

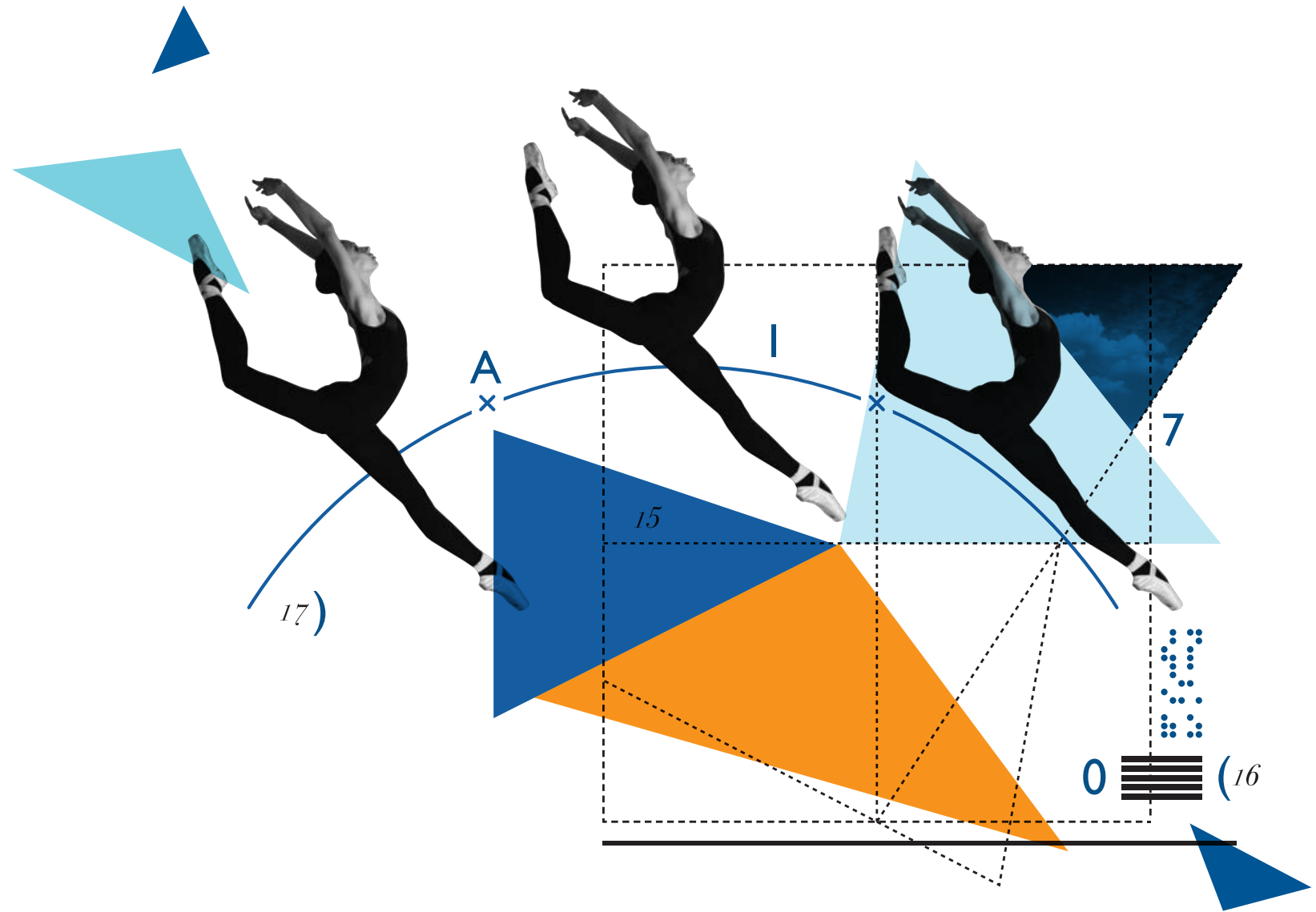
# Interaction technology

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Open up your banking platform to accelerate the  
pace of innovation around your services.

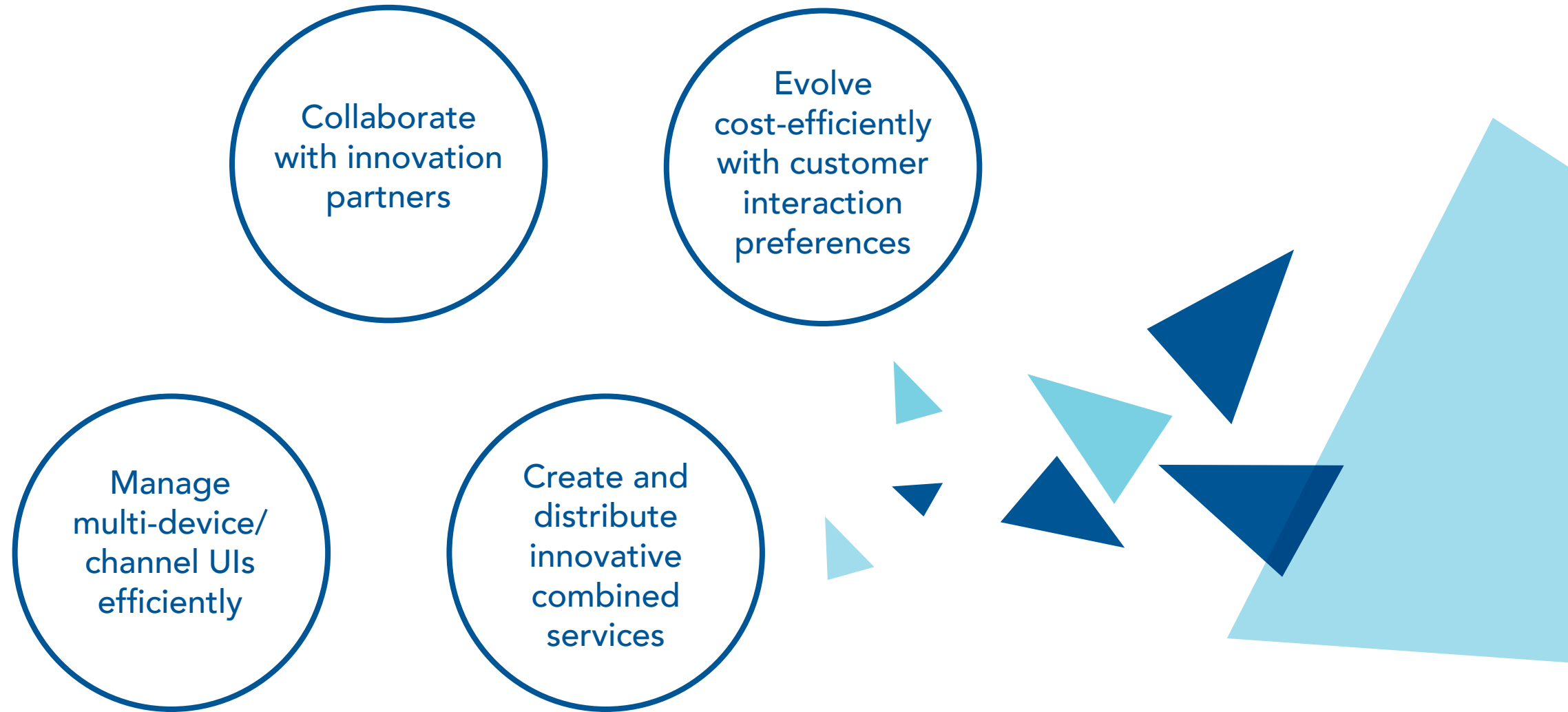
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## What do our customers want and need?

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# Market background

The omnipresence of internet and the spread of virtual and mobile channels have turned customers into direct users of banking systems. Because banking customers are familiar with the great virtual experience offered by the likes of Amazon and Apple, they expect no less from their bank: assisted or non-assisted access 24/7 to banking services via a wide range of interfaces, channels and devices.

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Digital customers expect their banking experience to go beyond simple banking. Consumers also expect banking services to be available via non-banking channels – for instance, real-time mortgage proposals on a real estate agents' website or home-search app.

The implication is that banks have to cost-efficiently deliver services from multiple underlying business systems via multiple interfaces, channels and devices – and not only their own, but third-parties'.

When banks try to do this, it usually comes at a significant cost. The main reason is that banks write complex code linking up business systems and user-interfaces, rigidly binding them to one another. Furthermore, as user-interfaces need to evolve much faster (typically every 3 years or so<sup>1</sup>) than underlying business systems (as seldom as every 15 years)<sup>2</sup>, banks regularly have to rip out and re-write these coded links – and as many times as there are user-interfaces, channels, devices, user roles, etc. This is obviously extremely costly and inefficient.

This rigid approach also inhibits innovation around the bank's services because they are not readily available in a standardized way to third-parties. In other words, the bank is not "open". Partners with user-experience expertise, superior knowledge of a customer segment or exploitable customer bases cannot create differentiated user-interfaces around the bank's services to boost their distribution. Similarly, the bank cannot easily tap services from third-party businesses to create innovative combined services.

These limitations make banks more vulnerable to disruptive fintech competitors which offer outstanding digital services and experiences that go beyond simple banking.

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1 Source: Nielsen Norman Group  
2 Source: SOFGEN



## Value proposition

The Interaction offering provides a highly flexible and **open banking platform** which **accelerates the pace of innovation** around the banks' services, mitigating the threat of disruptive competition. The products in the Interaction offering enable banks to: easily expose banking services to innovation partners and to any user-interface (UI); create innovative combined services; undertake highly efficient multi-device/channel UI management.

## Business benefits

Temenos' Interaction offering makes the bank much more competitive, flexible and cost-efficient. Ultimately, it enables the bank to mitigate the threat of disruptive competition and remain profitable.

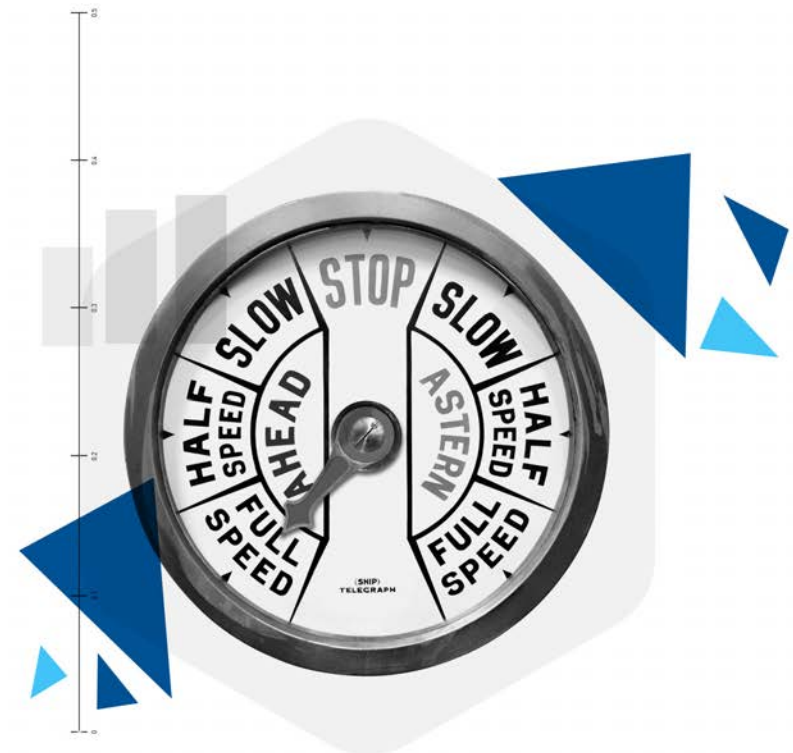
Using Design Studio for APIs, the bank can easily make its services readily available to innovation partners and to any user-interface (UI) or app of its choosing. This enables the bank to accelerate the pace of innovation around its services by collaborating with partners that have superior user-experience expertise and a better understanding of certain customer segments. By also using the User-Experience Platform, banks can create innovative UIs that combine services (banking and non-banking) from inside and outside the bank. The principal business benefit is **competitiveness**.

By implementing the Interaction Framework, which leverages our Interaction products and standard third-party tools (e.g. SCM) to provide an internet-like network of business systems and user-interfaces, the bank can stay apace with customer requirements much more easily. By enabling the bank to implement truly ReSTful architecture<sup>1</sup> and make its banking services readily available in a standard manner (APIs) to any UI, the Framework lets user-interfaces and underlying business systems evolve at different paces without requiring the bank to rip out and re-wire rigid linkages between them. The principal business benefit here is **flexibility**.

Thirdly, the Interaction products substantially lower the cost of innovating around, and distributing services. The products' intuitive design environments eliminate the bank's dependence on vendor-specialized experts and on lengthy coding cycles. The products also support high levels of re-use: once created, an API can be used by any number of UIs without additional work. Similarly, a UI created once can be distributed without further work across multiple devices, channels, user roles, brands. Lastly, having an open platform pre-empts the cost of implementing regulations on customer access to/control over personal banking data. The principal business benefit here is **cost-efficiency**.

The bank can achieve these benefits in very little time and very cost-efficiently. The offering is easy to deploy and to run, causing no disruption to day-to-day business and generating near-immediate business returns.

<sup>1</sup> Representational State Transfer ("ReST") is an architectural style for designing networked applications which exploits hypermedia, standard data models and standard representations.



## Why customers use it

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**Innovation:**  
collaborate with  
partners to speed  
up the pace of  
innovation around  
your services

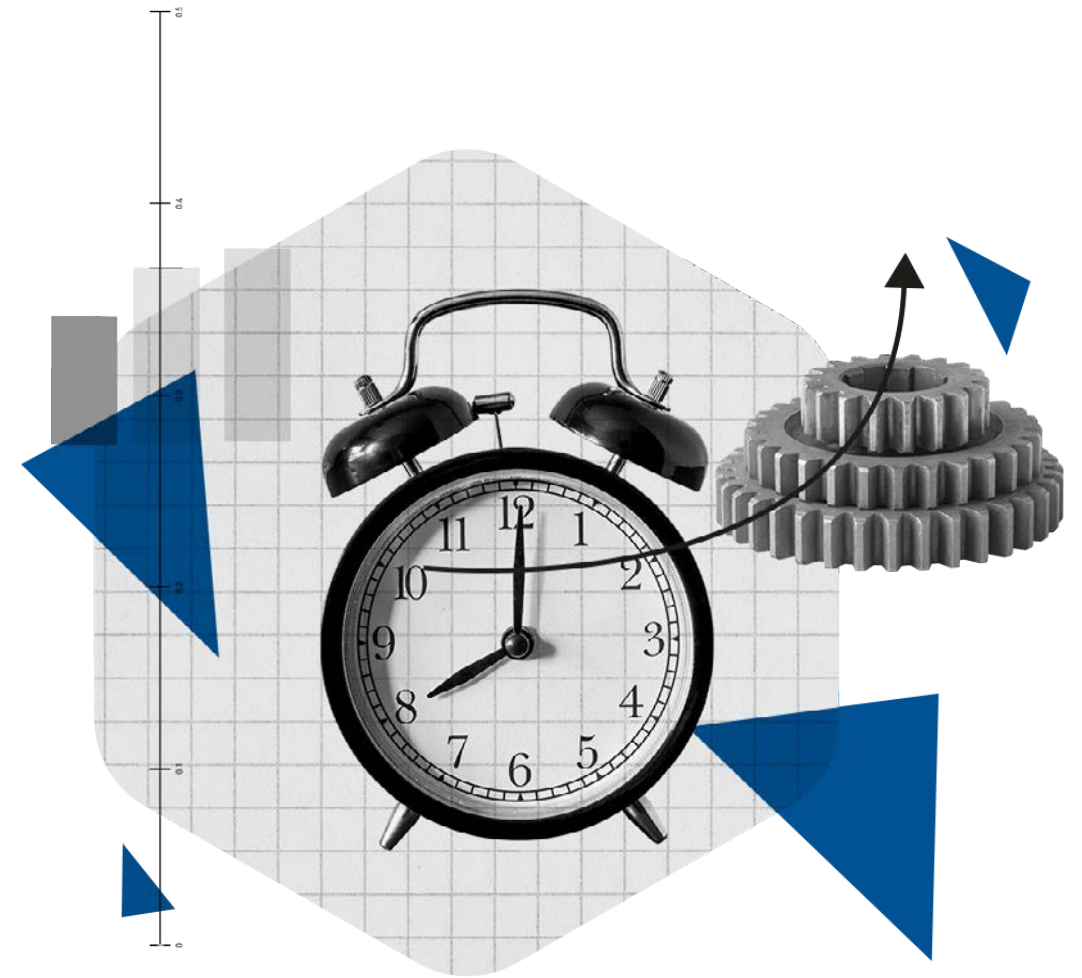
**Competitiveness:**  
distribute innovate  
services through  
outstanding  
interfaces (UIs)

**Flexibility:**  
evolve your UIs  
and business  
systems at their  
respective paces

**Cost-efficiency:**  
reduce the cost  
of managing UIs  
across multiple  
channels, devices,  
roles, brands...

# Products and key features

- Design Studio for APIs
- Design Studio for Webservices
- User-Experience Platform





## Design Studio for APIs

Make the bank's services readily available to *any* UI and to innovation partners

This product provides an Eclipse-based integrated development environment (IDE) which enables interaction designers with commodity skills to do two things: easily see what data and functionality is available in the Core Banking system to be exposed to user-interfaces; and, easily make the data and functionality readily available in a standard manner (API) to any user-interface/app and to innovation partners.

Features:

- Intuitive Eclipse-based Integrated Development Environment (IDE)
- Exploits standard data models and HATEOAS<sup>1</sup>
- Creates run-time Java web applications under the cover
- Can exploit all major SCM tools

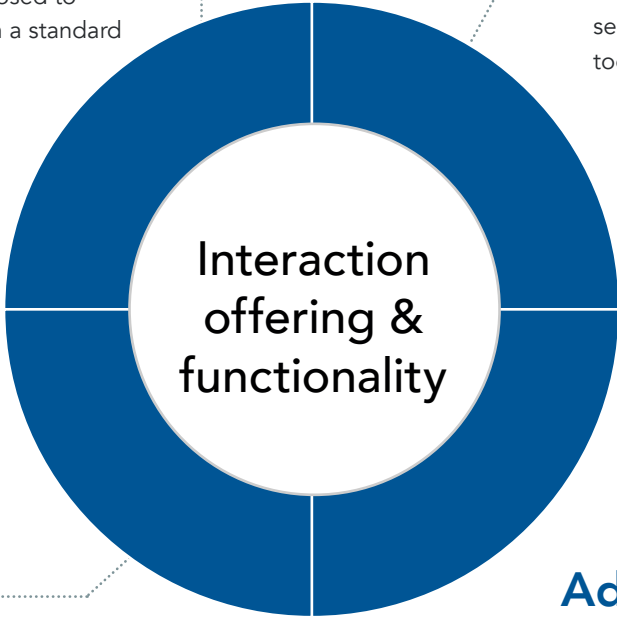
## Design Studio for Webservices

Make the bank's services readily available across the enterprise

This product provides an Eclipse-based integrated development environment (IDE) which enables users/developers with commodity skills to easily build and deploy SOAP-based webservices. It maintains a clear separation of the service definition within the bank's Core Banking system and the technical tooling used to publish services to the enterprise.

Features:

- Intuitive Eclipse-based Integrated Development Environment (IDE)
- Provides a perspective of the service landscape as a tree (with checkboxes), showing business areas, (sub-)domains, services and operations
- Exploits SCM tools, platform mechanisms and app server resources



Interaction  
offering &  
functionality

## User-Experience Platform

Efficiently manage UIs across multiple channels, devices, roles, brands, etc.

This product enables user-interface (UI) designers with commodity skills to develop and deploy multi-device/channel/language applications in an extremely efficient way. It lets the bank (and/or its partners) build or change a UI/app just once and have that change automatically reflected across multiple channels, devices, browsers, user roles, brands and languages.

Features:

- Separates the presentation, business process and integration layers of the UI
- Supports hybrid mobile applications that behave, look and feel like native applications
- Exploits API metadata files (EDMX) to accelerate the creation of UIs
- Supports Temenos' best-of-breed banking Channels products

Address these business challenges:

Slow innovation around your services

Rapid UI obsolescence

Disruptive competition

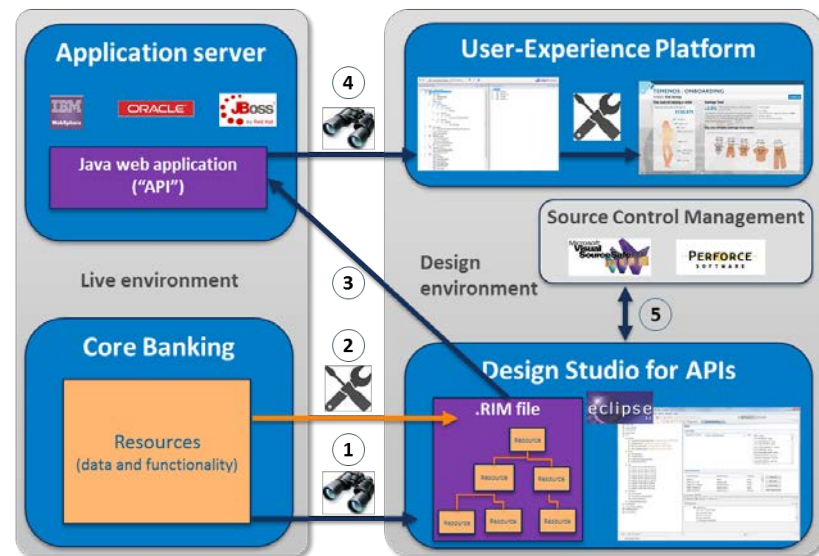
Cost of managing multi-channel UIs

Cost of evolving UIs faster than business systems

<sup>1</sup> Hypermedia as the Engine of Application State

# The Interaction Framework - how it works

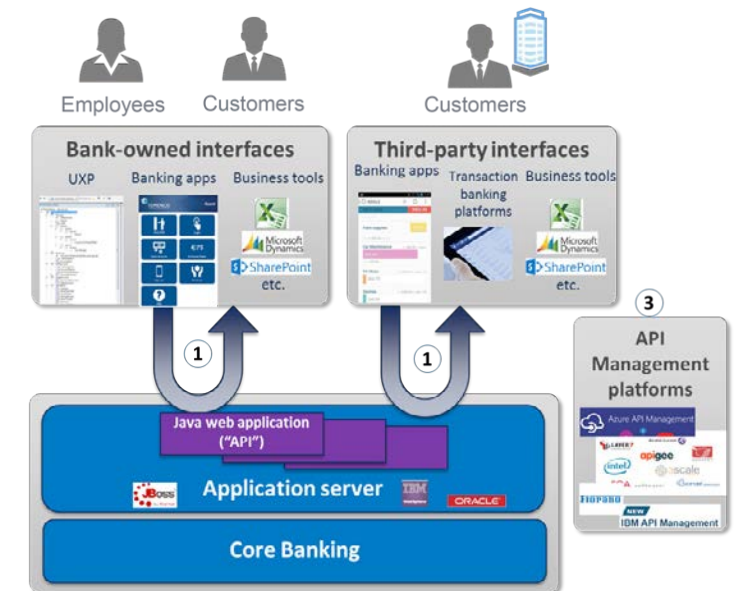
## Design-time



1. **Browse** Core Banking for resources to be included in the data service ("Discovery" phase)
2. **Define** resources and links between them ("Exposure" phase)
3. **Deploy** .RIM as a Java web application ("data services" or "API") in the application server
4. \***Discover** API documentation and import metadata (EDMX) into the UXP's IDE to create user-interfaces

(\*optional but recommended)

## Run-time: an open banking platform



1. Any user-interface can request (HTTP request) resources from any API; data is made available in standard representations (XML, HTML, etc.)
2. Security, paging, caching, and error handling all standards-based
3. Use API Management platforms to manage APIs through their lifecycle (developer onboarding, throttling, metering, and billing).

# Benefits summary and proof points

Innovation

Competitiveness

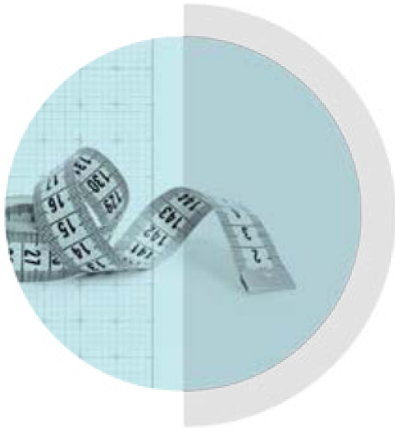
Cost-efficiency

Flexibility



**60%**  
savings on UI  
development costs

(60% on first project, rising to 95% on subsequent projects)<sup>1</sup>



**50%**  
reduction in UI  
maintenance costs

(50% on first project, rising to 100% on subsequent projects)<sup>1</sup>



**4x**  
times faster  
time-to-market for UIs

(using the User-Experience Platform)<sup>1</sup>

<sup>1</sup> Source: "Temenos edgeConnect: Reducing development and maintenance costs of web and mobile applications", January 2014, OVUM research

## Summary

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By providing your bank with a highly flexible and open banking platform that accelerates the pace of innovation around your services, the Interaction offering make you more competitive and helps you mitigate the threat of disruptive competition.

## Next steps

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To hear more about our Interaction products,  
contact us at [sales@temenos.com](mailto:sales@temenos.com)

Temenos Group AG (SIX: TEMN), headquartered in Geneva, is a market leading software provider, partnering with banks and other financial institutions to transform their businesses and stay ahead of a changing marketplace. Over 2,000 firms across the globe, including 38 of the top 50 banks, rely on Temenos to process the daily transactions of more than 500 million banking customers. Temenos customers are proven to be more profitable than their peers: in the period 2008-2014, they enjoyed on average a 31% higher return on assets, a 36% higher return on equity and an 8.6 percentage point lower cost/income ratio than banks running legacy applications.

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