# Web AppBuilder for ArcGIS:

## Advanced Development Tools and Techniques

esriurl.com/wabtools2017

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# What is Web AppBuilder?

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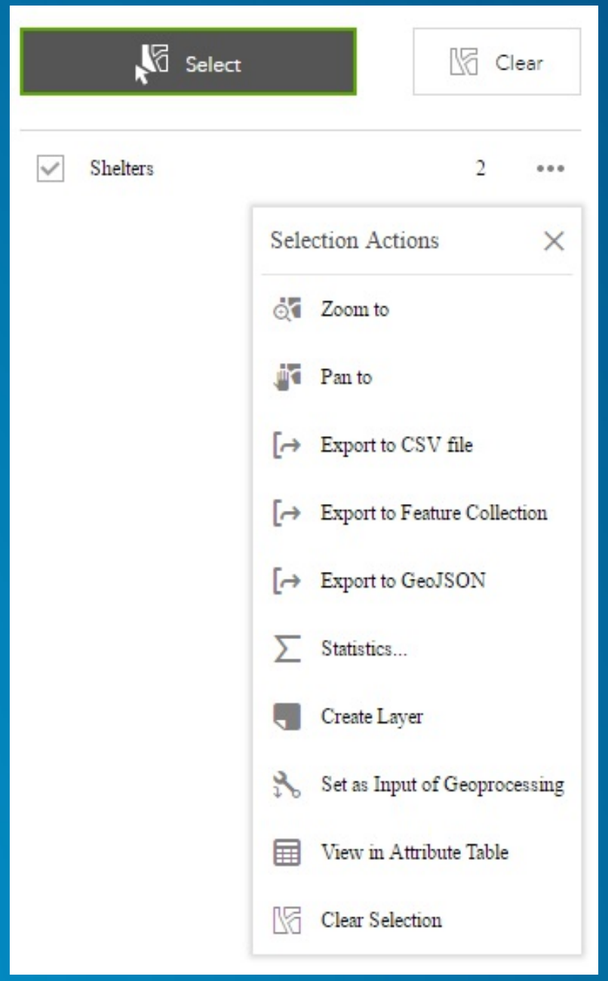
# When to use Web AppBuilder

- Good for:
  - Multi-purpose apps that need to run on multiple devices
  - Creating a suite of custom apps with consistent style/behavior
  - Empowering non-devlopers to create apps
- Other frameworks/templates might be better for:
  - Specific, custom web apps, with specialized workflows
  - When there is a template that does almost all of app functionality

# What's new in Web AppBuilder



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# Development Patterns and Tools

Patterns are the same ...

Tools have improved

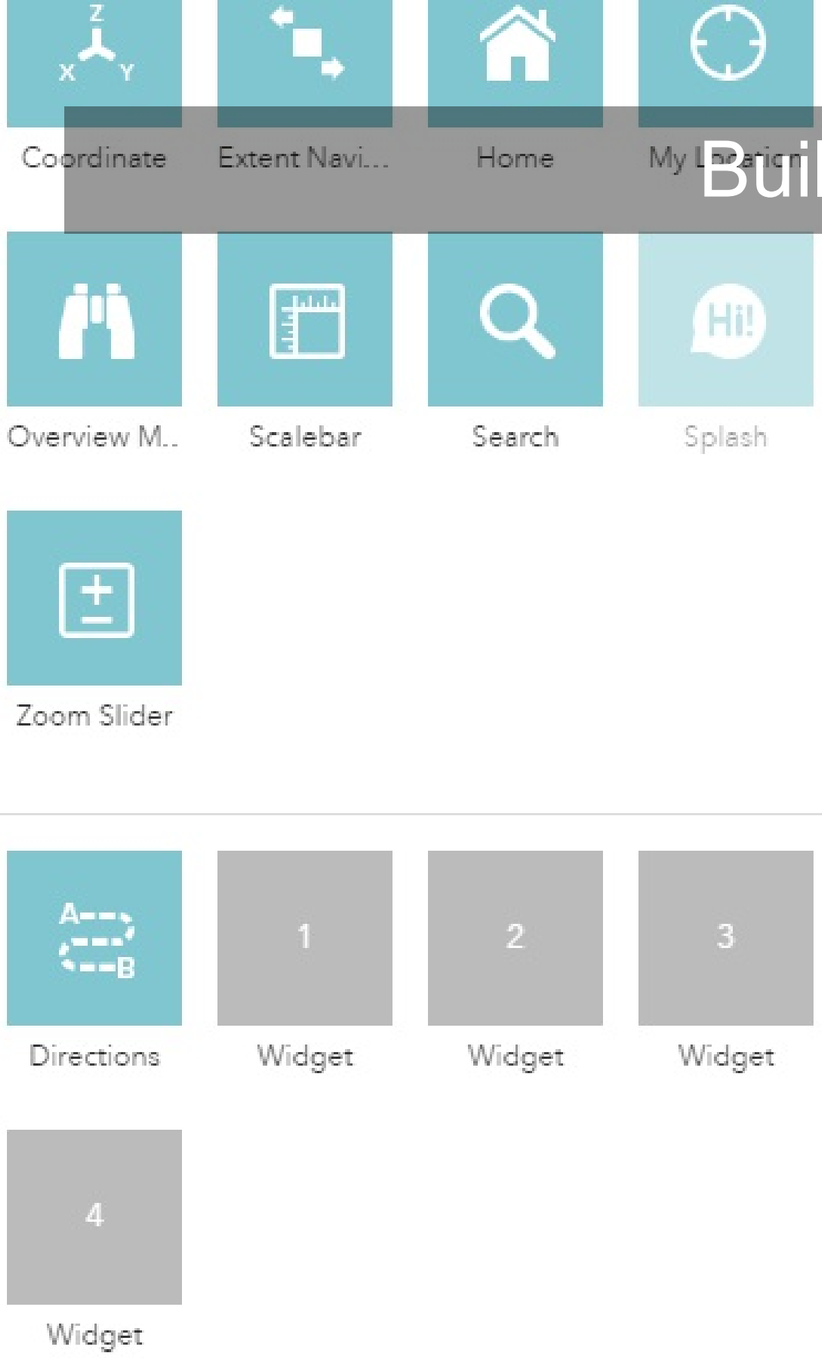
# Patterns

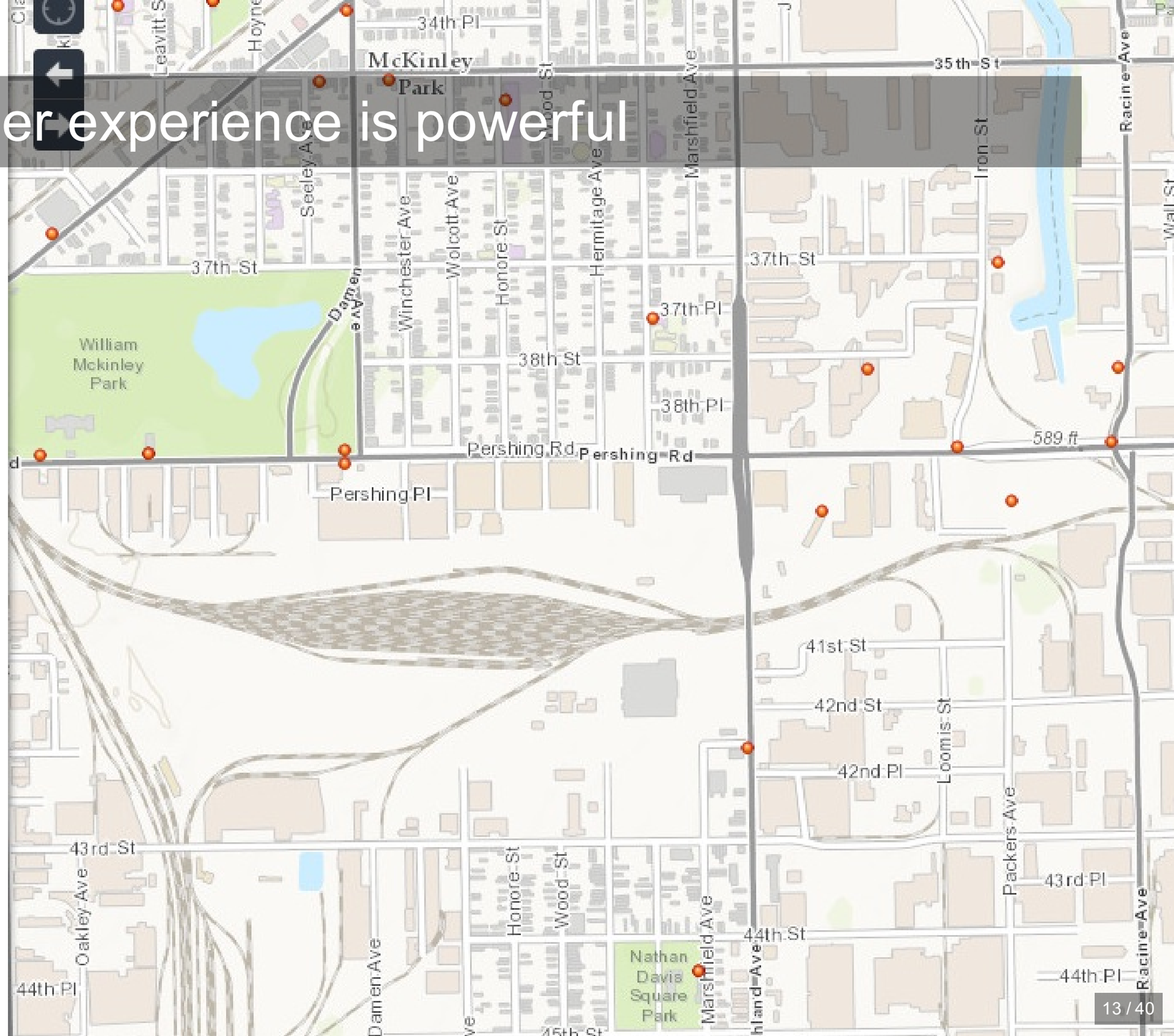
1. Keep your source code outside of the WAB folders
2. Don't write WAB widgets from scratch
3. WAB widgets wrap your own widgets
4. Test your code outside the WAB
5. Build your applications for production

# Tools: Yeoman - Grunt - Babel

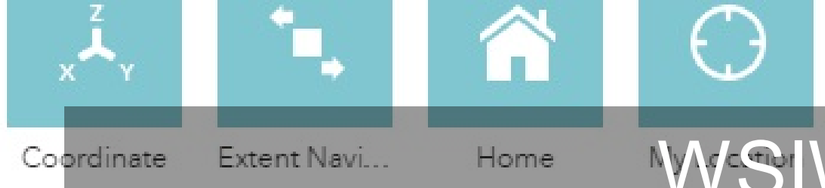
# Do I Really Need These Tools?

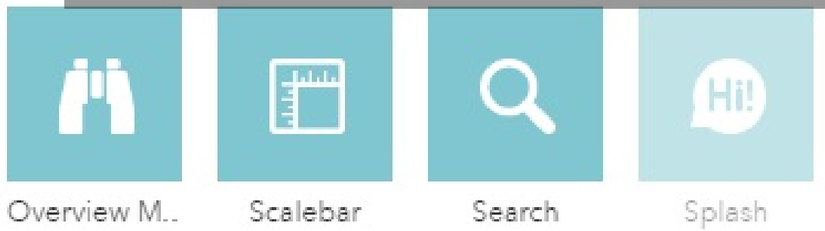
# Builder experience is powerful

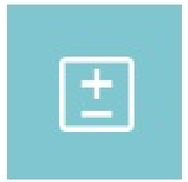


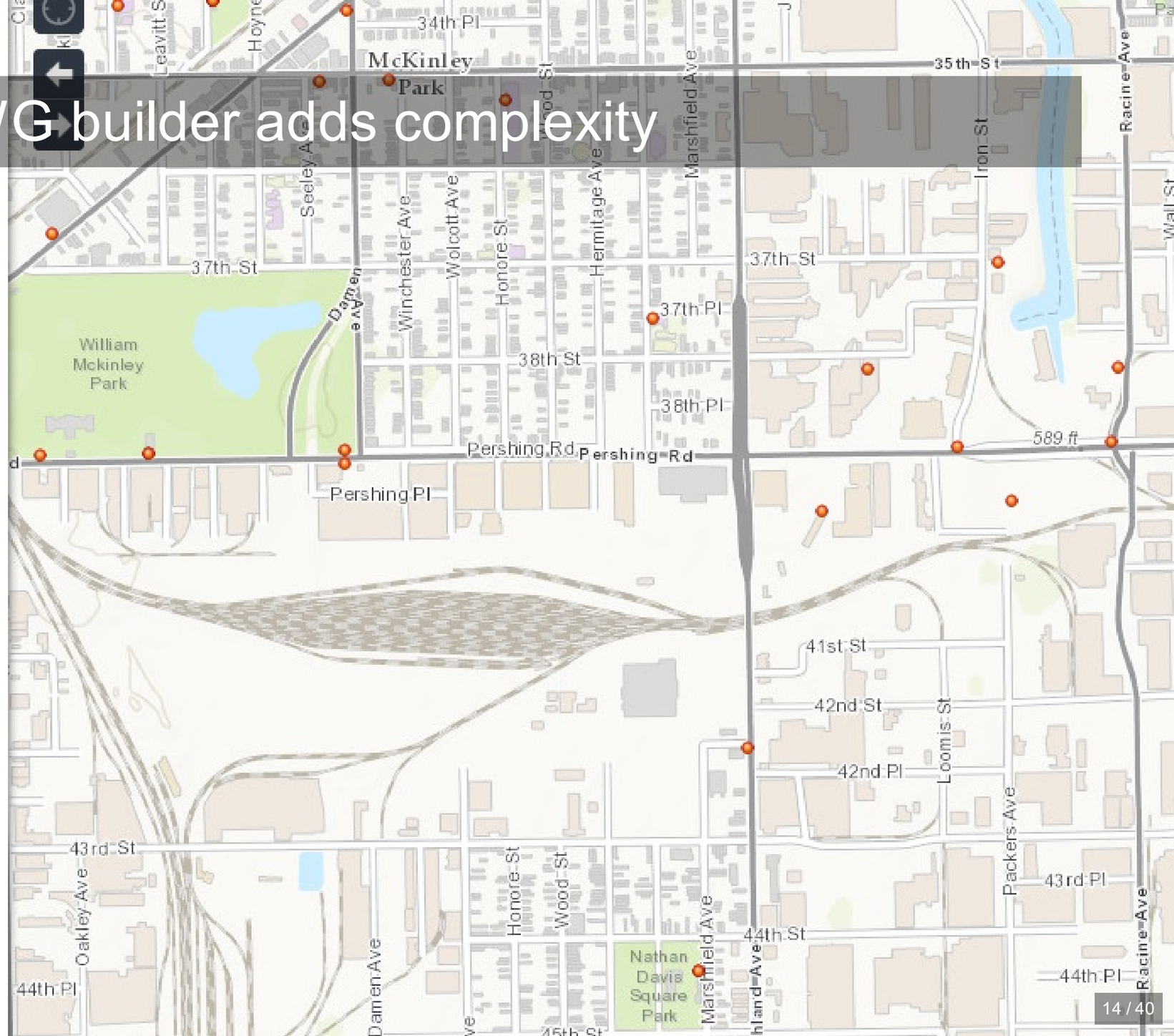



# WSIWG builder adds complexity

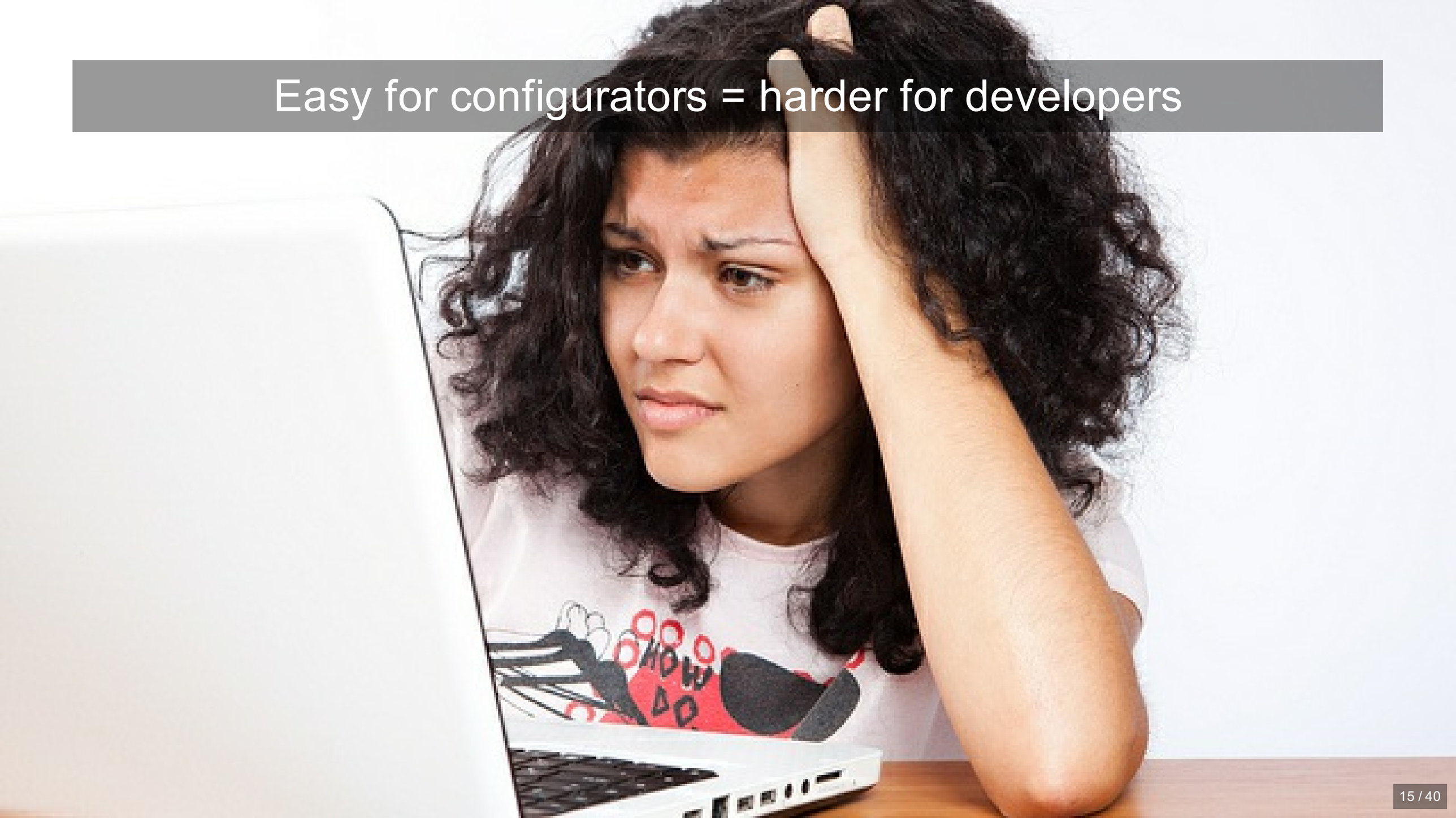




# Easy for configurators = harder for developers



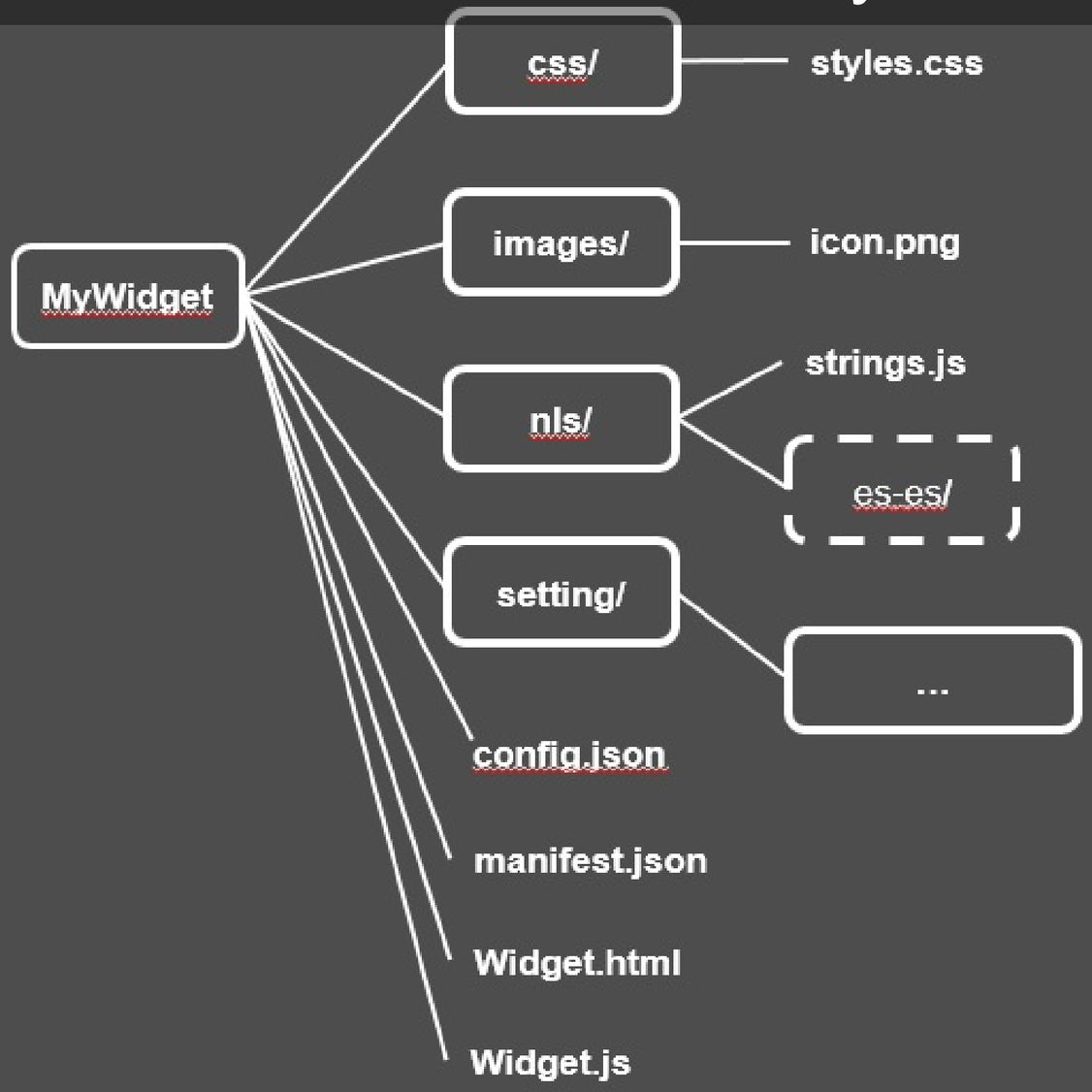
# Generators automate this extra work for us

# Scaffold out boilerplate code

# Install / configure tools to automate tasks

# WAB is an opinionated framework on top of JSAPI

# Heavy use of convetion - influenced by Rails



# Ideal for a generator: yo esri-appbuilder-js

```
λ yo esri-appbuilder-js

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 ┌──────────────────────────┐
 │  Welcome to the ArcGIS   │
 │     Web AppBuilder       │
 │       generator!         │
 └──────────────────────────┘

These generators should be run in the root folder of your project.
? Type of widget(s) to be generated: 2D
? Web AppBuilder install root: C:\Users\gavi6895\Documents\Projects\
? Web AppBuilder application: 6
? Would you like to use SASS for CSS preprocessing? Yes
   create .editorconfig
   create .babelrc
```

# Installs tools to transpile and copy to WAB folder

```
λ yo esri-appbuilder-js

     _-----_
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    /___A___\   /
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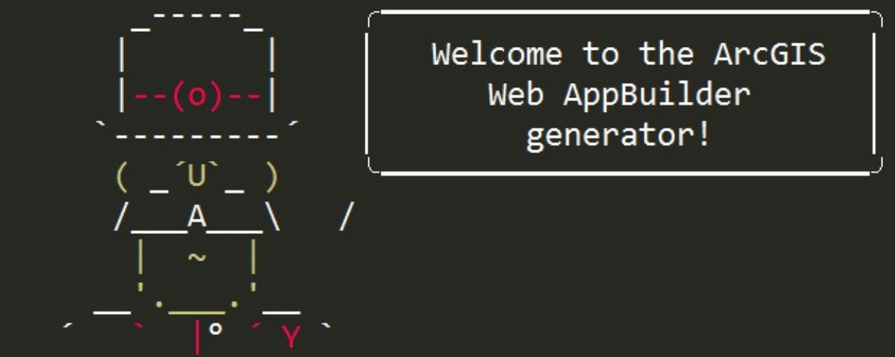
# Subgenerator to scaffold out widget files

```
λ yo esri-appbuilder-js
```

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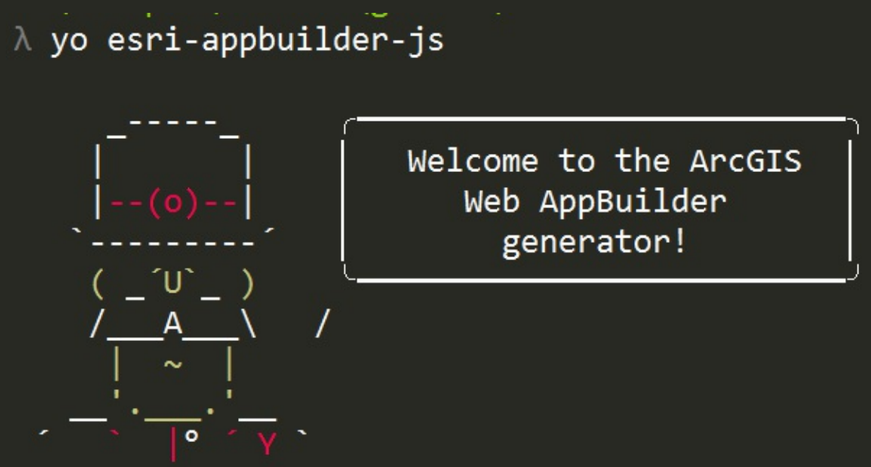
# New Features: SASS styling, custom themes



# Patterns Review

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Pattern:

# Source Code

# Web AppBuilder Folder Structure

# Only Keep YOUR Code in Source Control

# Demo: App Generator

Pattern:

# Do Not Write Widgets from Scratch

# Demo: Widget Sub Generator

Pattern:

# Wrap Your Widgets

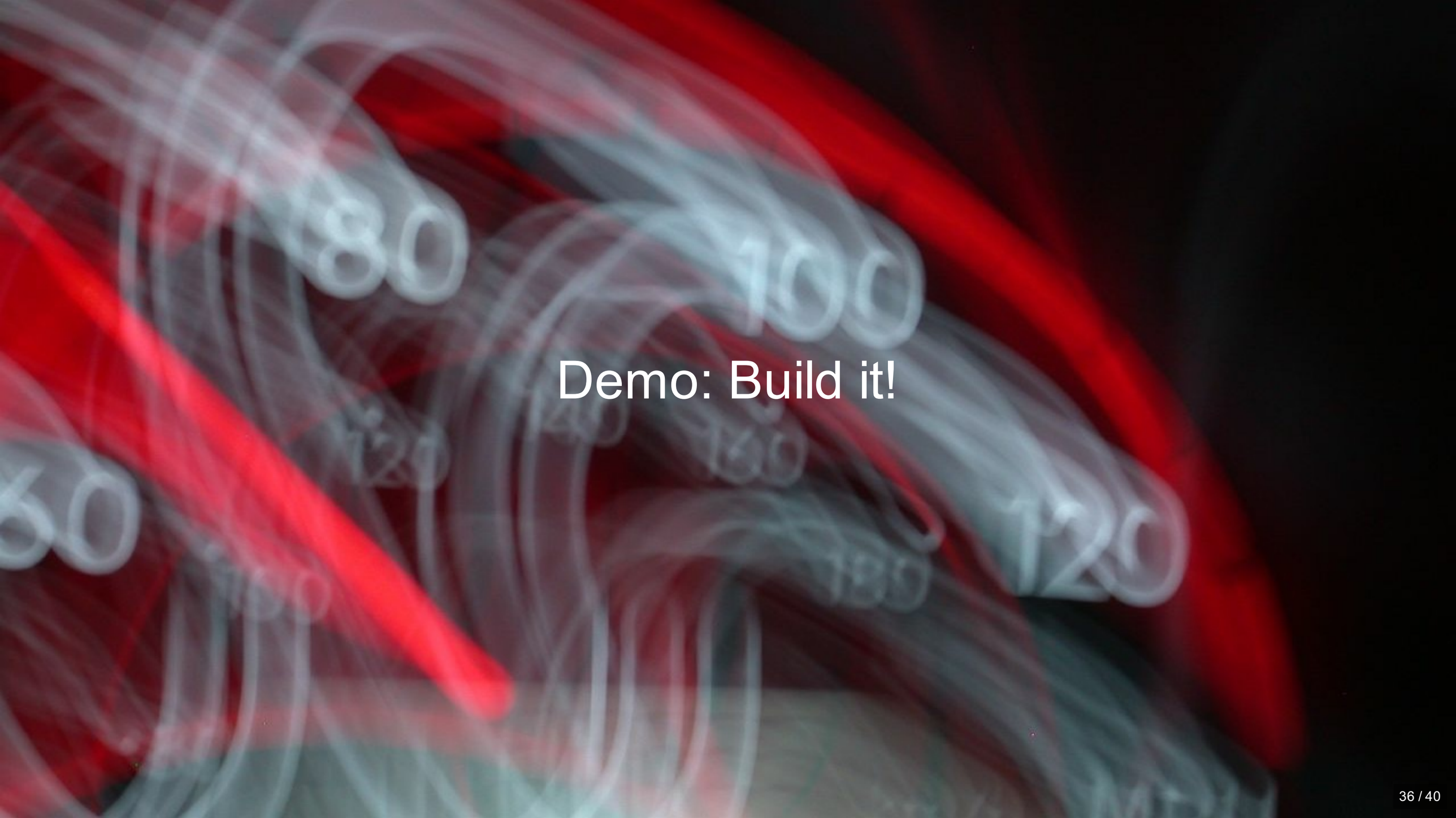
# ....maybe

# How do I test all this Web App Builder code?

STOP

Pattern:

# Build for Production


Demo: Build it!

# Coming Soon

3D Builds

Fewer Dependencies

Better Performance

# Resources

- Widget Generator: https://github.com/Esri/generator-esri-appbuilder-js
- Build Tool: https://github.com/gbochenek/esri-wab-build
- Finding Great Widgets
  - Geonet: Web AppBuilder Custom Widgets Group
  - WAB Widget Search
  - ArcScripts Search
- Documentation, Download, and Support:
  - developers.arcgis.com/web-appbuilder
  - developers.arcgis.com/javascript

# Thank You! Any Questions?

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gbochenek@esri.com - @bosshenek

These slides, sample code, and links are at:
esriurl.com/wabtools2017

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