Structural overview of k8s and OpenShift resources

What’s being shown:

- **k8s Service**: shows the IP and port that is being exposed within the cluster. Visually it should be associated with the things that it is routing to.

- **OpenShift Deployment**: shows when and why the deployment was triggered, visually associated with what is running in the deployment.

- **k8s/OS Pod Template**: shows what image is running. If the image came from OS build process then it includes build info. Shows source info that went into the build when it is known.

- **k8s Pods**: the actual instances of the pod template including a minimal amount of status (state, IP, etc).

Example of the same visualization applied to only k8s resources.
A single k8s service may route to similar but different pods. One example includes multiple deployment configurations during an A/B test.

When viewing k8s resources without OS concepts, things that are routed to by the service should still all be visually connected by the service.

Vertical relationships between deployments should indicate time, with the most recently deployed deployments within a deployment configuration being the most important.
Interaction with the overview

Clicking on a specific resource navigates to the detailed information and status for that resource (service, image, build, source, pod, etc). In OS navigation structure this would be underneath Browse.
Possible extension points within the overview

Additional details for what is running in the pods. Ex: if we know it is a JBoss image and that it has Camel routes configured then inject a link to view the Camel routes.

Area beneath the deployment may provide suggestions. Ex: I am running the Rails image but I have no database images running in my project, suggest setting up a DB service.

Entire sections could be swapped out with other visual representations. Pod template, pod details, etc.
Navigating the console

**Structural overview (default tab when going to a project)**

- Pipelines. This includes build pipelines (source -> build -> image), known environment pipelines (dev -> test -> production)
- Metrics and monitoring. This includes both container level system resource monitoring and extended monitoring details such as JVM monitoring (think threads, etc) and event bus monitoring.
- Events (timeline), important things happening within your project.
- Logs. Viewing the logs for your running containers. Viewing logs for your already completed or running builds.
- Browse. Dig down into lists of resources for any resource type. Ex: I want to look at a list of all the pods in my project
- Membership. View/edit the users/teams that have access to this project and its resources.
- Settings. General settings for the project.

**Switch between projects, the current selected left tab is maintained when switching**

**Search services and components**

**Filter the current view by labels**

**Primary Resources**

- Resources
  - Services
  - Deployment Configuration
  - Build Configuration
  - Builds
  - Replication Controller
  - Pods
  - Image Streams

**Secondary Navigation**

- Config foo
  - See builds
  - Edit

- Config bar
  - See builds
  - Edit

- Config baz
  - See builds
  - Edit

**Secondary navigation column will only appear as needed. Example shown is the secondary nav for Browse.**
Additional wireframes live in the OpenShift Origin repo