

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: Openso
13     twitter: Openso
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",
```

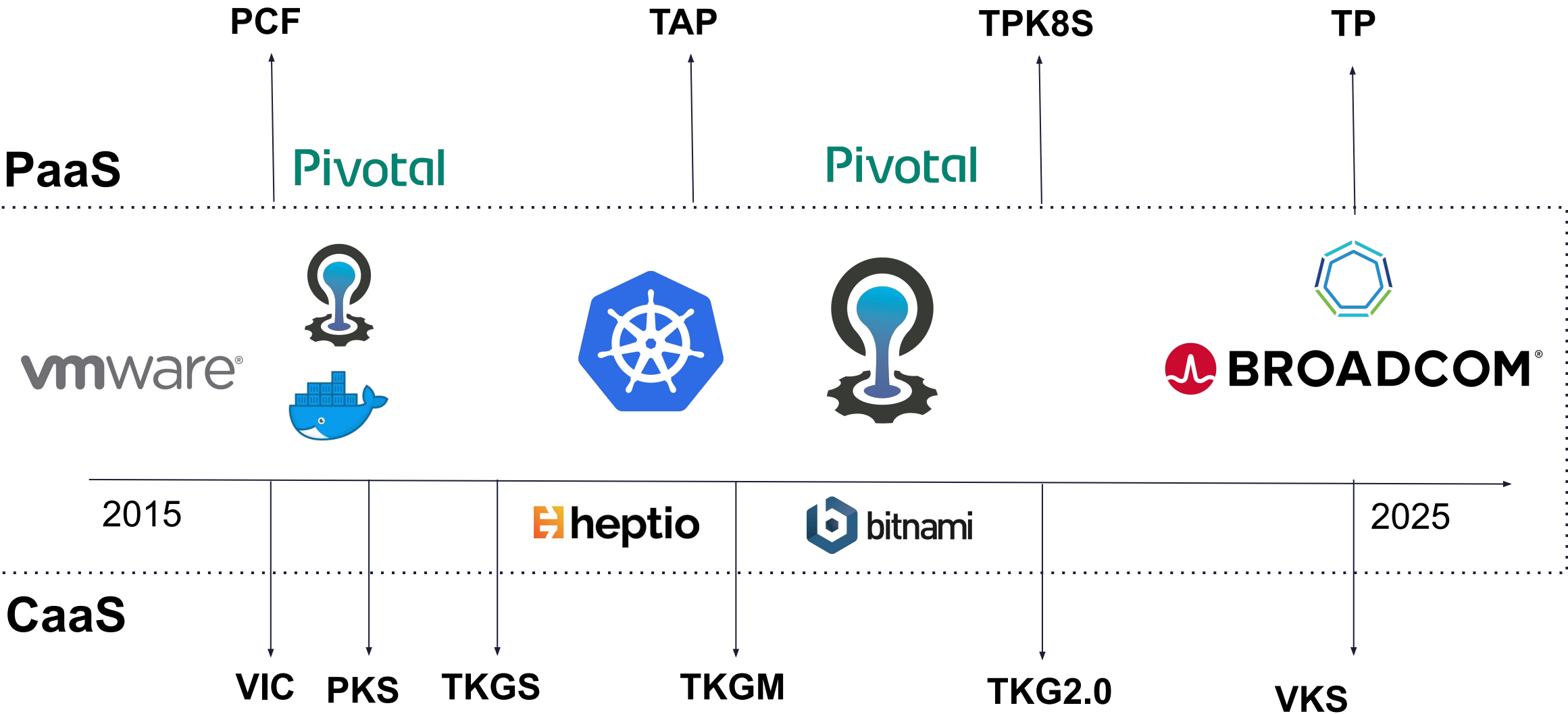
```
  "linkedin": "https://www.linkedin.com/in/neven",
```

```
  "github": "https://github.com/nevenc"
```

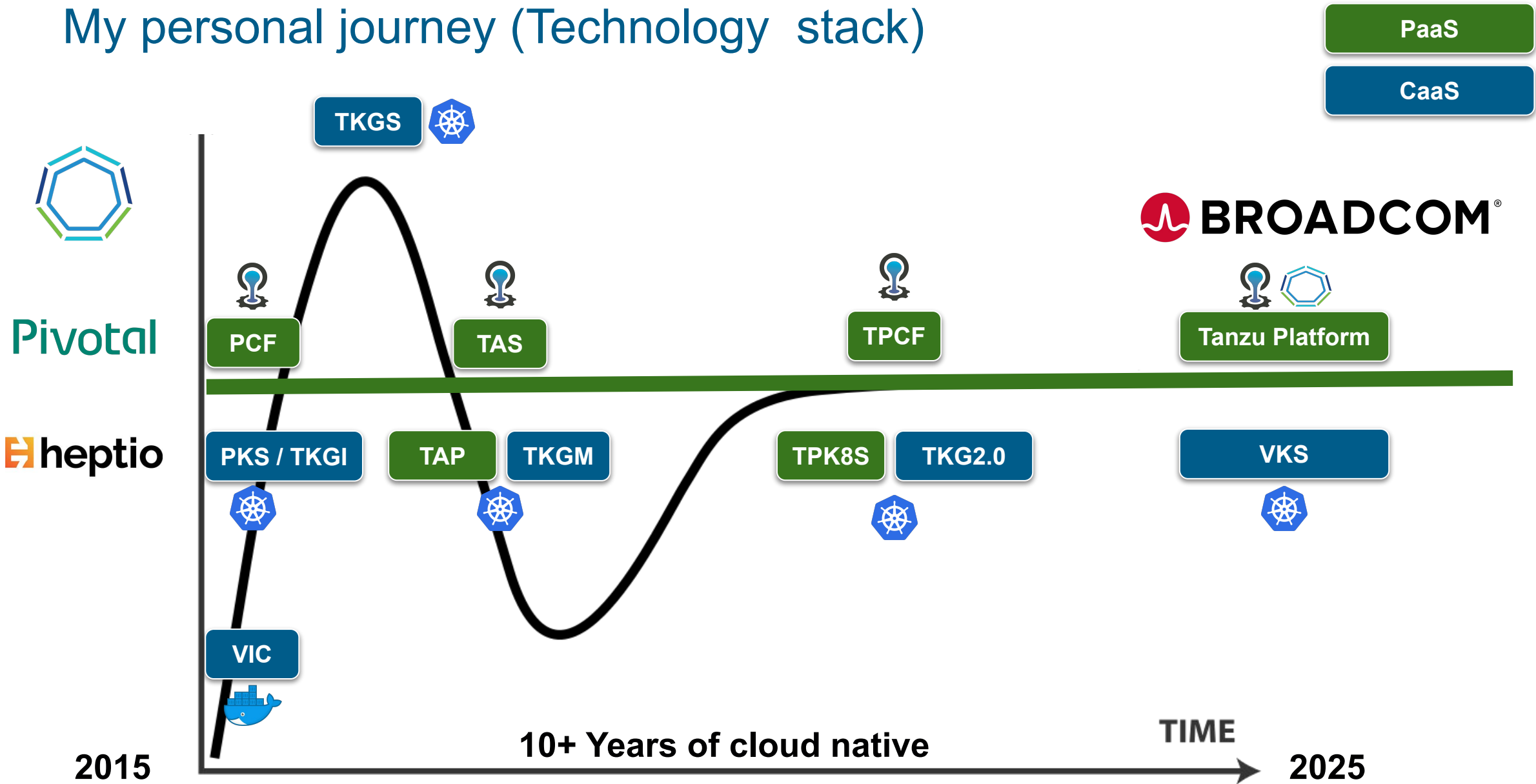
```
}
```



My personal journey (Technology stack)



My personal journey (Technology stack)





golden path



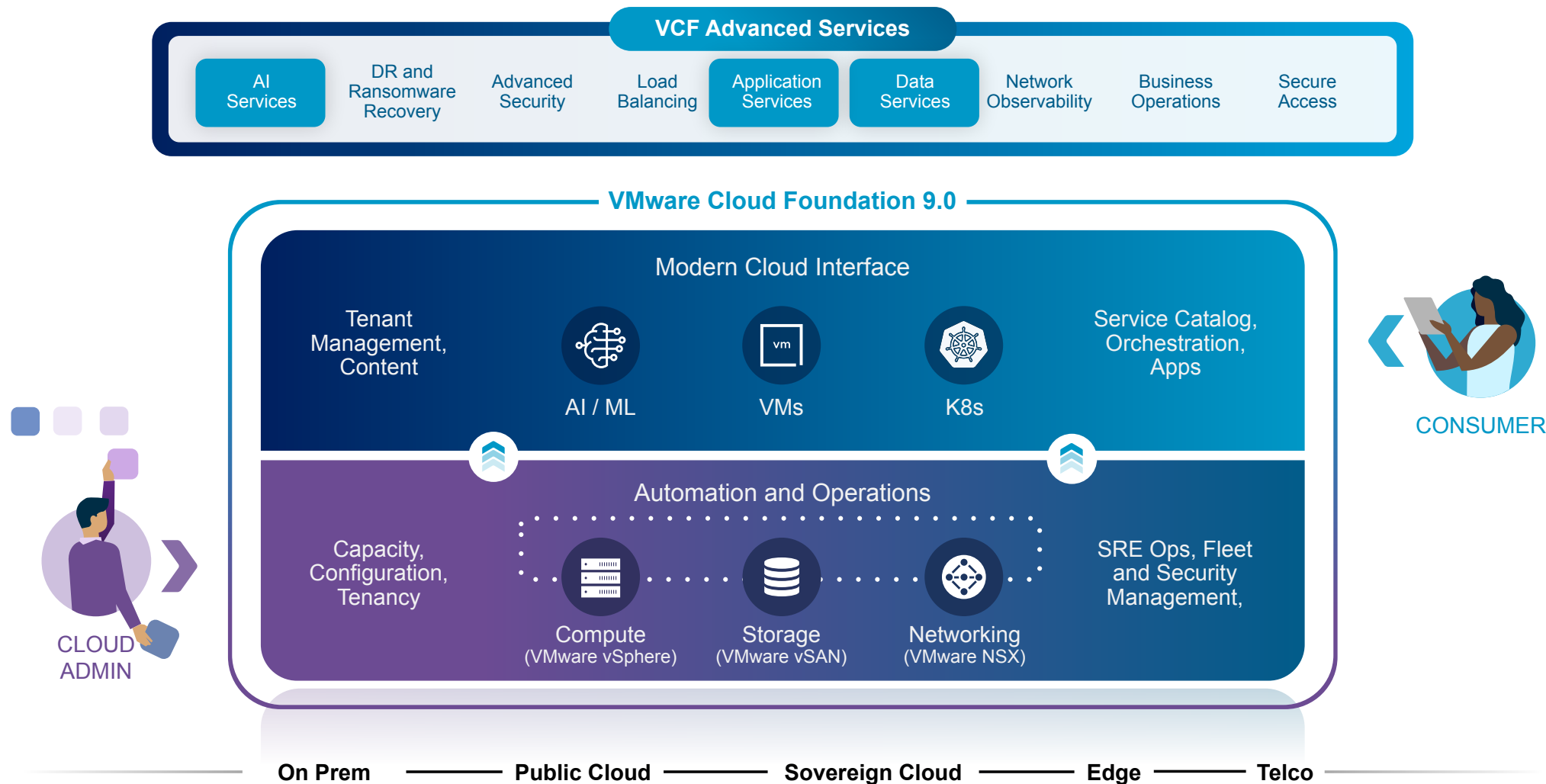
✦ AI Overview



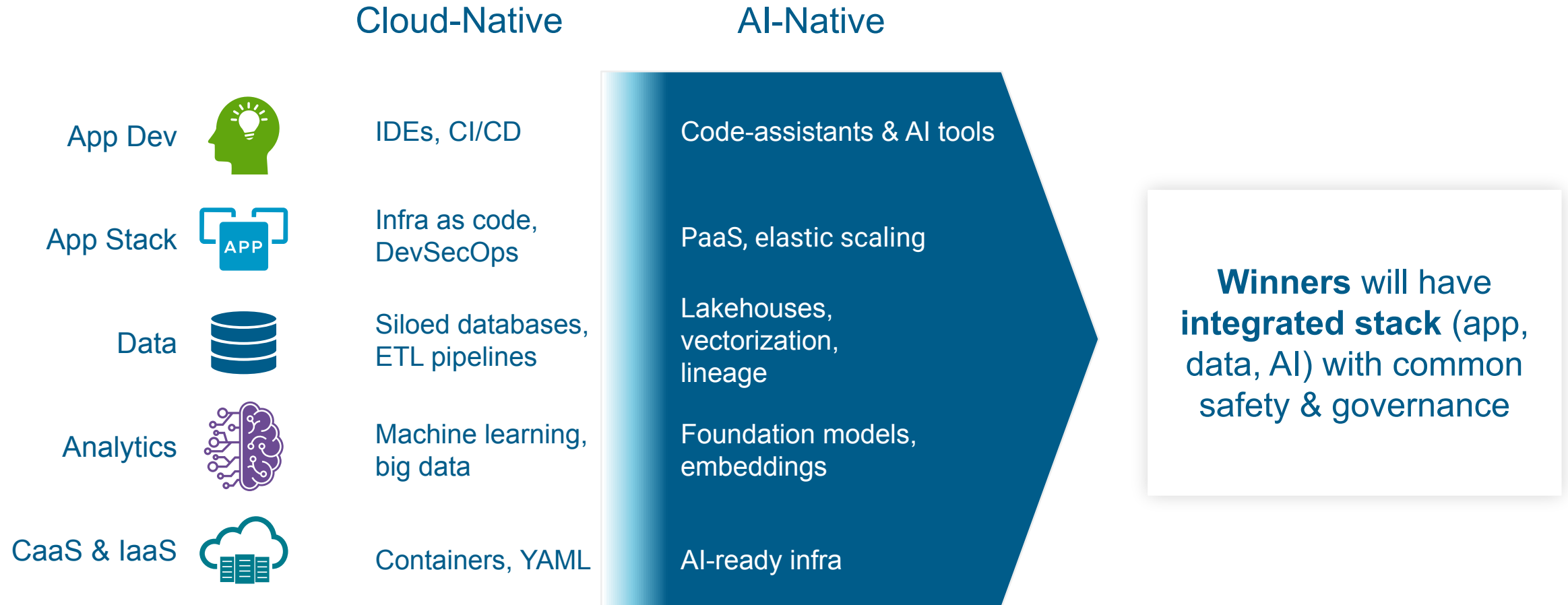
A "golden path" is **an opinionated, supported, and templated way of building and deploying software within an organization, ensuring consistency and efficiency**. It's a pre-defined set of tools, processes, and best practices for common tasks, allowing developers to build software more quickly by providing 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. [Link](#)



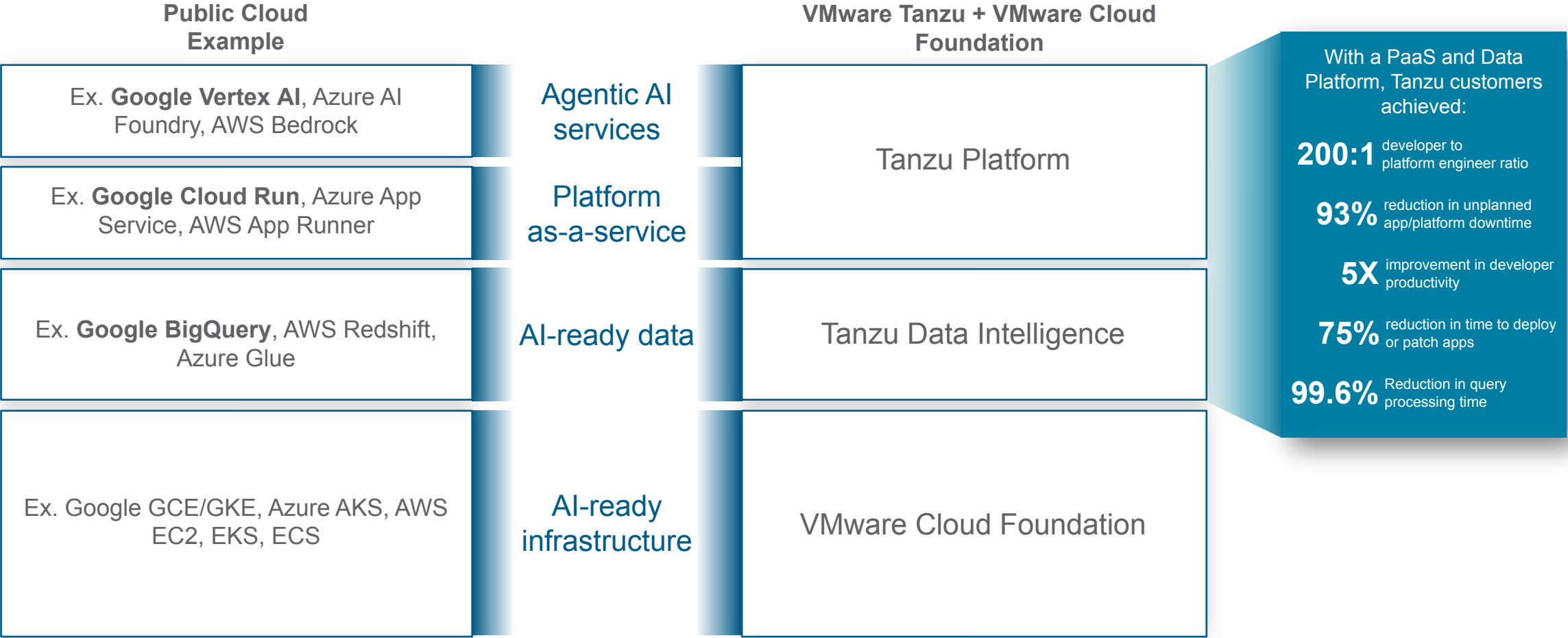
Tanzu: Delivering advanced application, AI, and data services on VCF



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

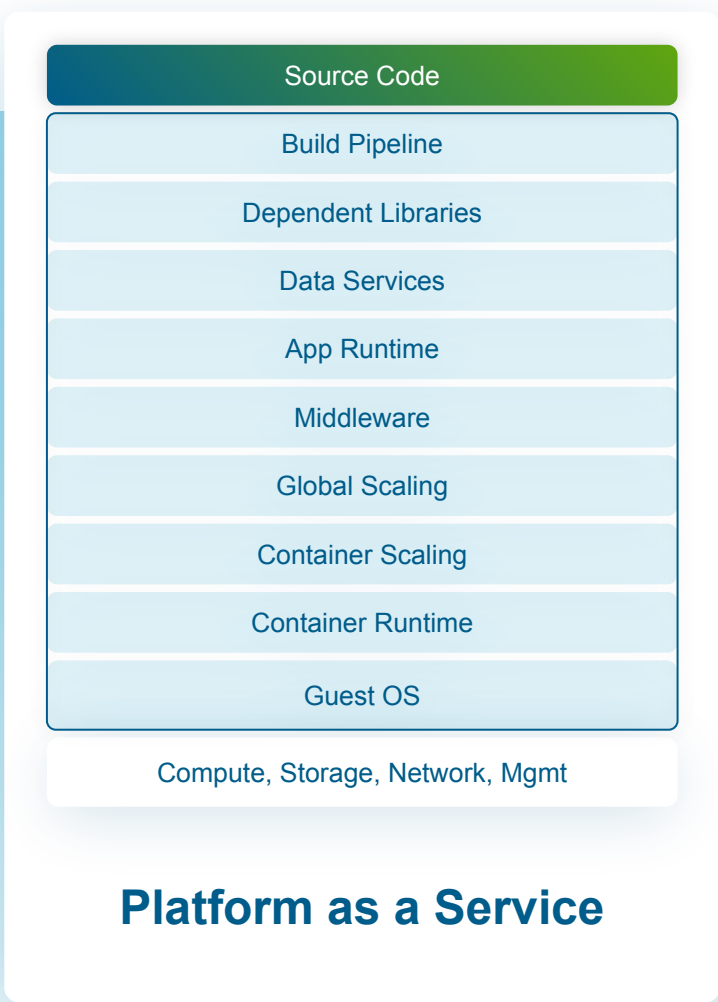


App Team Wants



**Central IT/
Platform Team
delivers**

Opinionated PaaS enables faster iteration and greater efficiency

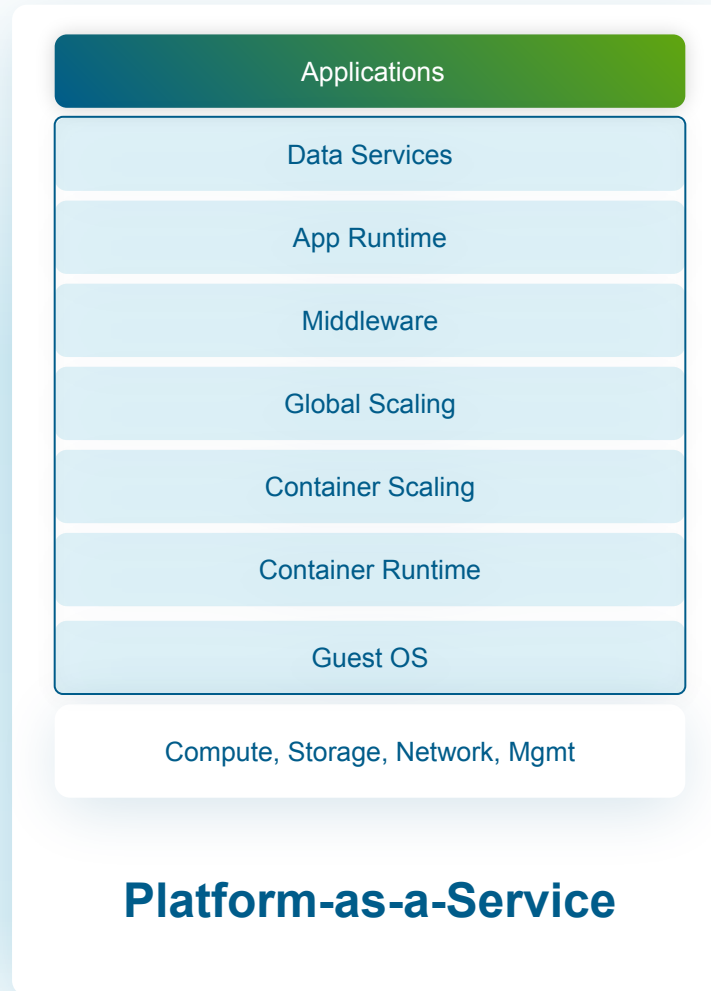


EXPLORE

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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

EXPLORE

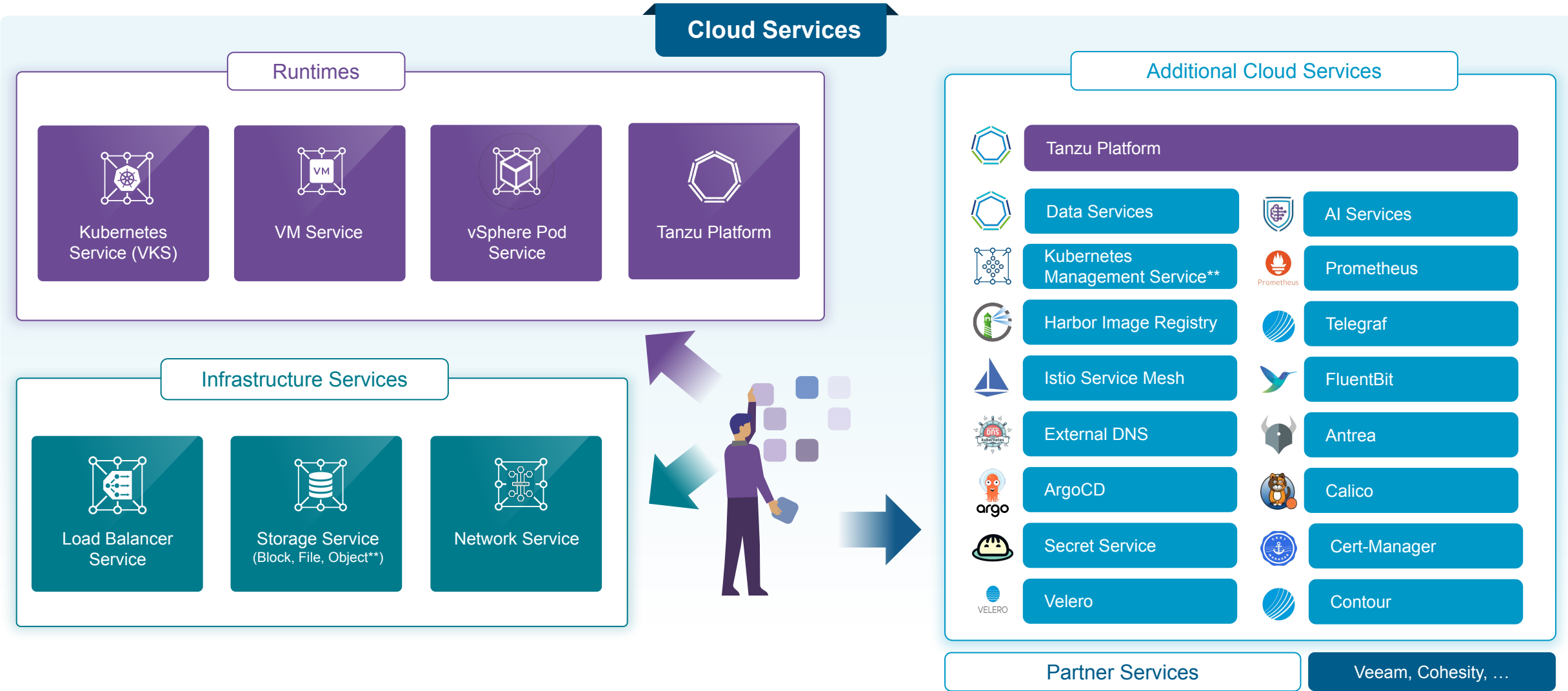
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The BEST PaaS
on
The BEST private cloud

Private cloud services

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

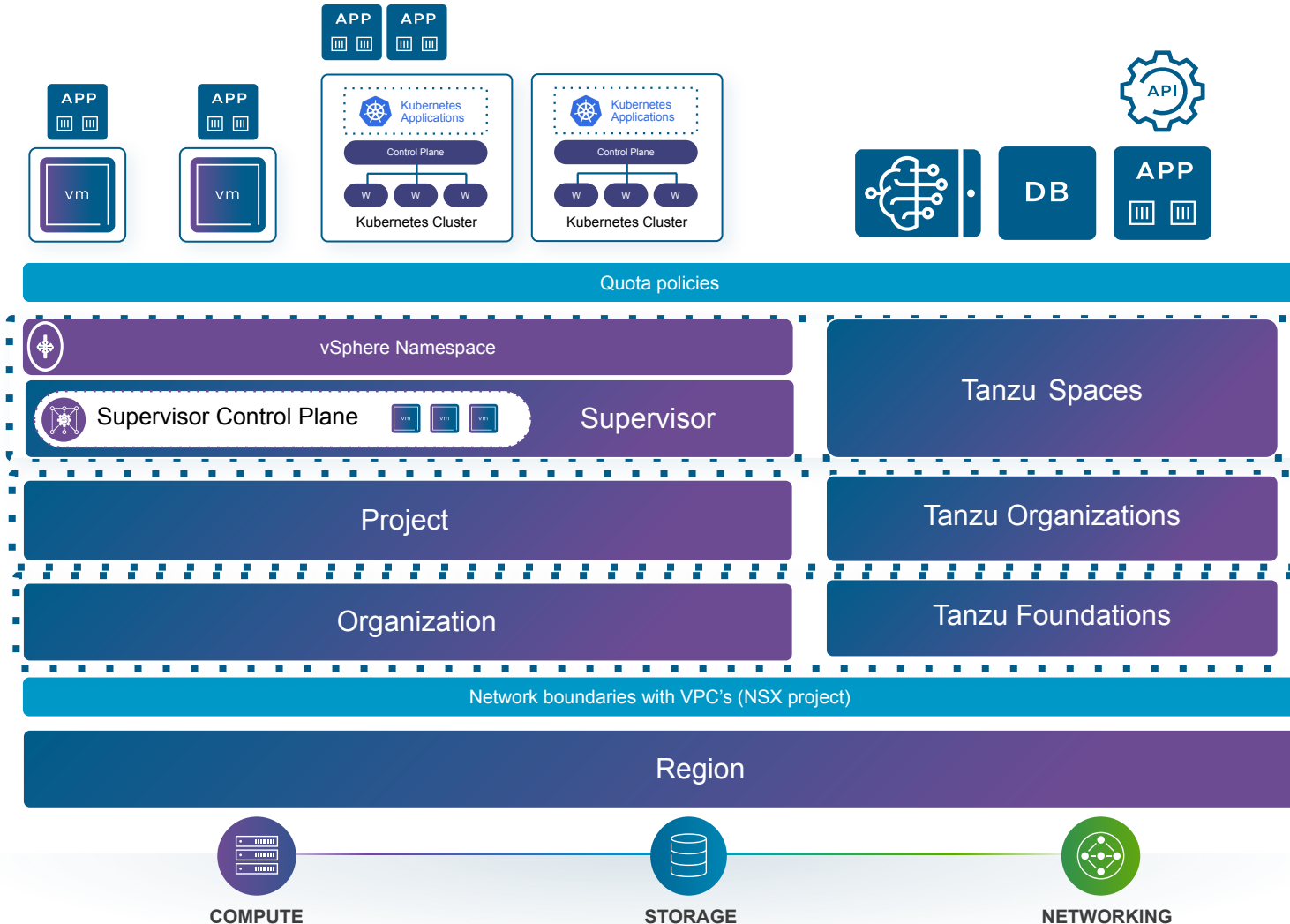


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Tanzu Platform on VCF 9.0

PaaS and CaaS options for your path to production

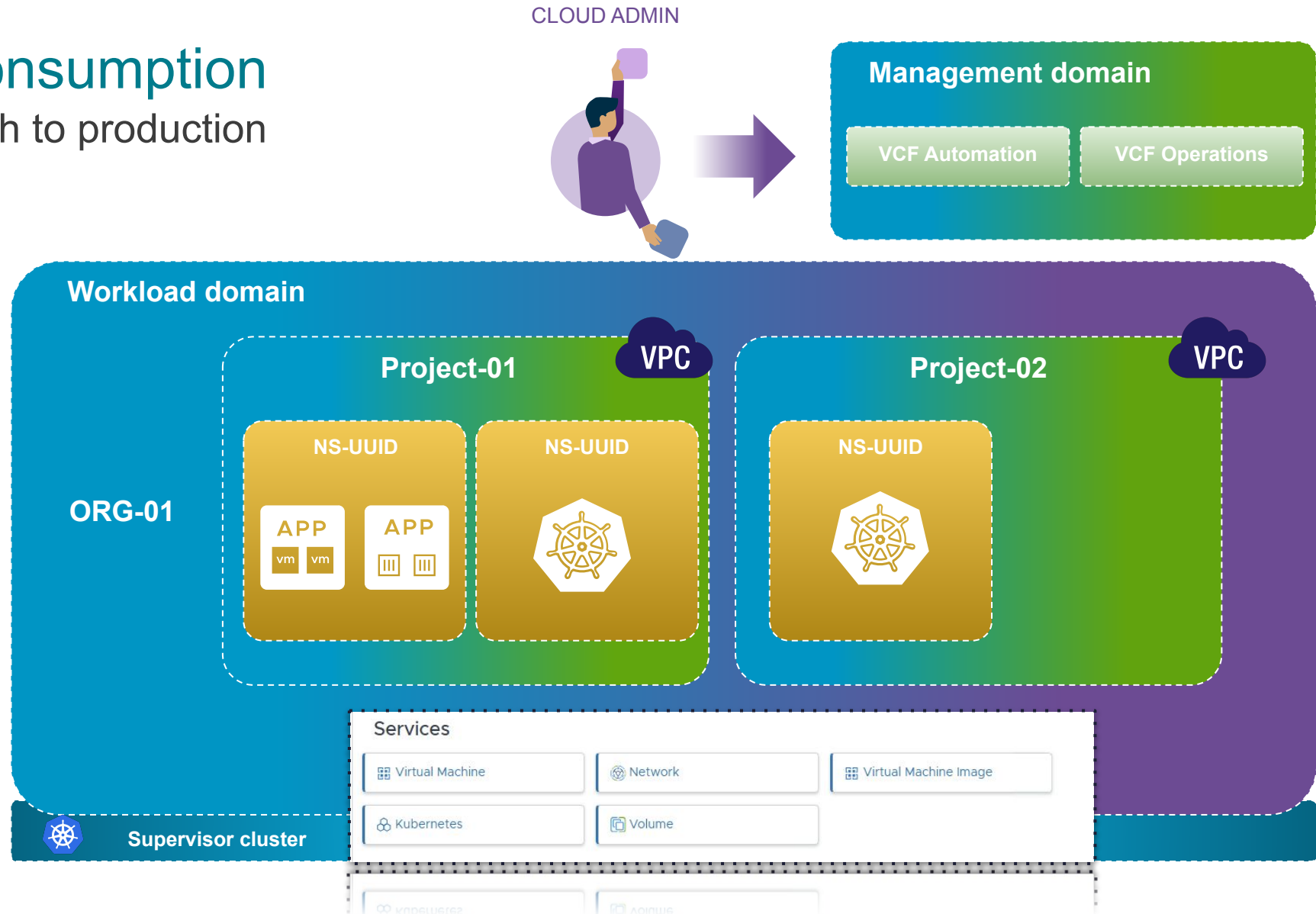
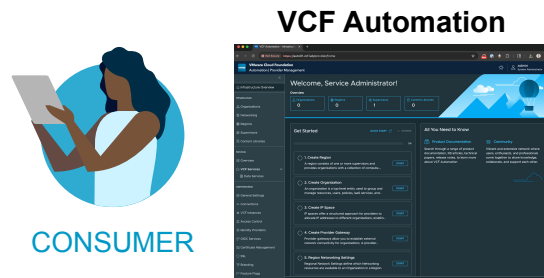


Choose how to go from code to prod:

- 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

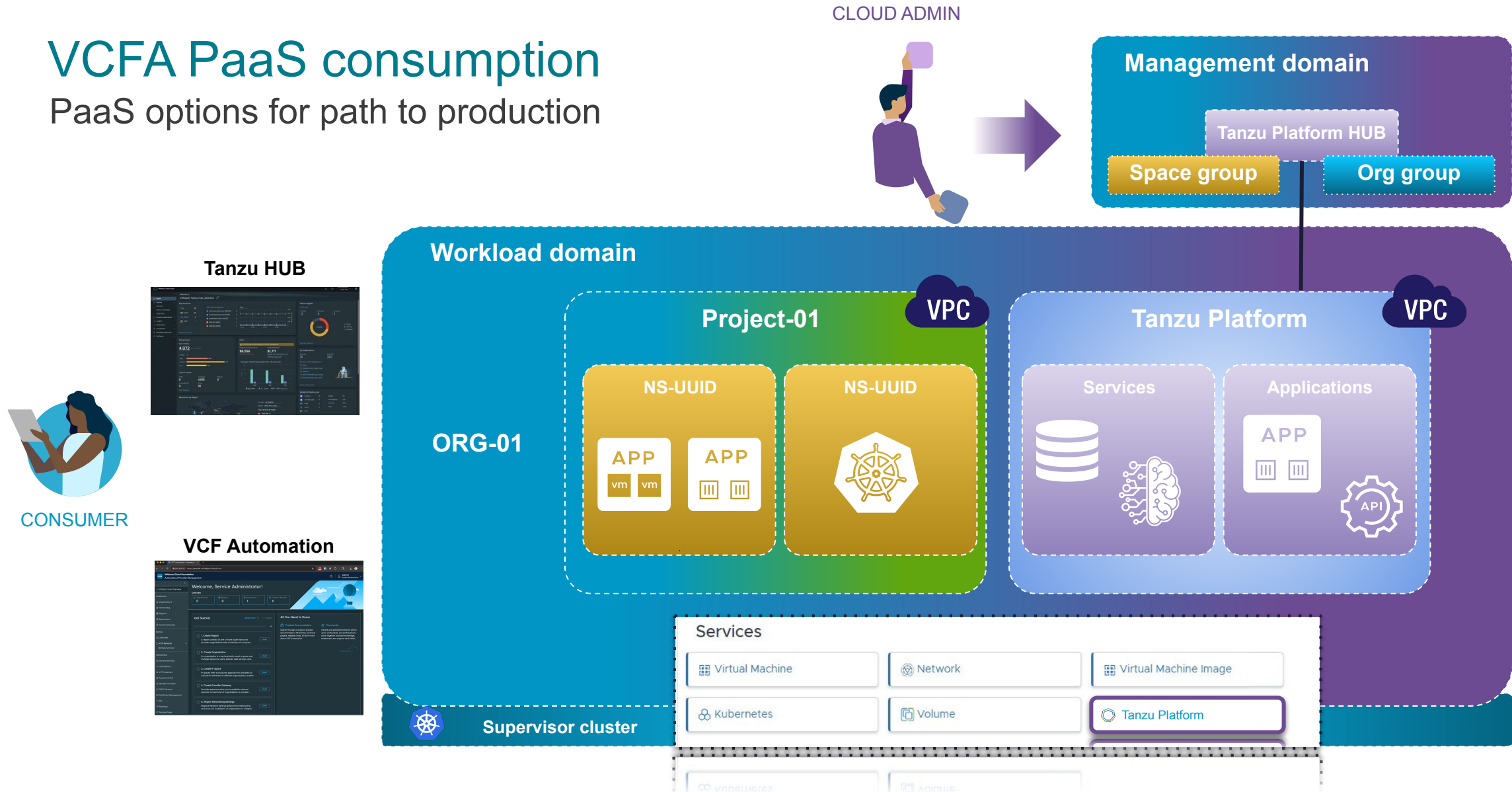
VCFA CaaS consumption

CaaS options for path to production



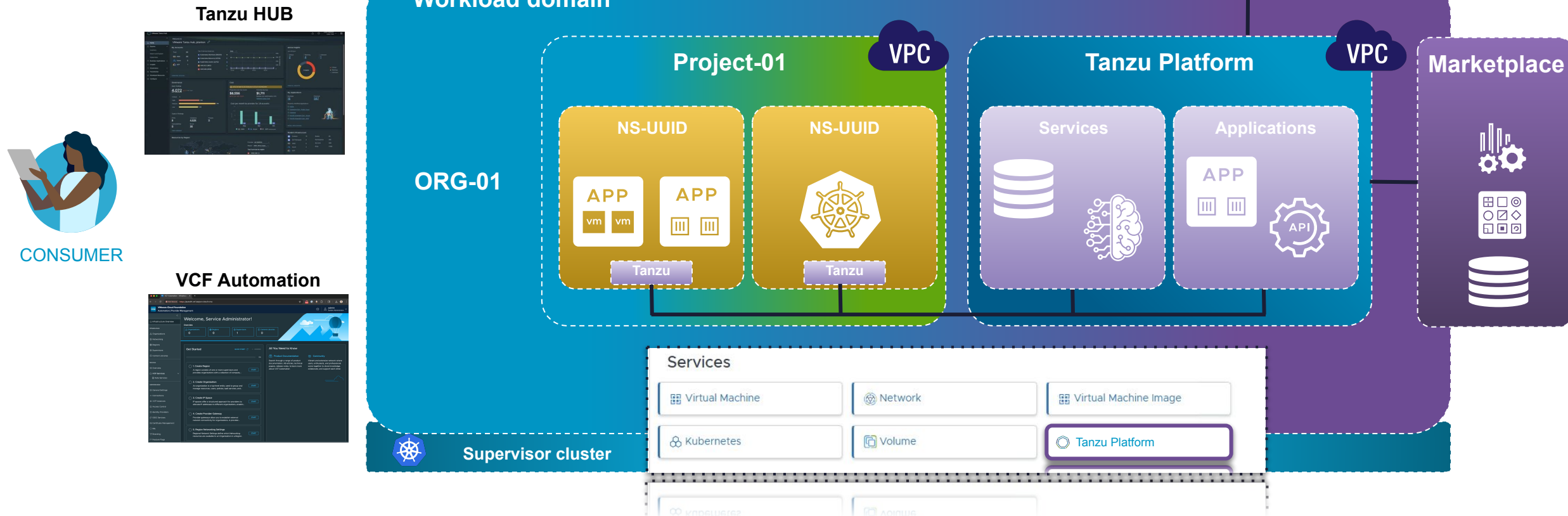
VCFA PaaS consumption

PaaS options for path to production



VCFA PaaS consumption

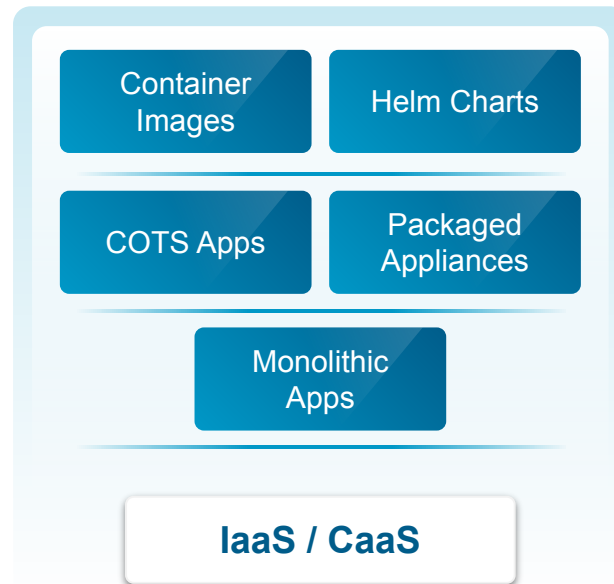
PaaS options for path to production



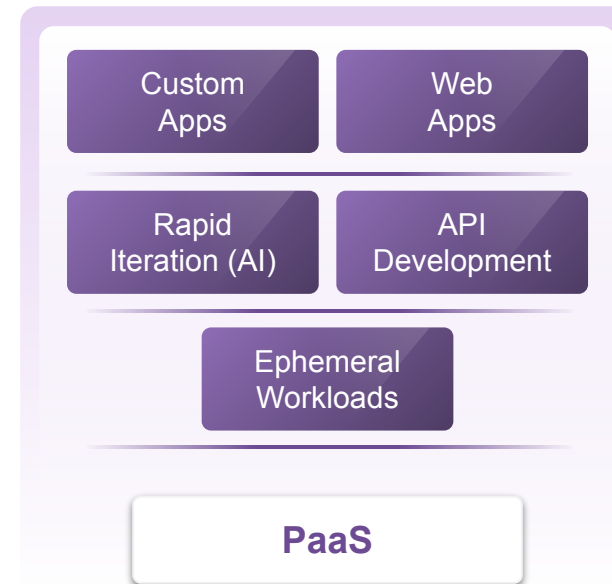
Value to the business starts with the workload

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.”



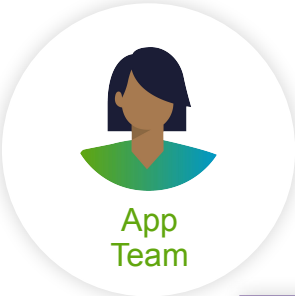
VMware Cloud Foundation 9.0



Tanzu mission:
Accelerate
ideas to code,
code to production

Application velocity = Business velocity

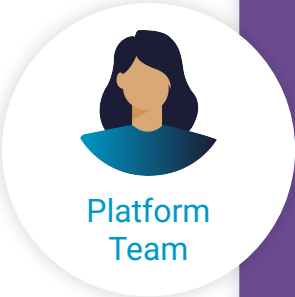
Tanzu Platform delivers modern and AI apps with a trusted, end-to-end Cloud Foundry based PaaS



Modern applications

GenAI applications

Agentic workflows



VMware Tanzu Platform

Build Services

Spring Services

Data Services

AI Services

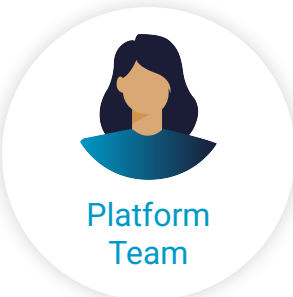
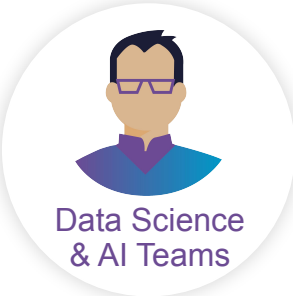
Marketplace Services

Elastic App Runtime Service

VMware Cloud Foundation

Public Cloud

Data intelligence unlocks deeper insights and innovation



Structured

Unstructured

Real-time

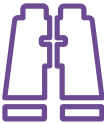
Batch



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

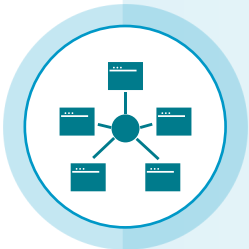
Agentic AI thrives with clear guardrails and enterprise integration



Constrain the problem: Leverage AI in bite-sized chunks



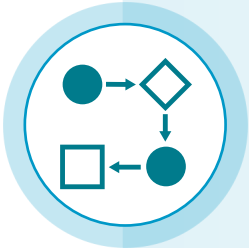
Solve to handle many composable agents with defined tasks that can be run on demand



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



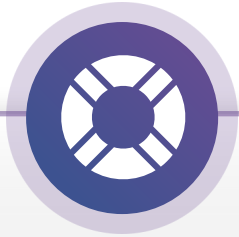
Meet your teams and enterprise systems where they are: AI is an integration problem



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



Strongly opinionated
guardrails



Service binding and
context injection



Elasticity and
auto-scaling



Integrated observability
and repair loops

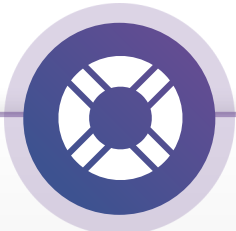


Development
productivity

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



Strongly opinionated guardrails

Controls the networks, scaling, service binding and access controls providing a **secure and predictable sandbox** for running apps or agents at scale



Service binding and context injection

Provides a **governed** set of data sources, APIs, tools (MCP servers) and models that may be injected into apps and agents **without manual wiring or recoding**



Elasticity and auto-scaling

Scales up and down providing as much or as little concurrency as needed **without development team intervention**



Integrated observability and repair loops

Builds trust in production with built-in **feedback, retries, and safety policies** with integrated logging, tracing, and automated update management

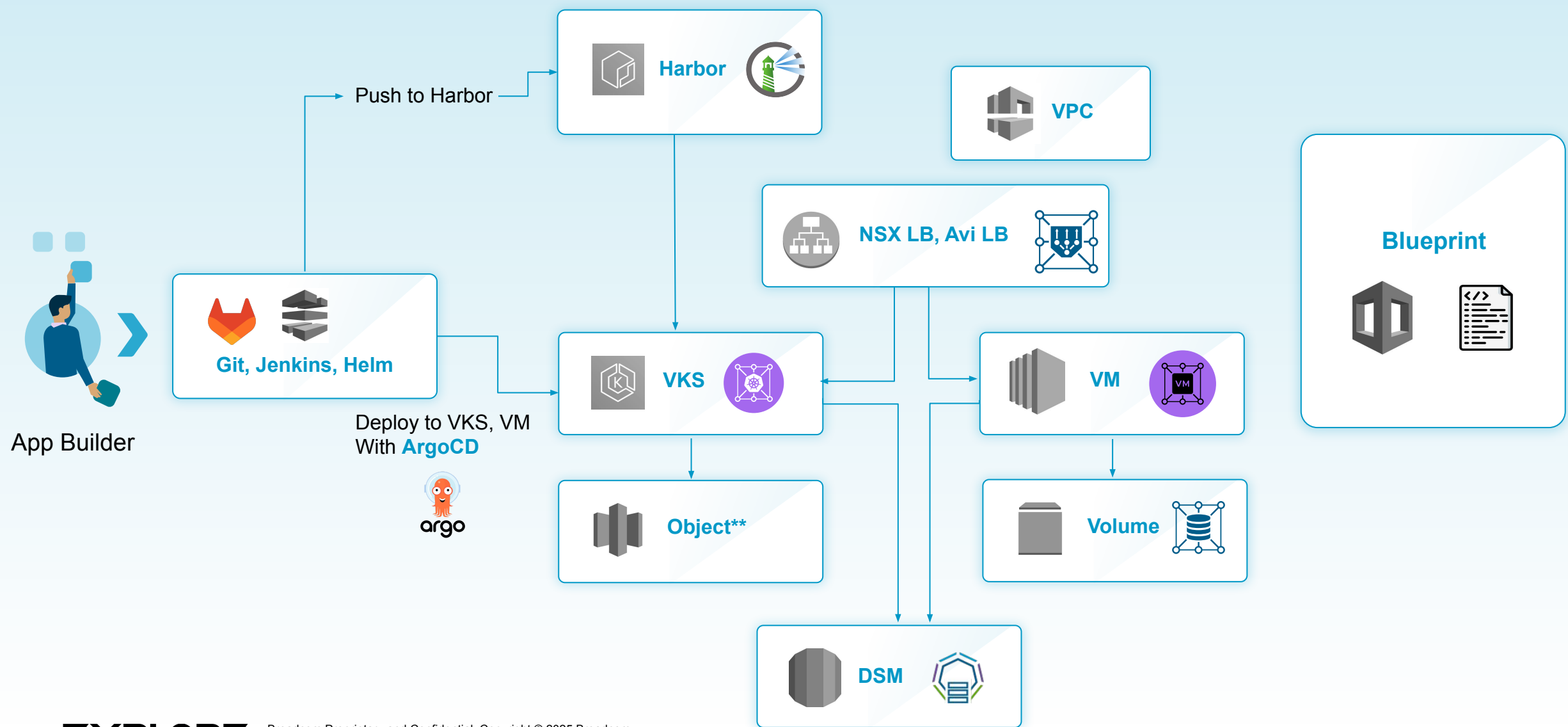


Development productivity

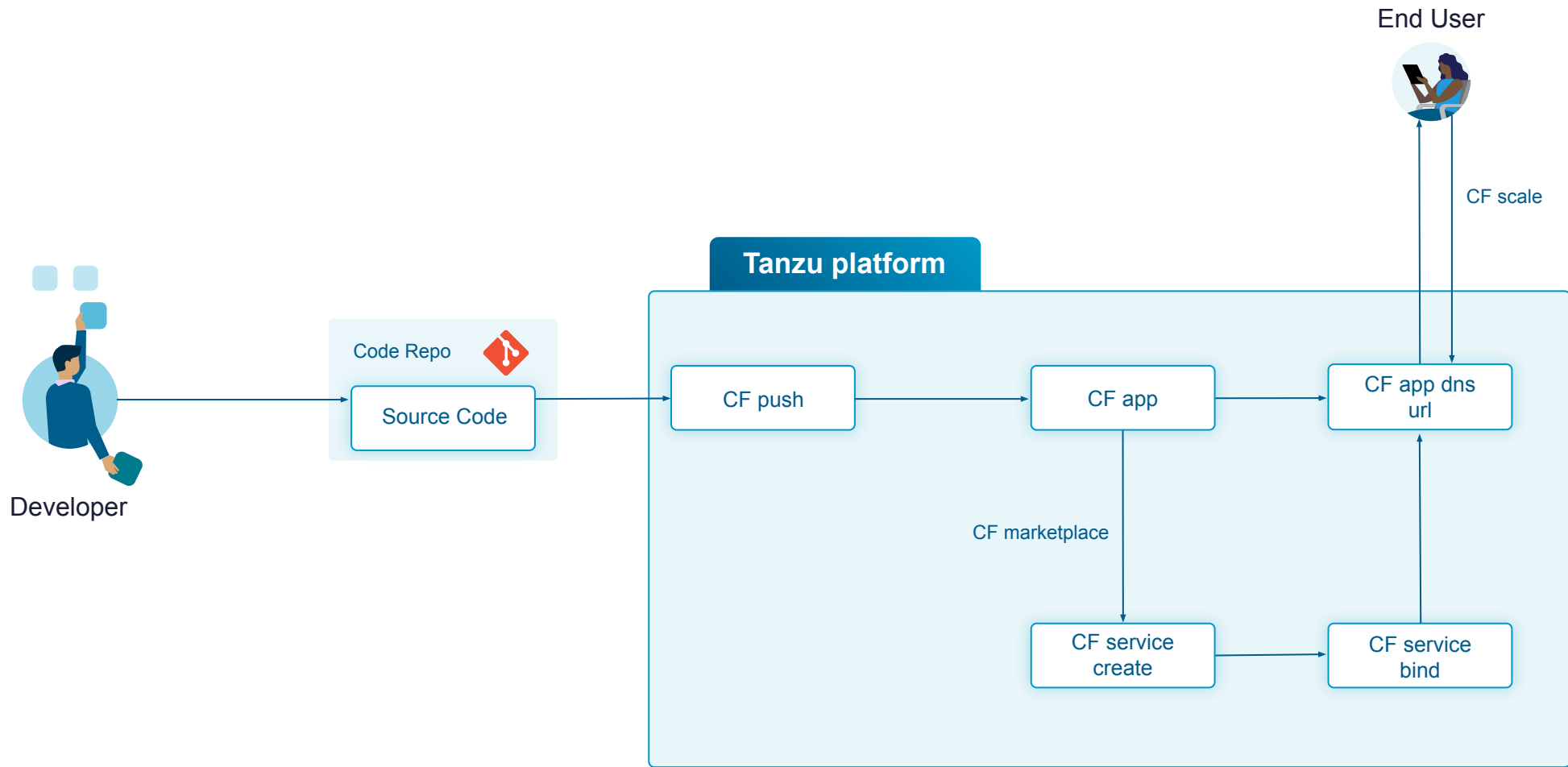
New code may be **pushed immediately without rearchitecting infrastructure** to update and redeploy apps and agents frequently

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

CaaS path to production



PaaS path to production

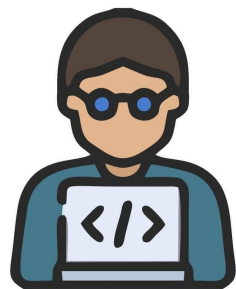




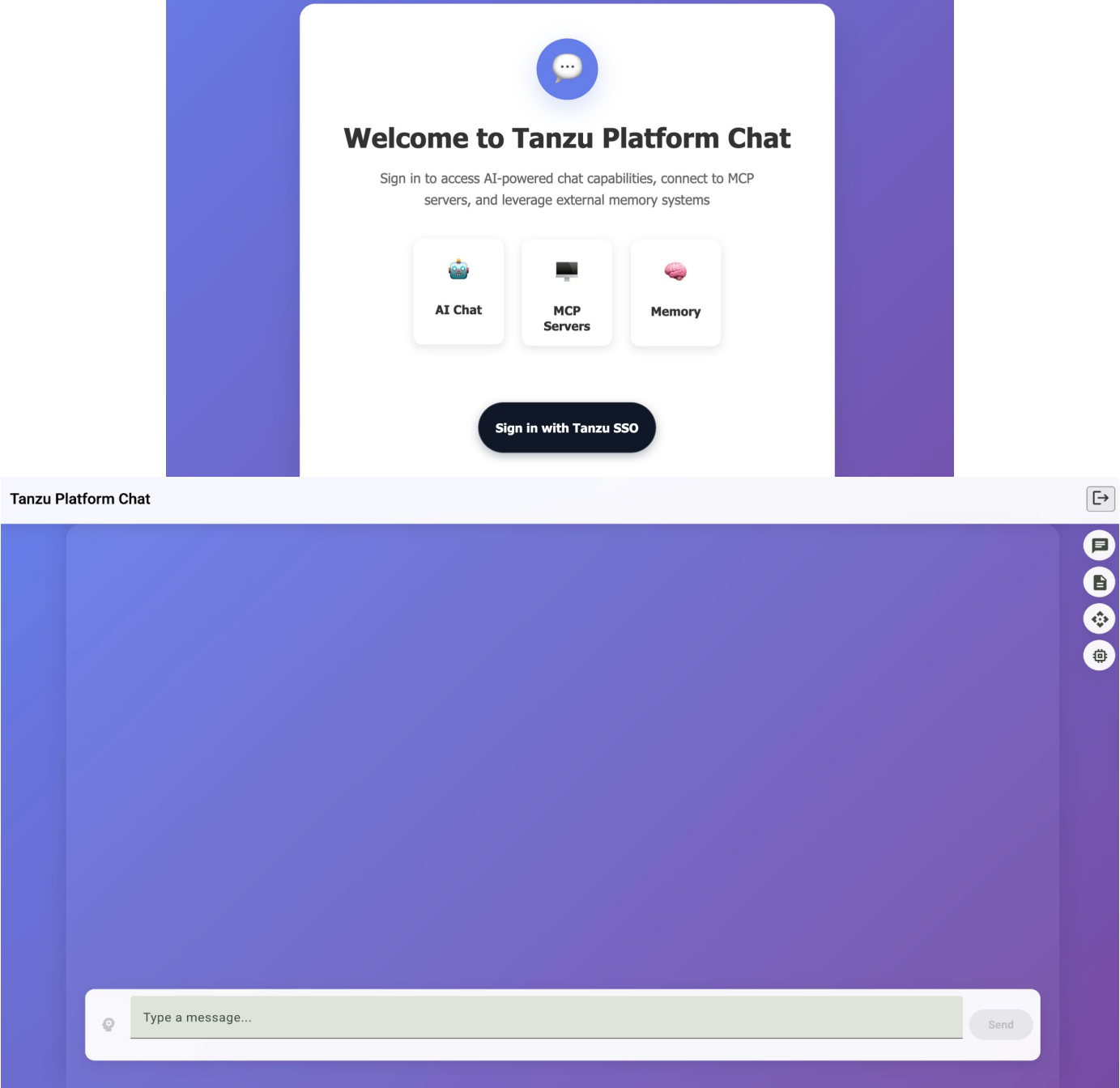
Idea to Code to Prod

Application velocity = Business velocity

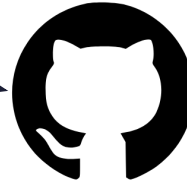
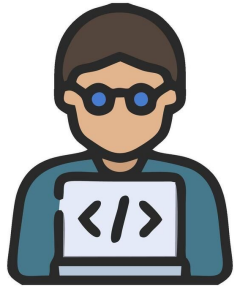
I really like my new AI chat app it is great!





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/Opens0/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



Opens0 opened 17 hours ago

Owner ⋮

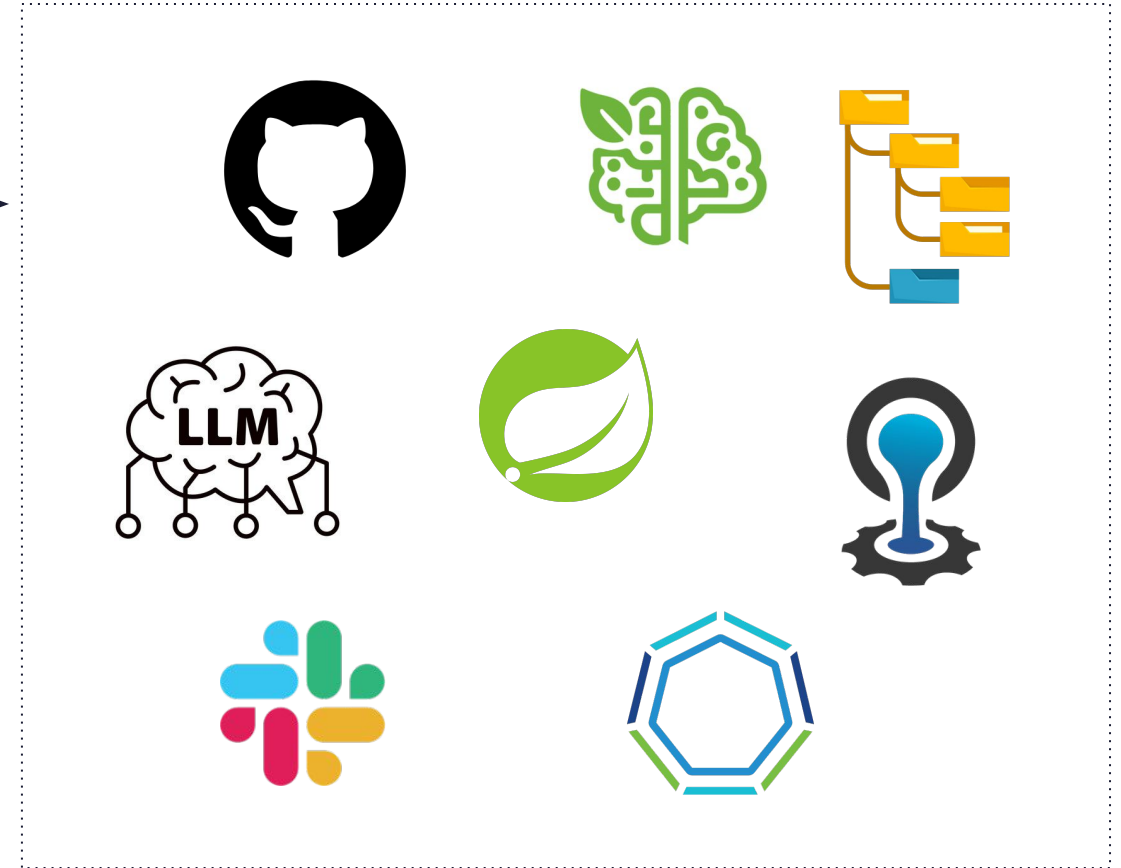
I have a new idea!

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

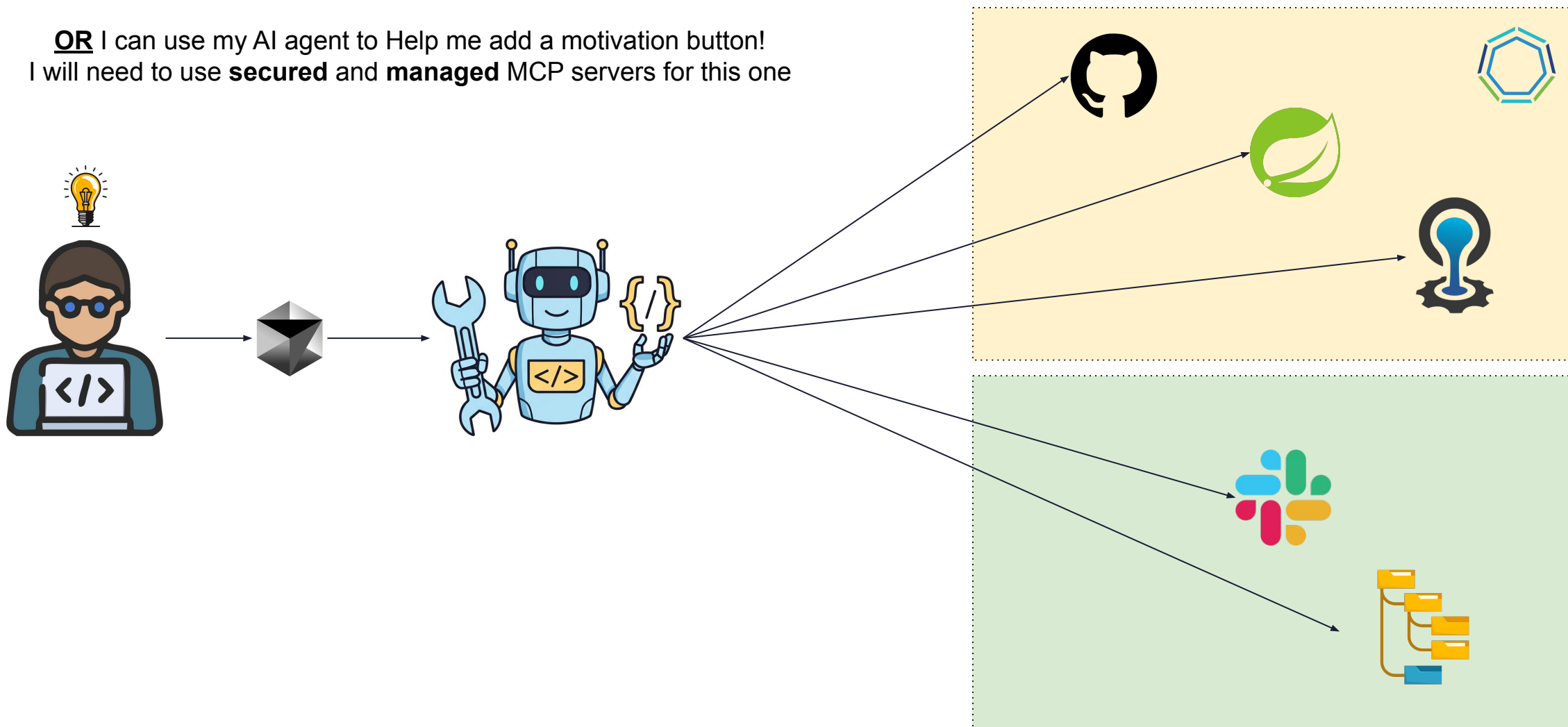
ToDo list

- 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

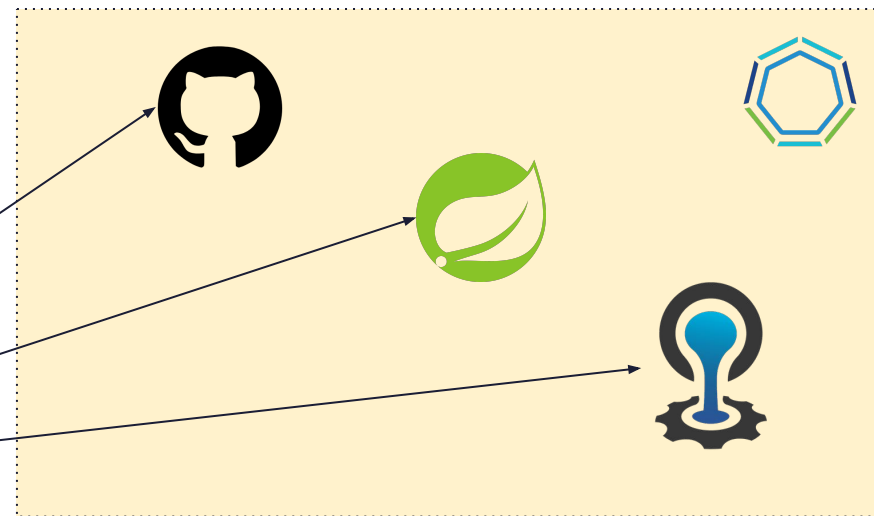
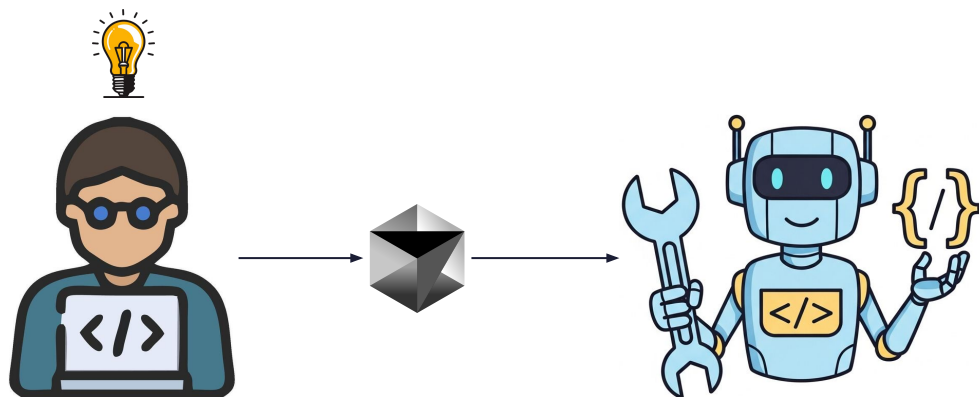


Check it out!

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

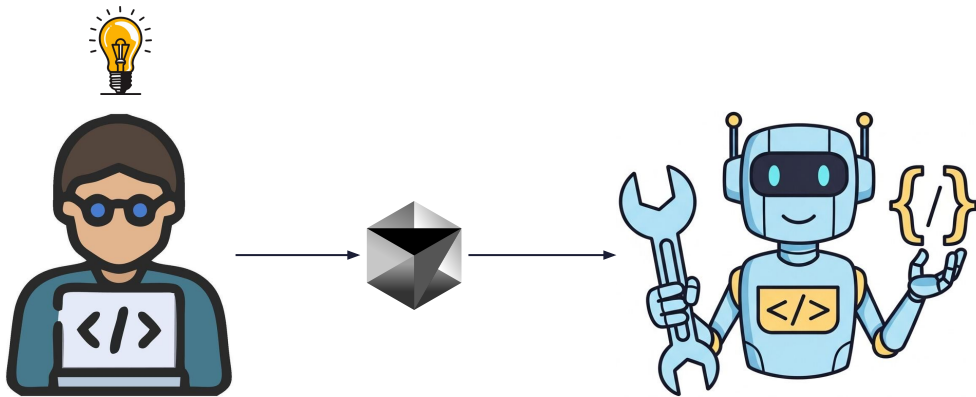


OR I can use my AI agent to Help me add a motivation button!
I will need to use **secured** and **managed** MCP servers for this one



```
"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



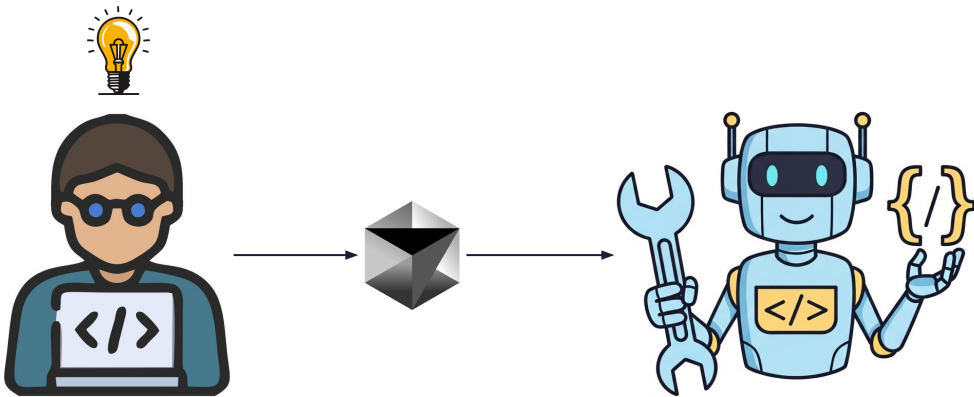
Issue #4 Summary:

- **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

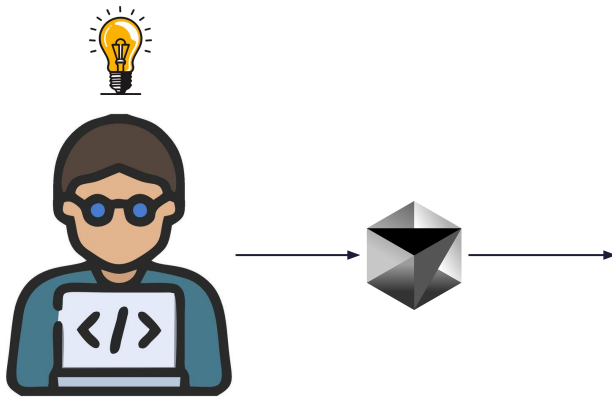


Creating a checklist for implementing and testing the motivation button.

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!



Cursor Settings | MotivationService.java U | MotivationController.java U x

src > main > java > org > tanzu > mcpclient > motivation > MotivationController.java > 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(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 + v | 1 / 2 files >

~ / gi / cf - mcp - client - sso > 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.

MotivationController.java (new) +49

MotivationService.java (new) +83

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

Read SecurityConfig.java

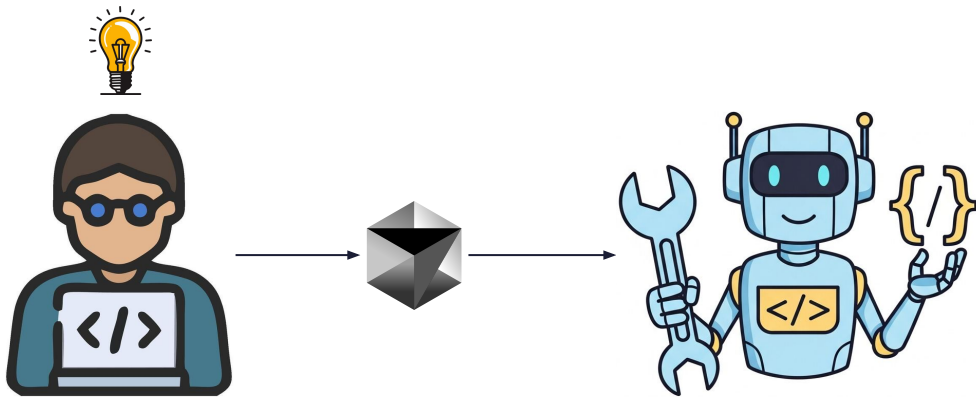
SecurityConfig already allows /api/**, so /api/motivation/** is covered. Checking lints and building the project.

Found 5 errors in motivation

- > 8 of 20 To-dos
- > 2 Files

Stop ^c

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.

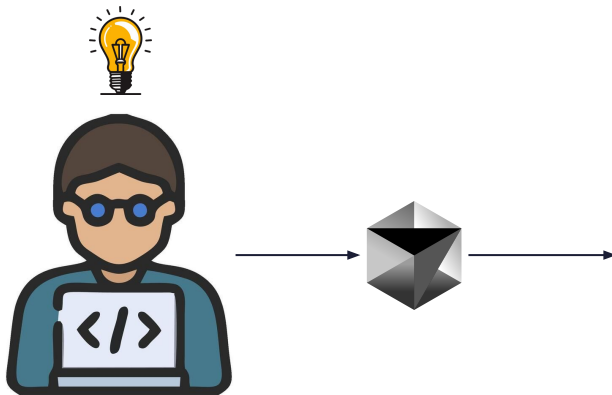
✓ Ran createServiceInstance ⌵
3 PARAMETERS

✓ 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

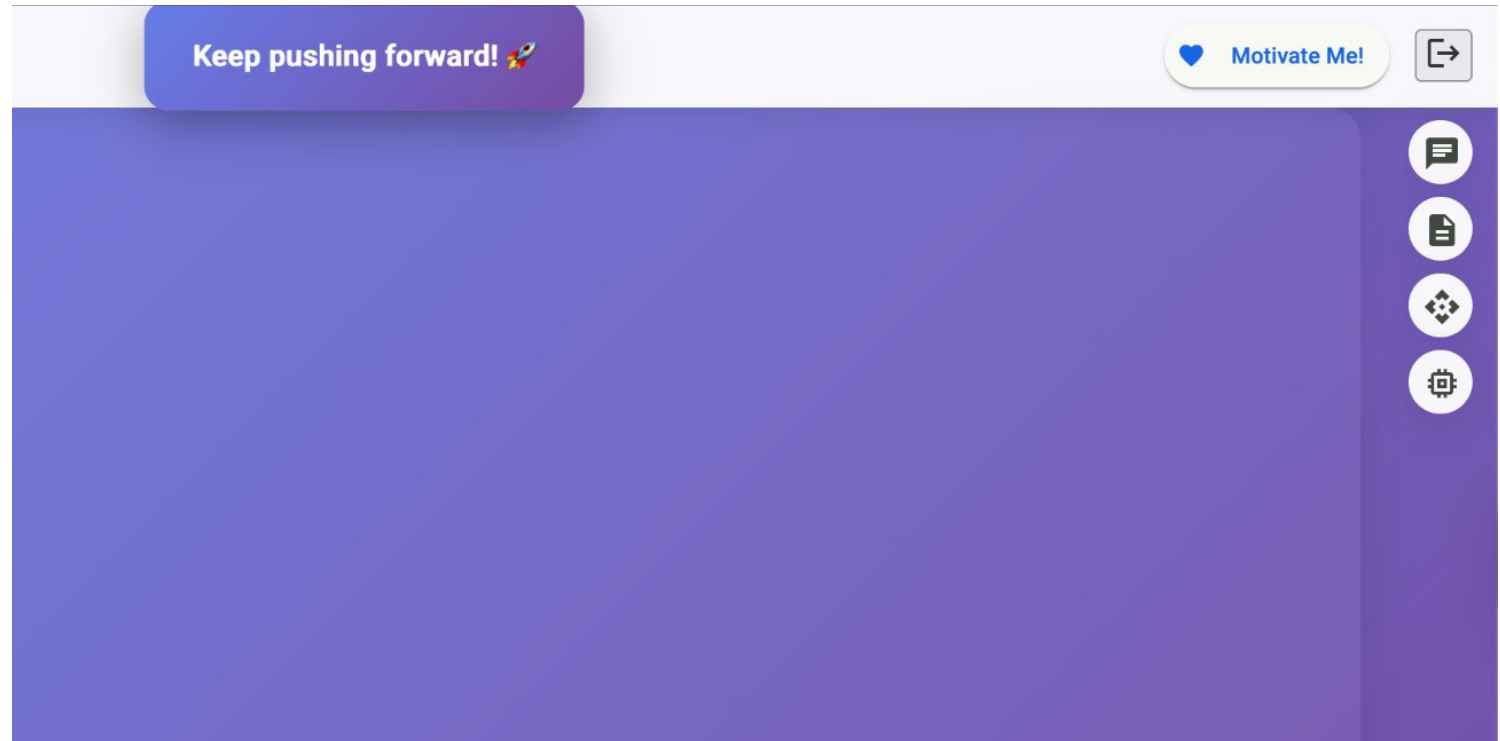
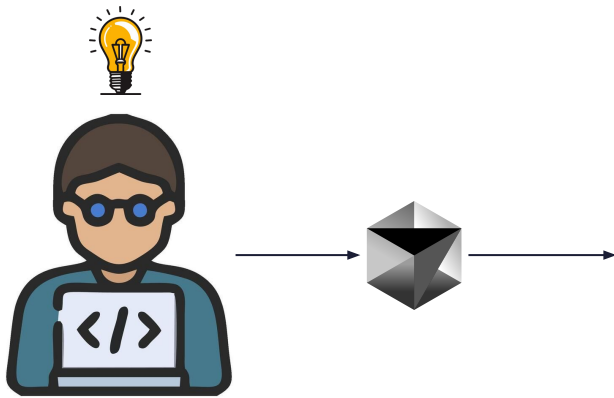


Next Steps:

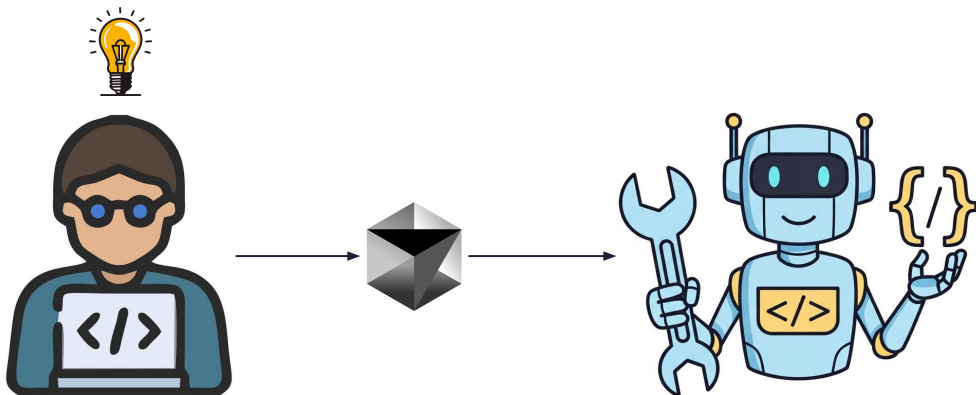
- Test predefined messages display and timing
- Test AI-generated messages after 5 clicks
- Verify button styling and responsiveness
- Test error handling for AI service failures

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

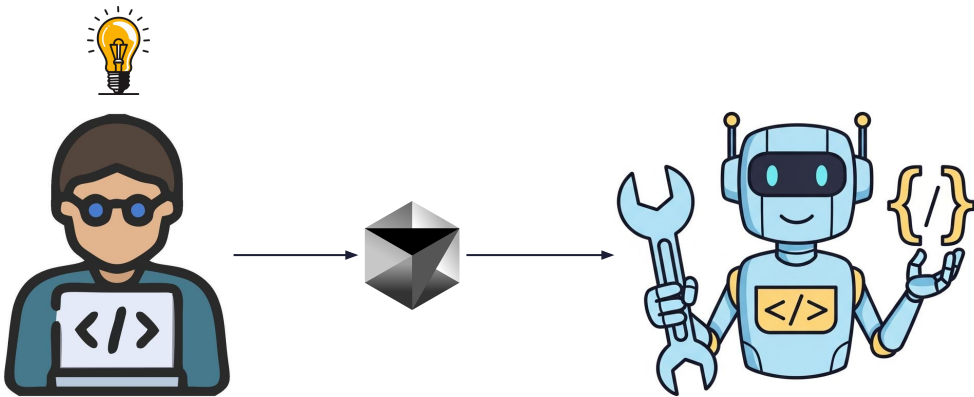


Rolling back the motivation button changes: deleting the feature branch, removing the backend code, and cleaning up the Cloud Foundry sandbox.

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/mcpclient/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