# MICHIGAN STATE UNIVERSITY Project Plan Presentation Backstage's Back Alright The Capstone Experience

#### Team Kohl's

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From Students... ...to Professionals

## **Project Sponsor Overview**

- Kohl's is one of the largest department store chains in America
- Over 30% of Kohl's sales are from online sales, tallying up to roughly \$1 billion quarterly
- Online sales are made from webpage and mobile apps





## **Project Functional Specifications**

- Developers often struggle with the deployment, development, maintenance and testing of software. A new way of managing these issues is with developer portals.
- Companies like Kohl's run and maintain a large amount of custom software, by using developer portals, developers can easily deploy complex software and projects. Kohl's has developed their own developer portal called "Ensemble".
- The two major parts of this project are solving an underlying inefficiency in the current Ensemble platform and extending the functionality.
- The Ensemble platform is functionally broken into two separate applications on different platforms, by merging these two applications together, we intend to save a lot of time for developers to deploy software.

## **Project Design Specifications**

- Create App Page
  - User will populate a template that will create a project, a documentation page, or a Spring Boot app
- App Directory Page
  - Displays a catalog of the developer's current applications and their details

## Screen Mockup: Create App Page

Search Home		ew Component					
App Directory	Available Te	nplates					
Create App Docs	Q Search	× Other Templates					
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Tech Radar	* Starred	Project Creation	Documentation	Springboot Application			
	KOHLS	DESCRIPTION	DESCRIPTION	DESCRIPTION			
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		OWNER	OWNER	OWNER			
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The Capstone Experience

## Screen Mockup: Product Creation Page

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sarch	Create a New Component	
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## Screen Mockup: Task Activity Page

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Create product 0 seconds		1.0
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## Screen Mockup: App Directory Page

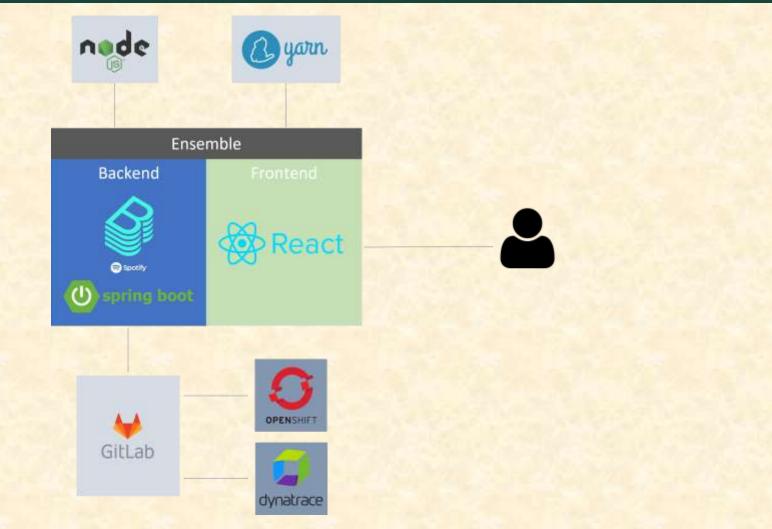
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	PROCESSING STATUS								

## **Project Technical Specifications**

- Ensemble web application
  - Backend
    - Uses both Backstage and Spring Boot
  - Frontend
    - **OUses React**
  - Run with Node.js and Yarn
- GitLab
  - Employs both Dynatrace and OpenShift



## **Project System Architecture**



## **Project System Components**

- Hardware Platforms
  - None
- Software Platforms / Technologies
  - React
  - TypeScript
  - Node.js
  - Yarn
  - Visual Studio Code
  - Backstage
  - GitLab
  - Dynatrace
  - OpenShift

## **Project Risks**

- Risk 1 Local Testing
  - Description Testing code without access to Kohl's internal network
  - Mitigation Work closely with the Kohl's engineers to develop methods for local testing
- Risk 2 Security
  - Description Each API used must be secured with authentication
  - Mitigation Research how to utilize libraries in the Ensemble backend to limit access for particular users and add encryption to all sensitive data
- Risk 3 Dynatrace Dashboard Connection
  - Description Building the connection between the Ensemble dashboard and Dynatrace dashboard
  - Mitigation Research the process behind linking Dynatrace to Backstage, and discuss non-trivial modifications Kohl's team previously made to get the connection working correctly

## **Questions?**

