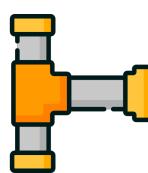


# One Pipeline to Rule Them All

DevOps & Platform Engineering



# Andrei Kniazev

- Cloud Ops & Platform Engineer at Salta Group
- 14 years of Experience as a Developer
- 5 years Experience with Azure
- 6 Years as Indie Game Developer (2 Games Published)
- Huge fun of Extreme Programming and Continues Delivery
- Creator of the LoreHub
- Open Source Contributor

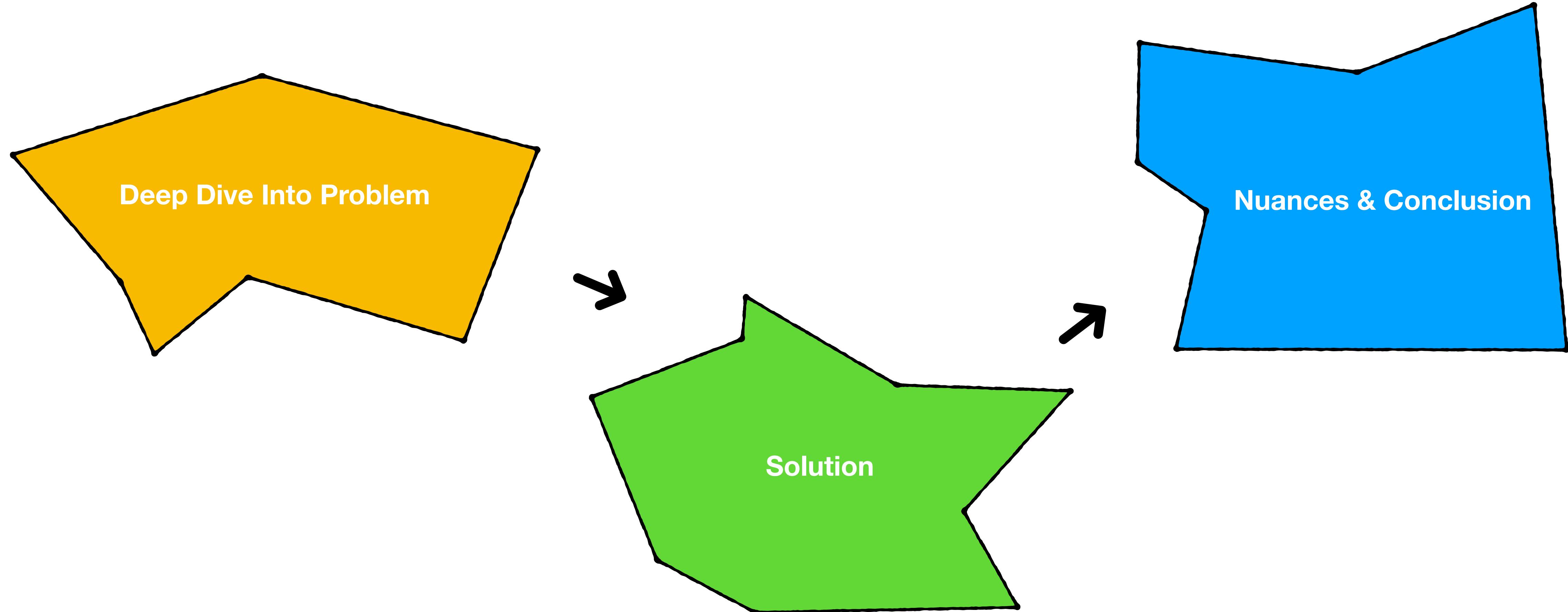


<https://www.linkedin.com/in/andrey-kniazev>

<https://github.com/worldpwn>

<https://dev.to/worldpwn>

# Agenda



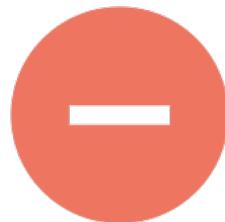
# Problem #1 Humans



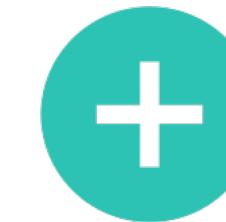
**BA → User Story → Code → Test Automation → Pipeline → Deploy → Infra → DB → Security → Monitoring**



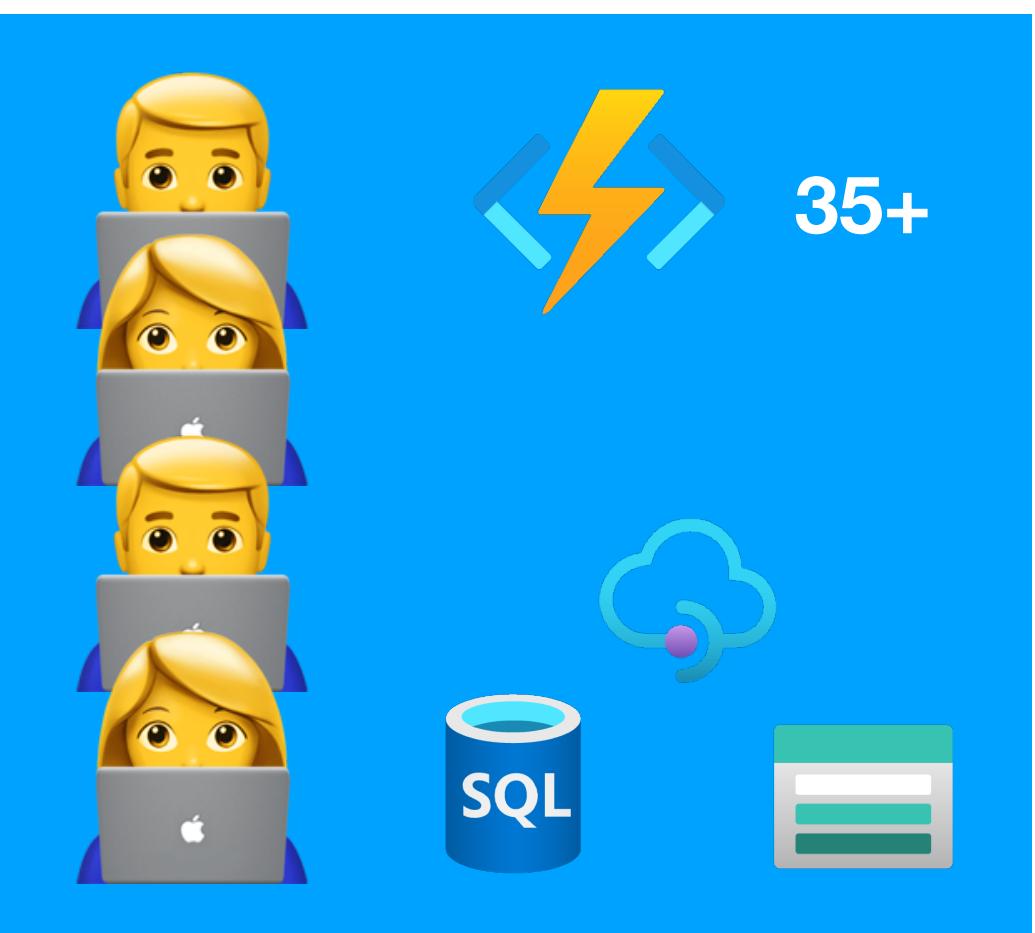
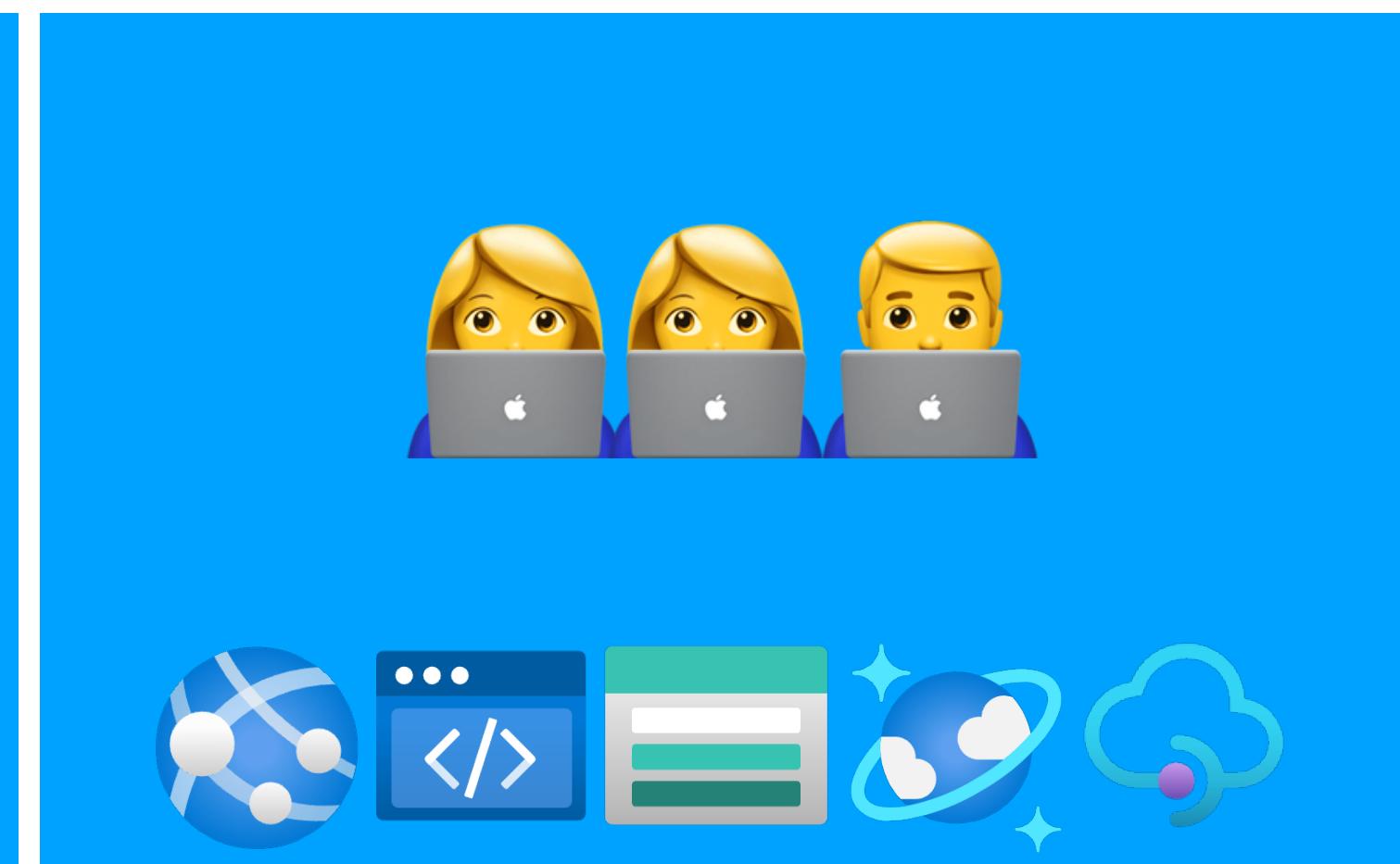
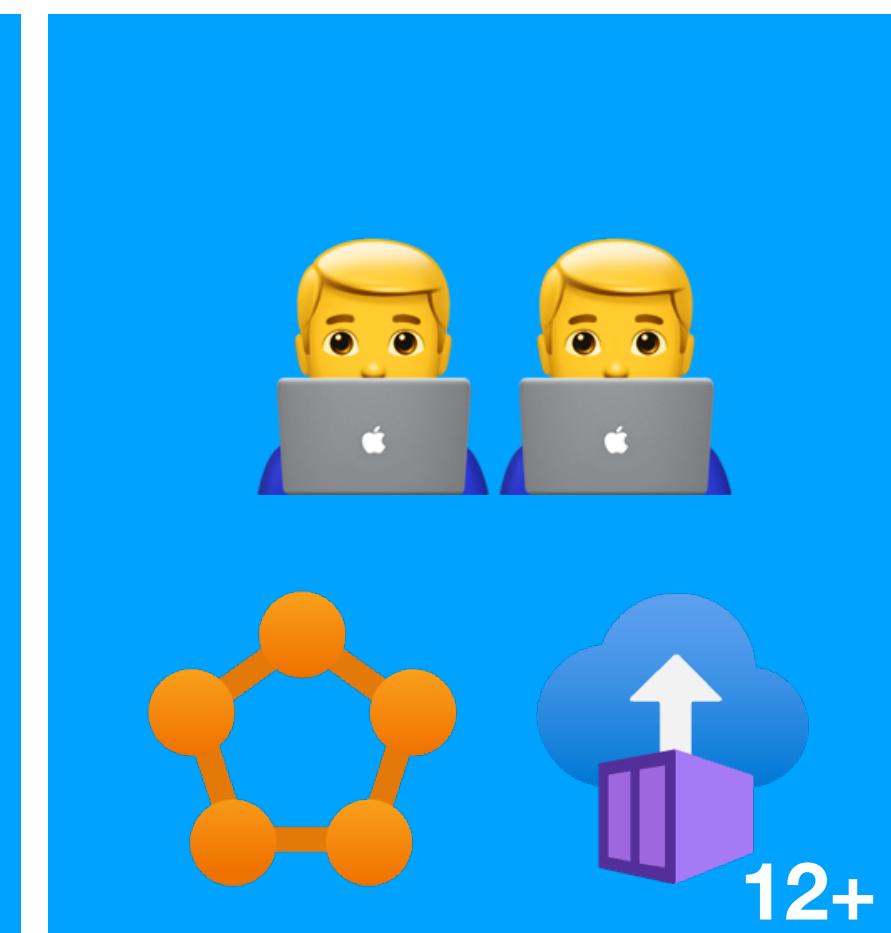
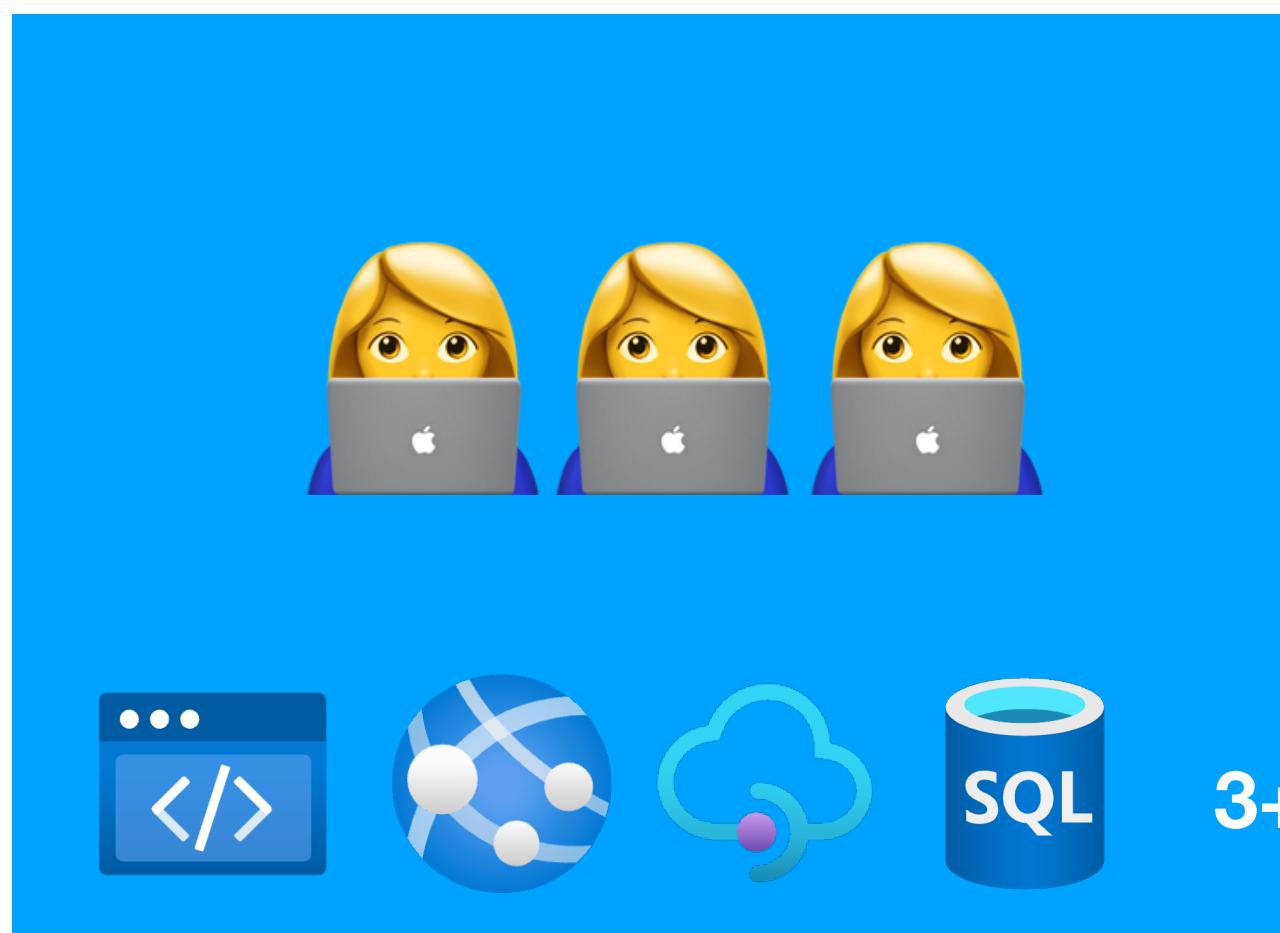
# Problem #2 Not Enough Humans



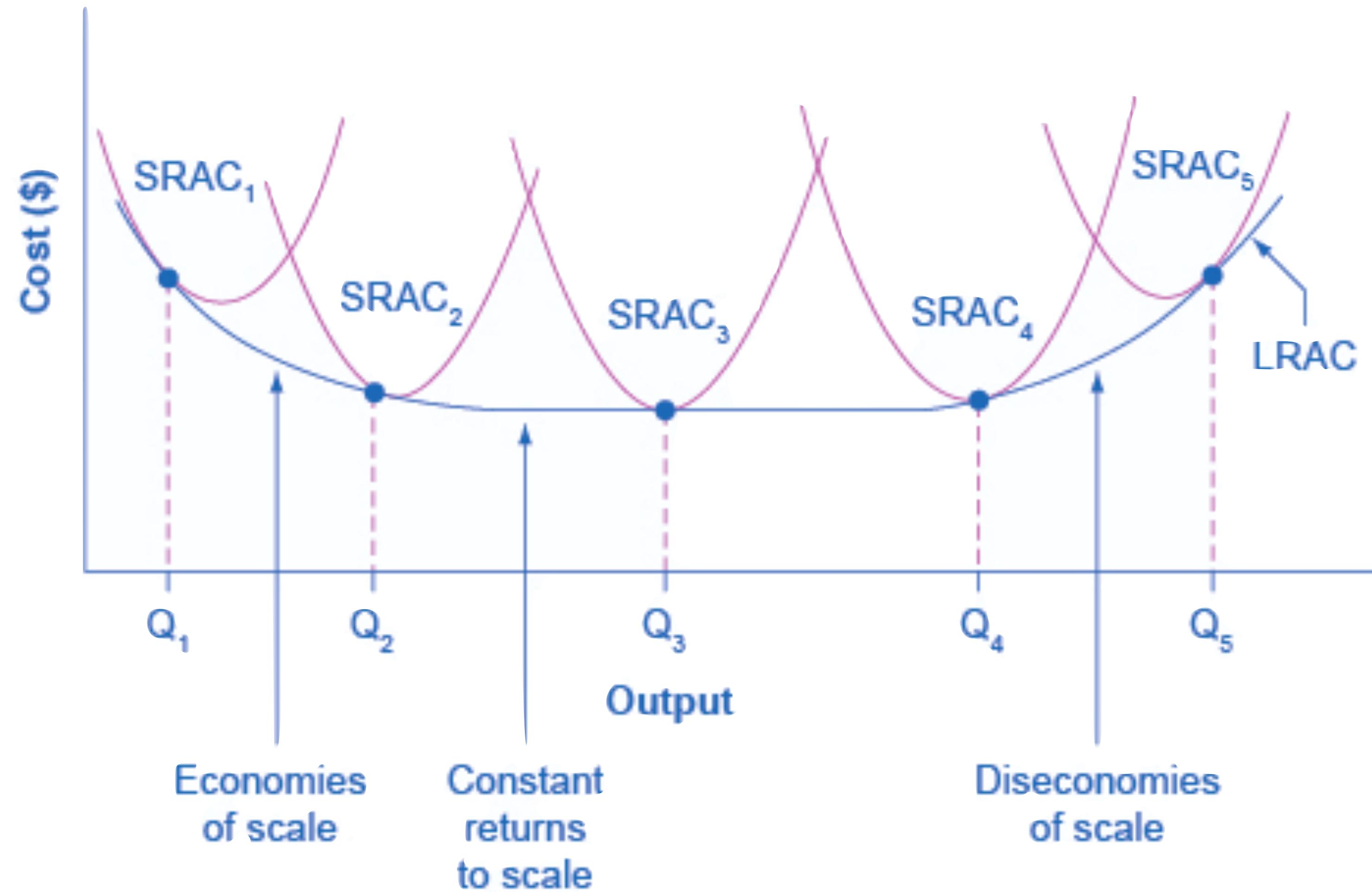
- Not the same Way of Work
- Different Branching Strategy
- Lack of Engineers



- + Everything is in Azure
- + Everything is in Azure DevOps
- + Dotnet almost everywhere



# Economy of Scale & Standardisation



# The Balance

Ops | Devs

DevOps

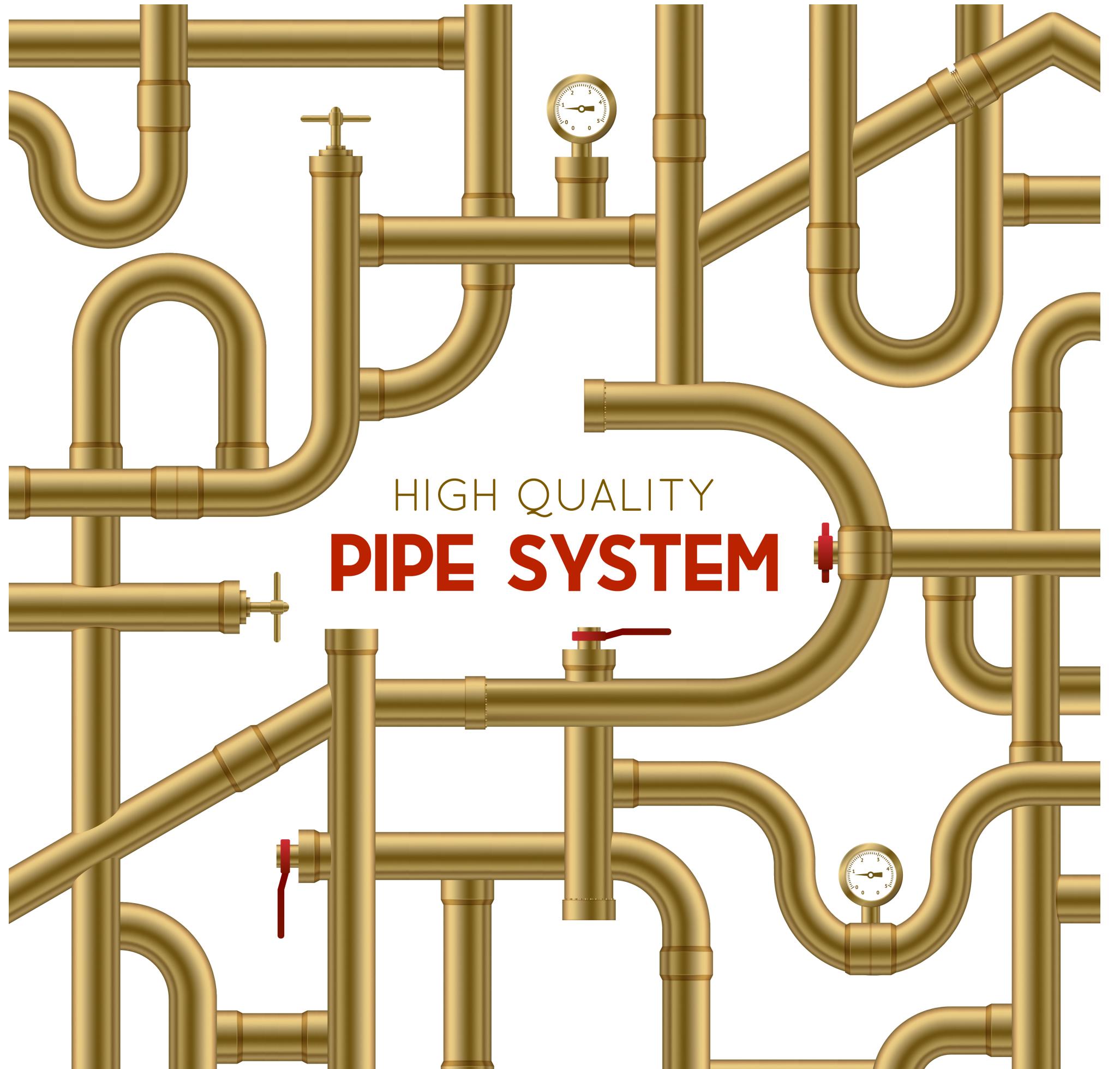


Factory

Craft

# One Pipeline

- Pipeline as a Product
- Developers' Experience.
- Follow best practices.
- No Silo.
- Internal Open Source.
- Don't abstract too much.
- Composable.



# Documentation

CloudOps ⋮

main ⋮

Filter pages by title ×

ver. 5.7 New Frontend CI co...

**ver. 5.6 Inventory**

ver. 5.5.1 Fix Wildcard for R...

ver. 5.5 Fix NuGet publish

ver. 5.4 Publish NuGets to ` ...

ver. 5.3 Test Paths

ver. 5.2 Test Report and Co...

ver. 5.1 Availability Test

ver. 5.0 Manual Approval

## ver. 5.6 Inventory

Andrei Kniazev 21 Apr

No Migration Needed

**New Component:** src/Pipelines/Templates/Stages/inventory.yml

```
resources:
  repositories:
    - repository: DevOps
      type: git
      name: Opleiding/SLT.Blueprint.CICD
      ref: refs/tags/v5.6

stages:
  - template: Pipelines/Templates/Stages/inventory.yml@DevOps
    parameters:
      metadata: [REDACTED]
      pipelineYmlFilePath: azure-pipelines.yml
      folderWithBackendProjects: src
```

### Known Issues

- if **resourceGroupName** parameter is using yml variable like this `${{ variables.baseName }}` the script will fail you should use like this `$(baseName)`. 404735 [Python Script] Inventory script cannot parse rg if it uses variable New

### Example PR

Add Inventory: [https://\[REDACTED\]/pullrequest/12044](https://[REDACTED]/pullrequest/12044)

```

resources:
  repositories:
    - repository: DevOps
      type: git
      name: Opleiding/SLT.Blueprint.CICD
      ref: refs/tags/v5.6

stages:
  - template: Pipelines/Templates/Stages/ci.yml@DevOps
    parameters:
      dotNetSdkVersion: 6.0.x
      pathToTests:
        - src/ProductsService.UnitTests/ProductsService.UnitTests.csproj
      pathToAzureFunctionToPublish: src/ProductsService/ProductsService.csproj

  - template: Pipelines/Templates/Stages/cd-connector.yml@DevOps
    parameters:
      stage: t
      resourceGroupName: <>
      azureServiceConnection: <>
      azureSubscription: <>
      baseName: <>
      bicepFilePath: cd/main.bicep
      appName: <>
      bicepDeployParameters: appPlan=S1
      shouldDeploy: true

  - template: Pipelines/Templates/Stages/cd-connector.yml@DevOps
    parameters:
      stage: a
      resourceGroupName: <>
      azureServiceConnection: <>
      azureSubscription: <>
      baseName: <>
      bicepFilePath: cd/main.bicep
      appName: <>
      bicepDeployParameters: appPlan=S1 numberOfInstances=2
      shouldDeploy: true
      requireManualApproval: true
      addAvailabilityHealthCheck : true

```

## 1. Reference to Generic Pipeline

## 2. Inventory Stage

## 3. CD to Test Environment

## 4. CD to Acceptance Environment

# Explicit vs Implicit

```
- template: Pipelines/Templates/Stages/slot-swap.yml@DevOps
  parameters:
    azureServiceConnection: <>
    resourceGroupName: <>
    appName: <>
    slotName: staging
    azureSubscription: <>
    slotHealthCheckEndpoint: https://app-prod-staging.azurewebsites.net/api/health
    healthCheckEndpoint: https://app-prod-p.azurewebsites.net/api/health
```



# Comparison

	Generalisation	Specialisation
Tools	<b>Generic Pipelines &amp; Templates</b> Increase Quality Easy to Maintain Deeper Understanding	<b>Custom Pipelines &amp; Templates</b> Zoo of Tools Harder to Maintain Lack of Knowledge & Skills Lower Quality
Engineers	<b>DevOps</b> Decrease Velocity Lower Quality Better understanding of e2e (?)	<b>Platform Engineer &amp; Partial DevOps</b> Increase Velocity Deeper Understanding Decrease Burnout (?)

**FIN**