Session 03
Build automation

Anton Boyko
Microsoft Regional Director
Microsoft Azure MVP
me@boykoant.pro

Housekeeping

- Please keep yourself muted unless you are participating in the conversation, so we can have a more clear recording.
- If you have questions – don’t hesitate and ask.

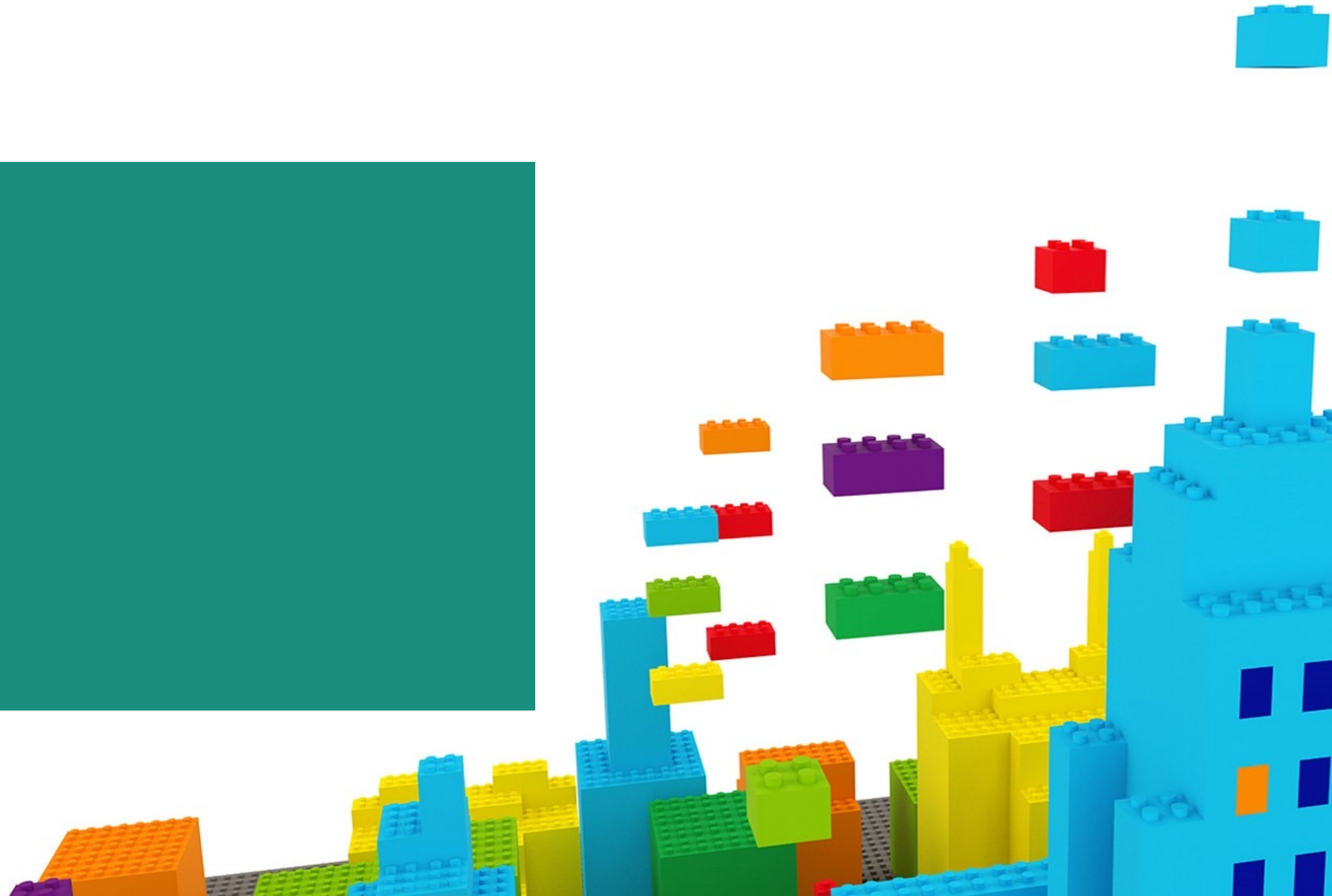
Quick recap

- Build once, deploy multiple times

Who are they?

- Build queue
- Build agent
- Parallel pipeline
- Build stage and build job
- Build step

Highlights



General flow

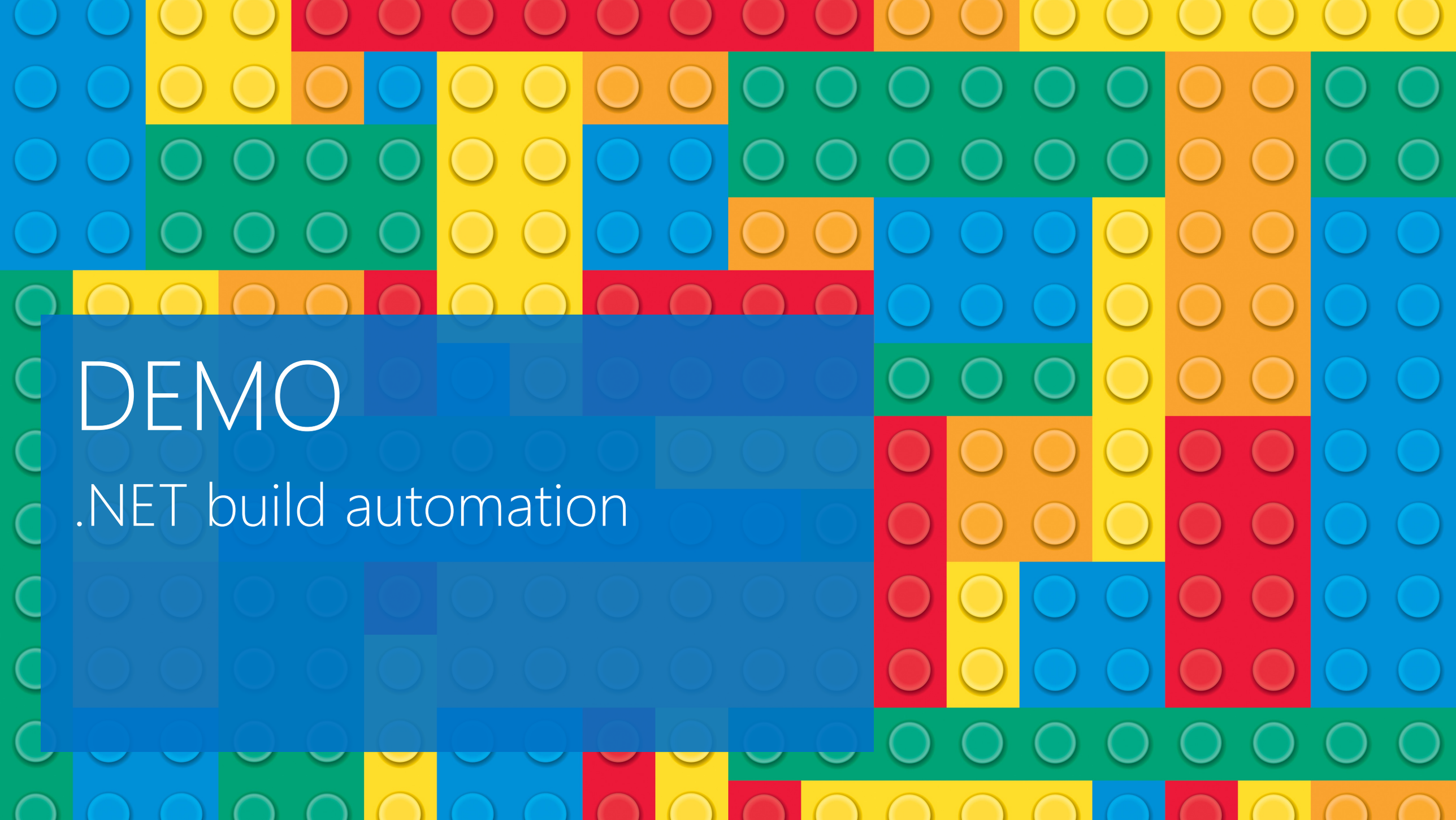
1. Restore dependencies (optional)
2. Build application (optional)
3. Run tests (optional)
4. Export artifacts

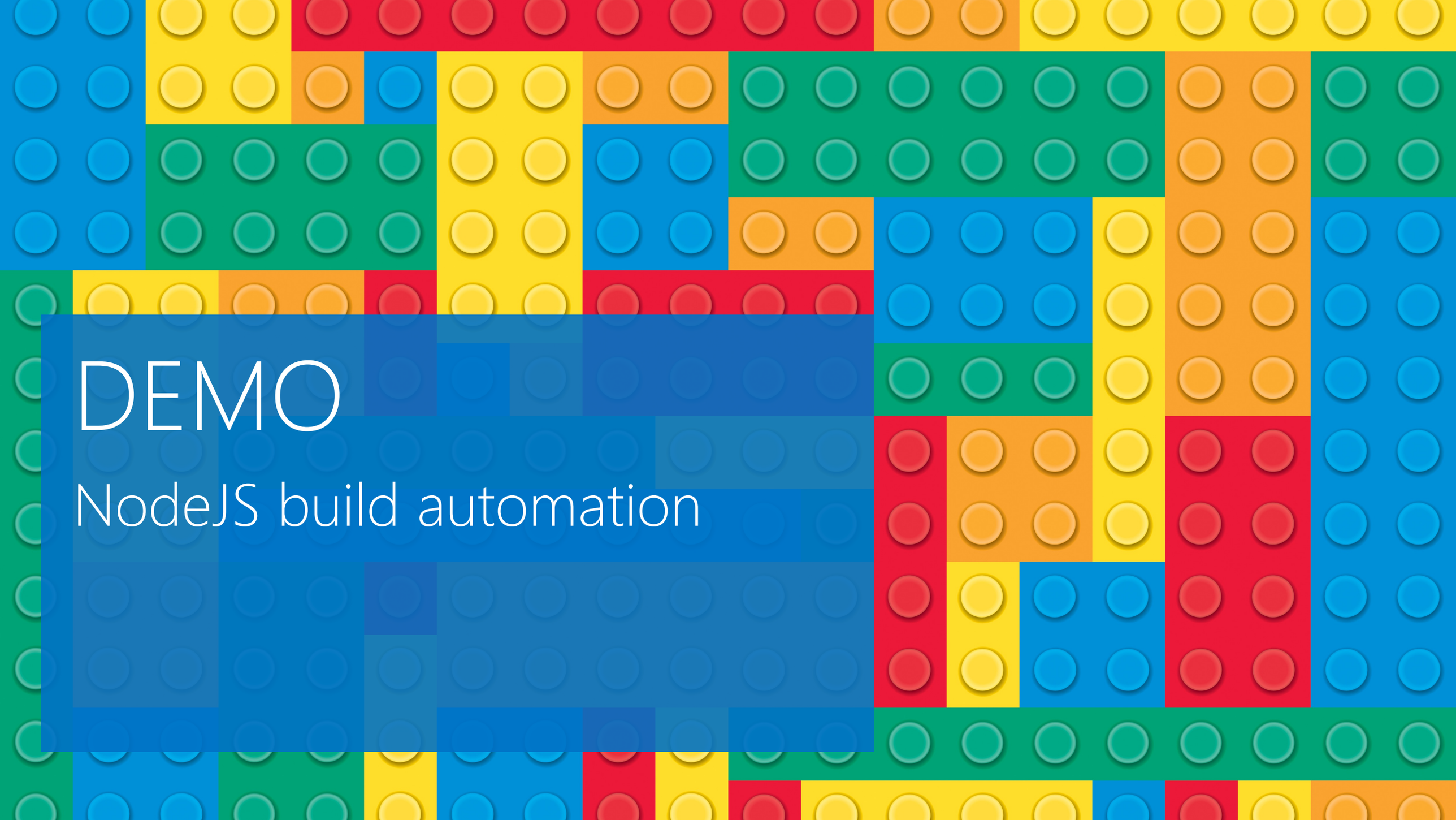
Target environment

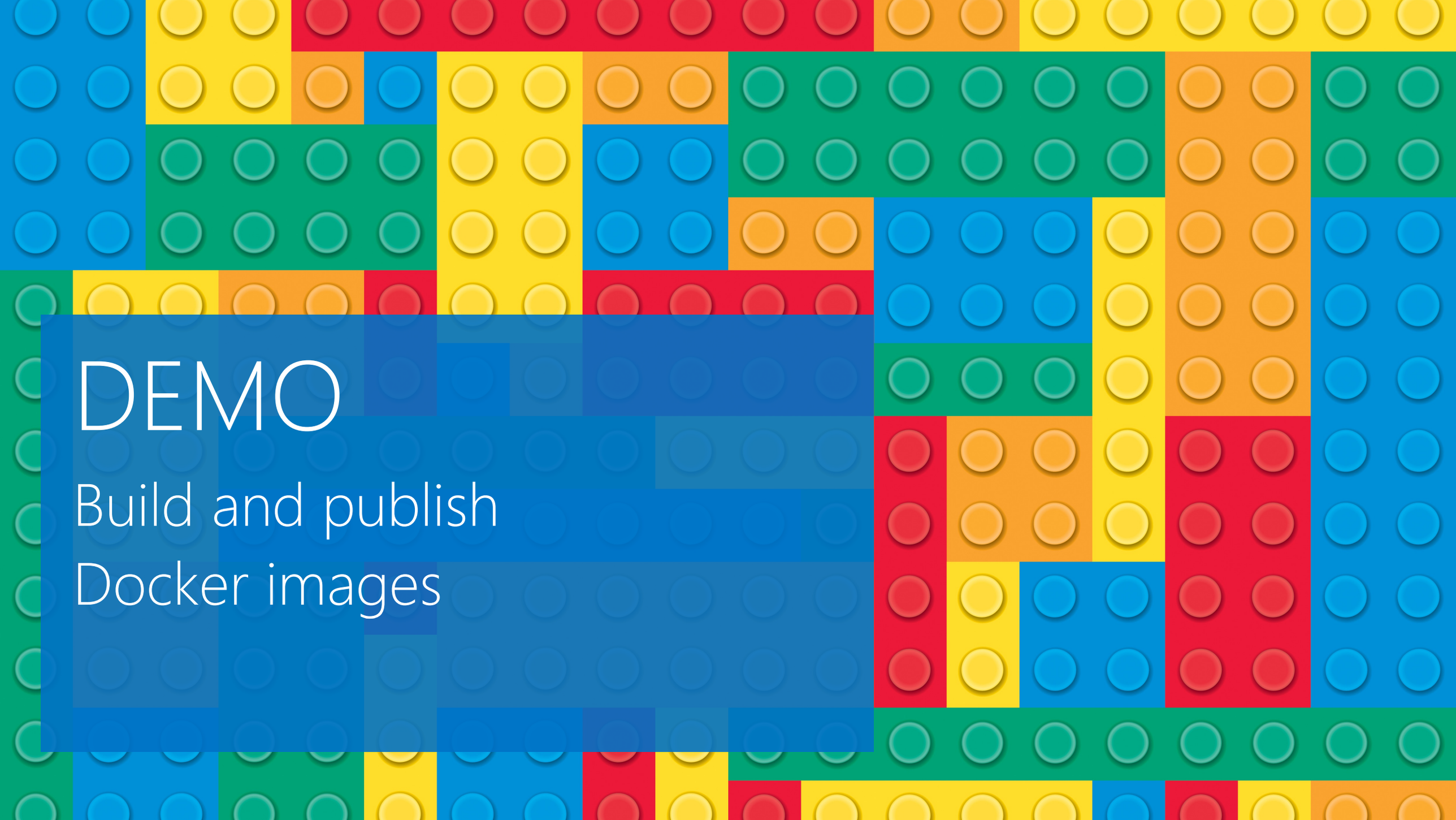
- Server
- Browser
- Desktop
- Mobile
- …

Build platform

- Server
  - .NET
  - Java
  - Python
  - NodeJS
- Browser
  - .NET
  - JavaScript
- Desktop
  - .NET
  - Java
  - Python
  - NodeJS
- Mobile
  - .NET
  - Java
  - JavaScript

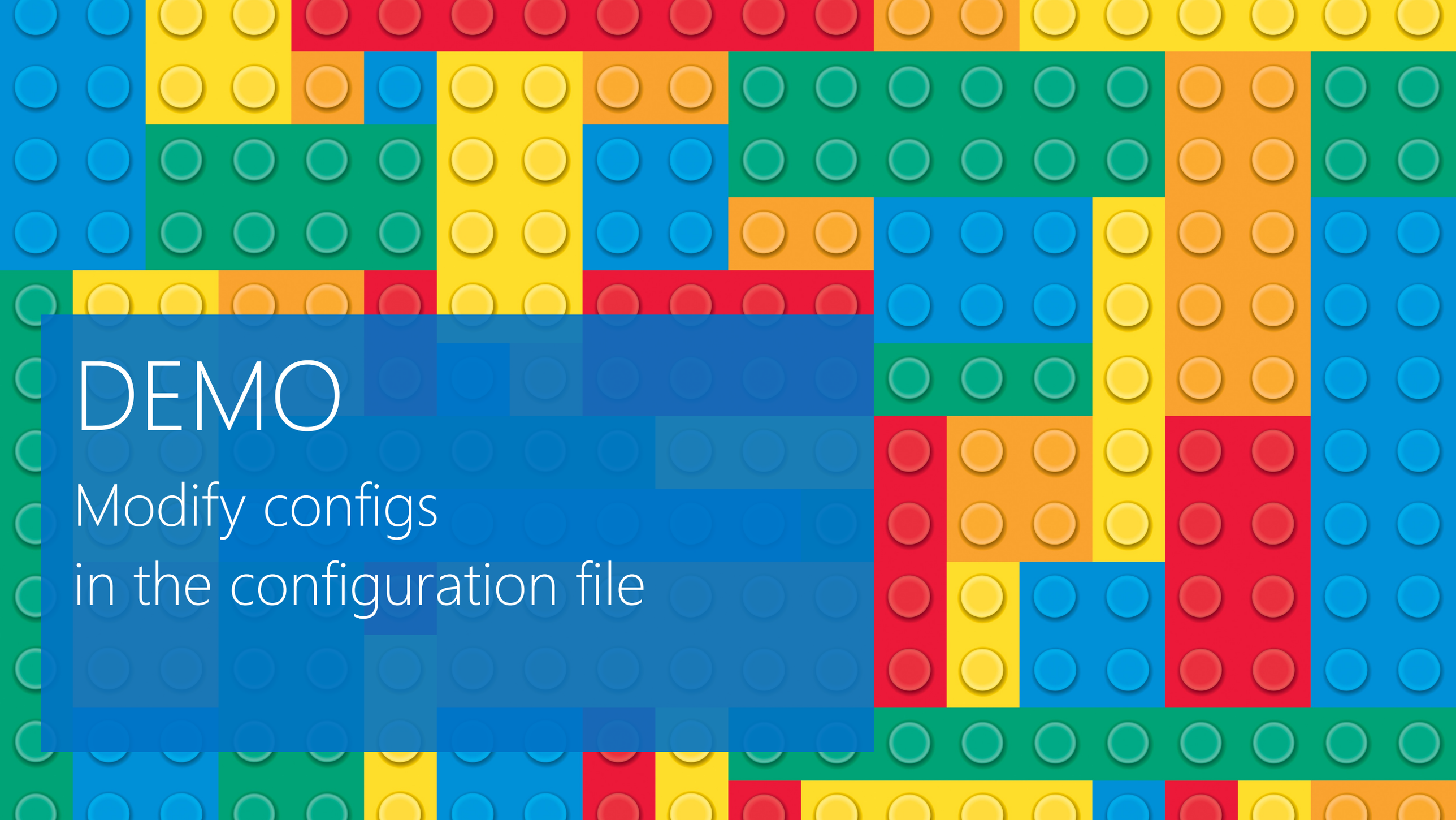

DEMO
.NET build automation


DEMO
NodeJS build automation


DEMO
Build and publish
Docker images

Runtime configuration management

- Pull
- Push
- Embed
- Code


DEMO
Modify configs
in the configuration file

DEMO

Templates

Questions?

Homework

Do (1)

- Create new repos on GitHub and upload sample applications there.
- Automate builds using GitHub actions for each application. Export standalone artifacts.

Do (2)

- Create a service connection from Azure DevOps to GitHub.
- Automate builds using Azure DevOps pipelines for each application. Export standalone artifacts. You need to use yml pipelines.

Do (3)

- Create Dockerfile for each application. Push created images to Docker Hub. Automate it with Azure DevOps pipelines (use yml pipelines) and GitHub actions.

Deadline

Recommended – by the end of the day 10.08.2022

Maximum – by the end of the day 12.08.2022