

Golden Path to Production

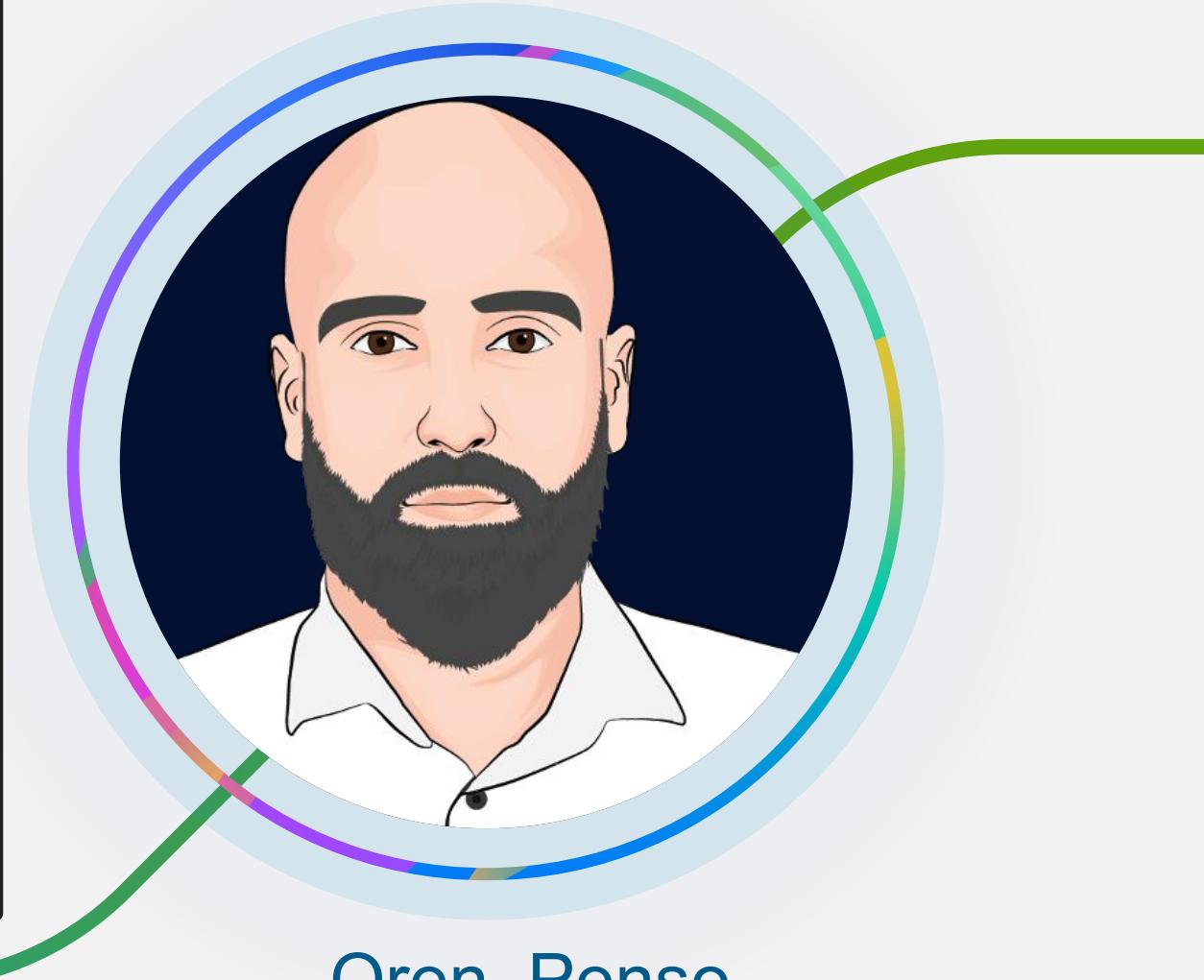
with Tanzu Platform

on Private Cloud

Oren Penso & Neven Cvetkovic



```
1  apiVersion: v1983
2  kind: Who~Am~I
3  metadata:
4    name: Oren Penso
5  current role:
6    name: FCTO
7    organisation: VMware Tanzu
8    region: Global
9  contact details:
10   email: oren.penso@broadcom.com
11   blog: penso.io
12   github: Opens0
13   twitter: Opens0
14 background:
15   it-experience: 20
16   education: MBA
17   previous roles: FCTO, FCISO, Product strategist, Head of IT and Security
18   hobbies: Information security, Gaming, Crossfit, Tennis, Volleyball
19 spec:
20   replicas: 1
21   template:
22     metadata:
23       labels:
24         presentation: Tanzu Past and Future
25         subject: Accelerate your path to production
```



Oren Penso
Tanzu CTO, Broadcom

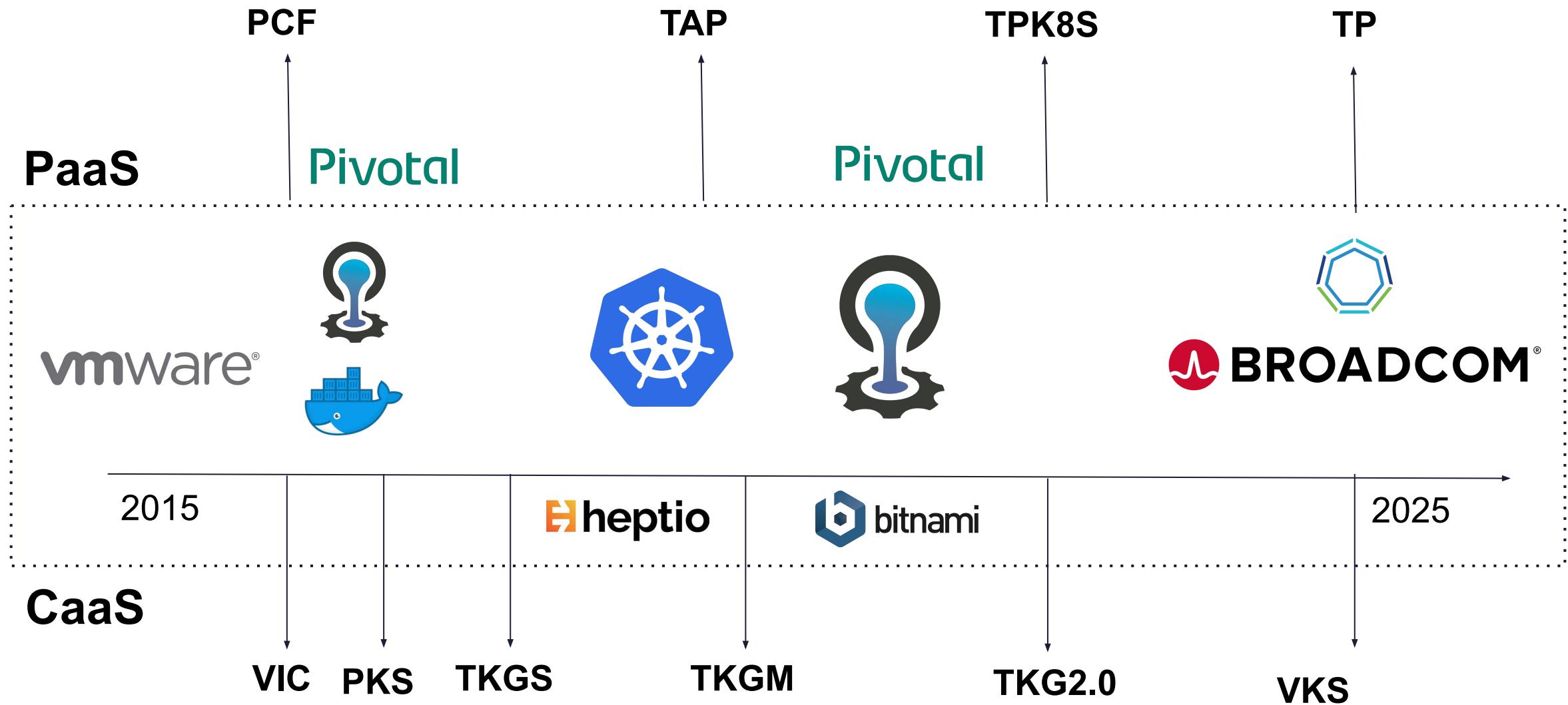
```
{
```

```
  "name": "Neven Cvetkovic",  
  "role": "Tanzu Solution Architect",  
  "company": "Broadcom, VMware Tanzu",  
  "email": "neven@broadcom.com",  
  "linkedin": "https://www.linkedin.com/in/neven",  
  "github": "https://github.com/nevenc"
```

```
}
```



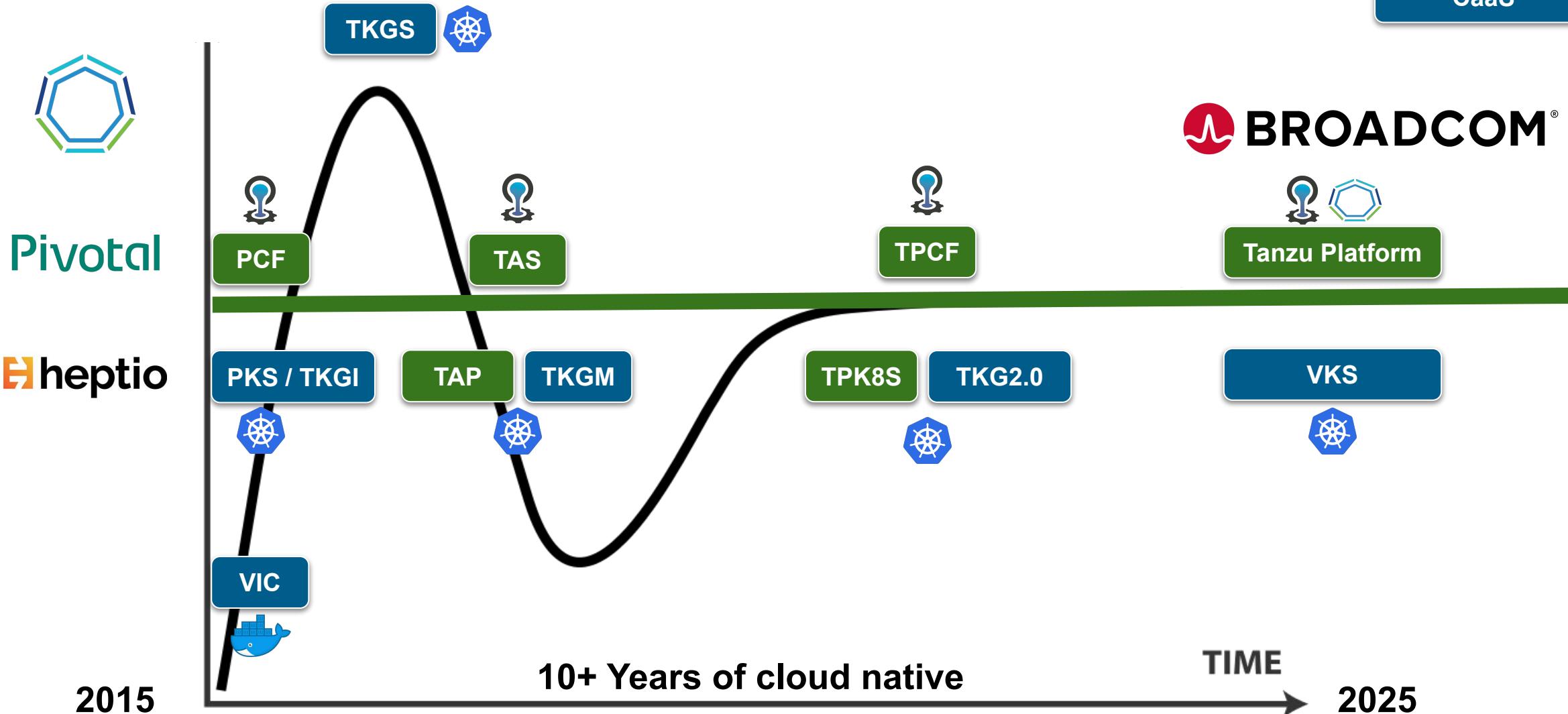
My personal journey (Technology stack)



My personal journey (Technology stack)

PaaS

CaaS



AI Overview

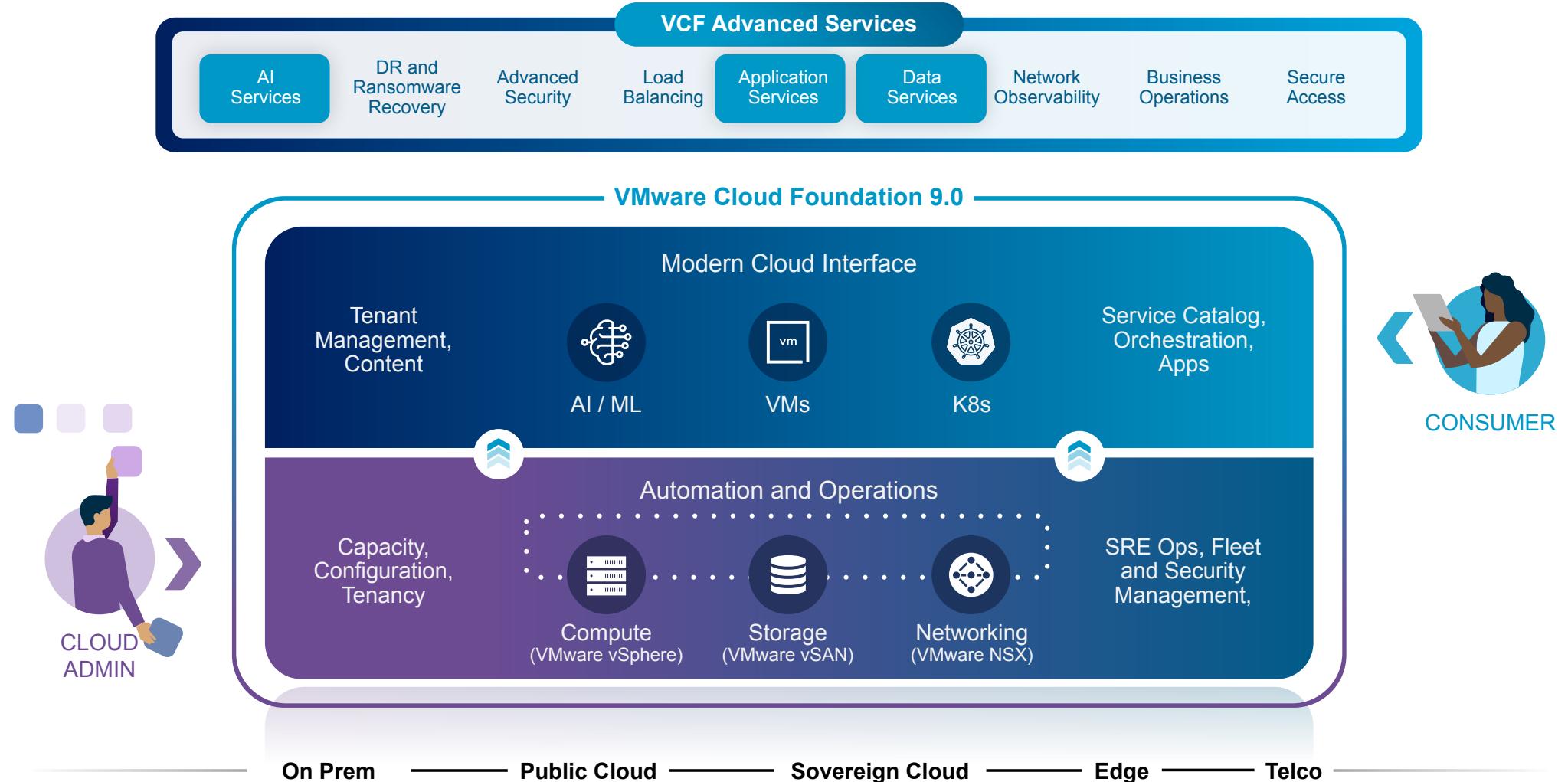
A "golden path" is an opinionated, supported, and templated way of building and deploying software within an organization, ensuring consistency and efficiency. It's a pre-defined set of tools, processes, and best practices for common tasks, allowing developers to build software more quickly by providing a self-service option that meets organizational standards. The term is also used in science fiction, most famously in Frank Herbert's *Dune* series to describe a long-term survival plan for humanity. [🔗](#)



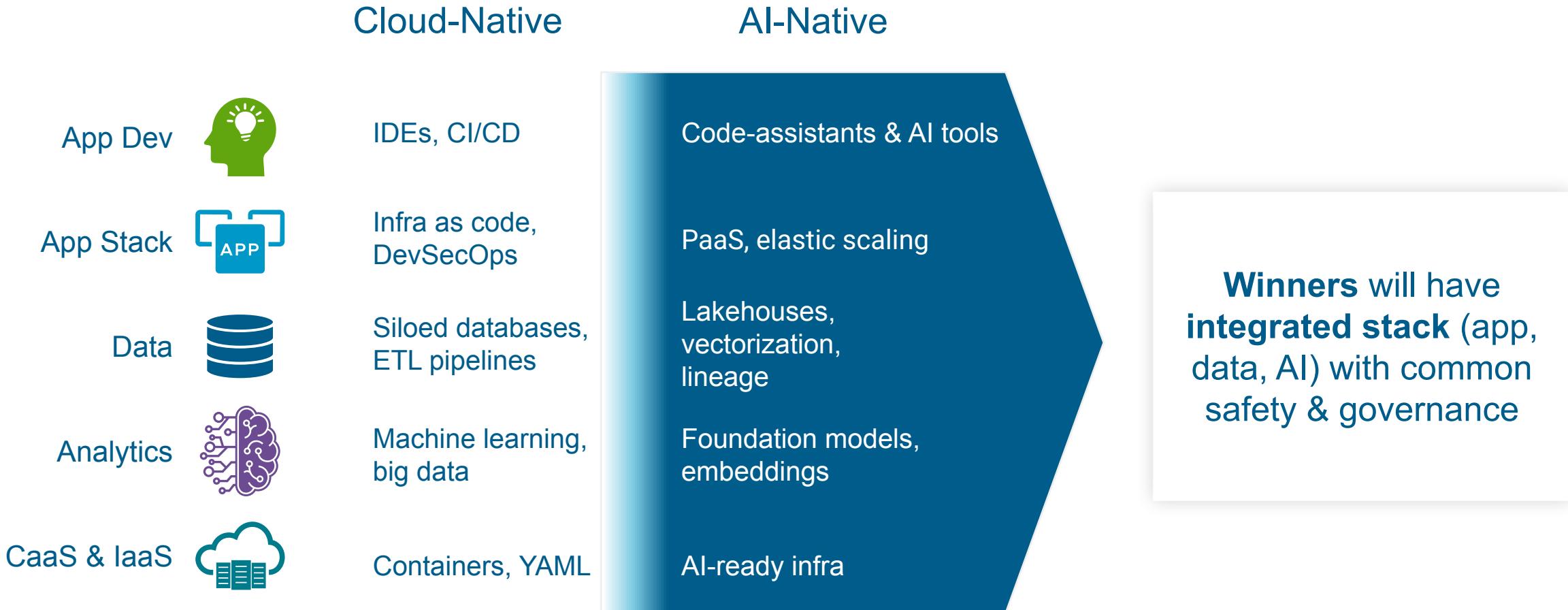
⋮



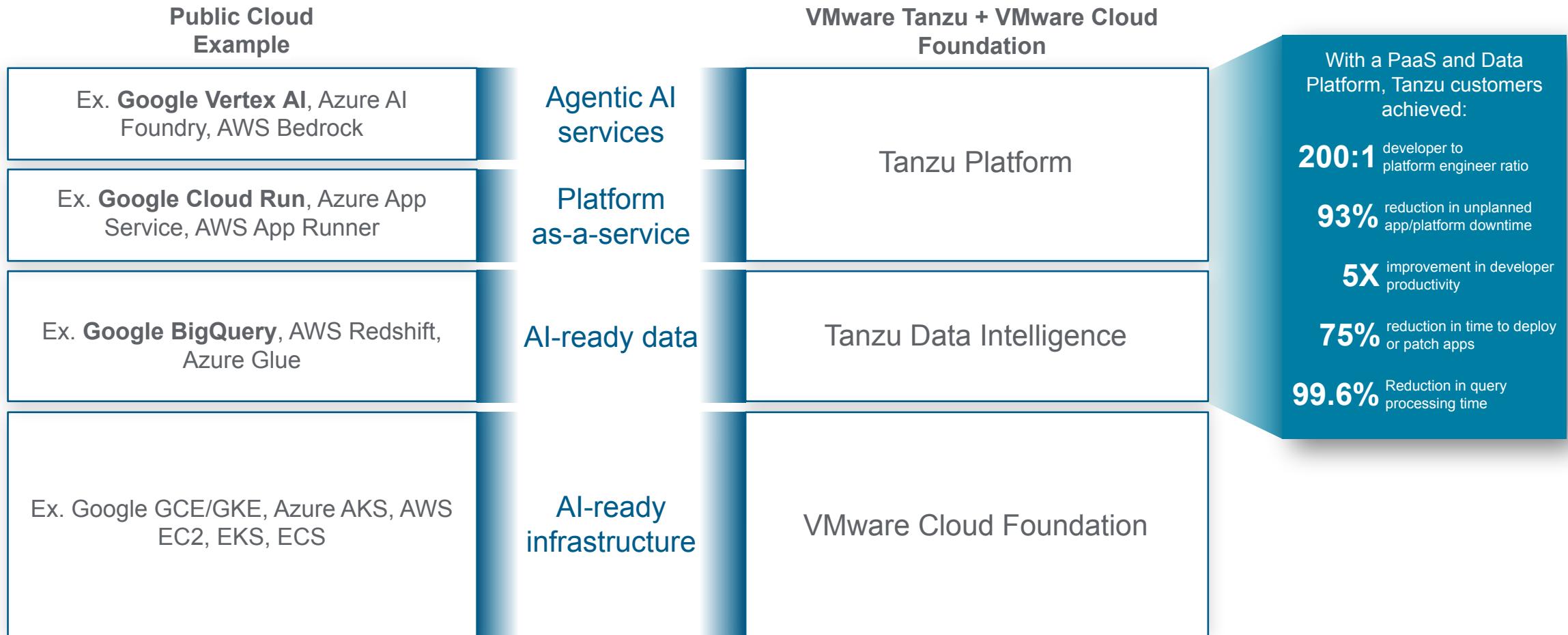
Tanzu: Delivering advanced application, AI, and data services on VCF



Application and data stacks are rapidly evolving to capitalize on AI



VMware Tanzu with VCF delivers the only private agentic AI stack





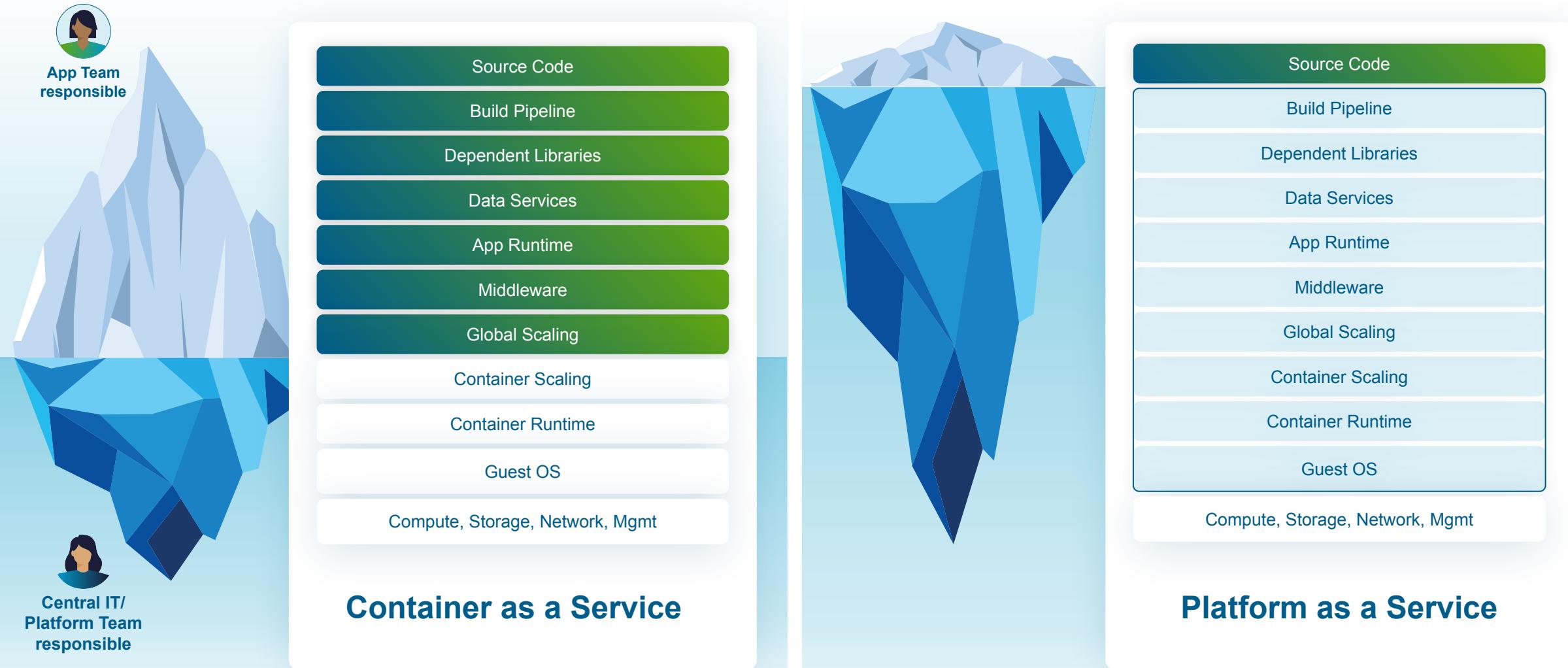
Different personas, different needs



App Team Wants

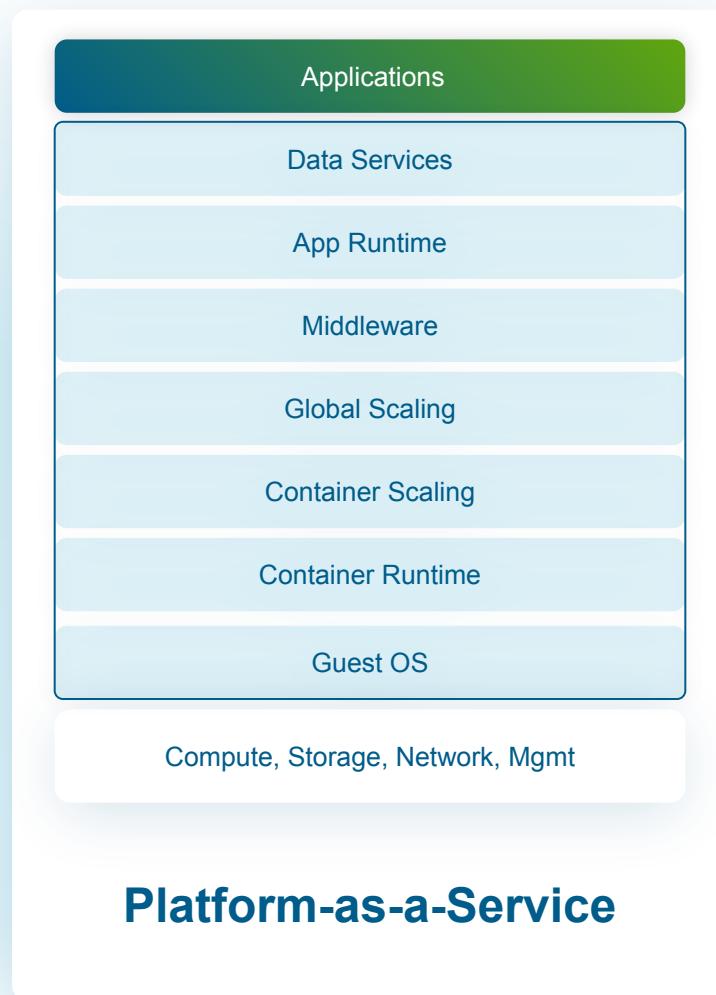
**Central IT/
Platform Team
delivers**

Opinionated PaaS enables faster iteration and greater efficiency



Tanzu == The App ecosystem

“Here is my code.
Run it for me.
I do not care how.”



With Platform-as-a-Service,
Tanzu customers achieved

200:1

developer to
platform engineer ratio

93%

reduction in unplanned
app/platform downtime

5X

improvement in
developer productivity

75%

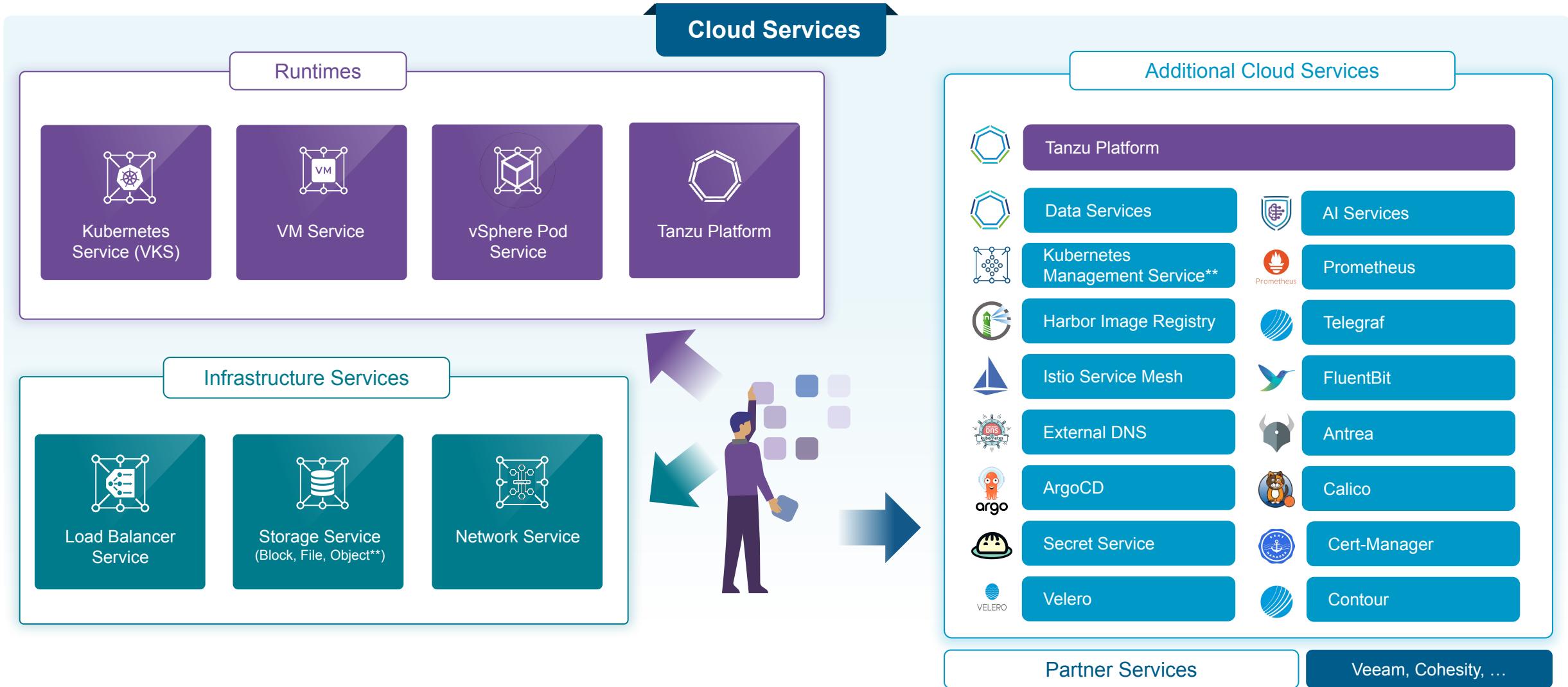
reduction in time to
deploy or patch apps



The BEST PaaS
on
The BEST private cloud

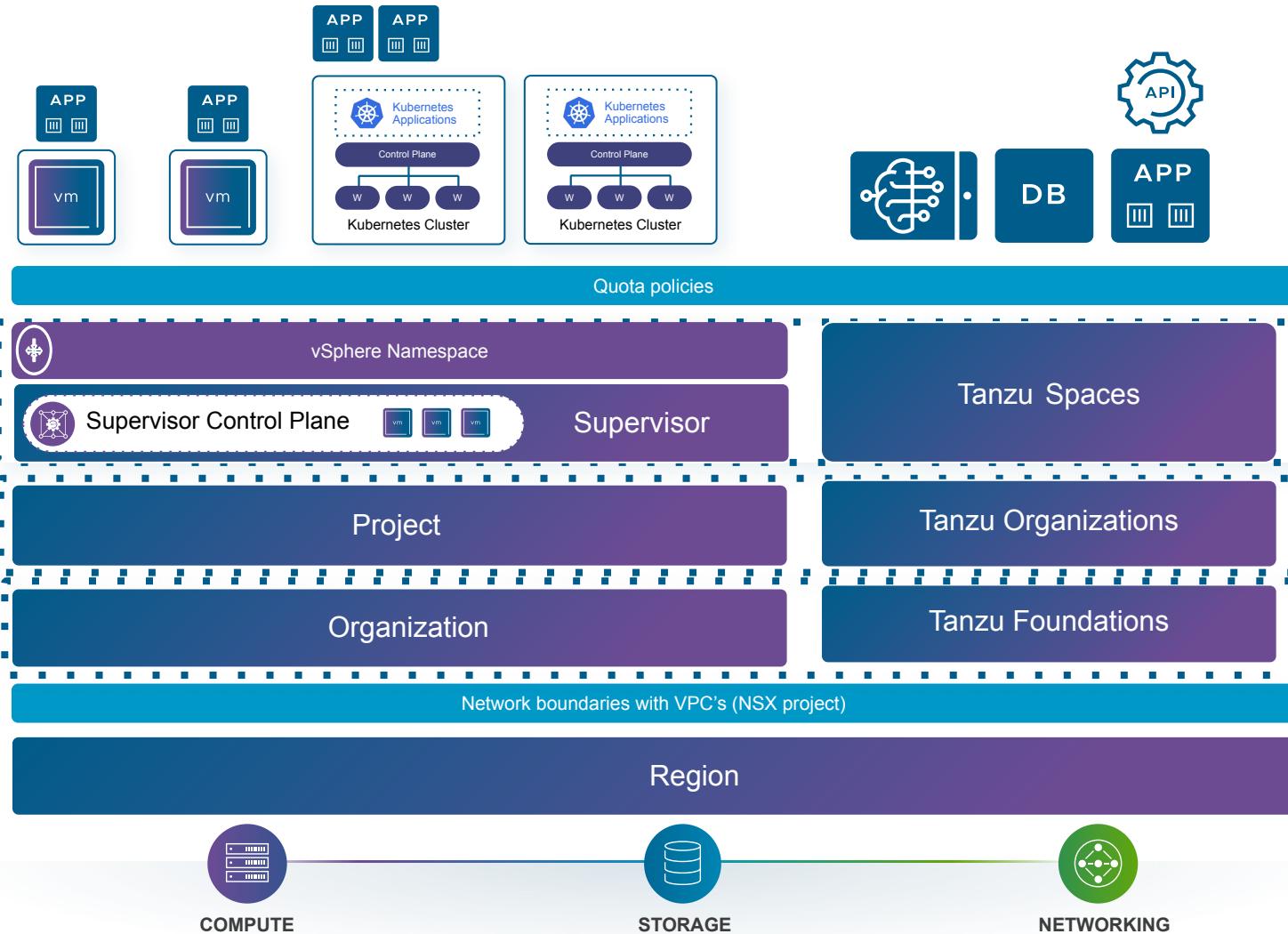
Private cloud services

Unified Runtimes, Infrastructure Services, and Advanced Capabilities via a Declarative API



Tanzu Platform on VCF 9.0

PaaS and CaaS options for your path to production



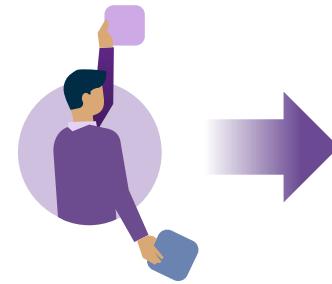
Choose how to go from code to prod:

- CaaS option with VKS clusters and Kubernetes driven CI/CD
- PaaS option for a pre engineered CI/CD platform experience
- Different path for different use case, land homegrown Java Spring applications on PaaS and COTS on CaaS with the same private cloud structures, boundaries and guardrails

VCFA CaaS consumption

CaaS options for path to production

CLOUD ADMIN



Management domain

VCF Automation

VCF Operations

Workload domain

VCF Automation



CONSUMER

ORG-01

Project-01

Project-02

Supervisor cluster

Services

Virtual Machine

Network

Virtual Machine Image

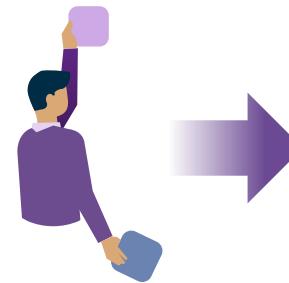
Kubernetes

Volume

VCFA PaaS consumption

PaaS options for path to production

CLOUD ADMIN



Management domain

Tanzu Platform HUB

Space group

Org group

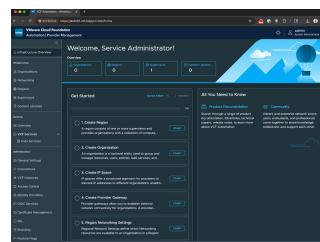
Workload domain

Tanzu HUB



CONSUMER

VCF Automation



Project-01

VPC

ORG-01

NS-UUID



NS-UUID



Tanzu Platform

VPC

Services



Applications



Supervisor cluster

Services

Virtual Machine

Network

Virtual Machine Image

Kubernetes

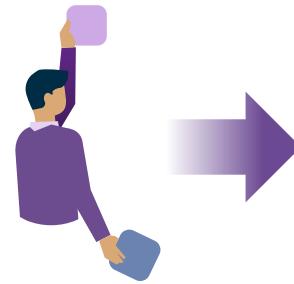
Volume

Tanzu Platform

VCFA PaaS consumption

PaaS options for path to production

CLOUD ADMIN



Management domain

Tanzu Platform HUB

Space group

Org group

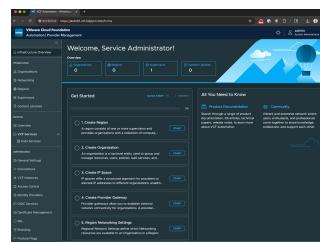
Workload domain

Tanzu HUB



CONSUMER

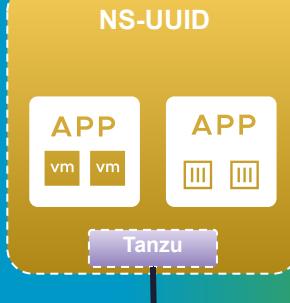
VCF Automation



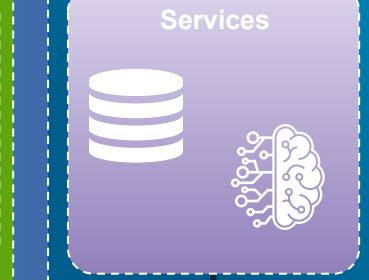
ORG-01

Project-01

VPC



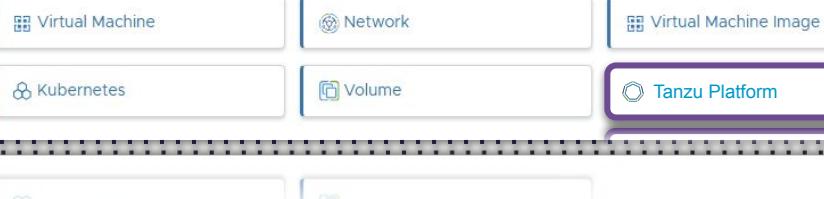
Tanzu Platform



Marketplace

Supervisor cluster

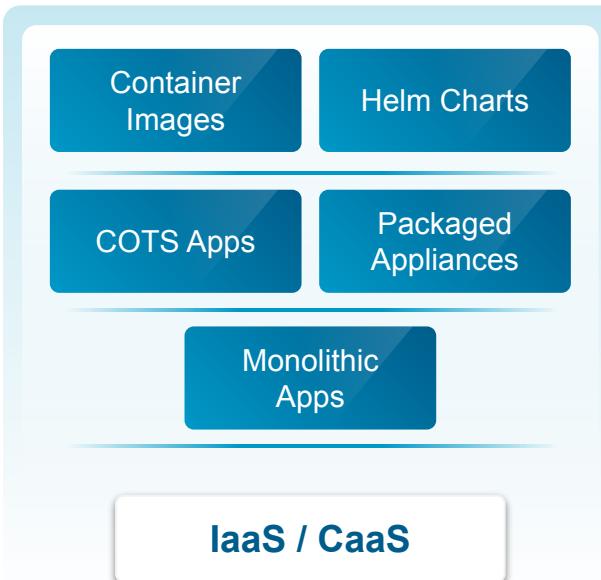
Services



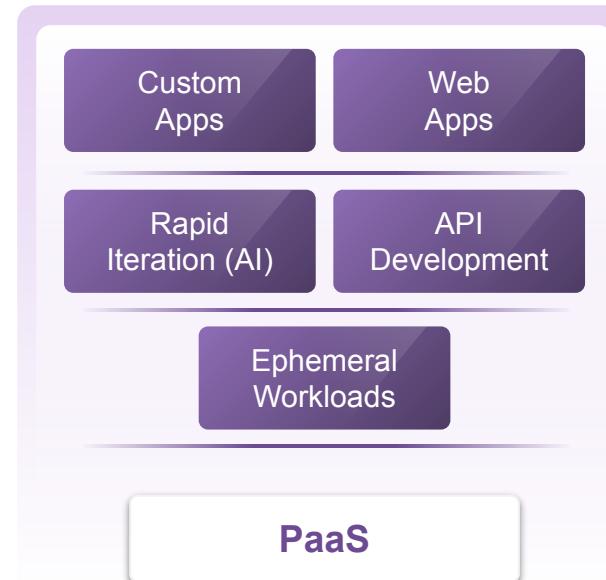
Value to the business starts with the workload

Map the workload type to the appropriate delivery model

“We need full control
and maximum
flexibility.”



“Here is my code.
Run it for me.
I do not care how.”



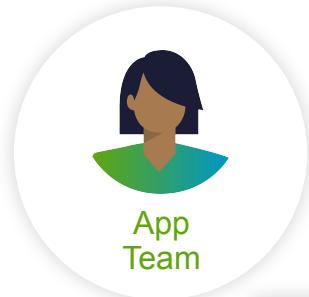
VMware Cloud Foundation 9.0



Tanzu mission:
Accelerate
ideas to code,
code to production

Application velocity = Business velocity

Tanzu Platform delivers modern and AI apps with a trusted, end-to-end Cloud Foundry based PaaS



Modern applications GenAI applications Agentic workflows



VMware Tanzu Platform



Build Services



Spring Services



Data Services



AI Services



Marketplace Services



Elastic App Runtime Service



VMware Cloud Foundation

Public Cloud

Data intelligence unlocks deeper insights and innovation



Structured

Unstructured

Real-time

Batch



VMware Tanzu Data



Data Workflow Services



Data Lake Services



Data compute Service



Analytics and AI/ML Services



High-speed Caching Service



Massively parallel data engine



VMware Cloud Foundation

Public Cloud

Bare Metal

Achieving ROI from Agentic AI requires solving for non-determinism

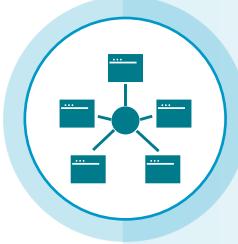
Agentic AI thrives with clear guardrails and enterprise integration



Constrain the problem: Leverage AI in bite-sized chunks



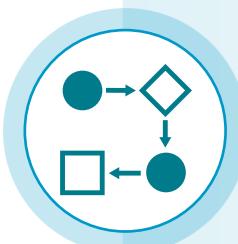
Solve to handle many composable agents with defined tasks that can be run on demand



Constrain the context: Less is more when trying to get high-quality results from a model



Curate and govern models, MCP servers, and tuned data products that may be leveraged by agentic planners



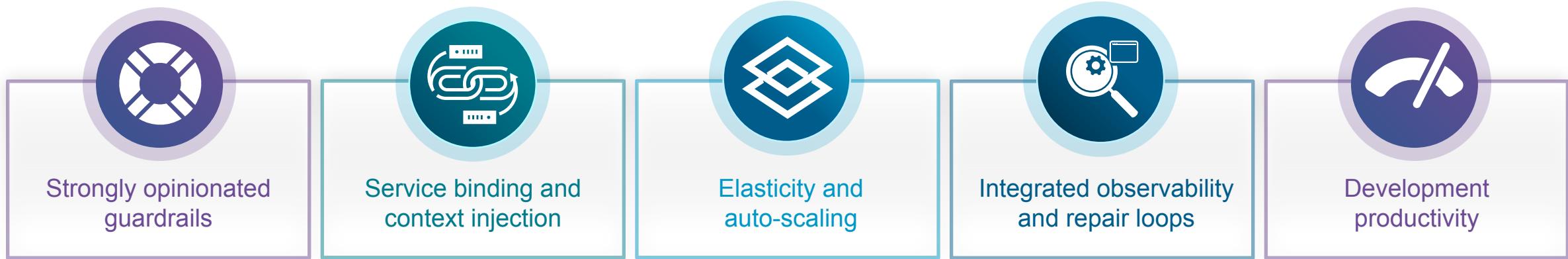
Meet your teams and enterprise systems where they are: AI is an integration problem



Modernize your existing apps, empower humans to remain in the loop, and enable repair loops to improve accuracy

PaaS: Simplifying AI adoption for teams, ensuring safety for agents

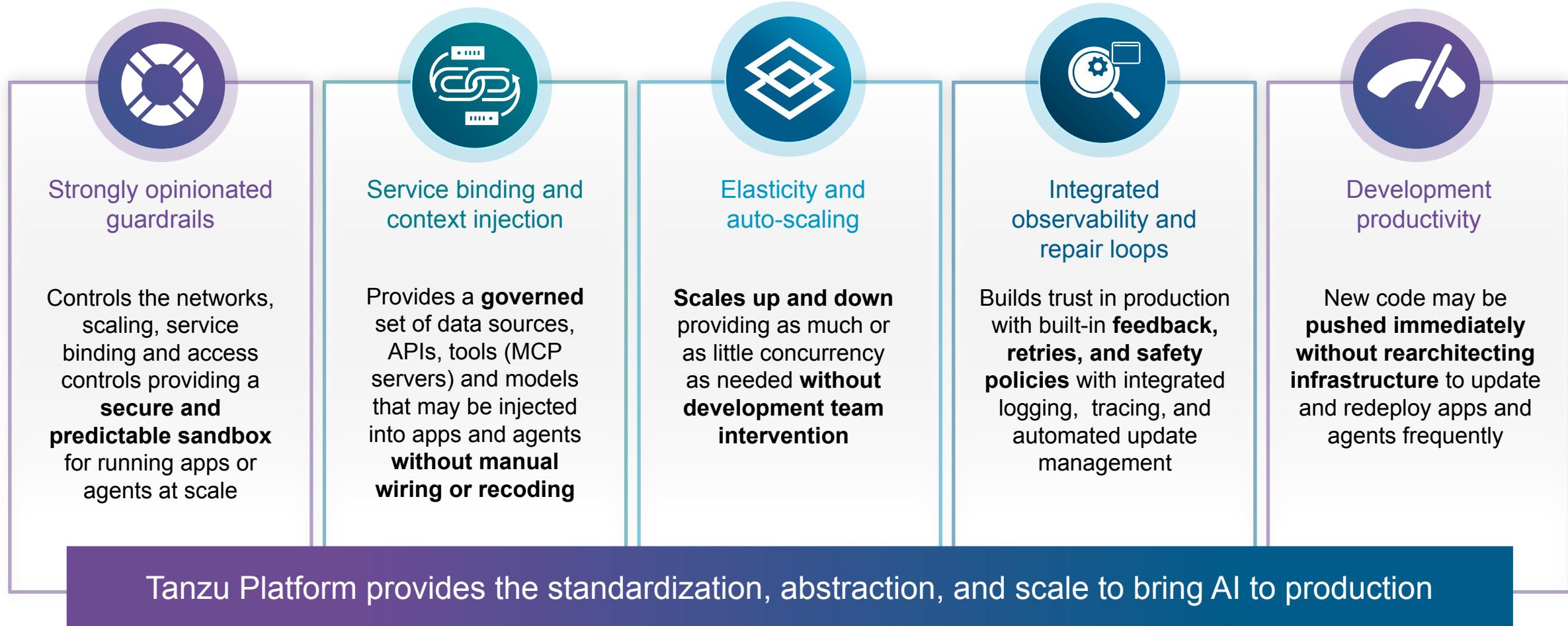
Tanzu Platform is the private PaaS for agentic AI



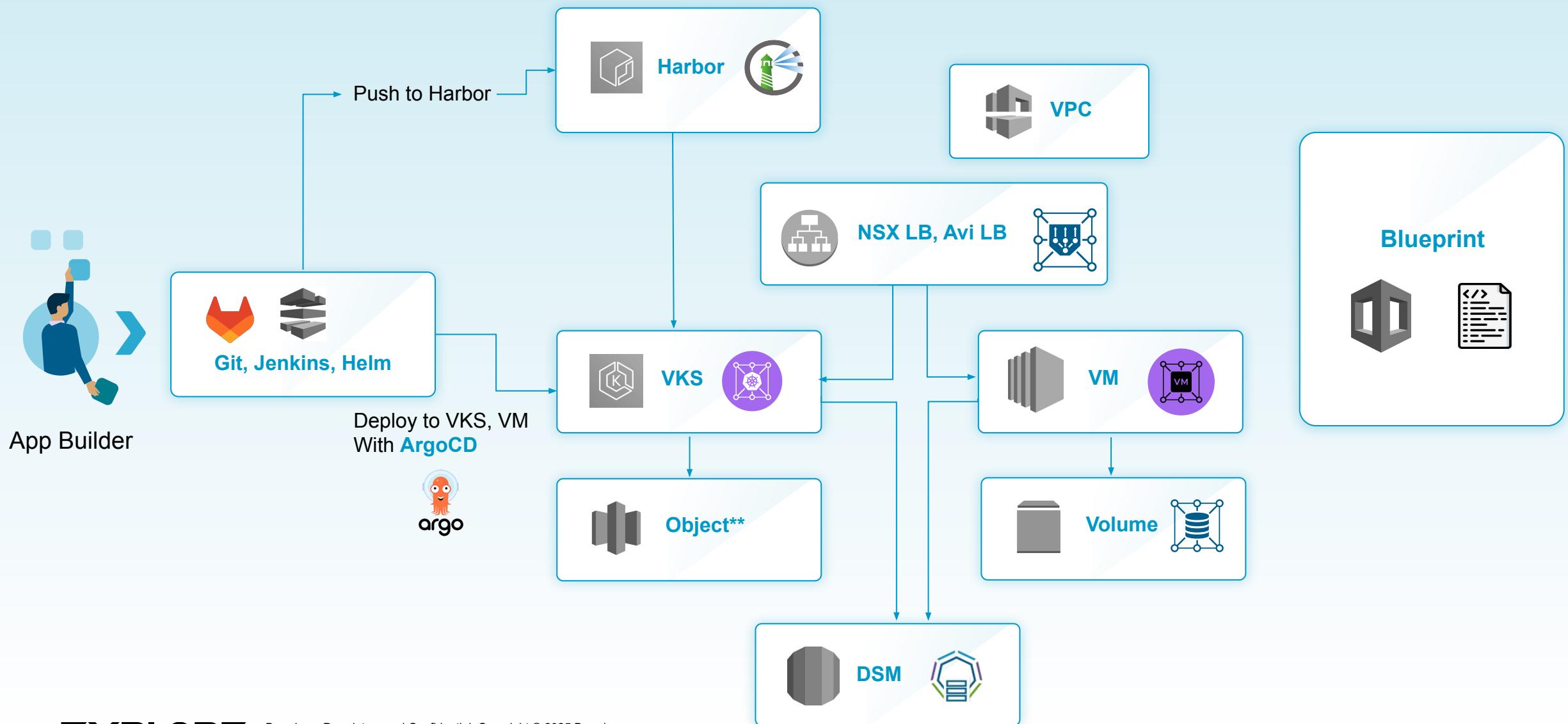
Tanzu Platform provides the standardization, abstraction, and scale to bring AI to production

PaaS: Simplifying AI adoption for teams, ensuring safety for agents

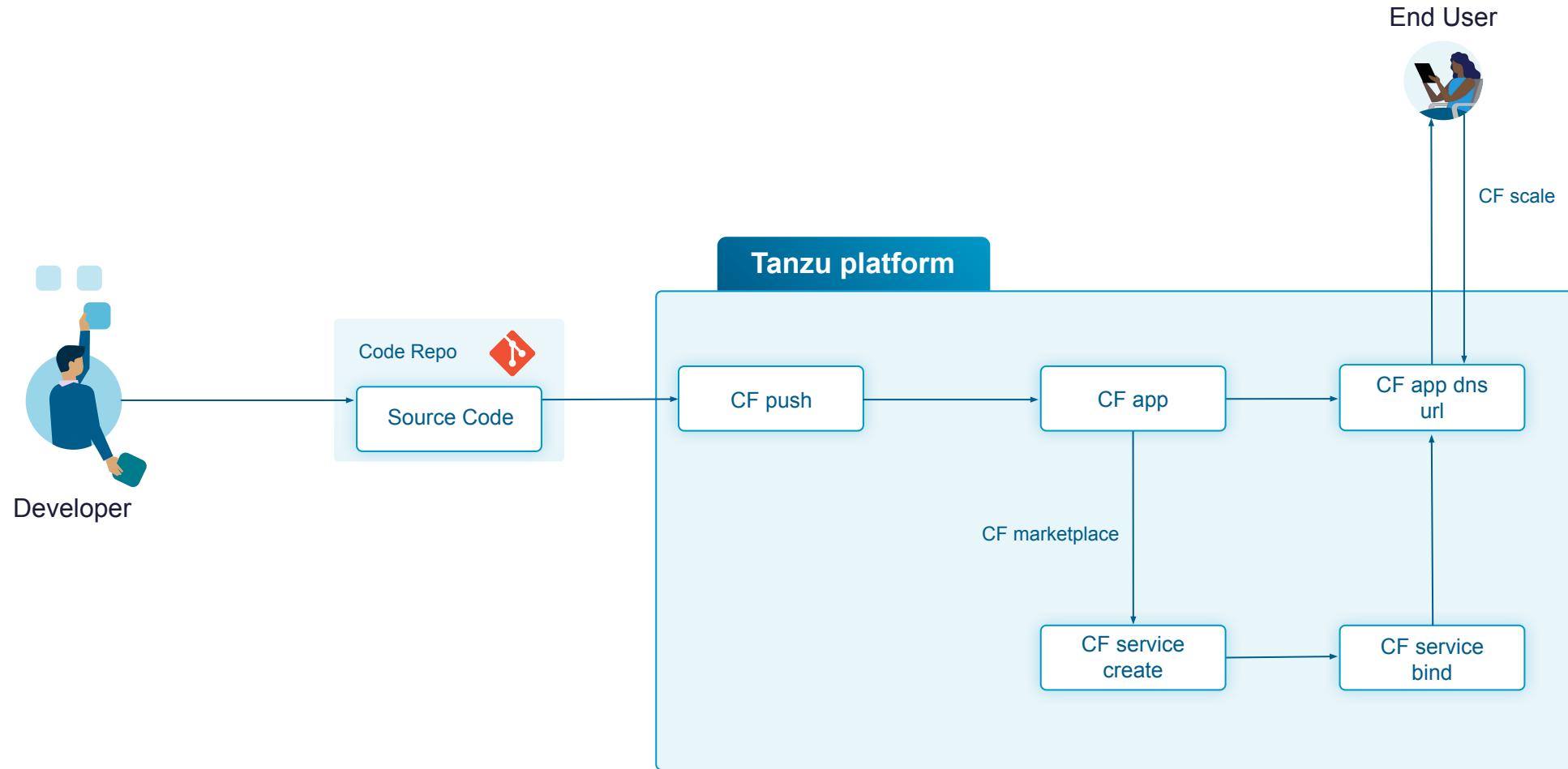
Tanzu Platform is the private PaaS for agentic AI



CaaS path to production



PaaS path to production

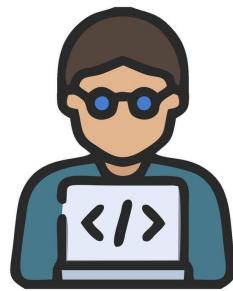




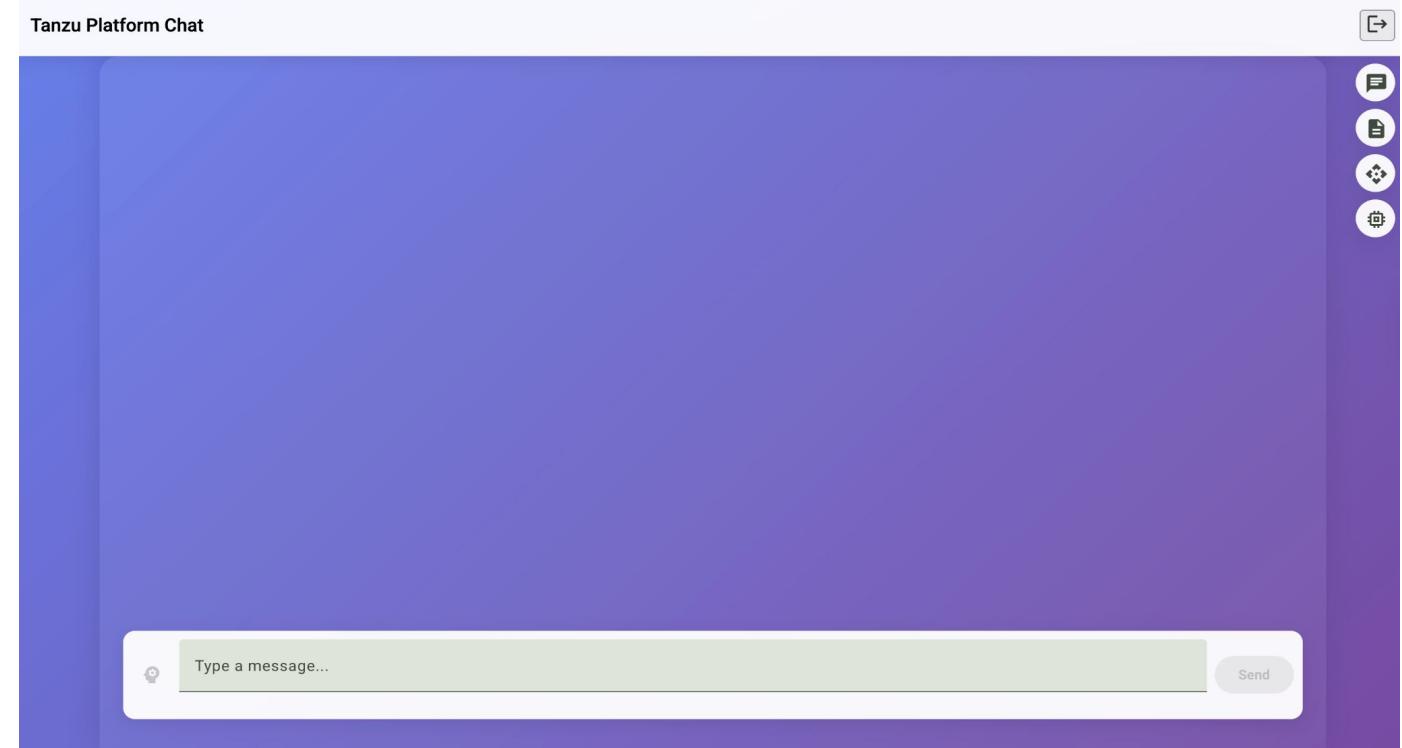
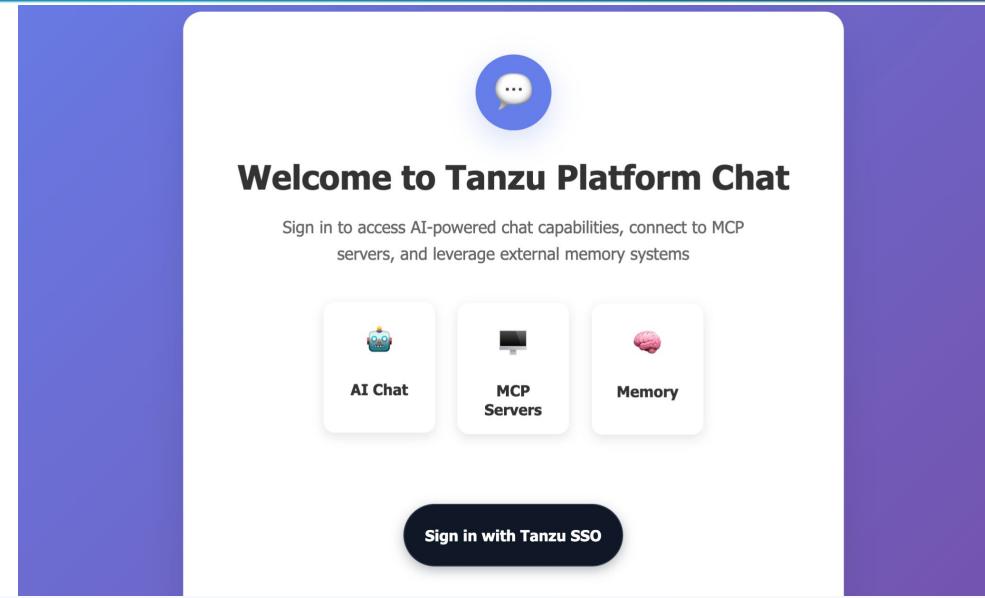
Idea to Code to Prod

Application velocity = Business velocity

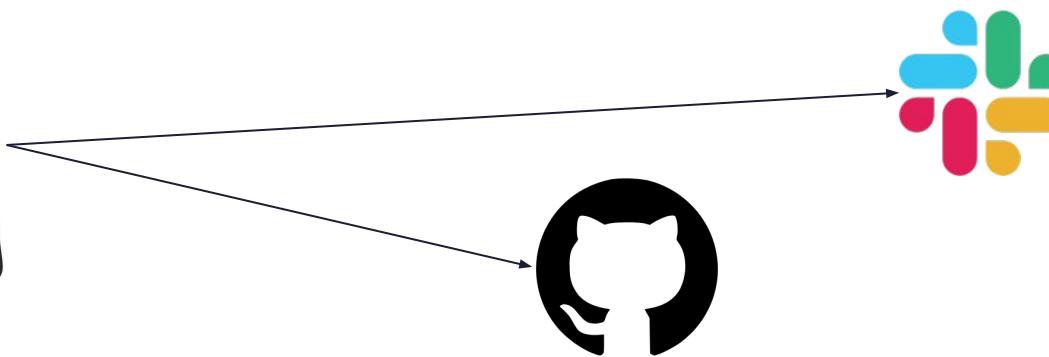
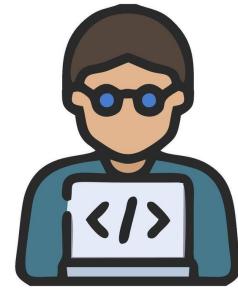
I really like my new AI chat app it is great!



I can chat with LLMs I can add my own data with RAG and I can connect some MCP servers, great!



I have a new Issue in my github repo, i
need to check it out



Oren Penso 08:10 Today

Issue #4 Update - Motivation Button Feature

Issue Details:

- Title: Add a motivation button
- Status: Open (reopened)
- Created: October 8, 2025
- Last Updated: October 8, 2025
- URL: <https://github.com/0pens0/cf-mcp-client-sso/issues/4>

Description:

Add a simple pill-like motivation button to the top-level mat-toolbar. When clicked, this button should randomly display one of five predefined motivational messages for five seconds and use the AI model for a random message every five ones.

Requirements:

- ✓ Pill-like button in mat-toolbar
- ✓ Random display of 5 predefined motivational messages
- ✓ 5-second display duration
- ✓ AI model integration for random messages every 5 clicks

Next Steps:

This feature needs implementation in the Angular frontend with AI service integration. Should I start working on this feature?

Add a motivation button #4

Open



0pens0 opened 17 hours ago

Owner ...

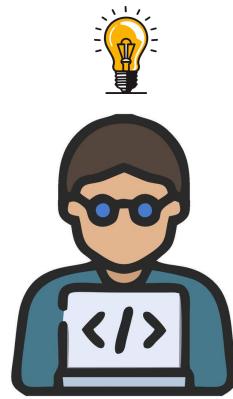
I have a new idea!

Add a simple pill-like motivation button to the top-level mat-toolbar. When clicked, this button should randomly display one of five predefined motivational messages for five seconds and use the AI model for a random message every five ones.

It's a new **idea** for a motivation button!
sounds great I need to try it out

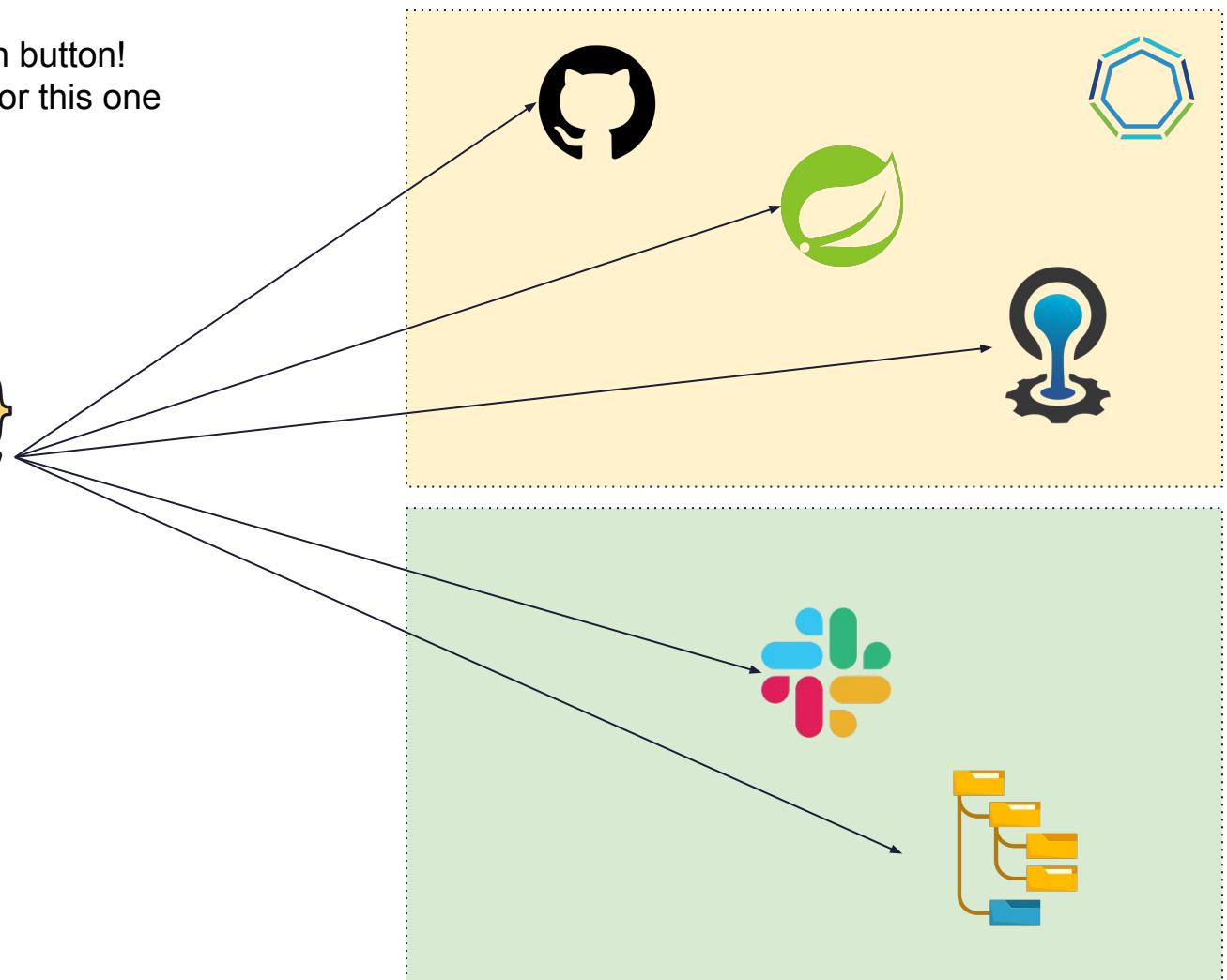
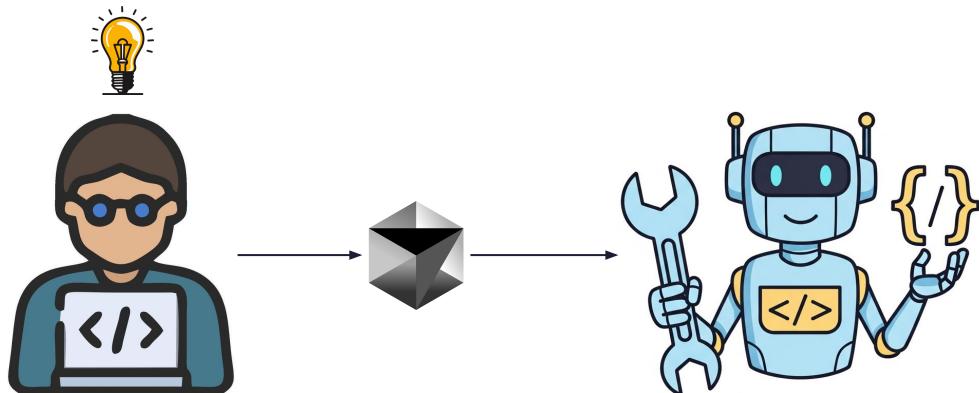
ToDo list

- Know how to do that...
- Fork the code
- Create a new branch
- Change the code
- Compile
- Create a sandbox
- Get access to services to support the SSO and LLM
- Deploy the application
- Create release notes
- Send the details to the team over slack

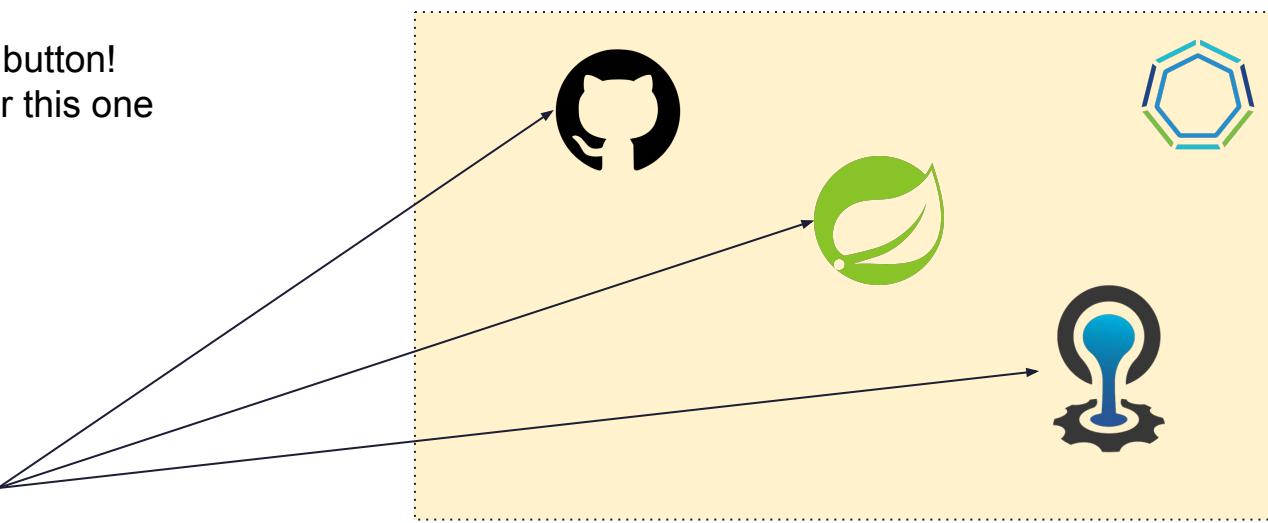
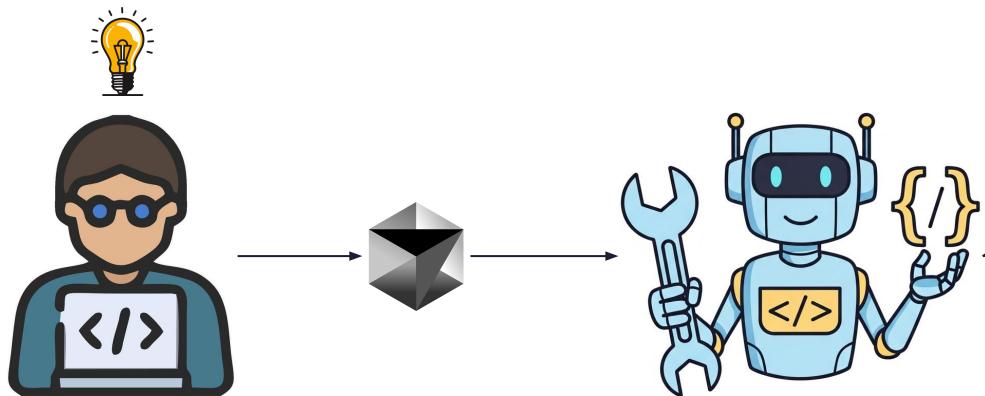


Check it out!

OR I can use my AI agent to Help me add a motivation button!
I will need to use **secured** and **managed** MCP servers for this one

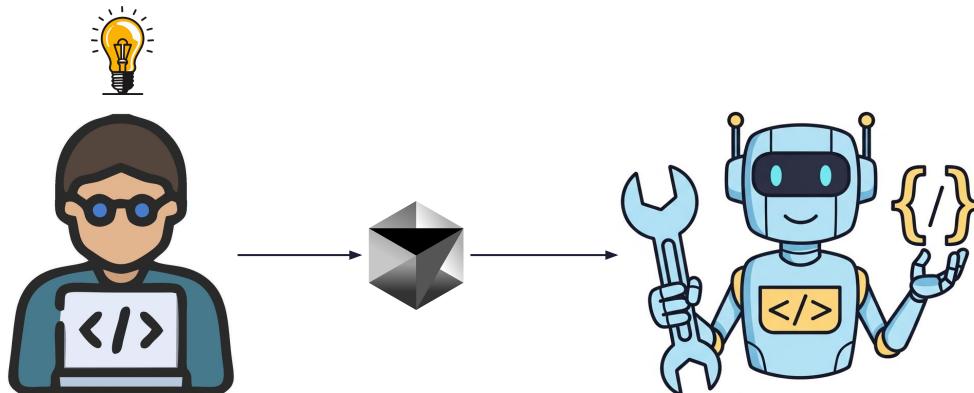


OR I can use my AI agent to Help me add a motivation button!
I will need to use **secured** and **managed** MCP servers for this one



```
"cloud-foundry": {
  "disabled": false,
  "timeout": 60,
  "type": "streamable",
  "url": "https://cloud-foundry-mcp-server.apps.tp.penso.io/mcp",
  "headers": {
    "Accept": "text/event-stream, application/json"
  },
  "autoApprove": []
},
```

Hi Cursor, go check that issue in the repo



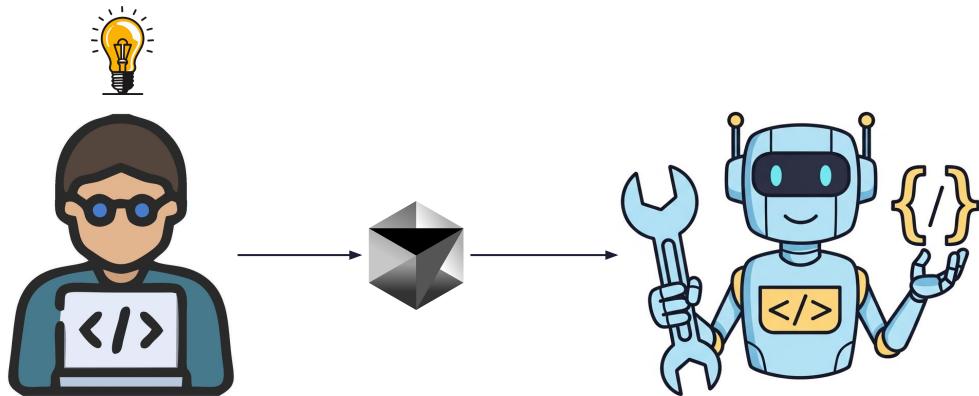
Issue #4 Summary:

- **Title:** Add a motivation button
- **Status:** Open (reopened)
- **Description:** Add a pill-like motivation button to the mat-toolbar that shows random motivational messages
- **Requirements:**
 - Pill-like button in the top-level mat-toolbar
 - Random display of 5 predefined motivational messages
 - 5-second display duration
 - AI model integration for random messages every 5 clicks

The message includes the GitHub URL and asks if you want me to start implementing it.



Hi Cursor, create a checklist for the implementation and testing of the new feature

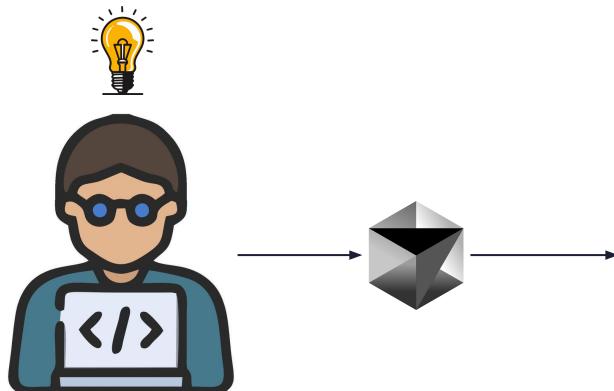


Creating a checklist for implementing and testing the motivation button.

:= To-dos 20

- Create feature branch for motivation button implementation
- Add motivation button component to Angular frontend
- Implement pill-like styling for the button
- Create predefined motivational messages array (5 messages)
- Implement random message selection logic
- Add 5-second display timer functionality
- Integrate AI service for random messages every 5 clicks
- Add button to mat-toolbar in main layout
- Create Cloud Foundry sandbox space for testing
- Deploy application to sandbox environment
- Bind SSO and AI services to sandbox
- Test predefined messages display and timing
- Test AI-generated messages after 5 clicks
- Verify button styling and responsiveness
- Test error handling for AI service failures

Hi Cursor, Let's do it!



src > main > java > org > tanzu > mcpclient > motivation > **J MotivationController.java** U **J MotivationController.java** U Language Support for Java(TM) by Red Hat >

```
1 package org.tanzu.mcpclient.motivation;
2
3 import org.slf4j.Logger;
4 import org.slf4j.LoggerFactory;
5 import org.springframework.http.ResponseEntity;
6 import org.springframework.web.bind.annotation.*;
7
8 /**
9  * REST controller for motivation-related operations.
10 * Provides endpoints for generating AI-powered motivational messages.
11 */
12 @RestController
13 @RequestMapping("/api/motivation")
14 public class MotivationController {
15
16     private static final Logger logger = LoggerFactory.getLogger(clazz:MotivationController.class);
17
18     private final MotivationService motivationService;
19
20     public MotivationController(MotivationService motivationService) {
21         this.motivationService = motivationService;
22     }
23
24     /**
25      * Generate an AI-powered motivational message.
26      *
27      * @return A motivational message generated by AI
28      */
29     @PostMapping("/generate")
30     public ResponseEntity<String> generate() {
31         logger.info(msg: Generating AI-powered motivational message);
32     }
33 }
```

Problems 20 Output Debug Console Terminal Ports GitLens Azure Tanzu Activity zsh + < > ^ x

Apple > ~ /gi/cf-mcp-client-sso > git feature/motivation-button ?1 08:23:43

Check issue 4 and send details

lets do it!

Searched motivation API endpoint backend controller (src/main/java)

7 of 20 Done View all

- >Create feature branch for motivation button implementation
- Add motivation button component to Angular frontend
- Implement pill-like styling for the button
- Create predefined motivational messages array (5-messages)
- Implement random message selection logic
- Add 5-second-display timer functionality
- Integrate AI service for random messages every 5 clicks
- Add button to mat-toolbar in main-layout

Motivation button is implemented and integrated into the mat-toolbar. The frontend calls /api/motivation/generate, but no backend endpoint exists. Creating the backend API endpoint.

Searched Spring AI chat service AI model integration (src/main/java)

Creating the motivation controller and service for AI-generated messages.

J MotivationController.java (new) +49 • J MotivationService.java (new) +83 •

Updating SecurityConfig to allow /api/motivation/**.

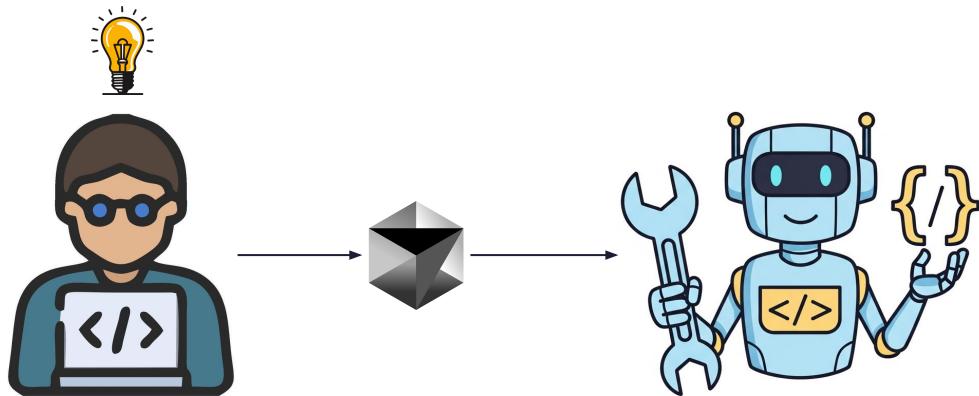
Read SecurityConfig.java

SecurityConfig already allows /api/**, so /api/motivation/** is covered. Checking lints and building the project.

Found 5 errors in motivation

8 of 20 To-dos 2 Files Stop

Hi Cursor, Let's test it!



✓ Ran createSpace
spaceName motivation-button-sandbox

Targeting the new space and deploying the app.

✓ Ran targetCf
2 PARAMETERS

✓ Ran serviceOfferingsList

Checking available organizations.

✓ Ran organizationsList

Targeting the tanzu-platform-demo organization and creating the space.

✓ Ran targetCf
2 PARAMETERS

✓ Ran createSpace
2 PARAMETERS

Space already exists. Creating the SSO and GenAI services.

✓ Ran createServiceInstance
3 PARAMETERS

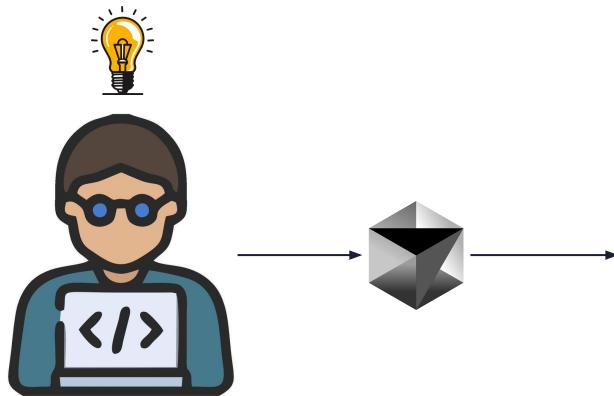
✓ Ran createServiceInstance

> 12 of 20 To-dos

> 3 Files

Undo All ⌘⌘⌫ Keep All ⌘⌫

Hi Cursor, Slack it!



Oren Penso 08:30

🎉 Motivation Button Feature - Successfully Deployed!

✓ Implementation Complete:

- Feature branch: feature/motivation-button
- Pill-like motivation button added to mat-toolbar
- 5 predefined motivational messages with random selection
- 5-second display timer functionality
- AI service integration for random messages every 5 clicks
- Backend API endpoint: /api/motivation/generate

🚀 Sandbox Environment:

- App URL: <https://cf-mcp-client-sso-quick-jaguar-lf.apps.tp.penso.io>
- Space: motivation-button-sandbox
- Services: SSO + GenAI bound and running
- Status: ✓ RUNNING (1/1 instances)

📝 Ready for Testing:

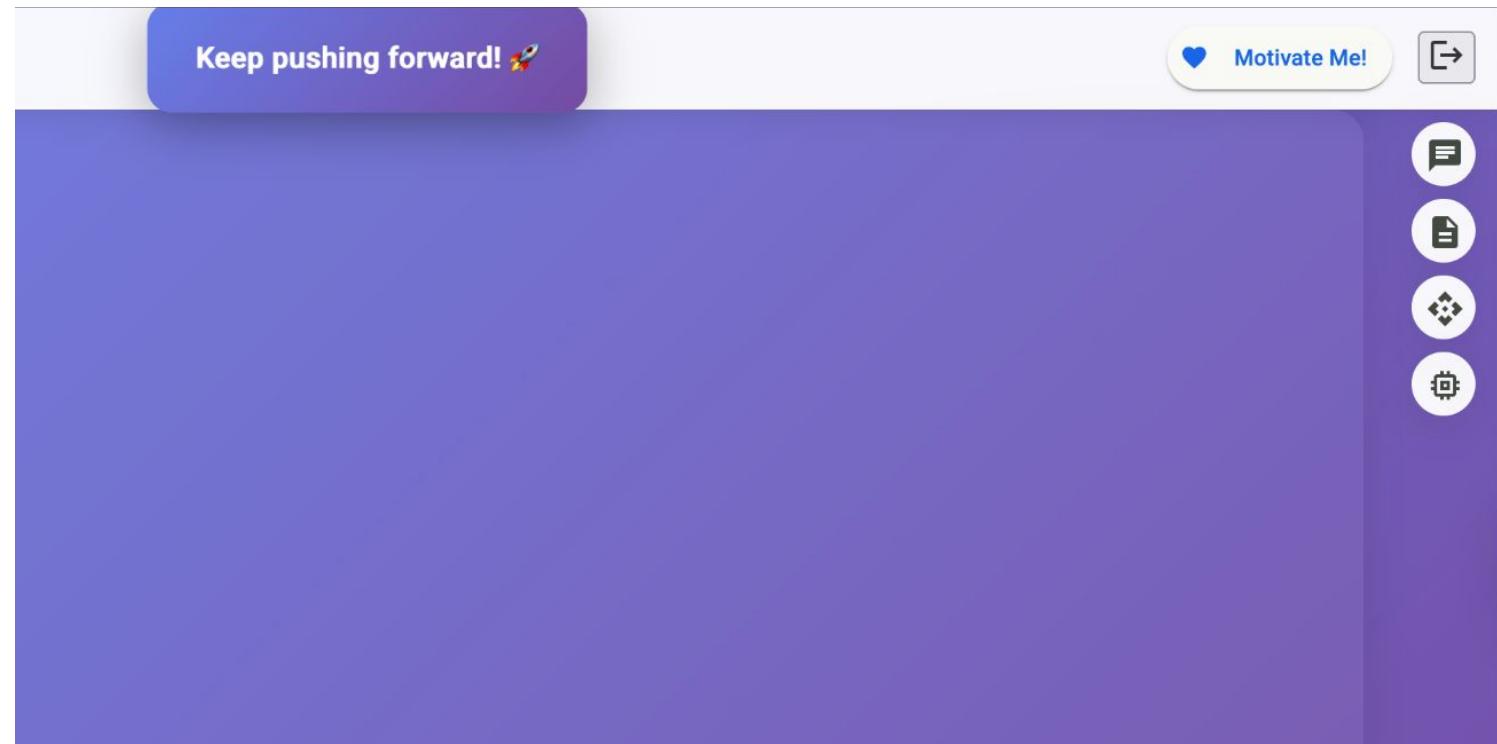
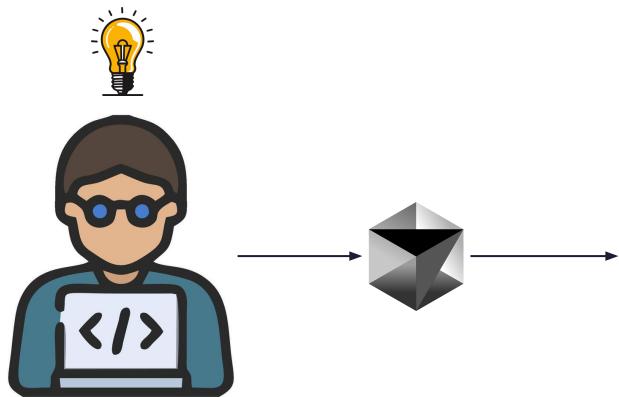
1. **Predefined Messages:** Click button to see 5 predefined messages
2. **AI Messages:** Every 5th click generates AI-powered message
3. **Timer:** Messages display for exactly 5 seconds
4. **Styling:** Pill-like button with hover effects and animations

📋 Next Steps:

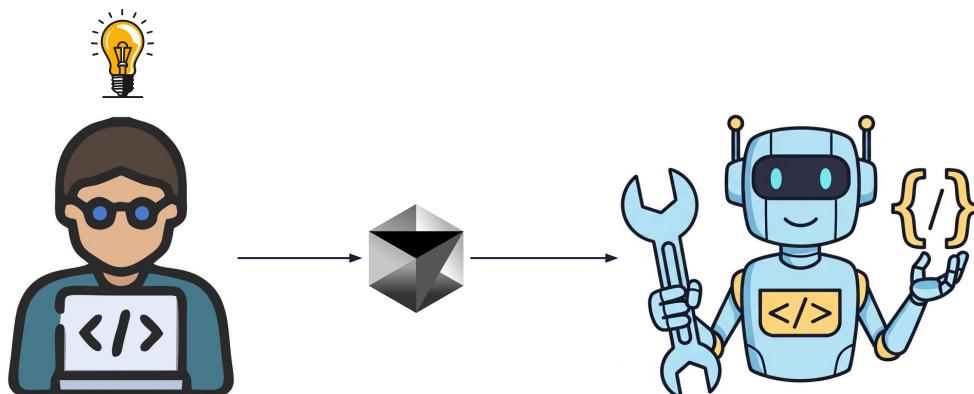
- Test predefined messages display and timing
- Test AI-generated messages after 5 clicks
- Verify button styling and responsiveness
- Test error handling for AI service failures

The motivation button is now live and ready for testing! 🎉

Hi Cursor, Great! it works!



Hi Cursor, rollback and delete all changes, it was a great test

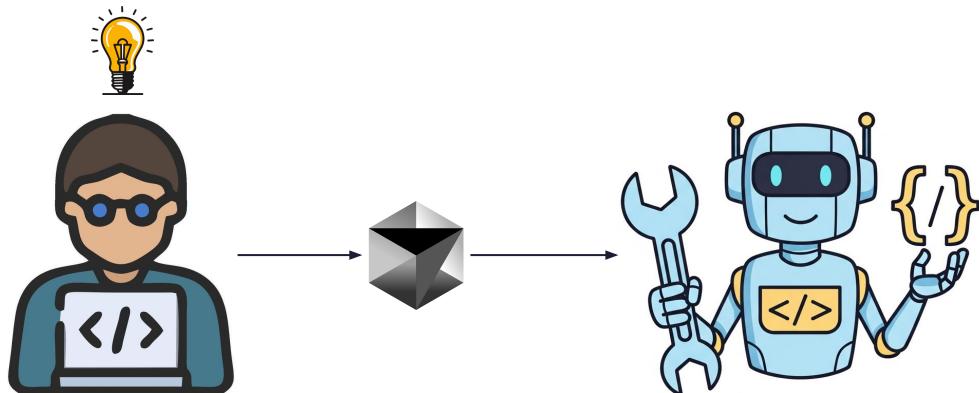


Rolling back the motivation button changes: deleting the feature branch, removing the backend code, and cleaning up the Cloud Foundry sandbox.

:= To-dos 8

- Switch back to main branch
- Delete feature/motivation-button branch
- Delete motivation backend files
- Delete motivation frontend component
- Remove motivation button from app.component.html
- Delete Cloud Foundry sandbox space
- Delete manifest-sandbox.yml
- Clean up target directory

Hi Cursor, rollback and delete all changes, it was a great test



Completed rollback tasks

1. Switched to main branch
2. Deleted `feature/motivation-button` branch
3. Removed backend motivation files (`src/main/java/org/tanzu/mc/pclient/motivation/`)
4. Removed frontend motivation component (`src/main/frontend/src/app/motivation-button/`)
5. Verified `app.component.html` is clean (no motivation button)
6. Deleted Cloud Foundry sandbox space (`motivation-button-sandbox`)
7. Deleted service instances (SSO and GenAI)
8. Deleted application (`cf-mcp-client-sso`)
9. Removed `manifest-sandbox.yml`
10. Cleaned `target/` directory

Current state

- Repository: Clean working tree on main branch
- Cloud Foundry: Sandbox space and services deleted
- Code: All motivation button code removed
- Files: No untracked files

The repository is back to its original state before the motivation button feature.

[Review Changes](#)





Tanzu mission:
Accelerate
ideas to code,
code to production

Application velocity = Business velocity