U.S. Bancorp Investor Day Technology Strategy

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usbancorp.

Technology: Enabling Efficiency, Productivity and Growth

We strategically deploy technology **in service to our customers, our employees, and the growth and efficiency of the organization.**

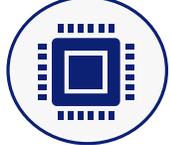- Artificial intelligence and machine learning

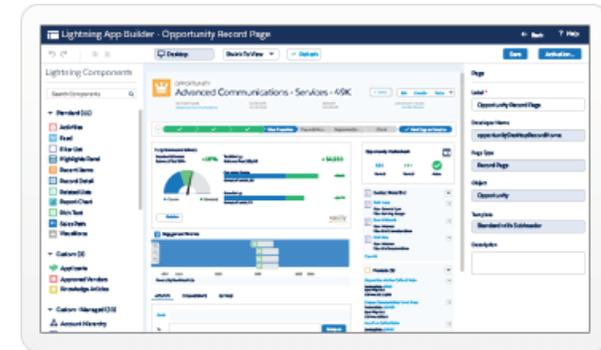- Robotic process automation and orchestration

- Data processing, aggregation and analytics

- Secure cloud enablement

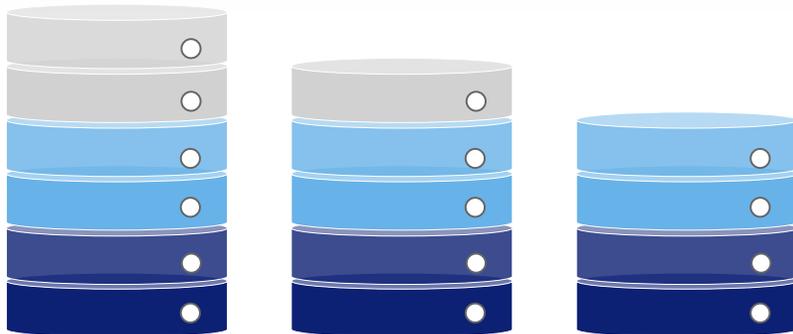- Application programming interfaces (APIs)

Technology at Work "Above and Below the Glass"

Above the glass: seamless customer experiences

Delivering **simple**-to-navigate, **consistent** user experiences along with information, insights and product offers that are **timely** and **relevant**
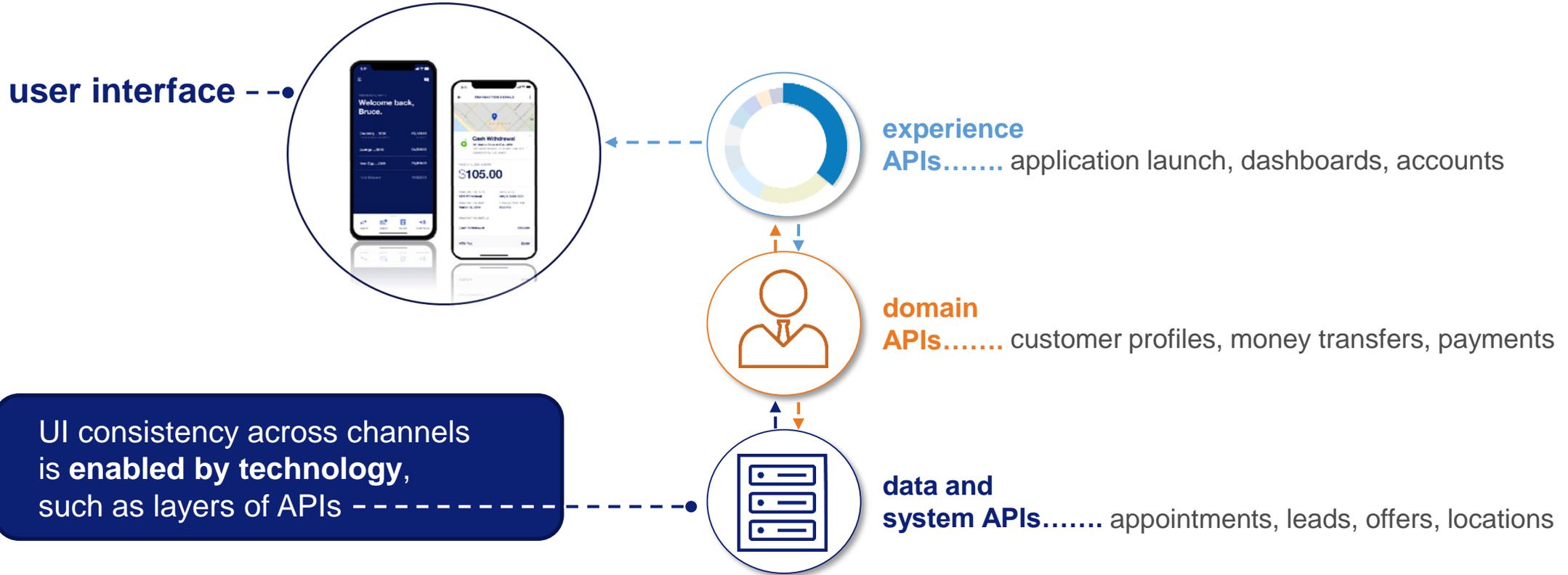
Below the glass: core and enabling technology

Deploying resources in a **highly effective** and **cost-efficient** way for the benefit of the organization;

Enabling **rapid** and **flexible** delivery of technology services, data and intelligence to ultimately be leveraged for the benefit of the customer

Above the Glass: Delivering an Exceptional Customer Experience

user interface

experience APIs……. application launch, dashboards, accounts

domain APIs……. customer profiles, money transfers, payments

data and system APIs……. appointments, leads, offers, locations

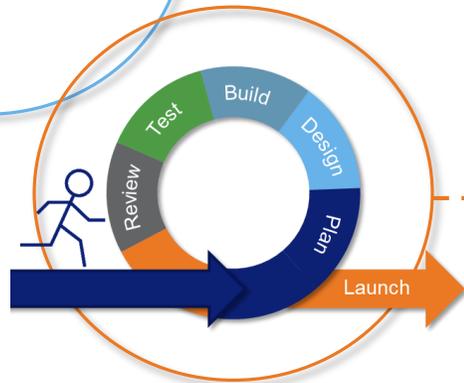UI consistency across channels is **enabled by technology**, such as layers of APIs

Below the Glass: Our Ongoing Initiatives

Continuing to modernize our architecture

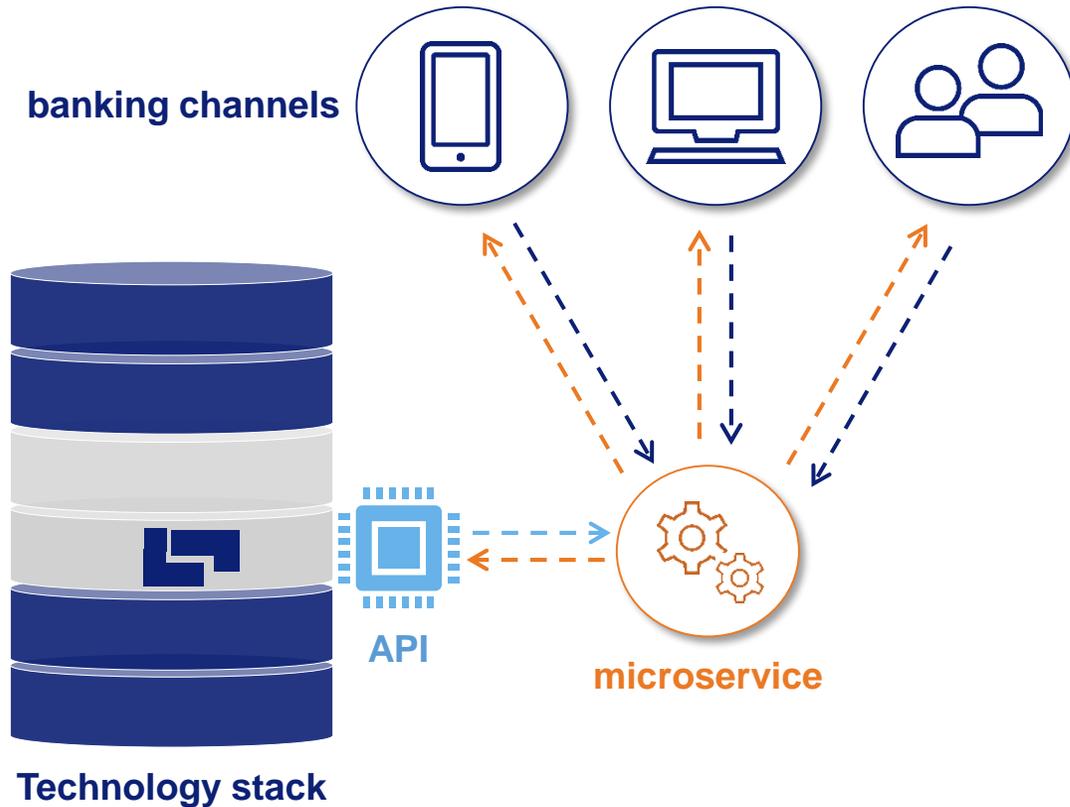Further scaling our data, analytics and artificial intelligence infrastructure

Accelerating improvements in productivity and cost-efficient delivery

Stability

Agility

Speed to market

Cost effectiveness

Security

Build

Test

Design

Review

Plan

Launch

Continued Modernization of Our Architecture

We are continuing to modernize our architecture, with an **increased focus on reusable shared services.**

banking channels

API

microservice

Technology stack

By rebuilding more-frequently changing functionalities that had resided in our core applications and data structures as **modular micro-services**, we create reusable capabilities that are readily accessible across channels and customer journeys.
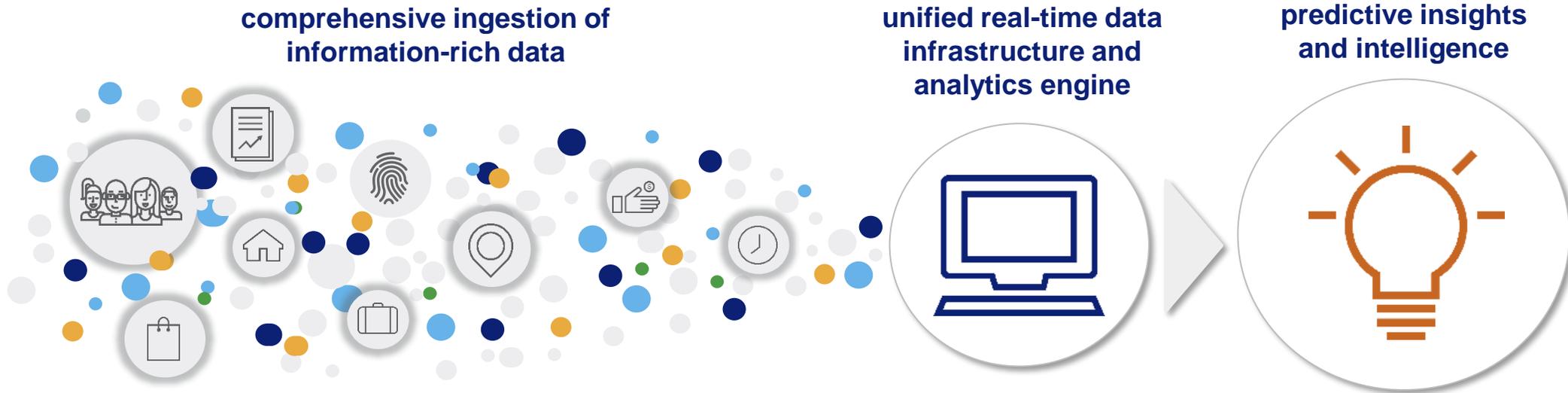
The Impact of Modernization

During the build-out of our new mobile app, we upgraded key components of our tech stack to **support faster rollouts, easier upgrades and more robust future compatibility.**

custom web applications
third party web applications
web server
database
applications
operating system
network

Rapid deployment of **APIs and microservices**…

…**reduced time to first code test** from weeks to hours…

…enabled **rapid, continuous delivery of new features**

Further Scaling Our Data, Analytics and AI

We are further scaling our data, analytics and artificial intelligence capabilities to **maximize the accessibility and utility of our data.**

comprehensive ingestion of information-rich data

unified real-time data infrastructure and analytics engine

predictive insights and intelligence

The Impact of Robust Data, Analytics and AI

Responsibly leveraging data across all products and at every touchpoint allows us to **build more personalized and high value relationships with our customers.**
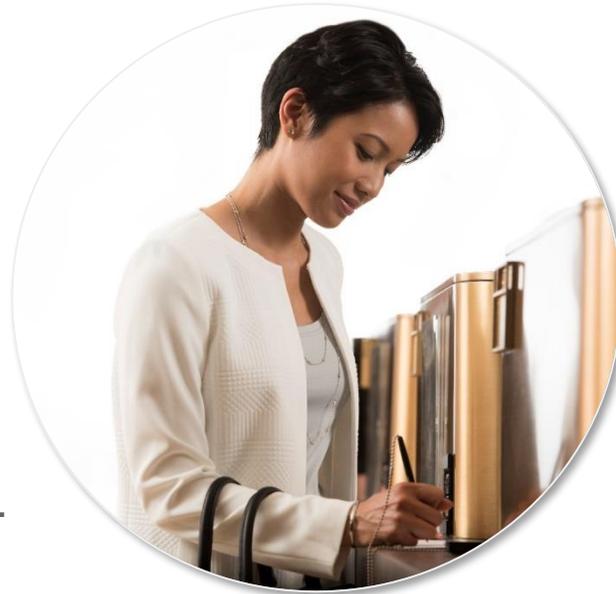
Would you like to try a simpler authentication method?

Your monthly Social Security deposit will happen in two days.

There is a transaction in your account that might be a duplicate. Can we help with that?

We see you've been traveling lately. A travel rewards credit card could earn you more rewards.

Your checking account balance is getting low. We can help you avoid an overdraft.
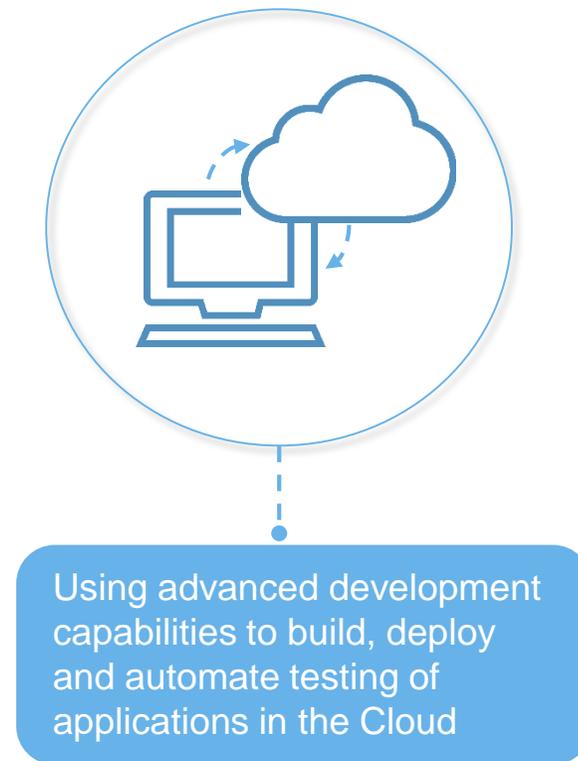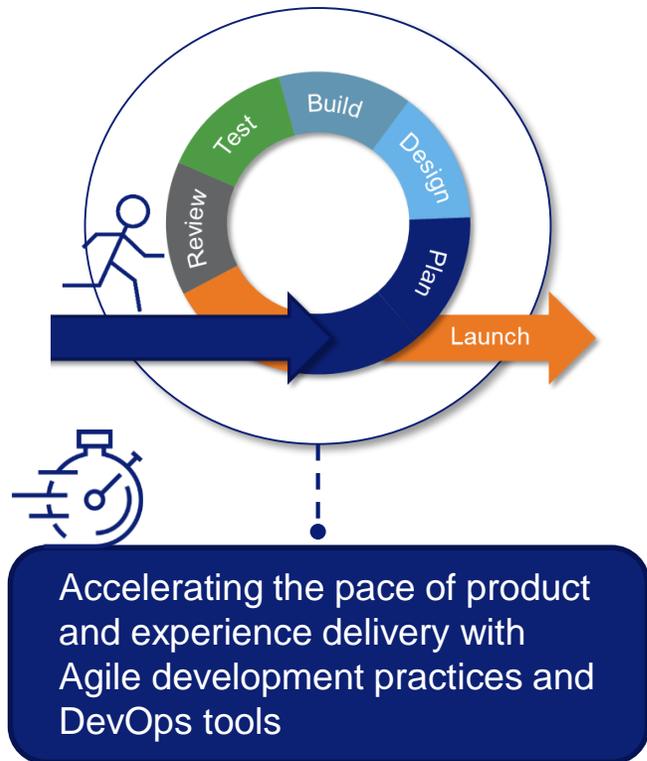
Here are some tips to help you maximize your retirement savings.

Accelerating Productivity and Cost-efficient Delivery

We are accelerating advancements in productivity and cost-efficient delivery via **process enhancements, workforce and tools, such as the Cloud.**

Accelerating the pace of product and experience delivery with Agile development practices and DevOps tools

Working in Experience Studios with business, technology and risk partners collaborating

Using advanced development capabilities to build, deploy and automate testing of applications in the Cloud

The Role of the Cloud

Why Cloud?

- Speed to market

- Development productivity

- Cost optimization

Our approach:

- Build new applications in the Cloud wherever possible; deliberately migrate existing apps

- Leverage the public Cloud's extensive tool set, scalable infrastructure and operating cost benefits

- Focus on comprehensive governance and controls to ensure security and safety

Cybersecurity

We continue to innovate in the **cybersecurity space**, **leveraging our investments** in intelligence-driven, machine-speed information security techniques **to securely enable our digital-first strategy.**

5 billion data-level events processed daily

Use of **deep machine learning, analytics and AI** to identify event anomalies (e.g. insider threats)

Enables **near real-time automation and orchestration**

Integrated approach with **on-premise and Cloud security** and compliance

The Impact of Changing the Way We Work

Flexibility & Speed

Increasing the pace of innovation and accelerating our response to changing customer expectations

Customer Obsession & Business Partnership

Anticipating new and emerging customer needs

Scalability & Efficiency

Improving cost efficiency using smaller teams of highly skilled engineers while optimizing expenses

Quality & Resilience

Remaining a bedrock of technology safety, soundness and customer confidence