



Roger Carson & Erhan Sanlioglu

Automating Standardization - Azure Landing Zones Vending Machine



# 12 regional and local SpareBank 1 banks are partners in the alliance

**SpareBank 1**  
SR-BANK

**SpareBank 1**  
SMN

**SpareBank 1**  
NORD-NORGE

**SpareBank 1**  
ØSTLANDET

**SpareBank 1**  
GUDBRANDSDAL

**SpareBank 1**  
HALLINGDAL VALDRES

**SpareBank 1**  
NORDMØRE

**SpareBank 1**  
RINGERIKE HADELAND

**SpareBank 1**  
LOM OG SKJÅK

**SpareBank 1**  
SØRØST-NORGE

**SpareBank 1**  
ØSTFOLD • AKERSHUS

**SpareBank 1**  
HELGELAND

De 8 lokale SamSpar-bankene

# Known brand names within SpareBank 1 alliance



# SpareBank 1 Alliance - Multi-Cloud



Since 2019  
Sparebank 1 Utviklings own «custom»  
«Internal Developer Plattform»



Since 2017  
Everything else, big and small  
Used by the banks and companies themselves

# In this session

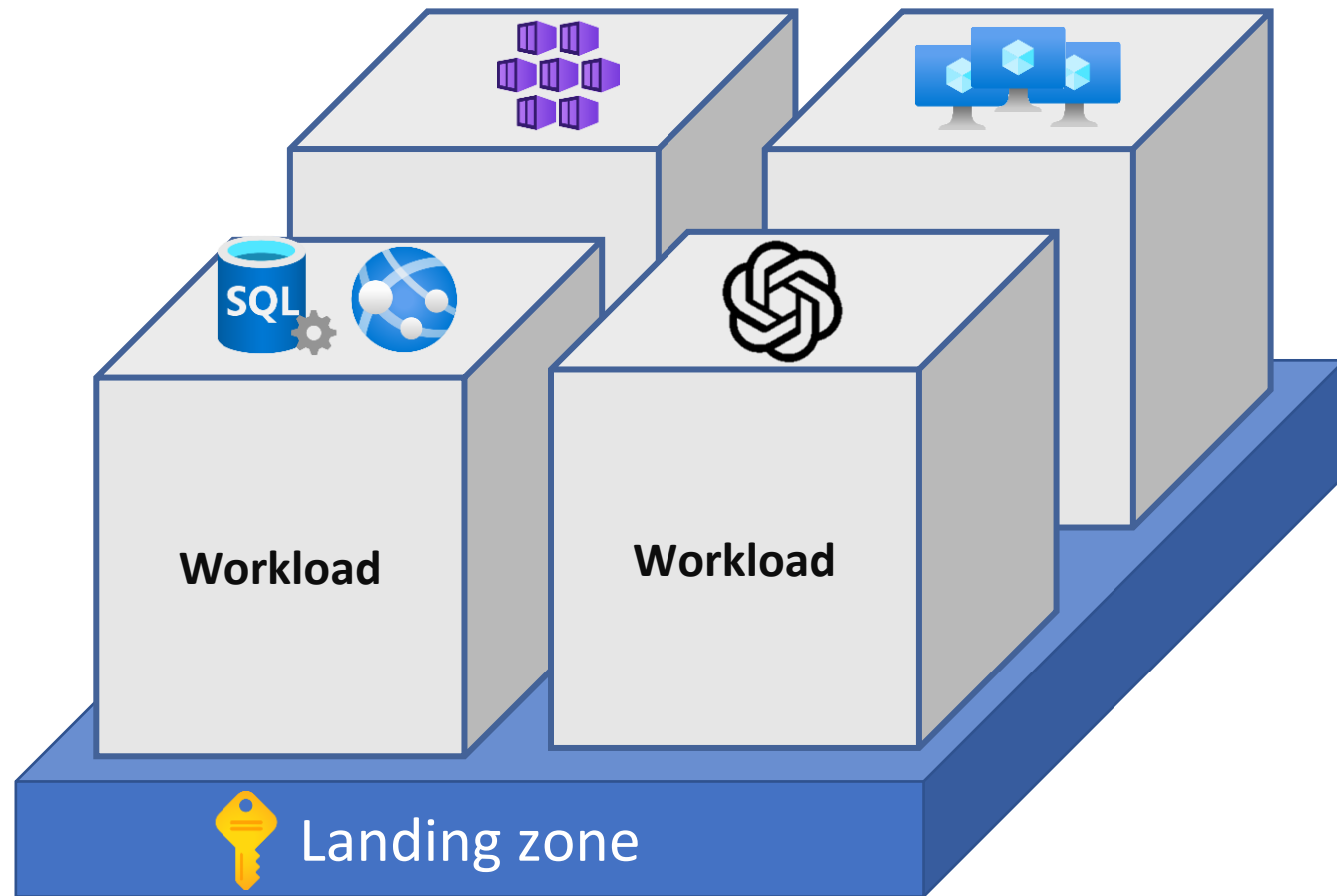
- What is a landing zone?
- Standardization and subscription vending
- Demo: Ordering a landing zone
- Subscription vending machine automation
- Demo: Deployment and the code
- Demo: The new landing zone
- What is next for our vending machine



# What is a Landing Zone?



# What is a Landing Zone?



Identity Management



Governance (policy)



Security



Management



Networking

# The Need for Standardization





# The Need for Standardization

We use Terraform, no probs

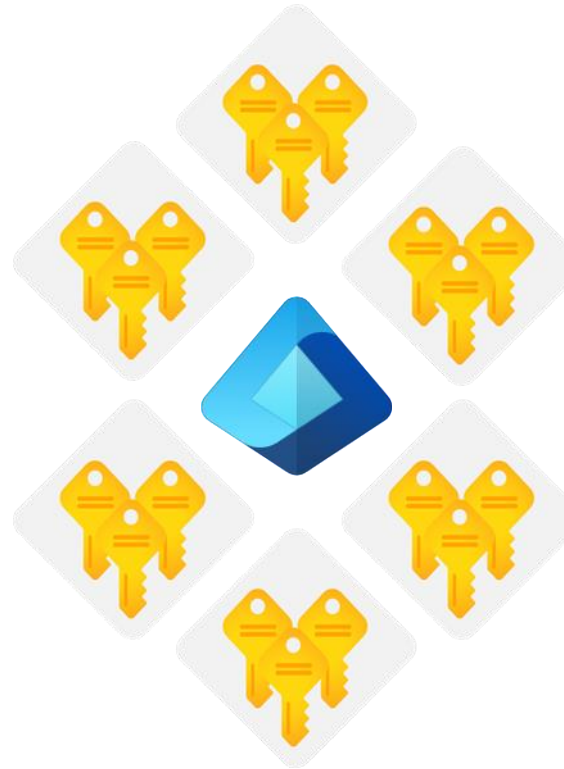
Why did it cost so much last month?

What is this policy thing?

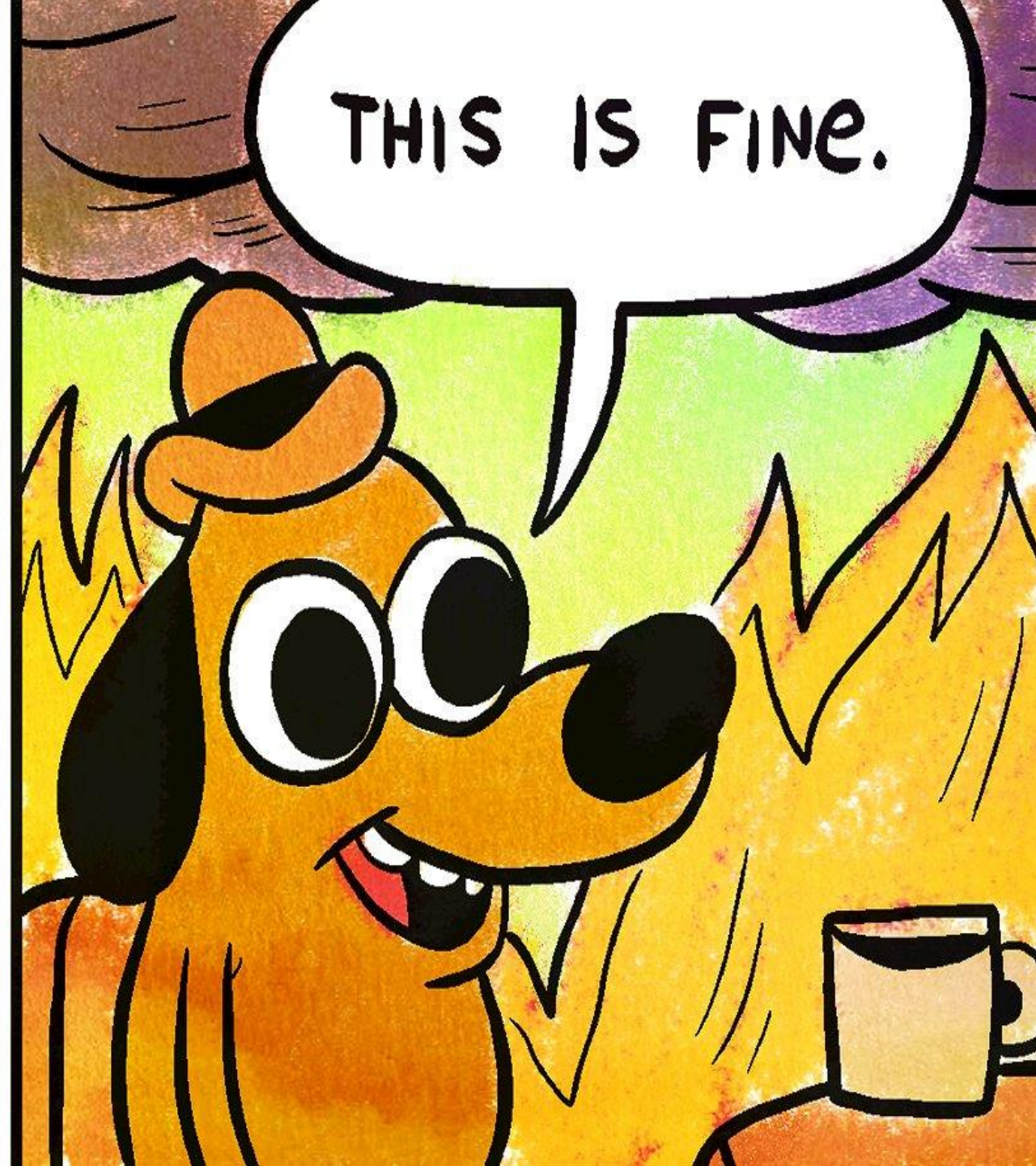
Love Bicep, this is easy

Azure portal, what is that?

ClickOps, ftw!



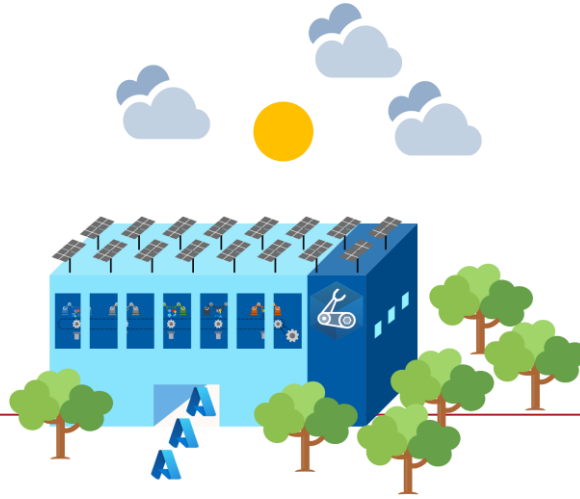






# Subscription Vending

Platform vending  
(Eunomia)



# Subscription Vending Orchestration



Establish  
business logic  
and approval  
process

Make a  
subscription  
request

Configure  
networking

Determine  
subscription  
placement

Create &  
configure  
subscription

Update  
subscription  
budget

Deploy workload  
and operate

CCoE

App team

Platform team

App team

Demo – New LZ order

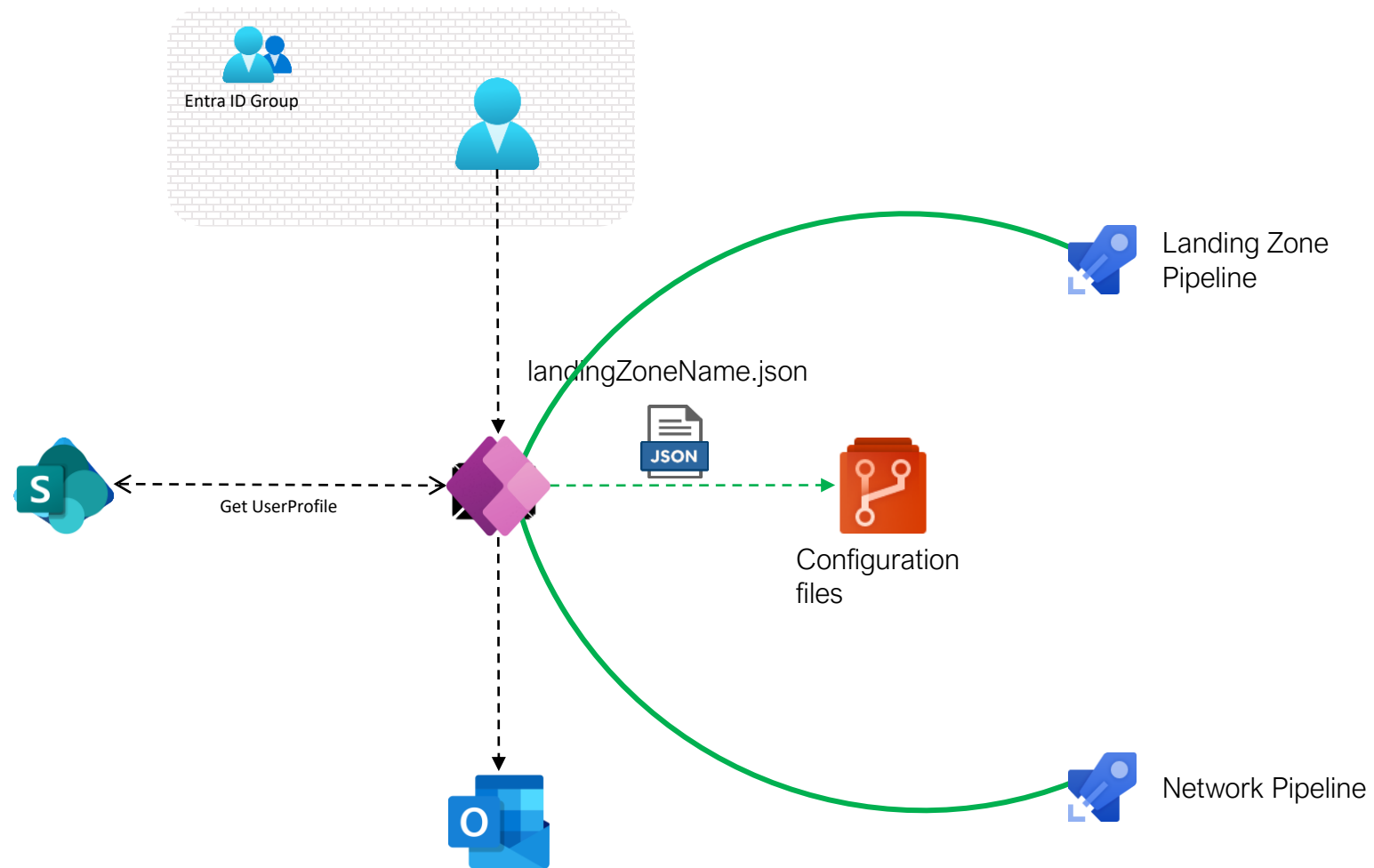
```

{
  "name": "string",
  "managementGroup": "string",
  "tags": {
    "companyCode": "string",
    "projectNumber": "string",
    "environment": "string",
    "defender": "string",
    "spendingLimit": int,
    "costOwner": "string"
  },
  "workload": "string",
  "IAM": {
    "groupAdmins": [...]
  },
  "billing": {
    "billingProfile": {
      "name": "string",
      "id": "string"
    },
    "invoiceSection": {
      "name": "string",
      "id": "string"
    }
  },
  "security": {
    "contactInfo": [...]
  },
  "devOps": {...},
  "networking": {
    "vnet": [
      {
        "resourceGroupName": "string",
        "rgLocation": "string",
        "vnetName": "string",
        "size": "string",
        "joinToVWAN": true,
        "managedVnet": true,
        "managedNSG": true,
        "vnetLocation": "string",
        "addressPrefix": [],
        "subnets": []
      }
    ]
  }
}

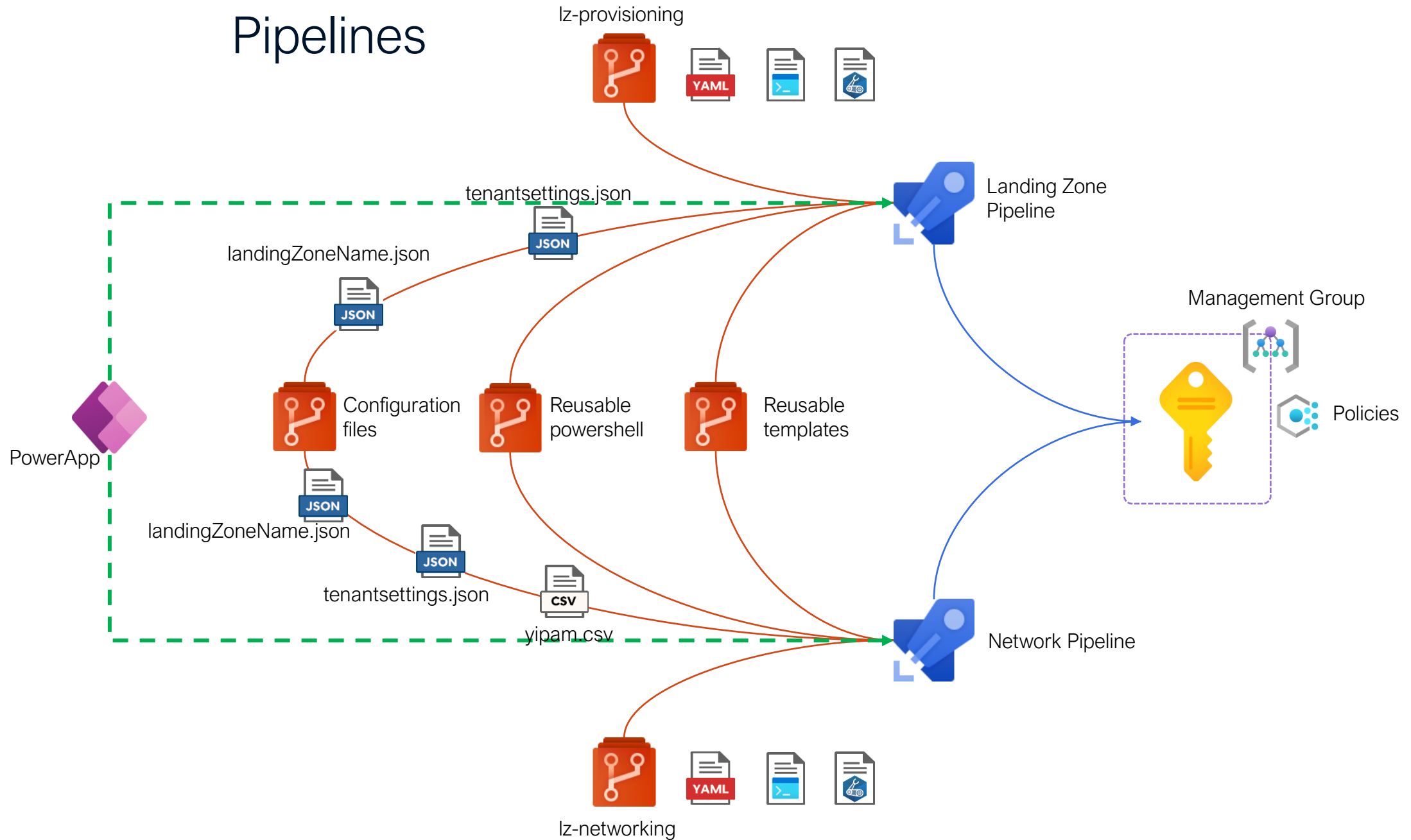
```



landingZoneName.json



# Pipelines





# What comes out of the vending machine

## Governance / Security

Defender for Cloud



Security



Budget



## IAM / Access Control

EntraID Groups



RBAC/PIM



LightHouse



Activity log



Diagnostic Settings



Platform Alerts\*\*

## Logging and monitoring



Networking



Private DNS



Peering

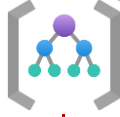
## Network / connectivity

# Policy deployment



Tenant Root Group

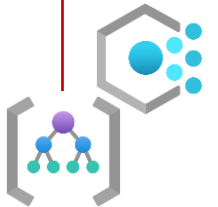
Eunomia



- Diagnostic settings
- Defender for Cloud
- Azure Security Benchmark
- Subscription Activity Log
- Register Private DNS

- Networking
- Naming
- Tagging
- No public IP
- Public Access Deny

Platform



LandingZones



- Security settings
- Networking
- Naming
- Tagging

Sandbox



- Audit
- Security settings
  - Naming
  - Tagging
  - Deny peering
  - Deny gateway

Private

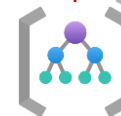


- No public IP
- Public Access Deny

Public

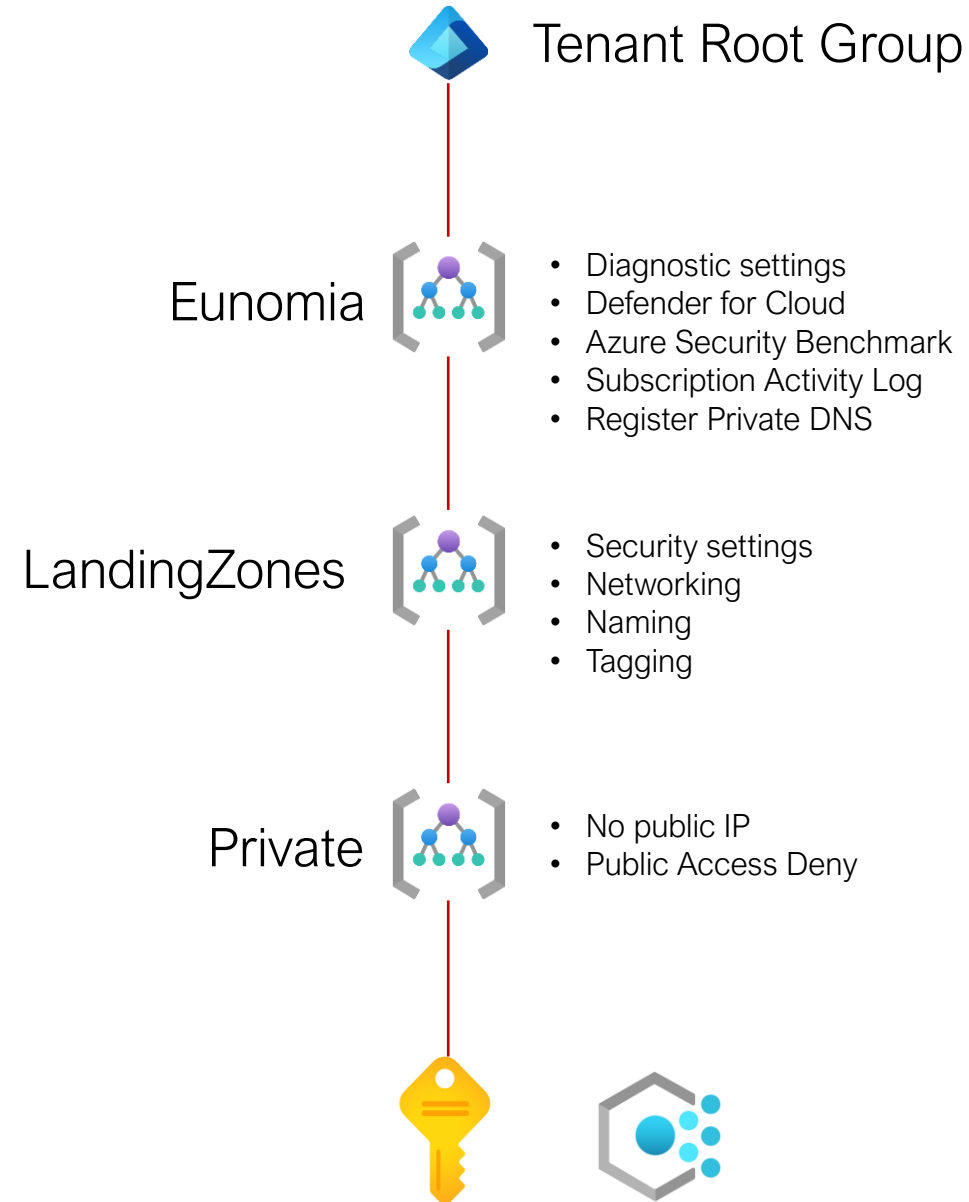


<workload N>



- No public IP
- Public network Access Deny
- Defender for Containers
- AKS Restrictions

# Policy deployment





Demo – Deployment

# What is next for our vending machine

- Policy refresh EPAC
- Compare notes with Microsoft GitHub repositories
- New features in Bicep
- Update API versions/code maintenance
- Common services
- No more YIPAM
- Additional self-service options



# Links

Blog Post:

<https://medium.com/sparebank1-digital/azure-landing-zone-vending-part-1-4a9333dc4569>  
<https://medium.com/sparebank1-digital/azure-landing-zone-vending-part-2-ba60d29984ec>  
<https://medium.com/sparebank1-digital/azure-landing-zone-vending-part-3-d9776ae79d57>

ALZ-Bicep:

<https://github.com/Azure/ALZ-Bicep>

Bicep LZ Vending:

<https://github.com/Azure/bicep-lz-vending>

CARML:

<https://github.com/Azure/ResourceModules>

EPAC:

<https://azure.github.io/enterprise-azure-policy-as-code/>

Cloud Adoption Framework: <https://learn.microsoft.com/en-us/azure/cloud-adoption-framework/overview>



LinkedIn: Roger



LinkedIn: Erhan Sanlioglu

Automating Standardization - Azure Landing Zones Vending Machine