MICHIGAN STATE UNIVERSITY

Project Plan Presentation
Global Business Services Process Intelligence

The Capstone Experience

Team Kellogg's

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Fall 2023

From Students…
…to Professionals

Project Sponsor Overview

- Large scale food manufacturing company headquartered in Battle Creek, MI

- Kellogg's owns various name brand products such as: Pringles, Cheez-It, and Pop-tart's

- Company vision: A good and just world where people are not just fed but fulfilled

Project Functional Specifications

- Create a streamlined process that standardizes and automates the OSD (overages, shortages, and damages) return process

- Reduce manual data entry through auto population, improve accuracy and efficiency, and increase visibility on the status of returns

- Showcase analytical views to track progress, find trends, and quantity impacts by different dimensions

Project Design Specifications

- Return Form – allow processors to fill out a form that auto populates information based on the bill of lading number

- Claims List – shows a high-level view of all submitted claims where you can sort the data and update order statuses

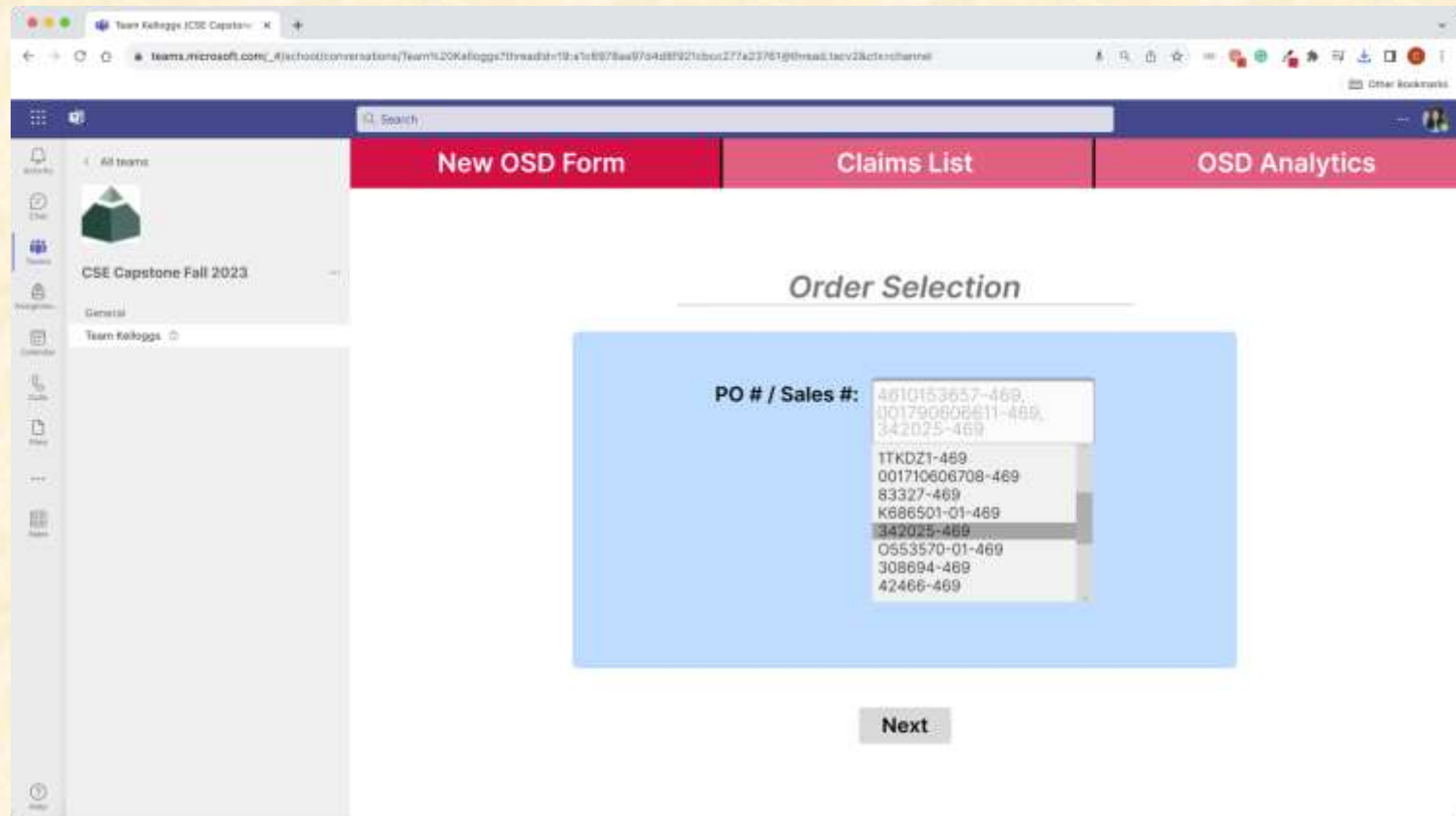- Analytical View – see insights into the type and number of claims over the last few months

Screen Mockup: Basic Information

Screen Mockup: Order Selection

Screen Mockup: Customer Information

Screen Mockup: Order Details

Screen Mockup: Destination Information

Screen Mockup: OSD Claims List

Screen Mockup: Analytical View
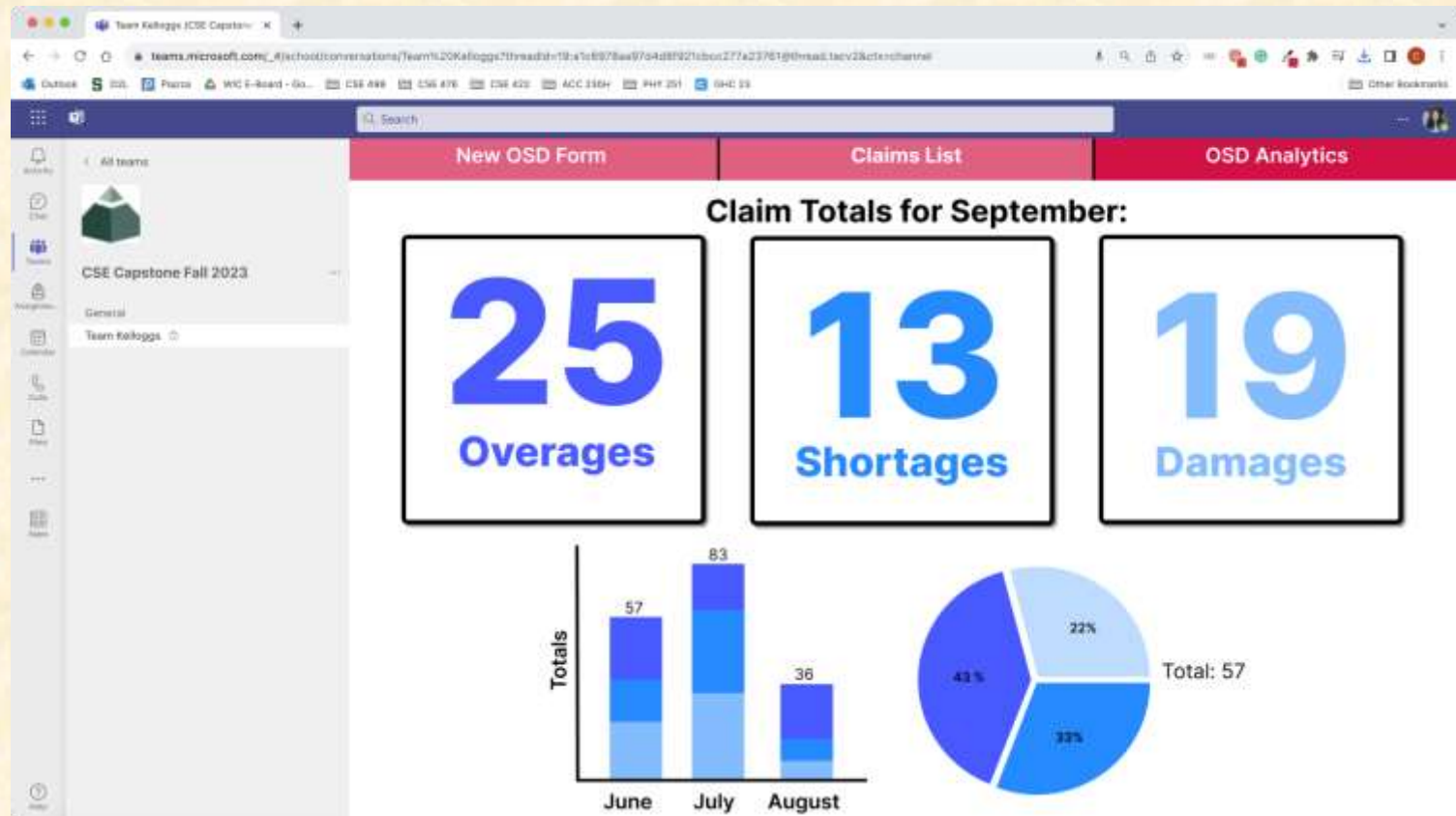
Project Technical Specifications

- Front end will be an application developed through PowerApps and integrated into Teams
- Back end will have a SQL database that pulls relevant order information for the claim being created to auto populate fields in the form
- Once the claim is created, this data will be added into a collection that can be sent through Power Automate to generate an Excel file of the claim
- PowerBI will also be connected to the claims data in the back end to provide insight and specific analytics

Project System Architecture
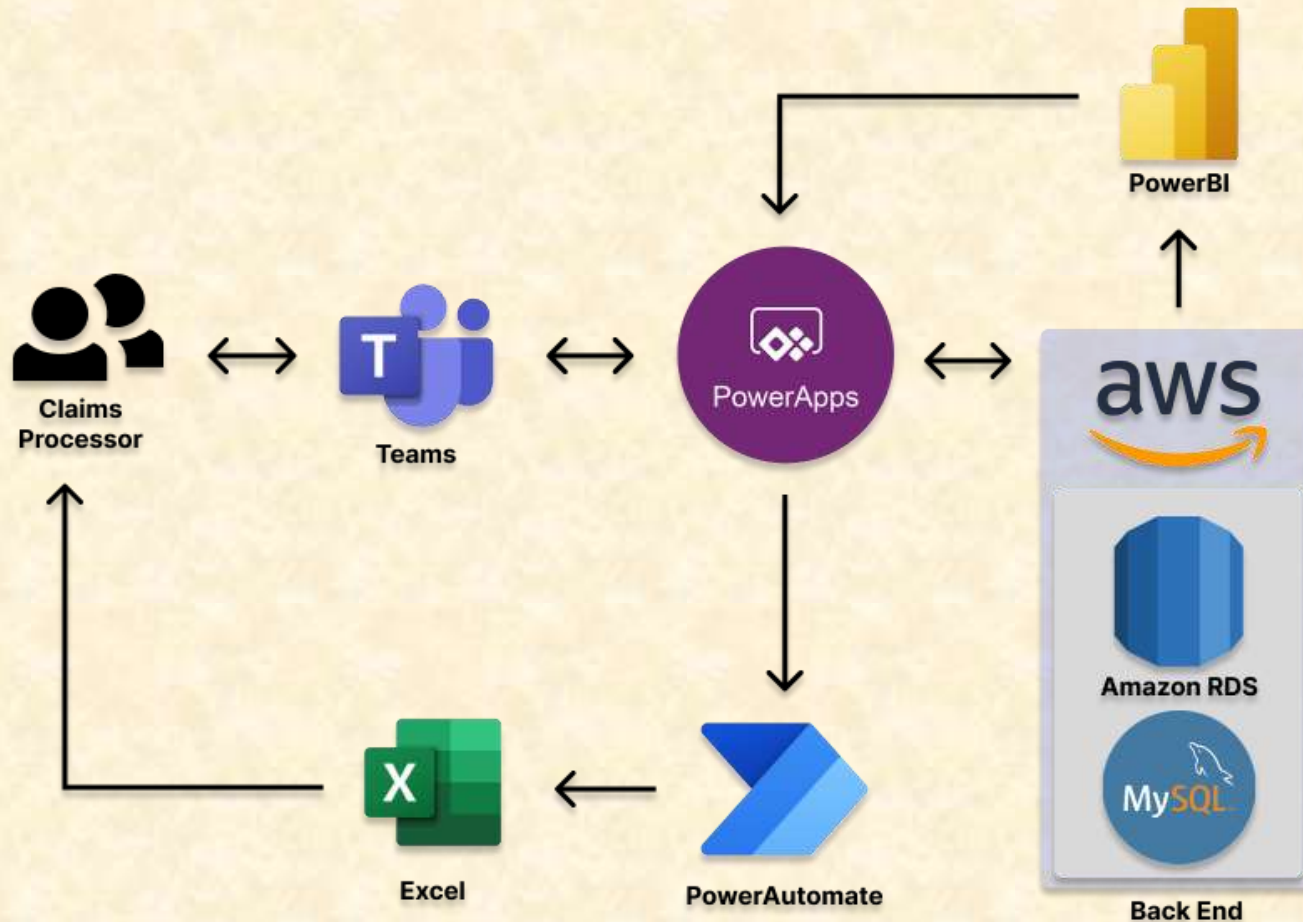
Project System Components

- Software Platforms / Technologies
  - AWS Server
  - Amazon RDS
  - MySQL Database
  - Microsoft Teams
  - Microsoft Power Apps
  - Microsoft Power BI
  - Microsoft Power Automate
  - Microsoft Excel

Project Risks

- **Integrating data from our AWS Server to Microsoft PowerApps**
  - *Description* – Kellogg's has only been able to give us a local copy of an Excel file with test data. We do not have access to their actual AWS Server or database(s) within that server yet.
  - *Mitigation* – Creation of our own AWS server and database with the data from the given Excel file. We will try to mimic the environment and functionality of how data will be transferred between Kellogg's AWS server to PowerApps.

- **Limited version control and collaboration within Power Apps**
  - *Description* – We cannot all collaborate on the same Power App simultaneously. Only one user can have the same Power App open in editor mode at once. We will not know about any merge conflicts until we try and put our individual components together.
  - *Mitigation* – We will have to implement a manual version control where we all have one 'main' Power App that we will all make a local copy and then merge the components of our applications together as we complete various features. We will need to make sure we are updating the 'main' application frequently to identify any issues.

- **Establishing permissions for Claims List view**
  - *Description* – Certain OSD forms that are submitted will be required to be reviewed and approved by a manager. A Kellogg's internal claims processor should not be able to change the status of these claims until a manager approves it
  - *Mitigation* – Research how to define and assign permission roles for editing record entries within PowerApps. Consult with sponsors to see where this Claims List will need to be displayed within Microsoft Teams and determine how an end user will be able to access it.

- **Determining how to scale database for best performance to avoid data discrepancies**
  - *Description* – Database will store various loads of data. This data will need to be accurate and efficiently transferred to external systems such as Power BI and Power Apps.
  - *Mitigation* – Our team will work to identify key factors that affect database performance such as data volume, concurrent users accessing the databases, and more. Sponsors will provide an estimate of the amount of data needing to be processed and users manipulating the data. Team will review Amazon RDS scaling options and choose the most appropriate option. Continue to monitor performance and adjust as needed.

Questions?

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