

Setting up your MVP(AND Road Map) for Success !!!!

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IBM Distinguished Engineer & CTO

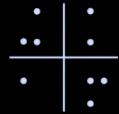
IBM Technical GTM (CSM, Tech Sales,
Architecture and Assets)

IBM Technology



IBM Garage Approach

Activities

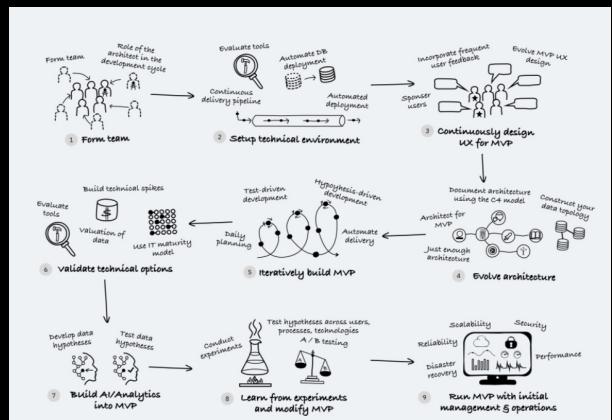
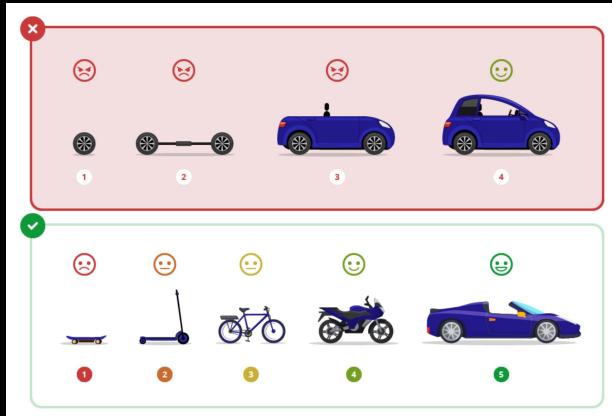


Initial Framing Session	Design Thinking	Architecture	Minimum Viable Product Build	Build Out
Client outcomes				
✓ Alignment on the desired business outcome.	✓ Business and IT alignment on user experience and roadmap to meet your business outcome	✓ Defined a minimum viable architecture that mitigates risk	✓ Modernized, deployed, and tested the application on the cloud environment	✓ Iterate, refine solution until you achieved the stated business outcome
✓ Confirm executive sponsor, product owner	✓ Identified risks and assumptions in your modernization approach, such as data security	✓ Deployed and configured a Hybrid and/or Multicloud solution with a data, management, and integration layer	✓ Achieved the stated business goals towards the outcome	✓ Become self-sufficient in achieving business results with the IBM Garage Method.
✓ Selection of candidate app workloads that can deliver the business outcome through modernization	✓ Agreed on next MVP business experiment			✓ Scaled production environment and applications

What is an MVP exactly ?

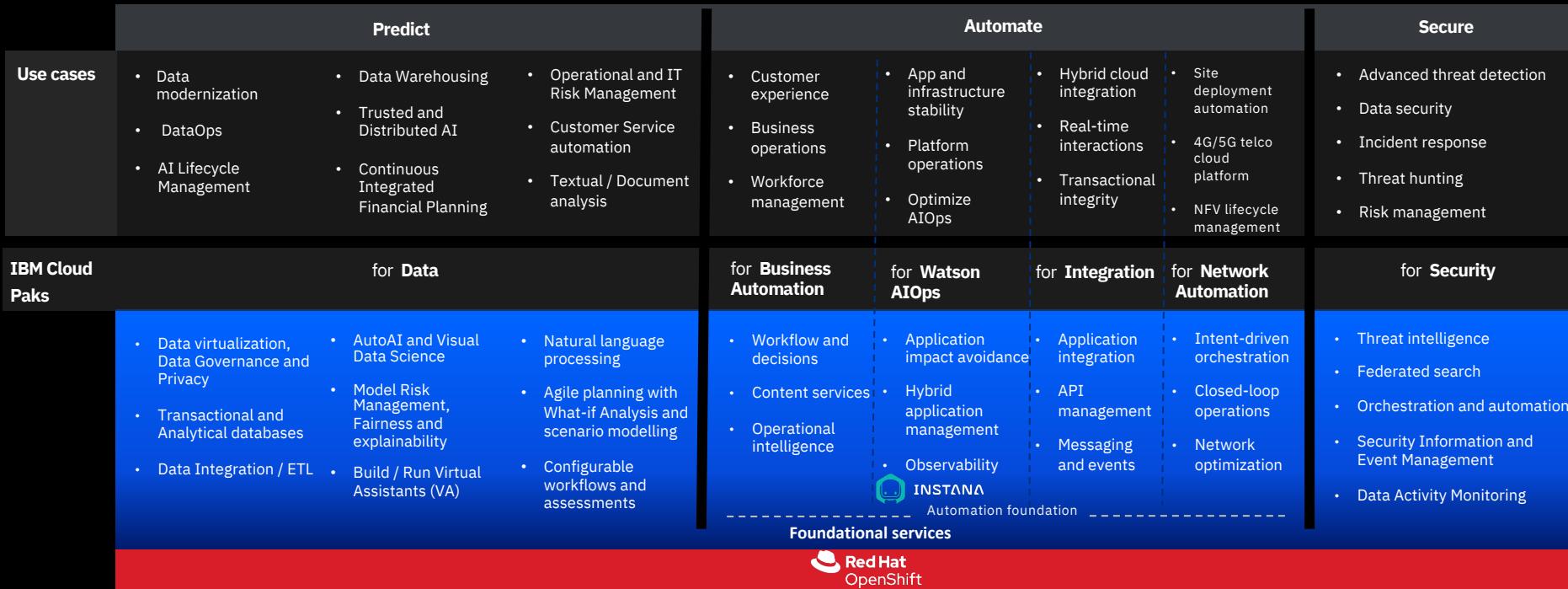
<https://www.ibm.com/garage/method/playbooks/activation-tech-sellers/develop-a-roadmap>

- MVP = Minimum Viable Product
- A minimum viable product is a concept from Lean Startup that stresses the impact of learning in new product development.
- A key premise behind the idea of MVP is that you produce an actual product that you can offer to customers and observe their actual behavior with the product or service.
 - Simple UI Mockup sometimes is enough for business/
- MVP may not be the RIGHT Approach IN all Our situations.
 - Technical Proof Points
 - Small Projects.
 - Setup Environments
 - Client Methodology
- Can be used as an approach to prove technical proof point if sponsor is Infra Architect.
 - OpenShift is a platform that can support 50 developers to deploy 10 applications continuously in minutes



IBM Cloud Paks

IBM delivers AI-powered software for specific use cases to **predict**, **automate**, and **secure** a smarter business. They are packaged as Cloud Paks that include: Containerized software, foundational services and Red Hat OpenShift.



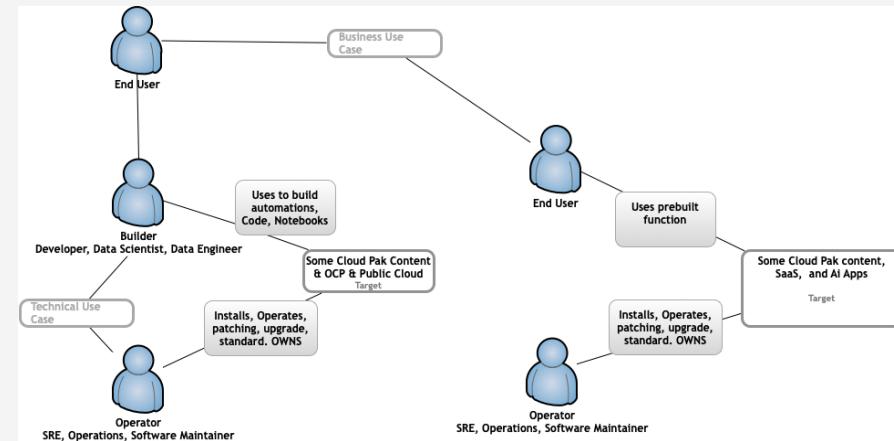
IBM Z
IBM LinuxOne
IBM Power Systems

End points

Who are the “Users” of your capabilities ?

As you plan your MVP, build a minimal roadmap. You OWN the context and broader implementation plan, architecture, CSM partners with Solution Owner !!!!!!

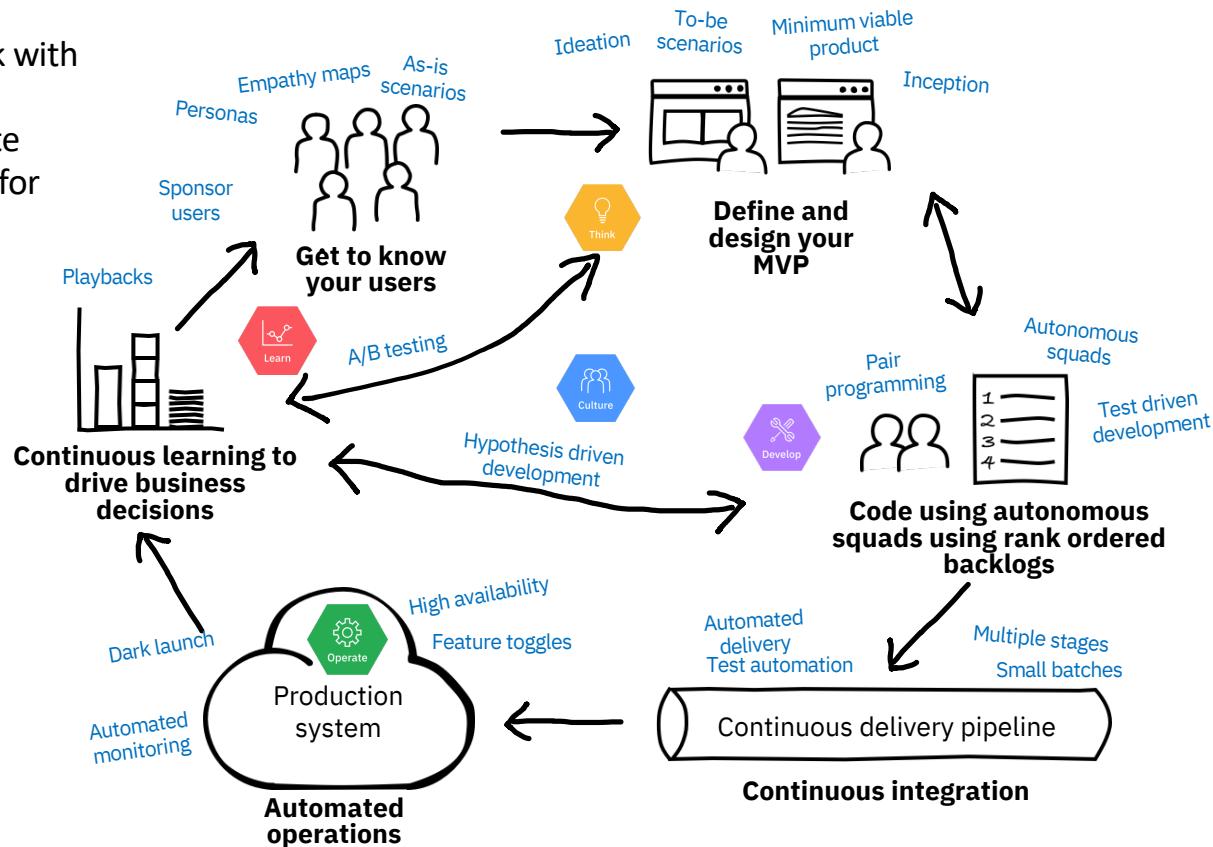
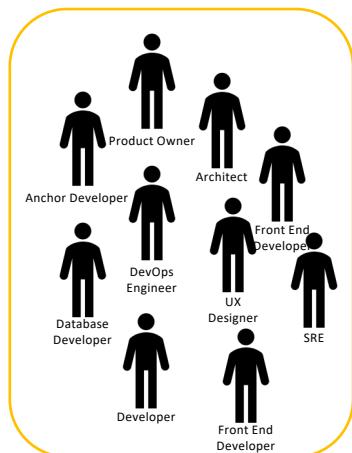
- Workload Journey
 - Cloud Native / DevOps
 - OpenShift and IBM Cloud
 - Application Modernization
 - Integration Modernization (API, Event Driven Architecture, Connectors)
 - Automation (Process Mining, Value Stream Mapping)
 - Data and AI First Method as part of Garage
 - Data
 - AI
 - Security
 - Cross cutting concerns
 - Governance
 - AI Apps
 - Strong Industry knowledge
 - AI Ops
 - SRE, Day Operations as a focus.
- Platform Journey (OpenShift, IBM Cloud, MCM)
 - Build environments, automation, DevOps, SRE Day 2 vision
MCM or IBM Cloud Satellite as part of the solution



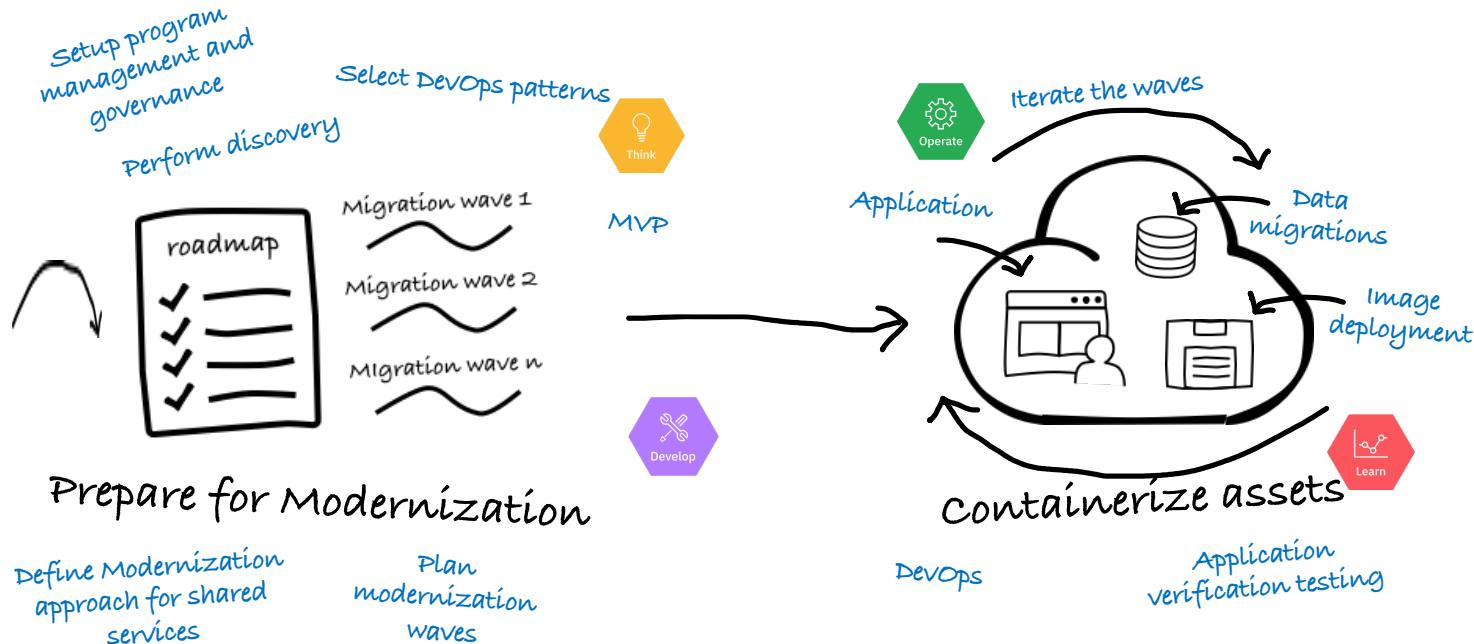
Garage Approach to Projects for Application Development

- Teaching your teams how to work with Modernized apps
- Co-CREATE, Co-EXECUTE, Co-OPERATE
- OpenShift, IBM Cloud, Cloud Pak for Apps.

Squad

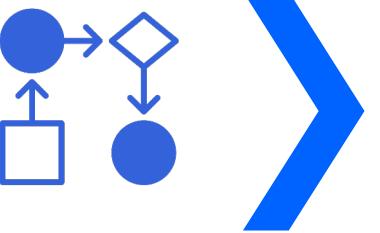


Modernization MVP Workflow



Process Mining

DISCOVERY



Automated algorithms for:

- Process Discovery
- Task Mining
- Business Rules Mining
- Multi-Level Process Mining

ANALYTICS



Dashboards and event flows for:

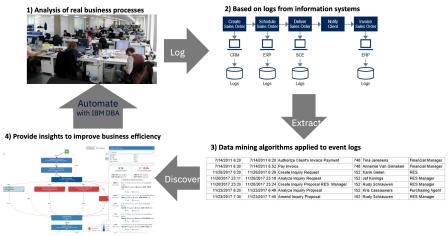
- KPI and Cost Checking
- Compliance Checking
- Automation outcomes
- Root Cause Analysis

DIGITAL TWIN



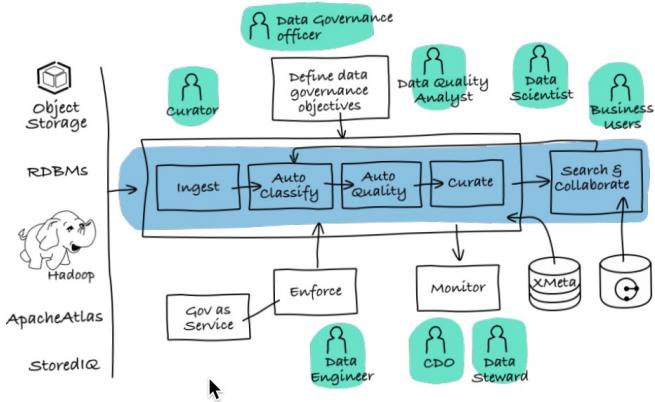
Create a **Digital Twin** to:

- Study what-if scenarios
- Simulate improvements
- Calculate ROI



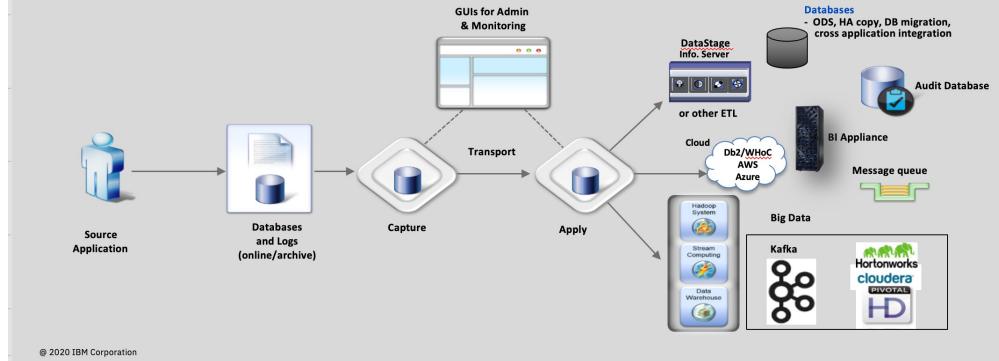
Cloud Pak for Data

AI Use Cases



- Data has a wide range of use cases
- AI has another wide range of use cases

Data Replication Use Cases

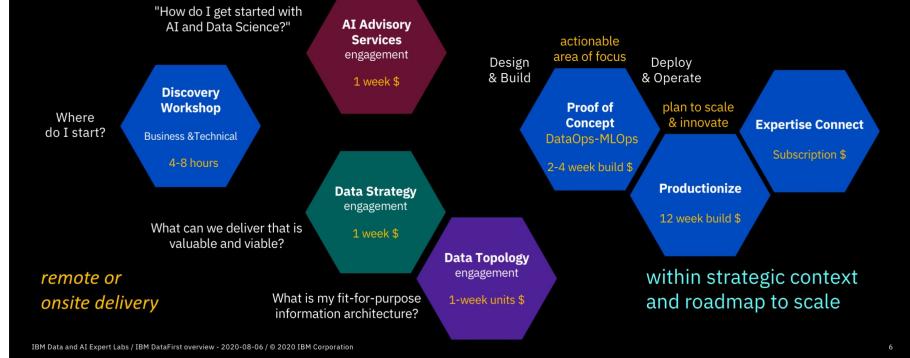


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IBM DataFirst: transform and modernize your Data and AI estate

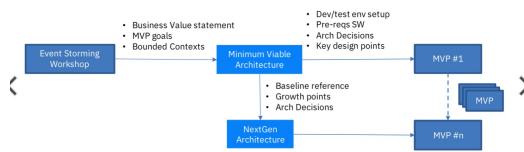
Start with your business objectives
and outcomes desired

Deploy and deliver a
valuable and viable solution

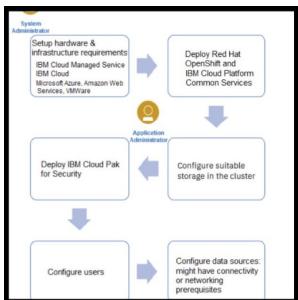


Implementation Journey will differ (Go to your breakouts)

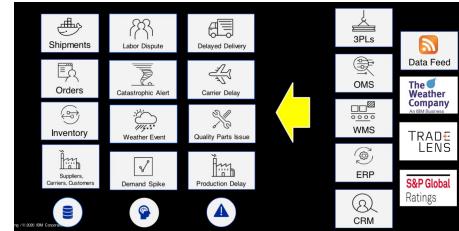
Integration (API's, Integrations, Events Driven Architecture):



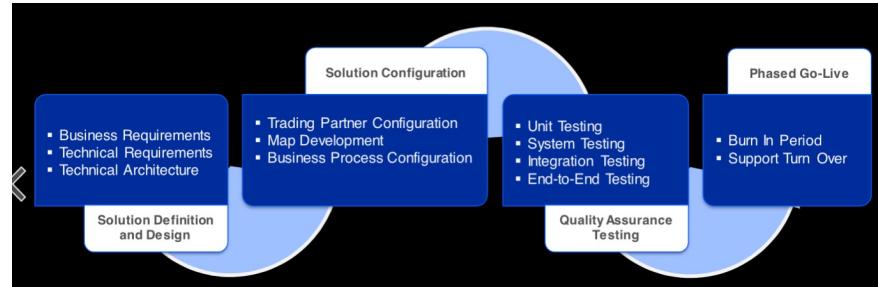
Security



Ai Apps (Supply Chain)



Ai Apps (B2B Integration)



Ai Apps (Asset Management)



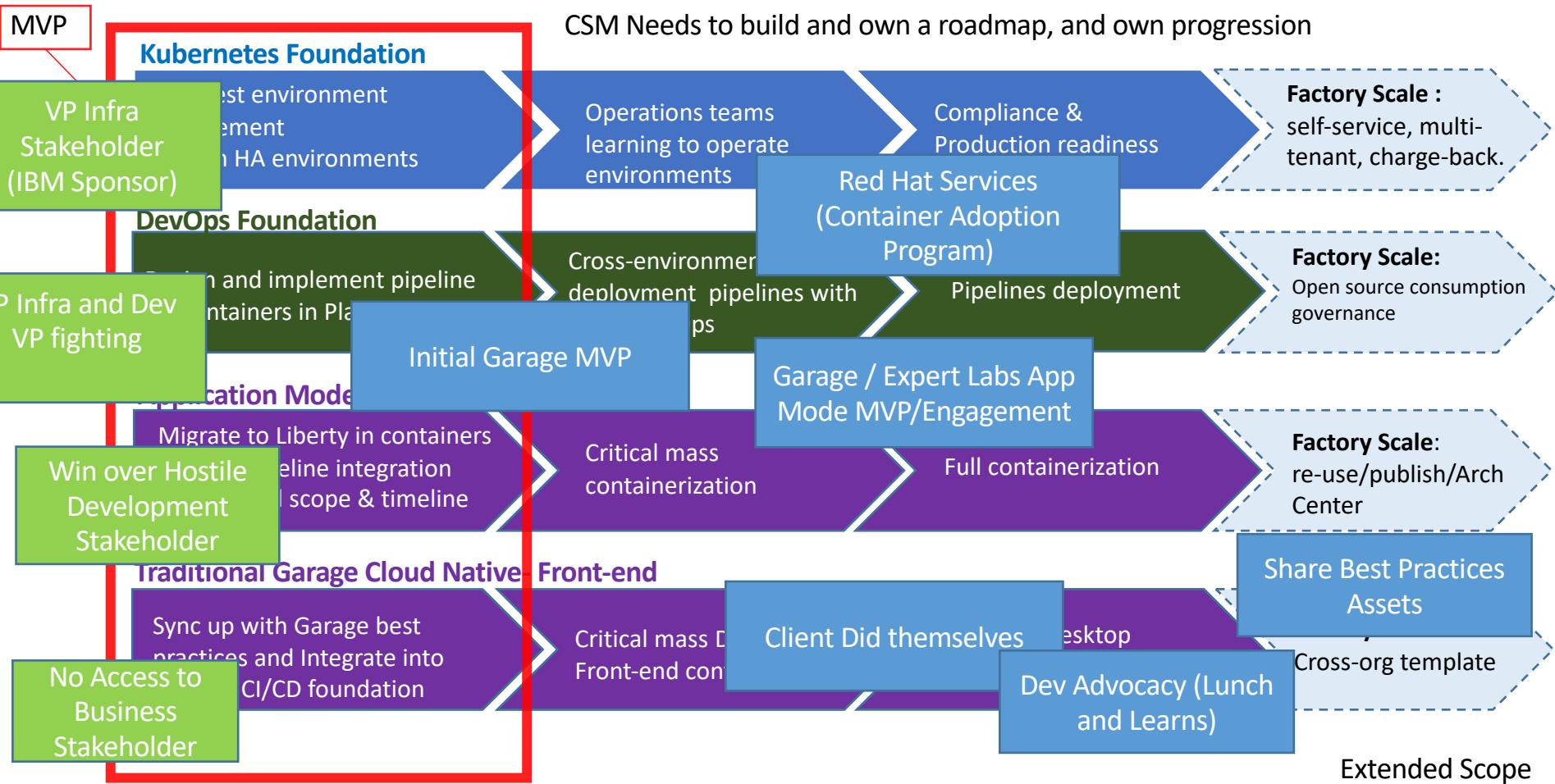
BCBS – SC

Modernization and Container Adoption

Drama In a Workshop



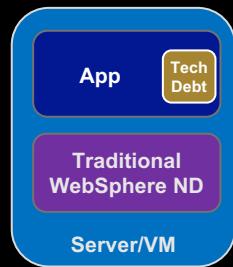
Workstreams



MVP

MVP with 1-2 apps

Current



Containerize

"As is"

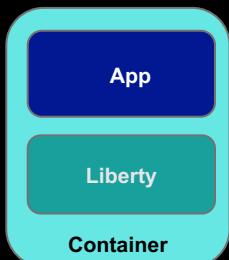


Replatform

App

Liberty

Container



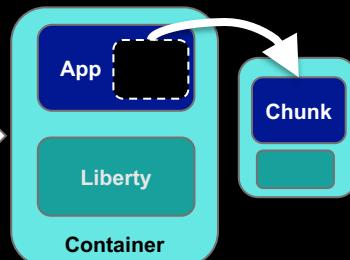
Refactor

App

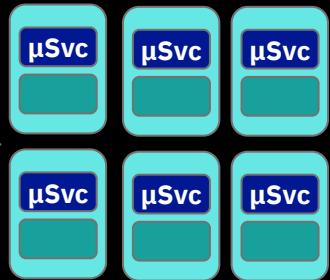
Liberty

Container

Chunk



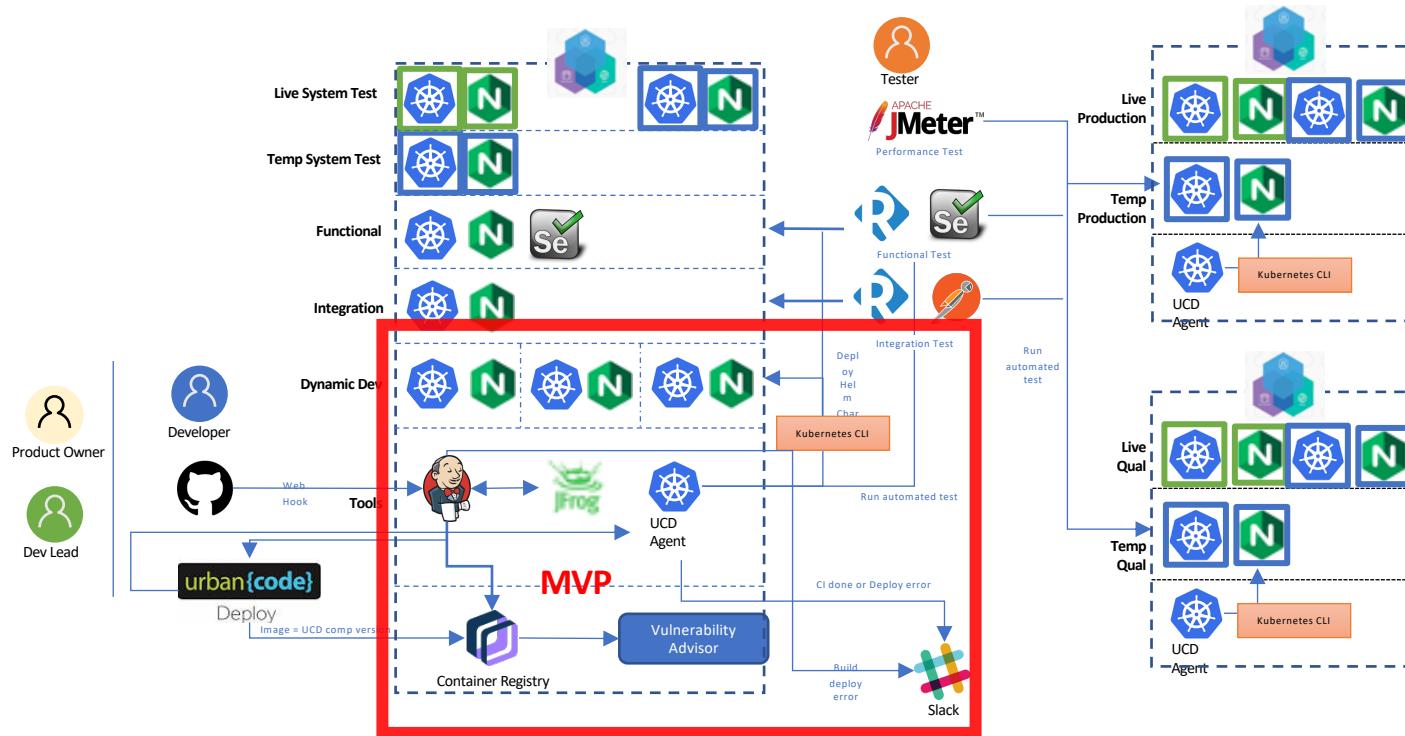
Rewrite



Integrated Container DevOps

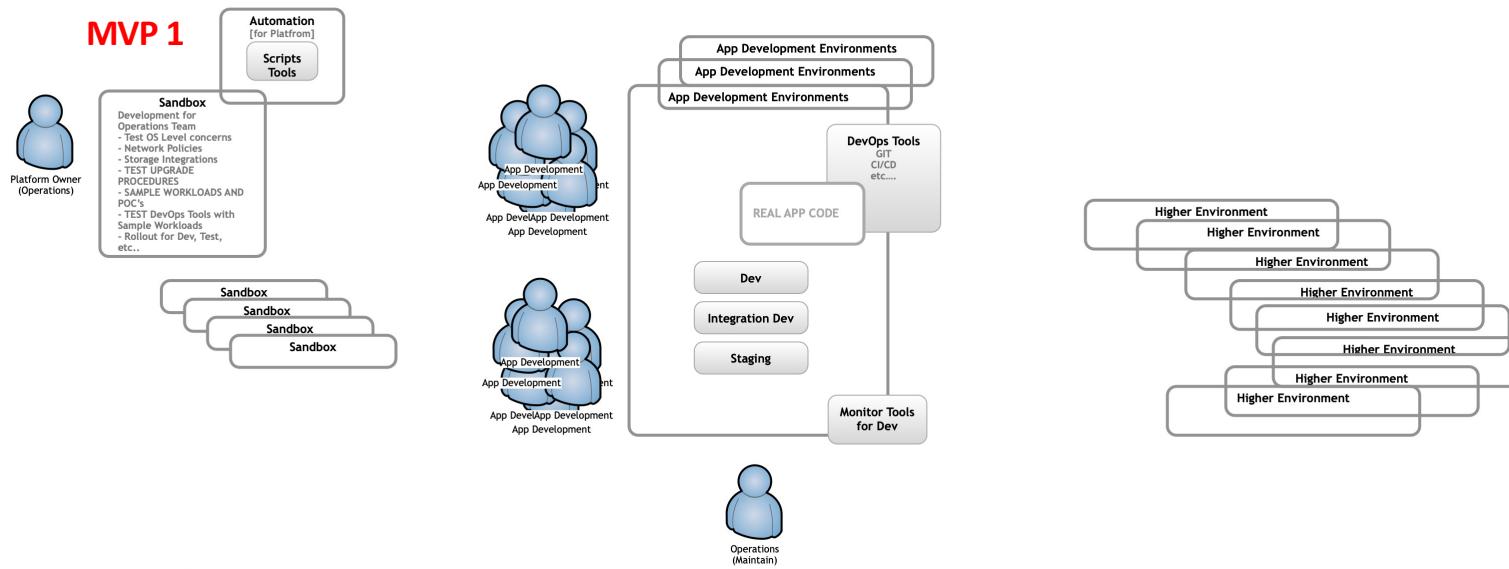
Red Hat OpenShift Container Platform

Initial DevOps Architecture



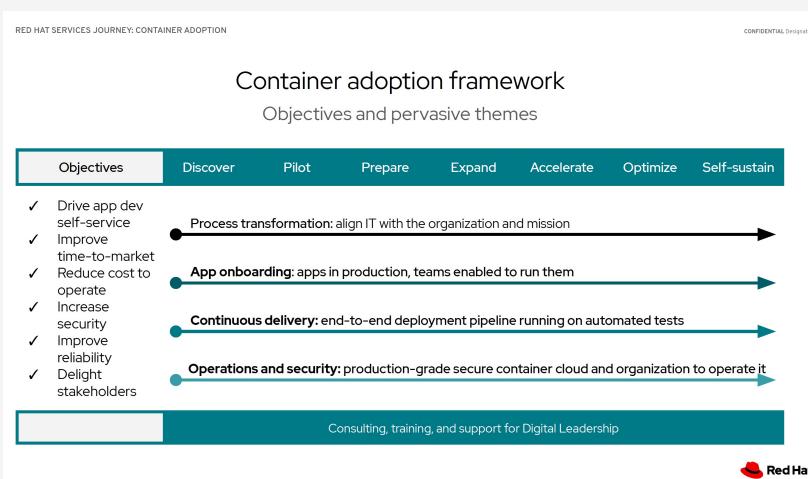
Development Environments = Production

<https://medium.com/ibm-garage/development-environments-production-e220c5155426>



Platform Journey example

- Partnering with RedHat can be successful.
- CSM must ensure Cloud Pak continuity



Container platform pilot

12 weeks



Goal

- A meaningful workload runs in production on a minimally viable container platform
- A core, enabled team manages the platform



Milestones

- One workload running in production OpenShift Container Platform
- Production environment with minimum viable operational capability
- End-to-end process for delivering applications to production platform demonstrated and captured, including roles and responsibilities
- Customer Operations team mentored to build OpenShift clusters with minimal assistance
- Implement dashboard to begin measuring and providing visibility to software delivery metrics
- Next phase planned with prioritized backlog or story map for infrastructure, deployment pipeline, and application development.



Environments

- Lab OpenShift cluster for infrastructure testing
- Non-production OpenShift cluster for development and testing of containerized applications prior to their production release
- MVP production OpenShift cluster



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- IBM owns modernization and workload.
- Opened opportunity for cloud pak for Data
- OpenShift on Z.

Clearing House

White Board discussion on Mainframe Transactions introduced Kafka and app to do AI.

MVP to prove out Kafka with Cloud Pak for Integration.



The Clearing House – Modernization Workshop

8 -16 hour deep dive in the architectural requirements of Platform , application and the use case

OBJECTIVES

Use Case

- Validate use case
- Identify Stake Holders
- Define success criteria and Understand the business objectives that need to be met
- Modernization Mapping

Application

- Architecture Deep Dive
- Dependency Mapping
- High Level MVP definition

Platform

- Assess readiness of Kubernetes platform
- Understand the Storage , Networking and other infrastructure related options and requirements
- Discuss Governance & Security requirements

Design Thinking Overview

- How considering human-centered design helps us get started and align on problems and prioritize actions

Details

Use Case

TCH will:

- Identify top 2 priority flows
- Define scope and success criteria

IBM will :

- Validate use cases success criteria and Understand the business objectives that need to be met
- Conduct Modernization Mapping exercise

Application

TCH will:

- Review deployment architecture
- Outline dependency mapping

IBM will:

- Review Java Layer
- Review MQ transactions
- Understand what DB2 Data we need

Platform

TCH will:

- Define the requirements for Kubernetes platform
- Define scope and success criteria

IBM will:

- Define a high level preliminary infrastructure deployment architecture

Stake Holders and SMEs

TCH will ensure that following persona's are available during the workshop :

- SMEs knowledgeable with current MQ, Java, and DB2 Data.
- SMEs with deployment knowledge of systems above.
- Stakeholders who will make GO/NO GO decisions.

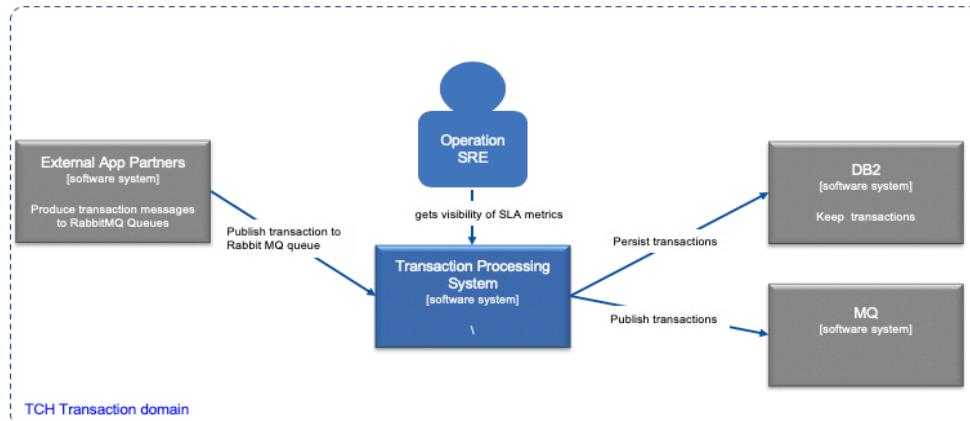
IBM will ensure that following persona's are available during the workshop :

- SMEs knowledgeable in Platform and Event Stream/Kafka / EDA solutions
- SMEs knowledgeable in DB2 and database technologies (if needed)
- Execs / DEs with decision making powers

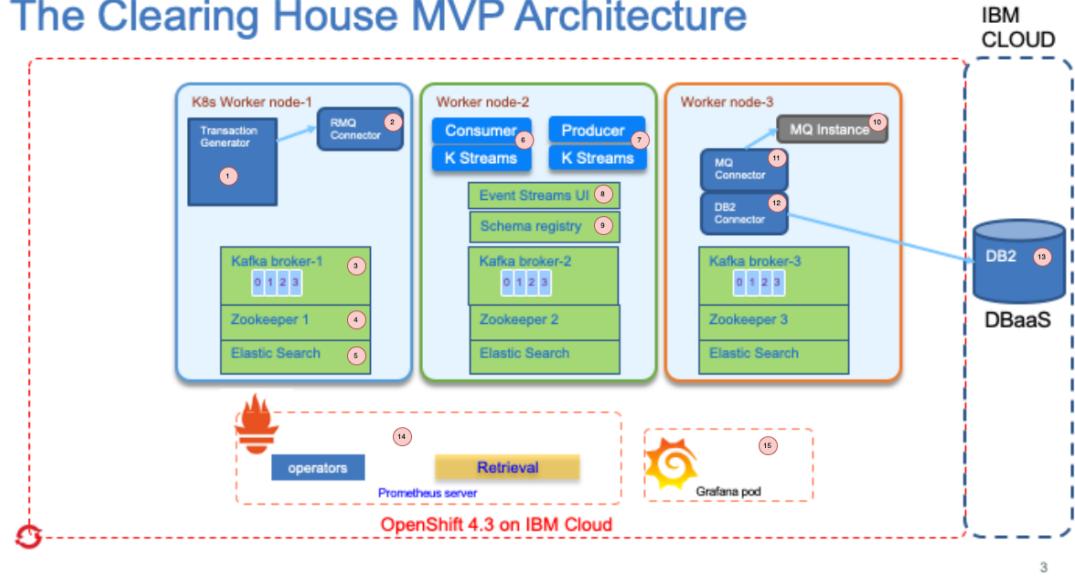


MVP

- Initial Discovery (Roland and Kedar)
- Build out one of their main transactions. (Garage Design workshop, followed by MVP) (Anna, Jerome, Alex I.)
 - Build out solution in their IBM Cloud account.
 - Use Event Streams
- After MVP, had Infrastructure expert (Noel Colon) walk them through install of Cloud Pak for Integration.



The Clearing House MVP Architecture



RBC

Building Home Grown Control Plane

Building Home Grown DevOps Stack

Active IBM CTO

You will experience pain !!!!
(Helping clients through patches, working
with Dev, OM and Bring Up Lab)



Context – Proposed Approach with RBC

1. Installation Experience Workshop

Objective:

Demonstrate and assist in the Cloud Pak deployment process.

Approach:

In collaboration with RBC Engineering team, perform the installation of Multi-Cloud Manager Cluster

Activities:

- Architecture planning session
- OpenShift installation in VMWare
- Cloud Pak installations
 - Multicloud Manager
 - Terraform & Service Automation Module

2. Multi-Cluster Management

Objective:

Demonstrate the ability to manage multiple clusters from a central point and ensure RBC policies are enforced.

Approach:

Working with RBC, identify a series of cluster to instrument and agree on a set of policies to apply

Activities:

- Importing all target clusters to MCM
- Configure federated Prometheus instance
- Deploy 2 policies out of:
 - Configuration policy
 - Mutation policy
 - Certificate policy
 - Vulnerability policy
 - Audit Logging policy
 - Secret Encryption policy
 - IAM policy
 - CIS policy

3. Automation and Application Life-Cycle Management

Objective:

Explore how the automation capabilities can be leveraged to automate a cluster deployment and improve application life-cycle management .

Approach:

Leverage Terraform scripts provided with MCM to deploy a new cluster and move an application from an existing target cluster to the new cluster

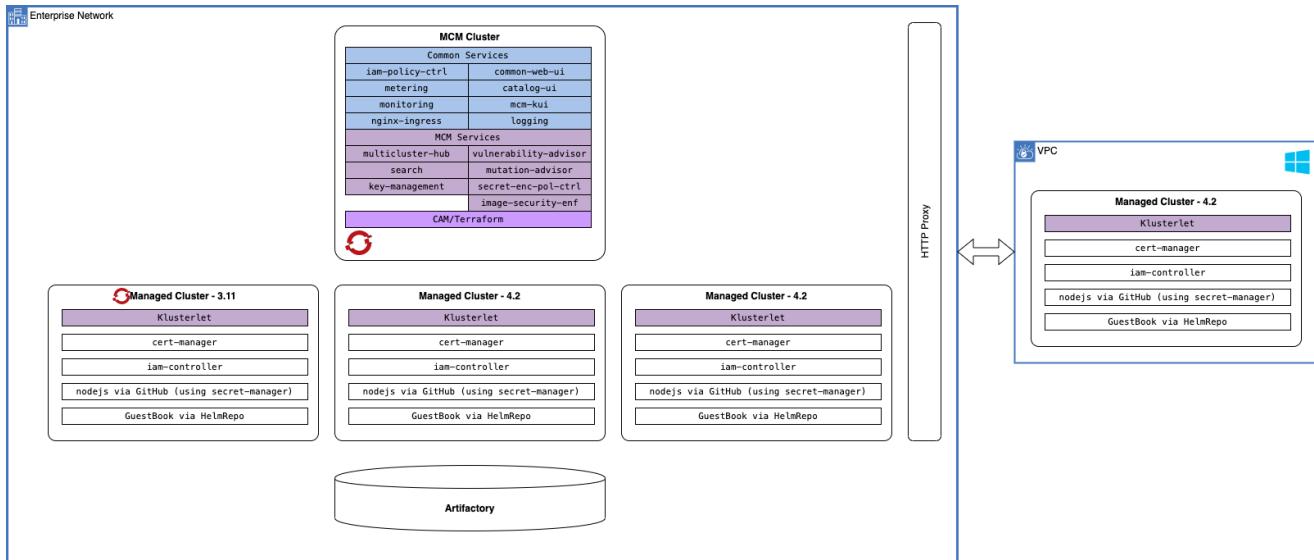
Activities:

- Deploy a new OCP cluster using the Automation module
- Deploy an application to a target cluster
- Using MCM placement rules modify the rules so that the application is moved to the new clusters.

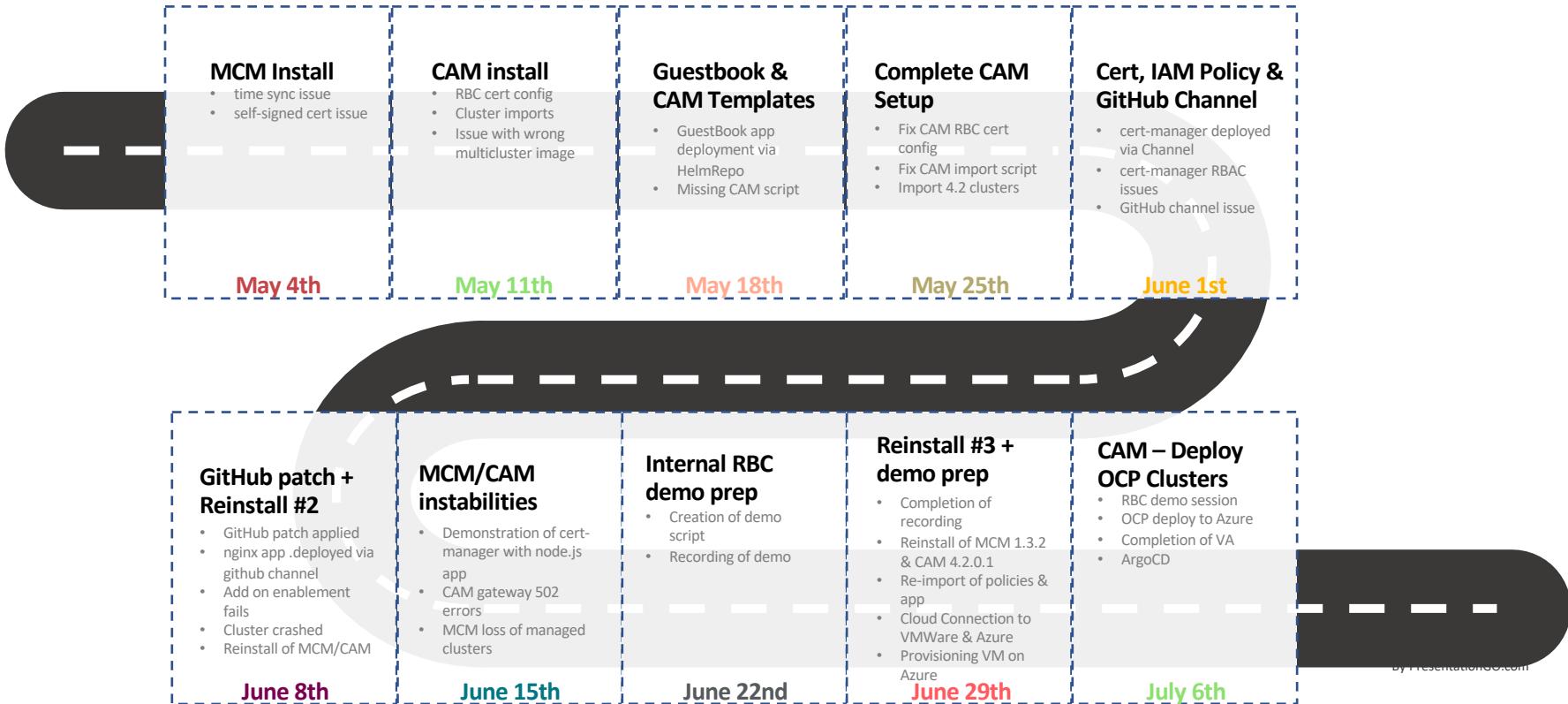
RBC Proof of Concept - Topology Overview

Capabilities demonstrated to RBC:

- Four managed clusters
 - OCP 3.11 – 1 cluster
 - OCP 4.2 – 2 clusters
 - OCP 4.3 on Azure
- Three application deployed via placement rules
 - Guestbook via Helm Repo
 - NGINX via GitHub
 - Node.js using cert-manager via GitHub
- Governance Policies
 - Certificate Policy
 - IAM Policy
 - Configuration Policy
 - Namespace Policy
- Vulnerability Advisors
- Automated deployment of OCP
 - Using Terraform Automation (In progress)



Project Timeline Overview



CSM IS POWER

- You have the power to lead your client's transformation.
- Grab the journey and lead them through it.
- Be adaptable to ways of working
- Make sure you have stakeholders for the journey you need to deploy.
 - You will need to engage Infra Teams, Security Teams, Go Live Teams if you want to get to production.
- Production can mean different things.

