



ARCGIS EXPERIENCE BUILDER FOR DEVELOPERS: WIDGETS, DEV, DEPLOYMENT, AND AUTOMATION

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Slides: presentation slides

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AGENDA

- Intro to Experience Builder
- Custom widget development
- Custom theme development
- Code collaboration
- Deployment
- Deployment automation (DevOps)

INTRO TO EXPERIENCE BUILDER



WHAT IS ARCGIS EXPERIENCE BUILDER

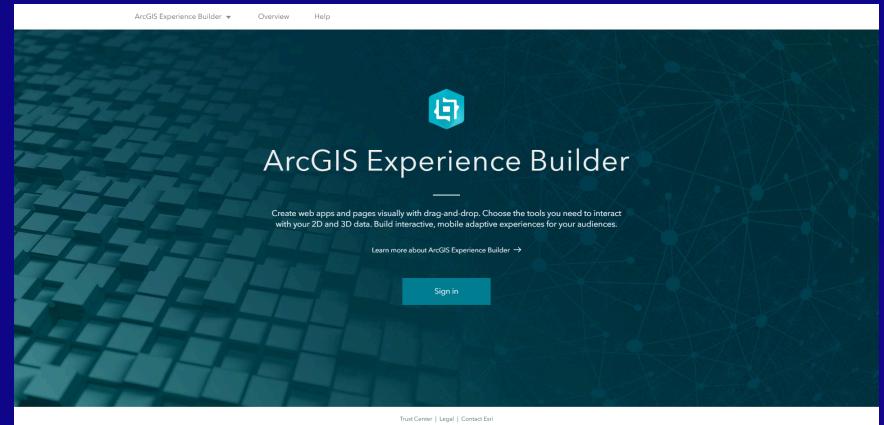
ArcGIS Experience Builder empowers you to quickly transform your data into compelling single or multi-page web apps

- Start with COTS templates and widgets
- Extensibility offered: custom themes and widgets

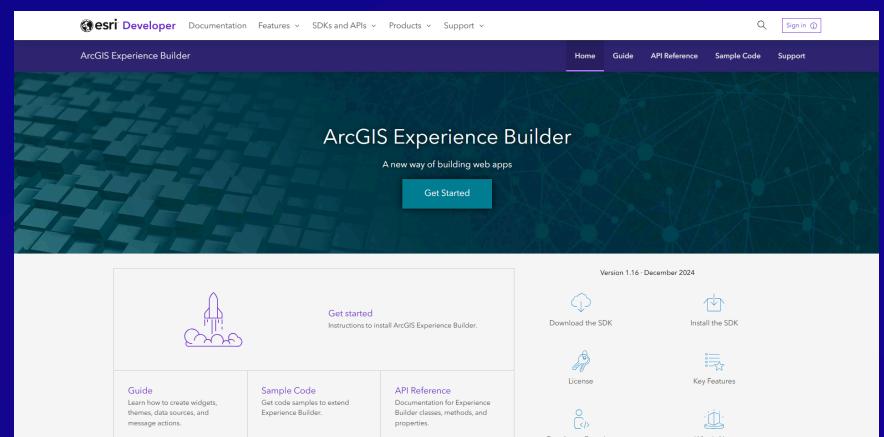


ARCGIS EXPERIENCE BUILDER EDITIONS

- ArcGIS Online and ArcGIS Enterprise
 - URL: experience.arcgis.com
 - ArcGIS Enterprise 10.8.1+



- Developer Edition
 - Download from the Developers website and install locally
 - Use your ArcGIS Online/Enterprise organization



CUSTOM WIDGET DEVELOPMENT

TECHNOLOGIES

- React
- TypeScript
- Jimu (Experience Builder JS library)

CUSTOM WIDGET DEMO

CUSTOM THEME DEVELOPMENT

CUSTOM THEME DEMO

CODE COLLABORATION

With your development team

WEB EXTENSION REPO

- Folder
- Within the `client/` folder
- Contains a `manifest.json/` file with the contents:

```
{  
  "name": "my-web-extension-repo",  
  "type": "exb-web-extension-repo",  
  "description": "This is a sample extension repository.",  
  "copyright": "",  
  "license": ""  
}
```

WEB EXTENSION REPO

- my-web-extension-repo/
 - manifest.json
 - themes/
 - widgets/
 - my-custom-widget-1/
 - my-custom-widget-2/

More info about developing as a team:
developers.arcgis.com/experience-builder/guide/frequently-asked-questions

DEPLOYMENT

TWO PATTERNS

1. ArcGIS Enterprise
2. Developer Edition > host on a web server

ARCGIS ENTERPRISE

1. Deploy custom widgets to Experience Builder within ArcGIS Enterprise
2. Users within ArcGIS Enterprise can build Experiences with those custom widgets
3. ArcGIS Enterprise 11.0 or higher
 - Documentation: links.esri.com/exb-share-custom-widget
 - Detailed instructions (blog post): links.esri.com/exb-add-custom-widgets-blog

DEVELOPER EDITION

1. Build the Experience with your custom widgets
2. Download as ZIP (image below)
3. Unzip files
4. If there is any private content, add `clientId/` to
`cdn/** app-string **/config.json/`
5. Host the files on a web server

DEPLOYMENT AUTOMATION

DevOps

WHY AUTOMATION?

- Faster builds
- Consistent builds
- Test integration
- The "reference" application
- Branch deployments

HOW TO AUTOMATE

- Store the reference version of each app
- Auto-build using your CI/CD env of choice:
 - GitHub Actions*
 - Azure DevOps
 - AWS CodePipeline
 - GitLab Actions
 - Jenkins
 - Etc.

AUTO-BUILD OUTCOMES

- Consistent outputs
- Easier version management (via Git branching)
- Quicker bug investigations (is it happening on the reference app?)
- More organized management of app config versions
- Quickly/easily share app both within & outside of team/organization

FOLDER STRUCTURE

- manifest.json
- apps/
 - 0/
 - 1/
 - zero/
 - one/
- widgets/
 - custom-widget-1/
 - custom-widget-2/

AUTO-BUILD

- Create file: `.github/workflows/build-app.yml`
- Demo repo:
`https://github.com/shawnmgoulet/experience-builder-devops-example`

SESSION RESOURCES

Code from
presentation

code

Experience
Builder
developer
documentation

[developers.arcgis.com/experience-
builder](https://developers.arcgis.com/experience-builder)

Esri
Community:
Experience
Builder

[community.esri.com/t5/arcgis-
experience-builder/ct-p/arcgis-
experience-builder](https://community.esri.com/t5/arcgis-experience-builder/ct-p/arcgis-experience-builder)

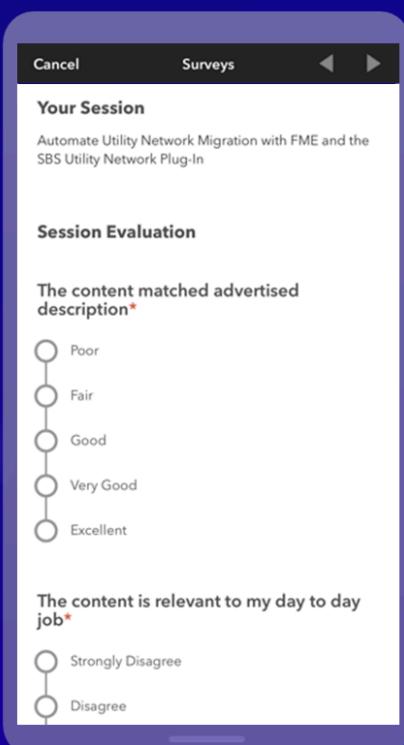
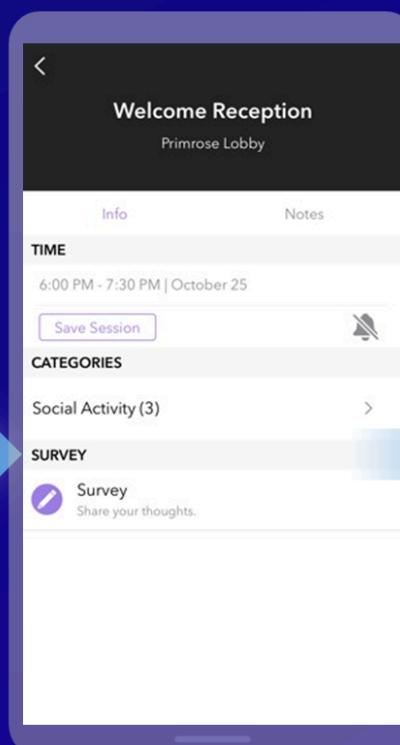
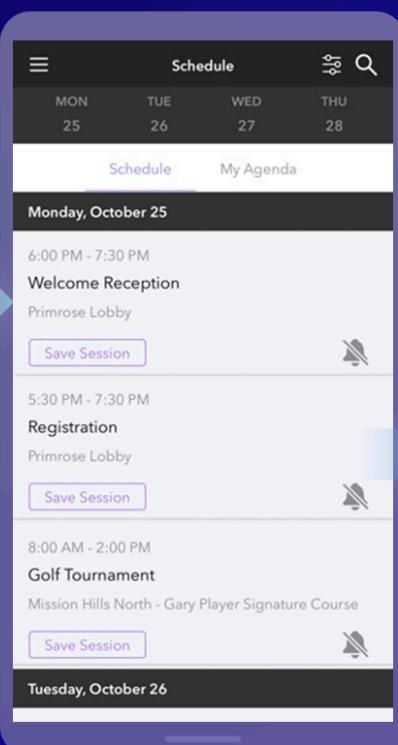
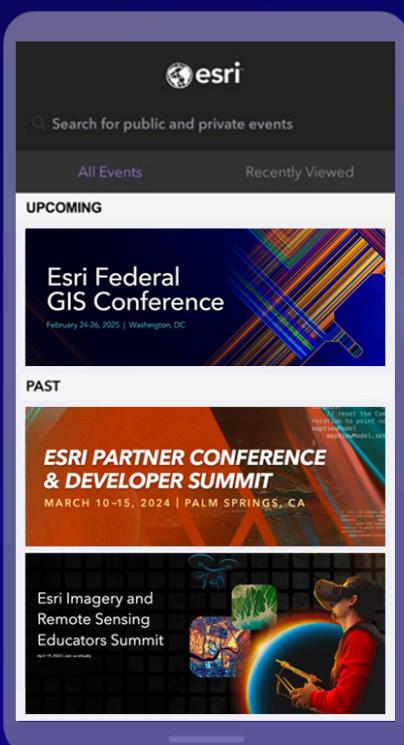
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