customers and Partners,

The rise of smart digital platforms has transformed consumer expectations. Whether it's planning a vacation, shopping, booking a flight, or even comparing mortgage rates, consumers now expect an easy, instant, and seamless experience.

These digital-first experiences point the way for banks to reimagine their place in their customers' lives – and to remain relevant and competitive in the coming years. The change will be dramatic, affecting the way banks interact with customers and manage traditional banking products and processes. And while it will enable new products and services, it will require new technology, talent, and a new mind-set to succeed.

Gone are the days when banks can simply sit back and wait for their customers to walk into a branch to do business. Driven by the dominance of mobile, now banks must act more like technology and social media companies. They must be responsive in real time, always on, and adaptable. In short, our industry must embrace dramatic business transformation driven by the adaptation of technical, cultural, and organizational change.

To survive as the tech giants and new entrants make their way into people's financial lives requires a keen awareness of external forces and a sharp focus on internal strategic priorities.

Externally, the world is facing social, economic, and environmental challenges that are reshaping the economy. Financial inclusion has become a worldwide challenge, and trust in institutions is at a record low. Simultaneously, customer expectations are rising, digital transformation presents organizational challenges, competition is coming from unexpected quarters, and the globalization of markets and talent requires new levels of flexibility.

Still, banks sit in a unique position, with access to their customers' most private financial information. The banks that can effectively safeguard, analyze, and leverage this operational data (O-data) and experience data (X-data) to better serve their customers will lead the way. But to succeed, they will have to consolidate fragmented and siloed systems and create a single view of each customer accessible throughout the organization. They must embrace emerging intelligent technologies and be willing to consolidate or retire legacy systems. And they must take a more proactive stance to understand their clients' experiences and be where their clients need them when their they need them.

We have identified four strategic priorities critical to moving forward:

- Seamless connectivity
- Data-driven intelligence
- Operational effectiveness
- Financial insight and risk control

To execute on these priorities, banks need a real-world understanding of their customers and the environment to make decisions, solve problems, and carefully manage the customer experience. As a result, data management will become a competitive differentiator.

By 2025, a significant portion of banking revenue will come from nonbanking services. Banks will be a platform for digital services that reflect a wide range of banking and related nonbanking services. Banks will move from being places people safely store their assets to financial partners able to make personalized recommendations based on their customers' financial history, experiences, and preferences, as well as becoming clearinghouses for an array of partner services.

The most successful banks will learn how to weave together formerly siloed processes, intelligent technologies, and real-world data from customers and partners. To retain good talent, successful banks will also offer employee experiences that keep their employees engaged and inspired.

Banking provides vital services to society; our impact is poised to grow. But to fulfill this potential, banks need to become intelligent enterprises to respond to increased customer expectations, leverage data, and take a hard look at their own processes. Banking must have the courage to remake itself – or risk being marginalized.

This paper takes a deep dive into the trends shaping our industry and the path to innovation.

The world is changing at unprecedented speed, and our industry is positioned to be a driver of progress. Together, we can have a long-lasting, positive impact.

Sincerely,

Falk Rieker
Global Vice President
Banking
SAP SE

"Banking 4.0 will see banks rethinking banking from the ground up. Human experience is the new disrupter in the experience economy. This will affect the way banks interact with customers and manage traditional bank products, processes, and finance and risk operations. The implementation of new technologies and talent will be required to succeed in the digital age. Banks will change to look and operate more like technology companies, providing banking and related nonbanking services as they become digital platforms. Data-driven intelligence will differentiate the successful from the less successful financial services providers, which will include banks and new entrant nonbanks."

Falk Rieker
Global Vice President
Banking
SAP SE

Access more information on the latest technology trends in the banking industry.

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OUR PLACE IN THE NEW WORLD

Global "megathemes" are affecting the banking industry and are providing new opportunities for growth.

The banking industry is being reshaped by four major trends.

The quest for financial inclusion requires banks to take a leadership role in bringing financial services to underserved customers, creating opportunities for individuals, businesses, and economies. Financial inclusion is a key enabler to reducing poverty and boosting prosperity, resulting in:

- Greater social and economic well-being for individuals

- Higher profits, increased competitiveness, and growth for businesses

- Greater economic growth and decreased inequality (income and gender) across economies

- **Increased customer expectations:** Bank customers want and expect more from their banks. Today banks are trying to understand how to offer customized offers, products, and services beyond banking transactions while delivering the best customer experience.

- **Data as the new currency:** Today, data analysis at banks is fragmented and piecemeal, making a deep understanding of customer needs and experiences very challenging. Banks are spending significant resources to reduce duplicate data and create a single view of each customer, from user history to user behavior, experience, and intent.

- **"Platformification" of banking:** A new type of plug-and-play business model is appearing at banks that allows multiple participants (producers and consumers) to connect to the bank, interact with each other, and create and exchange value.

- **Evolution of banks into technology companies:** Banks are reviewing and changing their organizational structure, technologies, and cultures to run more like technology companies than banks. To compete with the established technology firms for talent, they also need to understand and deliver the best employee experience.
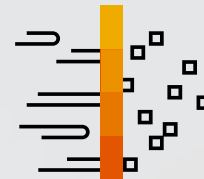
Digital strategies are disruptive and changing the rules for banks.

Discovery Bank is using the latest technology and innovative process designed to provide the first behaviorally oriented global bank. By linking interest rates directly to users' financial behavior, Discovery Bank is enabling clients to earn more interest on savings and pay less interest on credit as users improve their financial behavior. Discovery Bank provides clients with an attractive ecosystem of rewards in the form of dynamic discounts that further deepen user incentives.

Compartamos is a bank that offers microfinance services such as loans, deposits, insurance, and payment services in Mexico. Using SAP® technology, Compartamos is able to do real-time profitability and loss analytics on its microfinance offers for mobile account origination, leading to better decisions on financial products and customer offers.

Bank of Queensland (BOQ) needed to find a technology platform that would allow it to quickly and easily collect feedback from employees and analyze that feedback in a way that enabled individual managers to take action. With faster access to results through feedback dashboards, managers are now able to clearly see what it is they need to work on and put action plans in place. As a result, BOQ's employee engagement score has increased significantly over a three-year period.

81%

Of 132 banking and insurance decision-makers stated that data management and insight initiative were digital transformation priorities[1]

PAVING THE WAY FOR BUSINESS MODEL INNOVATIONS

By 2025 the role and revenue streams of banks will fundamentally change (see Figure 1). A significant portion of bank revenue will come from nonbanking services. Banks will act as platforms for digital services.
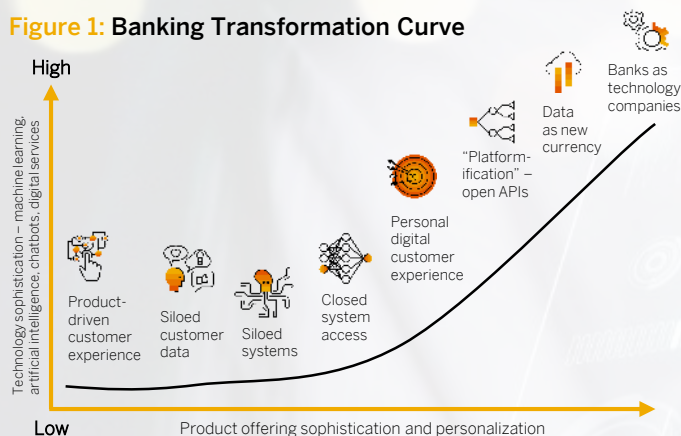
These services will reflect a wide range of banking and related nonbanking services to deliver an end-to-end (E2E) service orchestrated by the bank. Digitalized solutions will address the customer of one anytime and anywhere. These services will span from simple after-sales services to more-complex outcome-as-a-service models and the monetization of data assets that banks are able to generate based on the business they conduct.

Experience management will emerge as a primary driver and differentiator for the bank. To achieve this vision, banks must integrate and increase transparency of their own E2E processes and operations.

Banks, now and in the future, need a real-world understanding of their customers' experiences. They also need an environment in which they can learn from this information, make decisions, solve problems, and carefully manage the customer experience. By shifting routine tasks from humans to business systems enabled by machine learning, banks will free up the capacity needed to define and pursue innovative and transformative business models, thus becoming intelligent enterprises.

"Developing an omniadvisory and facilitation services business model requires **building intelligent banking operations** and customer profiles. This would be impossible unless banks develop **connections with the ecosystem** to master open (customer) data."[2]

Figure 1: Banking Transformation Curve

High

Technology sophistication – machine learning, artificial intelligence, chatbots, digital services

- Product-driven customer experience
- Siloed customer data
- Siloed systems
- Closed system access
- Personal digital customer experience
- "Platform-ification" – open APIs
- Data as new currency
- Banks as technology companies

Low Product offering sophistication and personalization

95%
Of financial services companies believe moving business processes to the cloud would notably improve their ability to digitally transform their whole ecosystem[3]

95%
Of financial services innovators believe adopting Big Data and real-time analytics technologies will help them achieve their digital transformation goals[4]

83%
Of innovative organizations have started their digital transformation journeys, compared to just 66% of other organizations[5]

62%
Of finance companies are currently investing in, expanding, or upgrading cloud investments[6]

93%
Of innovative companies believe cloud technologies will have an impact on improving service delivery and effectiveness[7]

69%
Of banking customers are nonpromoters based on their Net Promoter Score[8]

FOUR PRIORITIES FOR SUCCESS

Banks that manage their customer experiences well will differentiate themselves in the market. We have identified four strategic priorities necessary for banking organizations to transform their business.

- Seamless connectivity
- Data-driven intelligence
- Operational effectiveness
- Financial insight and risk control

SEAMLESS CONNECTIVITY

Bank customers expect more of their banks. They expect an experience similar to other commercial retail sites – easy to use with personalized recommendations for products and services.

Users are increasingly expecting their banking platform to go beyond banking services by providing integrated, complimentary, partnered services and offerings. Users are looking to banking as a platform for needs beyond financial services in the experience economy.

The Vision

In 2025 banking will be a customer-experience-driven business. Customers will access and obtain services seamlessly on any device, based on a detailed product set catered to a customer of one (see Figure 2). Customers will be able to consume banking and nonbanking services without a detailed knowledge of the financial services industry and jargon, but rather through product intent and desired outcomes. If a customer is unhappy with their experience, banks need to quickly understand why and intervene before the customer leaves the bank and revenue is lost.

The Journey

Banks will start toward this goal by linking islands of operational and experience information to create a unified customer view through various technologies (APIs). Then, with virtual views across divergent systems using in-memory and cloud technologies, banks will service and sell products to the customer. Banks will then create products for a customer of one – unique and specific to that individual customer with product attributes that are experience and outcome driven, not product-feature driven.

Figure 2: Future of Seamless Connections

Today

Segmentation

Future

Single customer
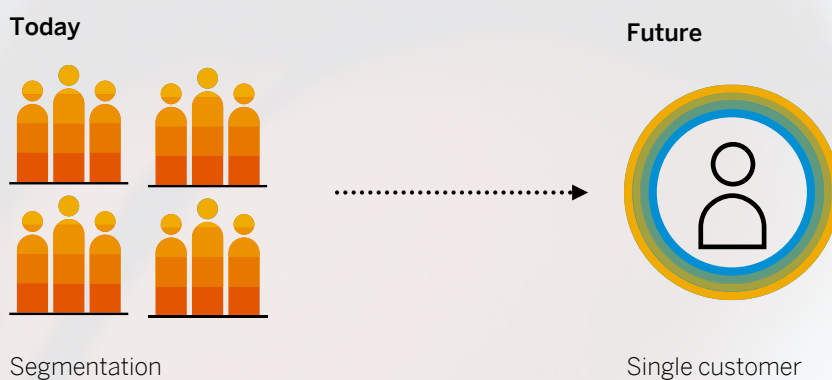
91%

Of innovative companies believe cloud technologies will help increase the speed of analysis[9]

Reimagine Customer Experiences With Seamless Connectivity

Customers are demanding that their banks provide a similar experience to those delivered by their retail and social media interactions in the experience economy. Banks are responding with new products and services that look, act, and feel like those frictionless experiences. These new products and services impact every facet of business, not just the front office. Banks must address E2E processes across departments and lines of business (LoBs) to deliver on improved customer experiences, products, and services. Banks must attract, cultivate, and retain customers by enabling an integrated, multichannel environment. They must analyze each customer's behavior and point of view to succeed in the digital age. This lifestyle view determines which products are created and which services are offered when and where to meet the customer's needs.

TRADITIONAL SCENARIO: MANUAL MARKETING CAMPAIGNS
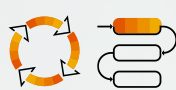
LoB business case

New product to market is defined with success metrics.

LoB also identifies and defines systems needing access and data needed for the campaign, requiring intimate knowledge of the system landscape.

IT codes and tests process

This process is for retrieval of target marketing data.

LoB must scrub and validate test data returned.

LoB must iteratively provide instructions to IT for data retrieval correction until satisfied.

Marketing campaign applied

If additional markets are segmented further, the process returns to IT code and test.

LoB defines data need from IT to assess success metrics.

Process returns to IT code and test-batch process.

LoB consumes success metric data

Success metrics are reported to management based on the segment marketed to during the campaign.

Each campaign follows a similar process to the previous.

New campaigns start from the beginning.

A NEW WORLD WITH SAP: REAL-TIME MARKETING MANAGEMENT IN THE CLOUD

Cloud-based customer data is now a single source for divergent systems (internal, social, third party), allowing real-time access by digital customer engagement (DCE) tools from SAP without the need for a deep knowledge of the system landscape.

Campaign segmentation and the target customer are defined in real time using DCE technology and Big Data.

Iterative, granular campaigns run in days, not months, allowing the bank to further segment campaign criteria in the cloud, on the fly, and without IT constraints.

Machine learning can be applied to campaign results, reducing the human dependency on analysis and the next-best offer.

Success metrics stream within the campaign, allowing the bank to further tune segments and campaigns along various inputs without the need for IT development.

New campaigns are built and deployed on the fly without IT dependencies.

TOP VALUE DRIVERS

Faster business process from business case completion to campaign evaluation

More accurate and personalized product offers, resulting in higher product conversion and a dramatic reduction in application abandonment

Source: SAP Performance Benchmarking

DATA-DRIVEN INTELLIGENCE

When customer experiences and needs are taken seriously, it becomes clear that one size seldom fits all.

Individuals as well as companies require solutions that are built to meet their exact requirements and differentiate them. On the other hand, customers are not willing to pay more than for a standard solution, which forces banks to move from rigid product models to approaches that include platforms and personalization to allow customization at scale.

The Vision
In 2025, banks will use deep data analytics to really understand their customers' experiences, desires, and intended outcomes (see Figure 3). This insight will allow smarter use of capital and will accelerate revenue growth. Banks will use data in an intelligent way to monitor risk factors and proactively position products and services based on the voice of the customer, helping to reduce churn and increase revenue. Banks will have a transformational, internal cultural change as incentives are aligned around servicing customers.

The Journey
Banks will start toward this goal by applying machine learning and AI to operational data (O-data) and experience data (X-data). Then they will be able to create, simulate, and forecast various business scenarios and financial impact using deep, real-time data analytics to understand customer and market behavior tied to intent. To achieve the cultural change needed, performance incentives will evolve from individual product sales to an aggregate customer satisfaction score correlated to the customer-of-one model.
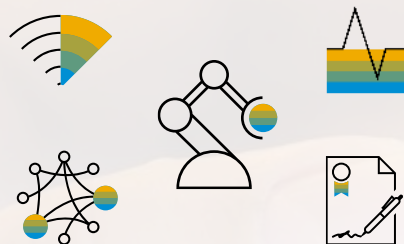
Figure 3: **Future of Data-Driven Intelligence**

Today
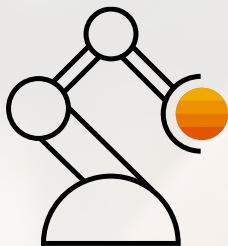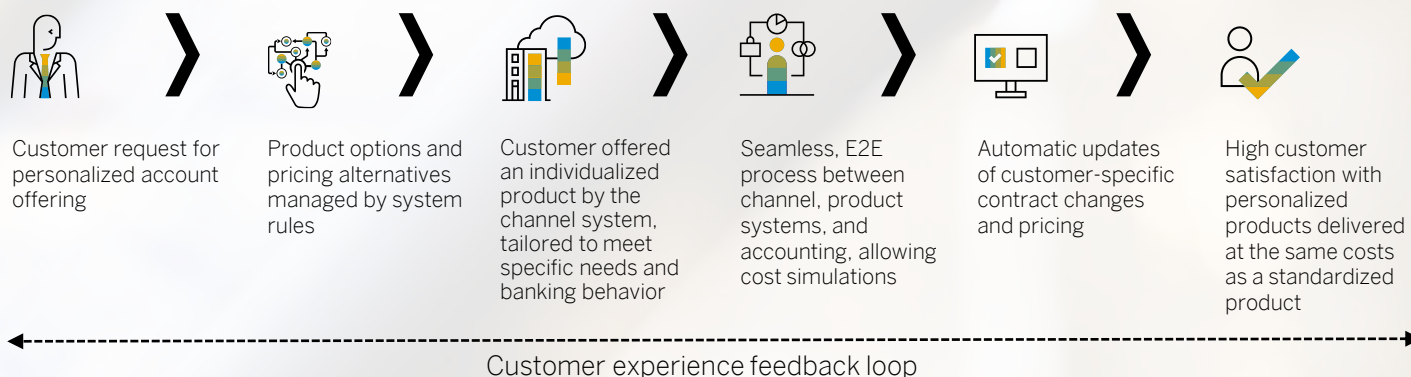

Selling products

Future

Selling outcomes

Reimagine Data-Driven Intelligence With Real-Time Analysis

Every bank needs the computing capability to carry out complex algorithms with large operational and experience data sets to support timely, real-time analysis. Everyone in the bank must have access to the data they need, whenever and wherever they need it. This is also true for the rest of the ecosystem. Compliance officers must be able to monitor transaction histories in real time to ensure policies and procedures are being followed. Bankers must be able to see client history to assess credit risk and ensure the performance of client relationship management tasks, such as addressing a poor customer experience. Banks should be able to process applications centrally, regardless of their source, in a digital, multichannel world. They should be able to respond quickly, thanks to a high degree of automation. Decisions should be based on accurate and complete customer information provided through automated application processing and seamless customer onboarding.

TRADITIONAL SCENARIO

| Product predefined by marketing and product management | Product catalog with a limited number of options and price lists available | Every option existing independently as a product, resulting in inconsistency and errors in product management downstream | Unique product definitions with different capabilities and pricing, making it impossible to simulate costs early | Multitude of detailed product definitions for each possible combination, generating a low level of process standardization and high maintenance costs | Inefficient, expensive, and error-prone product processes and delivery |

NEW-WORLD SCENARIO

| Customer request for personalized account offering | Product options and pricing alternatives managed by system rules | Customer offered an individualized product by the channel system, tailored to meet specific needs and banking behavior | Seamless, E2E process between channel, product systems, and accounting, allowing cost simulations | Automatic updates of customer-specific contract changes and pricing | High customer satisfaction with personalized products delivered at the same costs as a standardized product |

Customer experience feedback loop

TOP VALUE DRIVERS

Faster time to market

Lower R&D costs

Increase in revenue from new products

Better understanding of your customers' experiences and needs

Source: SAP Performance Benchmarking

OPERATIONAL EFFECTIVENESS

Banks need to deliver customer-centric products, services, and experiences using a 360-degree customer view enabled by streamlined and automated banking operations and a seamlessly integrated finance, risk, and compliance system across retail and commercial banking businesses.

The Vision

In 2025, banks will have fewer data silos and will be more connected to the customer through personalized services and better experiences. This connected view will provide agile product development and responsive action that will spawn the rise of outcome-based products – products that customers consume based on what they want. Leveraging customer and employee insights to reduce inefficiencies and anticipate opportunities will create loyalty, prevent churn, and maximize revenues. Data replication will be replaced with real-time connectivity, accessible anywhere from the cloud, allowing for real-time servicing. Decision-making will be enabled through real-time O-data and X-data secured by blockchain and served through the cloud. Latency will dramatically decrease, allowing greater operational efficiency (see Figure 4).

The Journey

Banks will invest in the resources and capabilities needed to engage through preferred platforms and channels. Banks will introduce machine learning and AI technologies to leverage and manage O-data and X-data. By automating low-value, human-based activities – such as trade reconciliation, transaction matching, and ledger adjustment – banks will improve employee efficiency and leverage individuals' talents and skills for higher-value, revenue-generating tasks. Finally, banks will adopt blockchain for a distributed ledger so that maintenance windows and batch processing will be limited and customers will experience no downtime. Blockchain changes the game by taking data from behind the firewall, making information available to external sources, and providing a full picture – enabling "open banking" in real time.

Figure 4: Complete Digital Representation of Products Throughout the Lifecycle

Today
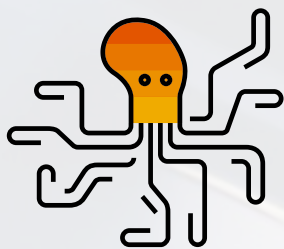
Future

Batch-driven manual processes

Always on

95% of financial services companies believe moving E2E processes or business processes to industry cloud would notably improve their ability to digitally transform their whole ecosystem[10]

Reimagine Operational Effectiveness With Real-Time Risk Management

A digital core is an IT architecture that offers stability and long-term reliability for core enterprise processes yet also provides the flexibility to adapt quickly to new opportunities, challenges, and regulations. This solid foundation gives you a single source of truth, which in turn enables flexibility for innovation to accommodate things such as new business models, new regulations, and business events such as mergers and acquisitions.

TRADITIONAL SCENARIO: MANUAL RISK MITIGATION

Lack of system integration

Disparate legacy applications and data silos make it impossible to focus on the holistic customer experience and journey.

Independent system accounts for customer data uniquely, leading to difficult customer data mapping.

Manual analytics and risk process

Limited or nonexistent aggregate views of customer interactions across channels and products make customer-intent prediction and therefore capital needs difficult or impossible.

Batch-driven risk management

A siloed landscape product leads to risk being managed at the product level and not at the customer level.

Manual reporting is generated in batch for human review and evaluation.

Slow response to market conditions

Batch-driven processes don't reflect rapid changes in the market, leading to intelligent guesses about risk management, either resulting in too much or too little in capital and reserves.

A NEW WORLD WITH SAP: REAL-TIME RISK MANAGEMENT IN THE CLOUD

Single source of risk management

Data streams into the cloud for a single customer view in real time, and analysis can be automated and reported in real time, sending alerts to various business owners for immediate risk management.

Analytical tools for real-time risk management

Transactional analysis is used for patterns, channel attributes, customer behavior, current and historic values, velocity, and historical-pattern trends.

Real-time analysis of customer intent and behavior is based on internal data, third-party data, social media, browser history, and cookie information.

Forward-looking what-if scenarios

Calculation of forward-looking what-if scenarios use real-time positioning risk, whether it be market exposure, asset valuation, liability exposure, or cash reserves, with a single data source in the cloud.

TOP VALUE DRIVERS

Improve the customer experience

Reduce fraud and risk

Increase revenue growth

Source: SAP Performance Benchmarking

FINANCIAL INSIGHT
AND RISK CONTROL

Banks are required to keep their systems and processes up to date in real time in a complex regulatory environment.

Banks need to meet regulatory requirements in an easy and flexible way to keep costs down. Current processes are highly reactive and manual – banks employ entire workforces to chase regulatory compliance. By using X-data and O-data, banks can better understand trends to enable enhanced decision-making, mitigate risks, and increase profitability.

The Vision

In 2025, banks will migrate to universal journals linked through blockchain and delivered through the cloud (see Figure 5). Universal journals will allow better access to regulatory and business data, enabling banks to be more agile and responsive to the requirements for financial insight and control. Banks will use predictive analytics, enhanced with a better view of fraud exposure and management, to improve fraud detection, increase data transparency, and enable greater regulatory compliance. Third parties will provide contract and accounting capabilities in addition to bank

capabilities, allowing banks to meet regulatory requirements from a single source of data while reducing their need for human capital. Yet banks will still ensure that the existing workforce is engaged and inspired.

The Journey

Banks will start toward this goal by adopting a comprehensive set of technology, process, and governance tools. This will enable O-data and X-data to stream into these tools, simulating positions and financial market conditions in real time and allowing a bank to forecast various business scenarios and financial impacts. Banks will distribute these tools and controls across borders and time zones, reducing market-specific risk while increasing data transparency and regulatory compliance. Finally, banks will enable third parties such as fintechs to share data for advanced insight and control through APIs, allowing banks to shift headcount to higher-value activities.

Figure 5: Future of Financial Insight and Risk Control

Today
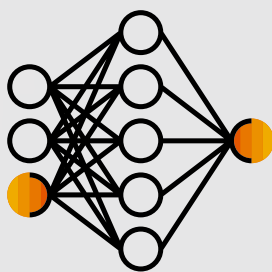
Reactive and manual

Future

Universal journals

90% of cloud decision-makers at financial services companies believe in the importance of software that integrates across an E2E value chain in an industry cloud.[11]

Reimagine Financial Insight and Risk Control with a Single Source of Truth

The ability to respond quickly is an essential part of managing a bank. To do this, simulation, prediction, and analytical capabilities are important components. Data is critical for gaining the insight to make decisions. This insight must be at a granular level, so decision-makers have the detail they need to understand trends, opportunities, and risks and quickly carry out what-if analysis using predictive algorithms. Banks are required to keep their systems and processes up to date in real time in a complex regulatory environment. They need to meet regulatory requirements in an easy and flexible way to keep costs down.

TRADITIONAL SCENARIO: MANUAL PROCESSES FOR FINANCIAL DATA MANAGEMENT

Isolated systems across the bank

Many legacy systems that provide point solutions isolated from other systems

Legacy systems not open to sharing data or providing minimal data-sharing capabilities

Banks dependent on IT to provide custom and isolated services

Manual analytics and risk process

Determining user behavior and intent by running manual processes across multiple systems, normalizing the data, and then conducting analysis, which results in stale predictions

Manual processes that make adapting to new regulations difficult

Fraud analysis after the fact

Legacy systems isolated from other channels, resulting in a limited view of fraud exposure and required mitigation to limit that risk

Slow response to competition

Isolated offer management systems that don't provide a holistic, 360-degree view of customer activity and potential intent, resulting in lost sales and revenue-generating opportunities.

A NEW WORLD WITH SAP: A REAL-TIME SINGLE SOURCE OF TRUTH

Complete customer view in the cloud

The SAP Cloud portfolio allows a bank to stream multiple data sources from various systems (internal, third party, social media, and so on) into a real-time, 360-degree customer view.

Real-time analytics and fraud management

Provide deep, real-time risk assessments using O-data and X-data to reduce flight, churn, and abandonment.

Identify fraud behavior in real time, minimizing state predictions and financial loss.

Real-time service and sales in the cloud

Increase the LoB's view of customer profiles, experiences, preferences, and activities.

Create personalized product offers and campaigns based on a user's behavior within the bank site as well as off the bank's site in the cloud.

TOP VALUE DRIVERS

More control over the customer experience, offer management, and customer behavior and intent

Real-time data management, allowing better fraud management and mitigation as well as sales campaigns that are more relevant to the user

Source: SAP Performance Benchmarking

KEY
TECHNOLOGIES

The current pace of technological advancements has the most profound impact on enabling how banks transform themselves to respond to competitive threats and the regulatory environment while improving the customer experience.

Intelligent technologies promise to bring great benefits, such as productivity and efficiency gains, enabling innovative new business models and new revenue streams. The following intelligent technologies are instrumental in helping banks respond to the quickly evolving global financial services marketplace.

Artificial Intelligence and Machine Learning
Machine learning and artificial intelligence enable algorithms to "learn" from existing data and achieve the best possible outcomes without being explicitly programmed. Once the algorithm is trained, it can then predict future outcomes based on new data. Businesses can leverage these capabilities to eliminate repetitive manual tasks, such as service ticket management, automatically determining classifications, routing, and responses. They can also be used to anticipate customer behavior – such as account closures and credit card cancellations – with instant insights from transactional data and digital interaction points.

Advanced Analytics
The integration of advanced analytics capabilities – including real-time situational awareness of negative customer experiences – into applications enables business users to analyze data on the fly and drives better decision-making. Empowered users can get immediate visibility into their operations and customer feedback. They can simulate the impact of business decisions, achieving better risk management and better outcomes. Predictive analytics of structured and unstructured data provides 360-degree customer insight, enabling banks to anticipate the behavior of its customers, respond to their needs, predict the next best step or product offer, and rapidly engage customers in real time.

Blockchain

A relatively recent breakthrough technology, blockchain is revolutionizing the movement and storage of value by creating a chain of unaltered transactional data. The blockchain model of trust, through massively distributed digital consensus, could reshape supply chains and commerce across the entire digital economy, for example, digitalizing the bill-of-lading document as part of the international ocean shipping process.

Conversational AI

Advances in machine learning are enabling algorithms to become highly accurate in natural-language understanding and in image and voice recognition, especially useful in after-service and call center activities. Voice interfaces will be the go-to for the next generation of applications, allowing for greater simplicity, mobility, and efficiency while increasing worker productivity and reducing the need for training. Customer experience bots for services and commerce provide a humanized way for the customer to interact with their bank. This results in higher customer satisfaction and better customer experiences due to ease of consumption by using machine learning techniques for natural-language processing.

Robotic Process Automation

Robotic process automation streamlines repetitive, rule-based processes and tasks in an enterprise and reduces cost through the use of software robots by replicating specific tasks or keystrokes. Automation frees up employees for engaging in higher-value tasks, resulting in increased employee satisfaction.
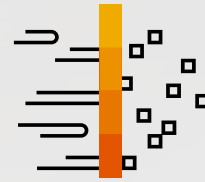
97%
Of banks say the customer experience is a focus[12]

94%
Of leaders are investing in Big Data and analytics[13]

25%
Reduction in attrition by making proactive calls to at-risk customers based on predictive models[14]

20%
Savings on capital expenditures achieved by adopting intelligent computer programs that can solve and even anticipate complex problems[15]

60%
Of human tasks will be automated by 2025[16]

99%
Accuracy in voice and video recognition by 2020[17]

360,000 hours
In reduced manual work by using an AI system to automate tasks[18]

GETTING THERE: A PHASED APPROACH

Companies will become intelligent enterprises on three distinct tracks as they evolve their strategic priorities to match their company's vision. They will:

- **Optimize** what they already do by implementing a stable and scalable digital core to make processes more transparent and integrated

- **Extend** their current processes by connecting them to the real world using IoT technologies

- **Transform** their business using a constant stream of data enabling new service-driven business models (see Figure 6)

Figure 6: Strategic Priorities Across Lines of Business

	Digital Customer Engagement		Banking Operations		Financial Services Network		Total Spend Management		Finance and Risk		Human Resources	
Seamless connectivity	Customer Experience		Offer Management		Bank Connectivity		Procure to Pay		Financial Insight		Employee Feedback	
	Today One-size-fits-all customer experience	**Future** Tailored omnichannel customer experience	**Today** Siloed loan and product offers	**Future** Instant loan offerings at point of sale using real-time data	**Today** Point-to-point custom solutions	**Future** Seamless real-time connectivity between corporate ERP and procurement systems and banks	**Today** Manual, complex, multilevel procure-to-pay processes	**Future** Synchronized and automated procurement and payment process for streamlined operations	**Today** Limited real-time insight using optimized queries	**Future** Instant drill-down and response to any inquiry	**Today** Fragmented and not unified	**Future** Rapid deployment of feedback from employees
Data-driven intelligence	Product Selection		Digital Marketing		Cash Management and Payment Services		Spend Management		Financial Services Data Platform		Workforce Analytics	
	Today Generalized banking products	**Future** Highly personalized product offerings	**Today** Simple and mass campaigns	**Future** Predictive, targeted marketing using AI technologies	**Today** Fragmented services and applications	**Future** End-to-end, real-time digital services and platform	**Today** Fragmented by spend types	**Future** Total spend management across all spend categories	**Today** Fragmented data silos with multiple data models	**Future** Unified data model supporting federated data management	**Today** Limited insight on outcomes	**Future** Insight to possible outcomes through predictive analytics
Operational effectiveness	Onboarding		Customer Feedback		Loans Processing		Supplier Management		Financial Product Subledger		Talent Recruiting	
	Today Multiphase, lengthy process	**Future** Streamlined digital process	**Today** Opportunistic customer feedback process	**Future** Systematic embedded customer feedback process	**Today** High degree of manual intervention	**Future** Straight-through-processing factory using machine learning	**Today** Silos with each supplier managed independently	**Future** Automated bid management	**Today** Single GAAP, single product subledgers	**Future** Multi-GAAP, multiproduct subledger	**Today** Selection process that takes a very long time and candidates that give up	**Future** Machine learning to machine candidates to positions
Financial insight and risk control	Compliance		Operations		Compliance		Supplier Risk Management		Financial Reporting		Career and Succession Management	
	Today Reactive response to regulatory needs	**Future** Machine learning to automate "know your customer," anti-money laundering, Patriot Act, and others	**Today** Batch processes	**Future** Real-time processes and data availability	**Today** Fragmented systems	**Future** Blockchain-based processes that drive transparency and compliance	**Today** Risk management based on historical data	**Future** Predictive analytics against established supplier performance indicators	**Today** Many parallel processes and data replication with significant manual reconciliation effort	**Future** End-to-end process using machine learning techniques	**Today** Poor career management and talent retention	**Future** Machine learning to identify key employees for development

EARLY DIGITAL ADOPTERS
LEAD THE WAY

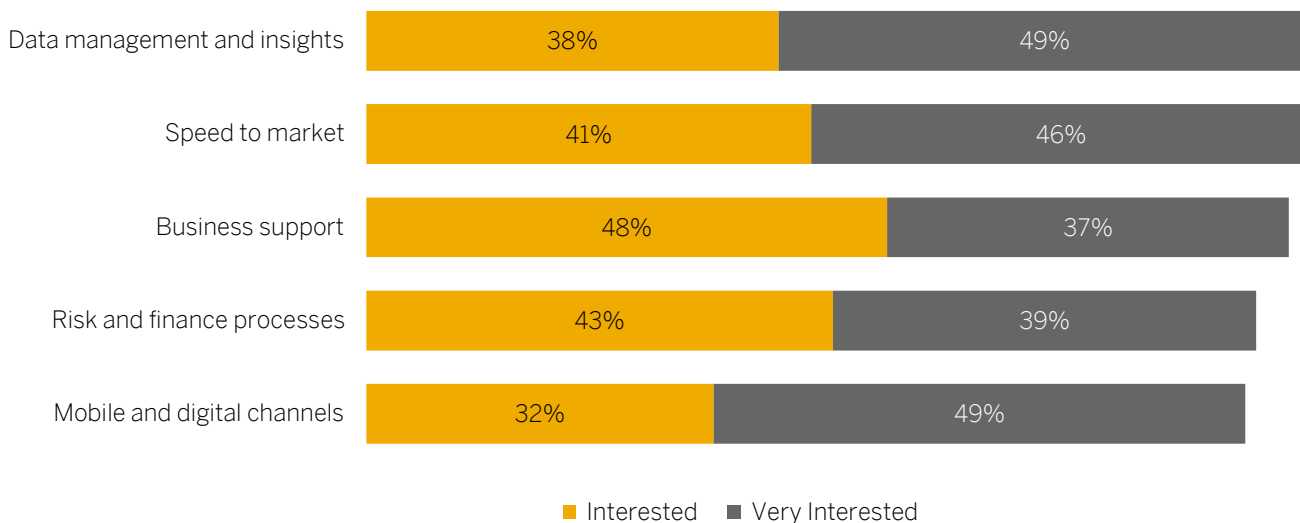## How do you achieve these strategic priorities?

Start with reimagining your business together with your customers. Then build a path for even more optimization and intelligent automation to simplify your business and free up resources to invest in even more digital transformation programs and find new business models and revenue streams.

Margin pressure and regulatory complexities are a constant challenge for banks. Legacy systems, mergers and acquisitions, along with changes in technologies, business models, and rising customer expectations require constant adaptation.

Banks must be able to respond to increasing customer demands yet still comply with all regulations and reporting requirements

Figure 7: **Banking and Insurance**

"How interested is your company or organization in adopting an industry cloud for each of these end-to-end digital transformation priorities?"

Priority	Interested	Very Interested
Data management and insights	38%	49%
Speed to market	41%	46%
Business support	48%	37%
Risk and finance processes	43%	39%
Mobile and digital channels	32%	49%

■ Interested   ■ Very Interested

SAP'S FRAMEWORK FOR THE INTELLIGENT ENTERPRISE IN THE EXPERIENCE ECONOMY

Most organizations understand what is happening in their business, but they may not always know why.

They know what's happening because they have systems that capture O-data – information about their customer transactions, supply chain, manufacturing, spending, and the activities of their workforce. They can see that data through reports and dashboards. They can see trends and predict what will happen next.

But to influence what happens next, companies need data about the interactions that people have with their products and their business. X-data captures beliefs, emotions, opinions, and perceptions – the "why" something is happening. And when companies know why something is happening, they can make an informed decision about the best way to respond.

To win in this experience economy, intelligent enterprises connect experiences with operations. They use both X-data and O-data to guide their business decisions. Intelligent enterprises collect insights from customers, employees, products, and brands at every touch point. They use powerful technologies to automate and integrate their data, processes, and applications, enabling them to sense risks, trends, and opportunities. And they act on this intelligence across every part of their business (see Figure 8).

Only SAP has the strategy, expertise, and solutions to deliver on this vision, enabling intelligent enterprises to turn insight into action.

Figure 8: SAP® Intelligent Enterprise Framework
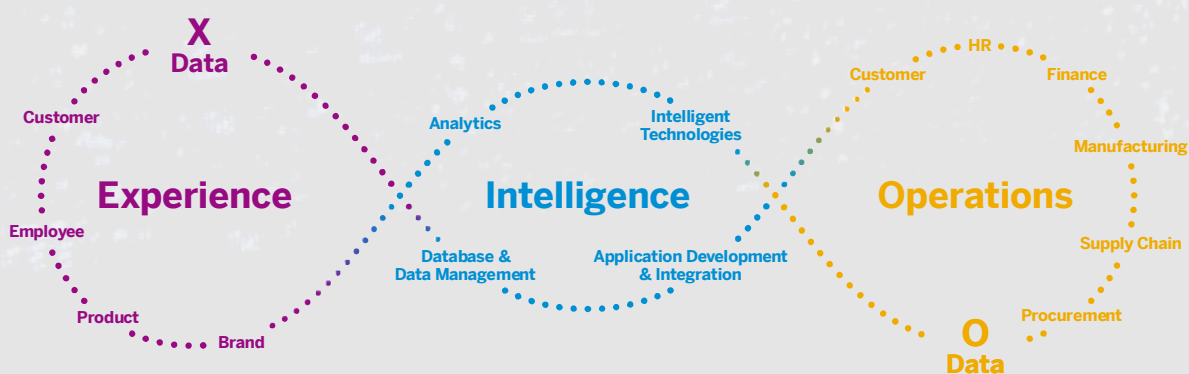
HOW TO PLAN YOUR PATH TO THE INTELLIGENT ENTERPRISE

In the digital economy, intelligent technologies and integrated business processes are now driving digital transformation.

To do this effectively requires an end-to-end plan for becoming an intelligent enterprise. This includes creating an intelligent enterprise road map and implementation plan with proven best practices and deployment options that optimize for continuous innovation with a focus on intelligent outcomes.

The End-to-End Journey to Becoming an Intelligent Enterprise

Plan
well to manage expectations

Simplify and innovate
- Reimagined business models, business processes, and work
- SAP Intelligent Enterprise Framework methodology as a guide for digital transformation
- Value-based innovation road maps

Build and launch
with proven best practices

Standardize and innovate
- Model-company approach to accelerate adoption with model industry solutions
- Design thinking and rapid, tangible prototypes
- Co-engineered industry innovations delivered with agility

Run
all deployment models

Run with one global support
- One global, consistent experience
- End-to-end support – on premise, in the cloud, or with a hybrid approach

Optimize
for continuous innovation

Optimize to realize value
Continuously captured and realized benefits of digital transformation

To move forward with speed and agility, it helps to focus on live digital data and combine solution know-how and industry-specific process expertise with data analytics so that the right digital reference architecture is defined and delivered. In that context, a model-company approach is aimed at simplifying and increasing the speed of the digital transformation journey.

Model companies represent the ideal form of standardization for a specific line of business or industry. They are built on preconfigured SAP solutions based on best practices supported by SAP, along with the business content that encompasses our experience and expertise relevant for the industry. They provide a comprehensive baseline and come with the accelerators to jump-start digital transformation projects.

COMPREHENSIVE SAP ECOSYSTEM
ORCHESTRATING THE PARTNER ECOSYSTEM TO DELIVER VALUE FASTER

Our comprehensive ecosystem for the banking industry offers:

- The Intelligent Enterprise as the overarching strategy to meet future requirements, providing:
  - SAP S/4HANA co-development programs for customers and partners
  - Industry co-innovation programs for industry-specific use cases
  - Delivery of enterprise-to-enterprise industry clouds
  - Thought leadership, evangelism, and enablement by industry through events, councils, and regular customer exchange

- Integration into a wide range of business services (OEMs, suppliers, key vendors, and more)

- Open architecture, with a choice of hardware and software specifically designed to meet requirements

- Complementary and innovative third-party solutions to provide leading-edge and state-of-the-art technology

Our partner ecosystem includes, among others:

EY · msg · accenture · Deloitte. · ifb

IBM · pwc · OPENTEXT THE CONTENT EXPERTS · axxiome · Microsoft Azure

r3. · Capgemini · NTT DATA Trusted Global Innovator · Infosys · BLACKLINE

itelligence NTT DATA Business Solutions · TATA · wipro · Wolters Kluwer · DXC.technology

celonis · DocuSign · Moven · BearingPoint · enterpryze

Cognizant · ConVista

SAP IS COMMITTED TO INNOVATION

10-Year Innovation Vision

SAP delivers fully intelligent business solutions and networks that span company boundaries and promote purpose-driven businesses. These solutions will be the most empathic symbiosis between machine intelligence and human ingenuity.

- Self-running enterprise systems
- Self-organizing business ecosystems
- New markets and business models

Comprehensive Industry Coverage

SAP enables comprehensive coverage of the complete banking value chain across the enterprise. With its clear industry road map, SAP is the partner of choice for the banking industry.

- Customers supporting more than 140 million active banking accounts across the world
- Global banking customers managing over US$70 trillion in assets
- Support for all lines of business on a single platform

Proven Services Offering

By bringing together world-class innovators, industry and emerging technology expertise, proven use cases, and design thinking methods, we help banks develop innovations that deliver impact at scale.

- Proven methodologies to drive innovation, from reimagining customer experiences to enhancing operations
- Innovation that is fueled through a managed innovation ecosystem from SAP
- Ability to build your own innovation capability and culture

SAP supports banks in becoming intelligent enterprises – providing integrated business applications that use intelligent technologies and can be extended on SAP Cloud Platform to deliver breakthrough business value.

Learn more

- SAP for Banking
- SAP Services and Support

RESOURCES

Outlined below is external research that was used as supporting material for this paper.

1. "Emerging Opportunities to Deploy Industry Processes in the Cloud," Forrester Consulting thought leadership paper commissioned by SAP, July 2018.

2. Jan van Vonno et al., "IDC's Digital Use Case Map for Financial Services," IDC sponsored by SAP, August 2018.

3.–7. "Emerging Opportunities to Deploy Industry Processes in the Cloud," Forrester Consulting thought leadership paper commissioned by SAP, July 2018.

8. Qualtrics research, February 2017.

9.–11. "Emerging Opportunities to Deploy Industry Processes in the Cloud," Forrester Consulting thought leadership paper commissioned by SAP, July 2018.

12. Jim Marous, "2017 Retail Banking Trends and Predictions," Digital Banking Report, December 2016.

13. "SAP Digital Transformation Executive Study: 4 Ways Leaders Set Themselves Apart," SAP Center for Business Insight and Oxford Economics, 2017.

14. Michael Grebe et al., "Customers Steer Digital Trends Driving Retail Bank Transformation," BCG, May 2016.

15. Mike Blalock, "The Future of AI in Banking," Intel IT Peer Network, April 2017.

16., 17. Mala Anand, "SAP Leonardo: A Closer Look at a Year of Innovation," SAP, June 2018.

18. Prasad Chintamaneni, "How Banks Can Use AI to Reduce Regulatory Compliance Burdens," Cognizant, June 2017.

Note: All sources cited as "SAP" or "SAP Performance Benchmarking" are based on our research with customers through our benchmarking program and other direct interactions with customers.

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