

BBVA



€ 732 billion in total assets 70 million customers 35 countries 8,660

31,120 ATMs 134,792

Transformation Objective & Values Statement





Driving value to our customers by quickly delivering great products, of the highest quality.

Driving an Concurrent Engineering & Culture Transformation

A tale of two transformation ...



- Driving Common Platforms
- Utilizing Common Delivery Ecosystems (DevOps)
- Consistent API/Micro-Service Strategy
- Consistent Data Strategy
- Move to Cloud
- IT Greenfield & Legacy Operations



- Driving a Product Driven Culture
- Establish a Common Global Delivery Model
- Driving a Dev-Sec-Ops Culture
- Driving a Scaled-Agile Culture
- Driving Iterative Legacy Integration Culture

Maintain Focus on Our Outcomes



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 & Security

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.

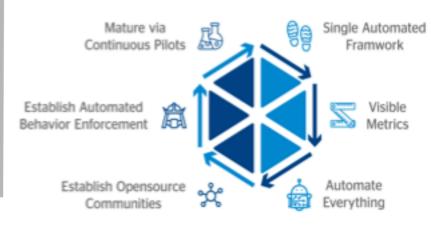


Establishing Our Framework









Driving a Single, Global Framework



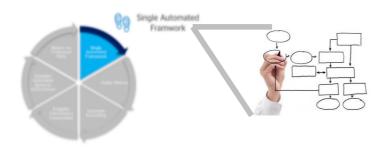


Single, Automated Framework

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

Driving a Single, Global Framework

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





Streamline Our Processes

Simplify our processes, and ensure lean delivery throughout our global and county delivery ecosystem



Automate Our Processes

Automate our end-to-end delivery process through utilization of our continuous and DevOps ecosystem



Driving Consistent, Global Delivery

"Effective delivery is ensuring that we create amazing products that deliver consistent value to our customers."





Daily/Stand Up Meetings

Discuss work to date, and opportunities for automation, tool adoption, and opportunities for cross-pollination



Backlog Grooming

Discuss work to to be completed, both features, as well as work required to automate and improve our delivery velocity and quality.



Sprint Planning

Plan work for the coming sprint, and build in those devops features, automation, and cross-pollination experiments.



Sprint Demo

Demo working software, as well as solutions that enable velocity and quality improvement.



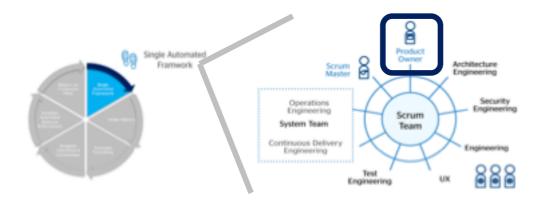
Sprint Retrospective

Review opportunities for improvement, and habits to build in order to better collaborate in the coming Sprint.



Driving a Single, Global Organization

Focus on Product Centricity



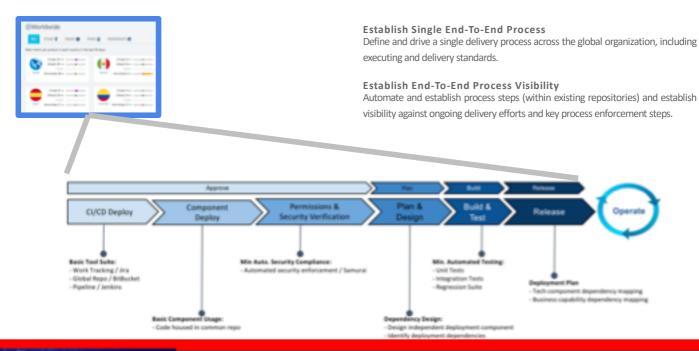
Product Management

Product managers are responsible, at the SAFe Train level, for defining the overll product strategy and sub-product (team) definitions.

Product Ownership

Product owners are responsible to work with the delivery teams directly in order to implement the vision set by the product management team.

Automating & Enabling a Single Product & Engineering Process





Establish Maturity & Alignment Through Visibility





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

Establish Visibility Against Objectives



Driving VelocityCreate global metrics

surrounding velocity of feature delivery at the sprint and PI level. Utilizze from the automated eocsystem, in order to drive consistency of definition and visibility.



Driving Quality

Create global metrics against application stability and product functional definitions. Utilizze from the automated eocsystem, in order to drive consistency of definition and visibility.





Establish Policy Based Objectives

Establish Policy Definitions

Establish a global definition of policies, and place them

within a common store to define and monitor those practices and policies.

Enforce Policies Automatically

As policies are established, ensure a manner in which to automate those policies across the enterprise, both within

new and legacy technology implementations.

Monitor Practice & Policy Adoption

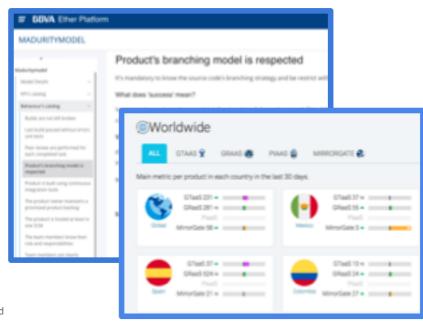
As policies are both established and enforced, ensure clear lines of visibility against those policies, both in terms of leading and lagging indicators.





Lagging Indicators

Policy and Practice Adoption according to definitions established via the policy store.



Relentless Automation



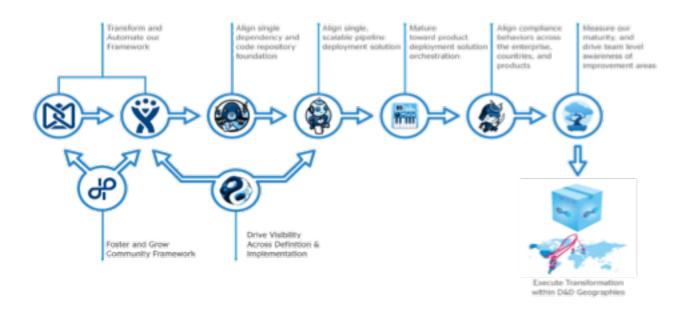


Highly Automated Delivery Ecosystem

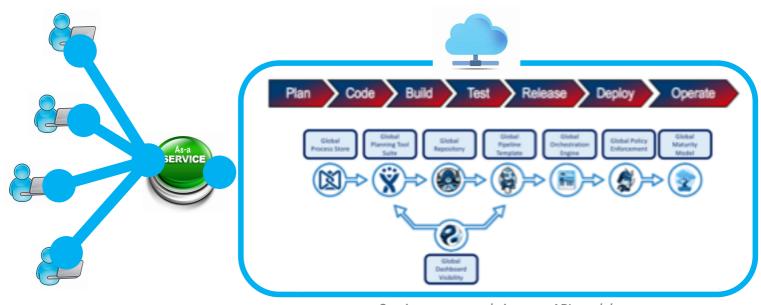
- Establish ecosystem components as a service
- Automate regulatory processes into the delivery and DevOps ecosystem.
- Establish (visibility metrics) flow & bottleneck discovery.
- Automate continuous delivery bottlenecks relentlessly.
- Relentlessly discover and automate approvals within the delivery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



Establish the Transformation Journey Through the Ecosystem



Establish the DevOps EcoSystem "as a Service"



Services consumed via open API model

Transformation Foundations

The First Three Areas of Focus



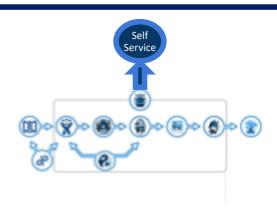
All initiative budget approvals will require Jira project registration. Adoption driven Enterprise wide "as a service".

Upon product breakdown definition, global repository registration created. Adoption driven Enterprise wide "as a service".

Upon repository registration, global pipeline automatically created with associated repository hooks. Adoption driven Enterprise wide "as a service".

Driving Adoption-at-Scale





From: Pilot Assisted Delivery

- Methodology assistance
- On site training and adoption assistance
- Ongoing team support

To: Auto Self-Service Adoption

- Begin team & community assistance to drive adoption
- · Video and self-study adoption tool kits
- Easy to provision and adopt tool suites

Establish Community Catalyst Engines



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.

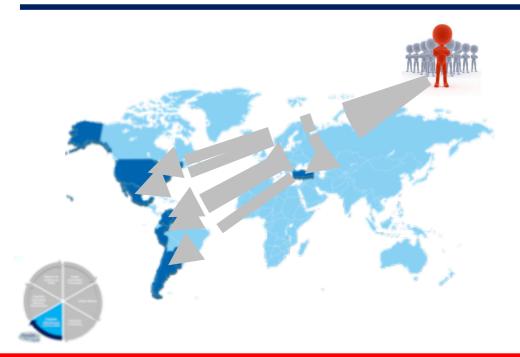


Establish Community Catalyst Engines

Function & Roles Overview



Establish Community & Business Unit Leaders



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

Establish DevOps Practices CoE



Establish Framework Common Capability Hubs

- Establish core capabilites 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.

Establish Framework & Agile Delivery CoE



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.

Establish a Cohesive Transformation Organization



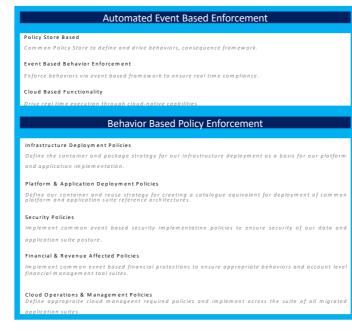
- Establish Product & SAFe-like Framework Organization
- Establish & Execute Quarterly Product Planning (Portfolio Managers)
- Establish and Execute PI Planning (RTE's)
- Establish & Execute Scrum Level Planing (Scrum Masters)
- · Establish & Execute Ongoing Pilots
- · Focus on Empowering Teams

- Build a Single, Global DevOps EcoSystem
- Drive Community InnerSource Model
- Continue to Deploy "as a Service"

- Drive & Teach Best Practices Along Side Dev. Teams
- Constantly Assist in Growing the Ecosystem Tool Suite
- Establish Academy to Upskill Teams
- Service as Faculty in University Learning Center

Automate Policy & Behavior Enforcement







Policy Enforcement Components





Define Compliance Policies



Establish a single repository to house policy definitions, interrogation method, and assigned actions JSON)



Interrogate Policy Compliance







Establish Policy

Enforcement





Dashboard Compliance



Establish a common interrogation engine to execute interrogation scripts across the various next-gen legacy technologies to (e.g. understand the policy state of any given asset.

Establish policy action scripts to, based upon the actions defined within the policy compliance repository (store). Each script executes and reports actions associated to a specific asset and environment type.

Create a common visibility dashboard that receives (via API) the state of any given policy against a given asset (JSPON expression). Establish shared visibility across the global organization.

Policy Enforcement Compliance Visibility



Establish Real Time Visibility

Establish policy enforcement that is executed and delivered real time within dashboard, email, and direct channel (e.g. slack) delivery methods.

Establish Proactive Policy Visibility

Ensure all relevant policies are visibile and coded to give all equal access and interpetation to the associated policies.

Execute Pilots Constantly





Pilot Framework & Engineering Process Pilots Constantly Constantly Search for Moles 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 Mainum Viable Products Constantly framework and ecosystem changes on small scale to build a enterprise musclle of continuous improvment.

Reward Experimentation

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



Driving Concurrent Engineering & Culture Pilots

A tale of two pilots ...



- Drive Agile Pilots
- Drive Global Process Definition Pilots
- Drive Coordinated Global Definition Sessions
- Publish Iterative Framework & Agile Delivery Method Versions



- Drive DevOps EcoSystem Tool Pilots
- Iterate Tool Usage & Practice Definitions
- Drive Coordinated Global Practice Definition Sessions
- Constantly Search for New Tech Univ. Sensei's
- Publish Best Practices & Automated Policy Updates



Early Pilot Tool Support



Define **definition and delivery workflows**. Align tracking to global repository, pipeline, orchestration, and enforcement tools.



Define and drive **component level deployment**, ensuring appropriate phases of development life-cycle ensuring testing and security standards.



Define and drive **product level deployment**, ensuring appropriate phases of development life-cycle ensuring testing and security standards, in addition to managing functional and technical dependencies.

"Through using the global product suites, they can more easily be assured that they are complying with the company level policy, and execute consistnetly across pilot programs."

Establishing a Visible Transformation Model

Establish a Consistent Transformation Model





Establish Visibility & Accountability

Transformation Journey Phases

Process & Culture

Engineering & DevOps Ecosystem

Technology & **Culture Alignment**



- Form basic product teams
- Execute baseline ceremonies
- Internal talent



- Basic agile management / Jira
- Global repository / Bitbucket
- Basic pipelines / Jenkins Deploy to Cloud
- Early integrated test capabilities



- · Deliver comprehensive ecosystem
- · Fully product aligned teams
- Coordinated agile trains / devops



Our Results



- Deployed full DevOps Ecosystem to 100+ development team in less than 1 hr.
- Ecosystem pilot deployment and adoption in 6 countries
- Early end-to-end delivery results driving critical country cycle times from six weeks to less than 1 days (including manual steps)
- Established MVP Code Sharing Framework across three continents, and driving reuse in three critical ecosystem components (global repository, global pipeline, policy enforcement)
- Deployment of our invisible, as-a-service, CI/CD framework deployed across 7 geographies

We have begun to publish our ecosystem OpenSource ...

https://github.com/BBVA/mirrorgate

What Worked ...





Driving Delivery via Embedded Teams

Ensuring both agile and devops skilled team members were part of the directly delivery teams was tremendously powerful to ensure practical delivery, in the eyes of our delivery teams. Ensuring no separation between the theoretical objectives, and the day-to-day delivery of the teams was an important aspect to ensure buy-in and successful global capability roll-out.



Roll Out Capabilities through Pilot Programs

Driving pilot programs across the various capabilities (agile-at-scale, global repository adoption, universal pipeline templates) allowed for capabilities to be tested at a practical level, but yet without driving capabilities too quickly into the global scope. This allowed capabilities to build out, be tested, mature and scale over time across various pilot programs.



Establish a Centralized Foundation (DevOps) Ecosystem

Delivering within the context of a common ecosystem, while complex during the first iterations was extremely valuable in droving low-friction ecosystem adoption by the teams. This allowed us to globally drive a more consistent method of implementation across our teams. It further also later helped to drive our contribution model (InnerSource) driving consistent, managed capability adoption across global geographies.



Create an Automated, Common Dashboard to Measure Progress

Creating a common method to drive visibility was a great value. This not only created consistently against interpretation of the data, but also helped drive adoption by the teams, who constantly were desirous of tangible metrics against their ongoing delivery and transformation.



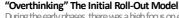
Ensure a Consistent Communication Plan across Global Teams

While initially not fully unified, a consistent communication plan across the transformation efforts (agile, devops, cloud) proved extremely valuable for the teams in their ability to understand any given pilot or capability within the context of the wider transformation.

What Did Not Work ... •







During the early phases, there was a high focus on ensuring consistency across the entire rollout model, inclusive of agile, devops, go to doud, common platform and global enterprise processes. While this is absolutely an important objective, the early focus should ensure basic alignment, and iterate the overall model over time vs a "big barg" initial alignment. The initial model will be the final execution model, and therefore, over-focusing on that model is generally not time efficiently spent during the early days of delivery.



(over) Engineering the Global Delivery Processes

The end-to-end global delivery processes were defined across a serious of multi-week (month) sessions. While a useful exercise to drive alignment, upon implementation, these processes were updated as needed. An early focus on basic alignment is critical, but over-engineering these processes during initial phases is often not an effective use of early delivery teammembers.



Waiting Too Long to Begin Pilot Programs

During the early phases of delivery, we worked to ensure global alignment. In doing so, we held a global roadshow, which gained high level alignment across our geographies. However, we did not immediately take advantage of that alignment to drive the early pilots, and instead continued executing some early definition activities. This time could have been better spent beginning pilots to drive practical adoption and delivery proof-points.



Too Many Metrics

We measured many factors during the early days of our transformation. Later, it proved more effective to ensure basic alignment across our teams across less, more impactful metrics. The middle phase of our transformation measured velocity and quality (across no more than five sub-metrics) to ensure clear alignment against our objectives. Over analyzing progress proved complex during our early communication, and was later simplified with the streamlining of our metrics and visibility strategy.



Focusing On Pace (over Delivery Wins)

Reports to our senior executive team during the early phases focused on our overall pace, and motion of change. Many metrics surrounded the pace and number of teams adopting agile, devoos, etc. These were high level, and not highly effective. Later, our focus changed to the material wins of teams (provable improvement of velocity and quality), which helped drive concrete examples that could then be re-piloted across global geographies.



Outpacing Management Team Members Early on the buy-in of teammembers at all levels. The early focus was to ensure buy-in of our delivery results (only), and not necessarily on the buy-in of teammembers at all levels. The early focus was to ensure buy-in of our delivery team members, and as time progressed the need to ensure buy-in of our management teams also provide critical. Several initiatives were created in order to focus both on their buy-in and education to darify their role in the new world of agile and devops. Their understanding of their place in the next-generation of delivery is critical to its medium and long term success.

Our Next Steps ...

- Continue to evolve and collaborate against our global devops ecosystem
- Continue to evolve our dashboard & visibility strategy
- · Continue to evolve our pilot execution model
- Continue to drive evolve our product & experience focused agile delivery organization
- Begin federation of our agile and devops teams to local delivery organizations







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Appendix



DevOps Journey Map

People

Establish Support Teams

- Establish AE, DevOps, IT Process local responsible (each geography)
- Establish Base Agile & DevOps Hubs: Spain
- Éstablish Agile & DevOps Hubs (Spain, Mexico, USA)
- Establish Local Agile Talent (RTE's, Scrum Masters)
- Establish TDD/Talent (roaming)

Train the Teams

- Besign and deliver agile training training training
- Design and deliver TDD training
- Tech University Curriculum: Process
- Tech University Curriculum: DevOps

Technology

DevOps Tool Suites

- Establish Common Reposition Suite
- Establish Common CI/CD
- Establish Common Orchestration
- Establish Behavior Enf. Framework
- Establish Visualization Progress Board
- Establish Common Testing Suite

Process

Foundations

- Establish and Communicate Common, Global Welhoo Framework
- Describe and Document Common, Global Processes Framework
- Describe and Document Common, Global Processes Enforcement
- Establish Local Process Definitions (Methodology) and Communicate

Culture

Form the Teams

- Define product team responsibility Name a single it responsible
- Name a single Business responsible
- Dedicate the full accountability delivery team (min one year for all team members)
- Define weighted, common delivery and annual review objectives
- Establish Teams w/ e2e Accountability

Productivity Suites

Tech University Ninia Academy

- Bellov Pass/Os
- DevOps Ecosystem Integration

Communication

- Establish Common Framework Communication Wethod/Wiki
- Establish Common Process Communication Method/Wiki

Establish a Fail Fast Culture

- Define and Communicate Pilot Execution Framework
- Execute Continuous Transformation Candidates via Pilots

Drive Talent

- Establish Role Definitions and Career Pathing Performance & Objective Management
- Internalization planning
- Establish Global Talent Acquisition Program
- Establish Global Retention Program

Productivity Agreements

 Developer Eirst Day Training, Checklist
 Developer First Week, Month Training and Checklist

Advanced Culture

- Establish DevOos Community
 Define & Pilot InnerSource Framework
- Define & Pilot OpenSource Framework
- Define and Roll Out Servant Leadership Training (Leadership)

Initiatives

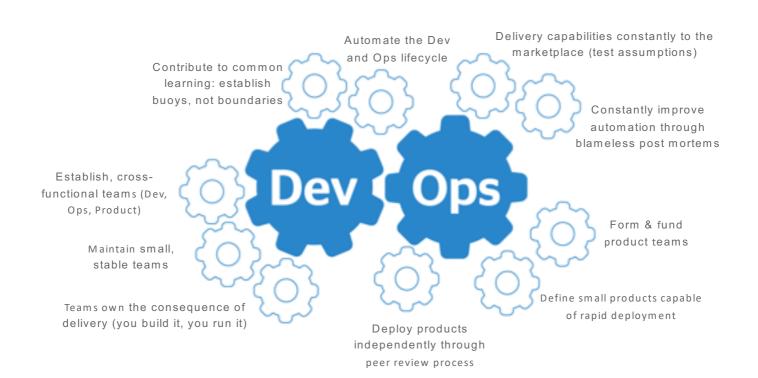
Initiative	Initiative Description
Well Defined Agile-At-Scale Delivery Process & Execution	Define and form the at-scale agile delivery process, policies, and teams. Begin across several pilots to drive best practices and in-the-field pilot testing. Form an improve-over-time model.
Well Defined Engineering & 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.

41

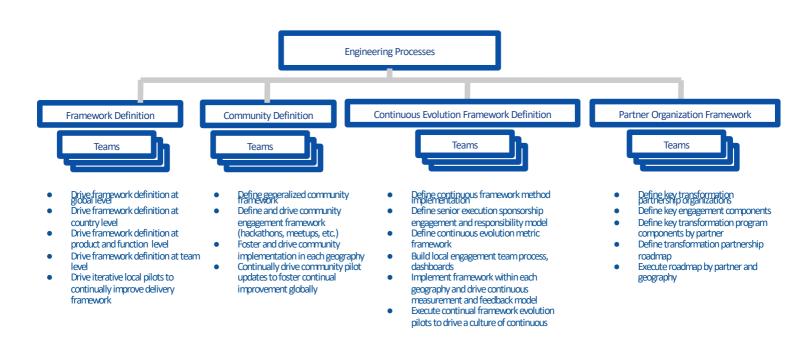
Initiatives, continued

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.

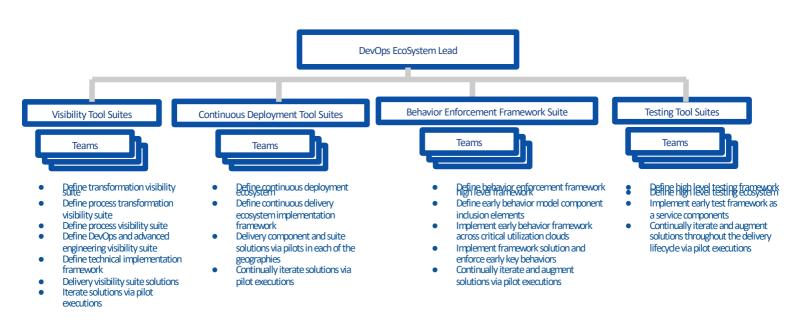
Transformation Program Principles & Behaviors (DevOps)



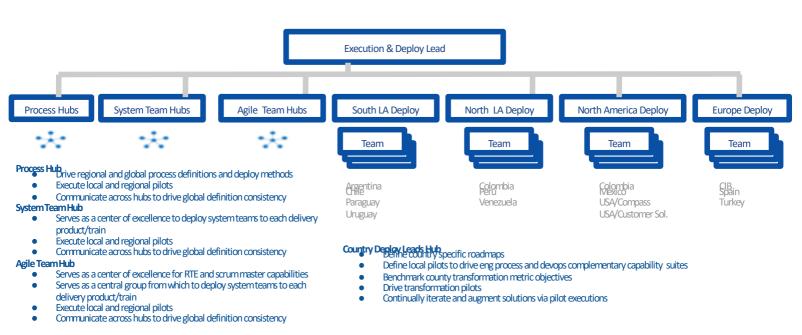
Engineering Process Organization Overview



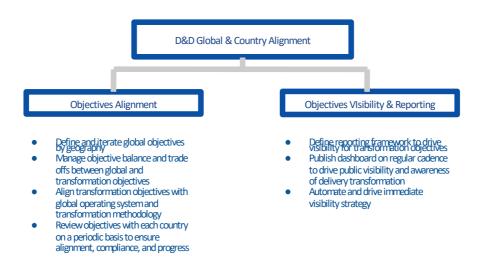
DevOps EcoSystem Team Organization Overview



Execution & Deploy Organization Overview



Country Alignment Team Organization



Commencing the Journey



Highly Manual Release Management Processes



Silo Delivery Teams



Low Cloud Adoption



Inconsistent Delivery Processes



Low Levels of Automated Testing

Outcomes

Inconsistent Application Integration

Inconsistent Quality of Release Delivery

Low Delivery Velocity



DevOps EcoSystem Component Value Statement



Define a single process framework, delivery process definition, and process automation through a cohesive devops tool suite ecosystem.



Utilize a single **global tracking tool** in order to drive and organize work consistently, implementing global delivery standards and consistent dependency management



Drive a single **global repository** as the source of truth for all code bases, dependency management, and build pipeline and deployment tool suite association



Implement a single **template pipeline** to drive standard build procedures and baseline enforcement protections, and align to global repository solution for easy access and adoption.



Drive single **orchestration template** to drive common visibility toward a product deployment vision which aligns the various repositories and pipelines that comprise a single product.



Enable a single behavior enforcement framework in order to ensure consistent compliance for security, bank, and external audit criteria.



Maturity Dashboard allows product teams visualize their accomplish about every DevOps practice collected in the Maturity Model and their status in Velocity and Quality.



Enable comprehensive visibility across the definition and deployment life-cycle for our developers, in order to allow them to take immediate remedy actions

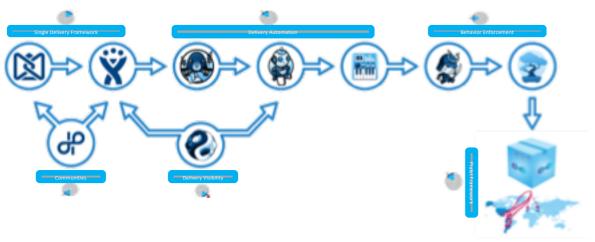


Drive a single devops community through experience sharing, code sharing, hackathons, meetups, devops days, and cross border project assistance



A single **pilot execution team**, comprised of both country level and product level focus in order to drive constant transformation globally. This team lives the values of delivering today, incrementally, and measuring our impact in order to improve.

Align the Automated EcoSystem to Transformation Objectives



Establish EcoSystem Objectives Establish the ecosystem with intentional focus

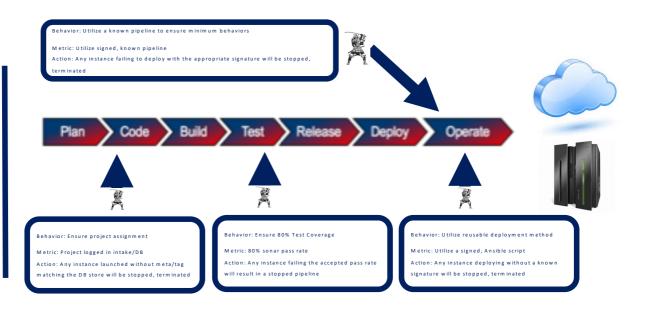
on each of the key elements to drive the overall, global transformation.

Establish EcoSytem Adoption Roadmap

Establish roadmap priorites to drive ecosystem adoption and purpose, in accordance with the objectives and principles of the transformation.

Policy & Behavior Enforcement Examples





Pilot Phase Overview

Phase 1 (9-12 months)

Phase 2

Phase 3

Definition & Pilot Culture

- MVP Methodology Framework
- MVP Devops Ecosystem
- Execute Early Scrum Pilots
- Execute Early SAFe Pilots
- Execute Early DevOps EcoSystem Pllots





Driving Pilots

- Formalize DevOps EcoSystem
- Formalize Method & Framework
- Begin Federated Learning (Univ, etc.)
- Drive a "Pilot" Culture (Formalize)
- Measure Velocity & Quality (MVP)



Continuously Mature

- Formalize Dashboards
- Begin Team Federation
- Automate Processes w/in Framework
- Drive Adv. Ecosystem Capabilities
- Drive "Continuous Pilot" Culture

