COSMO CONSULT

Business-Software for People

AUTOMATING AND EXTENDING AZURE DEVOPS

2020-06-23, TOBIAS FENSTER

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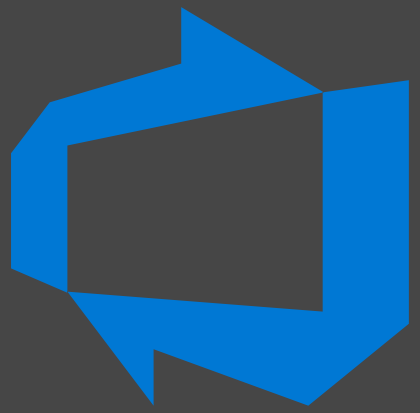
Pipelines: Continuous integration and delivery

Artifacts: Create and share packages



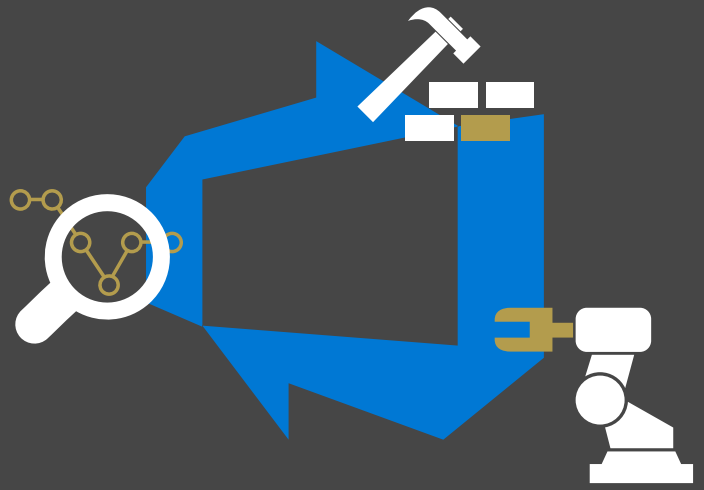
Boards: Manage, structure and control your work

Test plans: Manual and exploratory testing

Repositories: Version control your code

Extend

Read / Export



Automate / Write

Extend

EXTEND

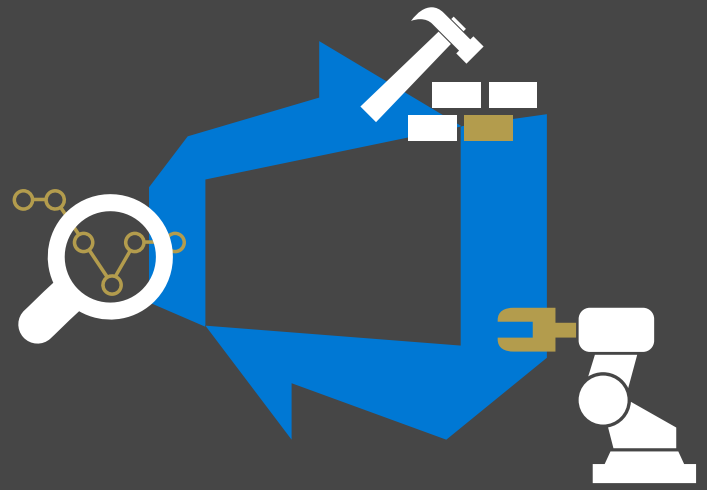
Make Azure DevOps do something that it couldn't do before

MARKETPLACE

- Store of mostly free and often open source extensions
- Used by Microsoft to get feedback on new features (DevLab)

CREATE YOUR OWN

- HTML / TypeScript / React / SASS → A typical web development stack
- Do whatever you want (as long as it works in a browser)



Read / Export

READ / EXPORT

Get data out of Azure DevOps

REST API

- Read data as JSON
- Queries, individual WorkItems, hierarchies…
- Quick and easy

.NET CLIENT LIBRARY

- Read data as objects
- (Almost) same options as with REST API
- A bit more setup, but more powerful

OFFICE INTEGRATION

- VERY simple
- Less flexibility, but if it can do what you need, then go for it

Automate / Write

AUTOMATE / WRITE

Bring data into Azure DevOps

Automate manual steps, e.g. setup

Automate „workflows" by calling other systems

REST API / .NET CLIENT / OFFICE

- Similar as before

SERVICE HOOKS

- React to events in DevOps (WorkItem created, code commited, build failed…)
- Execute predefined actions for a list of services
- Call an arbitrary endpoint which in turn can do something else

READ / EXPORT

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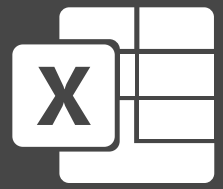

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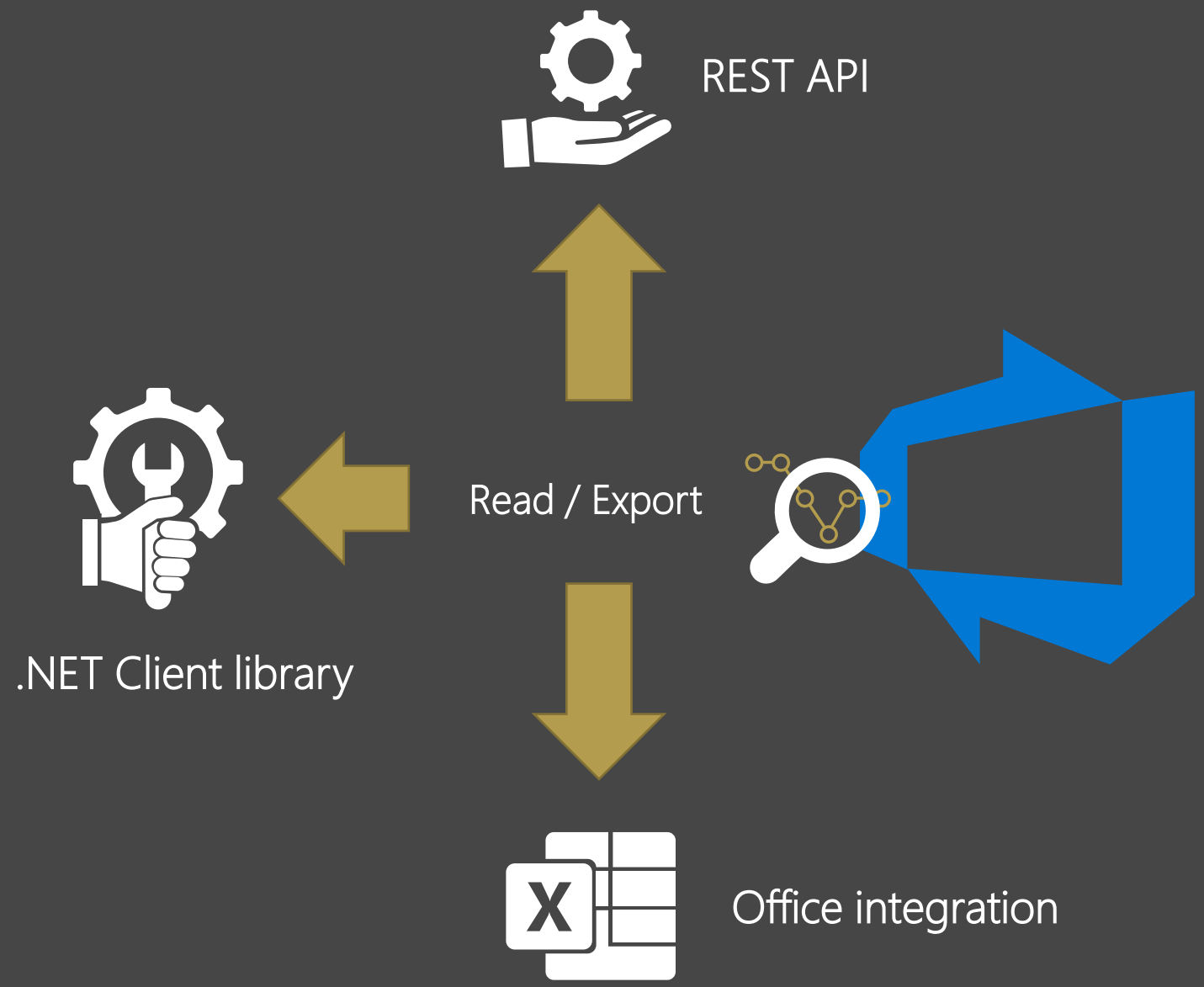
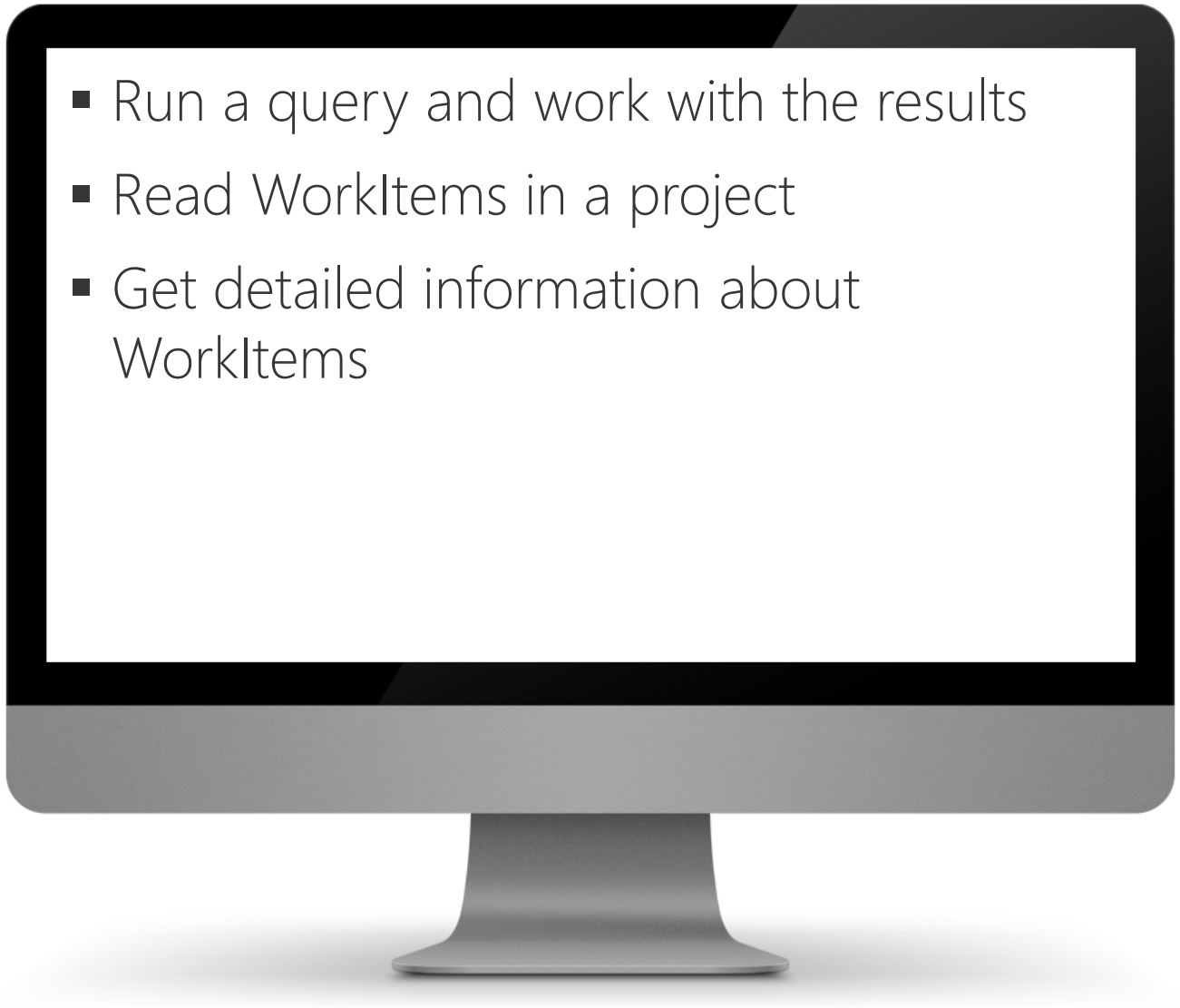

REST API
Read / Export
.NET Client library
Office integration



DEMO

- https://docs.microsoft.com/en-us/rest/api/azure/devops
- https://developer.microsoft.com/en-us/azure-devops/develop/extensions
- https://github.com/microsoft/azure-devops-dotnet-samples

AUTOMATE / WRITE

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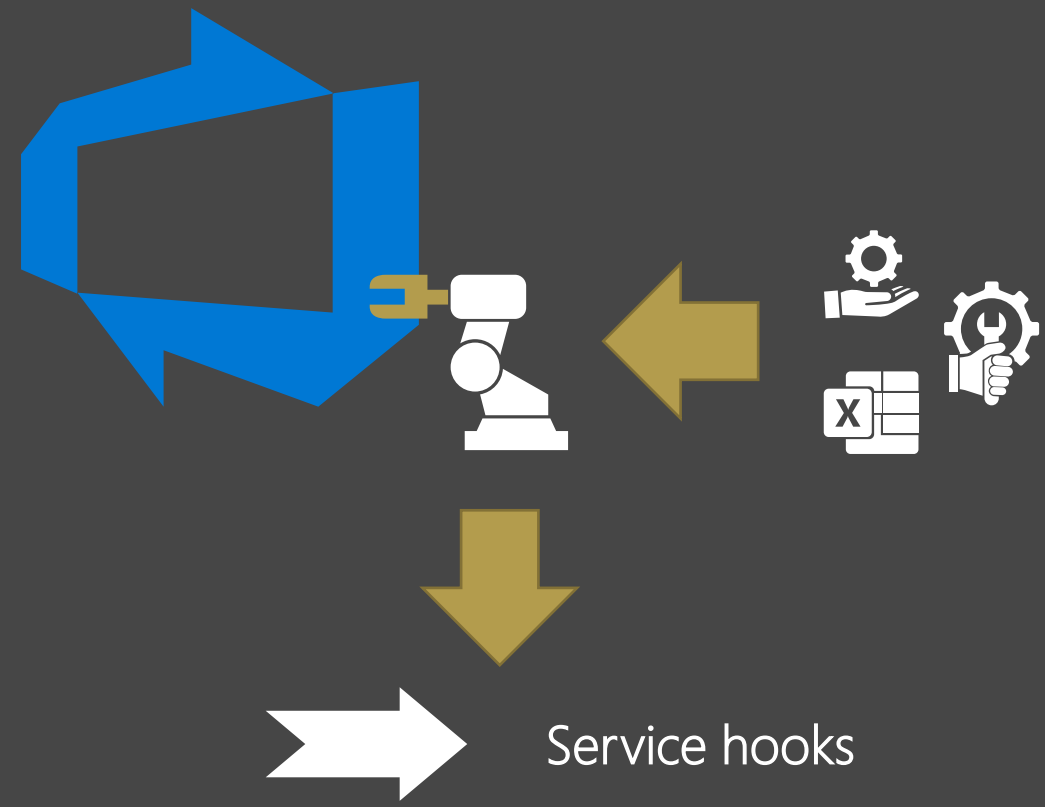
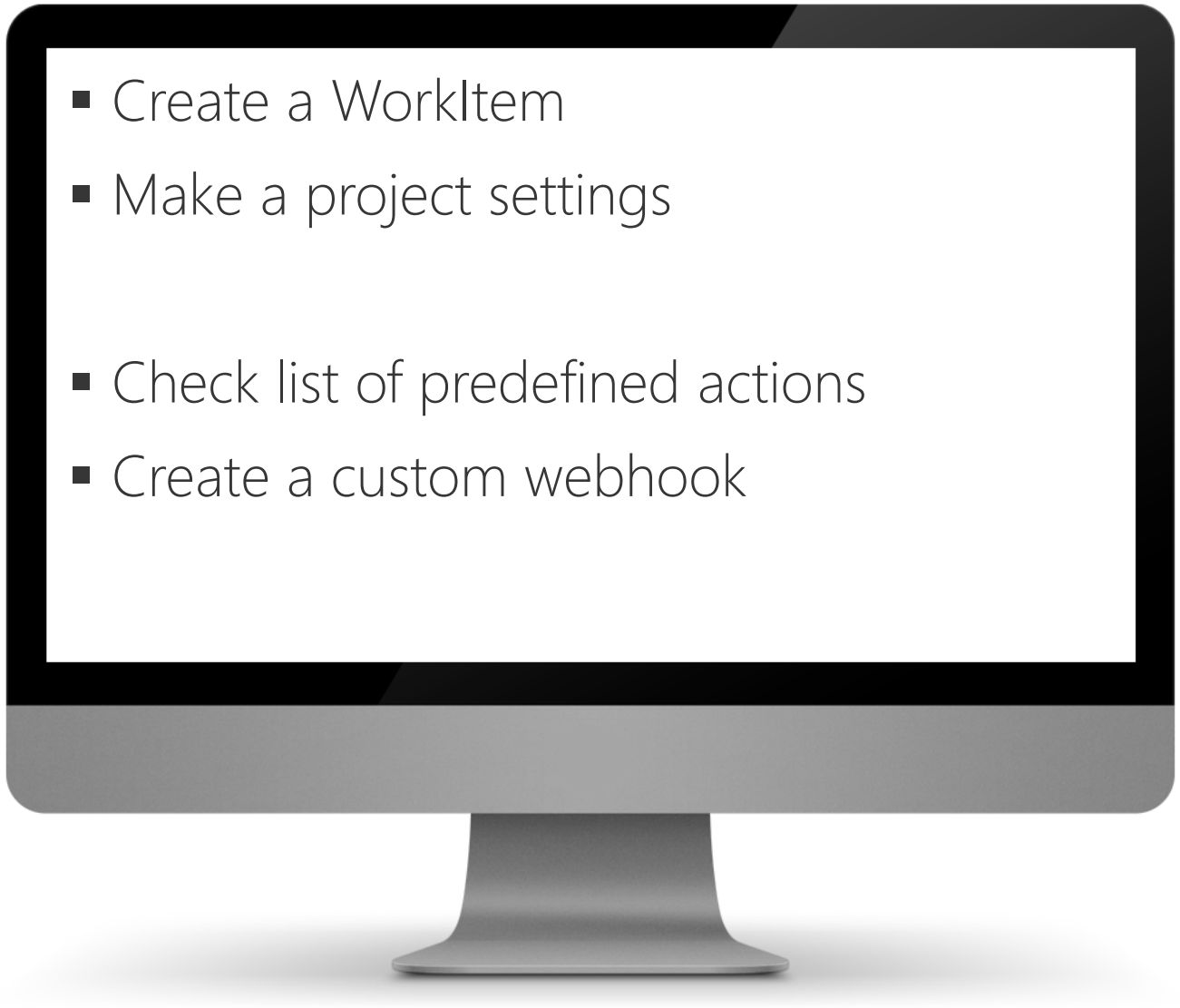

REST API /
.NET Client /
Office
Service hooks


Create a WorkItem
Make a project settings
Check list of predefined actions
Create a custom webhook

DEMO

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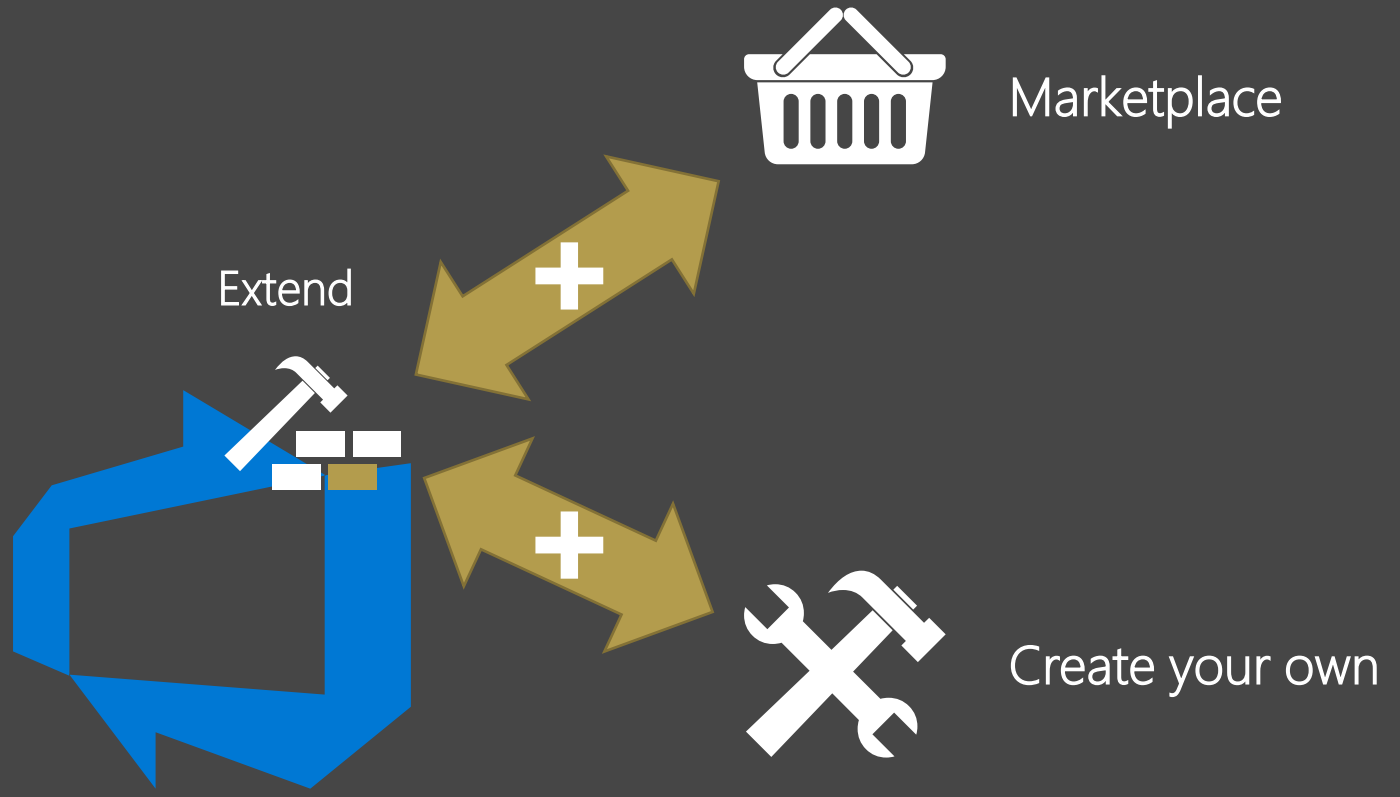
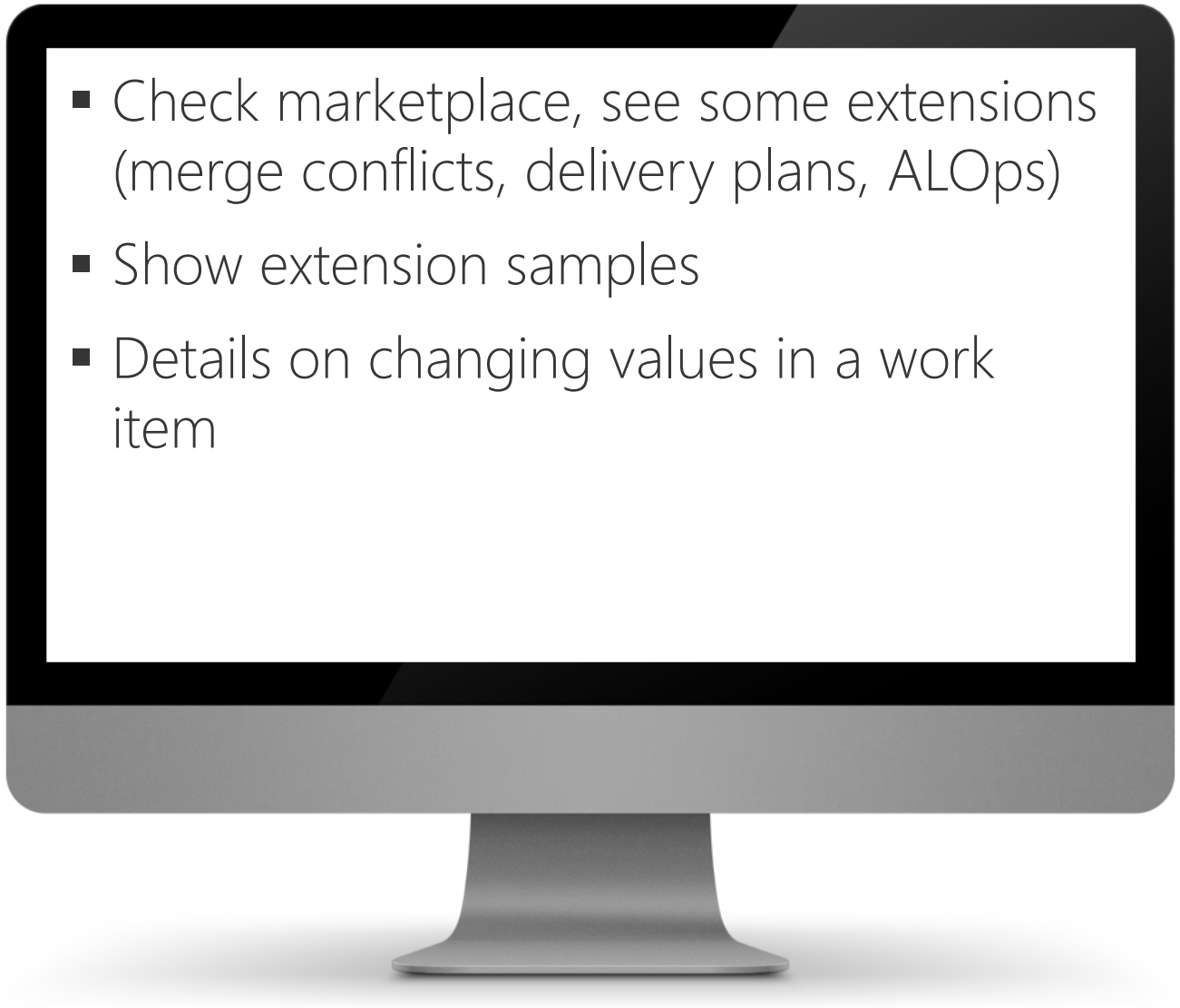

Marketplace
Extend
Create your own



DEMO

- https://marketplace.visualstudio.com/azuredevops
- https://docs.microsoft.com/en-us/azure/devops/extend/overview
- https://docs.microsoft.com/en-us/azure/devops/extend/develop/samples-overview

Extend

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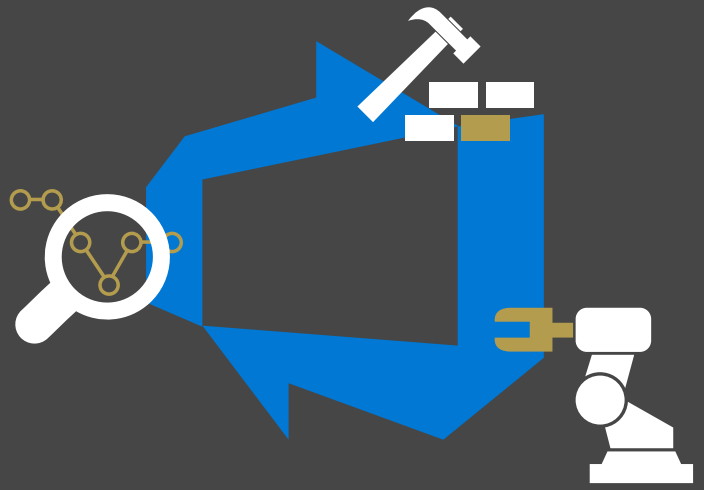

Automate / Write

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THANK YOU

FOR YOUR TIME