

The **State** of Backstage

in 2026





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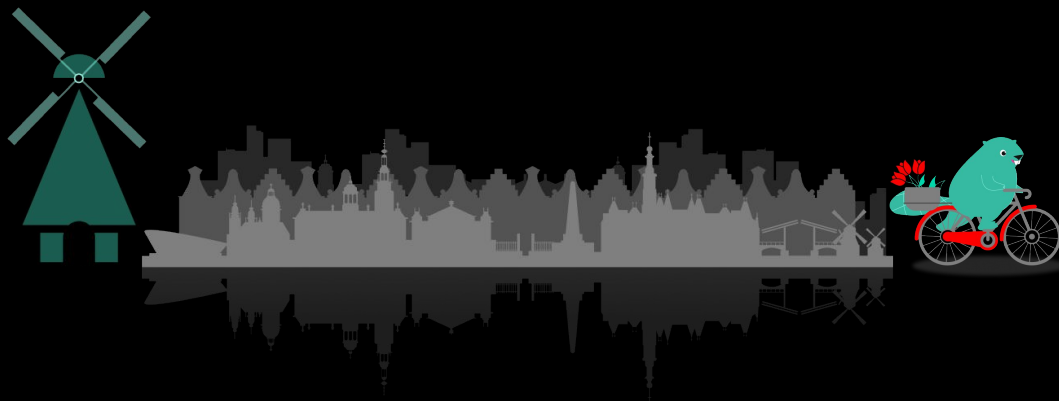
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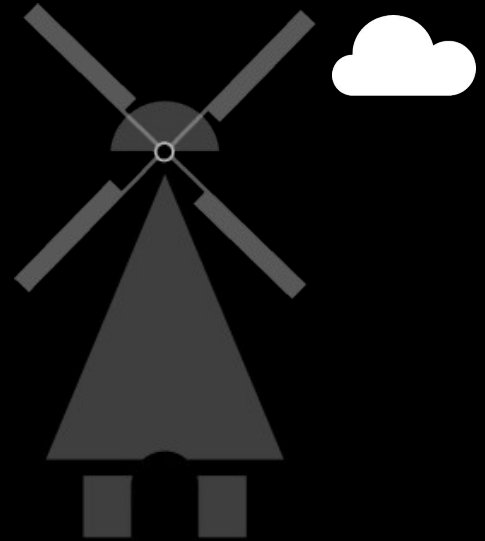


Agenda

- 01. Project Updates
- 02. Frontend System
- 03. MCP & CLI
- 04. Backstage & AI
- 05. Roadmap

Project Updates

What's been happening?



backstage/backstage

Project Updates

4k+

Adopters



255+

OSS Plugins

32.9k

GitHub Stars



backstage/community-plugins

Project Updates

190+

Community Plugins



85+

Maintainers



New Core Maintainers 🎉

- **New!** Core Maintainers
 - André Wanlin (@awanlin)
 - Aramis Sennyey (@aramissennyeydd)
- Both long-time contributors across multiple project areas
 - Been maintainers of five project areas together
- Lot of work across tooling, documentation, community plugins, core framework, and demo site
- Represented Backstage at past KubeCons



PR Reviews – Replacing our existing process

- Problems
 - Internal board with low visibility for contributors
 - Randomized assignment that leads to a flood of PRs for maintainers
 - Restricted team of community reviewers
- Goals
 - Better visibility for contributors
 - More focused attention from maintainers
 - Help prioritize reviews
 - An empowered team of community reviewers with real impact



PR Reviews – New process

Global Queue

Waiting for Review	129	This needs a review	...
1	cli: move transform tests into the build module	#33025	292
2	catalog: move stitch queue concerns into final_entities	#32854	235
3	fix danger section taking over full docsite	#32908	200
4	docs(techdocs): fix incorrect S3 IAM permission (PutObjectAcl)	#32961	190
5	catalog: slightly simplify deferred stitching runs	#32965	190
6	fix(ui): fix scroll overflow in Menu and Select popovers	#33049	190
7	docs: add the Flagsmith plugin to the microsite directory	#33027	188
8	feat(core-plugin-api): add optional description to plugin feature flags	#32081	185
9	docs(catalog): add mention of backstage-openapi backend module to configuration	#32840	181
10	Refactor scheduler to use metrics service	#32992	181
11	docs: recommend Node.js built-in proxy support for corporate proxies	#33006	181
12	fix(ui): limit Select menu height and enable scrolling	#32851	179
13	feat(auth-backend): add who-ami-1 action to actions registry	#33046	176
14	Add dangerousAllowAddETLonaKeys option for TechDocs MDDocs configuration	#33043	175
15	beps(dynamic-discovery): pivot to just plugin listing with static config	#25431	170
16	docs(catalog): add mention of openapi backend module for support	#32838	170
17	fix(ui): strip query params from tab href before active-state matching	#33047	162
18	feat(ui): add IconStart and IconEnd props to Accordion component	#32464	159
19	fix(deps): update dependency minimatch to v10 [security] - autoclosed	#32916	156
20	cli: Add plugin/package support to backend-plugin-module template	#32627	151
21	feat(scaffolder-backend-module-github): add settings.name and ownerUsername ...	#33028	149
22	feat(scaffolder): enable entity/rel filtering for EntityPicker, scroll to selected item l...	#32763	141
23	feat(backend-app-api): attribute registration errors to plugins/modules	#33029	138
24	Fix incorrect AWS S3 permission in TechDocs documentation	#32930	135
25	feat: Add status check functions for scaffolder steps	#32890	126
26	feat: schema-first audit events	#32148	113
27	feat(openapi): add spec for permissions router	#32211	110

Personal Board

Title	...	...	Assignees	...	Reviewers	...
Waiting for Review	2	This needs a review	...			
1	fix(catalog-backend): don't emit notFoundError when glob pattern matches zero fl...	#33360	97	Rugvip	▼	Rugvip and copilot-...
2	docs(bep): define shared AI assets repo and cli support	#33173	74	Rugvip	▼	awanlin, Rugvip, an...
+ Add item						
Waiting for Author	11	Changes have been requested	...			
3	create-app - Added the mcp-actions-backend plugin	#33346	273	Rugvip	▼	Johnmcollier, Rugvi...
4	Update backstage-cli repo list-deprecations to ignore local code	#32988	163	awanlin and Rugvip	▼	awanlin, Rugvip, an...
5	feat(auth): surface JWT payload claims on BackstageServicePrincipal for jwks tok...	#33059	162	Rugvip	▼	Rugvip and copilot-...
6	feat: add support for wildcard patterns in package discovery configuration	#33255	139	Rugvip	▼	Rugvip, schultzp20...
7	Add link checker to verify_docs-quality workflow	#32402	99	Rugvip	▼	awanlin, Rugvip, an...
8	Fix ongoing task logs display	#32276	99	Rugvip	▼	acierto, aramissen...
9	docs: clarify Unix-like shell requirement for Windows users	#32233	99	Rugvip	▼	aramissennyyeydd, ...
10	Add react/jsx-runtime and react/jsx-dev-runtime to ModuleFederation s...	#32210	98	Rugvip	▼	camilaibs and Rugvip
11	refactor(cli): Use commander for CLI args instead of yargs	#32944	85	Rugvip	▼	Rugvip and copilot-...
12	Bugfix/invalid limited tokens	#31856	79	Rugvip	▼	freben and Rugvip
13	feat: support conditional rendering NFS	#32330	62	Rugvip	▼	clairep94, Parsifal-...

PR Reviews – Become a Reviewer!

- Community member with real impact on PR flow
- Approving or Rejecting PRs is reflected on the board
- Rewarded with a higher priority on own PRs
- Existing org members: [backstage/backstage#32794](#)
- Become a member: [backstage/community](#)

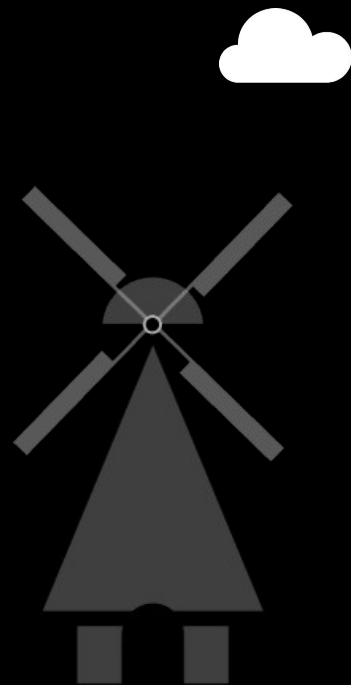


Frontend System



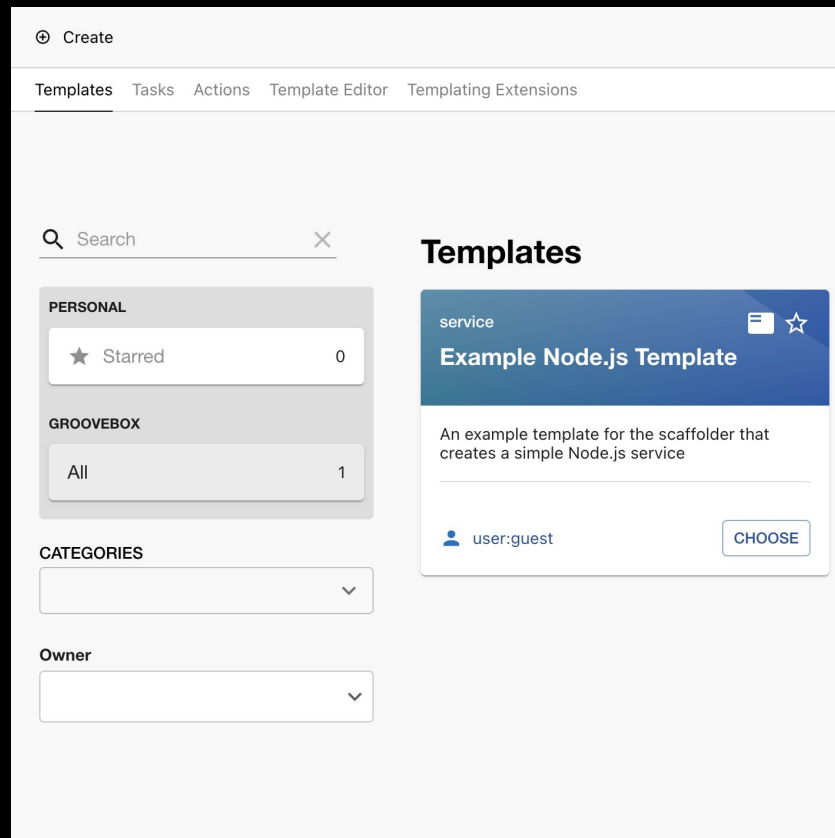
Frontend System – What's new

- More robust plugin isolation
- Documentation improvements
- Overhauled testing utilities
- Forwards compatibility from old system
- App-wide navigation improvements
- Titles & icons for plugins and pages, with new page layout
- Built-in Permissions & Feature Flag support



New page layout

- New page layout from Backstage UI
- Plugin-wide header
- Extensible header actions
- Swappable for a custom layout
- Support for sub-page navigation
- Only in the new frontend system



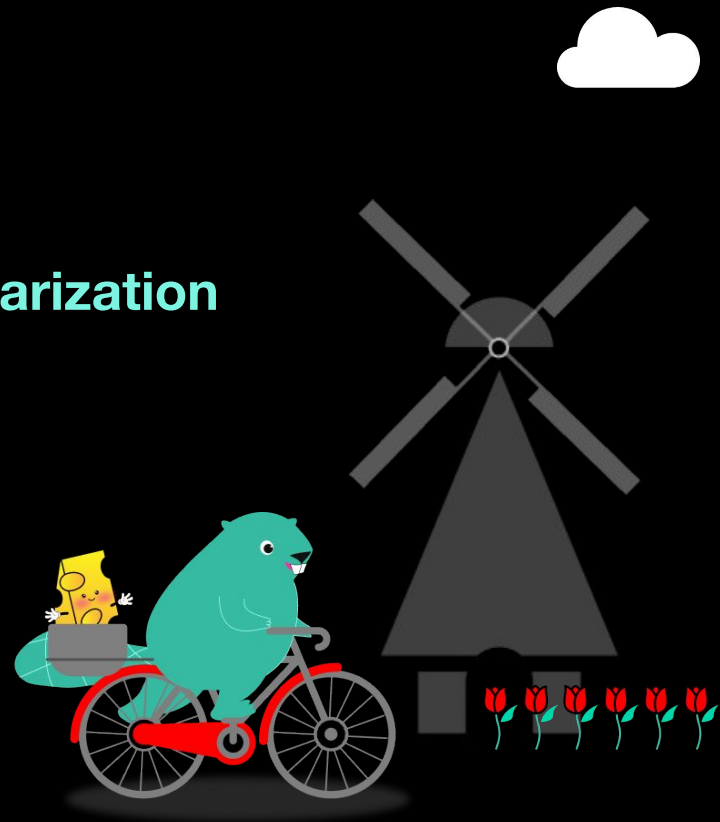
Frontend System – Release Candidate

- Backstage 1.49
 - New Frontend System 1.0 Release Candidate
 - If no major issues, 1.0 in a few releases
 - Now the default for new projects
- Agent skills
 - `npx skills add https://backstage.io`
 - Migrating apps to new system
 - Fully migrating plugins
 - Dual system support for plugins
- Old system will be deprecated, expect support until EoY



MCP & CLI

Authentication, Actions Registry, Modularization



CIMD & Refresh Tokens

- Static Tokens
 - No user context
 - No permissions
 - Painful to manage
- Client Identity Metadata Documents (CIMD)
 - Replaces Dynamic Client Registration (DCR)
 - Allowlist of public client documents
- Token expiry was 1 hour
 - Not great for MCP Sessions
 - `offline_access` and `refreshTokens`



CLI Authentication

- `backstage-cli auth login` ✨
- Manage multiple instances
- Client Identity Metadata Documents (CIMD)



CLI & ActionsRegistry

- ActionsRegistry
 - Reusable actions provided by plugins
 - Used as tools in MCP
 - Also callable from Scaffolder Templates
- Now available in the CLI
 - `actions sources add auth catalog scaffolder`
 - `actions list`
 - `actions execute scaffolder:list-templates`



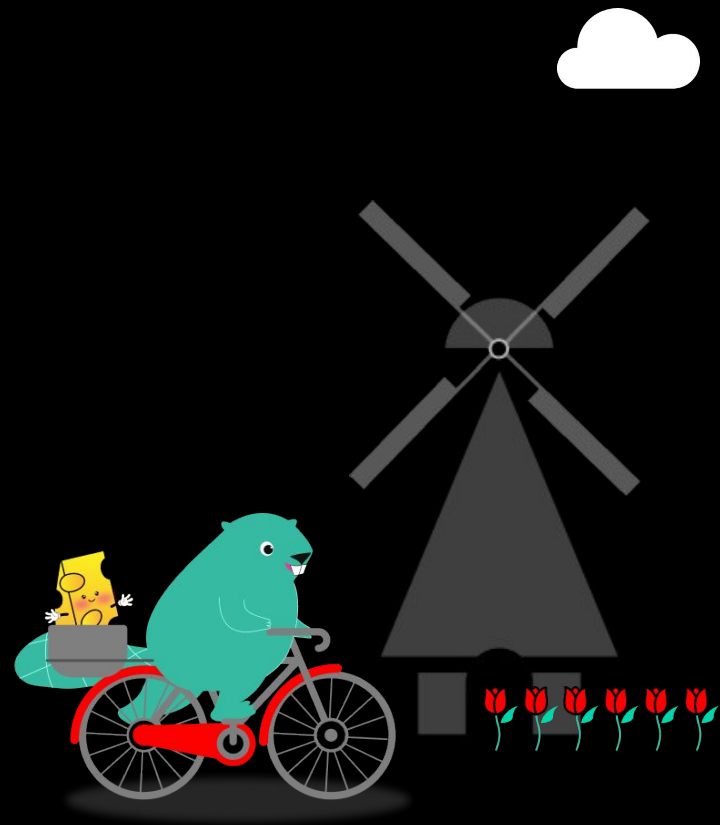
Catalog Actions

- `query-catalog-entities`
 - Better querying using Entity Predicates
- `add-location / remove-location`
 - Allows for mutating the Catalog outside of the UI
- `validate-entity`
 - Validating entities without registering in the catalog through dry-running.
- `who-am-i`
 - Returns the logged in user and associated groups
- **Yours?** 🙏



Demo

MCP & CLI



CLI Modularization

- CLI Modules
 - Each contribute one or more commands
 - Can be permanently installed, or run standalone
 - Shared instance management with authentication
- Use presets, or only install what you need
- Build your own modules
- Simplifies future additions, currently on the roadmap:
 - Replacing Jest with Vitest
 - Replacing ESLint with Oxlint



index.ts – Module definition

```
export default createCliModule({
  packageJson,
  init: async reg => {
    reg.addCommand({
      path: ['hello'],
      description: 'Say hello',
      execute: {
        loader: () => import('./hello')
      },
    });
  },
});
```

CLI Usage

```
$ cli-module-hello hello --name Patrik
Hello, Patrik!
```

hello.ts – Command implementation

```
import { cli } from 'cleye';
import { CliCommandContext } from '@backstage/cli-node';

export default async ({ args, info }: CliCommandContext) => {
  const { flags } = cli(
    {
      help: info,
      booleanFlagNegation: true,
      flags: {
        name: {
          type: String,
          description: 'Your name',
        },
      },
    },
    undefined,
    args,
  );

  console.log(`Hello, ${flags.name ?? 'World'}!`);
}
```

Backstage & AI



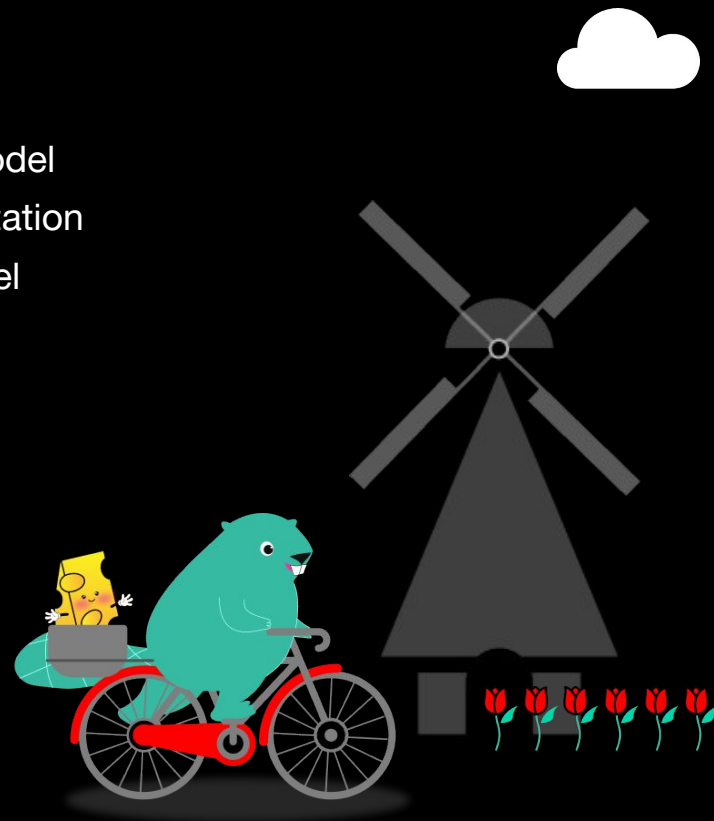
Multiple surfaces, same context

- Backstage powers multiple surfaces
 - UI – traditional web app
 - CLI – developer workflows & CI/CD
 - AI – MCP tools, skills, agents, rules
- Shift towards automated programming
 - Less time spent writing code
 - More time spent across these surfaces
- All in the same context with shared data and actions
 - Software Catalog, Software Templates, TechDocs ...
 - ... and much more, including your own



Catalog Model – Context Gap

- The current model is a black box
 - No external schema or other descriptions of the model
 - Field descriptions are scattered in plugin documentation
 - No structured way for tools to understand the model
- With an inspectable and extensible model
 - Plugins can declare their model contributions
 - Model is discoverable via API
 - Rich context available for use in AI tools



Catalog Model

- Plugins claiming ownership of annotations
- Extending the spec of a particular kind
- Creating new kinds for your org

```
import { catalogModelRegistryServiceRef } from '@backstage/backend-plugin-api/alpha'

createBackendPlugin({
  pluginId: 'scaffolder',
  register({ registerInit }) {
    registerInit({
      deps: {
        catalogModel: catalogModelRegistryServiceRef,
      },
      init({ catalogModel }) {
        catalogModel.register((builder) => {
          // write your model extensions here
        });
      },
    });
  },
});
```

Catalog Model - Annotations

```
builder.addAnnotation({
  name: 'backstage.io/kubernetes-label-selector',
  title: 'Kubernetes Label Selector',
  description:
    'Annotation used to specify a Kubernetes label selector query for filtering
resources.',
  schema: {
    jsonSchema: {
      type: 'string',
      examples: ['app=my-app,environment=production']
    },
  },
});
```

Catalog Model - Kinds

```
import jsonSchema from './Template.v1beta3.schema.json';

builder.addKind({
  group: 'scaffolder.backstage.io',
  names: {
    kind: 'Template',
    singular: 'template',
    plural: 'templates',
  },
  description: 'A template for scaffolding a new component',
  versions: [
    {
      name: 'v1beta3',
      relationFields: [
        {
          selector: { path: 'spec.owner' },
          relation: 'ownedBy',
          defaultKind: 'Group',
          defaultNamespace: 'inherit',
          allowedKinds: ['Group', 'User'],
        },
      ],
      schema: { jsonSchema },
    },
  ],
});
```

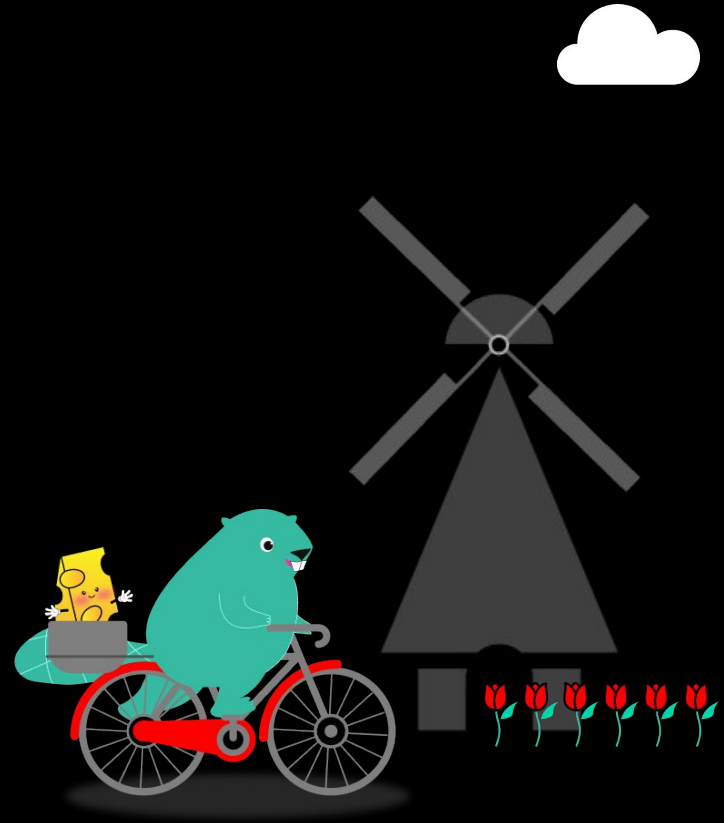
Catalog Model - Extensions

```
builder.addRelationPair({
  comment: 'A group manager is a user who is responsible for a group.',
  fromKind: 'User',
  toKind: 'Group',
  forward: {
    type: 'managerOf',
    singular: 'manages',
    plural: 'manages',
  },
  reverse: {
    type: 'managedBy',
    singular: 'manager',
    plural: 'managers',
  },
});
```

```
const jsonSchema = {
  type: 'object',
  properties: {
    spec: {
      properties: {
        manager: {
          type: 'string',
          description: 'The user who manages the group.',
        },
      },
    },
  },
};

builder.updateKindVersion({
  kind: 'Group',
  versions: [
    {
      name: ['v1beta3', 'v1beta2'],
      relationFields: [
        {
          selector: { path: 'spec.manager' },
          relation: 'managedBy',
          defaultKind: 'User',
          defaultNamespace: 'inherit',
          allowedKinds: ['User'],
        },
      ],
      schema: { jsonSchema }
    },
  ],
});
```

Roadmap



Roadmap

- Catalog Model Extensions
- `kind:AIContext`
 - <https://github.com/backstage/backstage/issues/33575>
- Release process
- Backstage UI
 - Continued rollout across core plugins and broader ecosystem
- Phasing out the old frontend system



Thank You

