

Next generation **self-service models** for infrastructure



/thoughtworks

November 2025

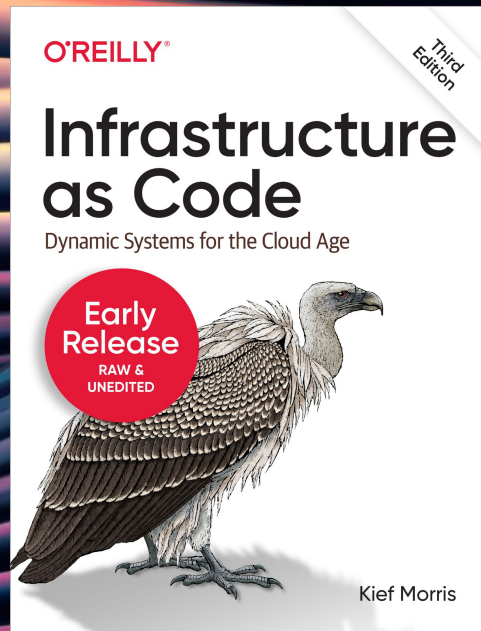
About me



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<https://thoughtworks.com>
<https://bit.ly/4qQrjxw>

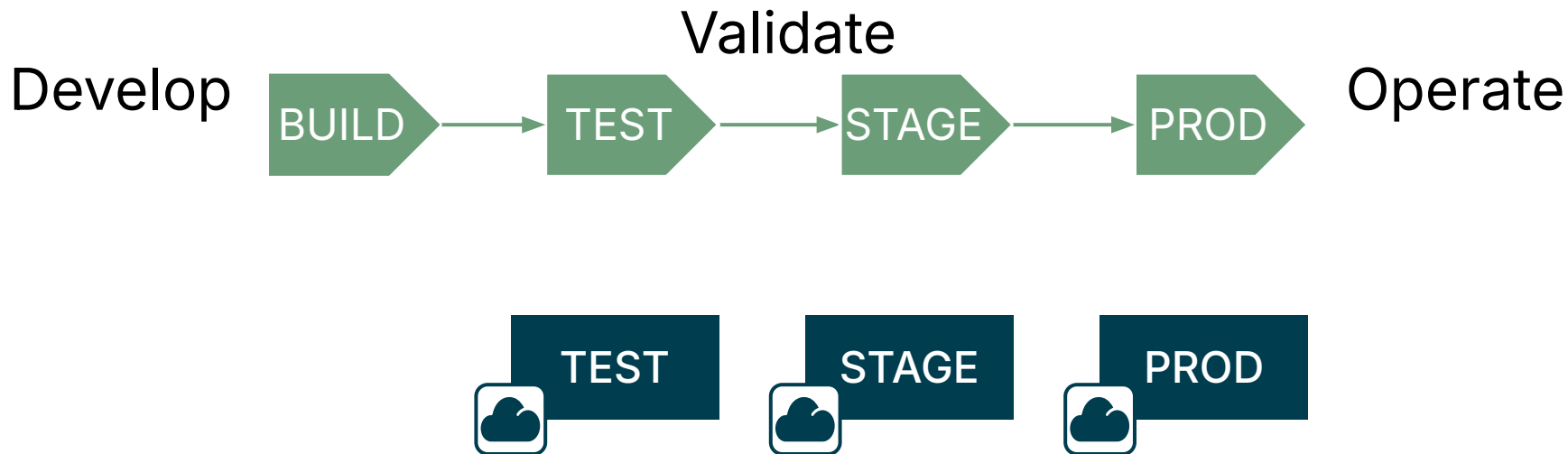
November 2025

We want to

Enable teams to deliver software services
effectively

By providing the infrastructure they need
when they need it

The software path to production

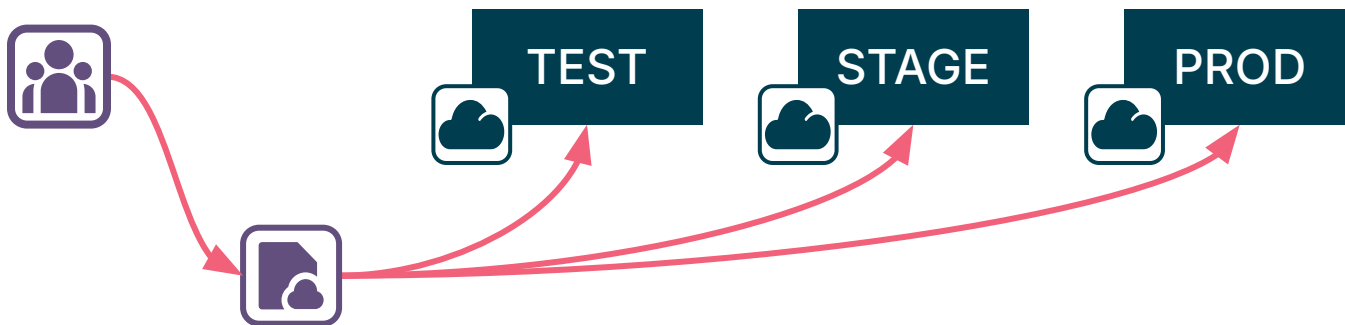


Path to production infrastructure

Day 1

Step 1: The infrastructure team builds the environments

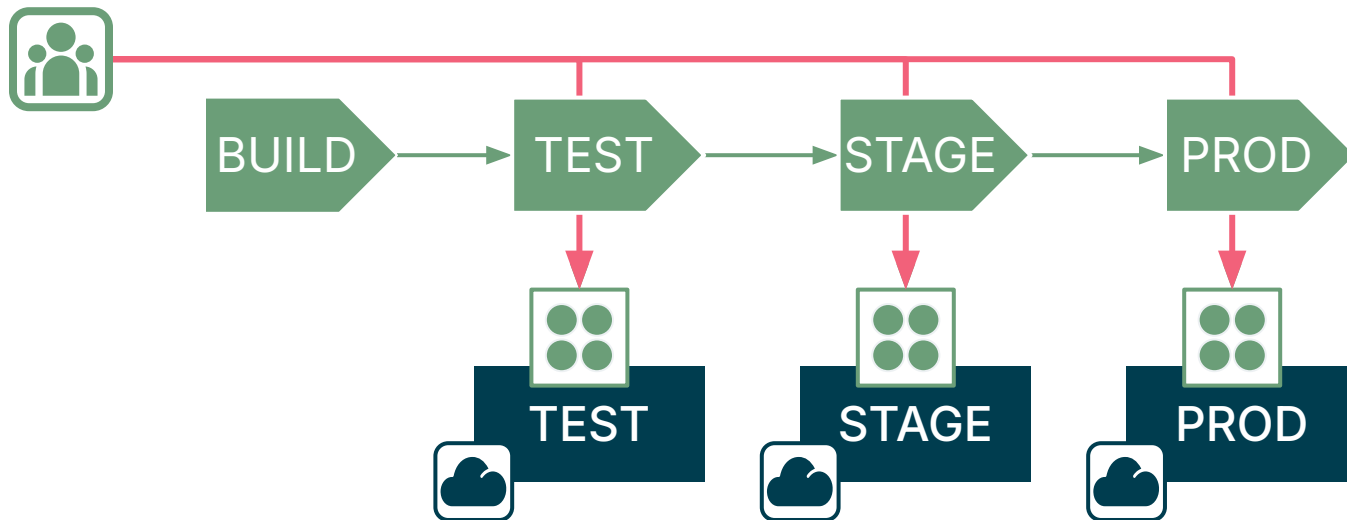
They use infrastructure code!



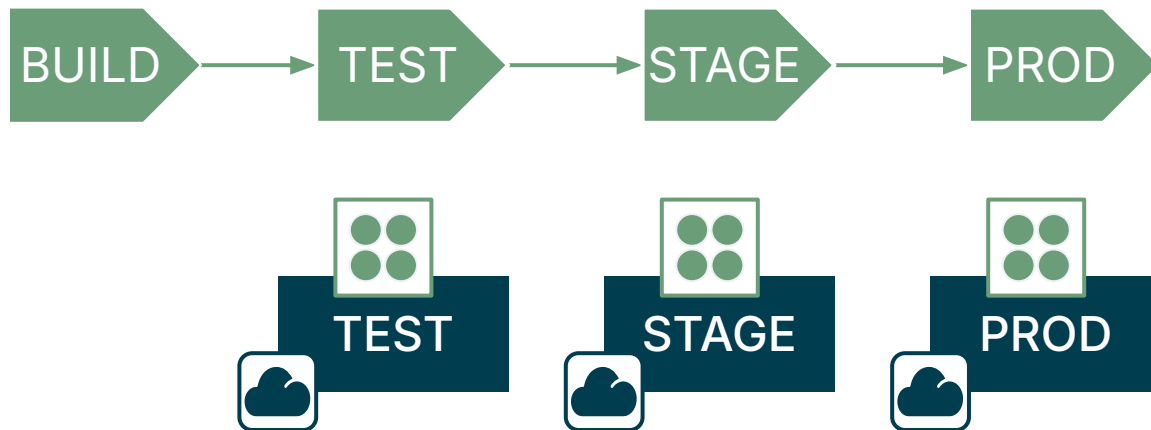
The infrastructure team is done. Bye!

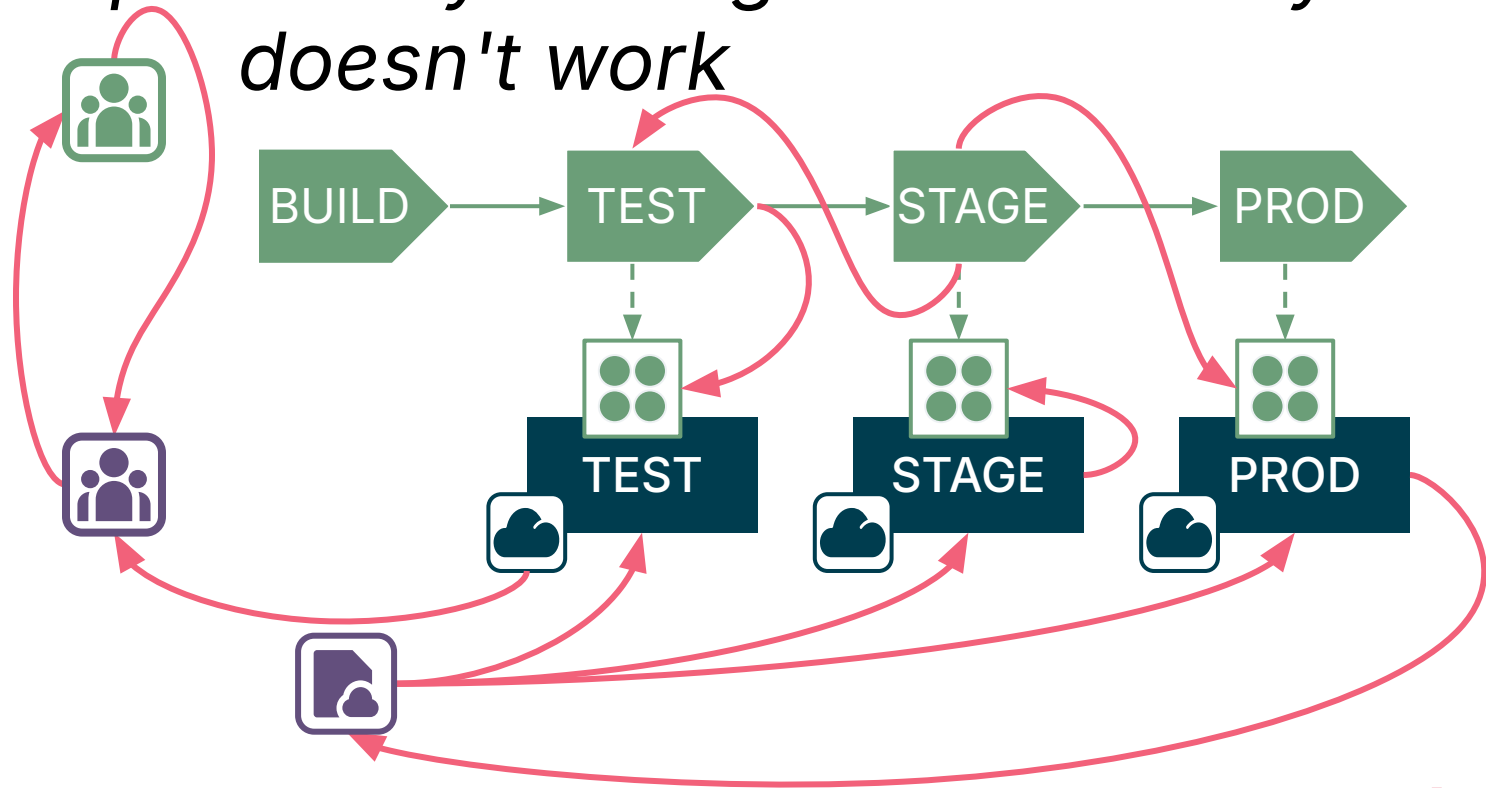


Step 2: The software team deploys the software



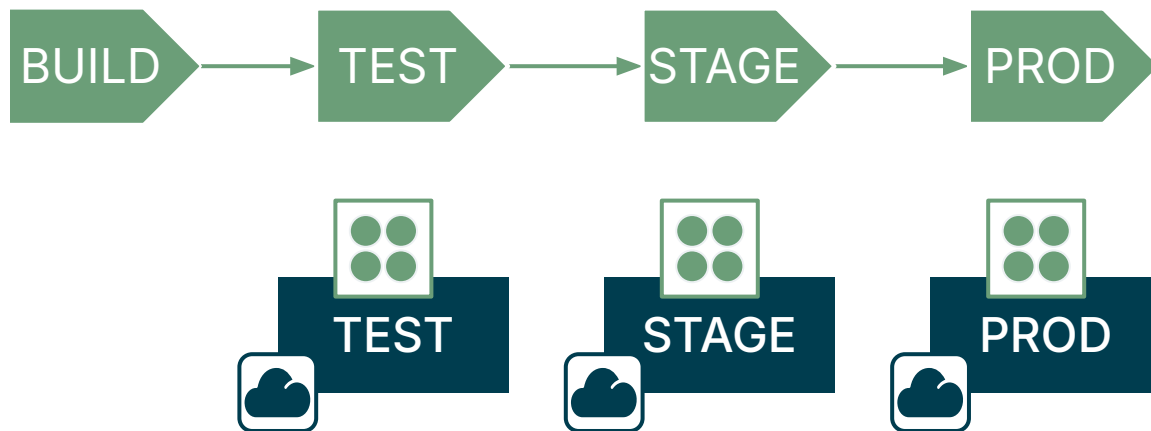
Step 3



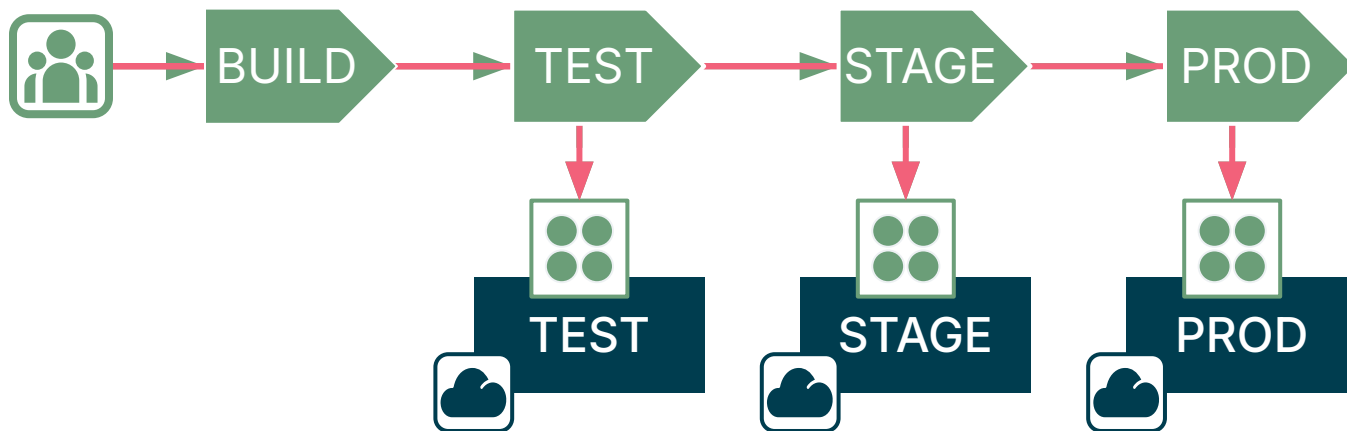
[illegible]

Then: the infrastructure is all done!

Fixed everything!

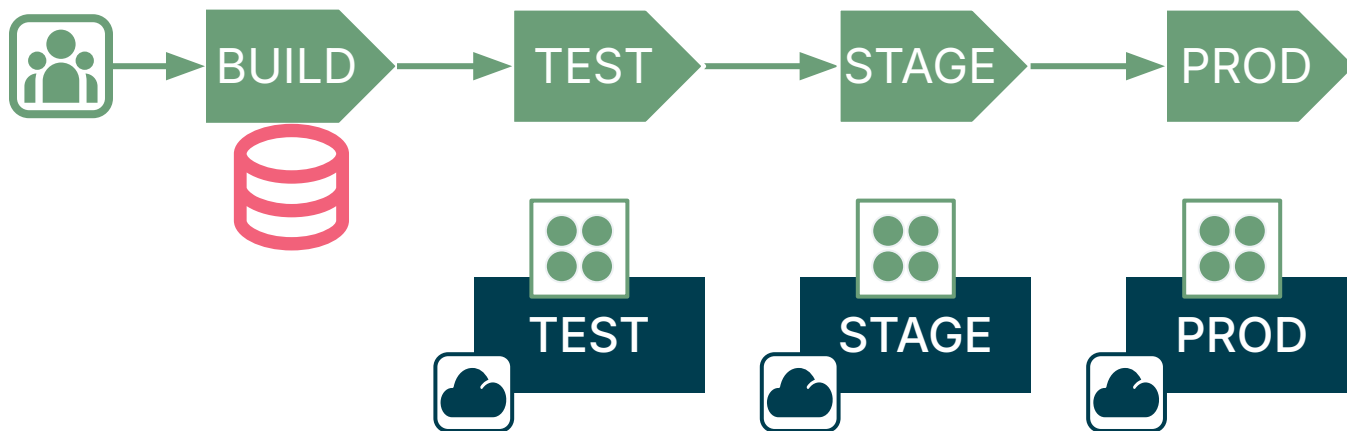


*Step 4+ the software team deploys changes whenever they want. **Self-service!***



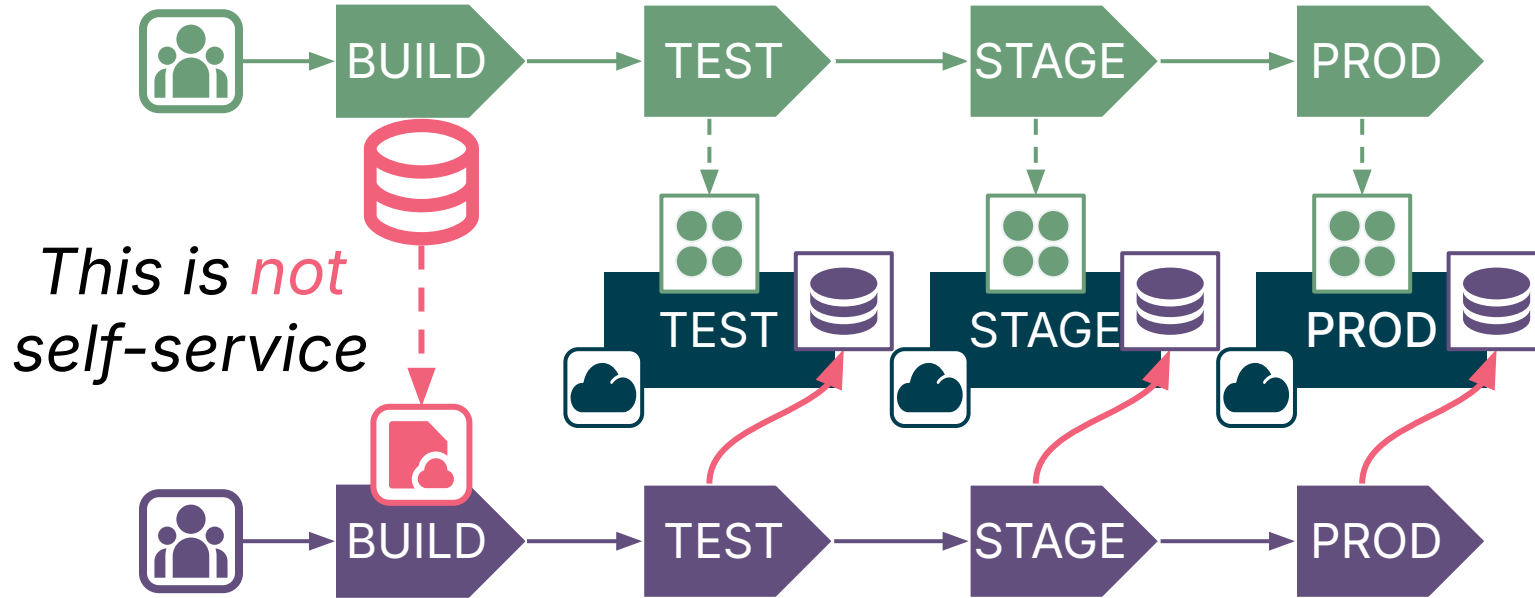
Day 2

~~The software team deploys application changes whenever they want (self service)~~

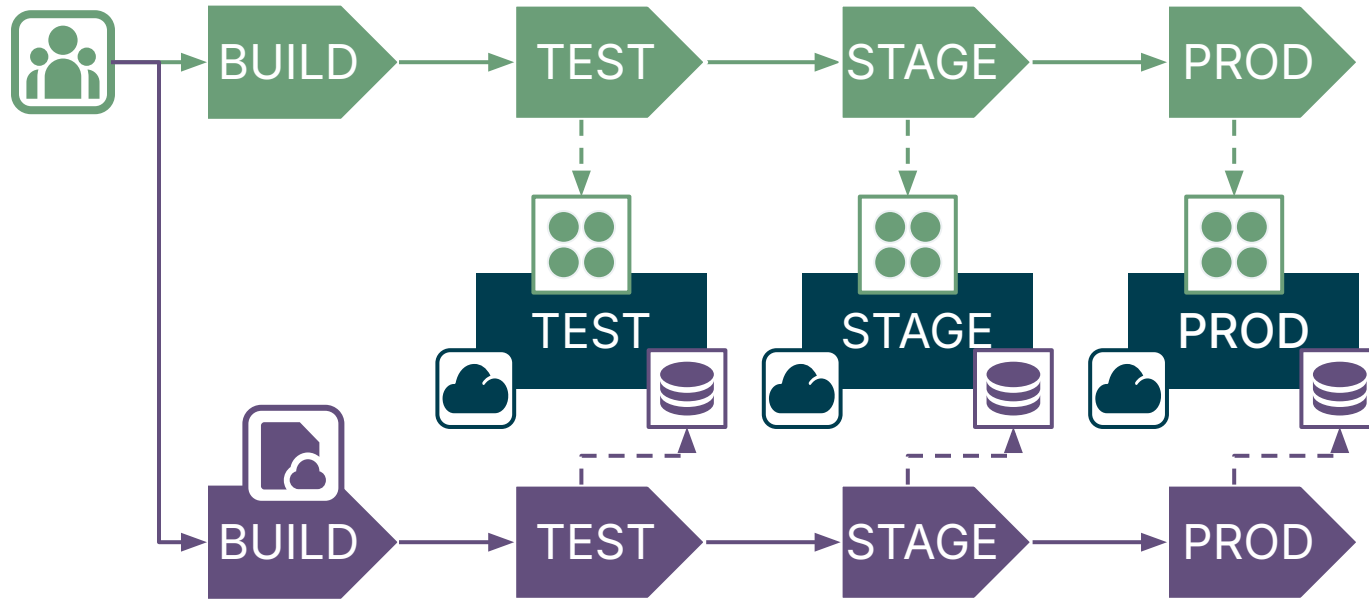


"We need to add a new database"

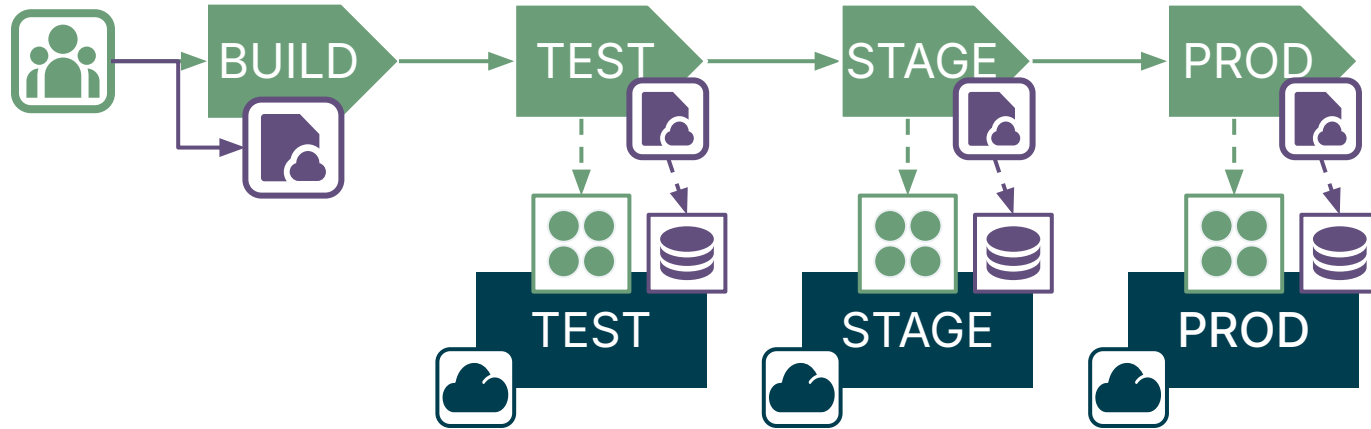
The infrastructure team adds the database to the infrastructure code and deploys it to all of the environments



Can we make infrastructure changes self-service, too?



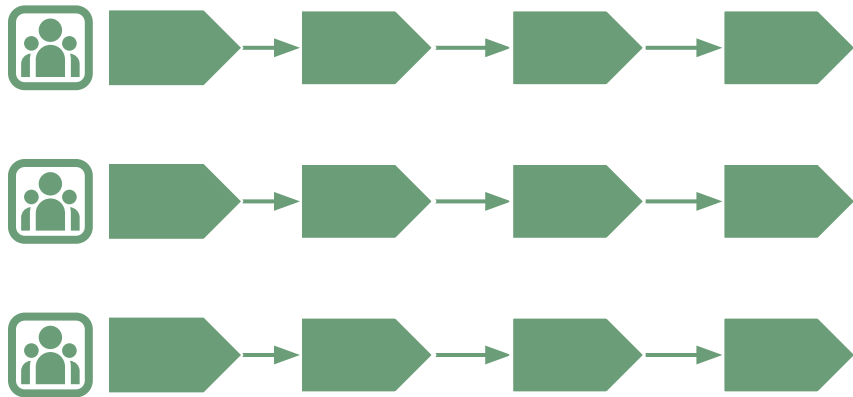
Can we make infrastructure changes self-service, too?



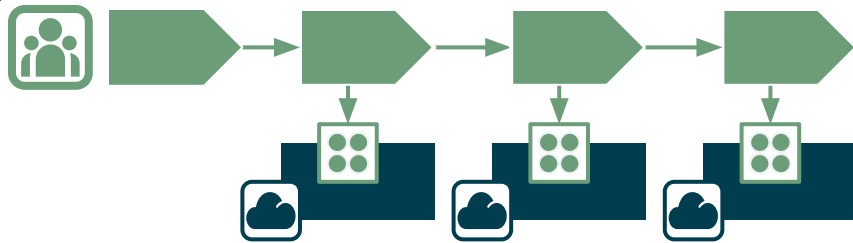
(For example, we can make it easy for developers to write infrastructure code)

Scaling to multiple teams

How do we scale to multiple software teams?

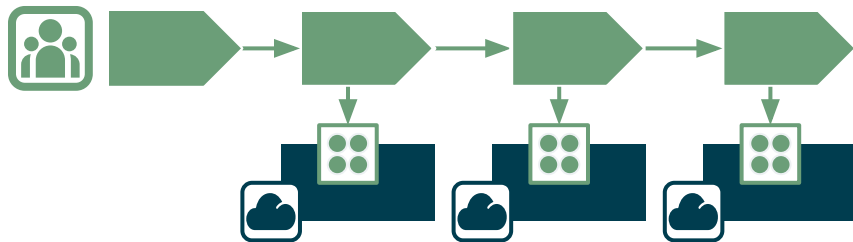


Could every software team manage their own environments?

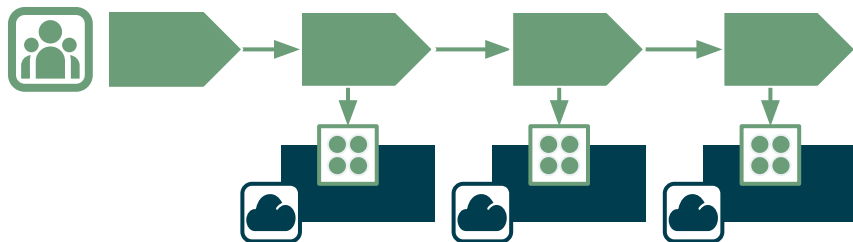


Skills and effort

Wasteful

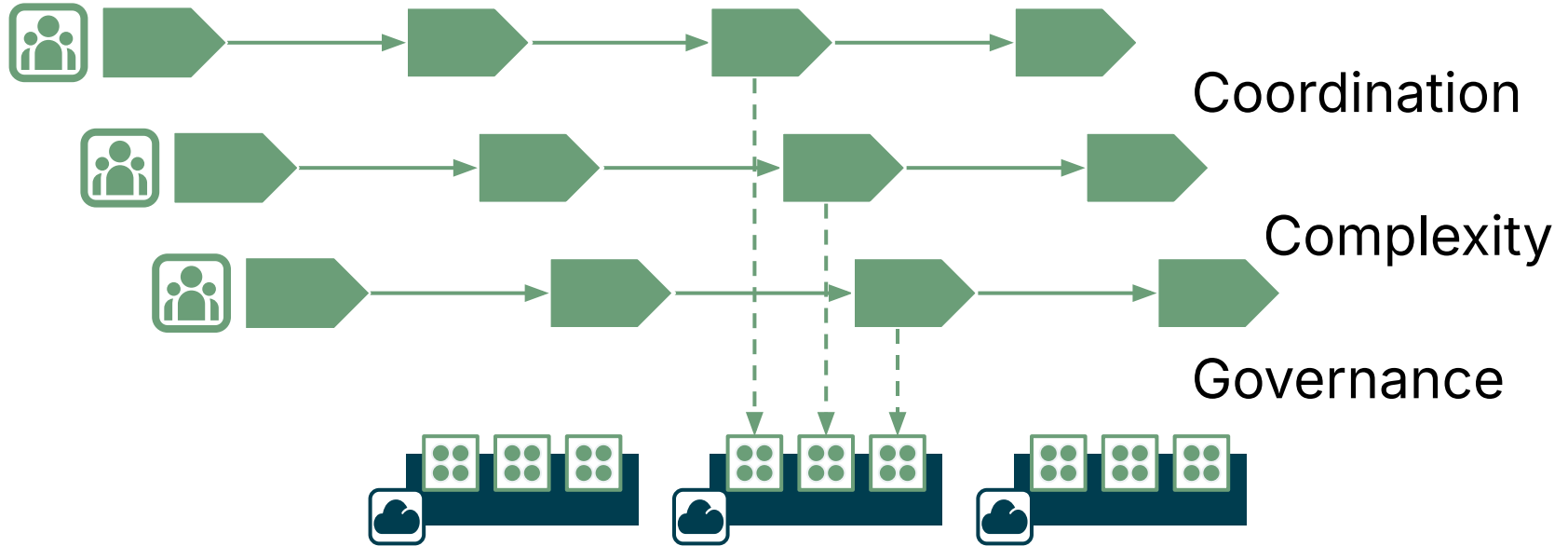


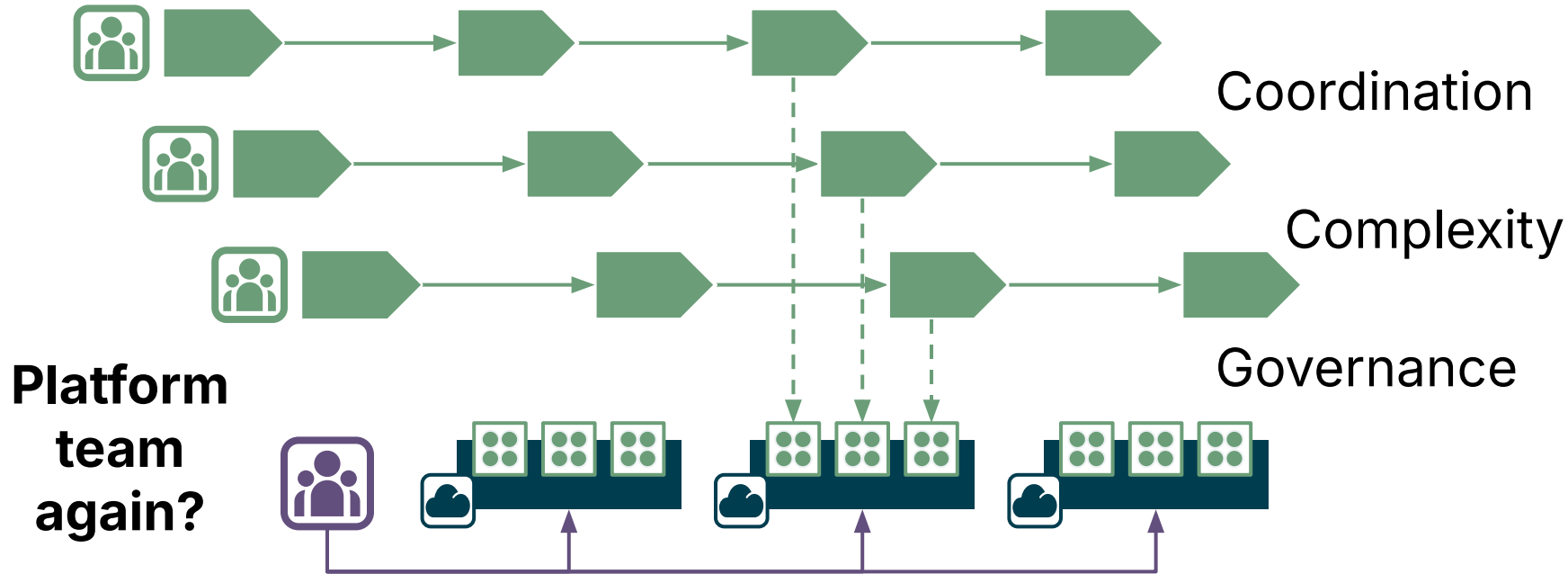
Inconsistent quality



Inconsistent governance

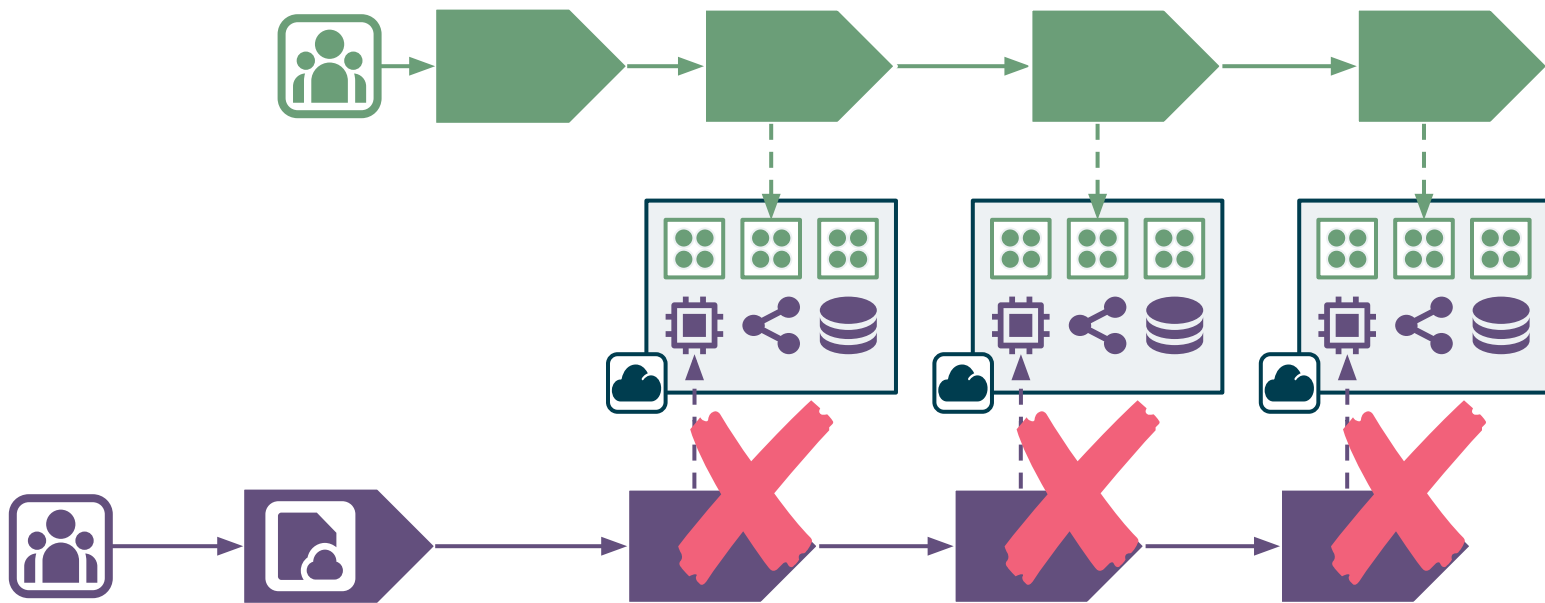
Can teams collaboratively own shared environments?



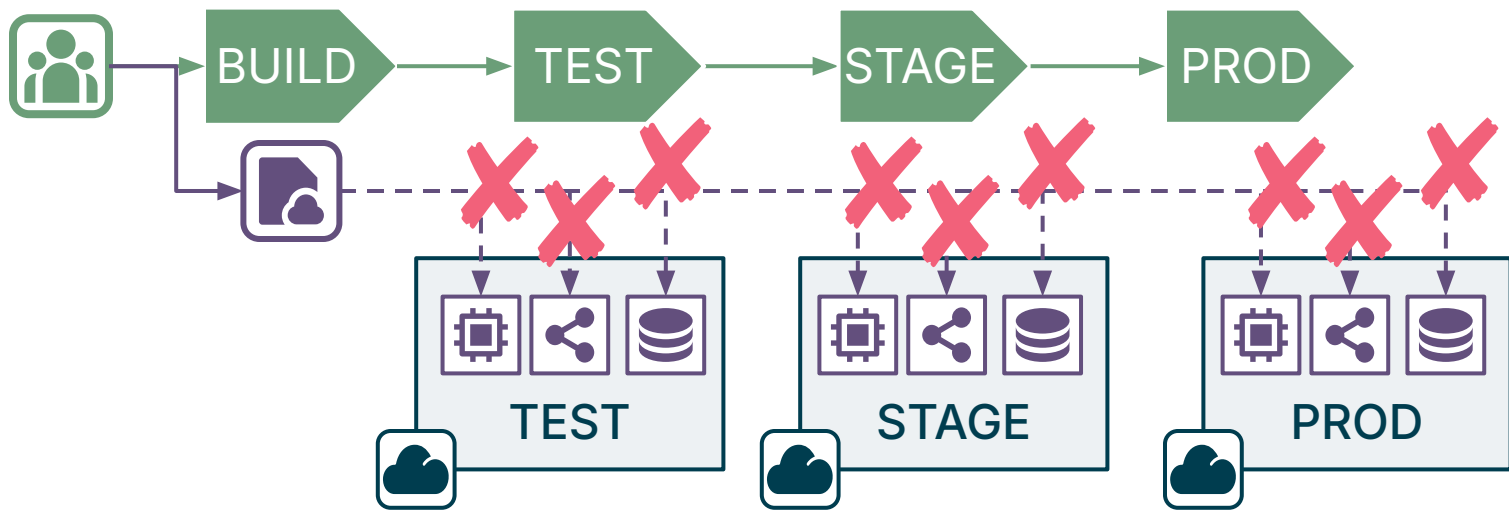


Enabling self-service for more complex infrastructure tasks

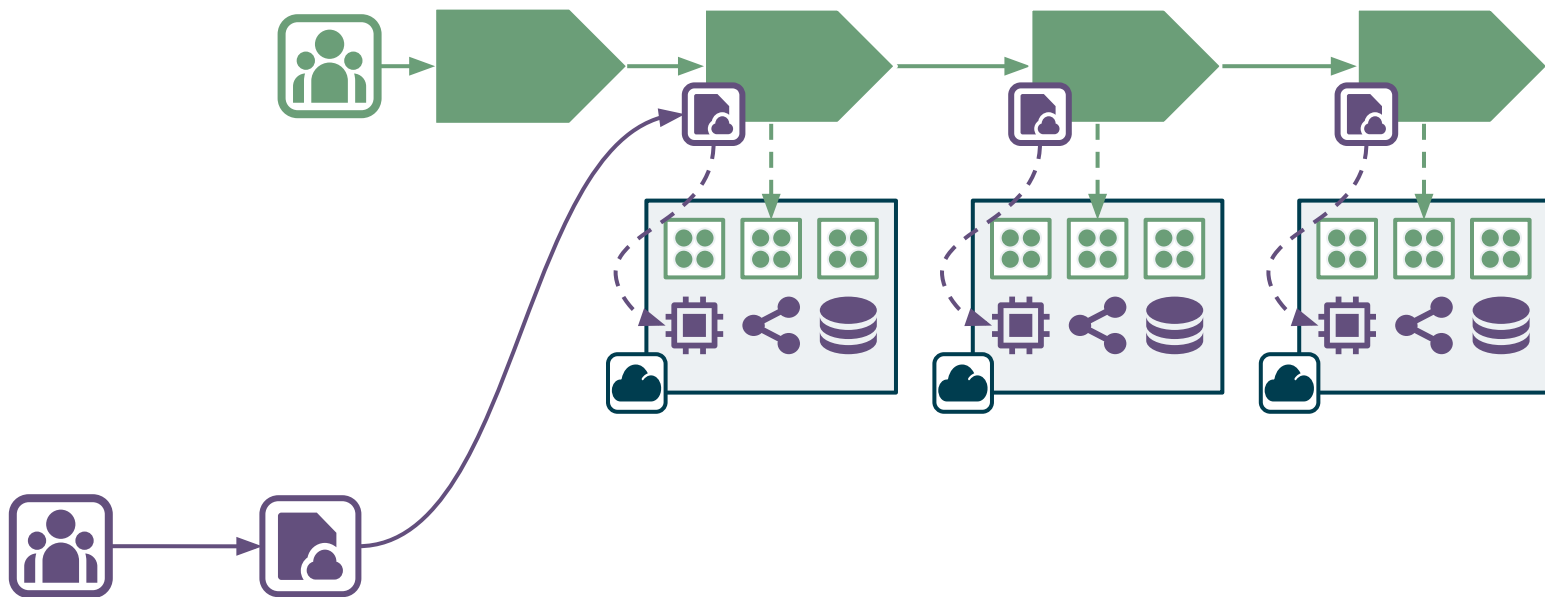
Platform teams managing deployed infrastructure is **not self-service**



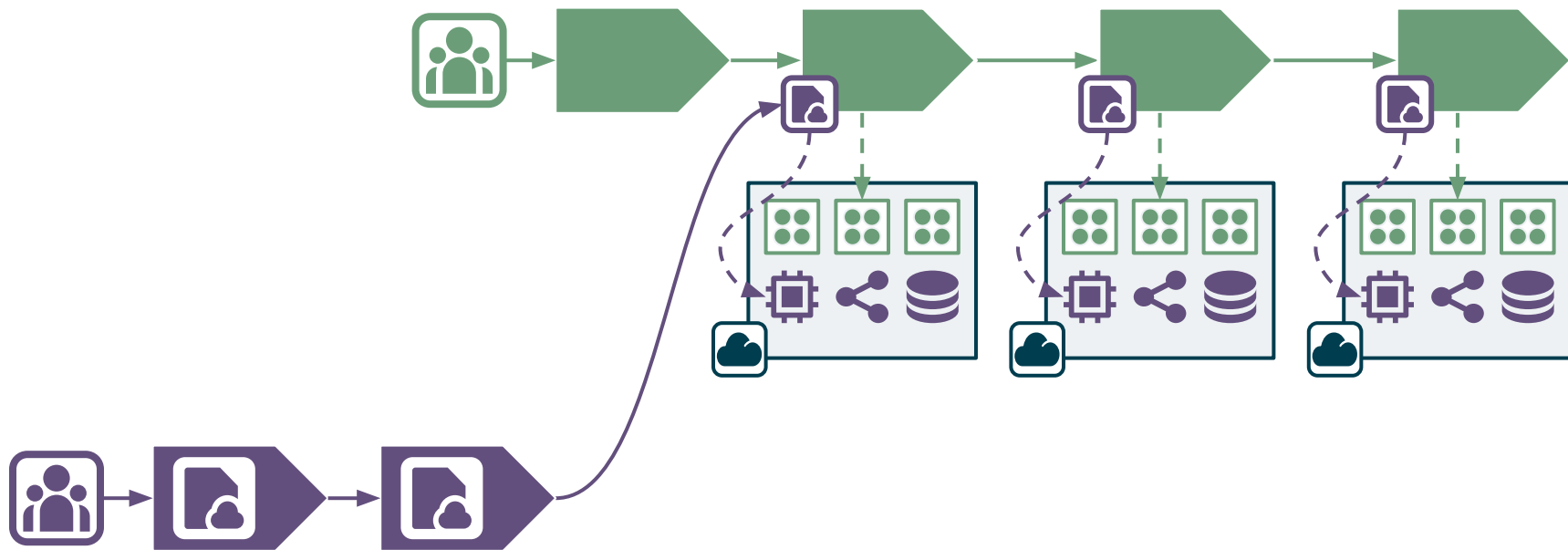
Developers writing all the low-level infrastructure code is **not self-service**



Deploy infrastructure code together with applications?

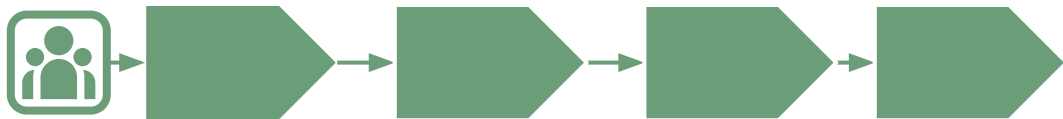


Deploy infrastructure **components** together with applications!

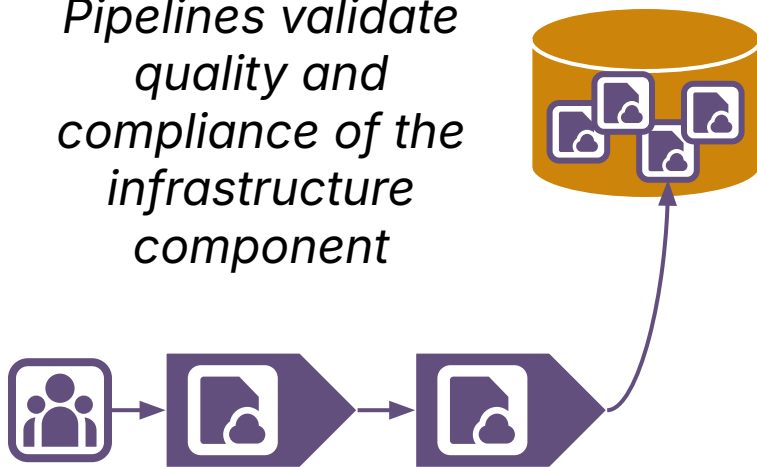


Infrastructure component delivery model

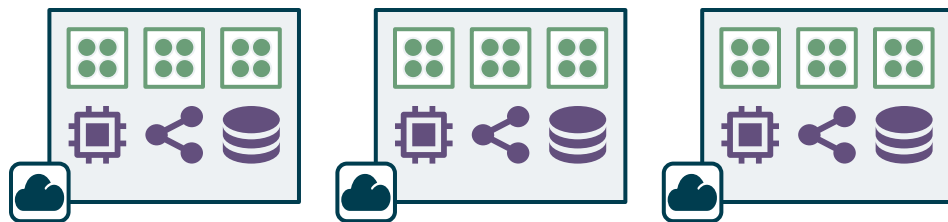
*Engineers build a
deployable
infrastructure
component*



*Pipelines validate
quality and
compliance of the
infrastructure
component*



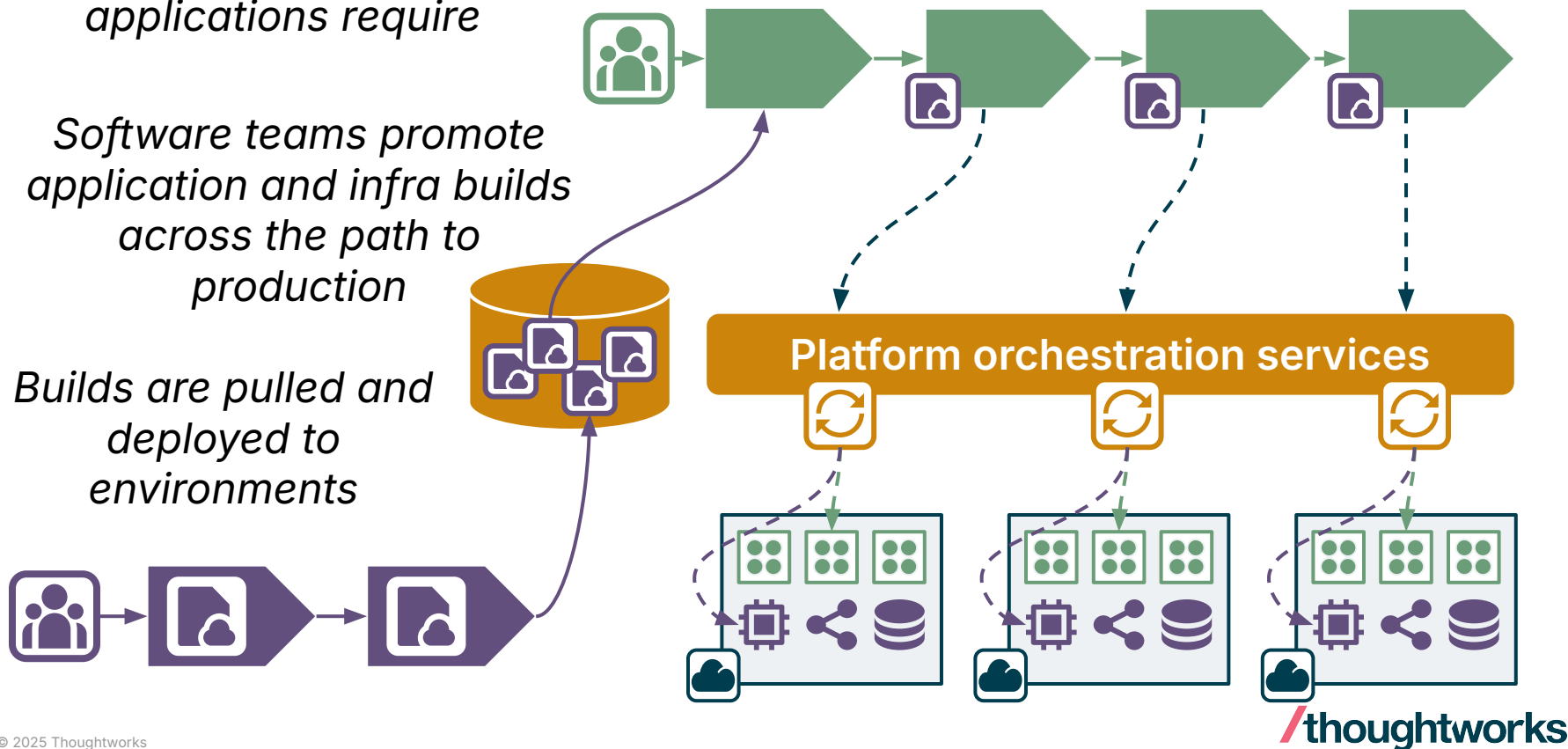
*Versioned builds of the
component are published
to an artifact repository*



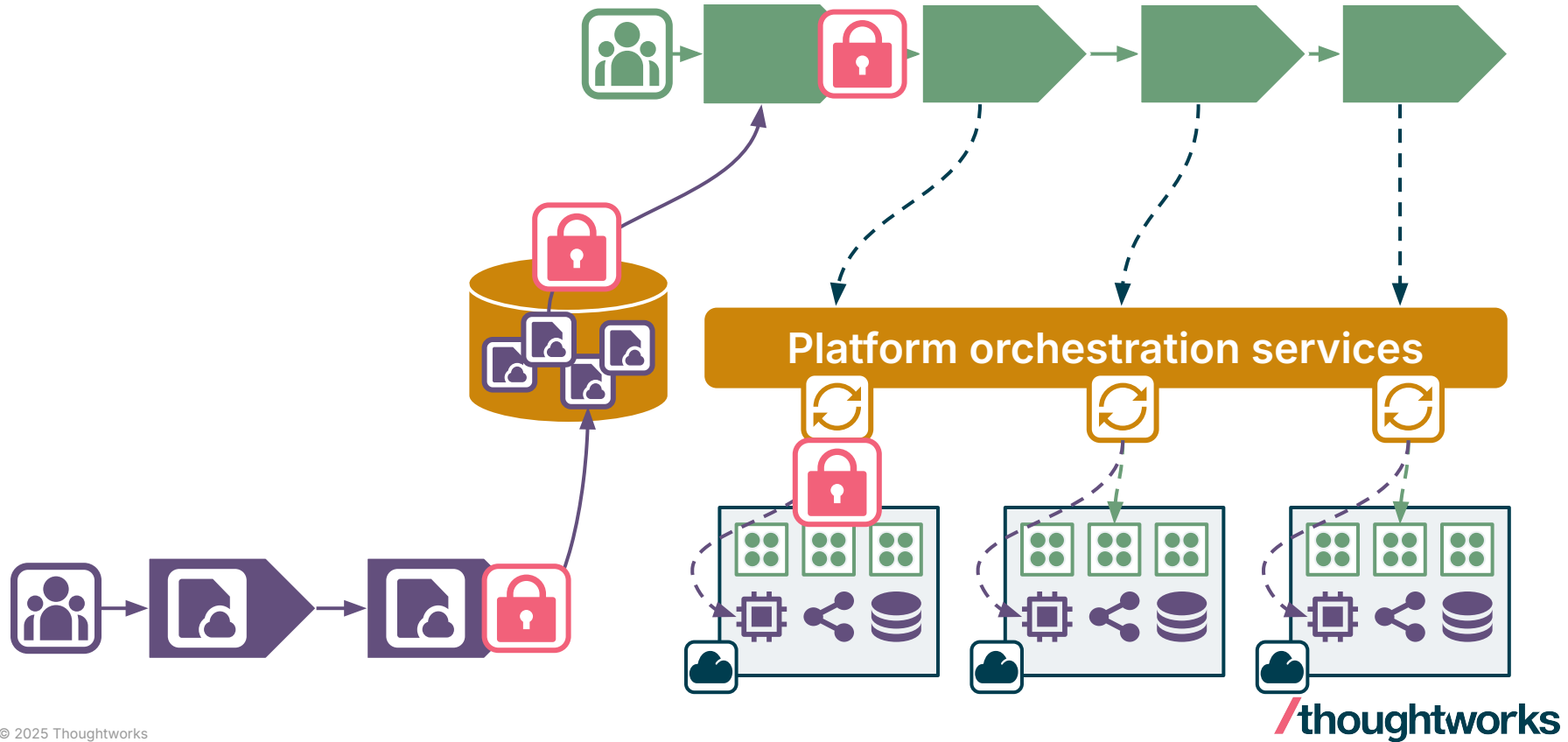
*Software teams specify
the infrastructure their
applications require*

*Software teams promote
application and infra builds
across the path to
production*

*Builds are pulled and
deployed to
environments*

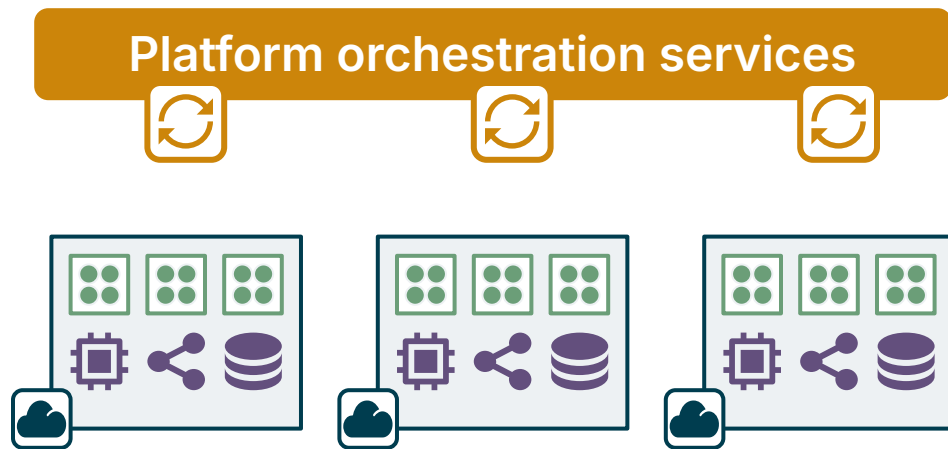


Multiple layers of governance



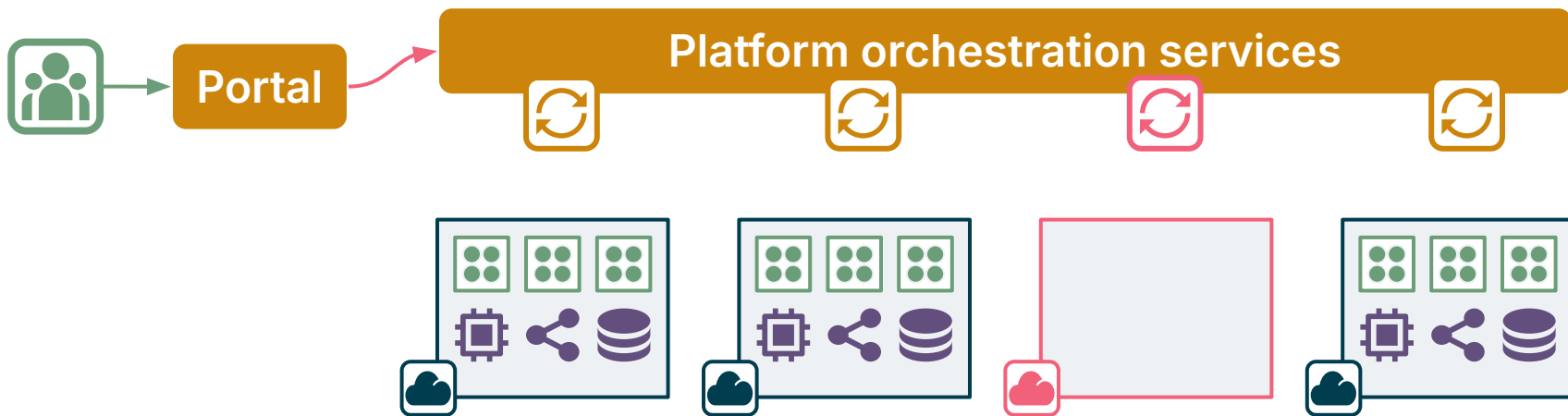
Composable environments

Adding a new environment



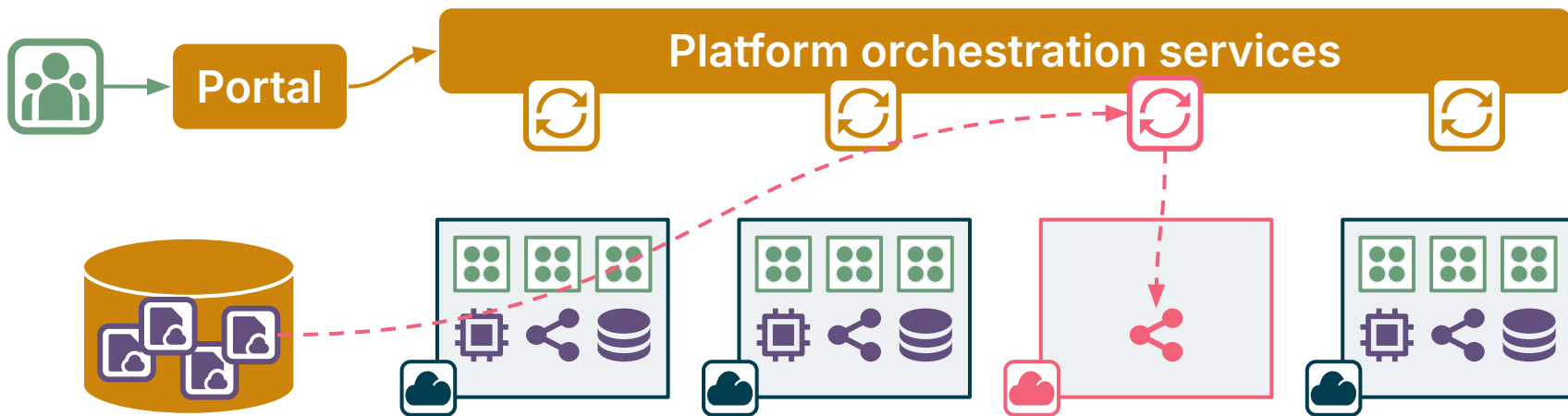
Adding a new environment

*Environment
owner configures
the environment*



Adding a new environment

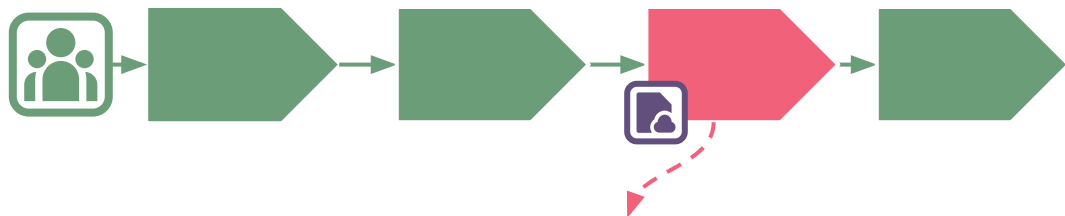
Environment owner configures the environment



Core environment infrastructure is deployed

Adding a new environment

Environment owner configures the environment

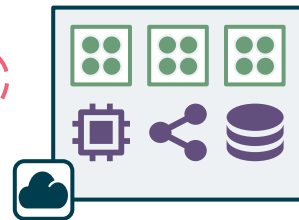
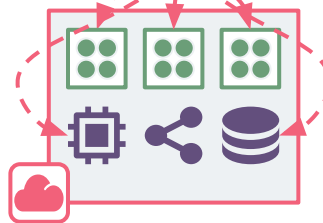
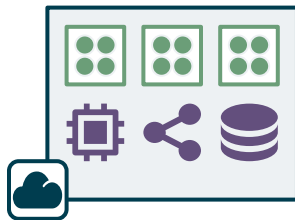
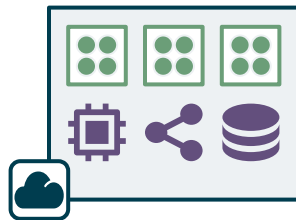


Portal

Platform orchestration services



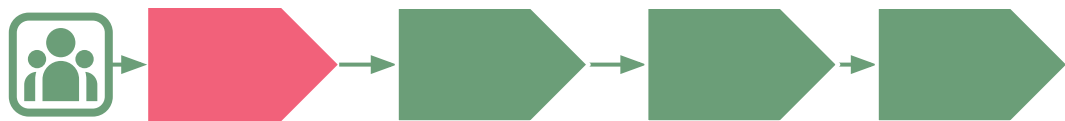
Applications and their required infrastructure are pulled and deployed



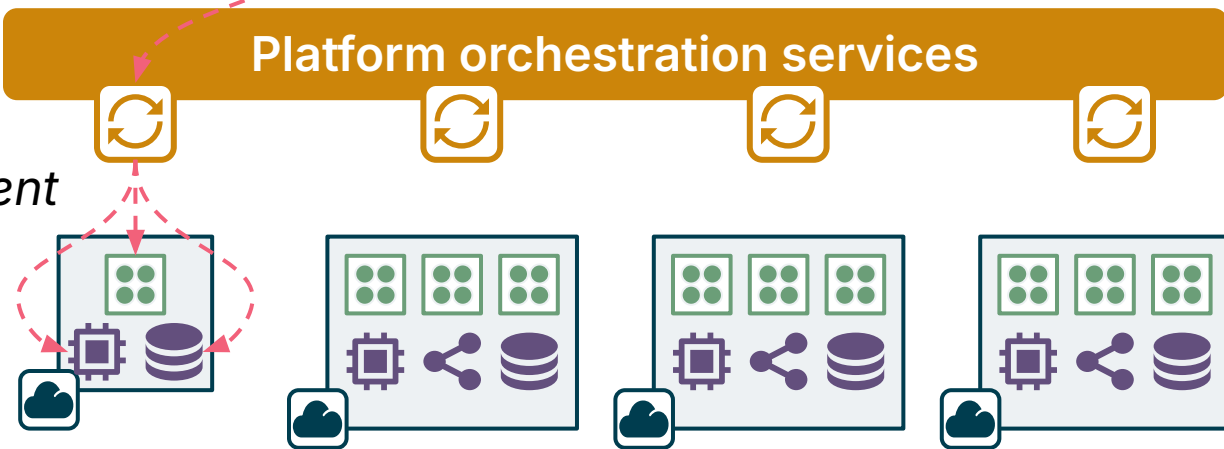
Core environment infrastructure is deployed

Ephemeral and "just enough" environments

Early pipeline stage tests only one deployable component



A minimal environment is automated provisioned



The application and minimum required infrastructure is deployed

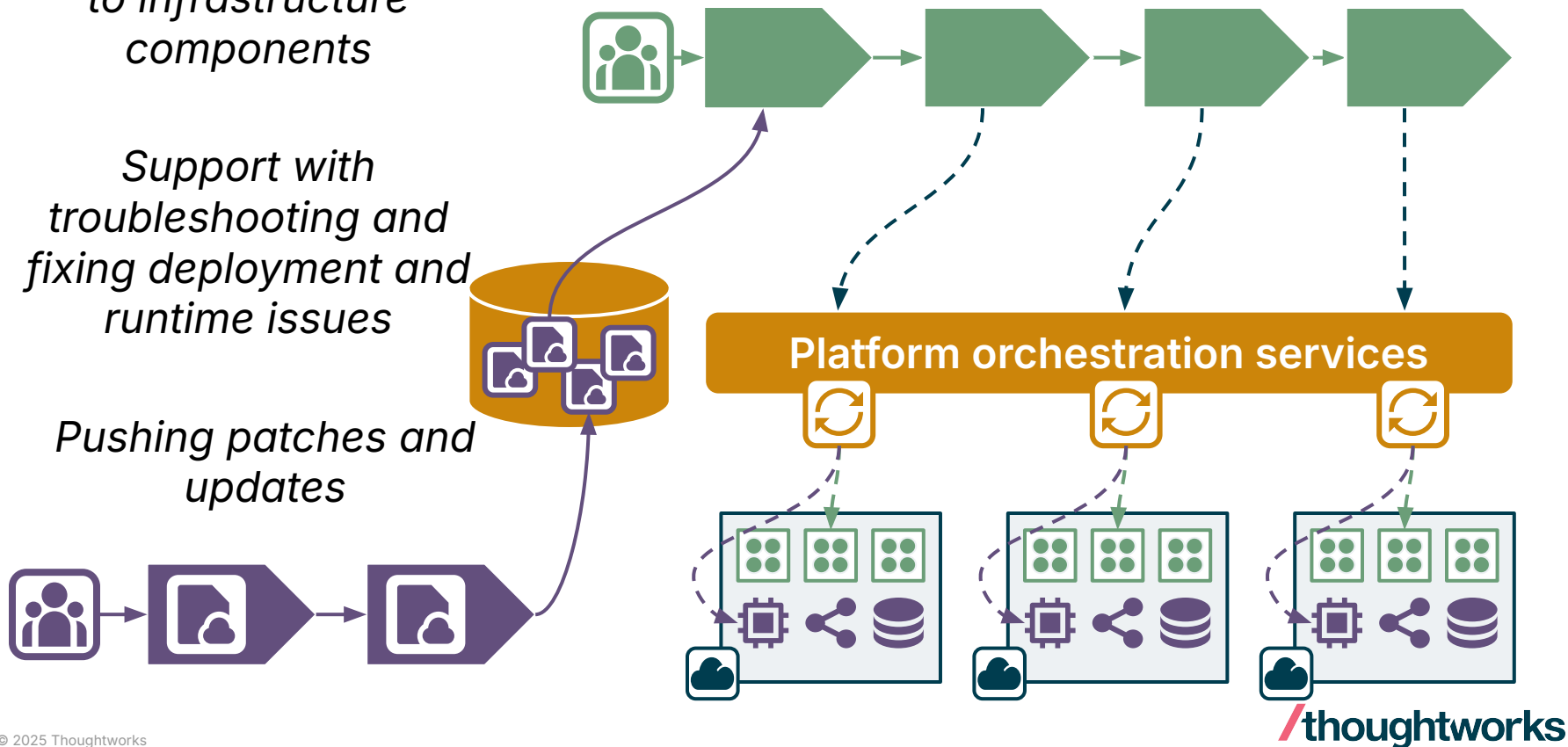
The environment is destroyed when it's no longer needed

Collaboration between teams is still essential

*Changes and additions
to infrastructure
components*

*Support with
troubleshooting and
fixing deployment and
runtime issues*

*Pushing patches and
updates*



In summary

Give software teams the infrastructure they need, **when they need it**

Infrastructure teams focus on building reliable, configurable, deployable infrastructure components

Platform orchestration services enable software teams to create, configure, change, and troubleshoot the infrastructure their applications need

Governance is embedded in the process for building, delivering, and deploying infrastructure components

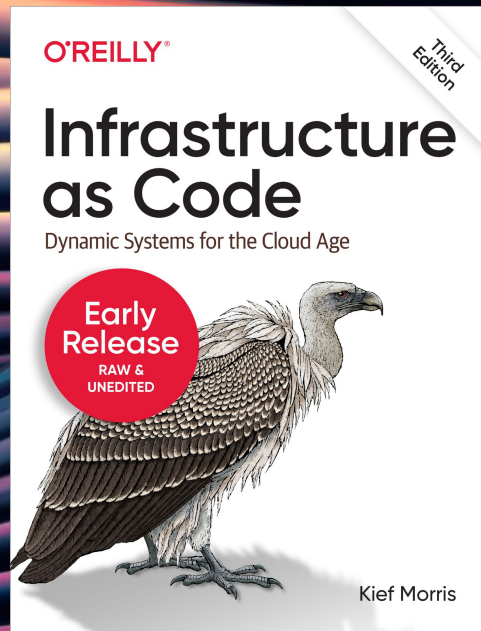
Thanks!



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