

Harnessing the Power of Technology for Banking-as-a-Service

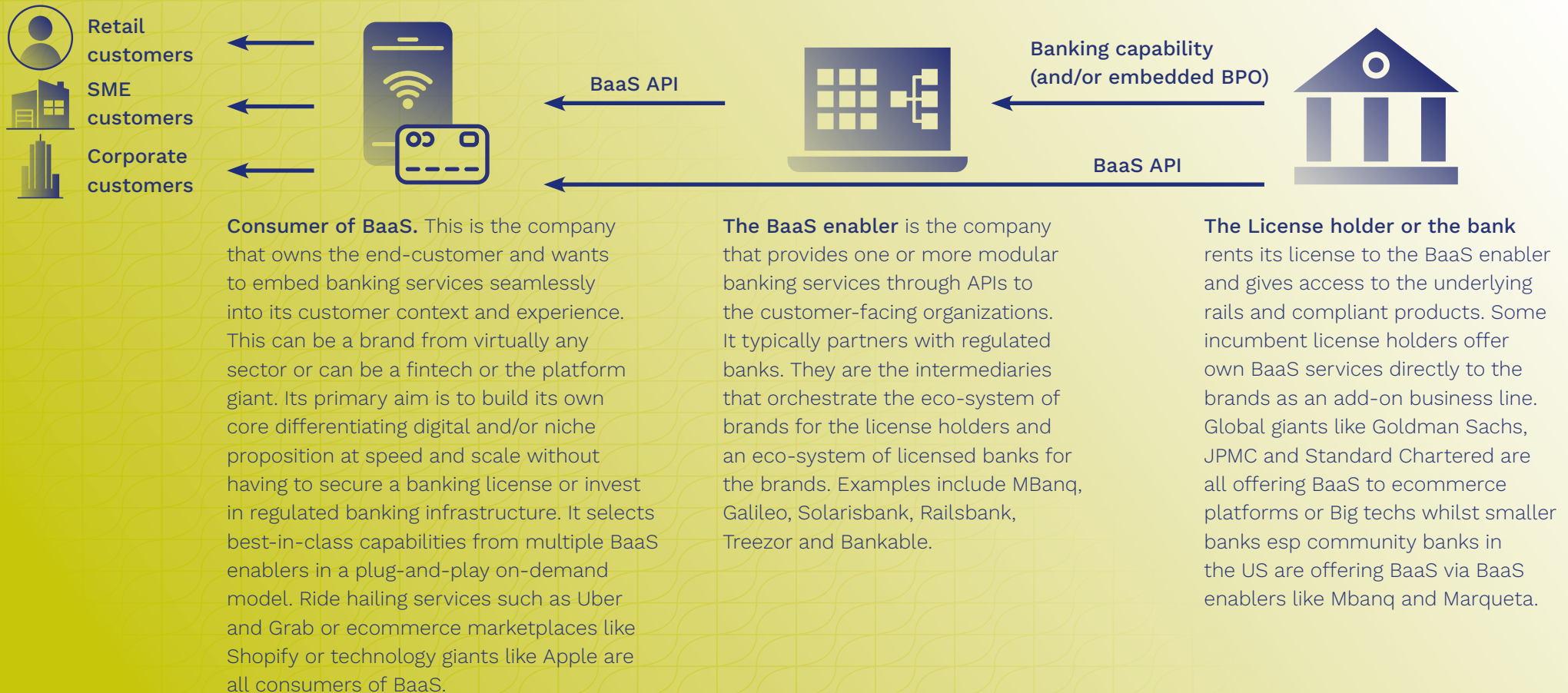
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The Banking-as-a-Service Value Chain

Since the COVID-19 pandemic, embedded finance and consequently banking-as-a-service (BaaS) are on an exponential trajectory of disrupting the banking value chain, mainly in retail and SME.

BaaS is the provision of complete banking processes (deposits, loans, payments) as a service from specialist cloud-based API platforms that use a licensed bank's secure and regulated infrastructure to enable delivery of financial services at the point of customer need: embedded finance.



Momentum in the Industry



The market capital of organizations engaged in embedded finance globally is expected to reach \$7 trillion by 2030 according to various analyst reports. The US is a dominant player where BaaS revenue is expected to reach ~USD 25B by 2026. In Europe, specialist BaaS enablers like Solaris, RailsR, Treezor have grown astronomically with revenues rising 100-200% in past 2-3 years.

\$7t

Market value created by embedded finance activities by 2030

24%

CAGR of embedded finance revenues from 2022 to 2029

39%

Banks already have or intend to have a BaaS strategy

This is happening for the following reasons:



First, rising demand for **simple and holistic experiences embedded** into consumers' daily lives and into the daily operations of small to medium enterprises (SMEs).



Consumers and businesses **trust** and are more willing to procure financial services from brands.



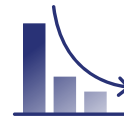
COVID-19 has speeded up **digital customer journeys** across industries and is facilitating brands to see financial services as just another product enhancement to their user journeys. Innovations in payments such as digital wallets and request-to-pay and embedded lending products like buy-now-pay-later are all driving embedded finance.



Across the world, **open banking** is promoting the development of banking APIs and universal access. This is driven by regulation as well as the rise of infrastructure aggregators like Plaid and Tink who are changing customer expectations of data portability.



Fintechs and neobanks increasingly need access to bank accounts, payments and lending without having to **procure a banking license**. They require end-to-end BaaS infrastructure, regulatory support and balance sheet and other funding sources to serve their customers. This is much faster and easier with a BaaS enabler – for instance, it typically takes just two months instead of 15-18 months to launch BaaS with a provider. It is also cheaper as the consumer of BaaS can adopt a pay-as-you-go model, with a much smaller upfront investment but recurring fees that scale as they grow.



Finally, there is continuing pressure on **banks to find new revenue models**. BaaS partnerships help banks grow their balance sheets profitably as the brands offer them a channel to acquire new customers cheaply and rapidly through their differentiating propositions. BaaS provides them a means to collaborate rather than compete with new entrants and a scalable business model to grow, particularly in markets or segments where they do not dominate.

The Technology Recipe for BaaS

As a banking technology provider, Temenos supports the Banking as a service (BaaS) value chain by directly providing all providers of BaaS, whether the BaaS enabler in the middle or the license holder, with the underlying technology and banking capabilities required to service the consumers of BaaS i.e. the brands and the fintechs. BaaS exposes license holders to the risk of providing regulated banking products to customers they don't own directly. Our mission to provide software for regulated banking operations and processes continues in the banking-as-a-service world and to ensure all parties in the banking-as-a-service value chain are compliant.

Buy Now Pay Later

\$120 / 2 weeks 6 weeks

\$100 / month **Interest free**
6 months

\$0 due today

APR	Interest	Total
0%	\$0	\$600

\$58 / month 12 months





The Platform - SaaS for BaaS

The Temenos Open Platform for Composable Banking has the breadth and depth of functionality from product engines to financial crime, payments and origination that enables banks or license holders to not only run their own business but also provide BaaS to brands with the same underlying platform.

Our open product capability allows the rapid creation of non-banking products such as insurance to meet the diverse needs of the brands. Furthermore, we partner with BaaS infrastructure providers including API aggregators (e.g.,Tink) as well as payment initiators and card issuers (e.g., Marqueta, Paymentology) through the Temenos Exchange where their solutions are pre-integrated and available to our clients.

Moreover, Temenos' SaaS offering, the Temenos Banking Cloud leveraging the full power of the hyperscaler cloud providers,, complements and supports the BaaS plug-and-play model of consumption to enable the providers of BaaS to cater to the diverse needs of multiple brands and to elastically scale to support their growth. With continuous updates or evergreening, the BaaS enablers can consume new features as they become available to develop their brand-specific propositions at their own pace and desired frequency.

The Temenos Banking Cloud offers banks the opportunity to rapidly launch their BaaS proposition through a parallel SaaS stack that can be set up quickly. Those banks already running Temenos can leverage our SaaS offerings to run their own business as well as BaaS from the same stack.

The Architecture

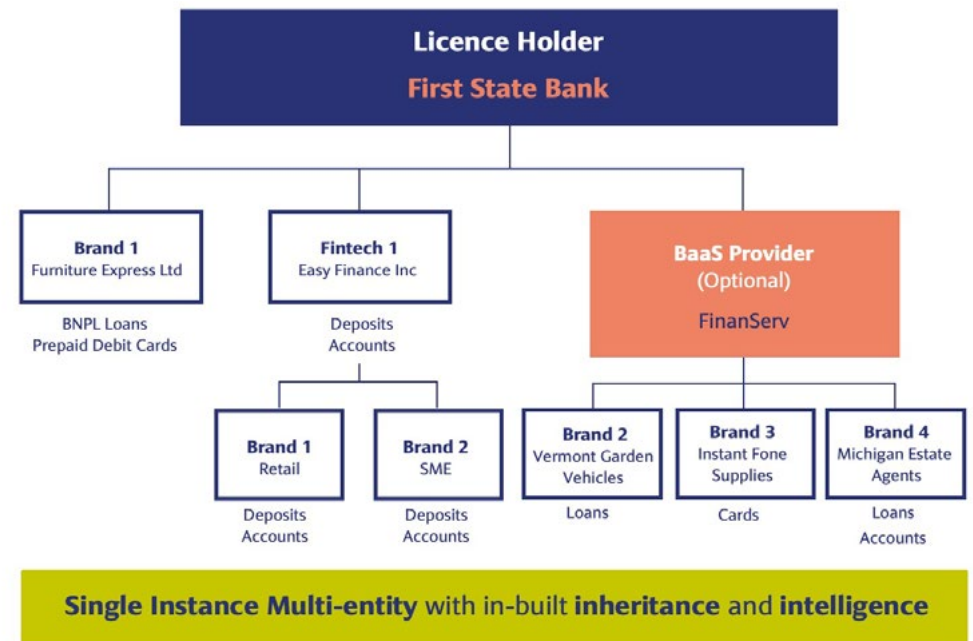
The Temenos Open Platform facilitates BaaS from a single-instance, multi-entity architecture with in-built intelligence and inheritance of product definitions to allow license holder to:

- Support multiple brands
- Ringfence the customer base of each brand (Resource and Data isolation)
- Have direct visibility over all end customers
- Leverage data and analytics within each brand and across all brands

This single-instance, multi-entity architecture offers operational efficiency and maximum leverage of the technology stack and shared compliance overhead. At the same time, it allows the license holder control and flexibility over key software decisions such as upgrade cadence, isolated extensions, and rollout of new features in order to manage risk and compliance as a regulated entity.

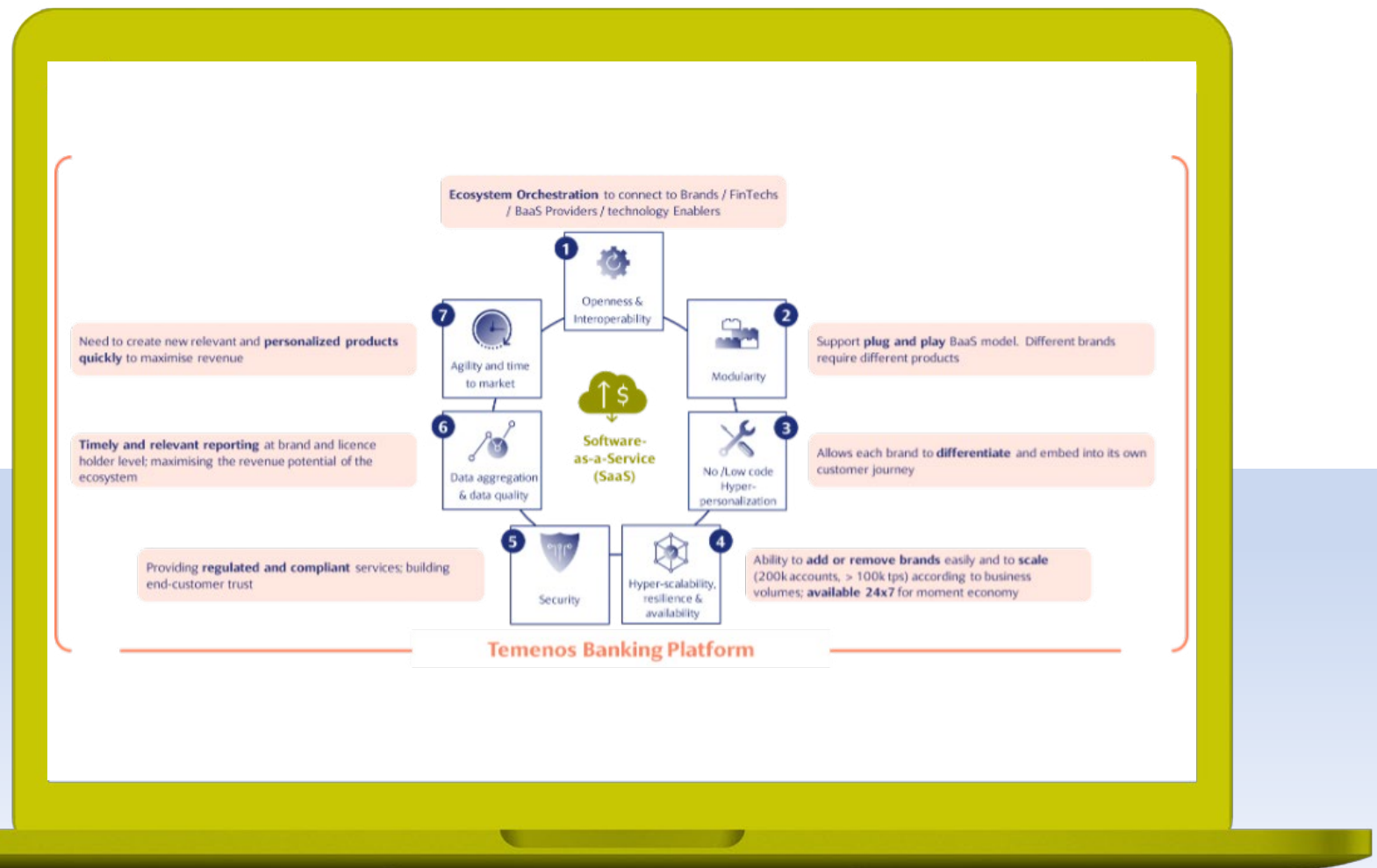
The principles of product hierarchy and inheritance at the license holder, BaaS enabler and brand levels allows the licence holder control over risk and exposure centrally whilst allowing the brands to offer attractive and relevant products. The master is set at the license holder level and can be over-ridden selectively at the brand or fintech level. Product inheritance allows faster time-to-market for the brand-specific products. Our platform's open product capability helps the license holder facilitate brand-specific products, often with features that are not supported by the licence holder's legacy systems.

How Temenos multi-entity architecture implements BaaS – Example



The Technology: 7 Key Attributes

The Temenos Open Platform for Composable Banking has all of the seven distinct technology attributes that Banking-as-a-service demands.





1. Openness and interoperability

Beyond the basic ability to consume and provide external APIs to brands, fintechs, other BaaS enablers and aggregators and complementary technology providers per regulatory and industry standards in the markets they operate in, banks and BaaS enablers must be able to adapt their APIs rapidly to changing open banking and other regulatory requirements. Developer portals with advanced API documentation and ease of use as well as pre-integration to an eco-system of third-party technology providers are a prerequisite for open banking and BaaS. The digital journeys of brands providing embedded finance are necessarily simple and slick. Our platform offers APIs focused on building best-in-class digital experiences.



2. Modularity

BaaS enablers need to support a plug and play BaaS model where different brands require different products that must be deployed, upgraded and supported independently. The brands want to deliver these banking products and services at scale embedded into their highly personalized customer journeys. Often, this means specialized point solutions for niche retail segments (based on shared lifestyle or shared beliefs like immigrants or climate activists or LGBT communities) or industry verticals (gyms, beauty salons, takeaways).



3. No code / low code hyperpersonalization

Ultimately, BaaS is about the brands' ability to hyper-personalize the banking products they embed in their own client propositions and journeys. These digital journeys are highly personalized and the corresponding banking product journeys need to be at par with these in terms of personalization. Therefore, the license holder as a regulated entity needs to control the brand-level "customization" whilst providing the utmost flexibility. This delicate balance is achieved through the platform's advanced configuration and extensibility capabilities with a ready-to-consume developer experience and standardized tooling, maximizing re-use of best practices.

The license holder can use no code configuration to set up parameters for each brand and can also use the extensibility framework to provide code extensions or to facilitate integrations. Code extensions allow complex pricing and product conditions and complex compliance rules and limits. Moreover, these are protected through continuous updates. The brands can use the no code configuration to further tweak their products within the limits set by the license holder. They can use the extensibility framework for integrations but do not have code extensions available.





4. Hyperscalability, resilience and availability

For providers of BaaS, the ability to add or remove brands easily and to elastically scale according to business volumes is key. A payments platform giant launched their “Buy Now Pay later” embedded lending product on the Temenos Banking Cloud, reaching 200M loans across multiple countries in just over 3 years, proving the massive scalability of the platform. The moment economy in the world of embedded finance is all about being available 24x7 and brands consuming BaaS require industrial-strength resilience with near zero risk of outages.



5. Openness and interoperability

This is arguably the most important requirement as the BaaS value chain involves customers’ personal and financial data being shared through a complex web of stakeholders, albeit with their consent. Hence, the underlying technology must have comprehensive security spanning authentication, authorization, access control and non-repudiation, covering all data privacy requirements.



6. Data aggregation & data quality

BaaS requires timely and relevant reporting at brand and licence holder level to maximize revenue potential of the ecosystem and ensure compliance. Hence, the providers of BaaS must aggregate and analyse real-time transactional data to provide insights for the brands so they in turn can develop personalized propositions for their end-customers.



7. Agility and time to market

For BaaS enablers, agility in terms of scaling their APIs on demand or to rapidly personalize products for the brand or to help the brand expand into new geographies becomes key. The depth and breadth of available functionality localised for different markets is a key advantage to rapidly meet the needs of diverse brands. Also, the fact that the licence holder can derive product definitions, configurations and APIs all from the same platform greatly reduces time to value.

With 30 years of banking IP, Temenos is well positioned to provide industry leading banking capability and technology to enable the banking-as-a-service business model.



Author

Kanika Hope is the Chief Strategy Officer, leading Temenos' global business strategy with responsibility for market intelligence, strategic sales support and value-based selling. Kanika joined Temenos in 2015 as Global Strategic Business Development Director and she laid the foundation of value selling in Temenos. She established the renowned Temenos Value Benchmark program and an influential series of thought leadership insights on strategic banking issues and trends.

Kanika has nearly 30 years experience in banking technology and operations and has held senior roles within SAP, McKinsey and General Electric. Kanika holds an MBA from the Indian Institute of Management, Bangalore.



About Temenos

Temenos (SIX: TEMN) is the world's leading open platform for composable banking, creating opportunities for over 1.2 billion people around the world every day. We serve 3000 banks from the largest to challengers and community banks in 150+ countries by helping them build new banking services and state-of-the-art customer experiences. The Temenos open platform helps our top-performing clients achieve return on equity three times the industry average and cost-to-income ratios half the industry average.

For more information, please visit www.temenos.com

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