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digital banking platform

DIGITAL TRANSFORMATION

ONE JOURNEY AT A TIME

WHITE PAPER

NOVABASE

DIGITAL TRANSFORMATION:

ONE JOURNEY AT A TIME

Key Takeaways

- Drivers and benefits of traditional Transformation.

- Understand different approaches to traditional Transformation.

- Proposed roadmap for a journey led Transformation project.

Who should read this document

- CIOs

- CTOs

- CEOs

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01 | TRANSFORMATION: IS THERE ANOTHER WAY?

Transformation projects are considered the source of all evils in the corporate IT world. Often, they represent multi-year projects, with millions of euros in budget, high-risk of failure and, many times, dodgy benefits and business blockages. Everyone knows a story about a botched or over-budget project, or one that jeopardises the same business benefits that it was supposed to deliver.

Nevertheless, these type of projects take place because organizations consider them critical to continue evolving and adapting to a very changing environment and dynamic ecosystem. If we continue to apply the same recipe, based on a **systems driven** approach, the outcome will remain the same.

What if there was another way?

02 | SYSTEMS DRIVEN APPROACH: NOTHING NEW

The traditional IT transformation approach is **systems driven**. In this approach, there may be a "core banking" platform that needs replacement or a card management system replacement/upgrade project, or the need to introduce a new CRM platform. In any case, the systems driven transformation approach is driven by the need to perform the replacement or upgrade of a key architecture component, and usually involves significant changes to integration requirements, new or changed business processes, business impacts and sometimes customer data migration.

Another major source of systems driven transformation are Mergers & Acquisitions. In this case, the need to create (or maintain) a business model that consistently represents the new merged financial institution, results in a major systems driven transformation program.

Systems driven transformation is inherently difficult to scale-down into smaller, more manageable projects: the replacement of an existing architecture "pillar" (i.e. Core Banking) causes so much disruption that the main options for "phasing strategies" become:

- Major product family: retail vs corporate;
- By core system "stack" – cards, deposits, ...
- Phased customer migration to reduce risk by keeping new and old stacks in parallel, with the inherent impacts in cost, stability, double development and risk.

Each one of these strategies has its pros and cons, but they ultimately share the same problem – the transformation project phases they generate are too big and thus have the large impacts on the organization: high business impact, high-risk, costly projects.

03 JOURNEY DRIVEN APPROACH: PAVING THE ROAD TO SUCCESS

The **Journey driven IT transformation** approach follows business challenges. These can include, the replacement of a specific channel front-end (sales application, branch support, partners support, contact centre), support for new business need that is currently not covered (extending the existing offer to a new area like insurance) or a set of meaningful business processes (like a fully automated, omnichannel, customer on-boarding process).

The Journey driven transformation converts the large programs originating from the systems driven approach, into a set of smaller, agile, customer journey enhancement focused programs. These can be carried-out with full business support, in small time-scales and obvious business benefits.

With **journey driven transformation**, these business challenges are used to drive a new IT architecture approach that enhances the separation of data, business logic and product definitions from the existing "core" systems. This new business layer provides a complete "transversal view" of the customer, his/her product portfolio, and enables the creation of end-to-end customer journeys to automate, streamline and reengineer customer facing and internal activities. We call this process **virtualization**.

CHANNELS

The objective is to create a new IT architecture layer - focused on customers and business - which is as much as possible "unlinked" from the underlying systems, as shown below:
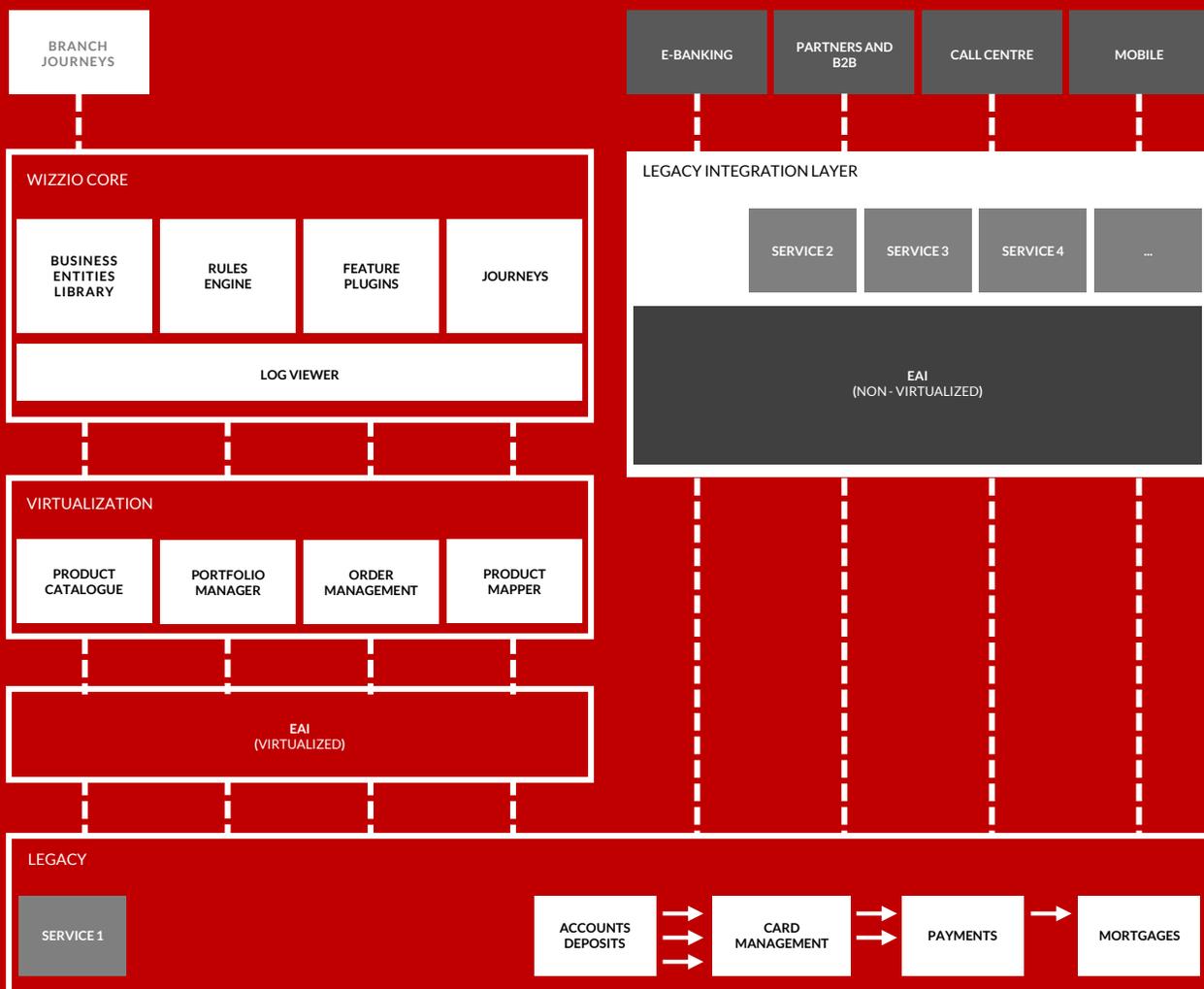
VIRTUALIZATION

Virtualization aims to abstract customer data, products and business logic from the underlying core systems. Virtualization is supported by specific software components and requires a targeted integration strategy (using the existing ESB/EAI tools).

Virtualization, enables the separation of "front-end processes", products and data from backend systems, thus allowing for a different IT transformation approach. One that is driven by front-end applications, instead of core systems.

HOW MUCH TRANSFORMATION?

Journey driven transformation represents a different take on the traditional view of IT transformation. However, it addresses the same challenges and has a deep and transversal impact throughout the organization.

- **Transforms the business by changing processes, usability, speeding up deployment, decreasing usage costs, allowing for omnichannel business processes, access to customer data, business rules, products and product rules and provides a framework that is fundamental to support tomorrow's business.**

- **Allows the optimal strategy to transform the business: time-to-market and business constraints become the primary transformation driver, not the need to replace or upgrade IT platforms.**

- Enables **smaller systems driven transformation** programs by isolating and standardising existing legacy systems. It is much easier to replace a core system by "slicing" some of its processes/functions and making them available through projects that are smaller and more agile.

- Enables Agile development methodologies.

- Drives the creation of a **SOA architecture**.

- Creates a **centralized product catalogue** strategy for all channels.

- Enforces the creation of **best practices for customer data management**.

Main Advantages of a Journey driven IT Transformation:

- Provides **short-term benefits** to business instead of long term ones;

- Imposes less restrictions or blockages to new products and services during the project's implementation resulting in **less business disruption**;

- Allows for the **parallel deployment** of the old processes and new ones thus de-risking the program;

- Provides **strategic depth** by allowing adjustments and changes during the program without incurring in the major losses incurred if a traditional transformation project is changed or cancelled midway.

Journey driven
TRANSFORMATION ROADMAP

By focusing on specific business processes, this approach is surgical and provides quicker results with less risk and impact on the business and IT.

On-top of the aforementioned benefits, journey driven transformation enables the organization to choose the best moment to transform or upgrade the existing core systems, with less risk, less cost and a faster time-to-market, while keeping the new core closer to the standard product and giving it more flexibility and ability to integrate with all channels.

ILLUSTRATIVE 4 PHASES

Phase 1
Digital for branches

Phase 3
Digital for all assisted channels

Initial Architecture

Phase 2
Digital for partners

Phase 4
Full Digital

Initial Architecture

E-BANKING	PARTNERS AND B2B	CALL CENTRE	MOBILE

LEGACY INTEGRATION LAYER

SERVICE 1	SERVICE 2	SERVICE 3	SERVICE 4	...

EAI
(NON - VIRTUALIZED)

LEGACY

Accounts Deposits	Card Management	Payments	Mortgages

Phase 1 | Digital for branches

BRANCH JOURNEYS

WIZZIO CORE

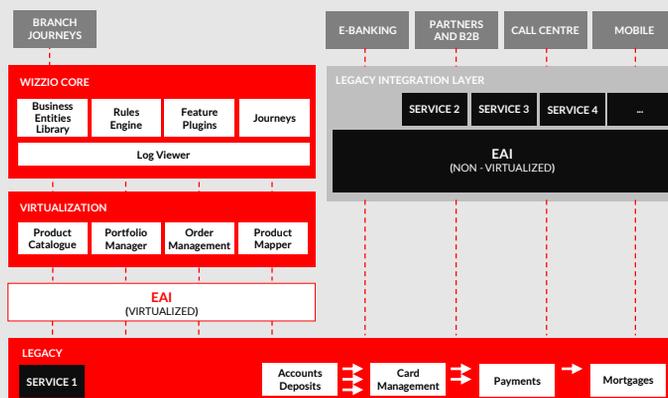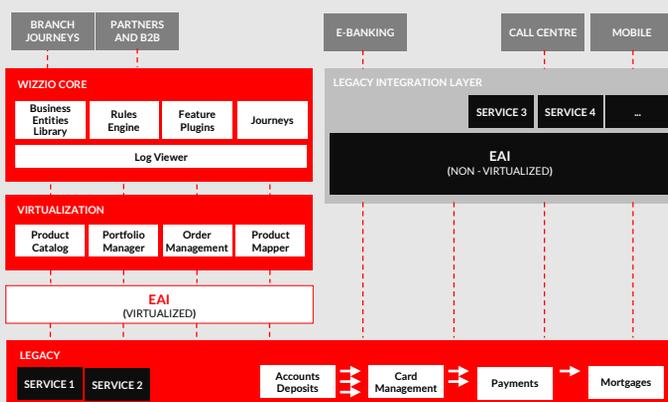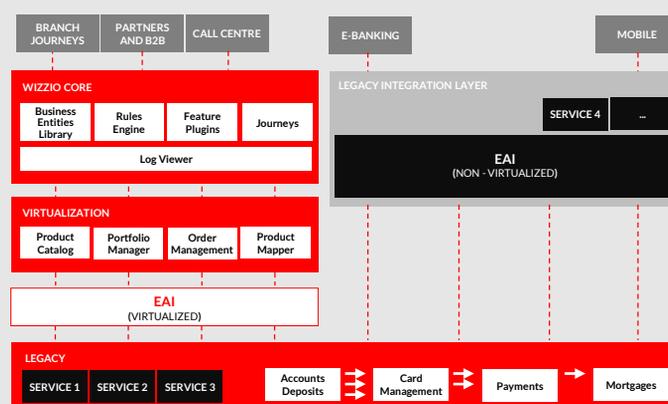| Business Entities Library	Rules Engine	Feature Plugins	Journeys

Log Viewer

VIRTUALIZATION

Product Catalogue	Portfolio Manager	Order Management	Product Mapper

EAI
(VIRTUALIZED)

LEGACY

SERVICE 1

E-BANKING	PARTNERS AND B2B	CALL CENTRE	MOBILE

LEGACY INTEGRATION LAYER

SERVICE 2	SERVICE 3	SERVICE 4	...

EAI
(NON - VIRTUALIZED)

Accounts Deposits	Card Management	Payments	Mortgages

Phase 2 | Digital for partners

BRANCH JOURNEYS	PARTNERS AND B2B

WIZZIO CORE

Business Entities Library	Rules Engine	Feature Plugins	Journeys

Log Viewer

VIRTUALIZATION

Product Catalog	Portfolio Manager	Order Management	Product Mapper

EAI
(VIRTUALIZED)

LEGACY

SERVICE 1	SERVICE 2

E-BANKING	CALL CENTRE	MOBILE

LEGACY INTEGRATION LAYER

SERVICE 3	SERVICE 4	...

EAI
(NON - VIRTUALIZED)

Accounts Deposits	Card Management	Payments	Mortgages

Phase 3 | Digital for all assisted channels

BRANCH JOURNEYS	PARTNERS AND B2B	CALL CENTRE

WIZZIO CORE

Business Entities Library	Rules Engine	Feature Plugins	Journeys

Log Viewer

VIRTUALIZATION

Product Catalog	Portfolio Manager	Order Management	Product Mapper

EAI
(VIRTUALIZED)

LEGACY

SERVICE 1	SERVICE 2	SERVICE 3

E-BANKING	MOBILE

LEGACY INTEGRATION LAYER

SERVICE 4	...

EAI
(NON - VIRTUALIZED)

Accounts Deposits	Card Management	Payments	Mortgages

Phase 4 | Full Digital

BRANCH JOURNEYS	PARTNERS AND B2B	CALL CENTER	E-BANKING	MOBILE

WIZZIO CORE

Business Entities Library	Rules Engine	Feature Plugins	Journeys

Log Viewer

VIRTUALIZATION

Product Catalog	Portfolio Manager	Order Management	Product Mapper

EAI
(VIRTUALIZED)

LEGACY

SERVICE 1	SERVICE 2	SERVICE 3	:

LEGACY INTEGRATION LAYER

❌

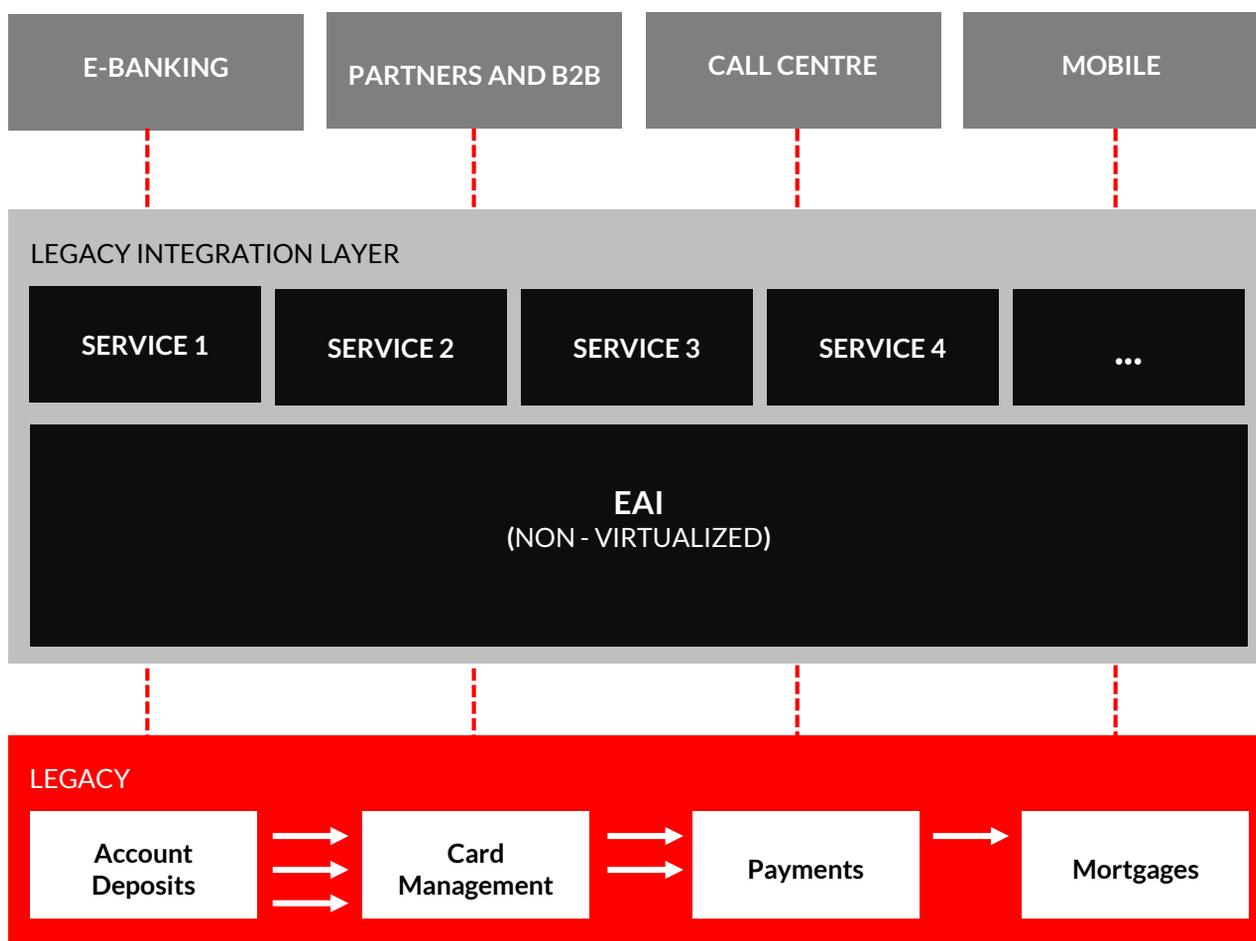| Accounts Deposits	Card Management	Payments	Mortgages

Initial architecture

The picture depicts a "standard" Bank IT architecture. There is a Core Banking, Card Management and other standard core systems in place. In this example scenario there is a CRM solution in place. However, the lack of a CRM solution would make the introduction of a "customer journey" layer even more useful. Notice as well that the presence of an EAI solution is optional as well (point-to-point integrations do not interfere with the rationale) and makes the need for digital transformation even more important.

| E-BANKING | PARTNERS AND B2B | CALL CENTRE | MOBILE |

LEGACY INTEGRATION LAYER

| SERVICE 1 | SERVICE 2 | SERVICE 3 | SERVICE 4 | ... |

EAI
(NON - VIRTUALIZED)

LEGACY

| Account Deposits | → → | Card Management | → → | Payments | → | Mortgages |

Phase 1
Digital for branches

Selects specific branches as the target for the first release, thus all branch business processes are considered targets for this phase. The most important business criteria are that this deployment should cover "full functions" for specific employees to avoid "alt+tabbing" between applications. The first phase also deploys all the main components for the architecture, including a Journey Server, virtualized integration layer, product mapper and catalogue.

There are a few caveats:

1. The product catalogue will not be fully virtualized, since there are users and customers still accessing the "normal" catalogue;

2. Some legacy services will be "routed" to the new architecture to leverage its capabilities (i.e. catalogue, customer data inquiries, etc.);

3. Some existing legacy services will be disconnected, simplifying the legacy architecture;

4. There is a significant transfer of business logic into the customer journeys and catalogue since these are required for the branch processes;

5. Notice that it is not mandatory that all branch journeys are targeted for a first release. A phased deployment with a progressive coverage is suitable as well, further de-risking the deployment process.
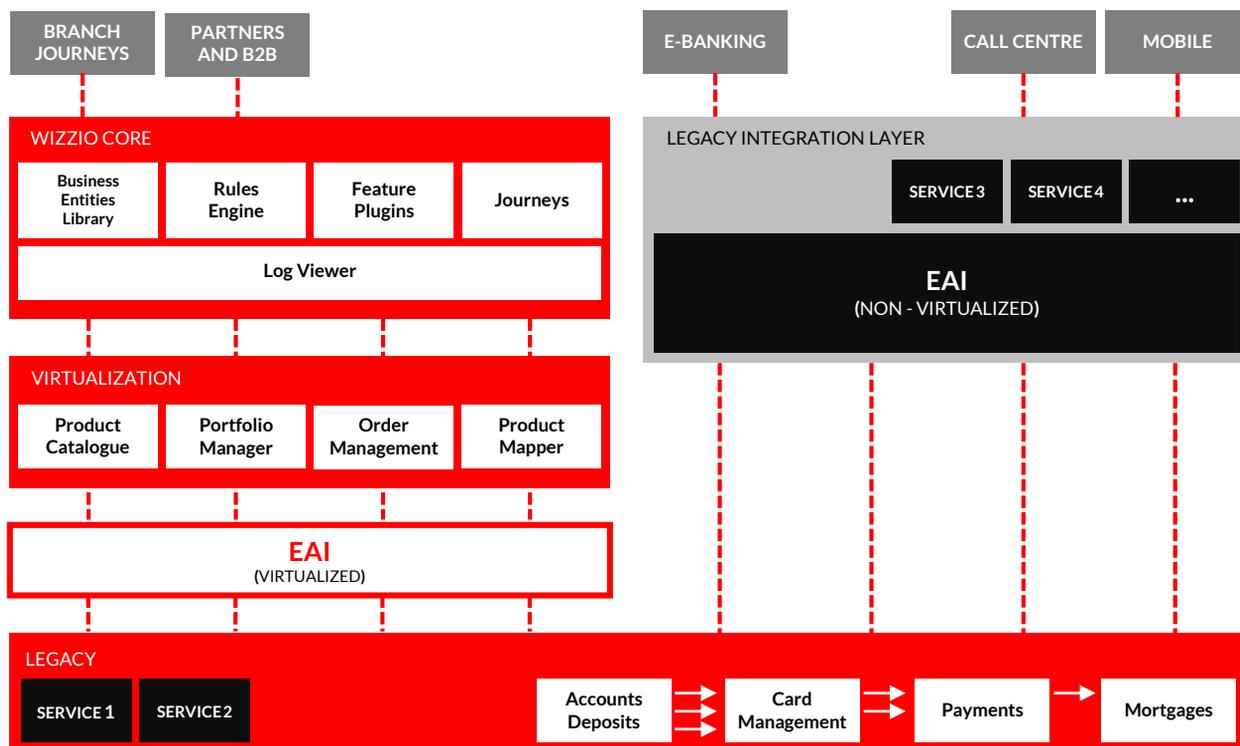
Phase 2
Digital for partners

Selects Partners and B2B as the target for the second release. It further increases the number of services provided by the new virtualized architecture and dramatically increases the business logic transfer into reusable journeys.

Some of this logic is no longer required within the core systems, thus reducing the customization level requirements for these systems. At this stage, it is possible to have journeys starting at partners (i.e. leasing request) and finishing at the branch and vice-versa. This is the fundamental step that "switches" the architecture from legacy to virtual. This step can have further iterations to avoid business disruption.

Phase 3
Digital for all assisted channels

Complete the transformation for assisted channels by including the call centre. Due to journeys reusability, this is mostly about making sure that the call centre has access

restrictions for journeys and products and creating call centre specific journeys, including back-office ones.
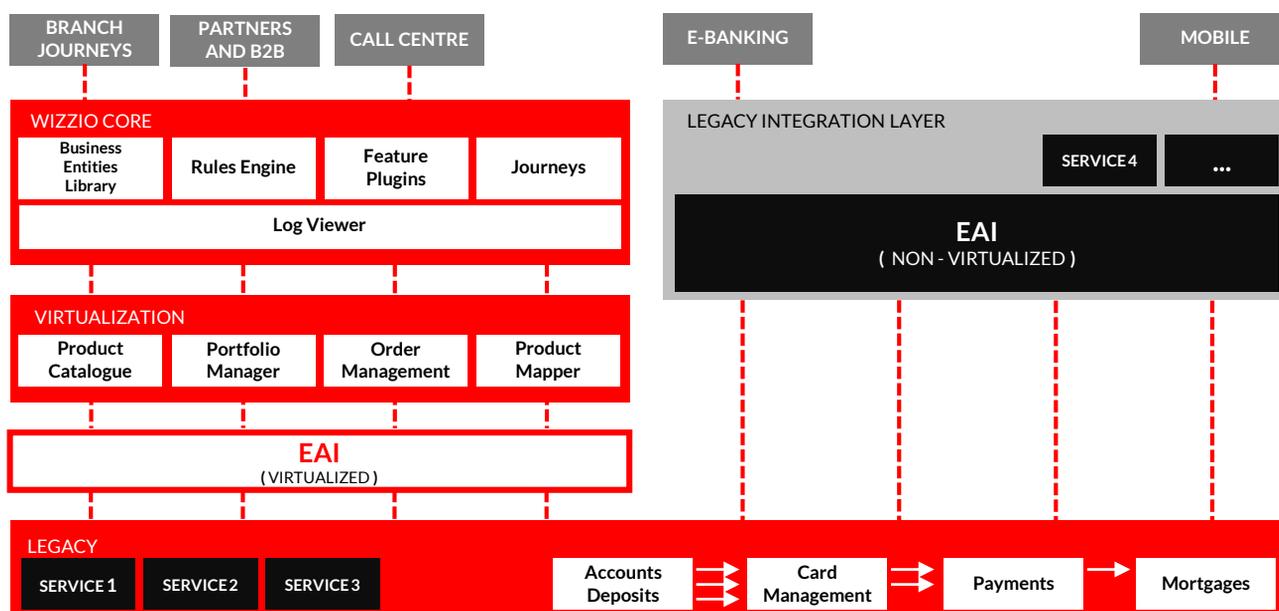

Phase 4
Full Digital

Extension of journeys to all self-service channels (e-banking and mobile). This phase extends journeys, catalogue and business logic to all channels. For e-banking, it allows journeys to be started by

the customer and handed-over to branches or account managers for assistance, as well as the final conversion of non-online channels (IVR, SMS) into the virtualised architecture.
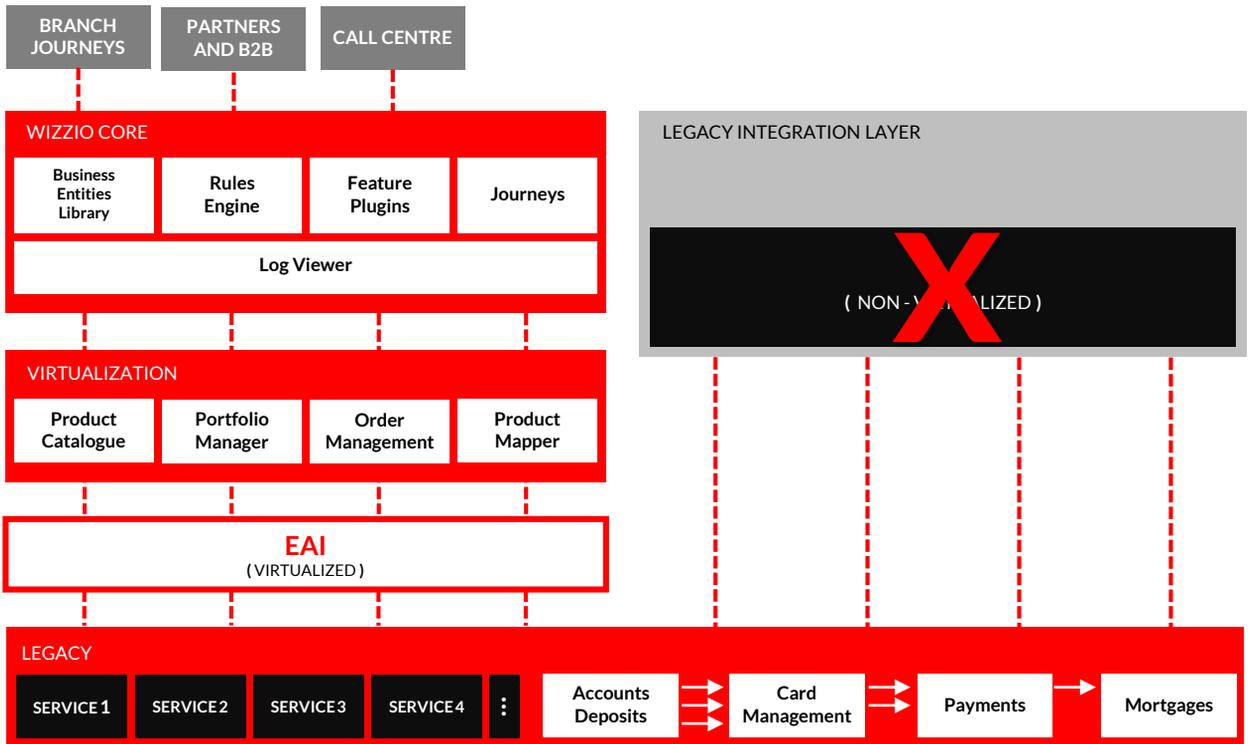
Since this is the last step in the roadmap the following benefits also materialise:

- **Full Product virtualisation:** since all product interactions are now performed through the new architecture it is possible to perform a full simplification of all products for all channels. Only commercial attributes need to be visible for products;

- **Business logic consolidation:** it is desirable (but not mandatory) that the final step is used to clean-up business logic "leftovers" on the core platforms. This will allow for future easier replacement / upgrade of core platforms and cut on development and maintenance costs. This can be part of a gradual roadmap (this can be considered from Phase 2 onwards);

- **Integration simplification:** many integrations between core systems and channels may be simplified due to the introduction of the virtualised SOA architecture. Simplified systems driven transformation enablement: it is now easier to re-place/upgrade individual core systems since they have non-core functions, cross-system journeys, and business logic removed or simplified;

By introducing new shorter phases into this cycle of business driven journey driven transformation, it end-up "wrapping" existing legacy systems with a virtualized business layer that componentizes individual legacy platforms, isolates them from specific business logic (less customization), provides flexible ways to define new products, use standard legacy APIs to "normalize" legacy interfacing and combines them in novel ways to build new business functions and products.

API ECONOMY

The new virtualized architecture is inherently open. This means that third-parties wanting to "consume" services will have a vast library of standardized, pre-built services that can be used for a faster time-to-market, less deployment risk and better security control. The architecture can be enhanced with several security layers designed to provide safe access to the services.

Examples of possible API economy services are the ability to setup direct links from third parties:

- PSD2 - payment services directive mandates the creation of regulated Open APIs;

- Support the creation of bank accounts from a third party using Salesforce.com for sales;

- Support a credit check from a third-party selling credit card subscriptions;

- Support payment processing for a music service subscription;

M&A SUPPORT

The Financial Services industry has a periodic cycle of **mergers & acquisitions** that have direct impacts on IT. M&As require the merger of two separate IT stacks from different institutions into a single coherent view of reality for the merged entity. A virtualized IT architecture provides an ideal starting point:

- A virtualized IT architecture is able to cope with one core banking system or multiple core banking systems transparently for its users as long as the objective is to have consistent journeys for the merged entity. The integration / mapping layers "know" which stack each customer is stored in and transparently runs the process in the right stack, managing product, identifiers and system specifics items as required;

- Eases the migration of the core platforms since it can have processes that "abstract" the core platform. The co-existence of two platforms, partial migration of one platform or the extension of the current product portfolio (i.e. from banking to mortgages) can be done by mapping the new systems into the architecture. The mechanisms that keep the overall architecture consistent are extendable to new systems and allow for new complex offers to be built on top of the existing ones;

04 | CONCLUSION

The combination of the proposed strategy and architecture results in business friendly IT transformation that can be tailored to each customer's needs and used as a guiding principle for a long-term transformation roadmap that delivers the promised benefits, generates lower risk, lower CAPEX projects while keeping digital transformation as its core objective.

ABOUT NOVABASE

With almost 30 years of experience, supporting business transformation and implementing complex projects around the world, Novabase's team has been assisting the Financial Services sector and delivering results with specialized finance solutions.

Novabase has become Portugal´s leader in IT. It is listed on Euronext Lisbon stock exchange since 2000 and is part of the PSI 20 and Euronext Tech 40 indices.

Novabase Services and Products cover Financial Services, Telecommunications, Government, Transport & Energy industries. With three business lines, namely Business Solutions, Neotalent and Venture Capital, we cover 40 countries in 4 continents.

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