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# CNCF Serverless Workflow with Kogito and Knative

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# Agenda



- CNCF Serverless Workflow Specification
- Kogito Serverless Workflow
- Use Case
- Building your first Workflow Service

# The CNCF Serverless Workflow Project

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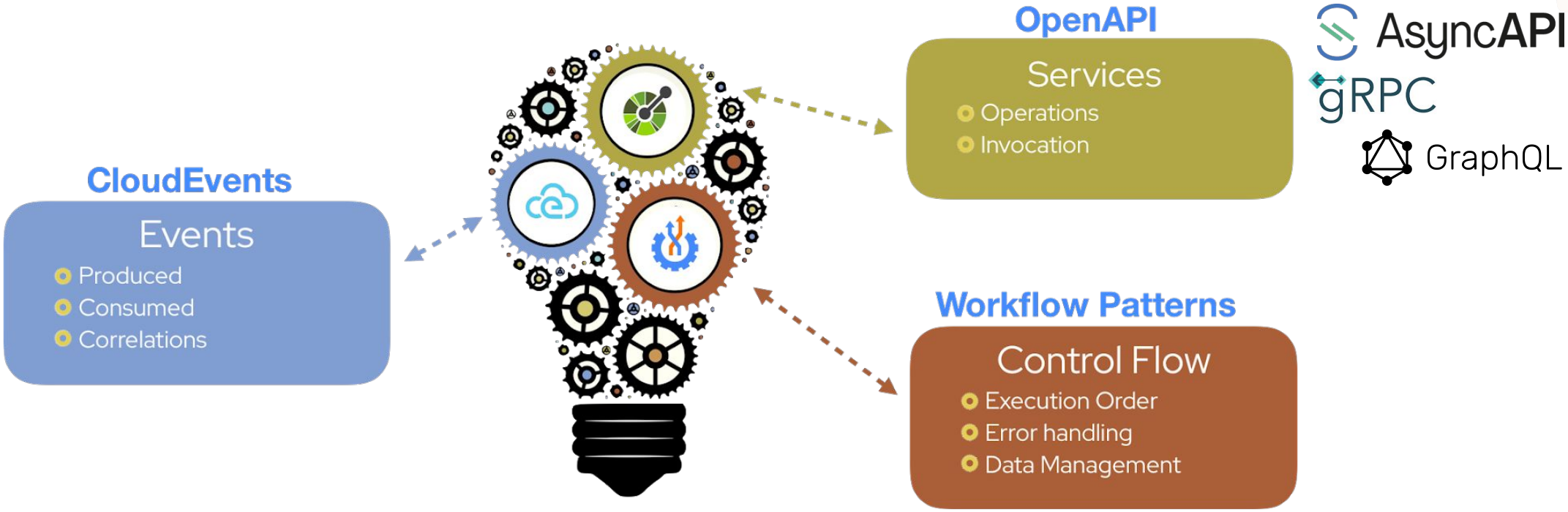
- CNCF Sandbox Project
- Vendor neutral DSL to describe Workflows
- Based on standards
- Collaboration among many vendors and projects

Red Hat · Neuroglia · Temporal · HUAWEI · NOKIA · OpenEnterprise · EventMesh · FaasNet · tantl

Visit us to know more about the project! https://serverlessworkflow.io/

# The CNCF Serverless Workflow Project

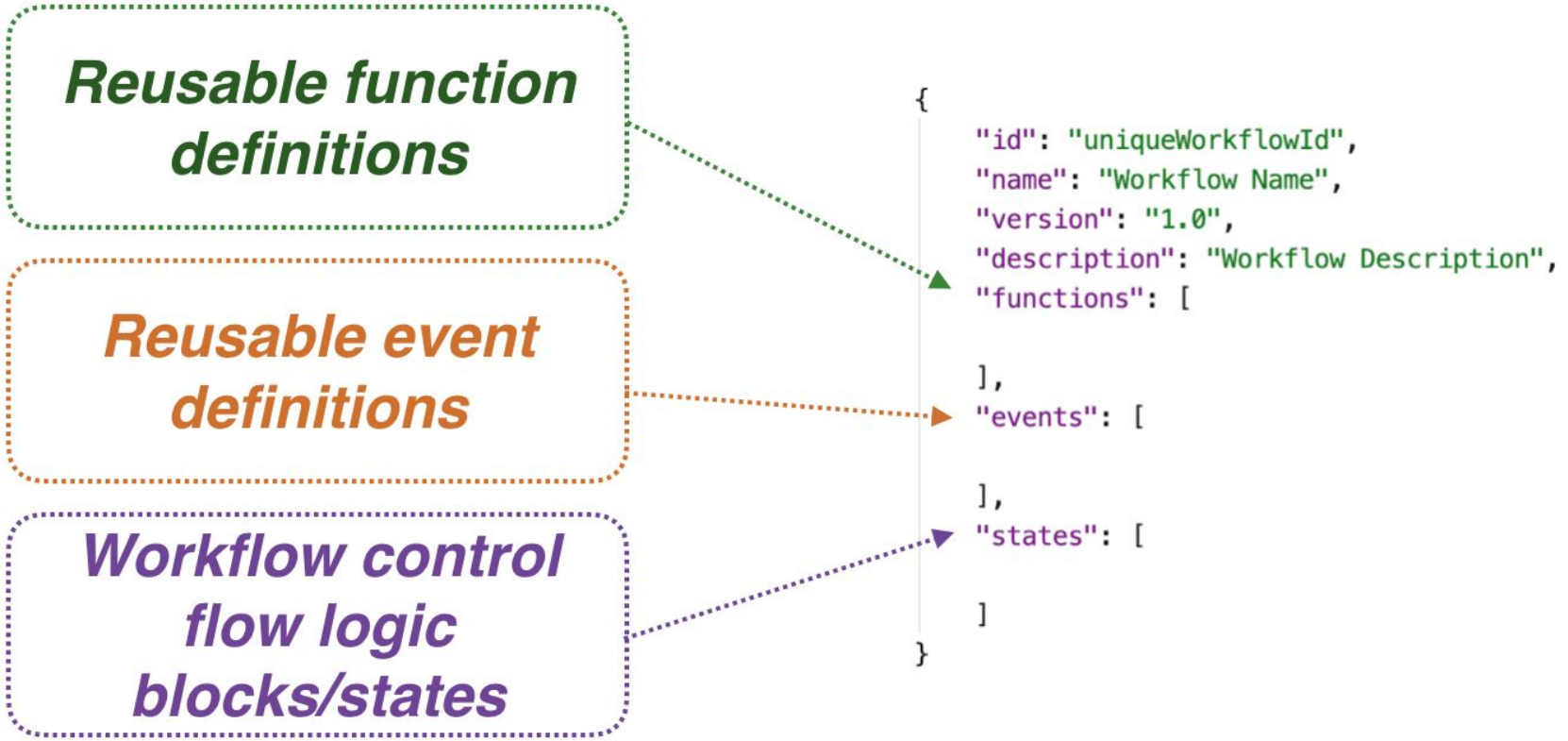





Source: https://github.com/serverlessworkflow/specification/blob/main/specification.md#focus-on-standards

# The CNCF Serverless Workflow Project



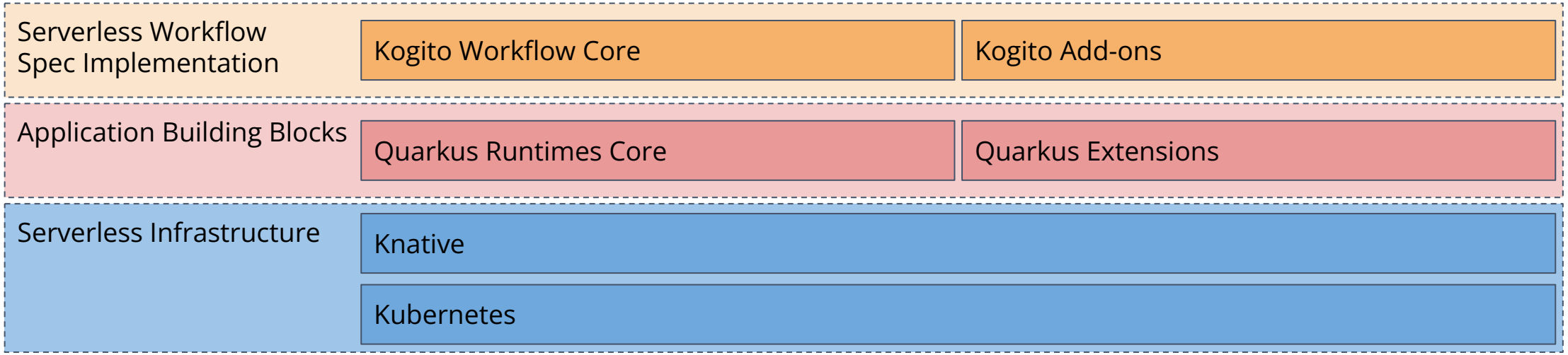


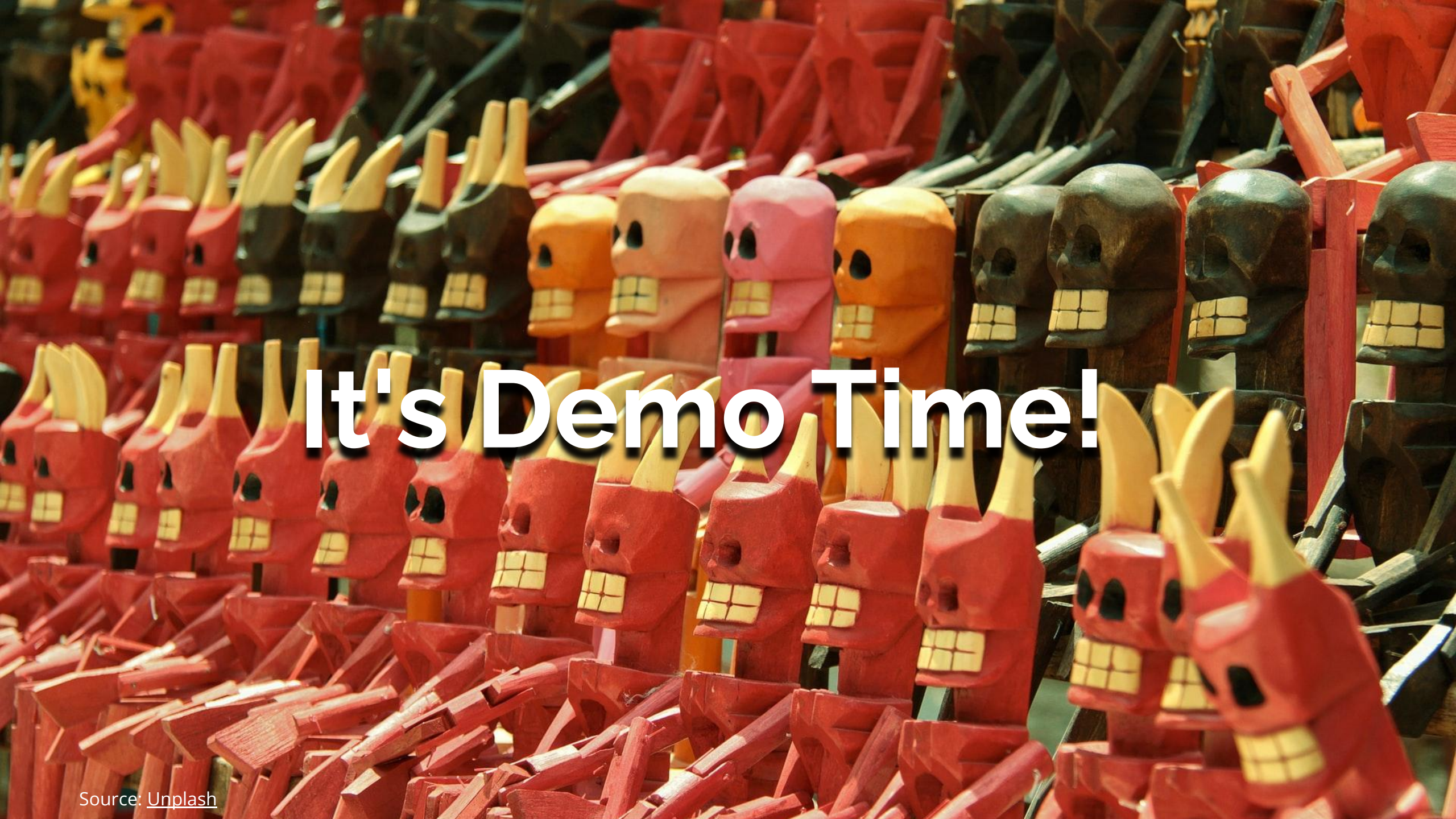

Source: https://github.com/serverlessworkflow/specification/blob/main/specification.md#workflow-definition-structure

# Kogito Serverless Workflow



- Red Hat implementation of the CNCF SW Spec
- Based on battle tested technology
- Running on top of Quarkus and Knative



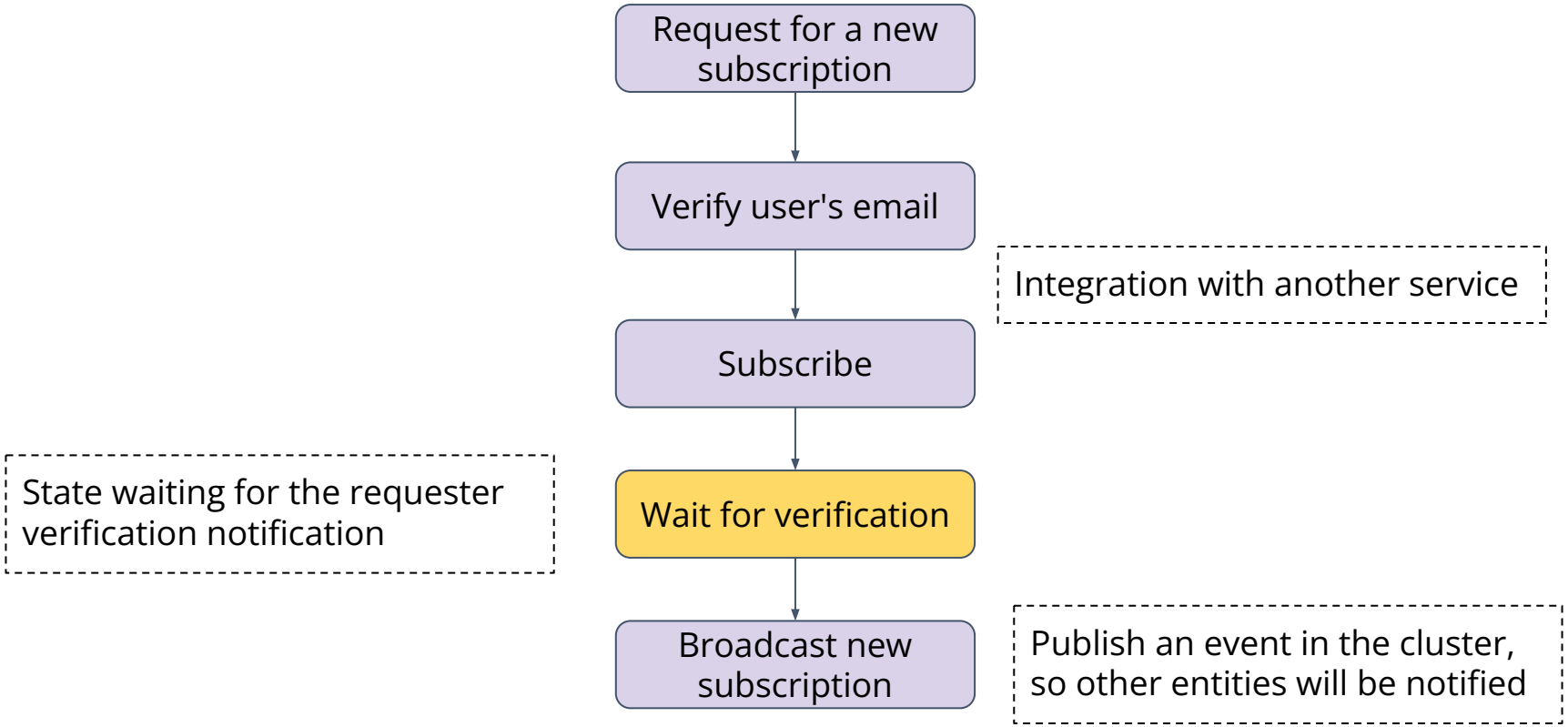



Source: Unplash

# Newsletter Subscription Use Case

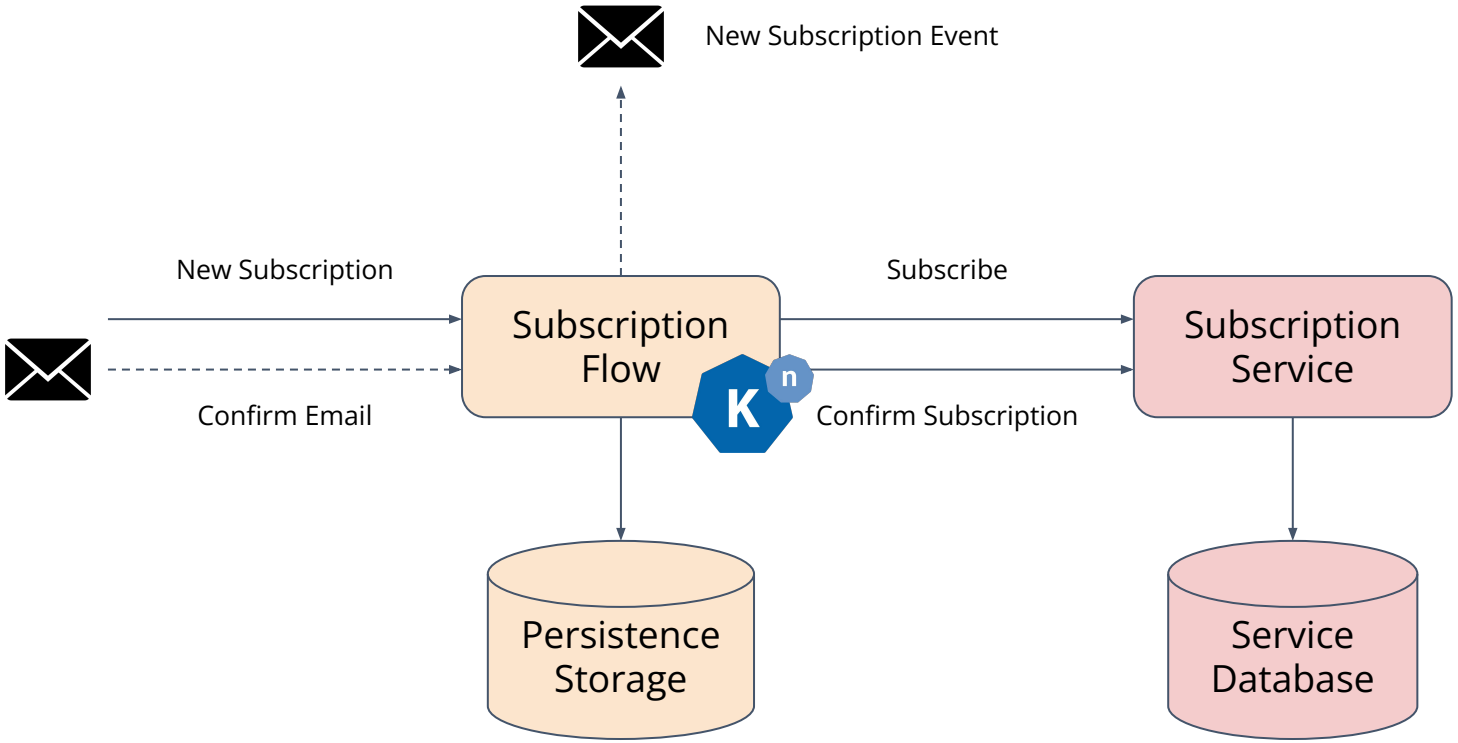


Example repo



# Newsletter Subscription Use Case - Infrastructure





# Creating your first workflow



1. Prerequisites:
   - Java SDK
   - Maven
   - Quarkus CLI
2. Use Quarkus CLI to create and build your project
3. Create your workflow file
4. Build and deploy on Knative

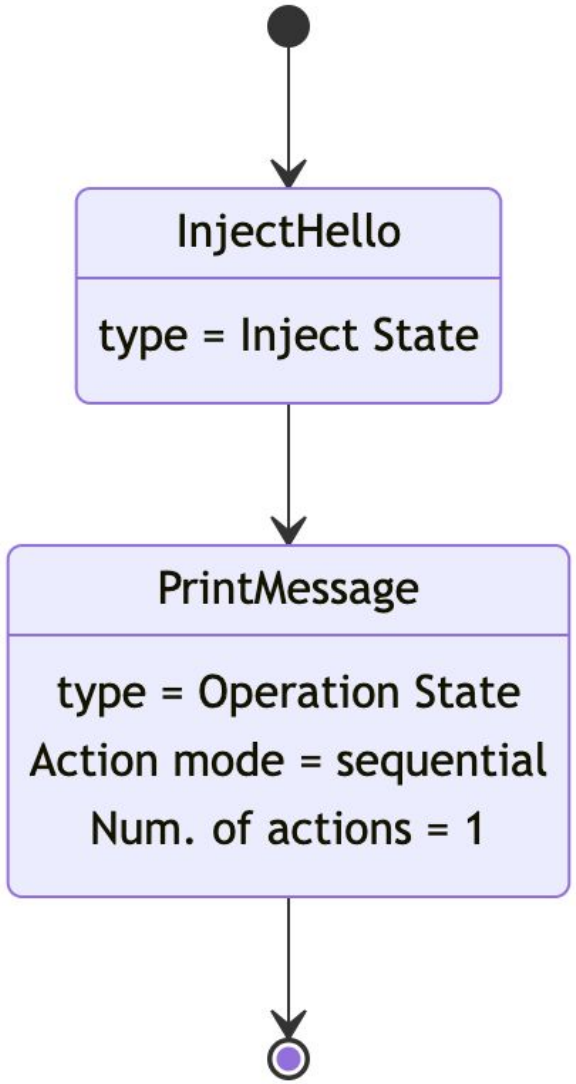
Scan this QR code to go to the example project

# Create the project



```
quarkus create app \
-x=kogito-quarkus-serverless-workflow\
  -x=quarkus-container-image-jib\
  -x=quarkus-resteasy-jackson\
  -x=quarkus-smallrye-openapi\
  -x=kubernetes\
   org.acme:my-first-ksw:1.0
```

# Create the workflow




```yaml
id: greetings
version: '1.0'
name: Hello Person
start: InjectHello
functions:
- name: printOutput
  type: custom
  operation: sysout
states:
- name: InjectHello
  type: inject
  data:
    message: 'Hello '
  transition: PrintMessage
- name: PrintMessage
  type: operation
  actions:
  - name: print
    functionRef:
      refName: printOutput
      arguments:
        message: "${ .message + .name }"
  stateDataFilter:
    output: "${ { message: (.message + .name) } }"
  end: true
```

https://github.com/ricardozanini/my-first-ksw/blob/main/src/main/resources/greetings.sw.yaml

# Run it!


```
quarkus dev
```

# Build and Deploy the Workflow



```
eval $(minikube -p minikube docker-env --profile knative)

quarkus build \
  -Dquarkus.container-image.build=true \
  -Dquarkus.kubernetes.deployment-target=knative \
  -Dquarkus.container-image.group=dev.local

kubectl apply -f target/kubernetes/knative.yml
```

# Gracias!

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Kogito Blog

More Examples!

My LinkedIn