GROGU'S GUIDE TO DEVSECOPS

A Survival Guide For

PLATFORM ONE


SMOKEY

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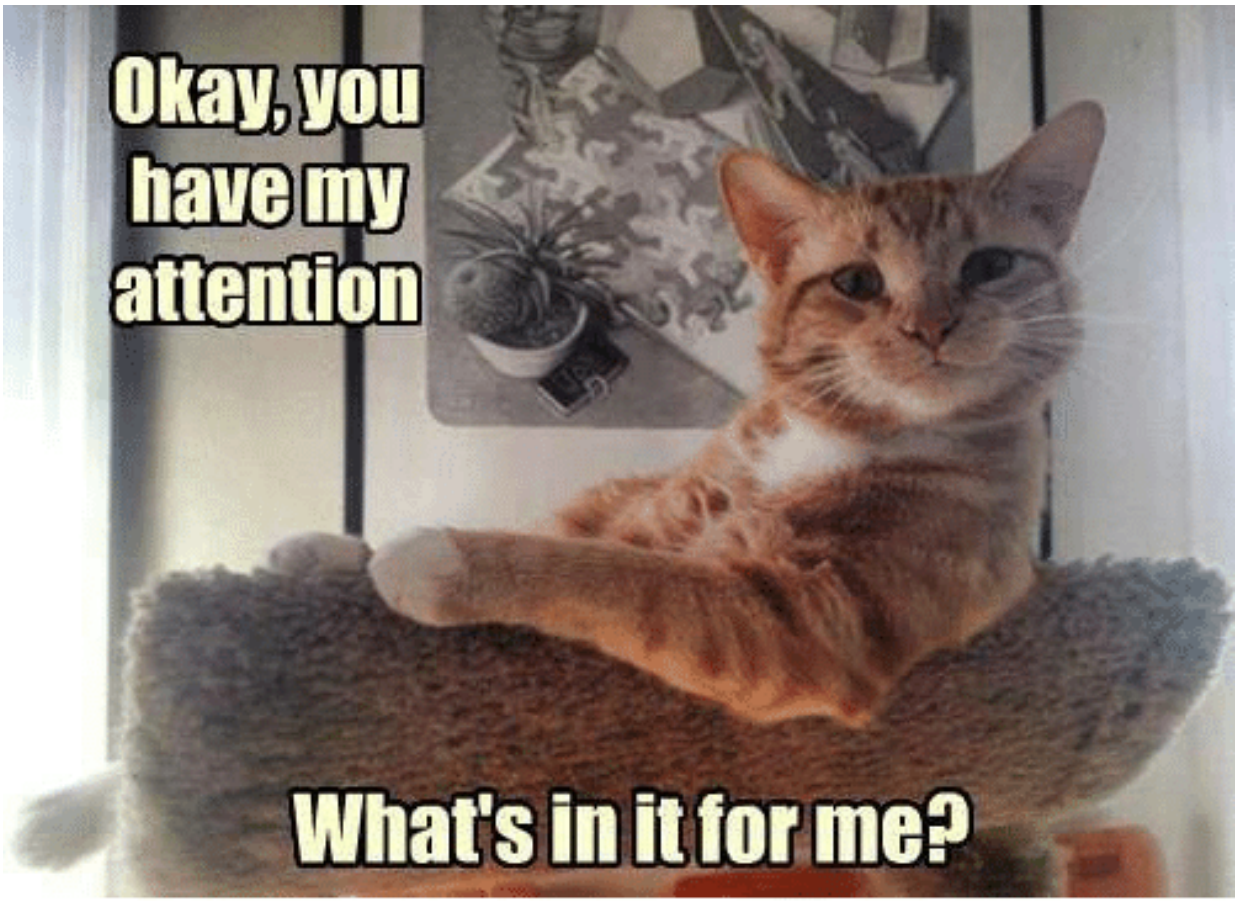
1. INTRODUCTION



After reading this guide, you should have a high level understanding of Platform One (P1), how it fits into the Department of Defense (DoD), how we are organized internally, and what products and services we deliver to our customers.

There are multiple points of engagement for P1 customers based off their needs, DevSecOps maturity level, and resources available. As we strive to be the enterprise DevSecOps solution for the DoD, we are hyper conscious that not all program offices adopting DevSecOps are the same.

As an enterprise service, our main job is to provide our customers everything they need in order to accelerate their software delivery to mission operators. Grogu will guide you through what you need to know as you start your P1 journey.

1.1 MISSION, VISION, VALUES, AND PRINCIPLES

MISSION

Guide, empower, equip, and accelerate DoD program offices and weapon systems through their DevSecOps journeys.

VISION

Create an innovative, collaborative, and unified defense department that delivers freedom through continuous integration and continuous deployments.

VALUES

Empower individuals and teams with the trust to be accountable and grow Platform One into an organization that drives change personally and professionally.

Obsessively know our customers and solve their challenges by delivering actual, functional solutions instead of arguing about requirements and process. Then, continue to improve the solution well into the future.

We. Value. Diversity. We are committed to Diversity and Inclusion. Employees in our inclusive environments feel appreciated for their unique characteristics and therefore comfortable sharing their ideas and other aspects of their true and authentic selves.

Nourish a culture of open, safe, candid communication, and decision making at all levels. We accomplish this by a heightened sense of self-awareness and encourage people to know their own faults and continuously work to improve them. When engaged in conversation, seek to understand the other's point of view prior to attempting to change his or her opinions.

BELIEFS

1. We can and must be better at software within the DoD

2. Open source is key; not just software but the mentality

3. Airmen will innovate at the edge if we provide the tools to do so

Another unique thing about P1 is that we embrace a badge-less culture. No matter what company you work for, or which contract you are on, at the end of the day you work for P1. You'll notice that our teams are cross-contractor. There are over 20 contracts and companies that support P1 but no one single company or contract is responsible for any team at P1. We intentionally break companies up and spread them around so we can view each other as other humans instead of a prime-sub relationship. You might work for Dark Wolf and be on a team with people from Booz Allen Hamilton, Seed Innovations, Parsons, Rancher Federal, and Oteemo. That's good, it's part of the plan! This style of co-mingling also drives another key piece of our culture which is that the government owns the baseline.

PRINCIPLES

Scale

Features aren't complete until they are tested, automated, documented, and with training modules.

Mission Obsessed

Obsess over the code that will form the baseline for weapon systems across the DoD: ships, planes, tanks, and nukes.

Everyone Codes

What we do is code. All of us... even if it is 3 hours a week using Youtube videos. No exceptions.

Ownership

Own every aspect of what you do, what you write, what you say, and what you use.

Simple and Robust

Make features as if 100,000 developers will use what you've developed.

Continual Learning

We always look to improve our baseline and our brains.

Live in the Trenches

Success or failure is found in the details. Don't ignore them because you don't have time to understand.

No Egos

We will never be the best at everything, so don't claim or try to be. Be open-minded about what others can bring to the table.

Invest in People

The best investment you can make is in yourselves. The next best investment you can make is in the people next to you.

We Serve

We exist to help others succeed. When they succeed, we succeed. If you can help someone, do it.

Shoot for the Moon

Be bold and strive to make monumental changes that sound so crazy people won't believe you... even after you've done it.

Smart Decisions

Encourage decisions to be made by the individuals with the most information. If it's a technical decision, that means technical people, even if they are the lowest ranking.

1.2 - SOME CORE TERMS

Platform

A platform is a group of technologies that are used as a base or infrastructure upon which other applications, technologies or processes are developed for the end-user.

DevSecOps

Development / Security / Operations: DevSecOps is a security-first disciplined approach to continuous software integration & delivery. It is more than just software pipelines; it is a culture that cares about delivering quality code fast and securely. tech.gsa.gov

ATO

The Authority to Operate is how we get software legally in the hands of our users. It is a complex policy -> security -> death cycle that some really smart people have figured out how to simplify to continuously deliver value to our users.

CI/CD

Continuous Integration/Continuous Delivery using a pipeline to automatically take committed code, run it through tests, and optionally, deploy that code into production.

Continuous ATO (cATO)

Our secret sauce for enabling DevSecOps. It ties people, process, and the pipeline together to give teams the flexibility continuously deploy their application to production after their initial accreditation which is our Certificate to Field.

Certificate to Field

The capstone of cATO process. It evaluates applications on a series of security criteria and controls (most automated through our pipelines) to assess its security worthiness. Once deemed secure enough to deploy, our CISO will sign off on the application to be deployed onto a DoD accredited system running a DevSecOps reference complaint architecture.

DevSecOps Reference Architecture

The overarching guidelines for deploying infrastructure and the associated platform onto a DoD system. It has hard requirements related to security to ensure secure delivery of valuable vsoftware. Infrastructure owners need to ensure compliance with this document in order to deploy CtF'd applications that come from our ecosystem.

Cloud Native Access Point (CNAP)

CNAP ensures that the right person can access the right resource at the right time. CNAP is P1's internally developed alternative to the DISA Cloud Access Point (CAP) that is built on a modern tech stack within the Cloud . CNAP provides connection services for every individual and compliance checks for every end point (think your laptop) before allowing connection to higher level unclassified enclaves, where Controlled Unclassified Information (CUI) is stored.

Iron Bank (IB)

You've heard of Docker Hub right? If not, you should check it out. It's a great place to start for containerized development. The Iron Bank is like Docker Hub but with more secure, vetted, and approved containers for use within the DoD. This rapidly accelerates the accreditation process and acceptance of containers by different organizations Authorization Officials (AOs).

Big Bang (BB)

Starting with containers from the Iron Bank, and the DevSecOps Reference Architecture as a guide, this P1 product uses the magic of kubernetes to configure all of the apps together into a coherent, usable platform. Customers, internal and external, can take this offering and deploy it onto a kubernetes cluster to go from zero to Reference Architecture compliant in minutes! This product is available fully open source for people to consume, but we also provide support as people embark on their DevSecOps journeys.

Party Bus (PB)

Isn't it beautiful when things all come together? So beautiful, we decided it was party worthy. Party Bus is our multi-tenant service offering that deploys multiple BB clusters to rapidly accelerate value delivery for P1 customers. It allows them to not have to worry about the infrastructure or platform and focus on the rapid development of their application for their mission operators. We provide the development and deployment environment, all customers need is to develop their app, pass our pipelines, and get a CtF to share their creation with their users in production.

Product Manager vs Project Manager vs Program Manager

In our world:

A **product** can be anything from a physical product, to a software or a service that satisfies the needs of a group of users. It goes through a life cycle, being developed and introduced on the market, grown in acceptance until it matures, and retired once it's no longer needed.

A **project** is a one-at-a-time endeavor with the aim of creating a product or service. It has a start and end date, as well as a defined outcome. It usually goes through five stages – initiation, planning, execution, monitoring and control, and closure.

Now here's the thing that sets them apart: the timeline. Unlike a project, a product is not a temporary endeavor. It evolves and adapts to the current user's needs to prove its utility and avoid being retired. Hence, it can include several projects that aim to maintain, improve, or diversify it.

While these may seem like minor differences, they can change the way decisions are made and drive the direction of the team accordingly. Here we use the term **Product Manager** instead of **Project Manager** because we want our team PMs to have a product mindset. Ideally, the product always continues to deliver more value and never needs to be retired. The focus is on value delivery, not meeting a schedule.

Program Manager (outside of in the Acquisitions realm) at P1 is probably a little different than you're used to as well. Here we use to to describe the humans at the Value Stream (a collection of teams centered around value delivery) who coordinate, prioritize, and facilitate across the entire value stream.

We don't have many "middle management" roles at P1 but we've found these ones to be incredibly useful in aligning teams of an individual product or service on a singular vision without having to eat up more "C Suite" time. Where we have Program Managers, they're typically accompanied by a "Scrum" Knight (to help them coordinate execution across the teams) and Value Stream Anchors who help drive the overall technical direction of the product line.

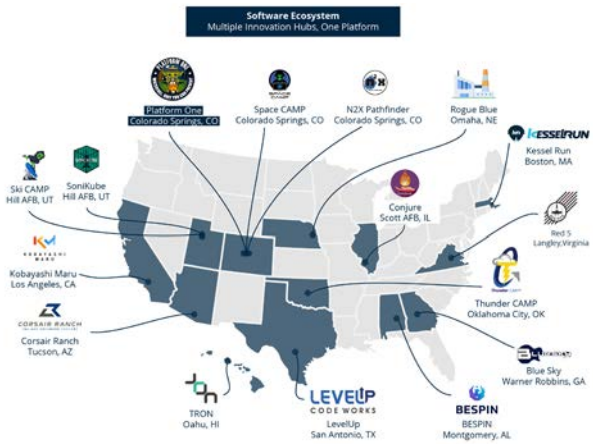
Given their placement in the organization, they have a unique perspective that is somewhat strategic, somewhat operational, and somewhat tactical. They have to take a systems approach but also understand the specifics of each team. It's a lot to wrap ones head around but they are situated to provide a lot of potential value with their perspective.

1.3 - P1 ORGANIZATIONALLY, IN THE DOD AND INTERNAL

WITHIN THE DOD

Platform One currently resides in the Air Force and was selected as the Executive Agent for DevSecOps execution within the DoD. The Air Force was selected as the Executive Arm for DevSecOps execution within the DoD, under guidance from the Chief Software Officer. Basically, our use of live system demos instead of PowerPoint charts, earned us a lot of street cred.

As this executive agent, we clearly tie to lots of other initiatives within the enterprise. From the Chief Software Officer Website, P1 is a large part of the overall Software Ecosystem in the DoD. We are building out the common platform that most of these different software factories utilize to delivery software rapidly and continuously. Most of the other organizations seen in this ecosystem utilized either our Big Bang or Party Bus offerings (more details in a later section).



Our Sister Org, Cloud One

Cloud One is the Enterprise Solution for Infrastructure as a Service (Iaas). They work with the industry leaders in IaaS (Amazon, Microsoft, etc) to provide a secure government option to government customers. They act as a brokers of accounts to rapidly accelerate the timeline for getting started for new program offices. P1 utilized C1 by having AWS Govcloud and Microsoft Azure Government accounts provisioned and regulated by C1 for our unclassified environments. Secure infrastructure is a huge part of securing the supply chain of software development and delivery.

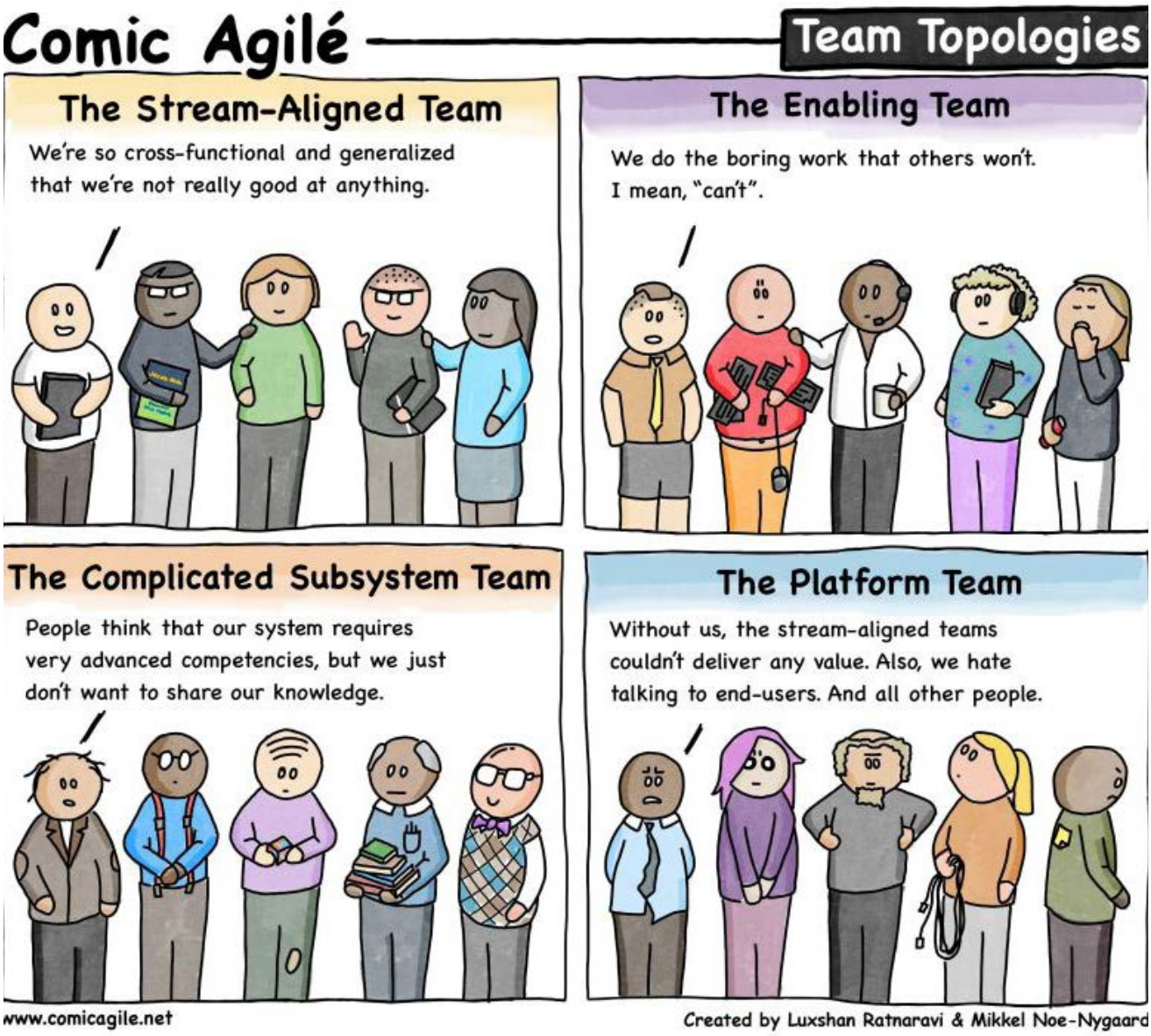
HISTORICAL EFFORTS IN THE DOD

We are riding on the shoulders of giants and doing our best to build upon their successes. For a detailed background on the historical ecosystem, please check out Section 3 of our CONOPS

INTERNAL ORGANIZATION

Internally, we have organized our teams as best we could around value delivery with cross-functional teams. We are organized into 4 major product and service lines: Cloud Native Access Point (CNAP), Iron Bank (IB), Big Bang (BB), and Party Bus (PB), as well as supporting teams that help across all product lines to enhance delivery: Cyber, Customer Success, and Acquisitions. Our product lines are broken down into teams that own specific pieces of their value delivery. An overview of each will be in a later section.

Agile organizations in a nutshell:



2. LEADERSHIP OVERVIEW

Here's a short blurb about some roles at P1 you should know and the humans that occupy them. We recommend reaching out to people outside your team and Value Stream as you start to understand how things work here because at the end of the day, there's nothing more important than people. The folks on this page are charge with taking care of the rest while also driving us towards success. It's a lot, but they can handle it.

ACROSS THE ORGANIZATION ("C-SUITE")

Materiel Leader - Lt Col Brian Viola

- P1 Director and decision authority
- Primary interface between the P1 product teams and acquisitions (resourcing)
- Accountable for reporting/compliance with Senior Stakeholders (AF CSO, HN Leadership, etc) and customers

Deputy Materiel Leader - Duong Hang

- P1 Deputy Director and back up to the boss man on anything he needs
- Primary focus in acquisitions and customer success

Chief Operations Officer and Chief of Product - Maj Austen Bryan

- Government lead responsible for continuous delivery of all products and services across P1
- Key interface between Chief Software Officer and product teams
- Responsible for establishing/maintaining long term relationships between Platform One and key stakeholders (software factories, etc.) who depend on our capabilities

Chief Technology Officer – Phillip Record (Acting)

- Government lead responsible for the technical baseline and architectural decisions for all products and services across P1 Responsible for execution of Chief Software Officer technical vision for the Department of the Air Force

Chief Information Security Officer - Matt "Who" Huston

- Government lead responsible for the cyber security for all products and services across P1
- The czar of environment ATOs
- The ruler of the cATO process with authority to grant product teams CtFs

Chief of Futures and Innovation - Todd Myers

- Government lead responsible for outward facing relationships of key industry stakeholders
  - Kubernetes distribution companies
  - New innovations via the AFWERX's Small Business Innovative Research (SBIR) process

Scrum Lord - Drew "Coach" Belk

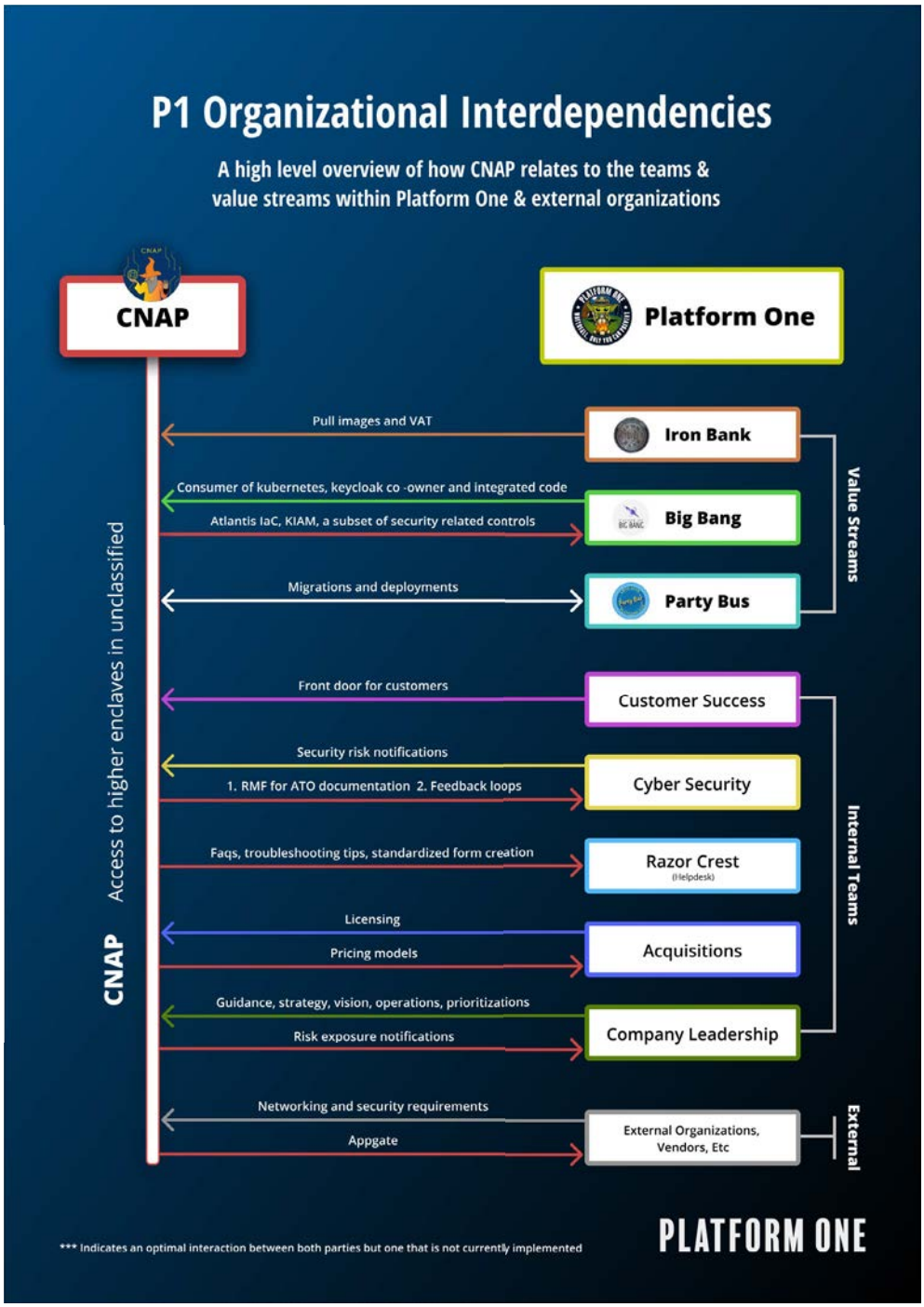
- Enterprise Level "Scrum Master"
- Facilitates task flow across Value Stream Scrum of Scrums (SoS)
- Coaches SMs on framework execution
- Facilitates communication between the teams and Business/Technical Leadership
- Coaches Business and Technical leadership teams on agile philosophies, our framework, and culture
- Facilitates Business Leadership & Technical Leadership Backlog Grooming
- Removes P1 wide blockers
- Helps map dependencies of all work, across all product teams

As mentioned in 1.3 - P1 Organizationally, in the DoD and Internal, we have done our best to organize around value delivery. The four product and services lines and the supporting teams at P1 will be covered in this section in a bit more detail. For a detailed breakdown of what we sell for each product and service line, check out Austen's Daily Briefs.

3. PRODUCTS, SERVICES, AND TEAMS

3.1 - CLOUD NATIVE ACCESS POINT (CNAP)

AN OVERVIEW OF CNAP WITHIN PLATFORM ONE(CNAP



WHAT CNAP PROVIDES FOR P1 AND CUSTOMERS

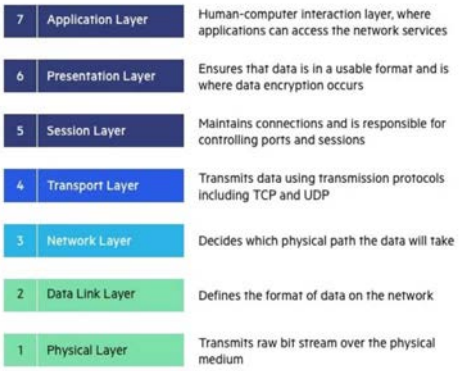
CNAP ensures that the right person can access the right resource at the right time. CNAP is P1's internally developed alternative to the DISA Cloud Access Point (CAP) that is built on a modern tech stack within the Cloud . CNAP provides connection services for every individual and compliance checks for every end point (think your laptop) before allowing connection to higher level unclassified enclaves, where Controlled Unclassified Information (CUI) is stored.

CNAP is how P1 enforces various levels of security into our environments. It provides endpoint security scanning and compliance checks, enabling a "bring your own device (BYOD)" policy. As mentioned in the above section, CNAP is our gateway to higher impact levels. It blocks any endpoints that are out of compliance with STIG requirements (IL-5 Access for CNAP) from accessing IL-5 and runs audit reports on devices at IL-4. See this page for more detail on the different DISA Impact Levels. This is accomplished in two pieces, utilizing a PaloAlto Network and by utilizing AppGate (SDP VPN). **Users must connect to AppGate to access tools at IL-4 and IL-5.** (One current exception to this rule is Mattermost, our chatops tool, at IL-4).

CNAP also implements zero-trust ingress and egress to P1's cloud environments. What is zero-trust you might ask? In short, this model starts with the assumption that nothing in a network or individual is trustworthy, until verified. In outdated models, a user was automatically trusted once a user is inside the network boundary. In today's world this is scary because pivoting is a thing. Zero-trust has multiple layers but at the end of the day, it simplifies to role based access control (RBAC), network micro-segmentation, and Layer 7 threat protection (supporting defense in depth, see below for layer descriptions).

Seven Layers of CyberSecurity (OSI Model)

Depth of cybersecurity is often referred to by using this model. In general defense in depth is a great cybersecurity practice that is implemented at Platform One.



CNAP PRODUCTS AND SERVICES

AppGate - AppGate is one component of CNAP's authorization and access service. AppGate itself is a Commercial off the shelf (COTS) product. Through AppGate, CNAP is able to verify user identify based upon a broad set of criteria, such as user context, device security context, and other criteria. Once an user is authenticated, the next steps include establishing a micro-network segment and granting access to specific network resources. AppGate also enforces multi-factor authentication.

VDI – Virtual Desktop Infrastructure which is another way of saying a virtual desktop. CNAP team is currently working to make available in the near future virtual desktops to replace a user's physical workstation. These VDI solutions will include both a Windows and Linus versions for developers.

PKI – Private Key Infrastructure is a critical component of Multi-Factor Authentication (MFA) as well as credential management. CNAP provides services to enforce MFA as well as services to provide credential management for applications.

DNS - Domain Naming Services: CNAP provides DNS services that manages external connectivity to/ from the internet as well as other networks, such as NIPRnet and allowlisting for other DoD or federal agencies.

HOW CNAP IS ORGANIZED

CNAP is broken down into three teams. A feature development team, a cluster operations team, and an engagements team. For more details on these teams and who is on them, check out CNAP.

USEFUL LINKS

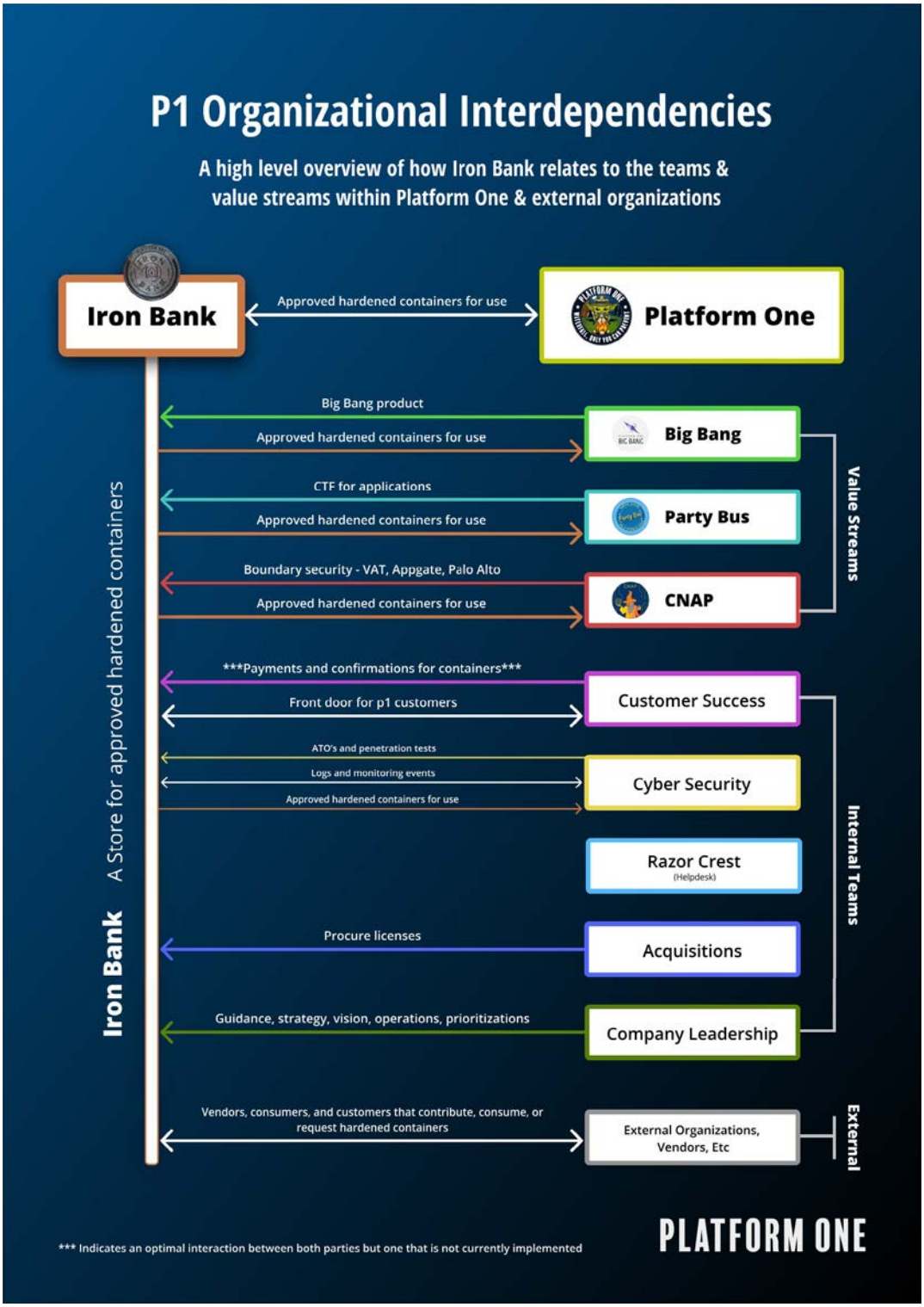
- CNAP - External
- CNAP Onboarding FAQ

USEFUL MATTERMOST CHANNELS

- https://chat.il2.dso.mil/platform-one/channels/team---cnap

3.2 - IRON BANK (IB)

AN OVERVIEW OF IRON BANK WITHIN PLATFORM ONE



WHAT IB PROVIDES FOR P1 AND CUSTOMERS

You've heard of Docker Hub right? If not, you should check it out. It's a great place to start for containerized development. The Iron Bank is like Docker Hub but with more secure, vetted, and approved containers for use within the DoD. This rapidly accelerates the accreditation process and acceptance of containers by different organizations Authorization Officials (AOs).

Bumper Sticker: Iron Bank is Platform One's authorized, hardened, and approved container repository that supports the end to end lifecycle needed for modern software development

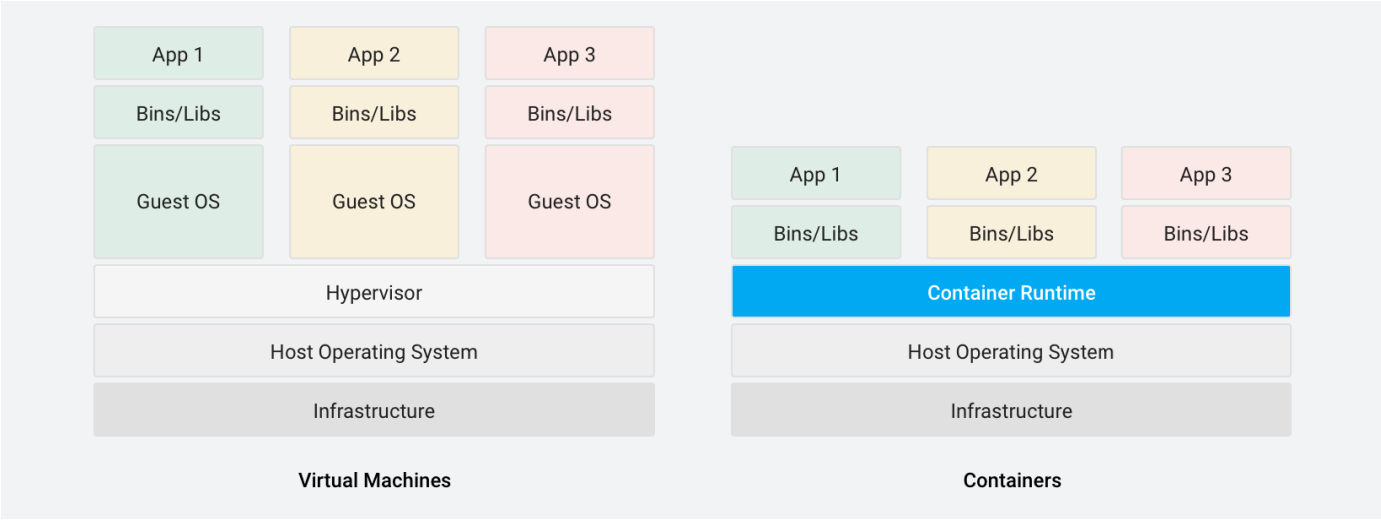
The Iron Bank is trying to solve an age old problem that the DoD has faced for many years. Since different Authorizing Officials (AO) own the ability to provide the Authority to Operate (ATO) for their environments, they often have different rules, or levels of risk tolerance. As you go from one environment to the next, different tools may be approved for use which makes development, and more importantly collaboration, in the DoD difficult to say the least. We've effectively created a bunch of silos where everyone is trying to solve the same problem without the ability to talk to each other. The goal of the Iron Bank is re-use for different applications across all different environments since they come from a trusted, vetted source. It arms AOs with the information they need to understand what risk they're taking on (we publicize the whole Body of Evidence) so they can trust the process and accept any application that has an IB approval. For more details, check this out.

Iron Bank Products and Services

- Registry One is a fully compliant Open Container Initiative registry. All containers found under the Iron Bank project are guaranteed to be approved
- Repo One is the central repository for the source code to create hardened and evaluated containers for the DoD
- Vulnerability Assessment Tracker (VAT) for providing end-to-end management of container justifications for known vulnerabilities and container approval process
- Iron Bank Front End (IBFE) provides a slick webtool showing the catalog of currently approved containers with access to download and body of evidence
- Container Hardening Services are provided to support the build out of the Iron Bank. The team hardens prioritized open source tools and works with vendors to get their tools approved

Why Containers?

What is a container and why do I care? In short, containers offer a logical packaging mechanism in which applications can be abstracted from the environment in which they actually run. Think of them as the next evolution after Virtual Machines. No more need for a hypervisor and containers will tie directly into the Host Operating System. From Google's page on containers:

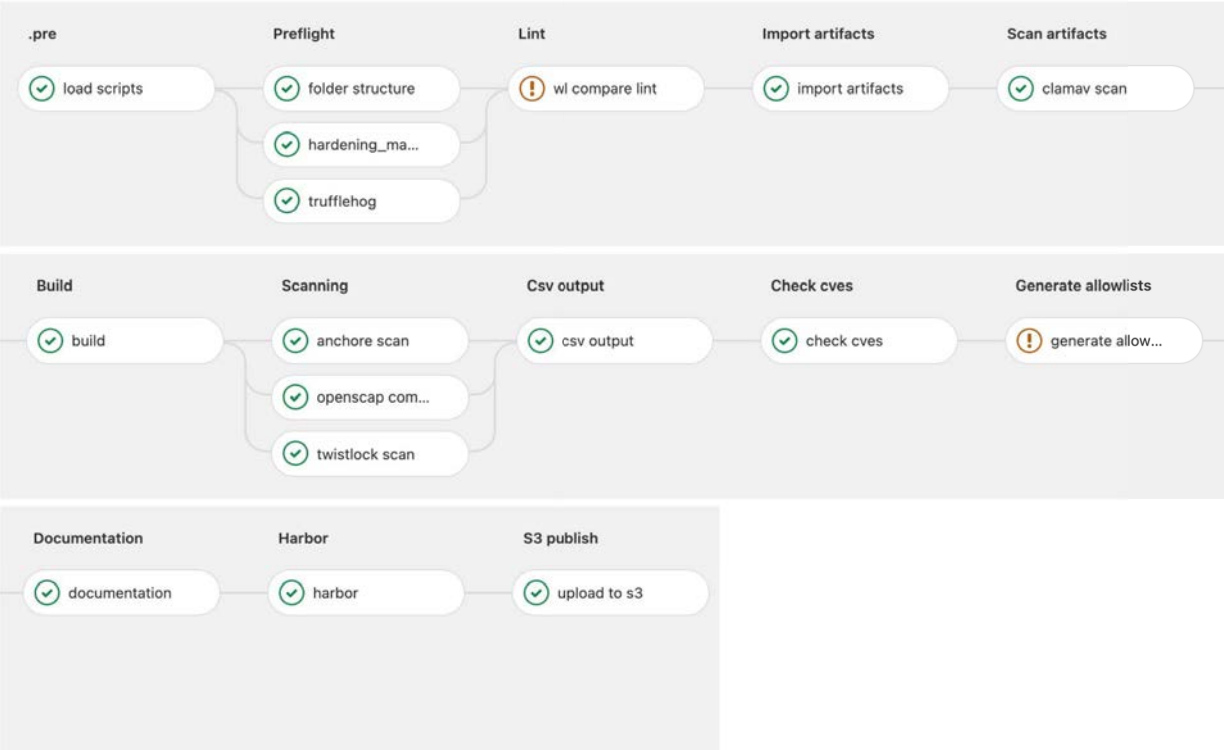


Containers are the main enabler of cloud native development. When you put all of the pieces (the containerized app, running on a container orchestrator like kubernetes, deployed in the cloud) together, you can greatly accelerate your delivery because you “practice like you play”.

Iron Bank is core to what we do at Platform One. Containers that are used by other Value Streams (Big Bang and Party Bus) should be pulled from the Iron Bank. It’s the base building blocks for our entire ecosystem.

The Iron Bank Pipeline

Here's a snapshot of one of the pipelines running scans against a container showing a high level overview of the stages and jobs. For more details see [the IB pipeline documentation.]



HOW TO REQUEST NEW CONTAINERS

Checked [Iron Bank Front End] and/or [Registry One] and don't see a container you need? Submit a ticket internally [here], or submit a ticket as a vendor [here] and the Container Hardening team will get in touch with you with additional information.

Links to Track Container Status (Where the Work Happens)

[Here is a link to the Iron Bank container hardening board] where you can track the work for each individual container.

How to Contribute to Iron Bank

DoD organizations, vendors, and individuals can contribute an application to Iron Bank! Anyone wanting to contribute must first onboard with the Container Hardening Team. Additional details and instructions can be found in the [Contributor's section] of the Iron Bank processes guide on Repo One.

HOW IRON BANK IS ORGANIZED

Iron Bank is broken down into 4 teams by product and value delivery. One team owns the development for the Iron Bank Front End. One owns the pipelines and environment operations (known as the POPS team) including Registry1. One owns the Vulnerability Assessment Tracker which is an internal tool used for accelerating the container approval process. And the final team owns the container hardening process, whether that's doing the work to hardened open source tools or engaging with vendors for their tools to help them through to approval. See below for more details on IB products.

Each team has a public board where their work can be tracked. Here are links to each:

- The Container Hardening Board
- The Iron Bank Pipeline Board
- Ops Bootstrap Board
- VAT Board
- IBFE Board

Iron Bank Events

Here are some useful, open invite events that IB hosts for customers. Although the target audience is external, they are a good place to learn about IB and their processes for all! Links for these can be found in the P1 Calendar.

- IB Onboarding Sessions - an overview of the IB process, how to get started, and how to push containers through for the first 30 minutes, then Q&A with the team afterwards.
- IB AMA/Get Unstuck - A session for vendors and people from the community to ask questions as they work through the process of getting their IB containers approved. If people have blockers/questions, this is the perfect forum for getting them answered!

Useful Mattermost Channels

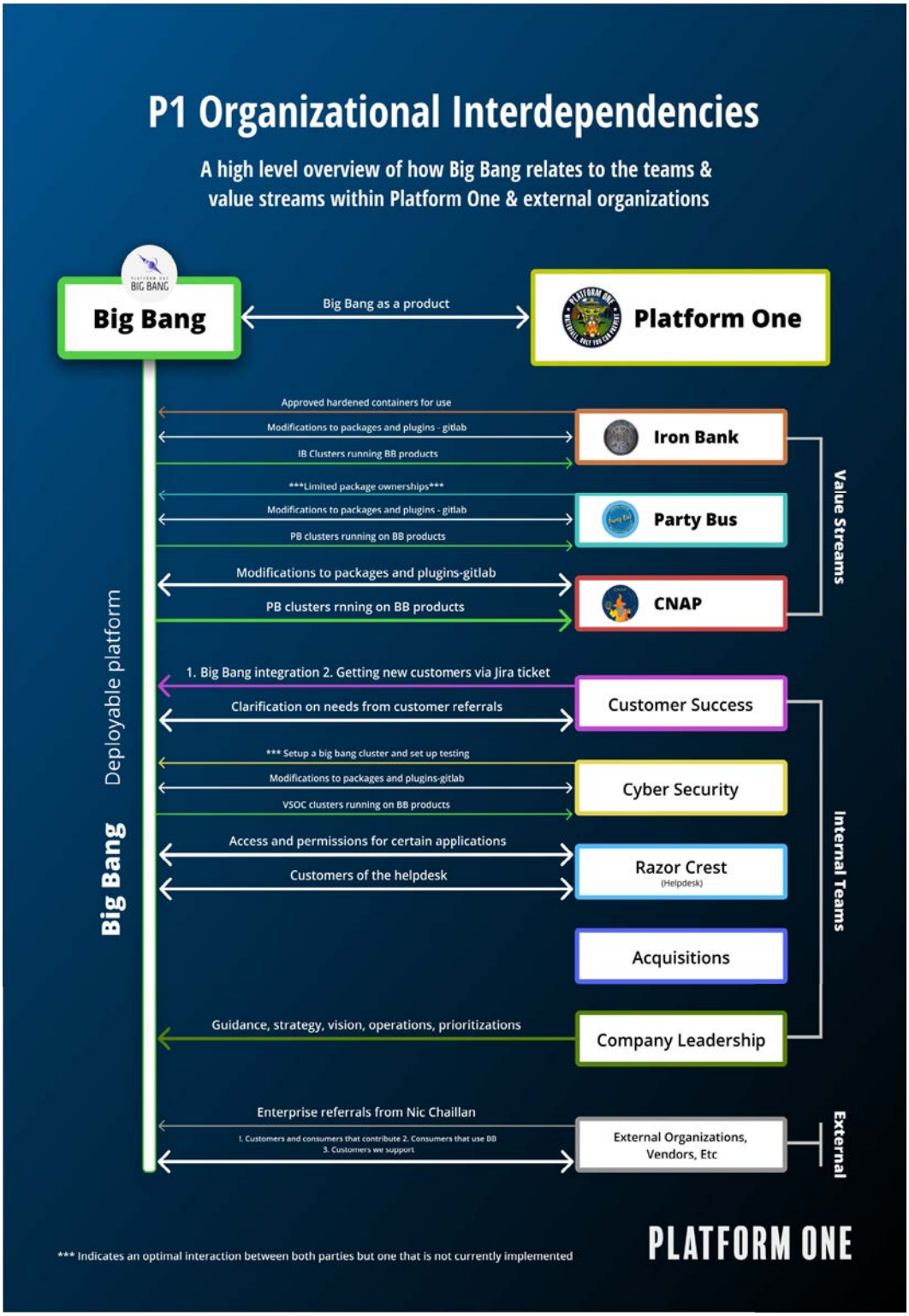
- Value Stream Channel
- Iron Bank Front End (Braavos) Channel
- Container Hardening Channel
- VAT (Napoleon) Channel
- Pipelines and Operations Channel

More Questions?

You can search for answered questions or ask your own in Confluence Questions.

3.3 - BIG BANG (BB)

AN OVERVIEW OF BIG BANG WITHIN PLATFORM ONE



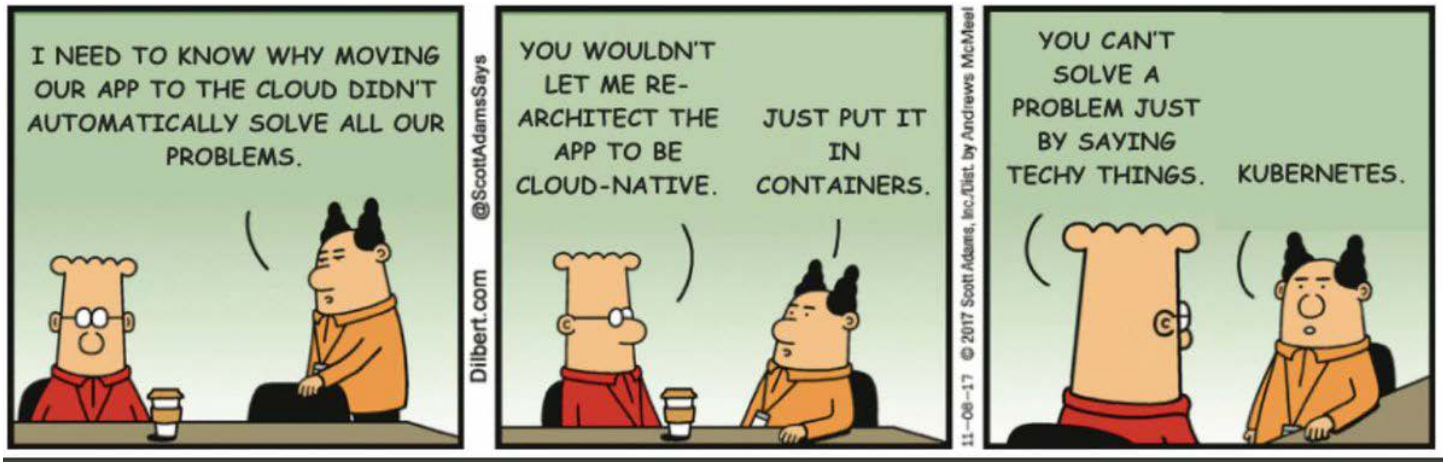
WHAT BB PROVIDES FOR P1 AND CUSTOMERS

Starting with containers from the Iron Bank, and the DevSecOps Reference Architecture as a guide, this P1 product uses the magic of kubernetes to configure all of the apps together into a coherent, usable platform. Customers, internal and external, can take this offering and deploy it onto a kubernetes cluster to go from zero to Reference Architecture compliant in minutes! This product is available fully open source for people to consume, but we also provide support as people embark on their DevSecOps journeys.

In the interest of remaining vendor agnostic, Big Bang does not currently provide Infrastructure as Code (IaC) to deploy a kubernetes cluster. The various kubernetes distribution vendors (Rancher, D2IQ, RedHat, VMWare, etc) provide this, and we're currently working on a scoring mechanism so that AOs can understand the associated risks of each distro, but we want P1 customers to be able to adopt whichever they prefer. The Big Bang product nestles on top of that distro by utilizing Configuration as Code (CaC) to configure all of the apps utilizing kubernetes manifests. The end goal is to continue the vendor agnostic vision by offering multiple different tools for each step of the cATO process (i.e. multiple different Static Code Analysis (SCA) tools like Fortify, Checkmarx, etc) but we have to build this out over time.

Big Bang Products and Services

- The Big Bang Product has been focused on throughout this page. It is the CaC that brings all of the platform apps together for customers to consume. It's open source and available for free by default but P1 support comes through various funding options.
- The Big Bang team also provides Integration and Onboarding services for the product to accelerate the journey of our customers through their adoption.



WHY KUBERNETES?

We just talked about the importance of containers in the Iron Bank section, but in order for containers to run effectively in production environments, we use the magic of kubernetes. Kubernetes is an open source container management engine that has wide adoption across industry. For a deeper look, check out the Kubernetes documentation.

BIG BANG CHARTER AND PACKAGE REPOS LINKS

The final step for graduation for packages to be supported by Big Bang is to add them to the charter and identify package owners within the P1 team. The process for this is laid out in their charter and can be see at the link below. We've also included a link to the overarching BB repo.

- Big Bang Charter
- Big Bang Repo Link

Which Packages from IB are Included Today

Bi-weekly releases and their notes can be found here.

- Big Bang Release Notes (minor releases every other Friday)

Which packages exist and where are they? What is the status of the pipeline for the various Big Bang packages?

- Package List
- Package Pipeline Status

Want to contribute? Maybe you don't see something that you'd like?

- Big Bang Contributing Guide
- Developer Docs

Big Bang Licensing Overview

- Big Bang Licensing

BIG BANG PACKAGE LEVELS

Check out the Big Bang packages page for more.

	Description	Owner	IB Reqd	Pipeline Status Link	Control	Issues with current approach	Governance	Notes
Customer Repos							Customer	
3rd Party Community Supported	Packages that are built and maintained by a true 3rd party (e.g. JAIC, INSCOMM, etc) that has either been rejected for inclusion into Big Bang Addons by the Big Bang Charter process OR has not been submitted to the Big Bang Charter process because it is known that IB will not be able to harden the package containers.	Community*	No	tbd	Request to Big Bang for repo, Big Bang validates no current activity for this package	Need to ensure we monitor ard clean out old packages that are not active. Once 3rd Party pipelines are in place, they should always pass if not for X weeks, the package should be removed.	Anybody can create a 3rd party repo	
3rd Party Big Bang Supported	Packages that are built and maintained by Big Bang but may not currently have a functional and approved IB container. (e.g Fortify)	Big Bang	No	tbd	Big Bang Charter process for approval. Once initially delivered, Package Owners are responsible for maintenance. If IB successfully hardened containers, this Package can be moved to Addons based on a Charter Request.		Platform One decides what packages Big Bang Value stream will support for which customers	
Addons	Packages approved to be supported by Big Bang. Current Addons are broken into the following functional areas:	Big Bang	Yes	Packages.md	Big Bang Charter process for approval. Once initially delivered, Package Owners are responsible for maintenance.		Platform One decides whether the commonality of request from customers justifies including it in a baseline and providing support for ALL customers	
Core	Packages used in all Big Bang instantiations	Big Bang	Yes	Packages.md	Big Bang Charter process for approval. Once initially delivered, Package Owners are responsible for maintenance. • Declarative • Reliability reproducing (gitops) • Interoperability (e.g. monitoring)		Platform One decides whether the commonality of request from customers justifies including it in a baseline and providing support for ALL customers	
Sandbox	Prototype or maturation area for Big Bang Addons. True	Community*	No	tbd		Need to ensure we monitor and clean out old packages that are not active	Anyone can create a sandbox package	Not shown in diagram

*Community includes the Big Bang team, P1 onboarded teams (JAIC, VAULT, F-35, INSCOMM, etc) or true Open Source community organizations or individuals. See the confluence page if you need to access the information on this table.

PATH TO PRODUCTION USING BIG BANG

Getting Started

Check out the link for more details, but the first step for utilizing Big Bang is to have a kubernetes cluster running with Flux v2 installed.

- Getting Started with Big Bang

EXTERNAL CUSTOMERS UTILIZING BIG BANG

Similar to what Party Bus created with their Customer Onboarding and Tracking Board (see 3.4 - Party Bus (PB)), Big Bang also has a board to map their customer journeys and track their interactions called their Customer Lifecycle Board.

HOW BIG BANG IS ORGANIZED

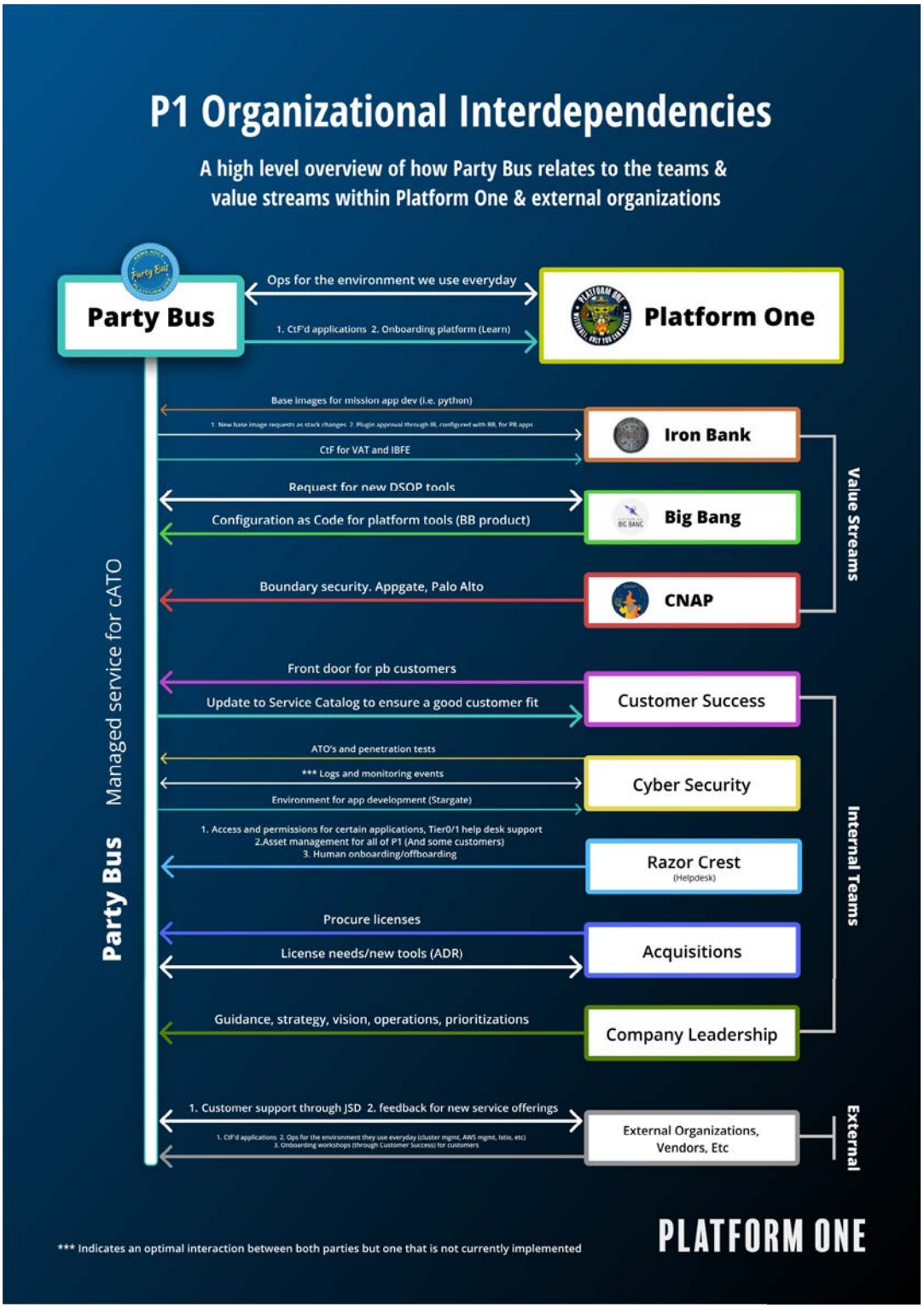
Big Bang is broken down into two teams, the product team and an integration team. The product team handles added new packages to the product and the integration team guides customers through their journey of adopting Big Bang. Since Big Bang is our flagship offering, these two teams are crucial to Platform One's success. Check out the Big Bang Roster for a list of who's who and what team they're on.

USEFUL BIG BANG CHANNELS

- Value Stream Big Bang Channel

3.4 - PARTY BUS (PB)

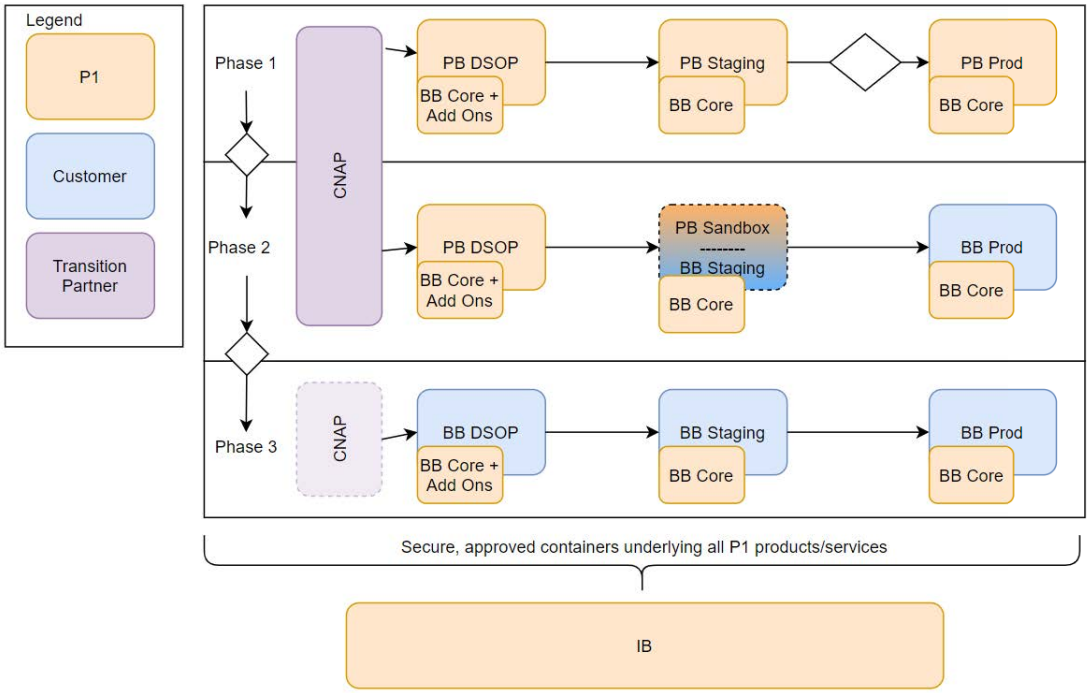
AN OVERVIEW OF PARTY BUS WITHIN PLATFORM ONE



WHAT PARTY BUS PROVIDES TO P1 AND CUSTOMERS

Isn't it beautiful when things all come together? So beautiful, we decided it was party worthy. Party Bus is our multi-tenant service offering that deploys multiple BB clusters to rapidly accelerate value delivery for P1 customers. It allows them to not have to worry about the infrastructure or platform and focus on the rapid development of their application for their mission operators. We provide the development and deployment environment, all customers need is to develop their app, pass our pipelines, and get a CtF to share their creation with their users in production.

As a service (aaS) models make adoption for new customers a lot easier. Transitioning for DevSecOps is no trivial feat. The Party Bus environments help teams dip their toes in the water as we give them everything as a service (effectively cATO as a service). That way, they can hit some quick wins and then move on to bigger and harder problems. Our goal, as an overall organization, is to help teams on their journey by guiding them through these phases.



P1 has grown into areas the DoD software community needed us to in order to move us forward towards DevSecOps. However, in the future, P1's role within the ecosystem is to develop platforms that enable DevSecOps automation. Our 4 key products have built a path to a full service DevSecOps PaaS (Party Bus) that shows the power of true DevSecOps in action. However, as we grow the community towards DevSecOps maturation, Platform One should be able to step back into it's core role. This is why strategic partnerships with key software factories and innovation hubs are so important.

Party Bus Products and Services

Party Bus is focused on continuous delivery using Platform Ones cATO. We develop many tools that support this goal and are in the process of migrating these to open source so that the benefit can be reaped for all who consume Big Bang.

THE CUSTOMER ONBOARDING AND TRACKING (COT) BOARD

We utilize the COT board to help guide PB customers through their journey to production. It at a high level outlines all of the various steps to deployment for our customers. We create an epic for each product team and assign all work for that team to the epic so they have a one stop spot where they can go and see all of the support we are providing them, whether it's work we've identified like setting up their manifests or work they request through Jira Service Desk.

Where to Send Customers for Help

Party Bus utilizes Jira Service Desk for its service request work. Here's a link to the portal where tickets can be submitted.

THE PARTY BUS SERVICE CATALOG

Since Party Bus is our own internally managed, opinionated service, we have been very selective about what we'll support. We'd love to support everything under the sun, but work takes time and we have finite resources. If we support something for someone, we have to support it for everyone, given our business rules of being an enterprise service which means going through IB and BB. That can of worms can get really messy, so we try to do our best to thoughtfully add things to our Party Bus - CATO - Service Catalog.

PARTY BUS WORKSHOP

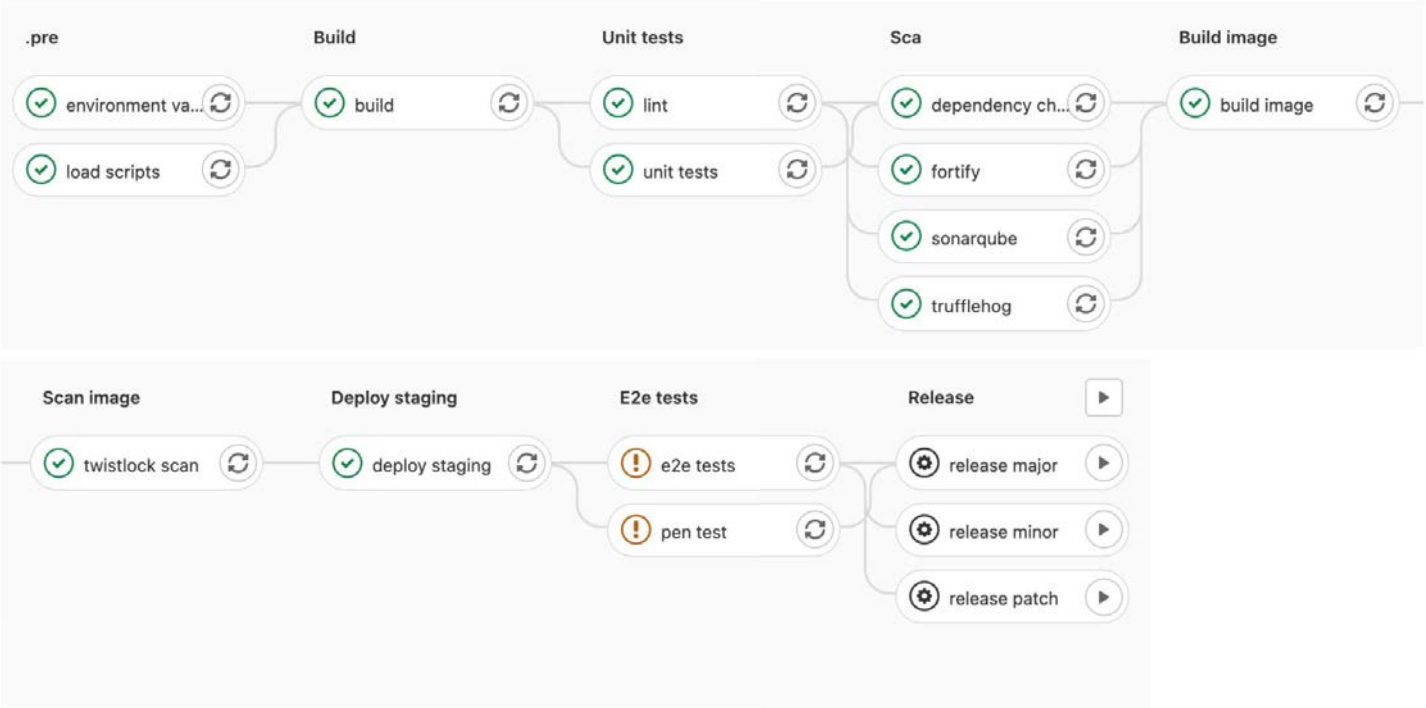
All new employees as part of New Employee Orientation will have the opportunity to go through the workshop. This 3 day course will cover the basics of getting repos set up and working through the pipeline. Learn Platform for Party Bus Workshops

THE PARTY BUS PIPELINE

The pipeline that we host through Gitlab in our various Party Bus environments meets the requirements of cATO. We have templates per language and framework that individual products extend so that it's a quality enterprise solution. Every customer that comes through and wants a CtF through PB needs to comply with the quality gates we have set for the various stages. The Continuous Integration and Continuous Delivery pieces of our pipeline are:

- Continuous Integration:
  - **Build Image** using Dockerfile pulling images from Iron Bank that are built on Universal Base Image
  - **Static Code Analysis (SCA)** language specific unit testing, linting tools, SonarQube, OWASP Dependency Check, Trufflehog, and Fortify
- Continuous Delivery:
  - **Dynamic Application Security Testing (DAST)** using Twistlock, OWASP ZAP, and Cypress End-to-End Testing
  - **Deploy** to Staging and Production clusters using ArgoCD Auto App Deployments

For a visual representation of the pipeline, see below.



WHAT DOES CATO ACTUALLY MEAN?

We, Platform One, build a Continuous ATO from multiple ATOs covering the infrastructure, platform, and deployment process. The the infrastructure and platform ATOs cover a majority of NIST 800-53 RMF controls. Once a team completes the Certificate to Field (valid for one year or until architecture is changed – major release) real-time deployments to production are enabled. The Certificate to Field (CtF) process uses SD Elements to answer the final NIST 800-53 RMF controls that are specific to the application. To be compliant with the DevSecOps Reference Architecture (PDF) and retain our ATOs, we pull approved images from Iron Bank.

Certificate to Field (CtF)

The Party Bus CtF is the capstone to the development process and is the last step our customers have to go through to deploy their app into production. This process consists of having a passing pipeline, onboarding the application into a tool called SD Elements which maps an application's tech stack to NIST 800-53 controls, answering those controls, and ultimately presenting the application's body of evidence to the P1 CISO or CIO for approval.

Path-to-CtF

PB CtF FAQs

HAVE QUESTIONS?

First try Confluence Questions

We use Confluence questions as a more effective way to capture knowledge than mattermost because the search functionality and traceability is far better. Head over to the Party Bus Questions space (make sure to add the Party Bus label if you ask new Party Bus questions).

Useful Mattermost Channels

Our teams are alsO active in Mattermost. They can help you out here, but it's better for the community if questions flow through Confluence. If you need a more timely response, Mattermost is monitored by more people. Our recommendation if you need a quick answer is to create the question in Confluence (link above) and then post it in one of these channel for visibility.

- Team - PB - MDO - Help (issues or questions about unclassified deployments or pipelines
- Team - PB - Classified - Help (issues/questions for classified environment and deployments)
- Value Stream - Party Bus - Town Square (When you just don't know, where to ask)

3.5 - CYBER

WHAT CYBER PROVIDES TO P1 AND CUSTOMERS

At its core, what P1 is trying to solve for customers is an accelerated path to the various ATOs that make a production system. Our team doesn't get our customers an ATO (we have ATOs for PB customers to utilize) but BB is a ATO ready product only if the owning AO will accept re-use. With modern cloud architectures which are utilized on PB, we have an ATO for our Infrastructure, an ATO for our Platform, and a cATO for the software being developed to be deployed on it. All of those, historically, have taken a long time to get in the DoD (or weren't even available - cATO). Within the software ecosystem in the DoD, getting accreditation is quite possibly the biggest bottleneck (rivaled only by the Acquisitions process). P1's ultimate value proposition is helping customers get to accreditation faster.

Cyber Products and Services

- Stargate (in development) - Cross Domain Solution for moving things low to high
- virtual Security Operations Center (vSOC) (in development) - environment monitoring and threat mitigation
- For a detailed breakdown of Stargate and vSOC, please check out the P1 CONOPS.
- Penetration testing services through Team Rocket to accelerate ATOs

IRON BANK APPROVAL

IB approval (notice the difference between approved and accredited – it comes down to AO authority) is the capstone of the IB cATO process and is granted by either Nic Chaillain (AF CSO) or Matt Huston (P1 CIO). This approval is granted when vendor and open source containers meet our

security requirements. They are now considered approved and are hosted on https://ironbank.dso.mil and https://registry1.dso.mil for consumption by the community. This approval significantly increases confidence for organization's AOs to approve these applications because of our quality gates and the body of evidence (BOE) provided.

THE CERTIFICATE TO FIELD (CTF)

The Certificate to Field is the capstone of our Party Bus cATO processes. We use this term for both Iron Bank and Party Bus containers (both processes have a cATO) and we'll break them out here. In both cases, the majority of the work on our P1 side is automated or quick to process, and the brunt of the work falls on the team (whether vendor for IB or product team for PB) to meet the requirements. Our Cyber teams act as a service team to help guide their journeys but at the end of the day, our customers are responsible for the security of their applications.

FAST TRACK ATOS

We have been the beneficiaries of some DoD Innovators who are willing to lean forward and reduce process to increase delivery speed. That doesn't mean "less stringent", it means "less bureaucratic". We're held to the same standards, if not higher, then traditional processes, but with much less paperwork/PowerPoint and more demonstration of abilities and security. Continuous monitoring plays a huge role in our secret sauce and this whole process has accelerated our value delivery.

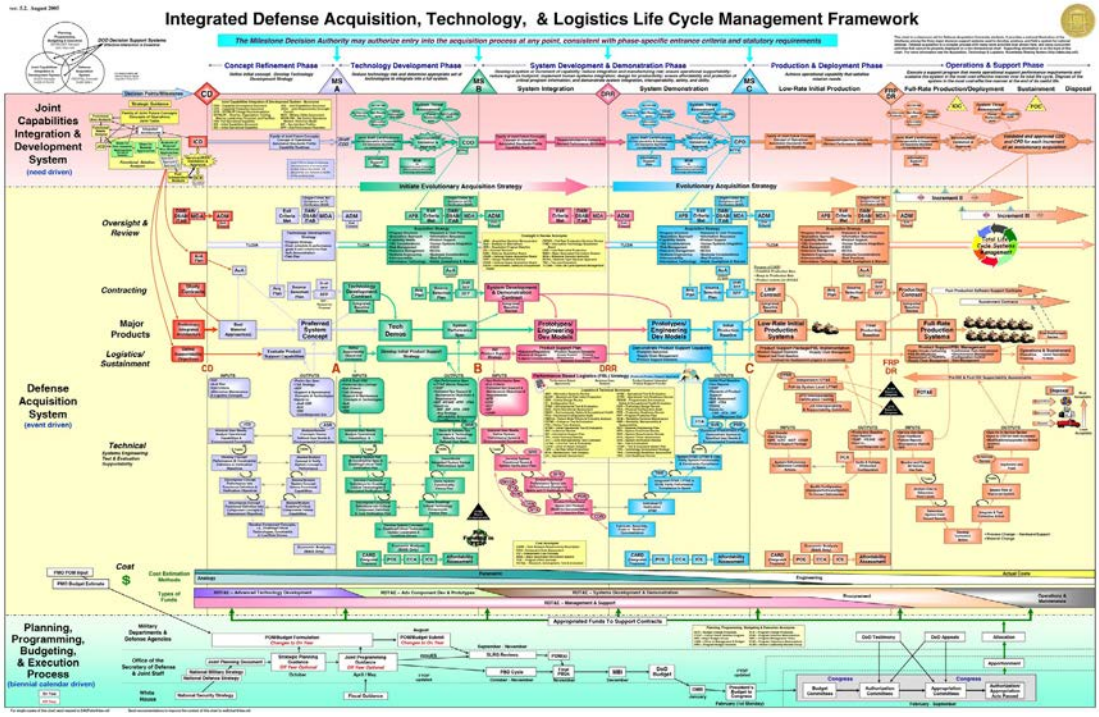
USEFUL CYBER CHANNELS

- Cyber Value Stream Channel

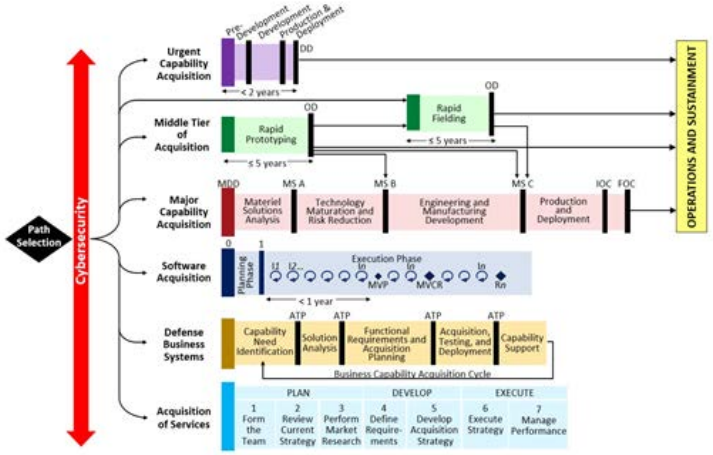
3.6 - ACQUISITIONS

ACQUISITIONS ACROSS THE DEPARTMENT

Software across the Department is not the only thing getting modernized, take a moment to view this chart (it is the prior DoD 5000.02):



If you just asked yourself, "What do you mean prior DoD 5000.02" and were not aware this has been modernized, you can read more about this massive overhaul and modernization of the DoD 5000.02 to what is now called, the Adaptive Acquisition Framework (AAF) shown below:



HOW DO I LEARN MORE ABOUT HOW IMPROVE MY TEAMS KNOWLEDGE ON SOFTWARE INTENSIVE PROGRAMS AND HOW IT'S RELATED TO THE POLICY MODERNIZATION?

That is easy and we hope you are as inspired as we have been to jump in with both feet! Platform One has partnered with an OSD pilot called Digital DNA. This is being offered to all Military, Civilians, A&AS/SETA and FFRDC folks from Acquisitions teams, Requirements Owners and Users (all other interested roles across the Department are welcome to join). This is currently a four (4) Module course that will help you build your Digital Foundations and relate it back to the DoD context.

You can register here: https://auth.galvanize.com/register?uid=e2dcf1f7d96e4936d5

No agile team can succeed without the right requirements on contract that are flexible to change. That is easier said then done and our acquisition professional also need the funding, contract, and management skills that mirror DevSecOps principles for their teams to be successful.

While your technical teams are learning more about the power Platform One can bring to your program, those of you in acquisition related roles are welcome to join Digital DNA at no cost!

Let's move past Acquisitions for the Department level to discuss how we do it here at Platform One!

WHAT ACQUISITIONS PROVIDES TO P1 AND CUSTOMERS

The Acquisitions team is the enabling factor and the lifeblood to Platform One. When you meet someone from that team, make sure to thank them! This team provides an invaluable support to our organization across a variety of different functions to include contracting, CAC processing, license acquisition, cost modeling, and much more.

Here in Platform One, our acquisition team seeks to revolutionize "the way we work" by underpinning our Technical Agility and then matching it with Business Agility. One of the ways we aim to do that is through the Platform One BOAs.

WHAT ACQUISITIONS PROVIDES TO P1 AND CUSTOMERS

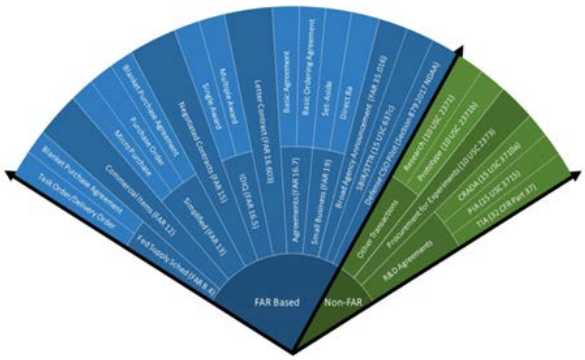
Let's start by outlining some of the defining of what a BOA is and is not:

- A BOA is NOT a contract
- There is NO CEILING associated with BOAs
- A BOA is an agreement between the Government and a contractor.
    - A basic ordering agreement may be used to expedite contracting for uncertain requirements for supplies or services when specific items, quantities, and prices are not

known at the time the agreement is executed, but a substantial number of requirements for the type of supplies or services covered by the agreement are anticipated to be purchased from the contractor." FAR 16.703(b)

OH THE POSSIBILITIES!

There is an endless supply of creative approaches that could be used when procuring SW Intensive programs. You can find out more (FAR-based and non-FAR based) by viewing the interactive Contracting Cone here: https://aaf.dau.edu/aaf/contracting-cone/



PLATFORM ONE'S BASIC ORDERING AGREEMENTS (BOAS)

As you can see, Platform One had a plethora of choices when deciding what tool would best enable business agility. Platform One decided to use BOAs as the tool of choice, placing agreements with a pool of vetted contractors for specific supplies and/or services to streamline our (AND YOUR) access to companies. Talk about Business Agility within our Acquisitions team!

Should your team decide to use them, Platform One has established 3 Categories of BOAs, no not snakes (Basic Ordering Agreements), to provide anticipated and repetitive DoD DevSecOps supplies and services. Currently there are 79 vendors under the three categories of Basic Ordering Agreements (BOAs): 43 for Software DevSecOps Services; 9 for DevSecOps Pipeline and Platform Integration and Licensing Services; and 27 for Cloud Services.

These vehicles will assist with the development and execution of program strategies that support and advance the DoD DevSecOps Initiative.

Multiple contract types are available: Time & Materials/Labor-Hour, Cost Reimbursable (for travel only), and Firm Fixed Price. The Platform One team will review the BOAs annually and anticipates holding future on-boarding events as needed to bring on new vendors in order to reach changing and emerging technologies. Different types of vehicles other than the BOAs will be introduced at a later date.

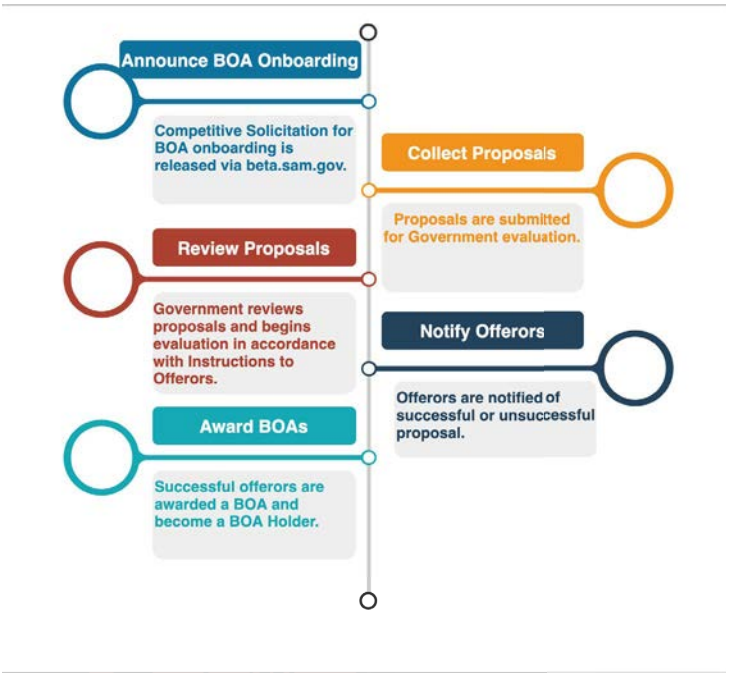
BOA TYPES

Software DevSecOps Services - Technical services of full-stack DevSecOps engineers, infrastructure engineers, and other key personnel, to include: Software engineers, programmers, and developers. These services will support the Government in constructing a secure, reliable, resilient, and assured set of software applications on the supporting Government and commercial tools and platforms.

Cloud Services - Provide a set of services via a Cloud Service Provider (CSP) that Platform One users can leverage to develop and deploy accredited, integrated, and tested code at multiple classification levels and hybrid cloud architectures to include, but not limited to IL5, IL6, and other classification networks via commercial cloud.

DevSecOps Pipeline and Platform Integration and Licensing Services - The contractor will provide DevSecOps pipeline and platform integration and licensing to help support a wide collection of software and programming tools supporting the continuous integration and continuous delivery (CI/CD) of software products and the Platform One platform. Software licenses may also include software business tools that enable Platform One operability. The contractor will NOT being asked to develop an end to end solution, but rather procure the licenses for and/or support the integration of a new or existing capability within the DevSecOps pipeline.

BOA VETTING PROCESS



Check out our BOA Ordering Guide here if you are already registered with Platform One.

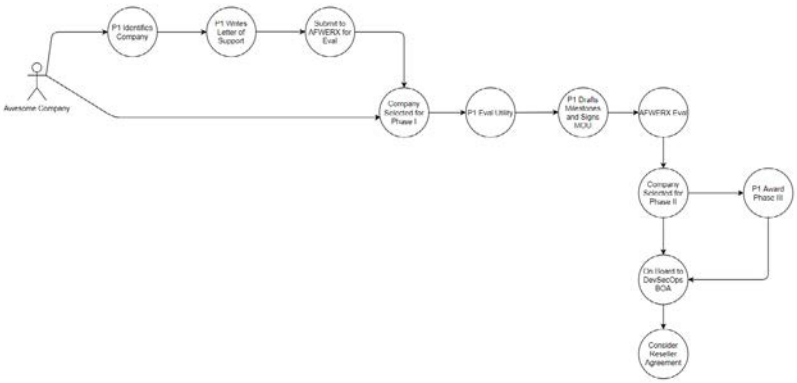
PLATFORM ONE SBIR

Why SBIRs?

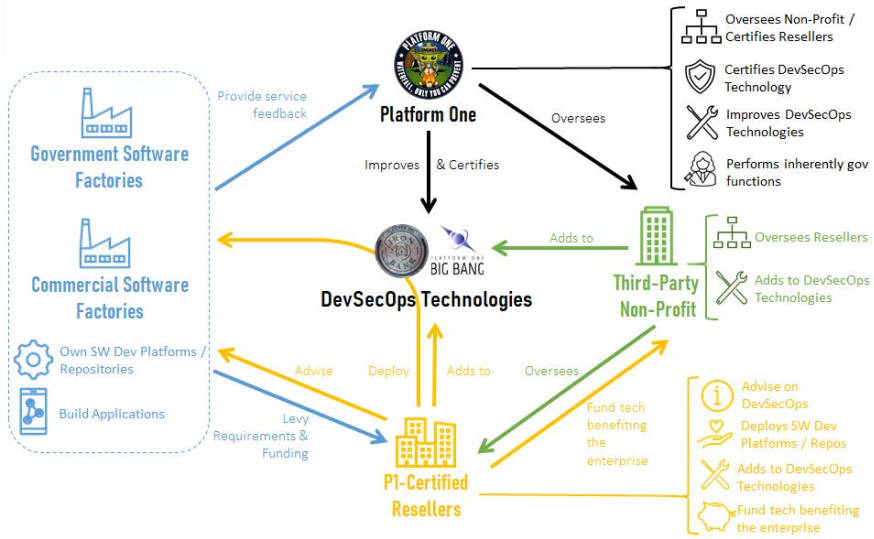
- New startups continually emerge and have the best products that the DoD needs
- Software talent is people (not company) based and we need to be prepared to continually add the best talent from industry
- Contracting and funding resources are “free” to P1
- Product companies can align roadmap to DoD needs and see future requirements of the landscape based on P1 ecosystem positioning

How

- General
  - No matching funds exist anymore outside the Tacfi and Stratfi programs
  - Matching can be from commercial, program office, or both
- SBIR Phase I to II
  - Create DevSecOps focus area
  - Define internal P1 process for selecting who we sign MOUs and create milestones for
  - Define bench of people and process to be on every tech evaluation cohort
    - Can select which proposals we pick to do and can scope to our Focus Area that SBIRs self elect towards
- Phase I or D2P2
  - Use Open Houses to actively recruit new companies unfamiliar with the DoD



PLATFORM ONE’S COMMERCIALIZATION STRATEGY



3.7 - CUSTOMER TEAMS

WHAT CUSTOMER TEAMS PROVIDES TO P1 AND CUSTOMERS

Customer Teams is the front door for all P1 customers and their entry point into our ecosystem. They handle everything from initial contact (think pre-sales) to costing models (working with 3.6 - Acquisitions), to funds transfers for prospective program offices that one to utilize P1's products and services. As customer's get more and more interested in a particular product or service (3.1 - Cloud Native Access Point (CNAP), 3.2 - Iron Bank (IB), 3.3 - Big Bang (BB), or 3.4 - Party Bus (PB)) the Customer Teams team will work with our internal teams to do a technical fit and evaluation of how well the customer fits in to our ecosystem. A lot of times, we're able to bring folks in and get them up to speed as they go, but in some cases, there's a big mismatch and we would devote incredible amounts of time for an effort that might not be fruitful for either party. Effectively, we utilize the Customer Teams team as a shield from our engineering teams, and they wear that shield proudly! Check out their Confluence page for more details: Customer Teams.

HOW CUSTOMER TEAMS IS ORGANIZED

Customer Success is a smaller team, but they break their work into one of three flows: BizDevOps, Customer Advocates, or General Customer Success work. They utilize the role of Technical Account Managers (TAMs) to help gather customer inputs and drive P1's products to be better. The continued relationship that Customer Success has with our customers, as well as their feedback loop to other P1 teams is at the core of driving our products and services to be better.

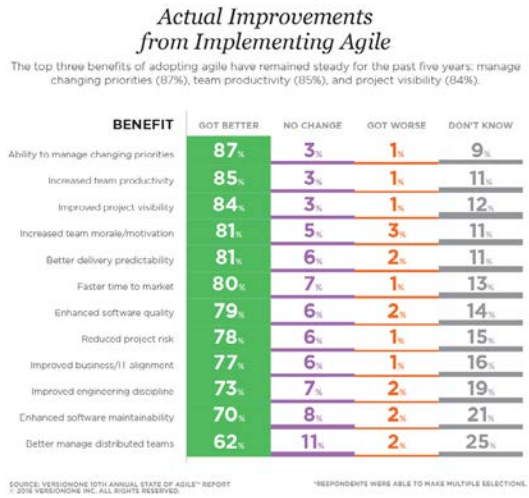
CONTACTING CUSTOMER TEAMS

If a customer is asking about how to get involved with Platform One, or knows that they need to reach out to Customer Success specifically, please have them submit a Jira Service Desk (JSD) form here. This team can also be reached via platformone@afwerx.af.mil.

4. AGILE FRAMEWORK

FIRST THINGS FIRST, WHY AGILE?

Because we love buzzwords! All jokes aside, there are many objective benefits (see below picture – a bit old but still rings true) but also intangible ones like employee satisfaction and engagement. We believe in the philosophy of "hire smart people and let them tell you what to do" not "tell smart people what to do because you outrank them". We like the idea of empowering teams to "fail" quickly and learn quickly. The tighter the feedback loop, the better. We put fail in quotes because in emergent domains, failure has a different meaning. We only consider experiments of work a failure if we failed to learn anything and adapt. This requires a lot of discipline because you need to ensure with this much enablement that everyone understands the mission, vision, and values. High autonomy is great, but without full context and competency it can be scary for teams and leaders. L. David Marquet, esteemed prior Navy Captain and author of "Turn the Ship Around! A True Story of Turning Followers Into Leaders" has a good segment on this topic in his "Talks at Google". In order to improve our posture in this domain, our organization is looking into adoption of Objectives and Key Results to drive alignment, but we're still in the "reading the instruction manual" stage of this right now so more to follow on that later.



Actual Improvements from Implementing Agile

The top three benefits of adopting agile have remained steady for the past five years: manage changing priorities (87%), team productivity (85%), and project visibility (84%).

BENEFIT	GOT BETTER	NO CHANGE	GOT WORSE	DON'T KNOW
Ability to manage changing priorities	87%	3%	1%	9%
Increased team productivity	85%	3%	1%	11%
Improved project visibility	84%	3%	1%	12%
Increased team morale/motivation	81%	5%	3%	11%
Better delivery predictability	81%	6%	2%	11%
Faster time to market	80%	7%	1%	13%
Enhanced software quality	79%	6%	2%	14%
Reduced project risk	78%	6%	1%	15%
Improved business/IT alignment	77%	6%	1%	16%
Improved engineering discipline	73%	7%	2%	19%
Enhanced software maintainability	70%	8%	2%	21%
Better manage distributed teams	62%	11%	2%	25%

SOURCE: VERSIONONE 10TH ANNUAL "STATE OF AGILE" REPORT

*RESPONDENTS WERE ABLE TO MAKE MULTIPLE SELECTIONS.

In this section, we'll cover some of our organizational design and ceremonies. We'll cover the boards we use for communication and alignment and our groups of people who meet to make sure we're moving in the right direction. We believe that building technical and organizational relationships to be modular and independent of each other as a key enabler to our agile workflows. Technical modularity supports our vendor agnostic vision and organizational modularity supports continuous flow of value built off incremental deliveries. We believe in the concept of Minimal Viable Products (MVP) and getting actual functionality in front of warfighters for feedback, utilizing User Centered Design principles. As we covered in the last section, our teams are built around value delivery and our products which enables agility. We believe it makes architectures simpler and relationships easier to manage.

One of our favorite parts of agile values and principles is the concept of retrospectives. As mentioned above, the faster the feedback the better. This extends to ways of working and how we operate within our framework. We hold organizational wide retros every 8 weeks and teams run retros internally every 2 weeks. We can always do better and we constantly strive to do so.

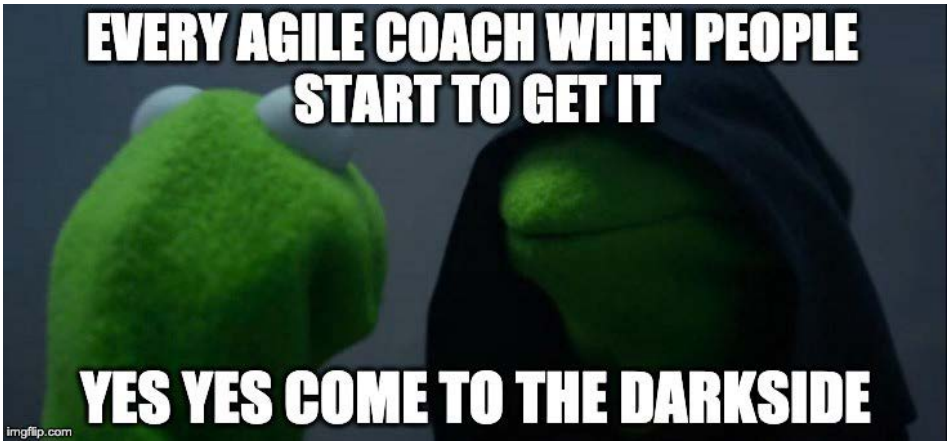
BACKGROUND

Like many organizations, we have struggled with scaling in a pretty big way. We started with about 25 people across 4 teams in January of 2020 and scaled to over 250 across 24 teams to date (most between March and June of 2020). We had a really strong culture built around tribal knowledge and hallway conversations that worked really well when we were in the same room, but things changed drastically when we transitioned to a remote-first organization. Combining these two (scaling plus going remote) introduced a lot of problems that continued to grow as we added more scope across the program, more people to each team, and more customers.

We tried a few minor tweaks to individual processes and practices to address specific problems like communication, prioritization, or alignment, but we didn't have much success. These things were all intertwined and needed to be addressed holistically, instead of individually. This certainly isn't anything new–many organizations struggle with scaling agile teams and mindsets–but we were hesitant to adopt any of the more popular frameworks (especially the ones popular in the DoD because they promote command and control philosophies more than we liked). Instead, we decided to learn from each of them, keep the pieces that we liked and discard the things we didn't. What resulted was a homegrown framework that met our specific needs.

At the end of the day, we believe there are an infinite number of things that could theoretically work (and we could probably find a Management Book or a Harvard Business Review article showing it working for someone else) but the only thing that works in practice is what everyone believes in. Since we built this from the ground up, we fully believe in it. Did we get it 100% right? No way, but that's what retros are for. We'll start here (because you have to start somewhere) and get better as we go.

We'll go into some high level detail here, but to describe all of it and every decision that was made would take dozens if not hundreds of pages. More details can be found in the pages here: The Republic (Our Framework). But if you still have questions, please don't hesitate to reach out in this Mattermost channel -- P1 Agile Framework.



To kick off the initial team that drafted this framework, we used the following guidance:

Problem Statement:

Platform One is not delivering products efficiently and continues to create additional tech debt. We believe this is due to constantly shifting priorities (causing velocity impacts) and lack of consistent, documented, and trained agile process across value streams.

Government Intent:

Develop, document, train, and execute an updated Agile software development process P1-wide that accounts for our current scale. This should be a framework that has minimum standards that must be met but allows team level flexibility within the framework to do what makes sense for each team.

PROBLEMS WE ARE ADDRESSING

While drafting this framework, we set out to solve these 5 problems, which had been identified at organizational retros and through leadership frustration. They were truly felt across the organization, at all levels. In order for teams, and our teams of teams, to fire on all cylinders, we had to get on the same page for each of these. After all, good decisions are made with information. Information lives at all levels of the organization, not just one, and so we needed a way to share that more effectively.

Main problems:

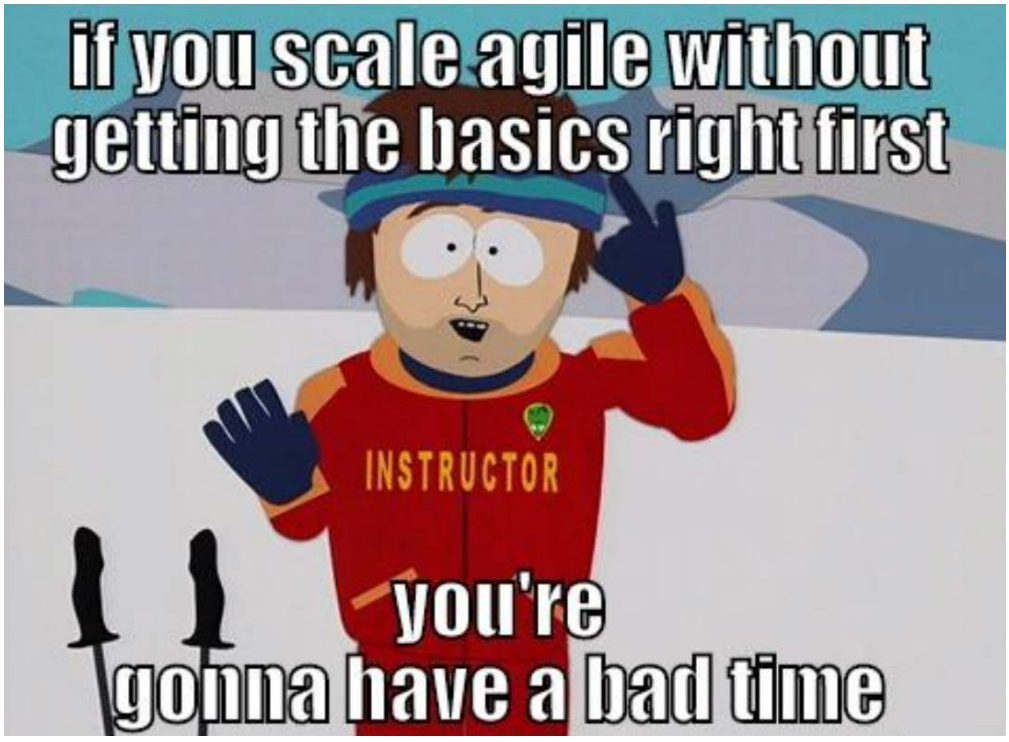
- Communication
- Alignment
- Vision
- Priorities and Planning
- Ownership

4.1 THE BIG ROCKS BOARD

PURPOSE

Boards, when used in an Agile Lean Management (ALM) tool like Jira can either be the organization's most useful work tracking asset or completely useless. They're as good as the information and effort put into them. We have tried–and failed!–in the past to do similar initiatives but they always fell flat because they were either a separate location or weren't really used by the leadership team so the information would quickly grow stale. In an effort to better combat the problems with our earlier approach, we decided to consolidate all of the Initiatives and Epics across the organization on this board. Initiatives are owned at the Organizational Leadership Level (see 2 - Leadership Overview) but epics are owned by the individual teams and displayed here so at both levels, there is frequent engagement with this board.

Our leadership team actually uses this board to set agendas for their ceremonies (described in 4.3 Team of Teams). Those conversations either become new initiatives to work across the organization, or 1-n epics for a team or multiple teams and are converted directly on the board as we discuss them. It has greatly improved our communication. Getting back to basics has worked wonders for us.



ISSUE TYPES

As mentioned above, the two issue types that are visible on this board are Initiatives and Epics.

Initiatives

Initiatives in many cases span multiple teams and don't necessarily need to have an end date. They could be a P1 product or service, or a necessary support piece to enable them. They have been relatively prioritized against each other to help teams understand which pieces of work are most important to the organization's vision. We'll cover the priority schema in 4.2 Prioritization.

Epics

Epics in our framework might be different than what you've seen before. Our "epics" are not being true to the general agile definition but if it helps, you can think of them as "spaghetti monsters." At the end of the day, the name doesn't matter, but what does is that we're all on the same page for how they're used within our execution. We wanted to utilize KISS (Keep It Simple, Stupid) and not have too many things tracked in multiple places, especially since not all of our teams use IL-2 Jira (where this board lives) as their ALM tool. Some use IL-4 Jira and some use Gitlab.

We wanted teams to have as much flexibility as possible for what works best for their processing, but we also needed information to be shared across all 24 teams, and up to leadership, more effectively. We mention this because one of our goals was to maximize flexibility in this framework. In order to do that, we came up with a Now (current sprint), Next (next sprint), Later (n+1 sprints) concept that is broken down on the Now/Next/Later page. The gist is that we only commit to a two week planning horizon. In order to communicate what will be done across the various epics that teams have, they have to shave off the bits of the epic they'll accomplish within the two week sprint and track that separately then the rest of the work. That way, teams that are dependent on the work from a different team can see exactly what will be accomplished within the sprint, and plan their future work accordingly. It also helps our Leadership team and Customer Success team with external engagement of when certain features/work will be ready.

I know what you're thinking! Why not just use features for that? Agile has a concept in the breakdown for this. The trade here, because our team's use different tools, is that it would create more duplication of work. In order to get the fidelity that leadership wants (which chunks of work from each epic are committed to each sprint) we would then have to tie features into this board as well so those could be moved through our Later/Next/Now paradigm. This wouldn't be an issue for our IL-2 Jira teams but would be more duplication for our teams that utilize other ALM tools. In our framework, epics are the only thing that need to be mirrored across both boards.

WHERE TO FIND MORE

If you're as interested in this stuff as some of us are, feel free to check out 2 - Issue Types and the Big Rocks Board. It's a sub-page under our Scrum Master Quick Start Guide that goes into more detail and also covers the statuses and flow as things move across the board.

4.2 PRIORITIZATION

OVERVIEW

Like many organizations, we fell into a response mode where we were often reactive instead of proactive. A lot of times, what would get worked on was the “closest alligator to the boat” or work that was coming from “whoever was screaming the loudest.” We lost sight of our vision and where we needed our products and services to go to continuously provide value to our customers and landed in a spot where we were just struggling to keep up with various demands from customers, leadership, and whoever else. It became difficult to see the forest through the trees and we started to notice that time kept slipping away. As it turns out, it wasn’t that we didn’t have time to work on certain things, it’s that we didn’t have priority. If you blame time, you can solve that by working more hours. We don’t support that philosophy here. So instead we framed it around priorities and started having more meaningful conversations in order to make the boat go faster.

Initiatives

In order to get at this problem, we decided on criteria that we thought were important to measure when it comes to our initiatives. We then gave each criteria a weight (how important it was compared to the other criteria) and we would assign each initiative a score for each criteria (from 1 -5). That score, multiplied by the weight, would then be summed with all the other criteria and weights to provide a final score. We then created a histogram with those scores and broke them out into 5 levels of priority. See below for more our criteria and 3 - Priorities And The Definition of Ready for more details.

POLITICAL VALUE

5 for high value, 1 for low value

Working this initiative will increase Platform One’s stature/credibility in the DoD, Air Force, Defense Industrial Base and/or Software Ecosystem

STRATEGIC BUSINESS VALUE

5 for high value, 1 for low value

Working this initiative with drive financial value to Platform One

COST TO IMPLEMENT

5 for high value, 1 for low value

Working this initiative will cost Platform One significant consumable resources (cloud, license, etc.)

ALIGNMENT TO TECHNICAL VISION

5 for high value, 1 for low value

Working this initiative is aligned with the future state of Platform One products and strategy

RISKS

5 for high value, 1 for low value

All initiatives carry risk of successful implementation assessed by Jedi Order. This could be technical implementation risk, security risk, or process risk.

COMPLEXITY

5 for high value, 1 for low value

All initiatives involve a level of complexity of successful implementation assessed by the Jedi Order.

Epics

Because the criteria listed above are at a pretty high level, we granted each Value Stream and Team the ability to define the criteria that matters for their epics. The only requirement was that it took into account the Initiative priority that it fell under as its heaviest weighted criteria. This way, we're taking into account the information that organizational leadership deem important but also including the information from the team that they have and leaning on their experience as well. Some examples of Value Stream and Team Definitions can be found on 3 - Priorities And The Definition of Ready.

4.3 TEAM OF TEAMS

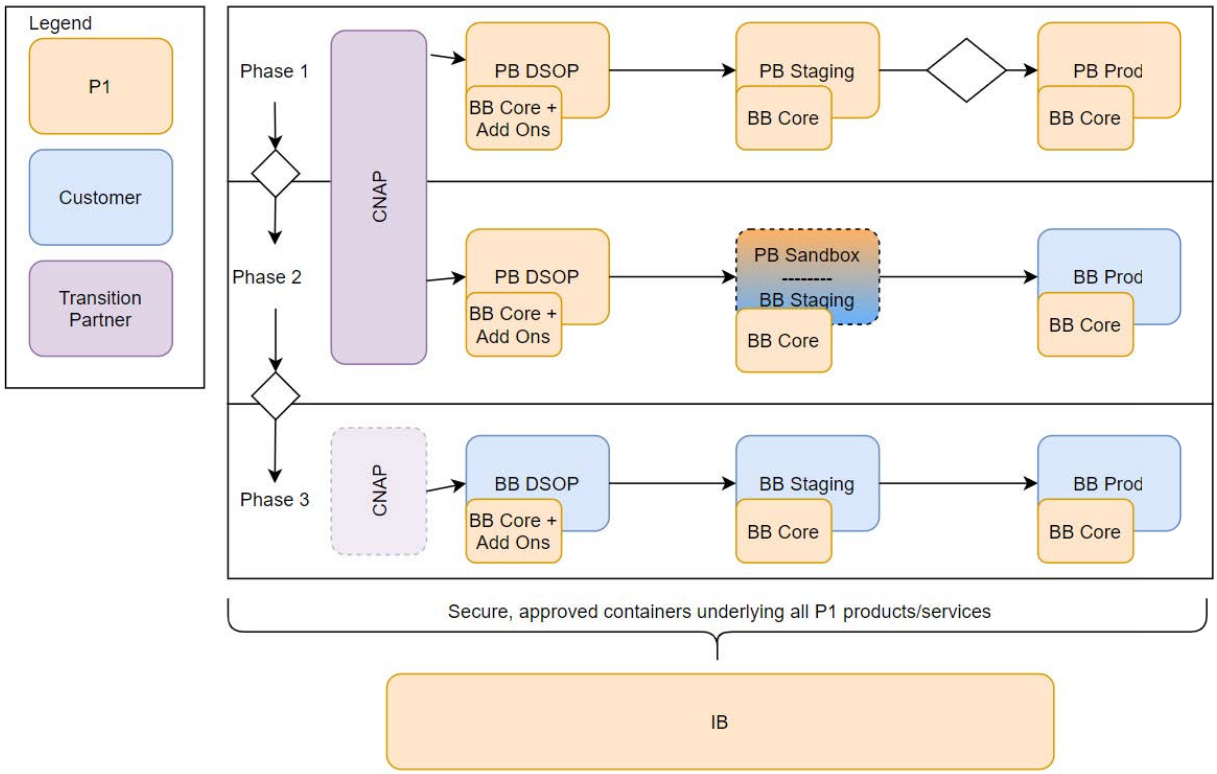
OVERVIEW

We're big on the concept of getting the right groups of people in the room to have valuable ceremonies when it makes sense and trying to avoid it at all other costs. At the onset of this framework, we think these three groups meeting across value streams and teams adds value and can help get ahead of potential dumpster fires so we have them meet. The cool thing about these groups is that they're not just people sitting in an ivory tower making demands. They are imbedded in the teams (with few rare exceptions) and help lead both tactically and strategically.

REBEL ALLIANCE

Think of this group as the "Business Leadership" at P1. It is the PMs of each of our Value Streams and Support Teams, as well as our Material Leader, our Chief Product Officer, our Chief Information Officer, our Chief of Futures and Innovation, our Chief Technology Officer, and our Scrum Lord (for coordination purposes). This team meets weekly to groom initiatives and provide prioritization scores for the business side of the house. If teams have Epics they would like more input on, they are also brought to this forum.

Here's a brief excerpt from the [Rebel Alliance (Business Leadership) Charter:]



P1 has grown into areas the DoD software community needed us to in order to move us forward towards DevSecOps. However, in the future, P1's role within the ecosystem is to develop platforms that enable DevSecOps automation. Our 4 key products have built a path to a full service DevSecOps PaaS (Party Bus) that shows the power of true DevSecOps in action. However, as we grow the community towards DevSecOps maturation, Platform One should be able to step back into it's core role. This is why strategic partnerships with key software factories and innovation hubs are so important.

JEDI ORDER

The correlating team of teams on the "Technical Leadership" side is referred to as the Jedi Order. This team is made up of the anchors (think technical vision/direction leader) of our Teams and Value Streams. These members too, sit on teams and work issues from day to day with their teammates so they're fully in-tune with the pulse of our organization. Added to the Anchors, the Chief of Product, Chief Information Officer, the Chief of Futures and Innovation, the Chief Technology Officer, and the Scrum Lord (for coordination purposes) are also on this team. This team meets weekly to groom initiatives and drive the technical vision of P1. If teams have Epics they would like more input on, they are also brought to this forum.

Feel free to check out the Jedi Order (Technical Leadership) Charter for more details, but here's an excerpt showing this team's mission statement.

Mission Statement

Provide clear technical vision and work allocation with the value streams across all nominated or requested significant P1 issues.

SCRUM OF SCRUMS

The Scrum of Scrums team is focused on execution, alignment, and communication. They ensure that all work is captured on the board and that dependencies are mitigated. Each team has a "Scrum" Master (note the quotes are because teams don't actually have to run Scrum) and some of our bigger Value Streams have one at that level, called a Scrum Knight, as well. At the organizational level, we utilize the Scrum Lord to facilitate and coordinate as well as coach on the framework. We do our best to automate alerts/notifications and updates across teams but this team meets weekly to discuss the outcomes and assignments from the two ceremonies listed above. This team also meets daily, in a short standup, to resolve dependencies and track work across teams.

More details can be found in the Scrum of Scrum CONOPS, but here's the mission statement.

Mission Statement

Ensure that all work is properly tracked across the organization and that we are aligned on our execution.

5. OTHER P1 PRACTICES

For a full list of other practices, the P1 CONOPS is the best place to go. It highlights how we do assessments of new tools, how we respond to incidents, and so much more. Below, we'll highlight one of the most common practices that you'll likely interact with and provide a link to a template.

THE ARCHITECTURAL DECISION RECORD (ADR)

P1 uses the ADR as a way to compare multiple different solutions, balance the pros and cons, and ultimately drive the discussion around certain decisions as they pertain to our architecture. We use this for everything from introducing a new tool into our ecosystem (something that goes through IB and is configured to run by BB) to making process updates. At the end of the day its our way to measure and discuss trade criteria as we make decisions. Due to the nature of us being a mixed-vendor team and some of the vendors that work here provide competing solutions to some of our problems, combined with the fact that the government owns the entire P1 baseline, we have the follow guidelines to our ADR process, but otherwise the ADR falls on the team for discussion and debate.

- Vendors with a product that would solve the problem should recluse themselves from the decisions and discussions
- Vendors should then be given a fast, but reasonable time to provide clarification/input on THEIR product only
- Each ADR will have a notice on the ADR, stating the recommendation was presented to the gov't as the final authority

6. TEAM ROLES, RESPONSIBILITIES, AND CEREMONIES

OVERVIEW

In this section, you'll see roles that are common across a lot of our teams. Not every team is built the same, because we don't mandate a team level framework, but in general these things are accomplished by either one, or multiple people. Different teams chose different frameworks at P1 based off what meet their needs. Some teams are more product focused so something like Scrum or XP works well, while other teams are more service focused and typically chose Kanban or a similar approach. Because of that, experience may vary from team to team but in general, these roles need to be accomplished. At the end of the day, we want our teams to operate like they're a family. No one is the "boss" of the team, different people have different roles and all of those roles provide unique insights that when brought together drive better decisions.

You'll also see our list of recommended ceremonies. We broke these out based off whether teams are more product focused or service focused because executing for those two things is entirely different. The specific flavors of these from team to team might be slightly different but the intent of these ceremonies should be captured and understood by all team members.

6.1 ROLES AND RESPONSIBILITIES

Product Manager

The PM must understand the business objectives, stakeholder vision, user needs, and technical challenges associated with the software they are delivering. They write user stories, work with designers and engineers to prioritize stories, and manage the day to day product team tempo. They are not the boss of the team, they are one member of a balanced team working to deliver. See 1.2 - Some Core Terms to see the different between Product Manager, Project Manager, and Program Manager.

- Create and maintain user stories
- Prioritize the backlog
- Ensure enough work for each iteration
- Represent their team to stakeholders
- Accept and Reject completed stories (could be shared with anchors)
- Manage product schedules and release notes

Designer

The Designer engages with the user to understand their pain points and to generate ideas to solve those pain points. Designers often have the most face time with the users and are critical to communicate the problem that needs to be solved for a story.

- Represent the user to the product team
- Investigate user pain and drive problem understanding and fidelity
- Generate ideas to solve user pain points (by collaborating with the team)
- Validate ideas early and often with users
- Build prototypes and mock ups from the ideas
- Work with PM to transfer prototypes into user stories

Engineer

The majority of a team is made up of engineers. Beyond creating the software, they also help the PM to understand the level of effort for stories during the IPM and collaborate with designers as needed to complete features. Within the engineers, one is identified as the anchor. This is an engineering responsibility within a team based on who will be there the longest to guide the long-term technical direction of a team.

- Deliver functionality based off stories
- Estimate work during planning activities
- Help decompose new features during grooming activities
- Share knowledge across team and build up other team members
- Engage other teams to help break down dependencies when necessary

“Scrum Master”

This human helps align delivery and execution, not only within the team, but across other teams at P1 as well. Communication and organizational skills will serve these humans well. We’re a big organization with a lot of moving parts and we don’t slow down for people to catch up so this person has to be on top of their game. Within our framework, these folks bear a brunt of the load so they team can execute. We expect a lot from these folks, but it’s a very rewarding job when done well.

- Team Level “Scrum Master”
- Remove blockers
- Manage injects and dependencies for team
- Coaches team on agile execution
- Helps map dependencies of all team work
- Organize and facilitate team ceremonies (e.g., sprint review, product demonstrations)
- Arrange, optimize, and manages product backlog (based off PM prioritization)
- Help communicate product manager needs/wants to product team

6.2 CEREMONIES

We recognize that different frameworks will suit different teams needs better and we don't want to impose too much on them to take away their right to chose a framework. However, these ceremonies listed below are typically common across agile frameworks and can accelerate delivery. Some of these ceremonies will apply to all teams, whether they chose kanban/scrum/XP/something else, and some will only apply to teams who plan product work as opposed to doing service work. The whole team should participate in these ceremonies.

For all teams:

- Stand up
- Retro – the most important ceremony

Teams doing product work will run 2 weeks sprints within the increment on the same cadence as other teams (we run Tuesday to Monday). Additional ceremonies that should occur in that time:

- Sprint/Iteration Planning
- Backlog Grooming

General Rule:

Conversations about things not tracked on the source of truth (board/tool) should be taboo or captured as an action item to get onto the board.

Retro

Entry

A list of pain points and highlights from the team

Process

The team will discuss the last sprint and how interactions amongst the team and other teams went. They use this space to identify continual improvements

Exit

A list of action items to help the team increase their delivery speed

Stand Ups

Entry

Updates from team members on work in progress and blockers

Process

Each team member will cover what they accomplished yesterday, any blockers that encountered, and what they plan to work today. This is ideally done directly out of the teams backlog so it remains the source of truth. This should last 15 minutes or less.

Exit

Plan of action for every individual on what to accomplish for the day

Sprint/Iteration Planning

Entry

List of prioritized epics and team capacity

Processing

Get Buy-in from all team members and commit to work for the 2 week period

Exit

Approved team plan

Backlog Grooming

Entry

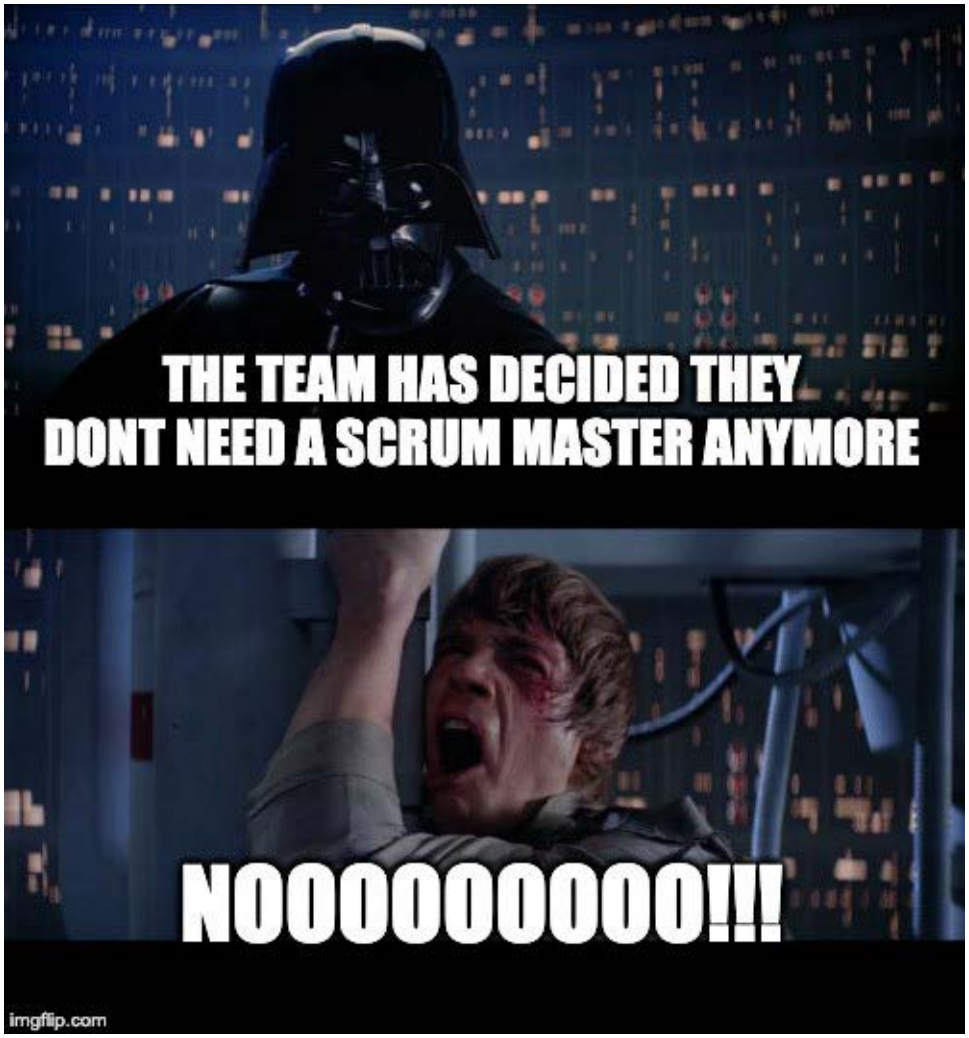
List of new priorities from the Rebel Alliance and VS PMs

Processing

Breaking down new work and providing estimates. New work will continuously come in and we need to investigate what it will take to do it. This will serve as an input to Sprint Planning. Work on these new items shouldn't begin immediately, until the epic has been prioritized and fully meets its Definition of Ready.

Exit

Better understanding of future work to inform other Ceremonies



7. CLOSING

Hopefully you had as much fun reading this as we did writing it and you've learned something along the way. Our goal was to cover how we fit in the DoD, how we're organized, and how we operate. Obviously, there is a whole lot more to us than we could write down in these pages, especially culturally. It's hard to capture our daily interactions and the way we treat people on paper. We know we're human and we have things we can improve on but we move fast and experiment often. It brings joy to our lives and more importantly helps us constantly improve. One of our main goals is continuous improvement and engaging the community. After all, we don't build our products and services for us, we build them for our software developers. We're working on more opportunities for engagement from the DoD DevSecOps community. We'll release updates to this document periodically (as we have valuable things to add, not based off some schedule) so follow us on LinkedIn for general updates and future copies of this guide.

PLATFORM ONE