

UI5 Tooling 2020

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UI5 Core Foundation
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ON AIR 
UI5con



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Recap: Tooling Evolution



Maven Tooling

- Based on Maven (Java)
- Full-fledged feature-set (/w legacy)
- Proprietary / SAP internal

Grunt Tooling

- Based on the Grunt Task Runner
- Limited feature-set
- Open Source (Apache 2.0)

Node.js Tooling

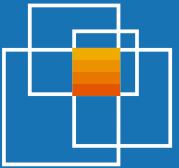
- Based on Node.js (JavaScript)
- Full-fledged feature-set (w/o legacy)
- Open Source (Apache 2.0)



Motivation



Future Tooling
For Building the UI5 Framework



Covers Basic Use Cases
For Application & Library Development



Foundation
For More Advanced Tools

Get Started



sap.github.io/ui5-tooling



UI5 Tooling

An open and modular toolchain to develop state-of-the-art applications based on the [UI5](#) framework.

[Get Started](#)

Features

UI5 CLI

Also see the [CLI Documentation](#)

```
npm install --global @ui5/cli
```



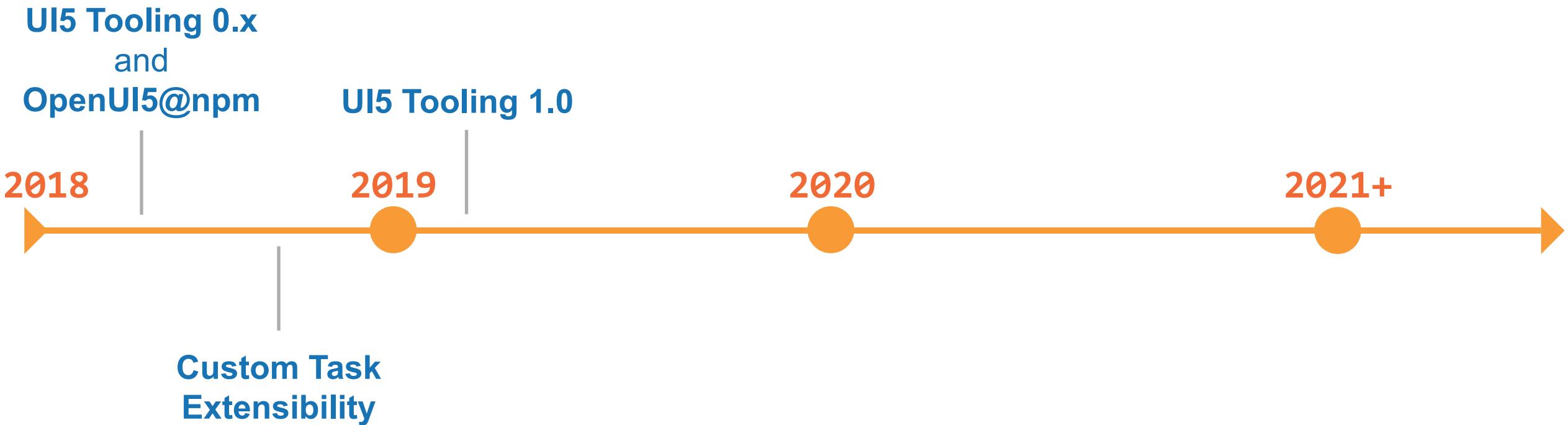
[Setup Project](#)

Configure your project for use with the UI5 Tooling.

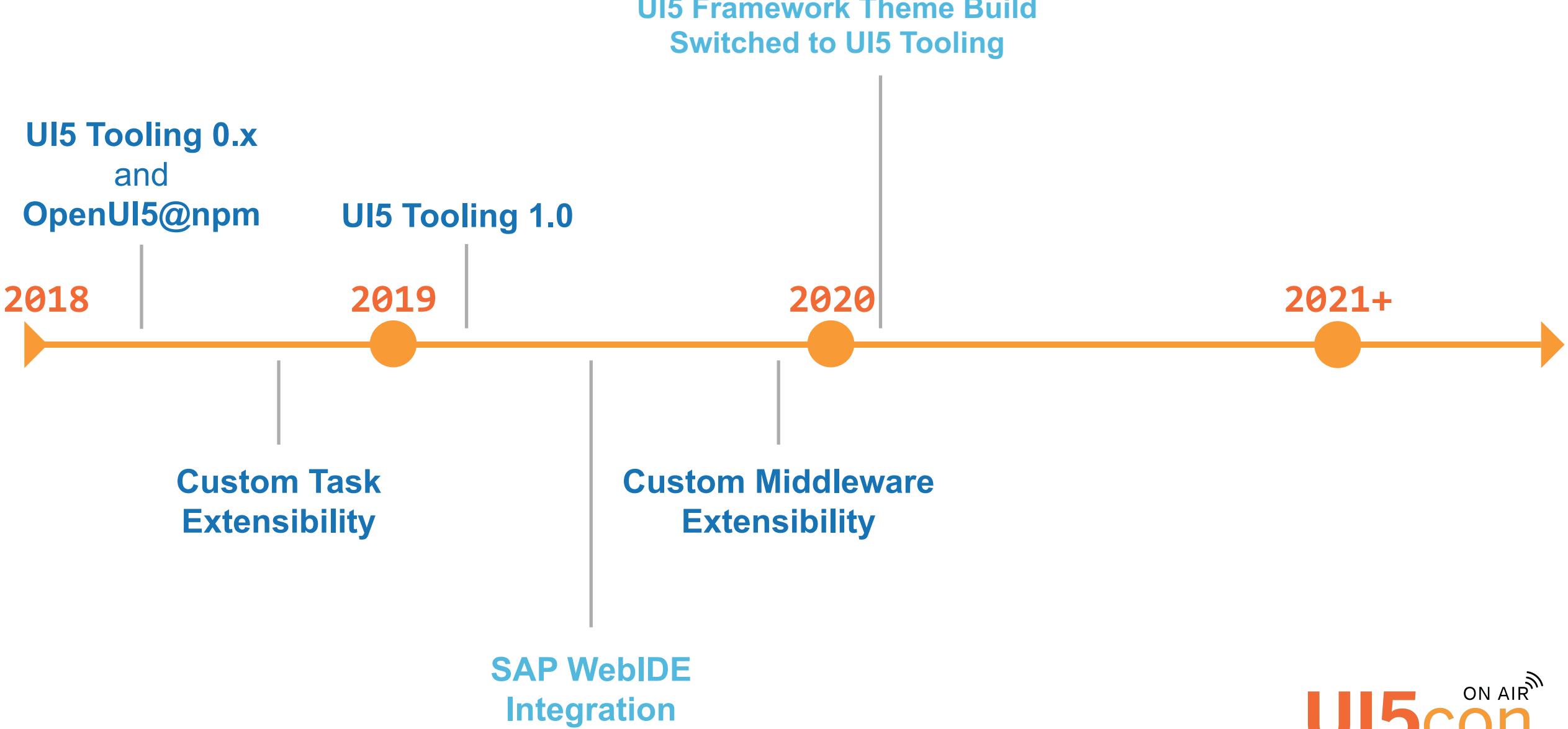
Also see the [Configuration Documentation](#)

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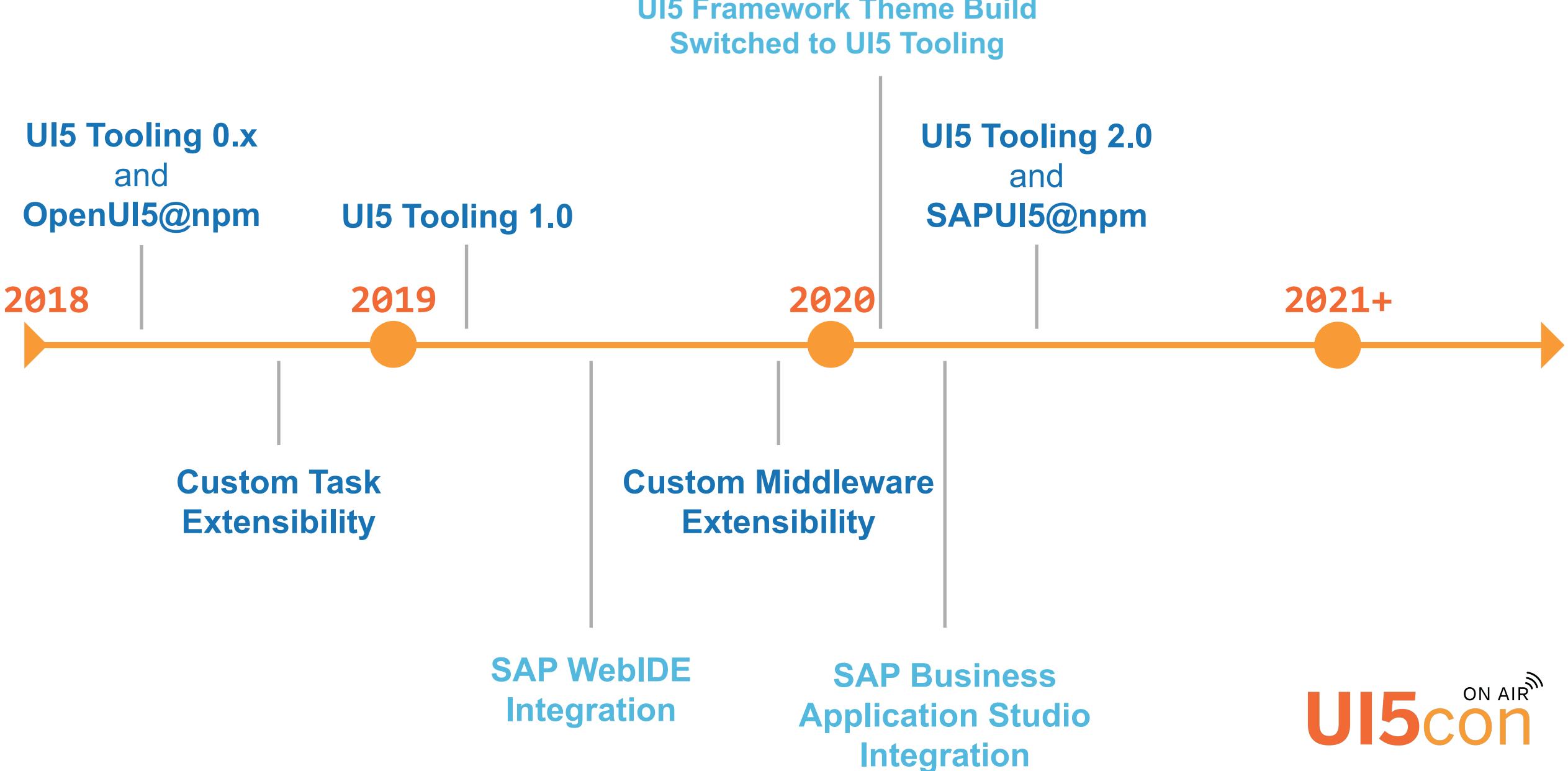
Where Are We Today?



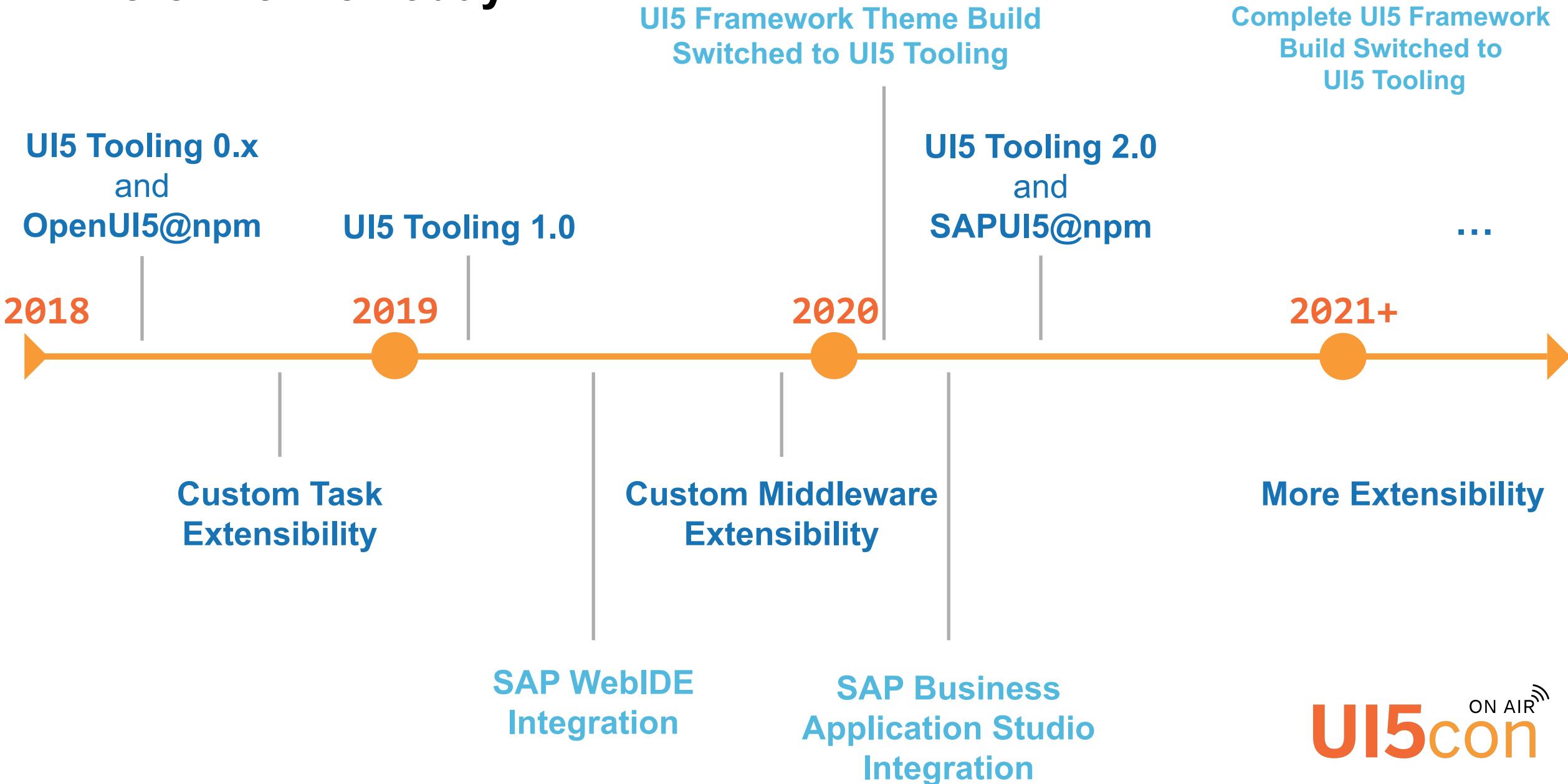
Where Are We Today?



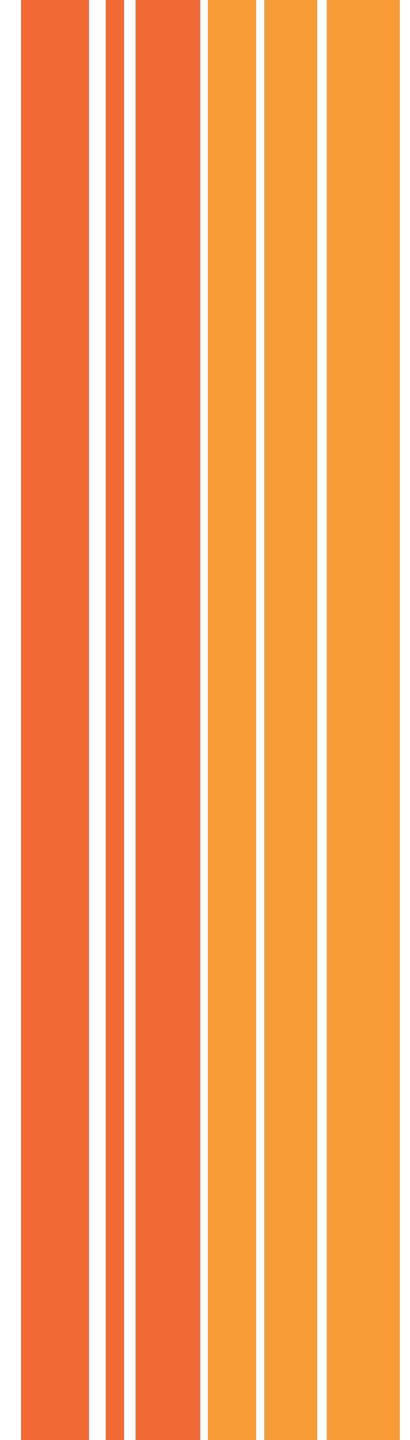
Where Are We Today?



Where Are We Today?



UI5 Tooling 2.0



Important Changes

■ ui5-cli

- Add "ui5 use/add" commands ([#315](#))
- Add "--framework-version" option ([#306](#))

■ ui5-project

- Add **ui5Framework Translator** and Resolvers ([#265](#))
- Add Configuration **Schema** ([#274](#))
- Support for **Spec Version 2.0** ([#277](#))

■ ui5-server

- serveResources Middleware: **Expect *.properties files in UTF-8 by default** ([#303](#))
- Add **Test Runner Middleware** ([#293](#))

■ ui5-builder

- Add new **theme-library type** ([#285](#)) (*actually in v1.9.0*)

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SAPUI5@npm

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Demo: UI5 Tooling 2.0



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Benefits of Running Our Own Package Management



Seamless Integration Into the UI5 Tooling



A Project Defines One „UI5 Version“



Shared Local Caching Makes Things Go Fast



UI5ers Buzz #49: The UI5 Tooling and SAPUI5 – The Next Step

Specification Version



```
specVersion: '2.0'  
metadata:  
  name: myapp  
  type: application
```



```
specVersion: '2.1'  
metadata:  
  name: mytask  
  kind: extension  
  type: task
```



```
specVersion: '1.0'  
metadata:  
  name: mymiddleware  
  kind: extension  
  type: server-middleware
```

Specification Version

```
● ● ●  
specVersion: '2.0'  
metadata:  
  name: myapp  
  type: application
```



```
● ● ●  
specVersion: '2.1'  
metadata:  
  name: mytask  
  kind: extension  
  type: task
```

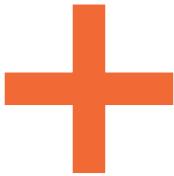


```
● ● ●  
specVersion: '1.0'  
metadata:  
  name: mymiddleware  
  kind: extension  
  type: server-middleware
```

@ui5/cli
v2.2.0+

Specification Version

```
● ● ●  
specVersion: '2.0'  
metadata:  
  name: myapp  
  type: application
```

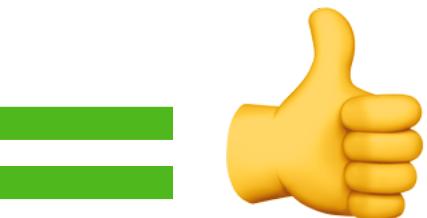


```
● ● ●  
specVersion: '2.1'  
metadata:  
  name: mytask  
  kind: extension  
  type: task
```



```
● ● ●  
specVersion: '1.0'  
metadata:  
  name: mymiddleware  
  kind: extension  
  type: server-middleware
```

@ui5/cli
v2.2.0+



Specification Version

Compatibility Matrix

Specification Version	UI5 CLI Release
2.1	v2.2.0+
2.0	v2.0.0+
1.1	v1.13.0+
1.0	v1.0.0+
0.1	v0.0.1+



sap.github.io/ui5-tooling/pages/Configuration/#specification-versions

Demo: Project Structure Example



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Demo: Node.js API



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Examples for Use in Other Projects

OpenUI5

- Custom Server / Dependency Management
 - github.com/SAP/openui5/blob/master/lib/server/server.js
 - Possible "built-in" solution via [RFC 0006 Local Dependency Resolution](#)

karma-ui5

- Use ui5-server Middleware in Custom Express Server
 - github.com/SAP/karma-ui5/blob/master/lib/framework.js#L431-L438

SAP Fiori Tools

- Talk coming right up!
 - blogs.sap.com/2020/06/22/sap-fiori-tools-is-generally-available

Examples for Use in Other Projects

OpenUI5 / SAPUI5

- Theme build uses ui5-builder task
 - sap.github.io/ui5-tooling/api/module-@ui5_builder.tasks.html#.buildThemes

Other Projects

- Integration in Gulp and other task runners

```
async function buildApplication(project, distPath) {  
    const tree = await normalizer.generateProjectTree({ cwd: project.path });  
    await builder.build({  
        tree, destPath: distPath, selfContained: true, excludedTasks: ["transformBootstrapHtml"],  
        buildDependencies: true  
    });  
}
```

Where Are We Heading?



Openness &
Extensibility



Performance



Improve
Documentation



Reduce build
result size



Basic
Scaffolding



Improve
Bundling

Thank you.

Matthias Oßwald

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slack  join

#tooling Channel

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