

MICHIGAN STATE

UNIVERSITY

Project Plan Presentation

Global Business Services Process Intelligence

The Capstone Experience

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*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



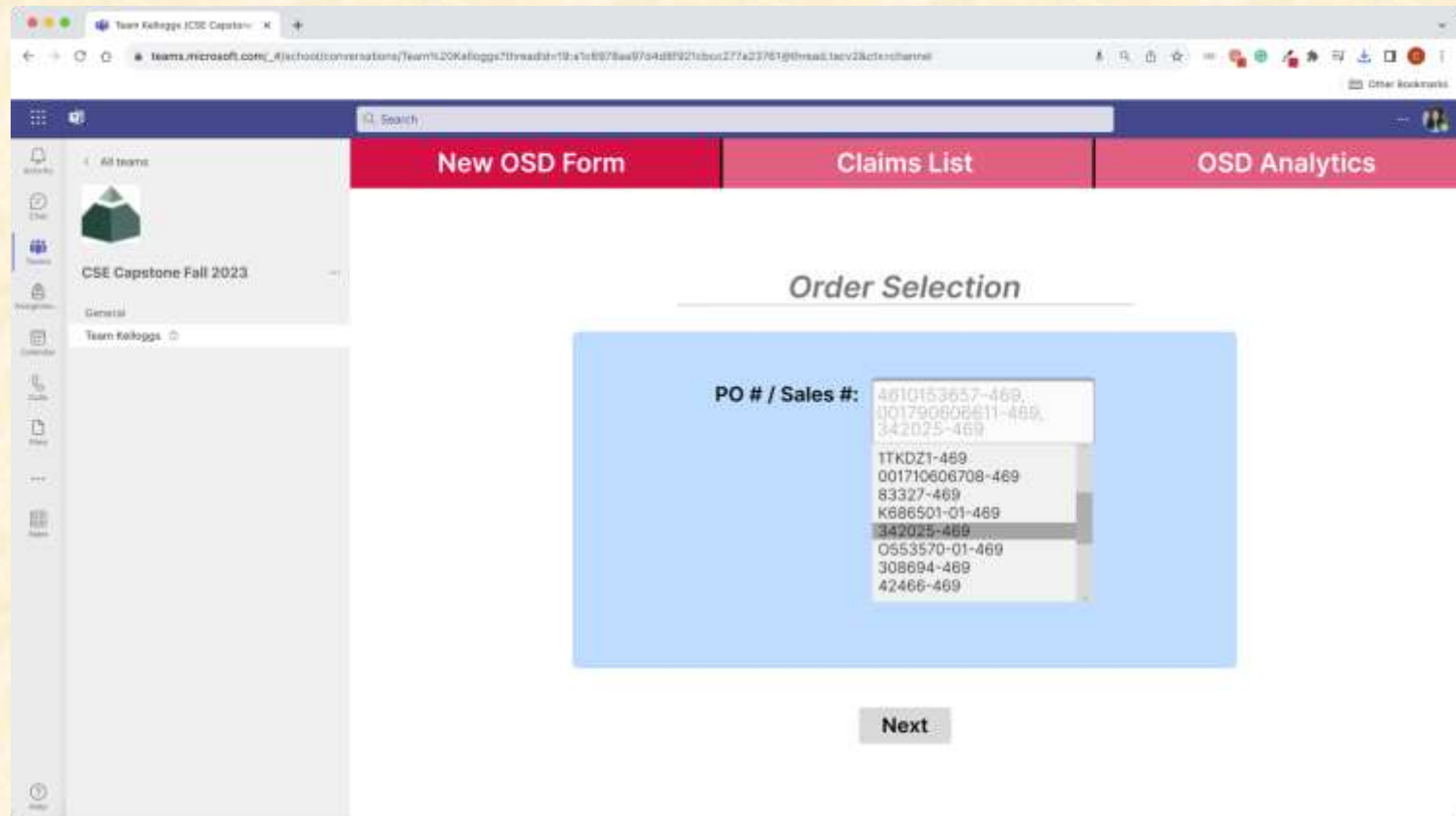
Screen Mockup: Basic Information

The screenshot shows a Microsoft Teams meeting window with a web application embedded. The application has a dark blue header with a search bar and three navigation buttons: 'New OSD Form', 'Claims List', and 'OSD Analytics'. Below the header is the Kellanova logo and the title 'OS&D Request & Return Authorization' with the subtitle 'Basic Information'. A light blue form contains the following fields:

Date:	<input type="text" value="08/10/23"/>	Email:	<input type="text" value="OverageShortageDamag"/>
To:	<input type="text" value="Transplace-Please Tender"/>	From:	<input type="text" value="OSD CPU@kellogg.com"/>
Bill of Lading / RA #:	<input type="text" value="120623"/>		

At the bottom of the form is a 'Next' button.

Screen Mockup: Order Selection



Screen Mockup: Customer Information

The screenshot shows a Microsoft Teams interface with a navigation pane on the left and a main content area. The main content area has a red navigation bar with three buttons: 'New OSD Form', 'Claims List', and 'OSD Analytics'. Below this bar, the title 'Customer Information' is centered. A light blue form box contains the following fields:

Customer Name:	<input type="text" value="Mejer"/>
Product Location:	<input type="text" value="Lake Lansing Store #5324"/>
City:	<input type="text" value="East Lansing"/>
State:	<input type="text" value="MI"/>
Zip Code:	<input type="text" value="48823"/>
Customer PO#:	<input type="text" value="1855"/>
Customer Order #:	<input type="text" value="4810153857-469"/>
Customer Warehouse Contact:	<input type="text" value="Sparty"/>
Customer Contact Number:	<input type="text" value="517-353-0910"/>
Customer Contact Email:	<input type="text" value="sparty@msu.edu"/>

Below the form is a 'Next' button.



Screen Mockup: Order Details

The screenshot displays a web application interface for managing OS&D (Overage, Shortage, & Damage) claims. The page is titled "Order Details" and features a table with the following columns: "Kellanova Case Code", "Number of Cases", "OS&D Claim Type", "Pickup Needed?", and "Expiration/Code Date".

Kellanova Case Code	Number of Cases	OS&D Claim Type	Pickup Needed?	Expiration/Code Date
123456789	10,000	Overage	Yes	09/20/2021
987654321	30	Damage	Yes	09/05/2021

Below the table, there are input fields for "Pallet Count" (value: 2) and "Weight in Pounds" (value: 456). A "Next" button is located at the bottom of the form.



Screen Mockup: Destination Information

The screenshot shows a Microsoft Teams web interface. The top navigation bar includes 'New OSD Form', 'Claims List', and 'OSD Analytics'. The main content area is titled 'Destination Information' and contains a form with the following fields:

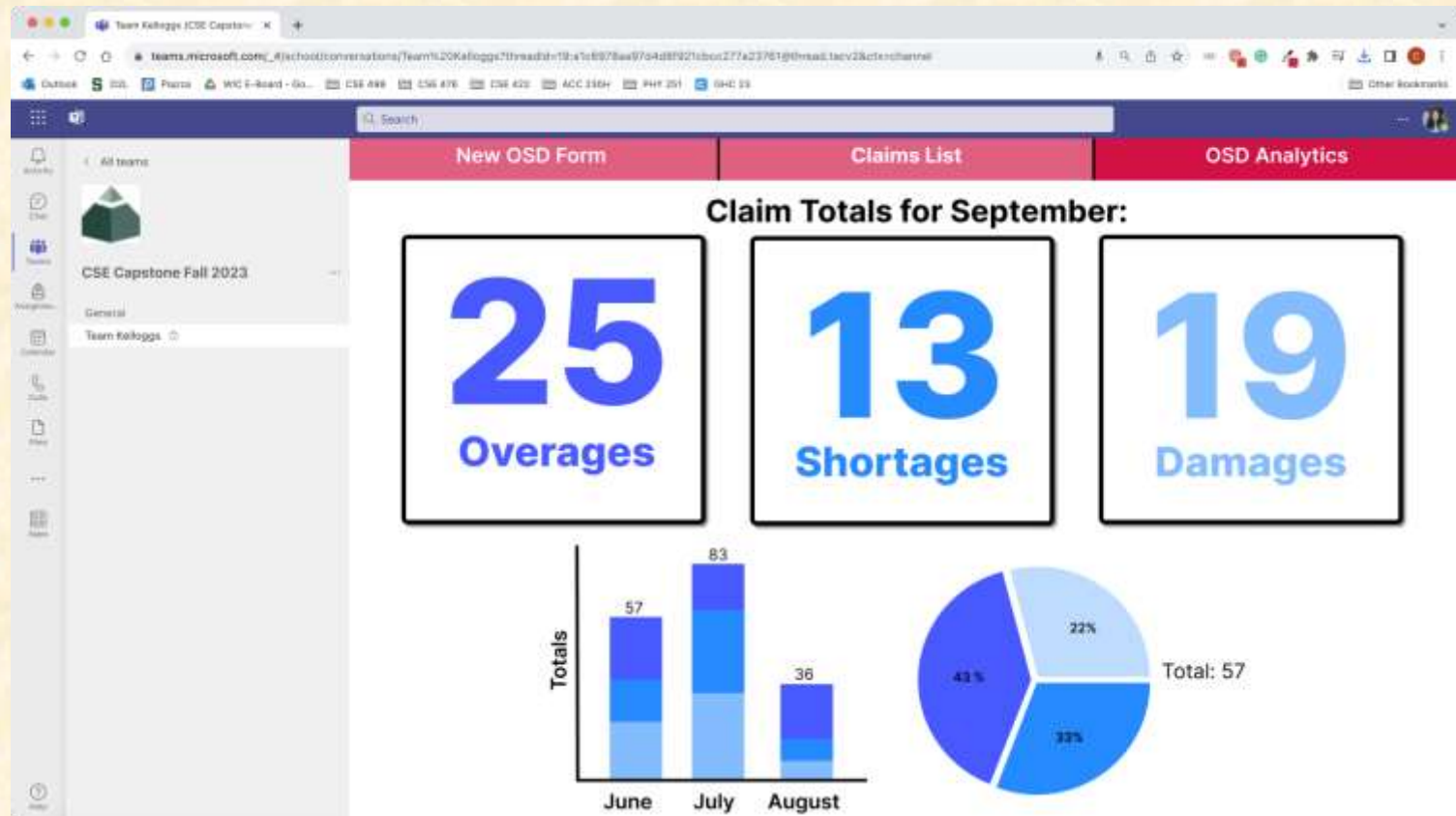
KDC/Destination:	<input type="text" value="Service Center #4682"/>
Recipient Location:	<input type="text" value="Sourcing Warehouse #928"/>
City:	<input type="text" value="Battie Creek"/>
State:	<input type="text" value="MI"/>
Zip Code:	<input type="text" value="49014"/>
Customer Warehouse Contact:	<input type="text" value="Jane Doe"/>
Customer Contact Number:	<input type="text" value="269-094-2351"/>
Customer Contact Email:	<input type="text" value="janedoe@kellogg.com"/>



Screen Mockup: OSD Claims List

Date	Claim #	Return Type	Pallet Count	Weight (lb)	Status
09/01/2023	19293840848	Shortage	40	823	Submitted
08/04/2021	91209204932	Overage	40	201	Submitted
03/31/2019	19293840848	Damage	40	91	Processed
09/22/2023	19293840848	Overage	40	945	Pending Approval
10/24/2022	19293840848	Damage	40	1005	Approved
12/01/2017	19293840848	Shortage	40	766	Submitted
05/04/2020	19293840848	Shortage	900	90	Processed
11/14/2020	19293840848	Overage	40	50	Submitted

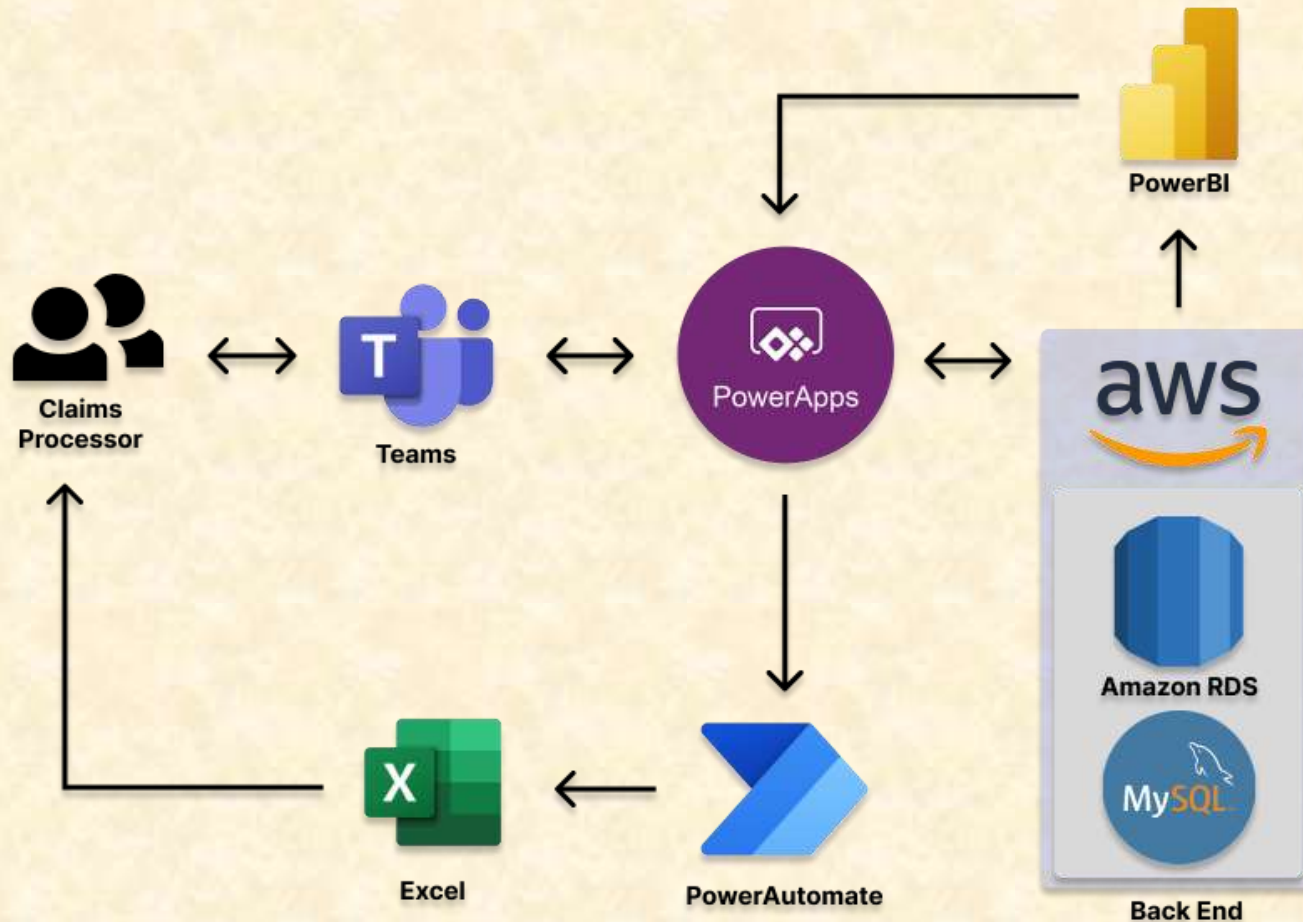
Screen Mockup: Analytical View



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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