Preparing for tech-first future & best practices in financial services

Nagarro PoV on business agility, API management and execution approach
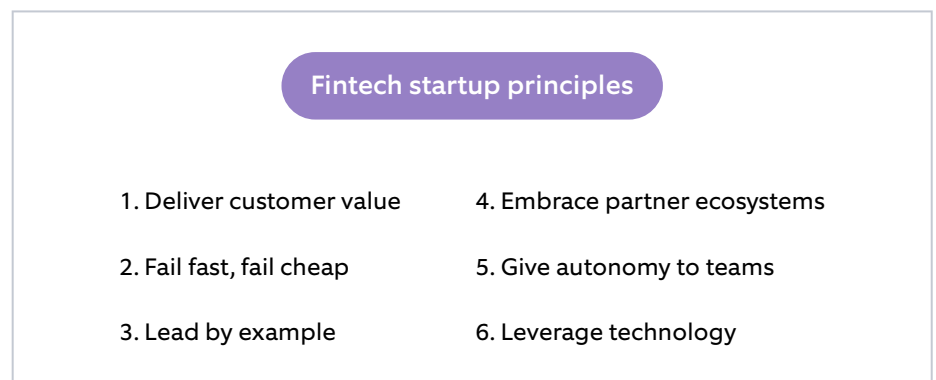
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Abstract

Are incumbent financial players like banks and insurance companies agile enough to adopt digital transformation across the board? Are they equipped to face the tightening regulations? Is API-enabled business the future for them? Bottom line, are they up to the competition of fintech innovation?

The truth today is, the time to transition from innovative technology to mass-market application is reducing rapidly for almost all industries, and the banking industry is no exception. Digital banks and fintech startups enable the masses to open bank accounts with a simple click, create automated ETF portfolios, detect fraud transactions using AI algorithms, and make cross borders at a fraction of cost. They disrupt markets with their innovation and business models by unbundling the services and removing friction in the value chain.

This reality is unforgiving. The incumbent financial services players understand that the competition is threatening their profitability and growth. They aspire to be nimble. But the path to business agility is anything but easy. The scale, legacy systems, culture, and product silos inhibit the ability to change quickly.

Where then is the solution? Well, it lies in (re)learning to unleash the power of innovation by following the principles of successful startups. These principles relate to customer-centricity, business mindset (failure, partners, technology), and strong leadership.


Fintech startup principles

1. Deliver customer value   4. Embrace partner ecosystems

2. Fail fast, fail cheap   5. Give autonomy to teams

3. Lead by example   6. Leverage technology

This paper elaborates on four ideas that we believe the incumbents need to implement to stay relevant and competitive:

• **IT as the new "powerhouse"**   • **API-fication**

• **Business Agility**   • **Innovation**

01. IT is the new powerhouse

The IT function is the new powerhouse for digital transformation and innovation.
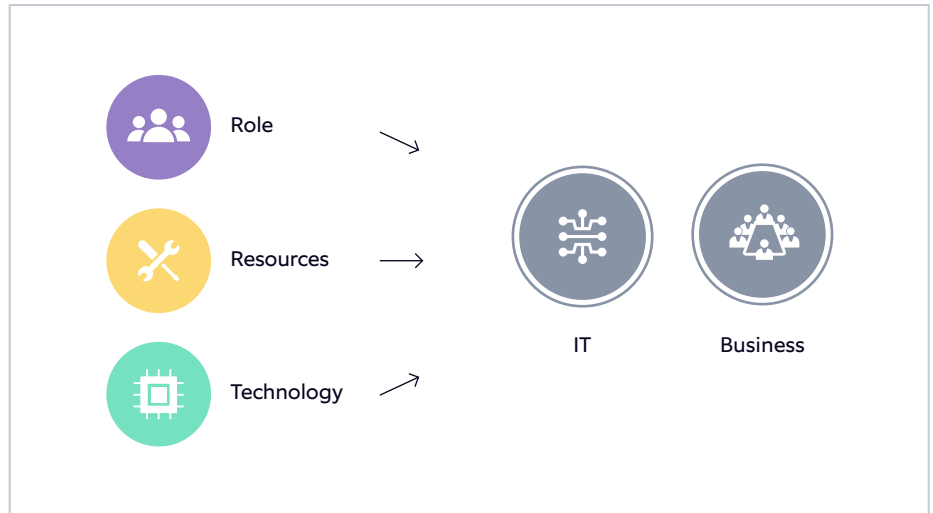
"Every industrial company will become a technology company."
- Jack Immelt, GE

Companies that plan to succeed tomorrow need more IT-enabled talent within the business and more business-enabled talent within IT. Essentially, this means that, rather than creating a business strategy followed by a technology strategy, the leadership must plan a unified approach.

The trend is catching up. Already a third of the Fortune 500 company boards include a former CIO / CTO. However, for many others, the leadership does not have CIOs in strategic discussions. The latter cannot present their case on how the business can potentially best use technology.

This calls for a mindset change within the C-suite: Technology is an enabler and a value creator, and not a cost center. The paradigm shift in the business will include:

• **a new role for business collaboration on strategy and operations**

• **an updated resource model offering the talent, methods, and tools to accelerate innovation**

• **and a futureproof technology foundation of flexible, scalable systems that speed releases of IT products.** (For instance, Tesla open-sourced its patents in 2014 to encourage others to build an ecosystem of supporting products, like charging stations).

Of course, the management must evaluate the IT team's role by checking how it makes the critical technology decisions at all company levels. It can track and measure the value produced by each technological investment.

Then, the management must push for a resource model that speeds innovation. This includes hiring high-caliber engineering talent, adopting agile working methods, using leading-edge tools, and partnering with targeted vendors. They can track the value-add by checking metrics like the time to deploy new applications, and the scope and quality of IT services outsourced to partners.

Most longstanding companies have a core of aging enterprise-wide applications and enterprise resource planning [ERP] systems where addition and innovation are resource-consuming. If that is the case, the management must transition to a flexible, scalable software foundation with a modular architecture, enterprise-wide data, and AI-integrated cybersecurity. They can measure the quantity of custom development work that goes into building new IT solutions. They can evaluate the business decisions made with help from AI-enabled solutions. Again, they can check cybersecurity metrics to assess if the feature is acting as an enabler or a hindrance to the development of new offerings.

All these evaluations can be KPIs aligned to the business and IT vision. Take, for example, DBS Singapore, one of the global leaders of innovation in banking. They call themselves a 25000 people start-up. They have aligned their digital transformation KPIs to (1) customers acquired digitally, (2) transactions completed digitally, and (3) other products cross-sold digitally.

Indeed, IT is the new powerhouse. But all said and done, is this change easy for tightly coupled legacy systems such as banks? For that, we have first to understand how the software ecosystem implements business agility. Let us explore this in our next chapter.

02. Business agility is easier said than done

Business agility is the new mindset

Business agility is the new mindset

Business ability is the organization's ability to renew itself, adapt quickly to market changes, and react flexibly to customer needs through rapid experimentation and learning in a people-centric culture.

Make people awesome

Deliver value continuously

Modern agile

Experiment & learn rapidly

Make safety a prerequisite

Source: modernagile.org

Traditional organizations have a structural hierarchy: static and siloed. This is a massive bottleneck to speed and innovation. Software development has countered this tradition by coming up with Agile, Scrum, and other similar models.

Of course, there are many reasons to embrace agility - from improving speed to market for customers, streamlining collaboration & communication with stakeholders, to increasing employee motivation. However, we need to move from "doing agile" (tools and processes) to "being agile" (a culture or mindset), or in other words, "input steering" to "output steering". After all, new-age technologies and software are coming up regularly, organizations are engaging with customers and vendors more inclusively, and new developers have different expectations and needs now.

Today, we have "modern agile", the brainchild of Joshua Kerievsky. It is a concept that takes the whole ecosystem into account, not just software development. Modern agile suggests that we endeavor to make everyone in our ecosystem awesome. Protect people's time, information, reputation, money, health, relationships. And constantly experiment, fail, learn, do the process again. Amazon, Airbnb, Etsy, and others are living proofs of the success of modern agile principles. Mr. Bezos proudly says Amazon is a safe place to fail. Airbnb values continuous deployment so much that it has built it directly into its onboarding program.
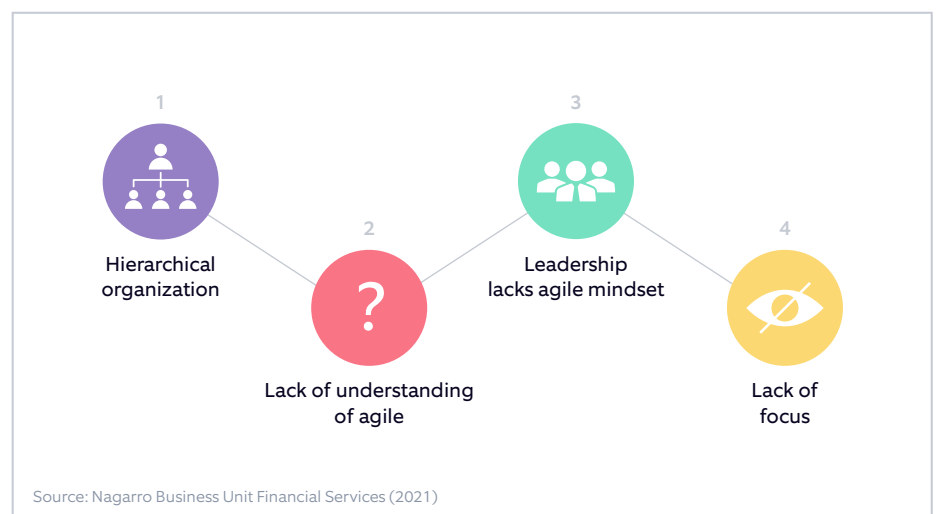
Effectively, an enterprise-agile organization is customer-centric. Typical enterprises will create small teams like squads, tribes, and chapters to give an agile structure. A squad owns a specific part of functionality end to end; it has a dedicated product owner and works like a mini start-up. A tribe, on the other hand, is a collection of squads within the same business focus, say, mobile. A chapter is a group of team members from different squads working in the same space, say, front-end developers. Going granular with teams is to promote teamwork, collaboration, innovation, ownership, and a sense of enablement to the members.

For instance, ING Netherlands is the first bank in the world to adopt an agile way of working. Check this video to find out how this new working synergy gives their teams end-to-end responsibilities to deal with customer demands.

Key challenges in embracing business agility

Of course, large financial institutions are already undertaking this fundamental shift. They are moving from the traditional model (designed based on supervision and production factors) to an enterprise agile model (designed for today's tech-first era).

However, we have experienced that the transition is not easy for many customers - from leading regional banks to fintech companies. We also observe that large banks are wary of negative publicity should the experimentation or transition fail.

1 Hierarchical organization

2 Lack of understanding of agile

3 Leadership lacks agile mindset

4 Lack of focus

Source: Nagarro Business Unit Financial Services (2021)

We summarize four challenges in moving from traditional SDLC (in most cases, waterfall or some earlier editions of agile) to modern agile:

1. Hierarchical structure - Most large financial institutions have a hierarchical or top-down-driven culture with siloed products. In contrast, companies with an agile mindset like that of a fintech look at the entire customer journey and can offer a more personalized customer experience.

2. Lack of understanding of agile - Agile demands a culture shift and complete understanding of the concept. We have seen quite a few large banks with teams still working in a 'mini waterfall' model.

3. Leadership mindset - Leaders need to give up the traditional hierarchy, formal meetings, overengineering, detailed planning, and excessive "input steering." They need to embrace empowered teams, informal networks, and "output steering." If they intend to be truly agile, they may encourage zero-base budgeting and conduct frequent reviews (maybe, quarterly) with a delta over the previous period.

4. Lack of focus - Sometimes, the management is hesitant to implement agile IT projects because they anticipate unplanned and last-minute requirement changes. Agile allows such diversions. It is not ad hoc but permits flexibility to adapt to the required changes to market dynamics.

Summing up, we agree business agility is easier said than done. But it is no longer an option; it is a matter of business survival now. As an extension of this concept, we discuss the trending of APIs to banking in our next chapter.

03. API management is an enabler and a mindset

Next to business agility, another success-critical concept is the embrace and management of Application Programming Interfaces (subsequently called APIs) - to unleash the power of innovation in the financial service organization. Generally speaking, this term refers to a software intermediary that allows two applications to talk to each other by exchanging data in a bi-directional way.

We can understand the meaning of APIs referencing Amazon, which issued a so-called API mandate in 2002. The company then directed all teams to expose their data and functionality through service interfaces and technically communicate with each other only through them (i.e., no direct linking, no direct reads of another team's data store, no shared-memory model, no backdoors whatsoever). Amazon's CEO at that time, Jeff Bezos, declared that all service interfaces, without exception, must be designed from the ground up to be externalize-able. To emphasize his demand, he explained that anyone who does not do this would get fired!

Indeed, Jeff Bezos realized early that API management is a strategic enabler for enterprises in any industry to interact with the ecosystem and to run IT operations. Enterprises can exchange data with external parties in the ecosystem via APIs to "export" or "import" data products. In financial services, we refer to them as banking-as-a-service and banking-as-a-platform, respectively. API-enabled banking as a service describes the execution of a financial service provided over the web on own or 3rd party properties. In contrast, API-enabled banking-as-a-platform allows third-party developers to build products and services for bank customers. As a crucial principle of agile enterprise architecture, "API first" aims to decouple the IT landscape and benefit product innovation, business agility, and time-to-market.

However, people sometimes simplify API management as just a highly secure, efficient, and scalable data exchange between applications. This is far from the truth. In fact, it requires – among others – setting up an enterprise-wide API governance architecture. Further, it creates new product development options and business model designs by fostering interaction with selected parties in the relevant ecosystem. That is why we at Nagarro see API management as a new way of thinking in which the "API-as-a-product" mindset plays a central role.

The "API-as-a-product" mindset represents a demand-side way of thinking that fundamentally differs from point-to-point integrations representing a supply-side way of thinking. The latter thinking puts a strong focus on customer orientation, respective productization, and complimentary self-service capabilities.

Against this background, we believe that leadership sponsorship is critical to driving an API-enabled business transformation successfully. Although, the required breadth and depth are humungous. Leaders need to set strategic goals for the organization, create derived business and IT strategies, and decide communication and behavioral incentives to encourage a transformational mindset.

Today, most enterprises already somehow use APIs in response to regulatory requirements, operational needs, and strategic considerations. However, we have seen that the clarity on the higher intent, the starting point in terms of API strategy maturity level, and the understanding of the following steps to move forward in this transformational journey vary significantly. Against this background, we have developed a kickstart offer for API-enabled business transformation:
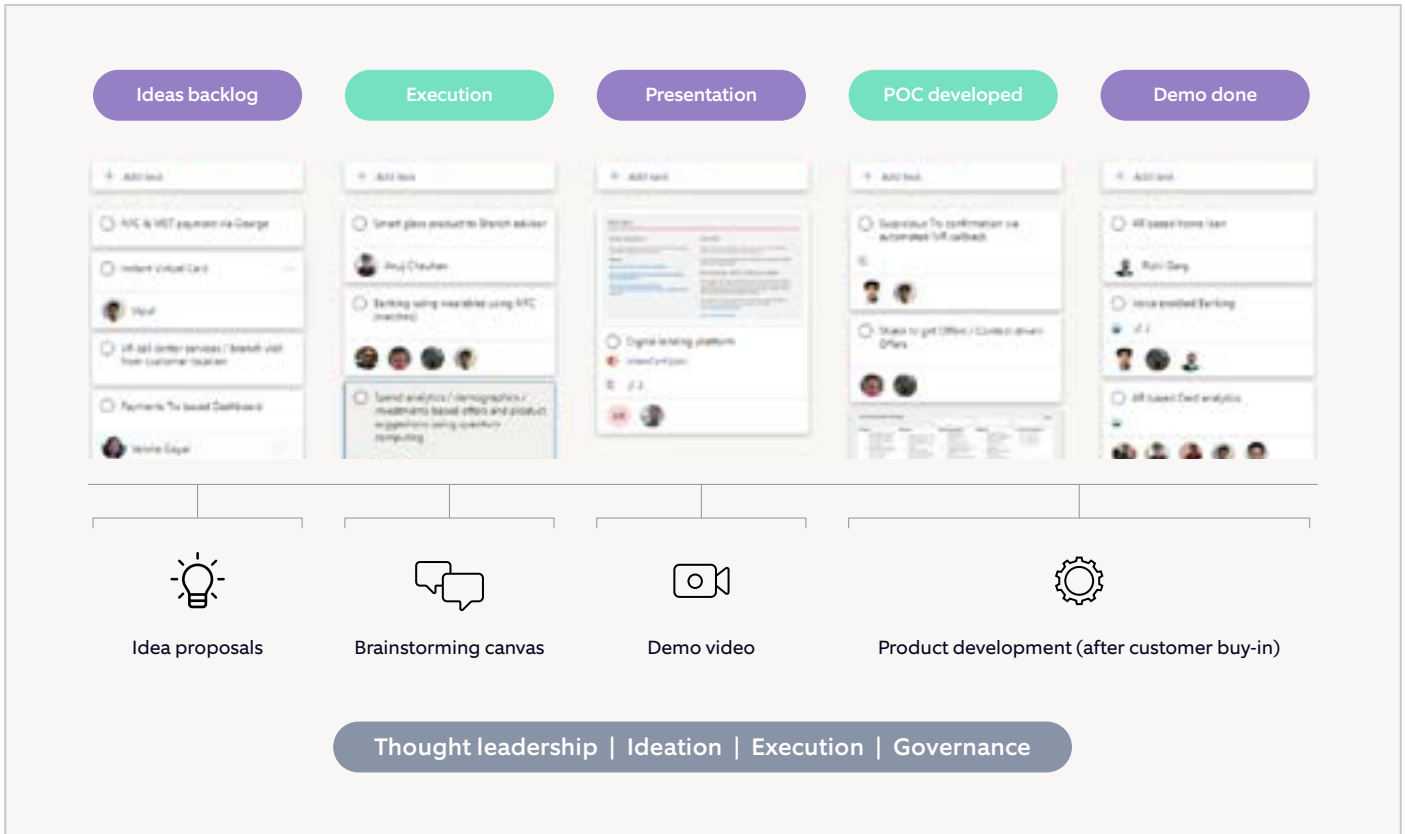
	API strategy maturity assessment (Pre-Workshop - 2 hrs)	API management (re)design (Workshop - 6 hrs) Format: 3x2 hrs
Deliverables	• API strategy maturity status quo • Potential areas for improvement	• Joint understanding on problem space • (Interim) Target state for advanced API management • Roadmap and next steps to move forward with senior mgmt buy in
Main Contents	• Setting the stage • Structured dialogue on the basis of the questionnaire • Instant derivation of assessment findings, debrief as workshop prep	• Check-in with API vision, findings on API strategy maturity assessment • Exploration on the existing problem space and underlying root causes • Joint definition of (interim) target state for advanced API management • Derivation of required actions and high-level roadmap for execution • Agreement on next steps re roles, responsibilities to kickstart initiative
Stakeholders	• Head of IT • Chief Architect	• CIO (partially) • Head of IT • Chief Architect • Selected business / API consumer representatives (to be carefully selected)

This kickstart offer is made of a tool-based assessment on the API strategy maturity level to understand the starting point and potential areas where to act. As a follow-up to this assessment, we do an online workshop. Here, we focus on the (re)design of advanced API management by jointly elaborating on the (interim) target state in the transformative journey. After the senior management buy-in, we create a high-level roadmap and decide on the following steps to move forward with hands-on execution.

Moving forward. In our next chapter, we explain how we introduce innovations in our work while implementing business agility and API management for our clients.

04. Innovation: Execution in a systematic manner

Ideas backlog | Execution | Presentation | POC developed | Demo done

Idea proposals   Brainstorming canvas   Demo video   Product development (after customer buy-in)

Thought leadership | Ideation | Execution | Governance

Innovation is an excellent yardstick to measure the business agility of an incumbent. But this must be linked to the ideas that can see the light of the day. In itself, an innovative idea may be a version of creativity. The true challenge, however, is in its execution.

At Nagarro, we have unique POVs on **banking topics**. We adapt "Design Thinking" to come up with innovations for our customers. While analyzing the project value chain, the team brings in an outside-in perspective for product lifecycle, user personas, and their journeys - in the form of swim lanes. They then brainstorm to eliminate the friction points in upstream and downstream systems, refine the use cases, and execute them once agreed. The project team considers every such idea with entrepreneurial zeal. Of course, there is a process for regular cadence, including celebratory wins.

One such example is a pilot to eliminate friction for a mortgage customer **(watch this video)**. We capture the whole customer journey from exploring houses to financing through a bank. And while at it, we minimize all friction points like the lack of transparency, inefficient documentation, and wet signatures.

05. Push change now, don't play innovation theater

Three critical concepts to unleash innovation

1. **Technology and data** are becoming increasingly important as the enabler for new business and higher competitiveness

2. Transition requires **changing people's mindset** to service leadership, enablement, and incentives

3. **It's all about execution.**
"In real life, strategy is actually very straightforward.
You pick a general direction and implement like hell"
- Jack Welch, CEO, General Electric

The global pandemic has pushed banks' digital transformation plans from an opportunity with a long lead time to an immediate necessity. With plummeting interest rates and margins, rising risks, tightening regulations and, aggressive and nimble fintech companies - the road forward is a no-brainer.

Financial institutions must embrace emerging technology (AI/data personalization) and design thinking. They must adopt agile as a framework and way of work. They must focus on customers, adopt zero-base budgeting (meaning, starting from zero and not anchoring on the previous budget), and review budgets more frequently, say quarterly.

Yes, it is essential to sharpen focus and make meaningful changes now. Banks or insurance companies cannot allow their initiatives to end up as innovation theater (that is, mere surface-level changes with no noticeable business impact). The aim must be to look into the future and embrace disruption in all its colors.

Nagarro workshop

Welcoming you to a 2-7-day workshop where we introduce Nagarro's customized "thinking breakthroughs" framework. Here, we understand your challenges and propose - how you can implement business agility, enterprise architecture, mobile-based offerings, UX & design, and other related areas. Being an enterprise-agile organization ourselves and having worked with clients across the globe and domains, our team of consultants, analysts, trainers, and coaches walk the talk.

Our major workshop subjects

Short, intense and collaborative consulting exercises

Thinking Breakthrough workshops

Blue sky idea generation | Topic based ideation - Defined problem
Use case detailing | Technology enablement | Roadmap creation

Business Agility
• Integrating agility in business
• Continuous delivering value
• Agile coaching and transformation

Enterprise architecture
• Enterprise application portfolio rationalization

Mobility
• Mobile app development platform (MADP) consultancy

Cloud
• Cloud enablement & transformation

User experience & design
• Personas and empathy maps
• User flows and journeys
• Wireframes & mockups, etc.

Quality assurance
• QA organization health check
• Automation health check

DevOps
• DevOps maturity assessment
• DevOps transformation roadmap

Big Data
• Enterprise data lake for data-driven decision support

Security
• Vulnerability assessment
• Penetration testing
• Red teaming / attack stimulation

So, are you ready? Drop a mail at **sandeep.gupta@nagarro.com** or **bernd.schulze@nagarro.com** to take the first step!

![nagarro logo]

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