



Driving DevOps at Global Scale

June 2017

ADVANCED ENGINEERING



BBVA History & Context

Speaker Profile & Company Highlights

Our Challenges

Our Strategy & Focus

Our Results

BBVA



**€ 732**  
billion in total assets

**70**  
million customers

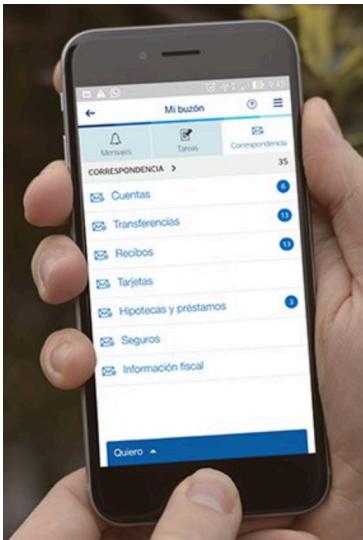
**35**  
countries

**8,660**  
branches

**31,120**  
ATMs

**134,792**  
employees

BBVA, #1 in mobile banking in Europe



Company:  
Role:

BBVA  
Head of DevOps &  
Engineering Processes

As a highly skilled IT professional with the ability to create and manage complex execution plans, Brian Timmeny is an experienced delivery leader that has consistently streamlined organizations to effectively implement complex solutions, and rise the tide of advanced engineering in the organizations he serves. Brian brings proven experience aligning business and IT organizations to deliver upon value driven execution strategies.

Brian presently serves as the Head of DevOps & Engineering Processes at Banco Bilbao Vizcaya Argentaria, a global financial services company. Brian is currently working toward the transformation of global engineering to next generation DevOps and Advanced Engineering Delivery, driving continuous deployment to the majority of application suites within the global engineering portfolio.

Prior to his current assignment, Brian served as the DevOps and Delivery Leader at Capital One, UnitedHealth Group and Cigna Corporation.

Brian resides in Madrid, Spain with his wife, and two children. Although busy with his career, he also serves on several local and industry boards related to DevOps and Advanced Engineering Maturity.



Through an easy and convenient experience: DIY through digital channels or human interaction

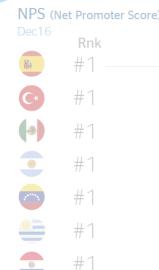


Helping our customers to make the best financial decisions offering relevant advice



Providing the best solutions that generate trust: clear, simple, transparent and fair conditions

“Our goal is to be leaders in customer satisfaction across our global footprint”



Digital Customer Experience Scores

Spain

Channel	Ranking <sup>(1)</sup>	NPS <sup>(2)</sup>	Change vs. 2015
Mobile App	10	63%	+20 pp
Online Bank	10	43%	+2 pp
ATMs	10	39%	+10 pp
Branches	10	32%	+14 pp

# Our Challenges



Inconsistent, Manual  
Engineering Processes



Low Cloud Adoption



Global, Silo Delivery Teams



Low Levels of  
Automated Testing



## Velocity ... Improve Delivery Time to Market

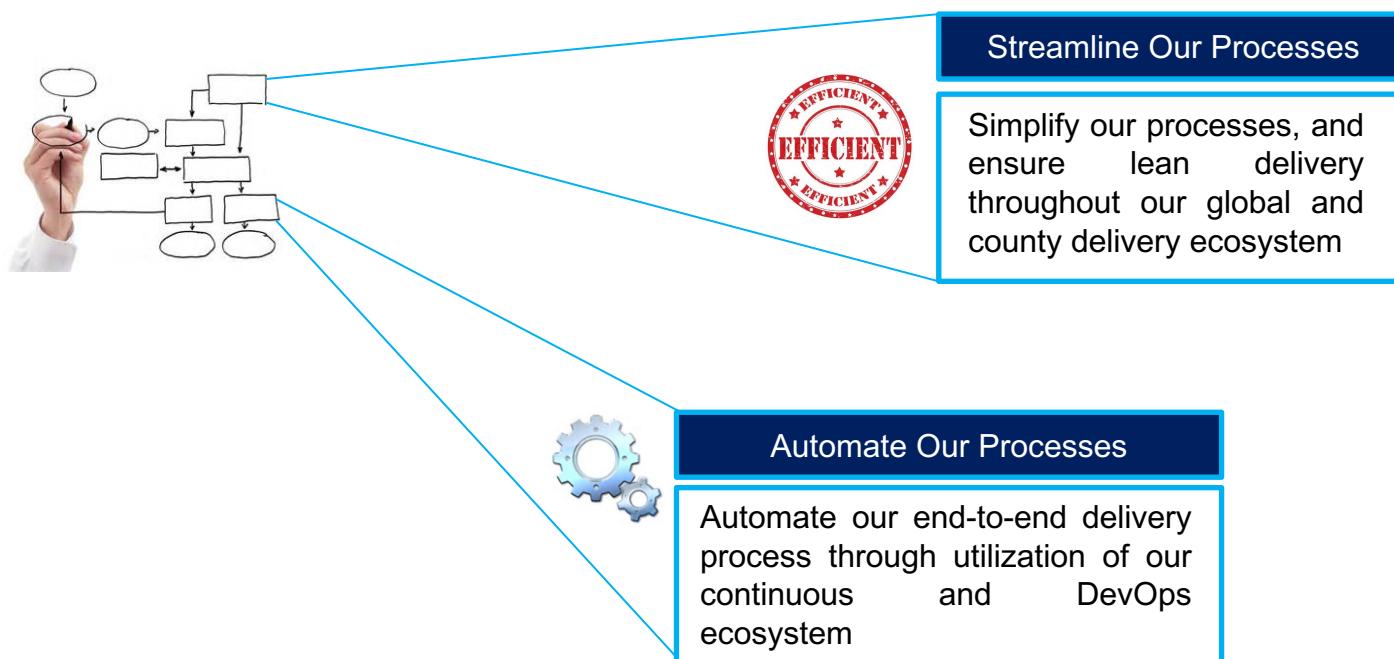
Drive a system with the ability to improve overall speed of the application delivery lifecycle. The objective is to drive applications more quickly directly into the hands of our clients, both internal and external.

## Quality: Improve Application Reliability

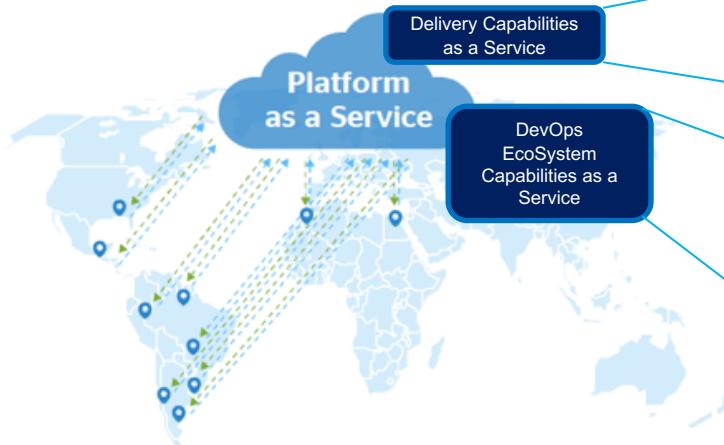
Within the development and operations system, constantly improve application stability through improved unit tests, dependency and integration test coverage, performance test execution, and real time/constant application fragility test case implementation.



Effective engineering is not the absence of process, but rather the automation and transparency of our processes ...

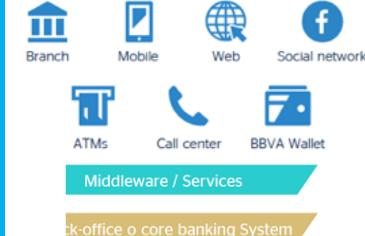


Enable our developers through a reusable, easy to consume DevOps ecosystem ...

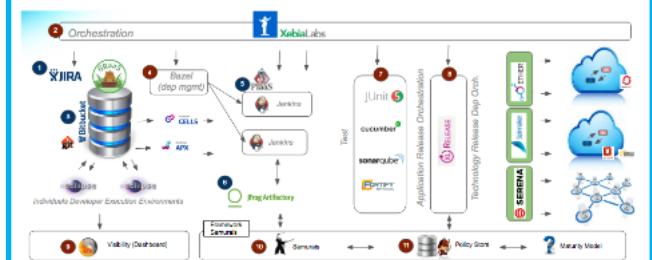


... automate our processes within the delivery ecosystem

## Front Office, Channels

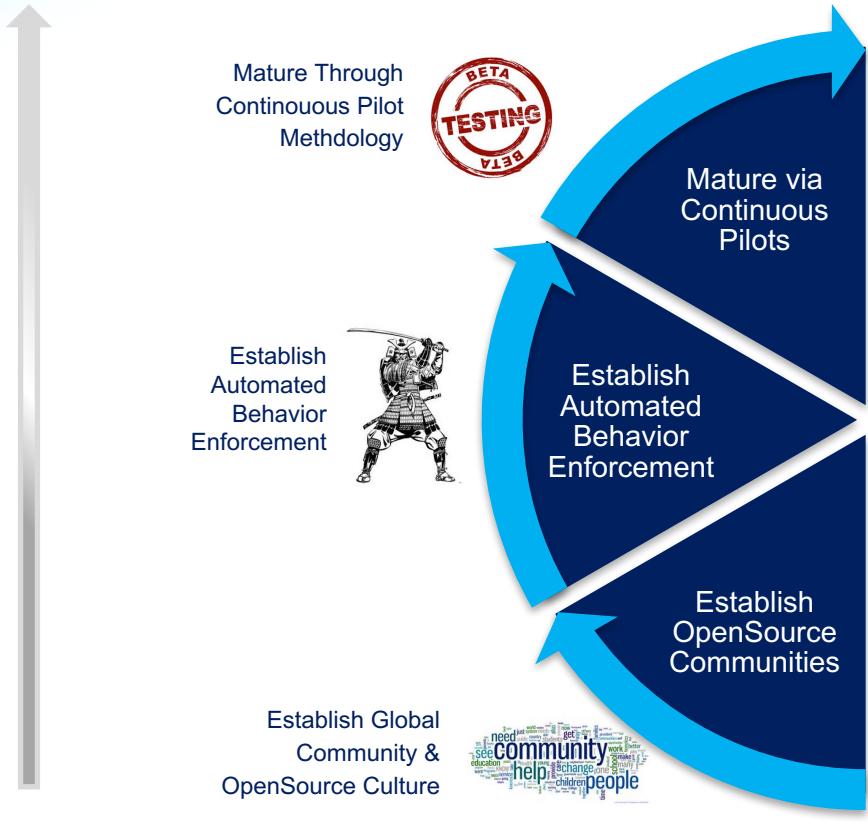


## Front Office, Channels

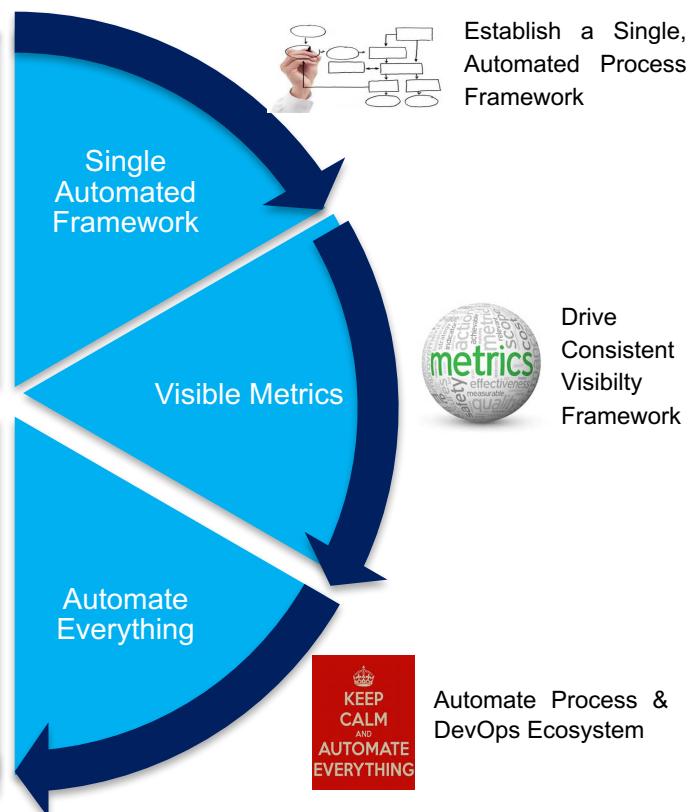


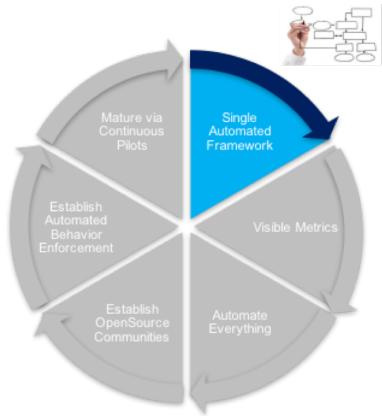
# Our DevOps Maturity Strategy

*Driving Adoption Through Bottom Up Execution*



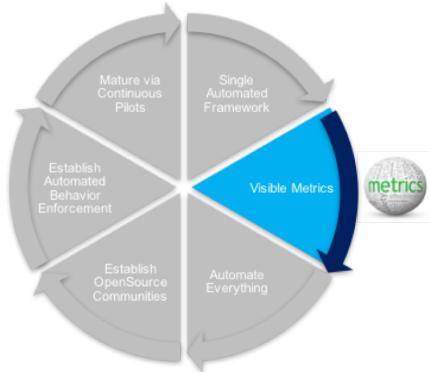
*Driving Consistency Through Top Down Delivery*





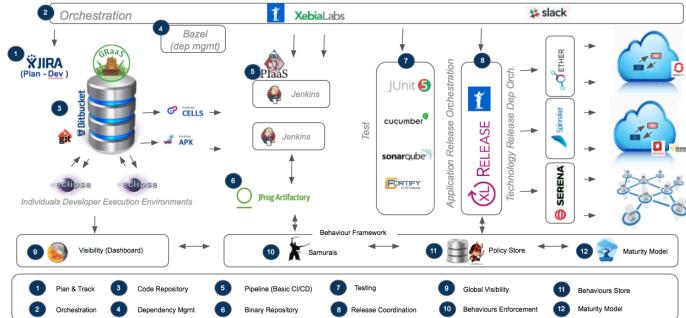
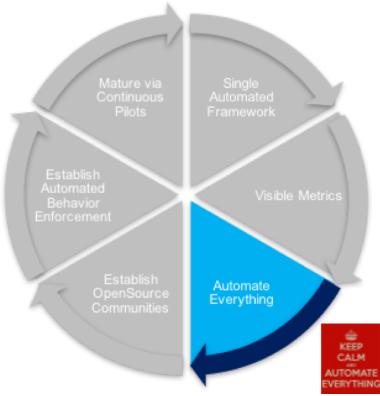
### Single, Automated Framework

- Move from externally sourced to internally sourced teams
- Ensure all teams comprised of development and operations delegates
- Define required end-to-end processes
- Optimize end-end-delivery delivery process approvals
- Define automated approval criteria
- Automated processes within delivery and DevOps ecosystem



### Highly Visible Delivery & Objectives Metrics

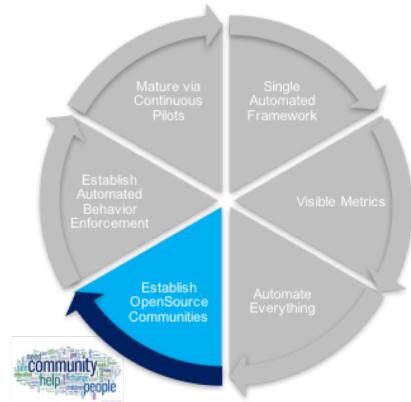
- Drive highly visible delivery metrics, both physically and operationally
- Show team level continuous delivery progress
- Expose all behaviors compliance metrics
- Enable objective based leadership visibility (against speed and quality)
- Drive constant flow/bottleneck reports
- **Keep visibility and dashboards simple and limited in scope**



## Highly Automated Delivery Ecosystem

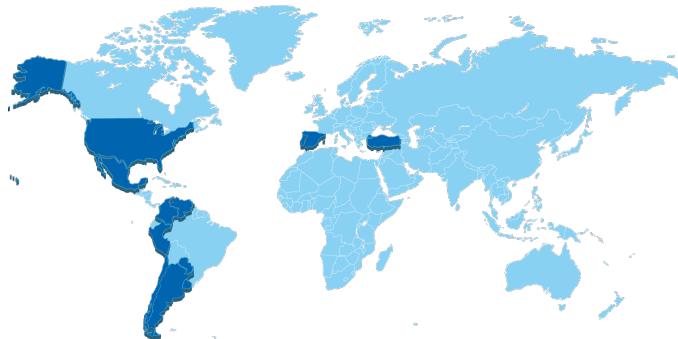
- Establish ecosystem components as a service
- Automate regulatory processes into the delivery and DevOps ecosystem.
- Establish (visibility metrics) flow & bottleneck discovery.
- Automate continuous delivery bottlenecks relentlessly.
- Relentlessly discover and automate approvals within the delivery chain.
- Enforce minimum automated testing at each phase.
- Automate behavior enforcement throughout the delivery value chain.
- Automate test suite processes from unit through orchestrated deployment.
- Automate integrated testing over time (through incident discovery model)

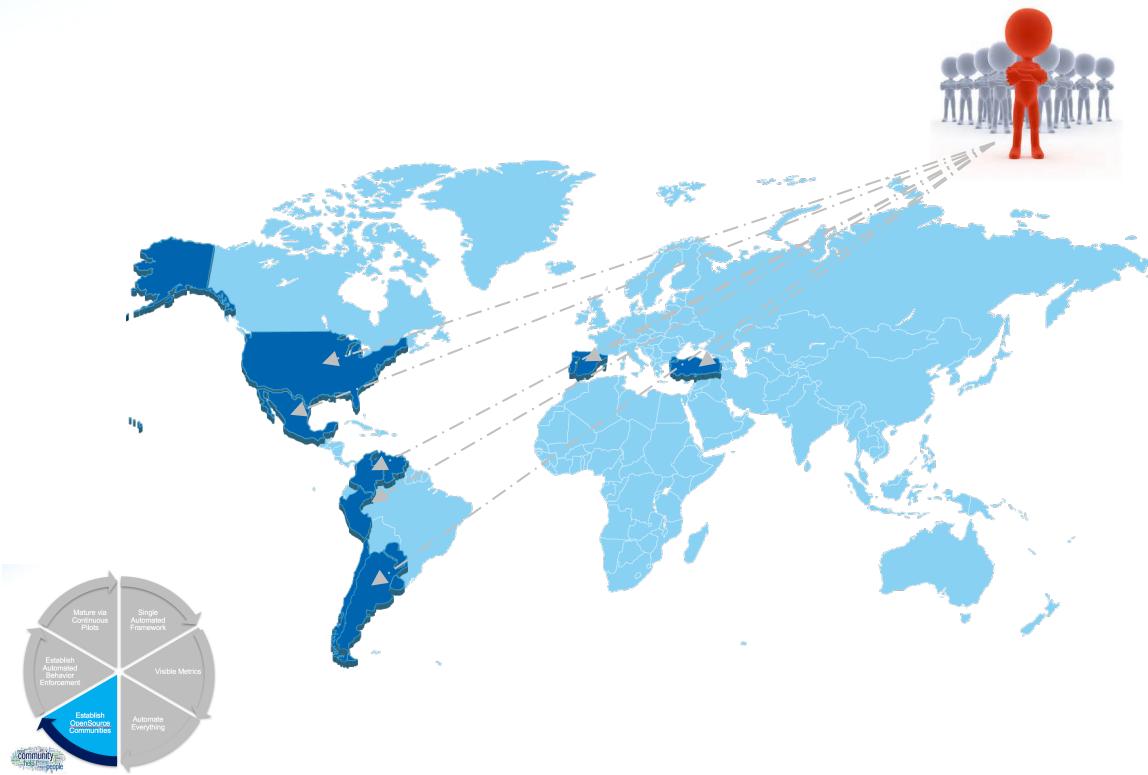




## Drive Global Collaboration

- Establish Framework discipline responsible within each geography (scaled agile teams).
- Establish DevOps discipline responsible within each geography (system teams).
- Drive common improvement roadmap across disciplines in order to drive synergy and focus across geographies.
- Drive a community framework utilizing constant improvement to drive enhancements and automation to the system.
- Drive constant improvements to the visibility dashboards through collaborate value utilization.

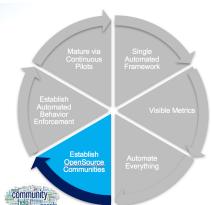




## Establish Discipline Leader by Geography

- Establish country specific roadmap and maturity pace
- Establish early pilot definition candidates
- Establish ongoing pilot candidates
- Drive synergy between local focus and global roadmap (framework, DevOps ecosystem)
- Drive global input improvements into local geography (framework, DevOps ecosystem)
- Drive local improvements into global agenda (framework, DevOps ecosystem)
- Determine long-term group federation strategy

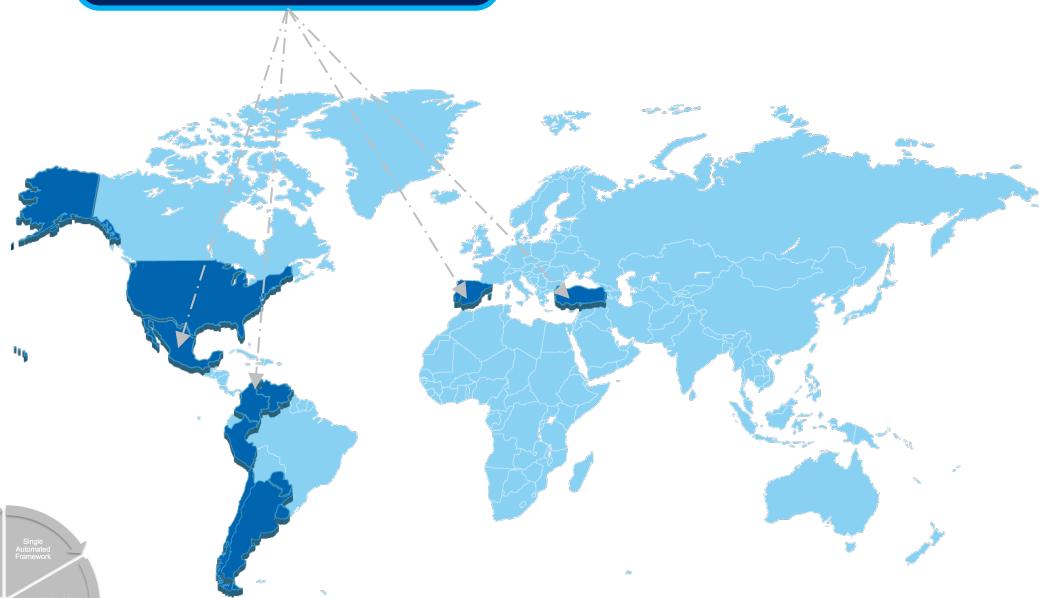
## DevOps Center of Excellence



### Establish Framework Common Capability Hubs

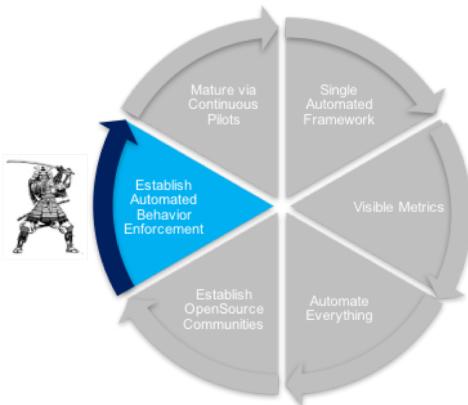
- Establish core capabilities ecosystem early incubation within three geographic hubs (Spain, Mexico, USA).
- Drive early innovation ecosystem pilots.
- Execute improvement capability pilots with assistance from DevOps CoE staff.
- Implement roadmap to drive common capability pilots across all geographies.
- Utilize pilot feedback to drive constant improvement of the ecosystem.
- Solicit pilot takeover from countries as capabilities improve.
- Serve as early System Team Support.
- Serve as Open/InnerSource Project Managers.

### DevOps Framework/Agile Center of Excellence



### Establish DevOps Common Capability Hubs

- Drive early automation candidates from three process excellence hubs (Spain, Mexico, Colombia).
- Establish core delivery continuous process streamline early incubation within hubs.
- Establish core delivery continuous process approval streamline early incubation.
- Drive early process innovation ecosystem pilots.
- Execute framework improvement and streamline pilots with assistance from Framework CoE staff.
- Implement roadmap to drive common capability pilots across all excellence centers.
- Utilize pilot feedback to drive constant improvement of the framework.
- Solicit pilot takeover from countries as capabilities improve.



## Automated Event Based Enforcement

### Policy Store Based

*Common Policy Store to define and drive behaviors, consequence framework.*

### Event Based Behavior Enforcement

*Enforce behaviors via event based framework to ensure real time compliance.*

### Cloud Based Functionality

*Drive real time execution through cloud-native capabilities*

## Behavior Based Policy Enforcement

### Infrastructure Deployment Policies

*Define the container and package strategy for our infrastructure deployment as a basis for our platform and application implementation.*

### Platform & Application Deployment Policies

*Define our container and reuse strategy for creating a catalogue equivalent for deployment of common platform and application suite reference architectures.*

### Security Policies

*Implement common event based security implementation policies to ensure security of our data and application suite posture.*

### Financial & Revenue Affected Policies

*Implement common event based financial protections to ensure appropriate behaviors and account level financial management tool suites.*

### Cloud Operations & Management Policies

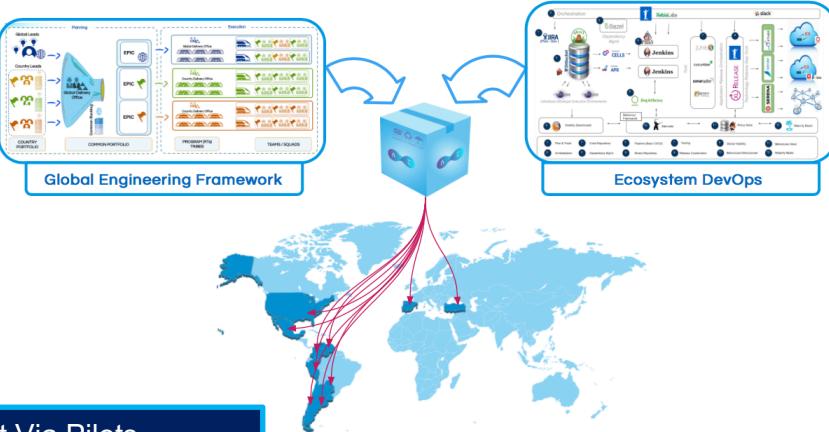
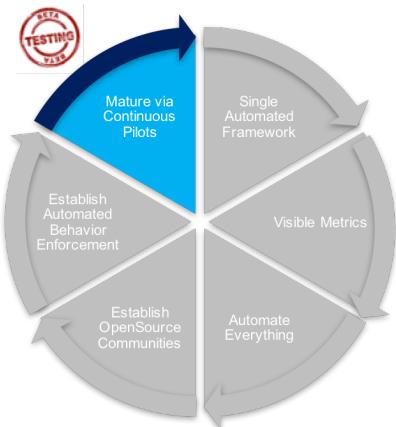
*Define appropriate cloud management required policies and implement across the suite of all migrated application suites.*

## Policy Store



## Policy Execution

## Cloud Driven Implementation



## Drive Constant Improvement Via Pilots

### Pilot Framework & Engineering Process Pilots Constantly

*Constantly search for ways to improve the delivery framework globally, and pilot those tests constantly. As they are ready, implement on a broader scale.*

### Pilot DevOps Ecosystem Pilots Constantly

*Constantly search for ways to improve the ecosystem globally, and pilot those tests constantly. As they are ready, implement on a broader scale.*

### Drive Improvement Roadmap by Geography & Globally

*Constantly search for synergies globally, drive targeted pilots, and search for wide scale rollouts of improving framework and ecosystem capabilities.*

## Execute Pilot Based Culture

### Pilot Minimum Viable Products Constantly

*Drive a culture of constantly driving framework and ecosystem changes on small scale to build a enterprise muscle of continuous improvement.*

### Reward Experimentation

*Ensure that successful pilots are both recognized and rolled out on a global scale.*

- Deployable DevOps ecosystem vs. single tool suites
- Focused first wave pilot adoption Across 11 Countries
- Global, common DevOps ecosystem adopted across 4 countries
- Established MVP Code Sharing Framework across three continents
- Global visibility tool suite adoption within primary geography
- Invisible deployment framework across for our “as a service” DevOps ecosystem products

***To be continued ...***



Brian Timmeny  
Banco Bilbao Vizcaya Argentaria  
Head of DevOps & Engineering Processes

**Linked In:** <https://www.linkedin.com/in/briantimmeny/>

# Appendix

<b>1995</b>	Banco Continental ( <a href="#">Peru</a> ) Probursa ( <a href="#">Mexico</a> )	<b>2005</b>	Granahorras ( <a href="#">Colombia</a> ) Hipotecaria Nacional ( <a href="#">Mexico</a> )	<b>2012</b>	Sale of <a href="#">Puerto Rico</a> Unnim Banc ( <a href="#">Spain</a> )
<b>1996</b>	Banco Ganadero ( <a href="#">Colombia</a> ) Bancos Cremi and Oriente ( <a href="#">Mexico</a> ) Banco Francés ( <a href="#">Argentina</a> )	<b>2006</b>	Texas Regional Bancshares ( <a href="#">USA</a> ) Forum Servicios Financieros ( <a href="#">Chile</a> ) State National Bancshares ( <a href="#">USA</a> ) CITIC ( <a href="#">China</a> )	<b>2013</b>	Sale of <a href="#">Panamá</a> Sale of pension business in <a href="#">Latam</a> Sale of CNCB's 5.1% ( <a href="#">China</a> )
<b>1997</b>	Banco Provincial ( <a href="#">Venezuela</a> ) B.C. Argentino ( <a href="#">Argentina</a> )	<b>2007</b>	Compass ( <a href="#">USA</a> )	<b>2014</b>	Simple ( <a href="#">USA</a> )
<b>1998</b>	Poncebank ( <a href="#">Puerto Rico</a> ) Banco Excel ( <a href="#">Brasil</a> ) Banco BHIF ( <a href="#">Chile</a> )	<b>2008</b>	Extended CITIC agreement	<b>2015</b>	Sale of CIFH's stake to CNCB ( <a href="#">China</a> ) Sale of CNCB's 4.9% ( <a href="#">China</a> ) Catalunya Banc ( <a href="#">Spain</a> ) Acquisition of an additional stake in <a href="#">Turkiye Garanti Bankasi</a> ( <a href="#">Turkey</a> ) Acquisition of a 29.5% stake in Atom ( <a href="#">UK</a> )
<b>1999</b>	Provida ( <a href="#">Chile</a> ) Consolidar ( <a href="#">Argentina</a> )	<b>2010</b>	New extension CITIC agreement <a href="#">Turkiye Garanti Bankasi</a> ( <a href="#">Turkey</a> )	<b>2016</b>	Holvi ( <a href="#">Finland</a> ) Sale of CNCB's 0.75% ( <a href="#">China</a> ) OpenPay ( <a href="#">Mexico</a> )
<b>2000</b>	Bancomer ( <a href="#">Mexico</a> )	<b>2011</b>	Extension of Forum SF agreement ( <a href="#">Chile</a> ) <a href="#">Credit Uruguay</a> ( <a href="#">Uruguay</a> )		
<b>2004</b>	Valley Bank ( <a href="#">USA</a> ) Laredo ( <a href="#">USA</a> ) Bancomer IPO				

**1988**

BANCO BILBAO VIZCAYA

- Banco de Bilbao
- Banco de Vizcaya

**1998**

- Corporación Bancaria de España
- Caja Postal
- Bco. Exterior
- Bco. Hipotecario

**1999**

- Banco Bilbao Vizcaya
- Argentaria

## Driving Adoption Through Bottom Up Execution



### Drive Maturity Through Continuous Global Pilots

Establish Pilot Programs, by country to Drive Iterative Maturity



### Establish Automated Behavior Enforcement

Establish System Control Framework to drive consistency in engineering, build, test and deploy practices



### Establish Community & OpenSource Culture

Establish and Nurture Communities to Drive Global Global Capabilities and Speed of Adoption

## Driving Consistency Through Top Down Delivery



### Driving a Single, Automated Framework

Publish Global Framework Overview & Foundations. Drive next level process and methodology definition through pilot execution.



### Drive Consistent Visibility Framework

Through Build and establish MVP visibility ecosystem to drive delivery and visibility against our key metrics of speed and quality.



### Automate Process & DevOps Ecosystem

Establish baseline tool suite for replicated use across the enterprise

Initiative	Initiative Description
Well Defined Agile-At-Scale Delivery Process & Execution	Define and form the at-scale agile delivery process, policies, and teams. Begin across several pilots to drive best practices and in-the-field pilot testing. Form an improve-over-time model.
Well Defined Engineering & Release Processes	Define overall process for engineering execution. Define the current and future states, including required manual and eventual automation execution.
Well Managed Compliance Automation	Determine Audit Outcomes, SOX, PCI, security and financial compliance required items; determine and create automated interrogation and enforcement module; support ongoing audit and sox compliance enterprise (ISRM and Cloud) initiatives.
Well Managed Cloud Strategy Automation	Drive a well managed cloud strategy to enforce financial and engineering consistency, in keeping with the defined and evolving advanced engineering behavior model
Well Managed Operations Automation	Operations Interrogation and Reporting: Determine appropriate tools to drive forward operations and security interrogation reporting; create interrogation and action implementation strategy
Behavior, Samurai Dashboard	View health and status of Samurai army; View health of application instances against required behaviors.
Well Defined DevOps Standards and Tool Suites	Define common best practice implementation tool suite. Build aligned rationale and self-healing associated strategy to suite implementation across enterprise delivery.
Well Managed Release & Template Deployment Pipelines	Build template-based pipeline for use by BBVA Technology across all relevant platforms. Pipeline will serve as an ephemeral delivery pipeline instance that will encompass all relevant maturity behaviors.

Short Description	Description
One Global IT & Delivery Process & Method. Definitions	Form a base of well defined process and interactions, together with role definitions, and engineering expectations to drive alignment to the same global processes.
Advanced Engineering Tools & Environment Implementation	Define and form the environment and system that drive the appropriate behaviors required of a digital company both in Dev/pipeline delivery phase and Ops/runtime. Create system to enforce required behaviors to drive concurrent increased speed of delivery and increased stability in environment/system.
Drive Common At-Scale DevOps Tool & Behavior Adoption	Define and drive a method of DevOps innovation adoption, including centralized and federated talent execution.
Support Train & Product Level Delivery & Transformation	Define and ensure a method to drive DevOps capabilities directly into our delivery teams, and ensure increasing maturity of our product trains across the global organization.
Effective Release Management as we Mature	Protect and drive maturity of our delivery teams and processes, and driving increased adoption over time of our process, DevOps and engineering capabilities.
Drive Consistent Advanced Engineering Operations	Define and drive next generation delivery and operations execution to ensure both antifragile and operation behaviors to support ongoing maturity, delivery speed and innovation, and maintenance of security and regulatory compliance controls.