



NEXT-GENERATION BANKING

From Traditional Banking
to Invisible Finance

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FROM DIGITAL TO NEXT-GENERATION BANKING

In 1472, the very first bank was established in the Tuscan city of Siena. The bankers needed three fundamental capabilities. Firstly, they needed access to capital. Secondly, it was essential to build relationships with people that required financing. And thirdly, they had to leverage a broad range of information to understand how to maximize their profits from lending, investment, and arbitrage.

Banking has come a long way since the renaissance, but even major developments like regulations, global markets, and digital transformation have not changed the need for these three fundamental capabilities. Of course, technology has enabled new financial products and services, better customer experience, and the real-time availability of information that banks need to pursue profitable business models.

Even today, capital, customer relationships, and information (or data) are still the three asset classes that shape modern banking.

But the times are changing in the Financial Services industry. We can already see the first signs of an upcoming impact that will be orders of magnitude bigger than anything before. We now anticipate a Cambrian style explosion of new banking models, each offer immense opportunities for banks worldwide. But at the same time, these models could eliminate a large part of their current power and influence on the global economy.

This Cambrian style explosion is being driven by what we see as six major developments, all coming together at the same time in a way that has never happened in the history of mankind.

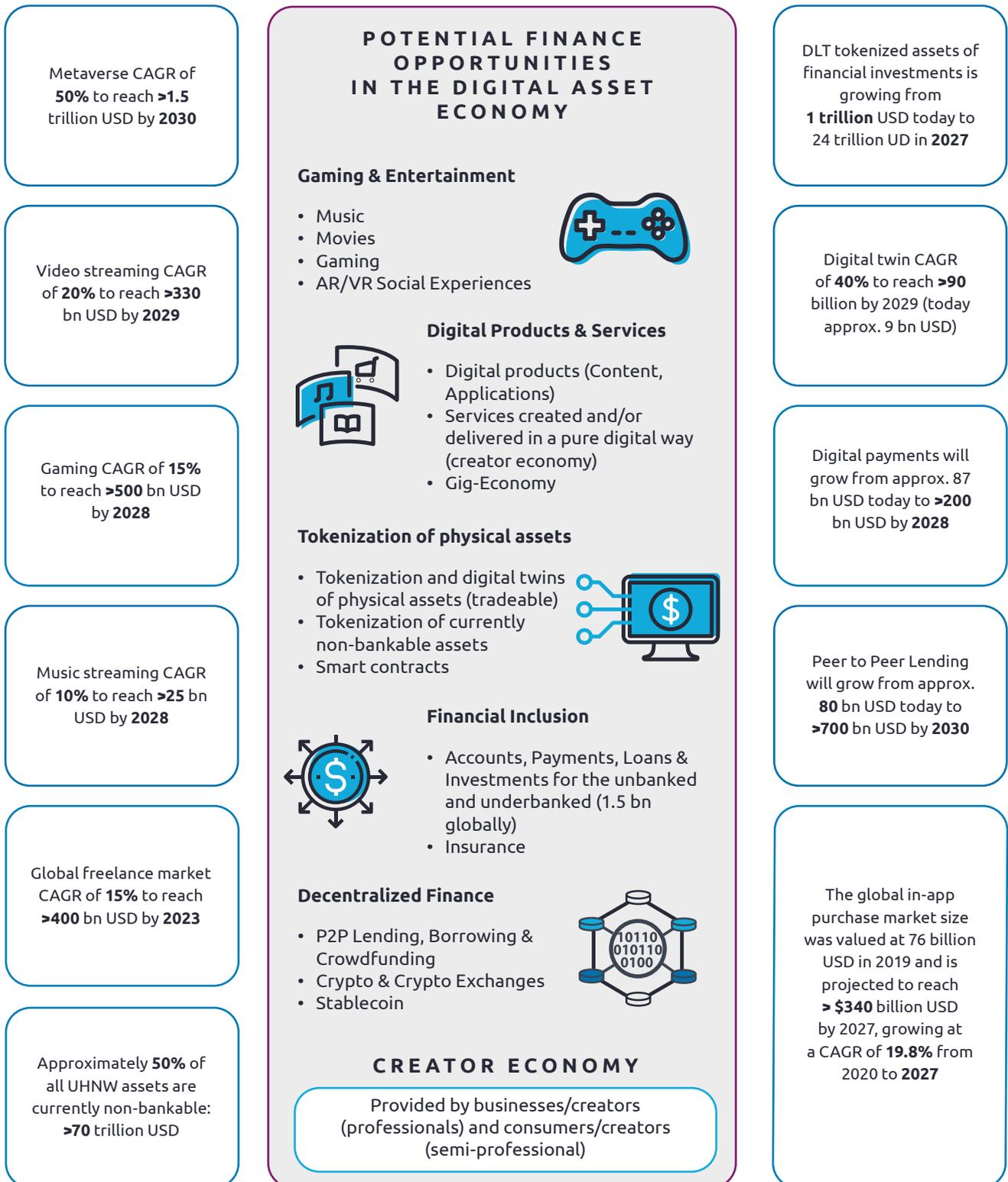
6 FORCES OF CHANGE IN BANKING

-  Growth of the Digital Asset Economy
-  Emergence of Platform Business Models
-  Changing Customer Experience Expectations
-  Intelligent products based on Artificial Intelligence and Analytics
-  Breaking up of Financial Services value chain
-  De-coupling of banking license and balance sheet from offering financial products and services

The biggest impact is the emergence of what we call the shift from digital business to the Digital Asset Economy. This new environment consists of any product and service that is either directly or indirectly (digital twin) created or delivered in digital form.

In such an environment, everyone can become a creator, with a significant shift in power from banks to platforms, and even creators.

RELEVANCE OF DIGITAL BANKING ASSETS ON BANKING BUSINESS MODEL ARCHETYPES



The next three developments are the emergence of platform businesses, intelligent products based on Artificial Intelligence (AI), and changing customer expectations driven by global best practices.

Combined, these six independent and accelerating developments are shattering the foundation of Financial Services, leading to a broad range of what we call “Next-generation Banking Models.”

The fifth force of change is specific to the banking world. This is because of the potential for breaking the Financial Services value chain into components that can be re-assembled in various ways through different entities.

To make our point in a more provocative way, we believe “digital banking was yesterday,” and today and the future belong to Next Generation Banking models.

Finally, the sixth force is the de-coupling of banking licenses and balance sheets from financial products and services offers. This is based on what is known as “Banking as a Service.”

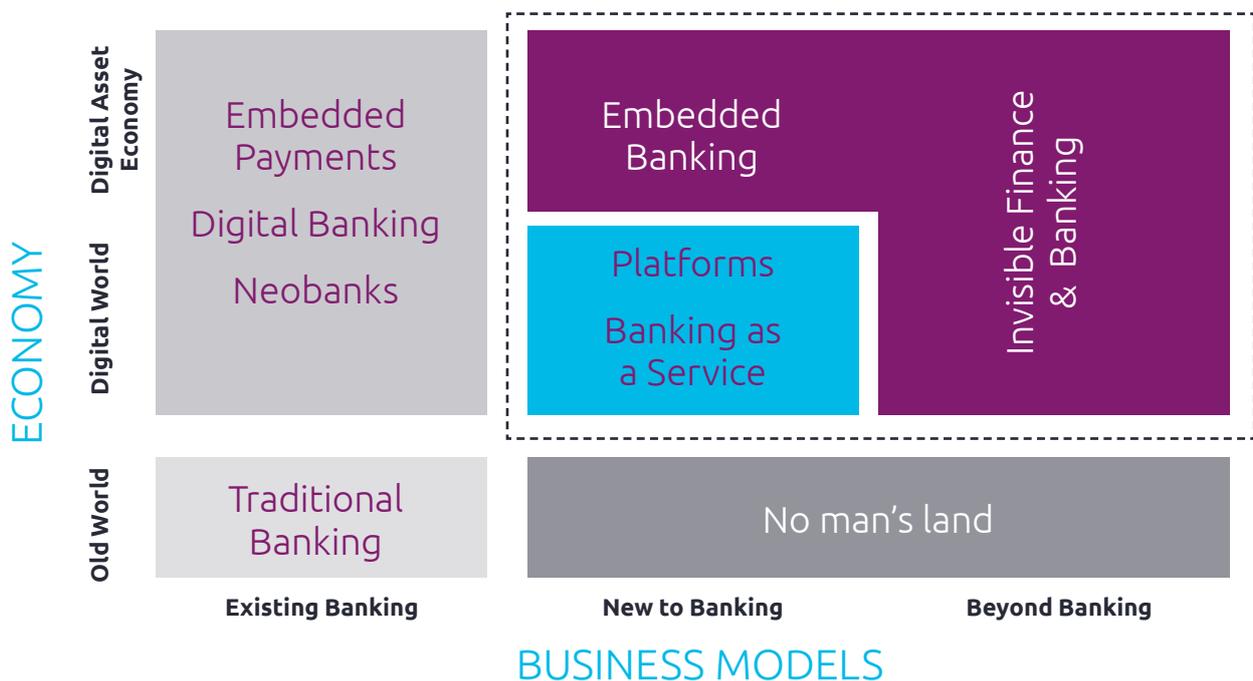
CHARACTERISTICS OF INTELLIGENT FINANCIAL SERVICES PRODUCTS





NEXT-GENERATION BANKING MODELS

Of course, making predictions is hard, especially about the future. This is particularly true of banking. Nobody can predict its future, but we have identified a series of new archetypal banking models with great potential. These new archetypes are Banking as a Service (BaaS), Industry Platforms, Embedded Banking, and Invisible Finance and Banking.



Banking as a Service is its own Next-generation Business Model, but it also enables other new Business Models. It gives banks the ability to leverage their investments in IT by getting other banks (e.g., smaller regional or local banks) to switch from their outdated IT to modern platforms. Smaller local or regional banks can barely afford to keep their IT compliant with constantly increasing regulations. But with BaaS, they can leverage a modern banking platform with a variable cost base.

BaaS also enables firms without a banking license to offer Financial Services products (white labelling). A large retail chain can use consumer financing (buy now pay later, branded credit cards, consumer loans) to increase overall customer experience, drive sales, and increase profitability.

BaaS is the foundation on which many other Next-generation Banking Models are built.

Platform Business Models are a major force in our economy. Companies like Amazon and Apple have mastered the platform approach. Consumers now find it hard to escape them due to their optimal customer experience. Consumer Platforms play a dominant role in our economy, and many of these platforms have a clear strategy to replace banks for Financial Services needs through their own financial products (see BaaS).

But banks have still a window of opportunity in commercial and corporate banking. They can build industry platforms that brings all players within an industry and across the entire value chain together. Co-creation on these platforms can make them “game changers” for industries, enabling co-creation along the entire industry value chain. Banks can then infuse their financial expertise, advice, and products and leverage a significant data monetization opportunity for creating new revenue streams.

Embedded Banking ensures the seamless integration of separate financial and non-financial products into a single customer experience. Through Embedded Finance, banking functionality is absorbed into physical products, technology, or platforms for creating a seamless customer experience. Although the product or service and the financial transaction are separate, the experience for the customer is seamless. Ideally, product and financial aspects are indistinguishable. Embedded payments for ridesharing or in-car payments are good examples of this, but Embedded Banking also includes lending, insurance, and investing. The integration of new data sources and sensors opens entirely new banking product features (e.g., dynamic credit lines based on e-commerce data) or even new product categories (e.g., dynamic project finance through IoT devices).

Invisible Finance is a completely new Financial Services business model that currently only exists at the experimental fringes of our economy. Our definition of Invisible Finance describes a non-financial product or service that includes an indistinguishable finance capability. This goes so far that the necessary financial functions are an integral part of the overall product and hence inseparable from each other.

An entry level invisible finance model is what we call **Invisible Banking**. Invisible Banking connects banking products with non-financial products and services. From a customer experience perspective, they become invisible. The focus is on connecting and integrating Financial Services advisory and products with life-event-driven products and transactions. They should integrate in a way that makes them available but does not take focus from the main product, service, or transaction. Life events like buying a house, marriage, vacation, and leisure activities are all perfect opportunities for Invisible Banking.

Although Invisible Banking can be seamless, in many cases, the customer still has separate actions, agreements, and contracts that are not necessarily fully integrated.



INVISIBLE FINANCE DRIVES THE CREATOR ECONOMY, AND VICE VERSA

Invisible Finance enables Creators to integrate Financial Services into their products and services. The (non-financial) product or service includes all the potential financial capabilities for maximizing the customer experience. From a customer perspective, the product or service is inseparable from the Financial Services functionality to buy, use, securitize, and sell said product or service. The creator of the product or service is the one face of the customer for all aspects of buying, using, and selling – covering non-financial and financial aspects.

After intensively evaluating and discussing these new archetypal banking models with our banking clients, researchers, and technologists, we are confident that all five models will flourish. But Invisible Finance will rule them all. By using the analogy of the Cambrian explosion, we believe Invisible Finance will become the most successful species – effectively becoming the Homo sapiens of Financial Services business models.

How Invisible Finance in a smart Photovoltaic system eliminates business opportunities for banks

Tom is a proud owner of a brand-new photovoltaic (PV) system on his roof that generates electricity. But compared with traditional PV systems, Tom's system is smart in a way that includes an Artificial Intelligence agent connected to other agents. It also has its own payment and account functionality based on blockchain technology.

The system is constantly creating surplus energy for the house and Tom's electric car. Once the PV battery is at a certain level, the PV AI agent starts selling the surplus energy back to the energy system. But instead of a contract with a single electricity utility, the PV agent sells dynamically on an exchange that maximizes Tom's profitability.

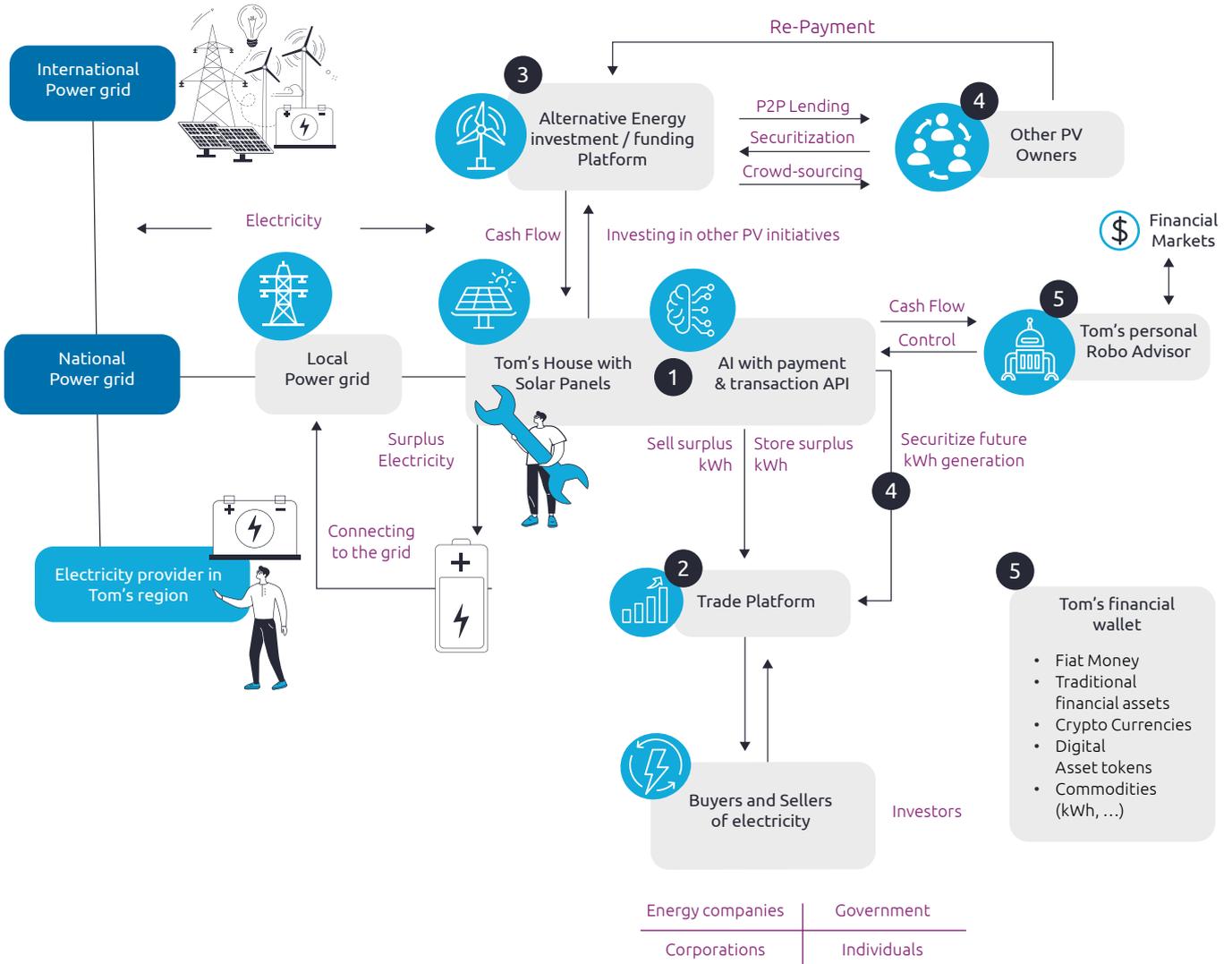
Additionally, the PV agent can also make decisions to invest the proceeds into a range of crowdfunding opportunities.

This helps to provide new smart PV systems for people who could otherwise not afford the significant setup investments. These crowdfunding investments are spread across a broad range of projects for risk management. The loan repayments with interest are paid back directly to Tom's PV account, coming from the newly funded smart PV proceeds from selling electricity on various electricity markets.

The PV agent is also connected with Tom's financial AI-based Robo-advisor. This facilitates the bi-directional flow of funds for maximizing the overall ROI of Tom's finances. These decentralized electricity markets even led to active trading in electricity for consumers (with spot and forward contracts). kilowatt-hours became as usable as fiat money, which creates significant challenges for governments and regulators (shadow banking).

If this scenario becomes real, it will eliminate loan business opportunities for traditional banks (funding assets that create a ROI) as well as wealth generating investment business services. Moreover, fee income from accounts and payments will disappear. And if kilowatt-hours are used for cross border transactions, there is a potential loss of FX business for banks. When kilowatt-hours (or any token or commodity) replace a share of the government-controlled fiat money, there are even wider implications for governments and regulators as well as non-Financial Services industries.

AN INVISIBLE FINANCE WORLD



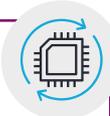
- 1 AI that trades Tom's surplus electricity (KWh) via spot and forward contracts via a marketplace along Tom's personal risk / investment profile
- 2 Energy trade platform connects Tom's AI with local, regional, national and global energy buyers, sellers and investors
- 3 Tom's AI invest (along Tom's overall financial planning) into other PV systems via an investment platform
- 4 Tom as well as other PV owners can securitize future KWh generation for immediate cash flow (with discount as in asset backed securities)
- 5 A personalized AI Robo Advisor that control Tom's overall financial activities leverages cash flow from PV ROI or provides additional funding for PV investing
- 6 Tom's financial wallet can hold various assets, amongst KWh that Tom can use for direct payments without conversion into fiat money

GETTING READY FOR NEXT-GENERATION BANKING

Although Invisible Finance is currently beyond the considerations of most bank CEOs, there is a strong case for starting to evaluate and strategize. This is due to both the incredible opportunity to grow a bank's business and at the significant threat to their existence. Our research shows that these "Next-generation Banking Models" require a fundamentally different approach to business strategy, as well as both the financial and operating model.

The next step is to assess the opportunity space for "Next-generation Banking" and to develop the ability to create intelligent Financial Services products that are ready for the Digital Asset Economy. Banks must significantly increase customer experience expectations in the physical economy as well as in the interaction and transition between physical and digital economies.

First, we have identified nine distinctive asset classes that bank senior executives must understand deeply for business strategy and capital allocation.

 <h3>Relational Assets</h3> <ul style="list-style-type: none"> • Trusted customer relationships (loyalty) • Best customer experience • Network effect / scale of user on platform 	 <h3>Financial Assets</h3> <ul style="list-style-type: none"> • Balance sheet / P&L • Access to capital • Credit / Risk score 	 <h3>Brand Assets</h3> <ul style="list-style-type: none"> • Brand / Awareness • Customer perception • Attractiveness for customer segments
 <h3>Intellectual Property Assets</h3> <ul style="list-style-type: none"> • Proprietary processes, features and code • Research & Development • Patents & Trademarks 	 <h3>Data Assets</h3> <ul style="list-style-type: none"> • Customer / business partner data • Analytics & insights • Security & Privacy • Data Monetization 	 <h3>Digital Assets</h3> <ul style="list-style-type: none"> • Unique content • Features & Capabilities • Digital products & services
 <h3>Talent Assets</h3> <ul style="list-style-type: none"> • Talent attractiveness • Development opportunities • Agility & empowerment 	 <h3>Sustainability Assets</h3> <ul style="list-style-type: none"> • Environmental focus • Social inclusion • Appropriate governance structure 	 <h3>Physical Assets</h3> <ul style="list-style-type: none"> • Physical products & services • Infrastructure • Manufacturing & Distribution

Thirdly, bank senior executives must create strong “sense and respond” capabilities. This will enable them to read early and weak signals that identify new opportunities or a shift in existing factors that drive their business. These predictive capabilities will become a question of survival, as new competitors from outside the industry that are not constrained by regulations can dramatically alter level playing fields.

Depending on the business strategy and the opportunity space identified for Next-generation Banking Models, senior executives must adapt their capital allocation to the nine distinctive asset classes. Furthermore, they need to (re-)define their business model and start developing

the 12 superpowers. But then comes the hardest step: “Activate.” This is the process of getting the organization ready for this new environment – especially the Digital Asset Economy.

Based on our investments in understanding and shaping the Digital Asset Economy, as well as our experience in re-engineering business models and digital transformation, we have identified 12 so called “superpowers.” Banks must develop all 12 to thrive and stay ahead of competitors that play by different rules with asymmetric strategies, asset classes, and operating models.



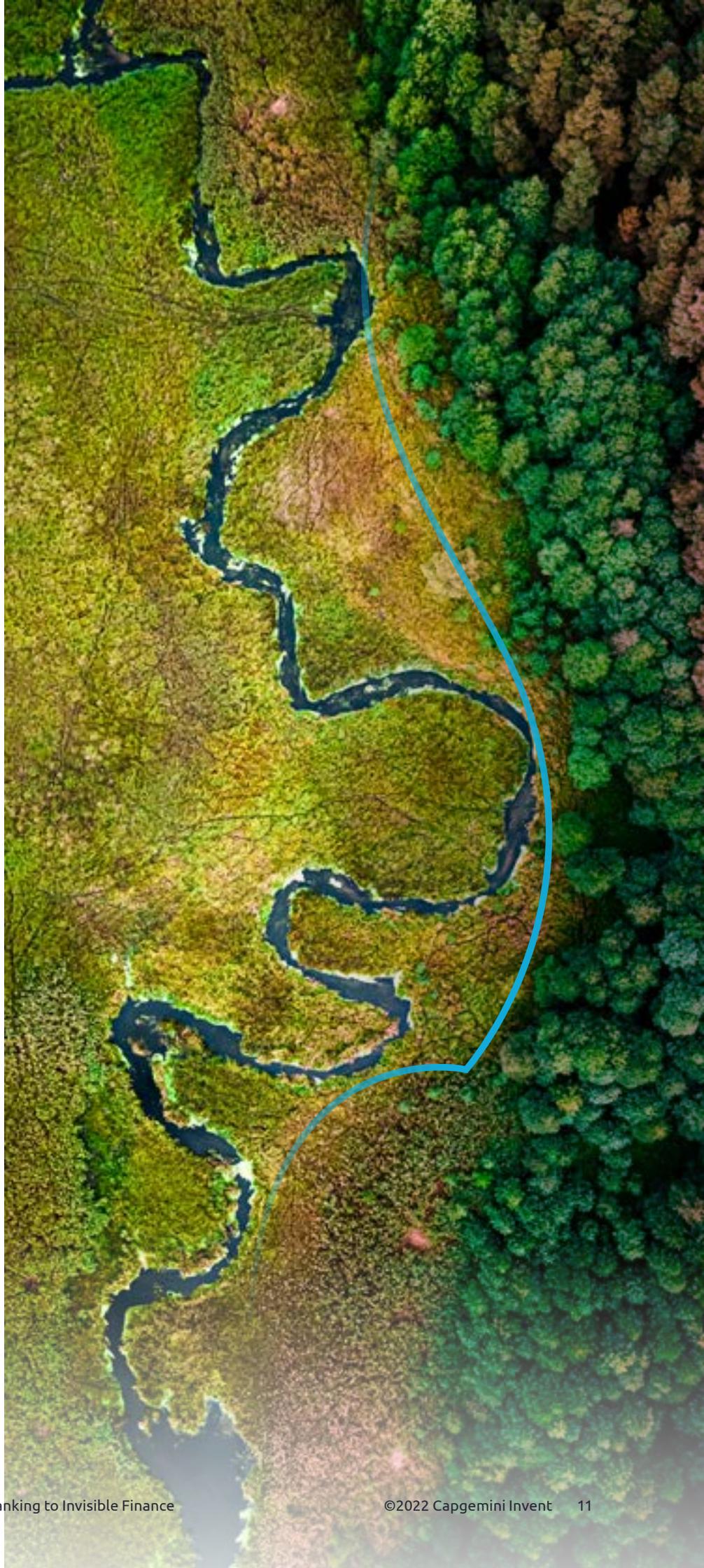
The shift from digital businesses to the Digital Asset Economy - combined with Invisible Finance - is not only a major challenge for banks. These two interconnected developments have huge implications on every industry and will create significant challenges for governments, central banks, and regulators.

In our daily work with senior executives of Financial Services firms, we see a strong interest in understanding the coming waves of change. But despite this enthusiasm, we also see a lack of bold vision and tangible actions to get their organizations ready.

We are confident that banks need to start now, as the transformation needed for this new world of business will take many years and is different to their current digital transformation initiatives. Banks will also face competition from areas that they don't even realize exist.

Nobody can predict the future, but as good Bayesians, our credence shows us that the potential for banks to get left behind in the race for new banking business models compels them to act now.

Rather than being caught off-guard and thereafter becoming insignificant, we believe bank senior executives should heed our bold and provocative view of the Future of Banking. It should be used as inspiration to take action and invent their own future - instead of letting others define their destiny for them.



SENSE

Discover What's going on?

Screen & Explore
Collect Data

Define Hypothesis
Developments in...

- Macroeconomic
- Political
- Socio-demographic
- Regulatory
- Competition
- Markets
- Customers
- Industries
- Products/Services
- Data
- Technology
- Talent
- Digital Asset Economy

Set qualified Assumptions
Build Credence

Focus Where to go?



Adapt What to build?

Gap Analysis

RESPONSE

(Re-) Define Asset Class Leverage

- Relational Assets**
 - Trusted customer relationships (loyalty)
 - Best customer experience
 - Network effect / scale of user on platform
- Financial Assets**
 - Balance sheet / P&L
 - Access to capital
 - Credit / Risk score
- Brand Assets**
 - Brand / Awareness
 - Customer perception
 - Attractiveness for customer segments
- Intellectual Property Assets**
 - Proprietary processes, features and code
 - Research & Development
 - Patents & Trademarks
- Data Assets**
 - Customer / business partner data
 - Analytics & Insights
 - Security & Privacy
 - Data Monetization
- Digital Assets**
 - Unique content
 - Features & Capabilities
 - Digital products & services
- Talent Assets**
 - Talent attractiveness
 - Development opportunities
 - Agility & empowerment
- Sustainability Assets**
 - Environmental focus
 - Social inclusion
 - Appropriate governance structure
- Physical Assets**
 - Physical products & services
 - Infrastructure
 - Manufacturing & Distribution

(Re-) Define Business Model



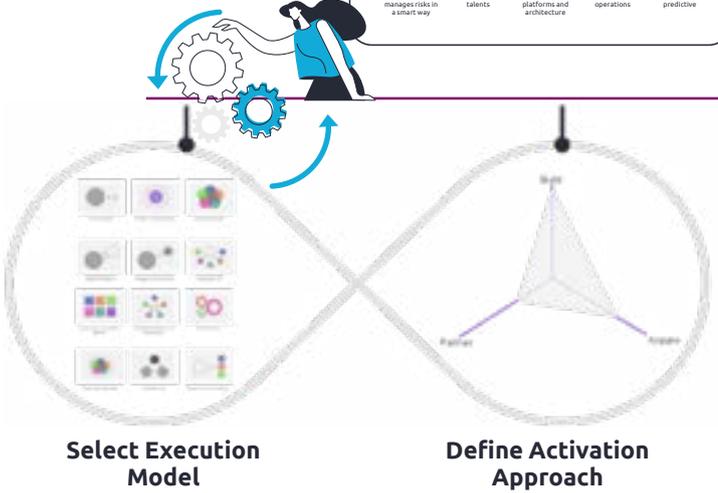
Next-generation banks need 12 superpowers



Activate How to get there?

Secure Success

- Measurements
- Experimentation Space
- Governance
- Methodology



NEW LEADERSHIP BEHAVIOUR AND STYLE

EMPLOYEE MINDSET AND BEHAVIOR

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