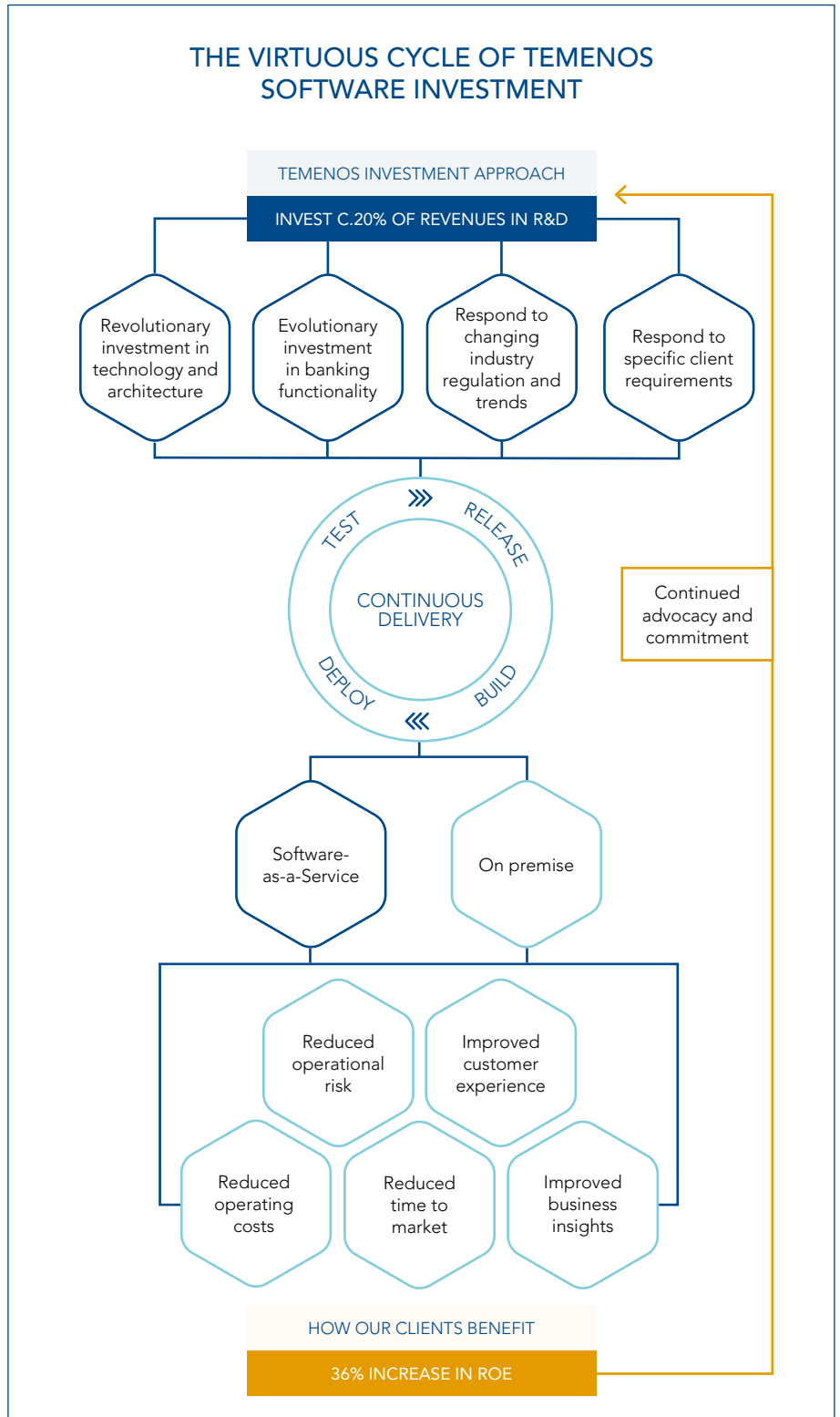


# DRIVING INNOVATION THROUGH PRODUCT INVESTMENT

## RESEARCH AND DEVELOPMENT

The Temenos software investment approach forms a virtuous cycle in which our clients influence Temenos' investment and therefore benefit from the improved product. This in turn contributes to their success. Our clients then advocate for our solutions enabling us to attract new clients continuing the cycle.



### Revolutionary investment in technology and architecture

In order to keep pace with the rapid rate of change in information technology, Temenos continues to invest significantly to ensure that its software takes advantage of the latest innovations. The technology changes required to support the growing business and regulatory interest in open banking are a prime example of this. What is revolutionary at one point becomes standard in the following years, and this is why it is important to continue with this investment approach. Examples can be seen in recent years in the adoption of mobile banking technology and the increasing desire to provide software solutions which are hosted on the cloud. Temenos offers updated software based on the latest technology to clients seamlessly through simple, regular upgrades.

### Evolutionary investment in banking functionality

Banking functionality changes more gradually than information technology, with evolutionary advances being made in banking products, industry practice and regulation. Temenos' investment in functionality over the past 25 years reflects this. Recent examples have included the embedding of analytics across the entire portfolio to support decision making by our clients and incremental investments in AI capabilities in areas such as the robo-advisor in wealth. We enable our existing clients to add new functionality to what they use already through regular updates, whilst releasing the latest software for new clients monthly.

### Respond to changing industry regulation and trends

Banking, being a highly regulated industry, is subject to the continuous changing of requirements by regulatory agencies. At Temenos, we actively follow changes in banking regulation, in order to build relevant solutions into the software and thus support our clients using the regular upgrade mechanism. We also anticipate other significant industry trends such as open and digital banking, and incorporate them proactively into our software.

### Respond to specific client requirements

As we enter new markets or work with new clients, it is possible that our software may require enhancement. We invest in our products to close these functional gaps, but also in such a way so as to make the new functionality of widest benefit possible to our existing and future clients. We do this by ensuring that flexibility is built into the design, and that the software is incorporated into the standard product. Our wide geographic reach across all banking segments means that enhancements developed for a specific client are often relevant in other markets and to other clients.

### Continuous delivery

Temenos builds, deploys and tests software on a daily basis. We use this as the foundation for the monthly release of upgrades to clients, which are then accumulated into one Annual Maintenance Release each year. All releases are cumulative enabling clients to upgrade when they want. The upgrade process is designed to operate with minimal disruption to a bank's staff and customers.

### Reduced operating costs

Banks spend an average of 14.3% of their operating costs on IT. Moreover, less than 30% of this is on growth and innovation; the remainder is spent on business as usual activities. In contrast, Temenos clients spend only 5.7% of their total costs on IT, of which 53.7% is on innovation. The result of lower and innovation-focused expenditure is an ROE (Return On Equity) number for Temenos clients which is 36% higher than banks using legacy systems.

### Improved customer service

Customers expect banks to provide the same level of seamless, personalized service which they receive from leading online service companies such as Amazon or Uber. In the past, banks' abilities to provide such service has been hampered by legacy technology and business issues. Temenos provides a modern front-to-back digital and integrated solution, allowing seamless customer journeys across all areas of a bank's service and product portfolio. A single rules engine driven by embedded analytic capabilities, enables a bank to proactively tailor the experience to a customer's individual needs based on a single 360° lifetime view of the customer.

### Reduced operational risk

Legacy IT landscapes are inherently risky because of the many interfaces which are required between different functionality and delivery silos; the number of "islands" of functionality and the resulting complexity of connections between them increase the number of points where a process or technology failure can occur. As a result, banks can face outages in mission critical operations with resulting reputational damage. These risks are increased if the bank is still relying on obsolete technology where there is often a shortage of suitably skilled resources. The end-to-end integration offered by Temenos' software, with its configurable and sophisticated workflow, access control and security features, allows our clients to benefit from the lowest levels of IT operational risk, and to future-proof their IT architecture by means of the regular software release mechanism.

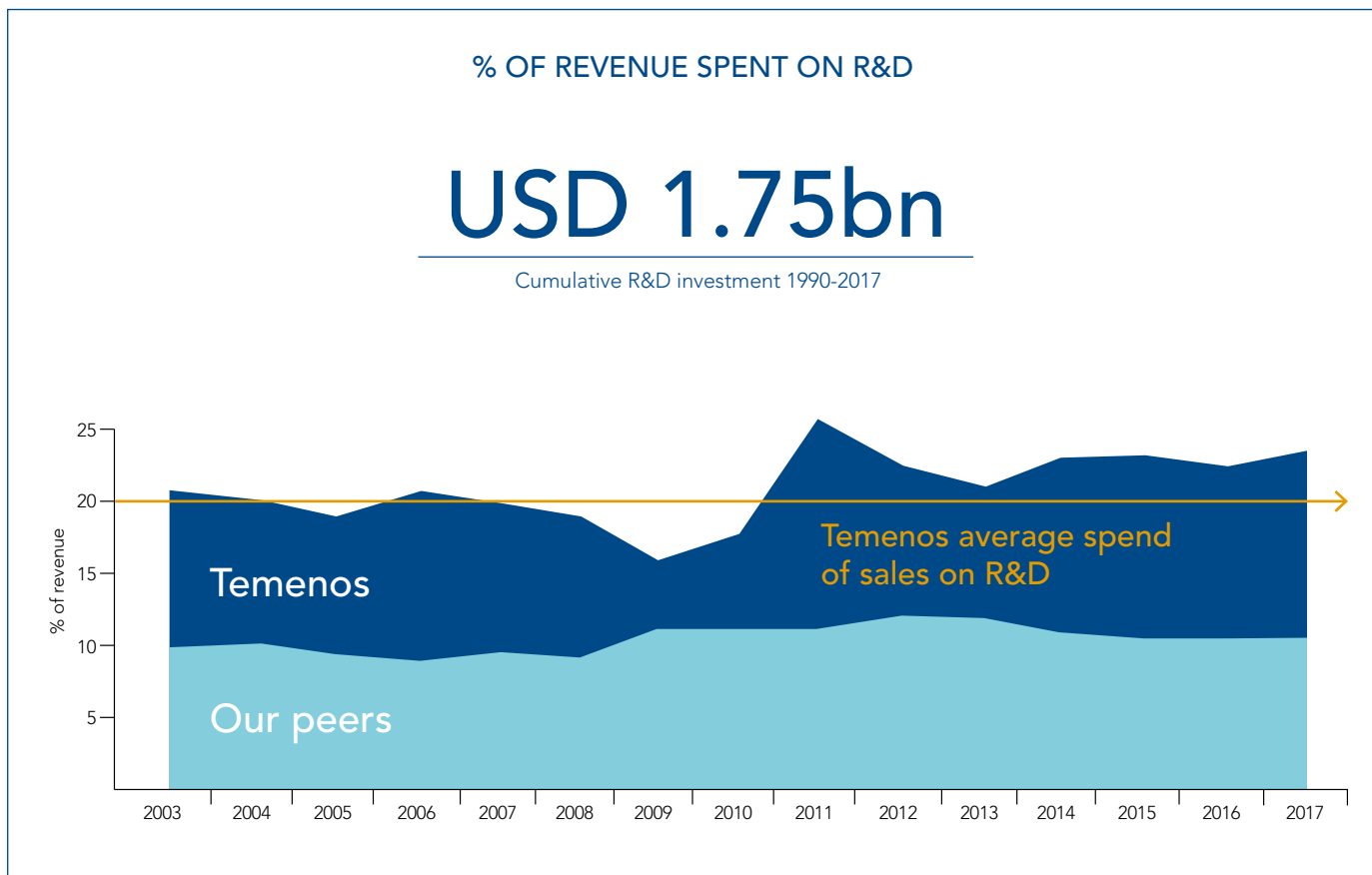
### Reduced time to market

Today, digitalization and the rise of new, specialized and highly agile competitors are driving banks to respond ever more quickly to customers' individual needs. Temenos' software enables banks to respond quickly, flexibly and securely to these business needs as it is highly parameter-driven, and delivered with pre-configured, re-usable content, as well as user-friendly configuration, design and testing tools.

### Improved business insights

A modern, digital bank requires sophisticated analytics to understand customer needs, to service regulators and to make optimal business decisions in a timely and efficient manner. The Temenos analytics product set is tightly embedded within the overall front-to-back solution, providing real-time, predictive and integrated analytics based on a single version of the truth sourced from both transactional and contextual data from all areas of the solution. This enables bank staff to take customer service and business strategic decisions on the basis of up to date information.

# R&DEEP



R&D at more than twice the level of our competitors plus deep domain knowledge means that our software never becomes legacy

**Investing more than our peers on R&D**

Temenos has consistently invested over 20% of its revenues in R&D. This is more than twice the level of investment made by our closest competitors. Furthermore, since we only produce software for banking and finance, all of this investment is targeted at our concentrated product portfolio.

**Channeled into regular releases**

Our software is truly packaged and upgradeable. We produce a monthly release of new software, which can be used by clients when there is need, and each year we create a cumulative Annual Maintenance Release.

We also support partial upgrades, allowing our clients to upgrade the parts of their solution which they need to. This means that all of our clients can continue to benefit from the ongoing investment we make in our products.

**Core principles**

Temenos has always produced software according to a set of core principles. We believe in re-use, openness and being agnostic about technology platforms. This means that all developments are made available to all clients. It also means giving our clients choice over which technology they run and never locking them into a particular provider. The openness means that third parties can develop on our platform to accelerate innovation thus ensuring that our clients always have access to the best technology and functionality.

**Proud record of innovation**

Our philosophy could be summed up as constant functional evolution delivered on innovative technology. We are proud of the record of innovation which we have established, being, for example, the first true fintech vendor to run on open systems, to have a truly 24 x7 platform, the first to run core processing software in the public cloud and the first to have all services exposed as RESTful APIs.

# OPEN BANKING

The pace of innovation is accelerating at the same time as competitive boundaries are blurring.

Consequently, it's not enough to innovate faster; firms must keep up with best-in-class innovators regardless of what sector they might operate in today. This places many requirements on firms in terms of, say, winning the war for talent or adopting a DevOps model for the production and releasing of software. But, most of all, it means that companies need to open themselves up to third-parties. In today's world, the best way to build competitive advantage is to leverage a firm's position by putting it at the heart of an ecosystem; to influence rather than control. This is true for Temenos. It is true for banks. It is true for fintechs.

Recognizing the broad need for collaboration across financial services is why we created the Temenos Marketplace; an ecosystem for growth.

### Open banking is inevitable

The widespread consumption of digital banking services by less loyal customers and the rise of non-traditional providers of financial services, mean that the banking value chain is unbundling and that manufacturing and distribution of banking services are diverging. This trend will only exacerbate as the disruptive technologies such as cloud, APIs, artificial intelligence and machine learning, mature in banking. Open banking is the resulting global phenomenon of this disintermediation of the value chain. It is a collaborative model and involves sharing of banking data between organizations through the use of open APIs. APIs are considered the de-facto industry standard for collaboration because they are scalable, reusable, easy-to-use and considered safer and more cost effective than non-standard ways of sharing data such as screen-scraping, or manual downloads. Open APIs lend themselves to monetization and the rise of new business models.

Regulatory initiatives such as the EU's Revised Payments Services Directive (PSD2) and other Open API initiatives in countries like the UK and Germany that came into force earlier this year, are further accelerating open banking by forcing banks to share customer data with third party providers, should their customers give consent. This is intended to create a level playing field for fintechs, technology players and banks alike.

### Open banking can be lucrative

The good news is that the move to open banking can boost banks' profitability and most banks now see the opportunity.

By placing themselves at the heart of a digital ecosystem and orchestrating a successful platform strategy, i.e. forging partnerships with third party providers as well as developers, banks can benefit substantially. McKinsey estimates, that by adopting a platform model, banks could potentially increase their Return on Equity by up to 6.3%.

Banks are starting to appreciate this. A recent survey from Accenture and Temenos<sup>9</sup> found that a clear majority of bankers (79%) now see open banking as more of an opportunity than a threat with 62% of bankers saying that they would be prepared to distribute third-party services over their platform.

This change in banking sentiment coincides with an increasing realization on the part of many service providers, especially fintech companies, that using banks as a route to market – given their large customer numbers, compliance and capital – might well be easier than going it alone. Today, according to Capgemini<sup>10</sup>, 75% of fintech companies want to work with banks.

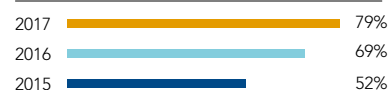
And so the scene is now set for greater collaboration.

## OPEN BANKING READINESS

Banks were asked "To what extent do you agree/disagree with each of the following statements about open banking?" (%), 2015-2017.

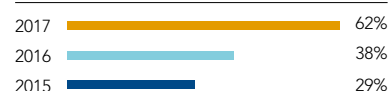
IT IS MORE OF AN OPPORTUNITY THAN A THREAT

79%



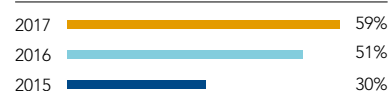
WE ARE HAPPY TO DISTRIBUTE THIRD PARTY PRODUCTS THROUGH OUR PLATFORM

62%



BUILDING AN OPEN BANKING PLATFORM IS A HIGH PRIORITY FOR US

59%



## FINDING THE **BEST** FINTECH

According to some estimates, there are as many as 25,000 fintech companies in operation today.

As in everything in life, we could use a bellcurve to classify these companies, with only a minority being truly outstanding. The job of the MarketPlace team is to find those truly outstanding fintech companies, those that can add significant incremental value to our banking clients. As well as working with clients and our incubator Partners, the global Innovation Jam competition provides a critical means for us to uncover these exceptional companies.

The Innovation Jam was started in 2015. That year, we held a competition at the Temenos Community Forum (TCF) – decided by the attendees – to find the most innovative new product from our complementary solution providers. It proved to be such a success that, the following year, we turned it into a global competition.

The global competition is now in its third year and it keeps getting bigger and better. In 2016, we held four global heats, in 2017 we held five global heats and in 2018 we're holding eight.

This year, we are running many of the competitions together with Partners and many of the winners from last year, such as [Finn.ai](#) and [Edgelab](#), will give testimonials explaining how the Innovation Jams have turbocharged their business.

In 2018, the Innovation Jams come to Dublin (powered by Bank of Ireland), Miami, Amsterdam (supported by ABN AMRO), Hong Kong (supported by Supercharger), London, Abu Dhabi (supported by ADGM), Geneva (supported by Fusion) and Luxembourg (supported by the LHoFT).

As in previous years, we will fly the winners from the Innovation Jams to the Temenos Community Forum, this year in Dublin, where they will compete for the crown of global innovation champion, which last year was won by Blue Code.

Let's Jam!



“Taking part and winning the **Geneva Innovation Jam** has given us massive exposure. That and our **Temenos MarketPlace membership**, has helped us to **grow much faster** and internationalize our business. Pretty much every day now we have a call or meeting with Temenos sales or Temenos customers.”

Ruedi Winzeler – COO at EdgeLab

# THE TEMENOS MARKETPLACE

## Fostering collaboration and access to innovation

The challenge is that there is no established model for banks and fintech companies to work together. This is the problem that the Temenos MarketPlace solves.

In the Accenture/Temenos banking survey, it was clear that banks overwhelmingly want to work with fintech firms, but they face two significant challenges in doing so. The first is around curation, mustering the time and resources to figure which are the best fintech firms to work with (cited by 10% of bankers). The second and bigger challenge (cited by 55% of bankers) is around procurement, specifically the time it takes to steer a fintech firm through a bank's procurement processes and then integrate the solution into the bank's production environment.

The Temenos MarketPlace overcomes these two challenges. The Temenos MarketPlace is curated. We find the best fintech companies by working with our ecosystem of incubator Partners and our clients and by actively screening the fintechs we find through the Innovation Jams and those that apply directly through the site. Our clients can be sure that every solution on Temenos MarketPlace is robust, proven and has a clear value-adding proposition.

In terms of speeding up procurement, we would point to certification and our Innovation Acceleration Platform, a cloud-based version of our Suites they can use for testing providers. When a provider is onboarded onto the Temenos MarketPlace, they get access to our developer portal, with documentation of our APIs, as well as access to a shared sandbox. This enables them to create the level of integration to have a joint architecture model and an integrated demo environment. Once a provider starts to sell, we then integrate much more deeply with our software, making them "plug and play" accessible to all clients who run our Innovation Acceleration Platform.

