

The background features a dark blue gradient with abstract geometric shapes. On the left, a thin orange line forms a triangle. On the right, a large curved shape transitions from orange to blue. The text is centered in the upper right area.

AWS re:Invent

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Itaú: Upgrading platforms to transform the customer experience

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The Itaú Unibanco

Universal bank | 97 years of history | Largest bank in Latin America¹

Market value³
US\$52.1 bi

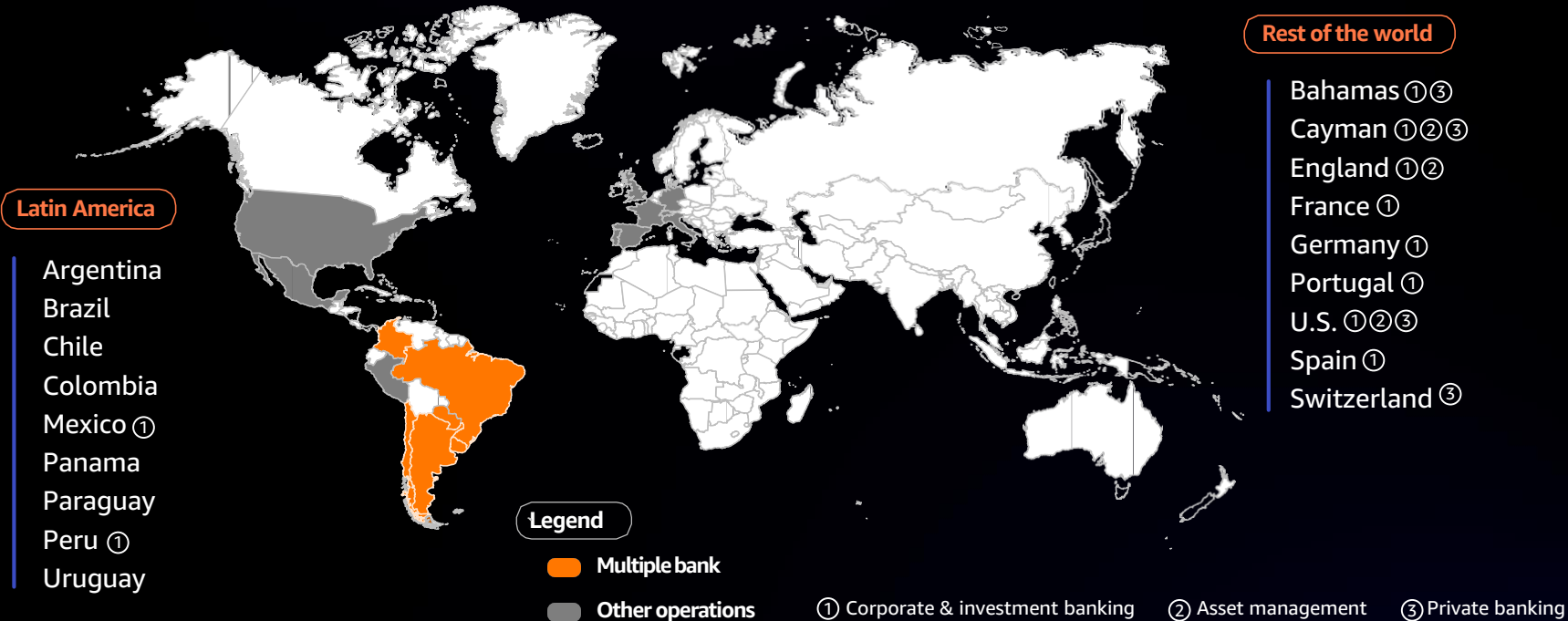
Total assets³
US\$387 bi

Credit portfolio³
US\$172 bi

ROE⁴
19.7%

Recurring managerial result
US\$1.22 bi

Tier 1 capital³
12.9%



Brazil's most valuable brand at approximately

US \$ 6.72 billion



56 million⁵
Retail clients



4.3 k
Branches and PABs



99 k
Employees



23 MM
Digital customers



4 k
Business services

(1) Largest bank in market value; (2) 2020 Interbrand ranking; (3) September 2021; (4) In 3Q21

<https://www.itaú.com.br/relacoes-com-investidores/Download.aspx?Arquivo=VySVAN/M63QqTN6EDJx/KO==&linguagem=en> Dollar Quotation (Nov 25, 2021)



Today's agenda: Our modernization journey and lessons learned

.01



Context

.02



Modernization
strategy

.03



Mechanisms

.04



Lessons
learned



Customers' expectations have changed

They value experiences rather than just products and services

Our ambition

To be a **digital and a customer-centric company**, managed by a robust and decoupled tech platform, with capacity to innovate and create value for customers **quickly and at low cost**

Our three pillars to reach our ambition



Working model

Integrated communities (tribes)

+20k people already work under this model, and by the end of 2022 we expect to have 21k



People

Investing in **training and diversity** to accelerate our digital transformation

Zup acquisition: **+1.3k** Zuppers in action in our digital transformation



Business platform upgrade

Enabler to become **more data centric**

Business platform upgrade: Modernization strategy

How are we rethinking our businesses to be more competitive?



**Find new, ready,
modern platforms
in the market**

**Use of external solutions
as accelerators**

- › Possibility of using modernized external platforms to be integrated (only via APIs or events) with the bank's environments



**Break down the monolith
into new modernized services
(using the Strangler Pattern)**

**Modernization of the
bank's systems**

- › Gradual replacement of the monolith (legacy), decoupling services and turning them into APIs, moving to the cloud with microservices
- › More efficiency in transaction costs vs. legacy environment
- › Prepares the platform for constant evolution

**Why did we
choose this
strategy?**

A.

We need transformation capabilities

B.

Guarantee the customer experience

C.

Legacy would still be present

Business platform upgrade: Modernization strategy

In 2021, we made huge investments in platform modernization

+125%
**Investment
growth**
(2020 to 2021)

Signed a 10-year
partnership with
AWS

Cloud governance
framework
developed

82 new products
and features
released in South
America

**245% growth in
cloud consumption**
since Q4 2020

**These efforts bring medium-
and long-term benefits to our
platforms**



Flexible, adaptable platform
designed to evolve



Component architecture based on
microservices



Reusable solutions that bring more
competitiveness (as a service)



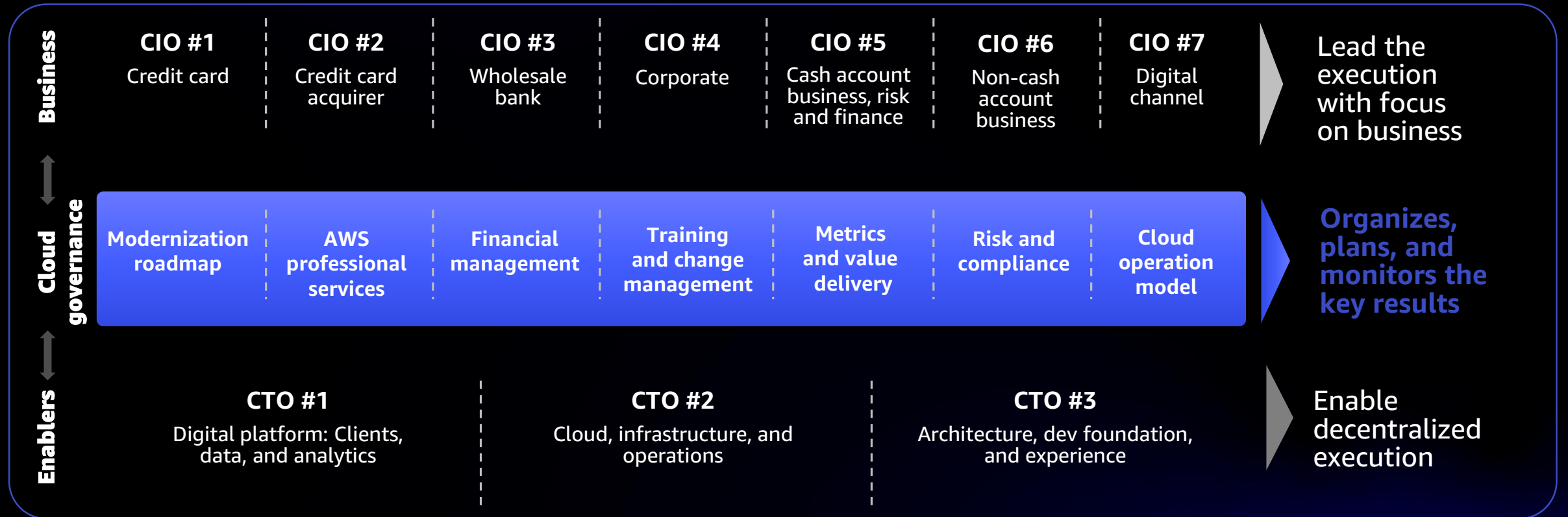
Increased delivery frequency and
improved time to market



Analytics by design and observability
tools to better monitor customer
experience and allow the platform
to evolve

Business platform upgrade: Mechanisms – control tower

This was a key factor for our modernization evolution:
Enabling centralized management and decentralized execution



Business platform upgrade: Mechanisms – modernization framework

Methodology to assess and determine the right approach to modernize our business services (workloads and applications)



Mechanisms: Business platform upgrade and cloud training program

Training structure with three learning stages

.01 Self-learning

Focus on fundamental and associate levels

+3.6k

.02 Lead by instructor

Partnership with AWS for 1,943 training vacancies for professional level

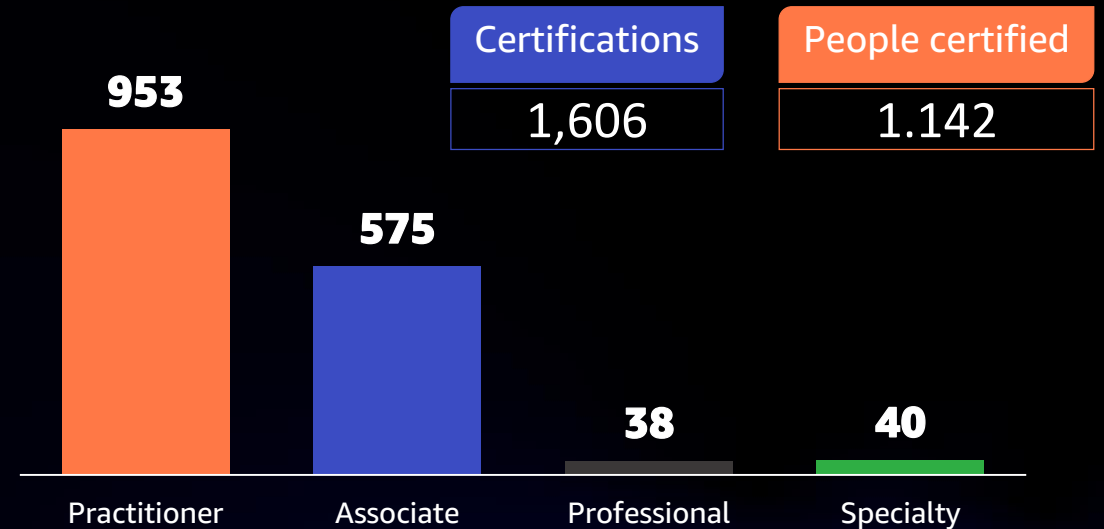
+1.3k

.03 Practice

Pods supporting practice

+100

AWS Certification



Use cases

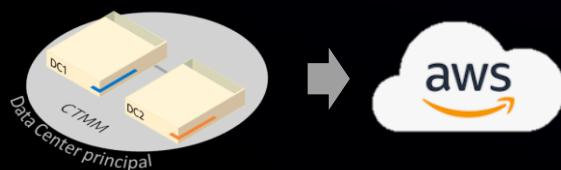
Business platform upgrade: Use cases – PRR

Itaú and AWS mutually sharing knowledge



PRR

Production readiness review



- › 50% of business services will be modernized by Q42022
- › Reduced number of incidents with impacts to our environment
- › Develop capability for fix bugs and generate automation that will avoid new impacts
- › IU Confia: Automated Assessment for end user



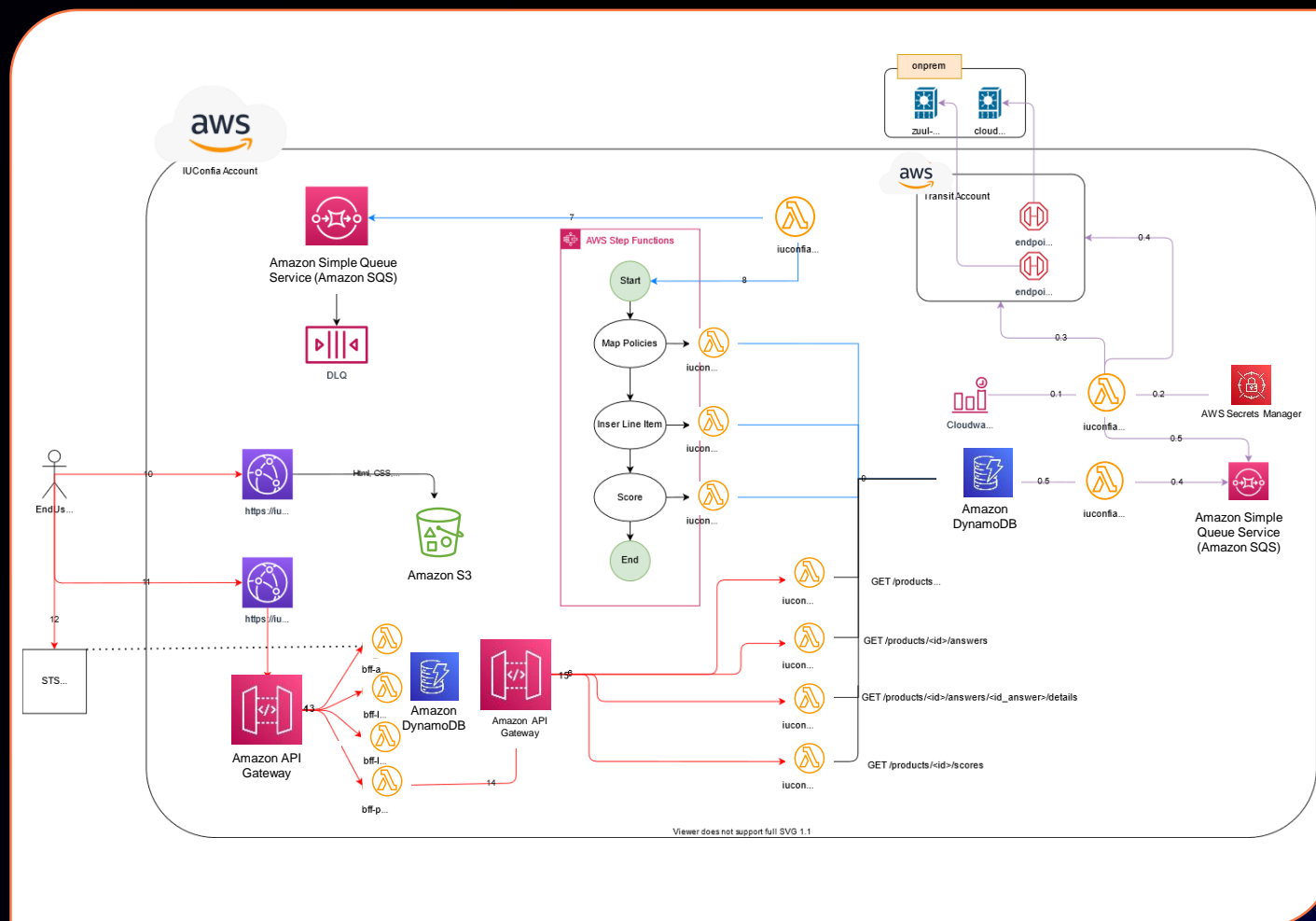
PRR



Backlog



Fix up



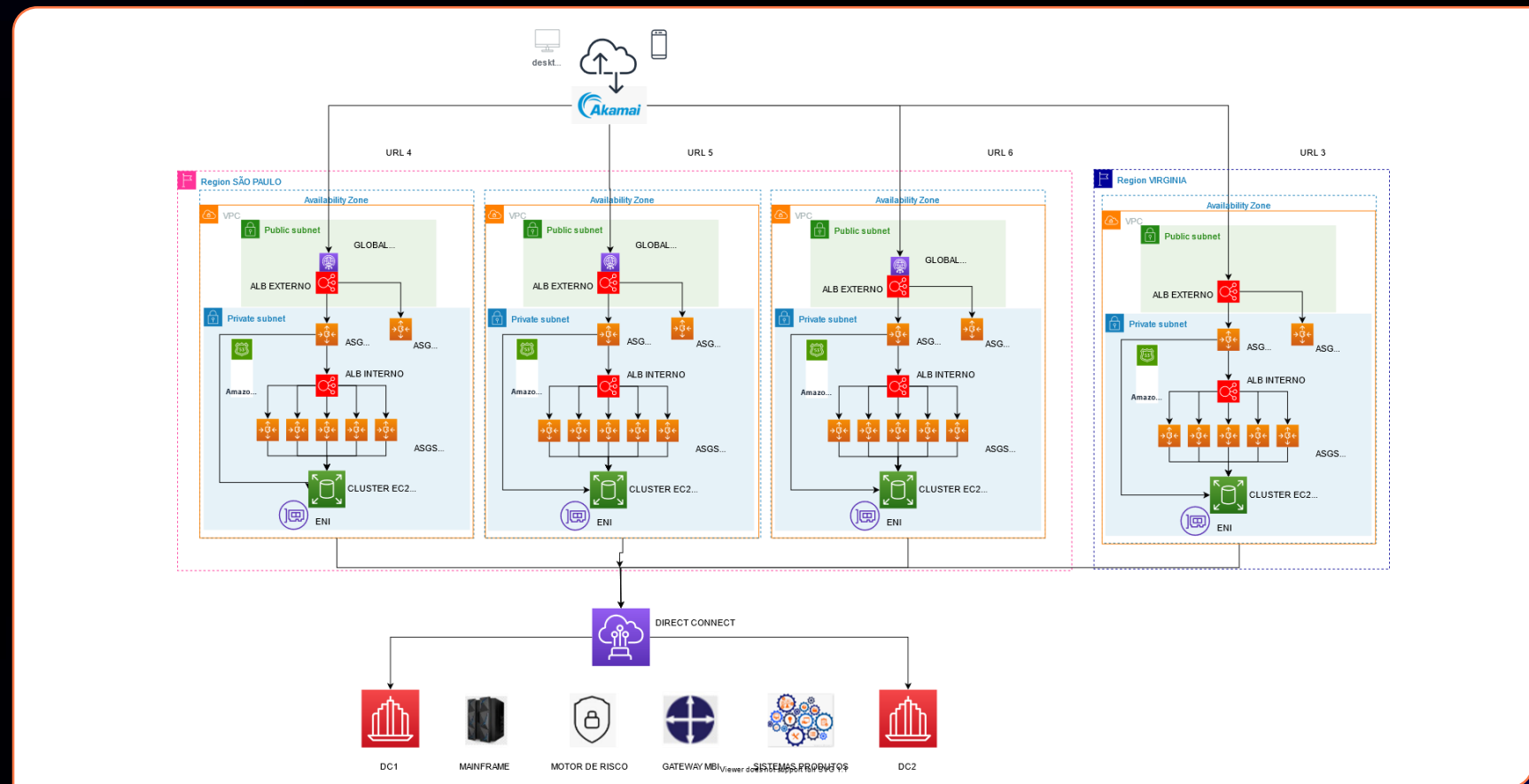
Business platform upgrade: Use cases – digital channels

Results in products and services that have improved customer experience and created competitiveness for Itaú



NF2 (Digital channels)

- › Internet banking and mobile running **100%** on cloud
- › Share of impacted customers reduced from **0.89%** to **0.77%** for mobile channels and from **0.82%** to **0.79%** for internet, in just one month
- › **40%** decrease in the number of servers
- › Lead time for new deployments reduced to **20 minutes** from **3 hours**



Business platform upgrade: Use cases – PIX

In November 2020, we started PIX, an instant payments solution coordinated by the Brazilian Central Bank



> **+700**
participants
(direct and
indirect)

> **54 MM**
customers
with keys
registered in
the system

> **129
MM**
keys

> **80%**
of payments/
transfers by Itaú
customers already use
the PIX infrastructure

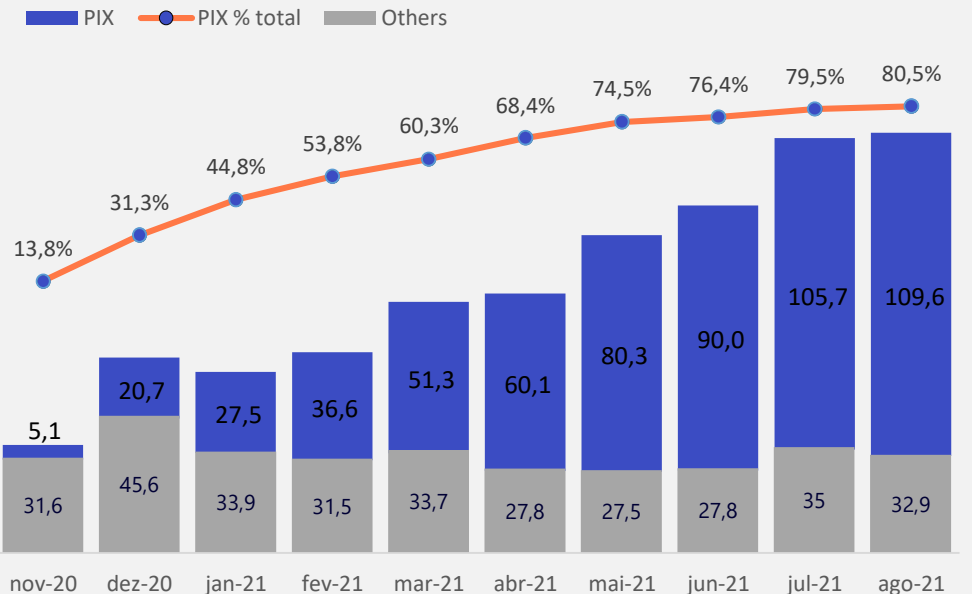
> **11%**
of the
volume
of money

Challenges



- > Aggressive timeline (only 10 months)
- > Elasticity needs increased until 500 tps
- > Regulatory SLA of 99.7% (24x7)
- > Aggressive SLA related to transactions, 99% of transactions below:
 - > 1.5 seconds to send payments
 - > 2.3 seconds to receive payments
- > Hardware security requirements (FIPDS-140-2 level 3) to sign and validate the transactions

PIX sent in relation to other types of transfers

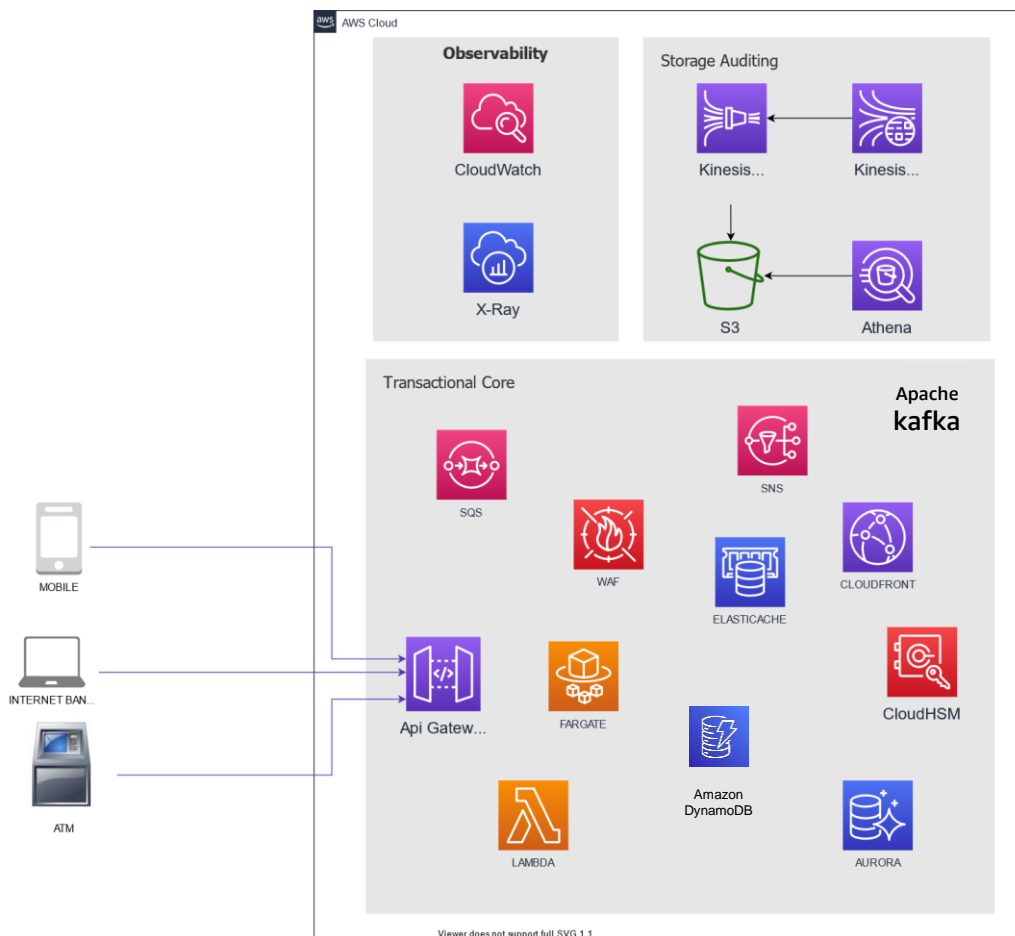


Business platform upgrade: Use cases – PIX

We are already seeing results in products and services that have improved customer experience and created competitiveness for Itaú

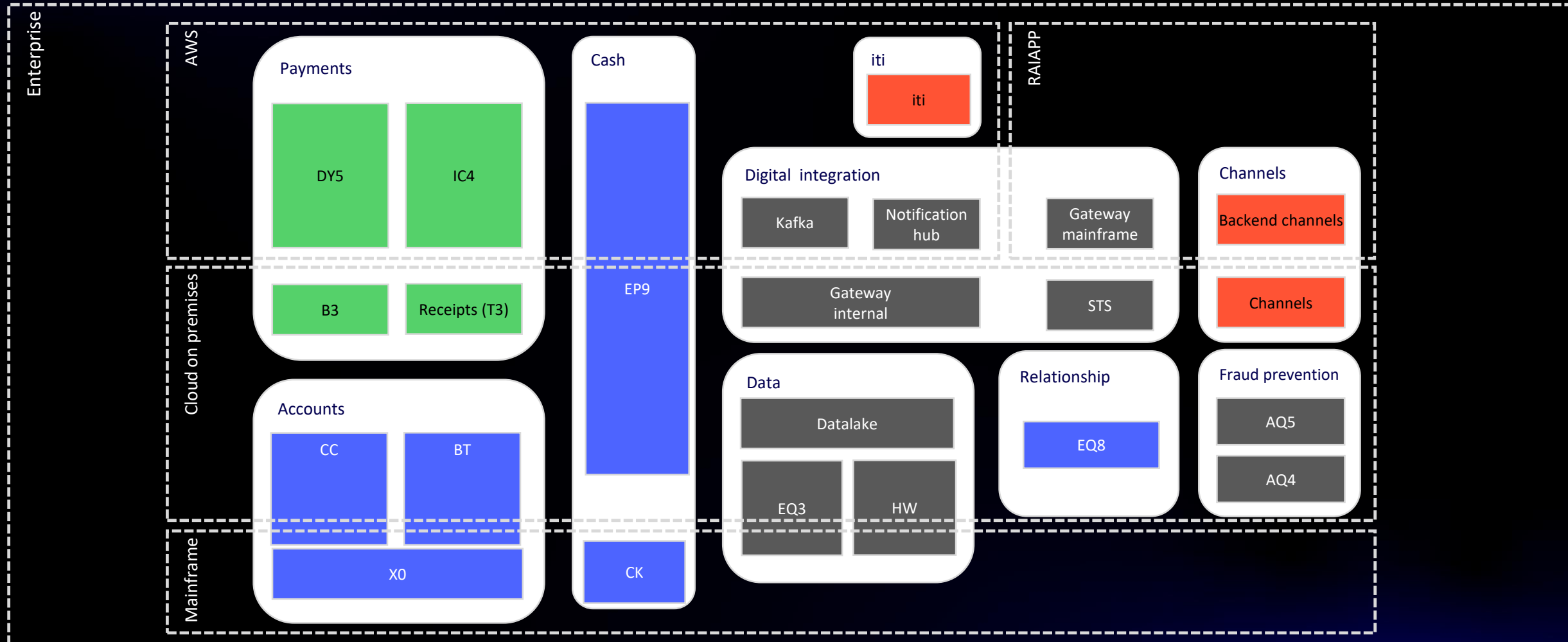


- › 100% born in the cloud on a modern platform
- › 20% of all volume transferred in Brazil
- › 99.8% average availability
- › 15% average monthly growth in transaction volume



Business platform upgrade: Use cases – PIX block architecture

Functional and environment view





Lessons learned

- › **Centralized governance** and execution in communities (tribes). The model allows for autonomy of business strategies and aligned with platform evolution goals in addition to scaling execution.
- › **Automation** tool to link OKRs with business services. This also allowed us to follow up on the modernization roadmap.
- › **Framework** to ensure the quality of the code we're uploading to AWS, preventing incidents and other issues.
- › We stopped talking tech language and started talking about the business. This made it possible to **bring the tech language to our current situation**.

Thank you!

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