The Digital Banking Industry
Unlocking New Business Value with Intelligent Technology
“How can banks continue to drive digital transformation in order to prosper and stay competitive in this emerging digital financial services landscape? Through partnerships, collaboration, and embracing new technology such as artificial intelligence, machine learning, or blockchain, banks are reimagining their business processes to better serve their customers. With mounting customer demand for more-efficient operations, faster delivery of new product innovations, and highly personalized solutions, banks have no choice but to change.”

Falk Rieker
Global Vice President
Banking Business Solutions
SAP SE
Banks Face New Challenges and Opportunities Amid Digital Disruption

Competitive banks use market dynamics to create and capture new business opportunities.

Customer's digital expectations
Banks need to meet (or exceed) a high bar set for digital interactions. Customers are comparing their bank's digital experience to that of retailers', financial technology providers' (fintechs'), and competing banks' digital experiences.

Cloud-based solutions that are easily enhanced and quickly rolled out allow banks to better meet the increasing expectations of their customers. Artificial intelligence provides the insights to best serve the customer.

New ecosystems are emerging and industry lines are blurring
Incumbent banks face changes within their competitive landscape. Banks will no longer be competing against just banks, but against everyone offering financial services.

Investments in open and agile software platforms and APIs enable banks to respond to competitive challenges. Banks need to be able to collaborate with other banks, fintechs, and new entrants to develop new business models and product innovations (for example, the Amazon and Chase partnership).

Margin pressure
Banks are faced with reduced margins and increased competition from traditional and nontraditional financial services providers. Shareholder value is a top priority in managing the bottom line.

Banks use machine learning to automate their processes and reduce operating costs. Automating knowledge work, standardizing processes, and providing employee self-service options all play a part in reducing costs.

Meet regulatory and compliance standards
The unprecedented volume of global regulation is placing considerable demand on banks from a compliance bandwidth perspective.

Using machine learning, banks can mitigate fraud in various business processes. Concerns around data privacy are driving regulatory reform (such as the Revised Payment Service Directive, or PSD2).
With Huge Opportunities and Challenges, It Is Essential to Focus on the Right Strategic Priorities to Drive Digitalization

Digital business models are disruptive. The rules have changed.

Online retailers, communities, marketplaces, and platforms have access to large customer and supplier networks. Financial services are offered by nonbanks as an integral part of their product offering. Fintechs are fueling rapid innovation. Retail banks acknowledge the need to adapt, as traditional value chains are being disrupted by new entrants. The always-connected, digitally savvy customer is turning to alternative banking providers or traditional banks who have successfully digitally transformed.

**Improve the customer experience**
Consumer expectations are high, and there are now multiple touch points for them to use in conducting business with their bank, such as phone, e-mail, Web, and social media. Banks can use technology to harness the data across all of these touch points to ensure that customer issues are being resolved to mitigate the risk of customer attrition.

**Predict customer needs**
Banks have a wealth of customer data that could be harnessed and used more strategically to better serve their customers. By monitoring and measuring social media, transaction history, and external information, banks can anticipate customer needs in real time.

**Reduce operating costs**
Digital processes can be orchestrated and integrated with customer channels and third parties. An open and agile platform can help banks reduce time to market and enable personalization as well as standardization of product processes. Automating manual processes with machine learning reduces the need for headcount, resulting in lower operating costs.

**Meet regulatory and compliance standards**
Maintaining all relevant financial data at the most granular level on one data platform allows banks to quickly react to the latest regulatory reporting requirements. They also are able to then deliver real-time insights while minimizing the need for integration and data harmonization.

**Enable open banking and platform-based business models**
Banks are collaborating with fintechs and tech providers at a more rapid pace than ever before. They are working together to serve customers’ tech-savvy demands. Having an open and agile platform will enable faster implementation for new products and a better customer experience.

Business optimization and intelligent automation are key priorities for innovative banks to simplify their business and free up resources to invest in transformative programs.

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Our Point of View: To Achieve These Strategic Priorities, Leading Banks Are Becoming Intelligent Enterprises

An intelligent enterprise enables employees to focus on higher-value outcomes and invent new business models and revenue streams. By applying intelligent technologies such as the Internet of Things (IoT), artificial intelligence (AI), machine learning, and advanced analytics, leading banks transform into event-driven businesses. These event-driven businesses automate repetitive tasks, enable employees to focus on higher-value tasks, and allow the invention of new business models and revenue streams by monetizing data-driven capabilities and applying core competencies in new ways.

Optimize and extend the value of current processes

Transform with next-generation business processes
SAP Enables Banks to Become Intelligent Enterprises

SAP helps banks transform into intelligent enterprises through integrated business applications that use intelligent technologies and can be extended on SAP® Cloud Platform. This enables next-generation business processes to deliver breakthrough business value on our customers’ journeys to becoming intelligent enterprises.

Intelligent Suite
The set of applications provides the business capabilities that banks need to run their business. End-to-end business processes span multiple applications, so processes and data must be integrated for automation, a seamless user experience, fast adoption, and ease of operations.

Intelligent Technologies
Several innovative technologies have matured to practical use:
- The IoT makes business applications interact with the physical world.
- Big Data makes large data sets accessible for advanced analytics and intelligence.
- Machine learning and AI automate repetitive processes and learn from human exception handling and decision-making.
- Advanced analytics find data patterns to support decisions and predict the future.
- Blockchain distributes collaborative processes across the entire value network.
- Data intelligence finds new value in data assets for new business models.

Digital Platform
The digital platform, which is powered by SAP HANA®, extends intelligent, end-to-end processes and connects to these data sources:
- Cloud platform that allows customers and partners to extend their intelligent suite to run additional business processes
- Data management to handle and organize data, a key asset of an intelligent enterprise

NOTE: This representation is a general visualization of the Intelligent Enterprise and may include functions not covered in every industry.
SAP Leonardo

SAP Leonardo technologies bring the power of intelligent technology to your platform and applications to streamline existing workloads, reveal optimal decisions, maximize revenue and profits, improve customer satisfaction, and capitalize on digitally transformed business models.

In addition, companies can use SAP Leonardo Services, delivered by world-class innovators that combine industry and emerging technology expertise, to help drive innovation and business impact at scale.
SAP Leonardo: Intelligent Technologies Optimize, Extend, and Transform the Business

Intelligent scenarios in banks
SAP Leonardo technical capabilities are embedded in business-core and industry applications to optimize and extend business processes. Companies can also use them together with innovation services to build and assemble next-generation business processes. For banks, SAP supports more than 15 intelligent scenarios to optimize, extend, and transform their business. Below are a few highlighted ones that will be further explained on subsequent pages.

- Service ticket intelligence
- Customer retention
- Conversational customer experience (CX) bots for service and commerce
- Predictive analytics

- Smart loan origination
- Categorization of payments
- Digital boardroom

- Real-time consumer financing

Optimize existing processes for more efficiency or reliability.

Extend current business processes beyond efficiency gains to capture new sources of value.

Transform the company’s value chain or business model to capture new revenue streams.
SAP Leonardo: Applications Optimize Business Processes

Optimizing business processes results in achieving the same business outcome more efficiently and reliably. We begin with scrutinizing current practices: What can be automated using machine learning? How can we make processes aware of the real world by connecting them to the things around them? How do we give people the right analytical tools to make sense of vast amounts of data and to handle exceptions?

<table>
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<td>Labor-intensive and slow resolution of customer service tickets</td>
<td>Lack of insight into root causes of bank customer attrition</td>
<td>Lengthy processes and cumbersome customer interactions</td>
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The SAP Service Ticket Intelligence application efficiently processes inbound social media posts, e-mails, and other channel interactions. It automatically determines classifications, routing, and responses.

The SAP Customer Retention application anticipates customer behavior — such as account closures and credit card cancellations — with instant insights from transactional data and digital interaction points.

CX bots for services and commerce provide a humanized way for the customer to interact with their bank. This results in higher customer satisfaction due to ease of consumption by using machine learning techniques for natural language processing.

Predictive analytics of structured and unstructured data provide 360-degree customer insight, enabling banks to anticipate the behavior of their customers, respond to their needs, predict the next best step or product offer, and rapidly engage customers in real time.

- Improved customer experience
- Reduced operating costs
- Improved customer experience
- Reduced operating costs
- Increased productivity
- Increased customer experience
- Improved customer experience
- Improved offer targeting

97% Of banks saying customer experience is a focus

94% Of leaders investing in Big Data and analytics

25% Reduced attrition by making proactive calls to at-risk customers based on predictive models

20% Savings of capital expenditures achieved by adopting intelligent computer programs that can solve and even anticipate complex problems

SAP Leonardo: Capabilities and Services Extend Current Processes to Capture New Sources of Value

Extending business processes aims at generating more value and new outcomes. Begin by challenging the status quo: Are we doing the right things in managing assets or in shaping customer relationships? Innovators use digital technology to extend business processes to create new value. We gain asset downtimes that never happen because they have been predicted and prevented, as well as customers who get serviced before they realize they need it.

Rabobank is using SAP technology to create straight-through processing of loans – taking the manual process of weeks to an automated process time of hours. This improvement results in increased employee and customer satisfaction.

93% Of leaders say technology is critically important or very important to retaining competitive advantage, compared with 72% of others.

75% Of enterprise applications will use AI by 2021.

### Smart loan origination

- Unstructured data that cannot be interpreted automatically

### Categorization of payments

- High volume of data that cannot be analyzed without technical support

### Digital boardroom

- Inability to monitor performance against critical success factors results in poor decisions

### Smart loan origination supports the digital origination process for consumer loans, factoring in age, income, guarantor, loan size, and job experience together with additional customer information to arrive at a loan approval status more quickly and accurately.

### Categorization of customer payments uses SAP Leonardo Machine Learning capabilities to provide better lifestyle analysis and comparison with peers and filter, detect, and identify payment triggers. It provides automatic insights for clients and insights into consumer behavior for banks.

### SAP Digital Boardroom helps banks improve boardroom decision-making with real-time, contextual insights. Intuitive and powerful analytical exploration capabilities, with a simple user interface, enable the analysis of root causes to identify business challenges and opportunities on the fly.

- Improved customer experience
- Reduced operating costs
- Increased accuracy in meeting regulatory and compliance requirements
- Reduced operating costs
- Higher payment data accuracy
- More-informed decisions
- Improved accuracy

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SAP Leonardo: Intelligent Technologies and Innovation Services
Transform the Banking Value Chain and Business Models

Transforming the business starts with ideas to conquer new markets with current products or deliver new value on your home turf. It often goes along with a renewed view on who the ultimate customer is and what kind of value they really need.

Real-time consuming financing

Bank customers' expectations of instant gratification when interacting with their banks during purchasing decisions requiring financing.

Customer-centric banks are automating and digitalizing consumer financing in real time, which includes the use of real-time data and predictive analytics to guide the buyer on their journey with competitive offers enabled through geospatial data. SAP Leonardo Machine Learning and the IoT enable a straight-through loan process through a frictionless mobile experience.

- Improved customer experience
- Increased efficiency

92% of enterprises must evolve their business models to survive at the speed of digitalization.  

SAP Leonardo: Transformational Scenario – Real-Time Consumer Financing Experience

SAP customers and SAP experts collaborate to design and build end-to-end use cases using innovation technologies – fully tailored to the specific customer situation and supported by SAP Leonardo Innovation Services.

Banks need to manage the end-to-end lifecycle of consumer financing. This includes using digital technology, real-time data, and predictive analytics to run faster while partnering with business networks to offer frictionless customer solutions on any device. The capabilities delivered in the cloud help ensure that processes run smoothly and efficiently across the whole financing lifecycle. In turn, banks can benefit from higher customer retention by offering complimentary services through integration with network partners, and they can increase topline growth through selling additional bank products and by originating sales of products and services of third parties.

**Traditional process**

Client contacts rep for consumer finance

Rep enters details and triggers request processing

Triggers credit check and other processes manually

Updates new request manually

Starts negotiations with client for better terms

Offers new terms after series of negotiations for new request

**Next-generation process**

Partner with business network to offer frictionless customer solution on **any device**

Scan QR code using mobile banking app

Use geospatial data and predictive analytics to push message that highlights participating shops

View request for subsequent financing offer from bank using **mobile app**

Detect previous offer and amend existing offer with better terms

Receive client’s appreciation on social media and new relationship referrals

Analyze client relationship with **SAP Digital Boardroom**
SAP Enables Banks to Predict Customer Needs and Reimagine Their Business Processes

mBank

Using SAP Predictive Analytics software, mBank was able to better use its customer data to execute successful marketing campaigns with a 10x higher effectiveness rate. As a result, mBank has the highest net promoter score in Poland. With the costs to acquire a customer so high, effective use of analytics maximizes marketing spend. By creating special data-driven promotions with bonus partners, offers are highly targeted and relevant, which has resulted in increased customer satisfaction.

Click to view video

Rabobank

Rabobank was faced with the challenge of improving the time to process a loan for its mortgage and business loan customers. The challenge in improving the wait time is in maintaining the integrity of its regulatory and compliance process within the loan application and approval business process. The bank was able to improve the time to process loans from weeks to hours by creating a straight-through processing “loan factory.”

Click to view video

“Now with SAP, we run a straight-through processing factory servicing the end customer directly. We’ve moved from a reactive, traditional IT management approach to a proactive approach.”

– Bart Vloet, Head of IT Management, Rabobank
How to Get Started with SAP Leonardo

Whether you’re still exploring new ideas or have defined one idea in detail already, SAP Leonardo brings together world-class innovators, industry and emerging technology expertise, proven use cases, and design thinking methods to help you optimize your business and drive innovation and impact at scale – faster and with less risk.

SAP takes a holistic approach to innovation. Because digital transformation isn’t just about installing the latest technology, we also address the readiness to receive a new idea. From human capital to infrastructure, we bring best business practices across your organization to improve communication, plan for employee training, review technical and regulatory feasibility, and consider other cross-functional needs to drive change and truly scale your innovation.

Explore in a workshop
Identify and prioritize your business challenges, explore how SAP Leonardo might help to rapidly solve them, and define a path for the way forward.

Design for the future
Use a guided process to reimagine the future of your business and uncover where a blend of SAP Leonardo and established technologies might take you – from testing a new business model to organization transformation.

Accelerate
Draw on our library of industry innovation kits to address common value propositions, and let SAP guide you to a business outcome in weeks, not months.

Bring your own idea
Bring a defined idea and we’ll support rapid prototyping and progression with a constant eye toward how to scale it across your business.
SAP Is the Innovation Partner for Banks

Ten-year innovation vision
Deliver fully intelligent business solutions and networks that span across 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 the 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.

- More than 14,100 banks in 150 countries are innovating with SAP solutions.
- 46 of the 50 world’s safest banks run SAP solutions.
- All lines of business are supported 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.

- Use proven methodologies to drive innovation from reimagining customer experiences to enhancing operations
- Fuel your innovation through a managed innovation ecosystem from SAP
- Build your own innovation capability and culture

SAP delivers support for becoming an intelligent enterprise in the banking industry – providing integrated business applications that use intelligent technologies and can be extended on SAP Cloud Platform to deliver breakthrough business value.

Learn more
- SAP.com for banking
- SAP Leonardo
- SAP Digital Business Services
- SAP Design Thinking