

**MICHIGAN STATE**  

---

**U N I V E R S I T Y**

# Beta Presentation

## OPEN v2.0: Smart Order Picking

### The Capstone Experience

Team Phoenix Group

Bryce Corey  
Charlie Deneau  
Austin Littlely  
Evan Brazen  
Austin Rix

Department of Computer Science and Engineering  
Michigan State University

Fall 2017



*From Students...  
...to Professionals*

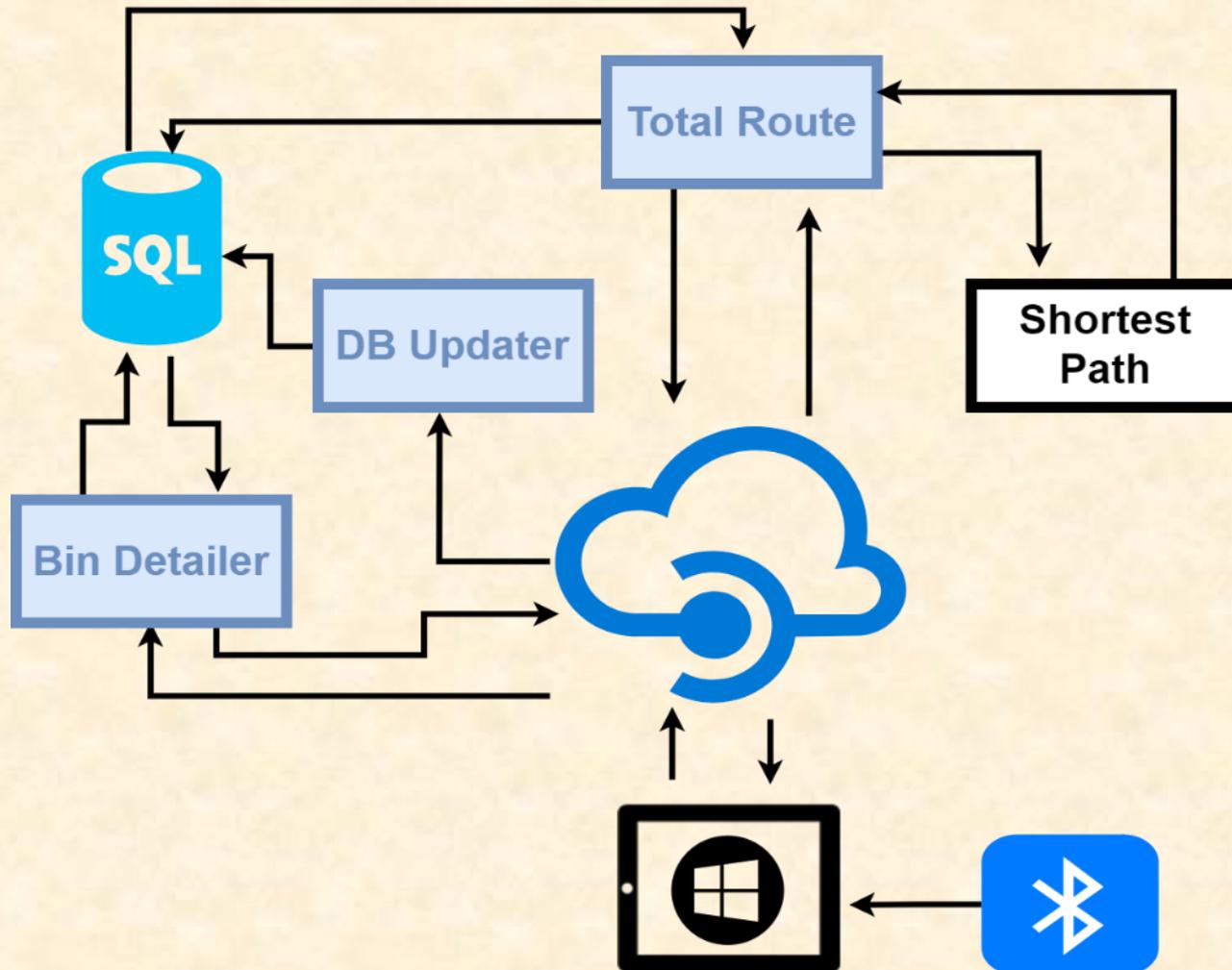
# Project Overview

---

- Enhance Warehouse Order Picking Process
- Include Real Time Inventory Control
- Integrate with Current Application (O.P.E.N v2.0)

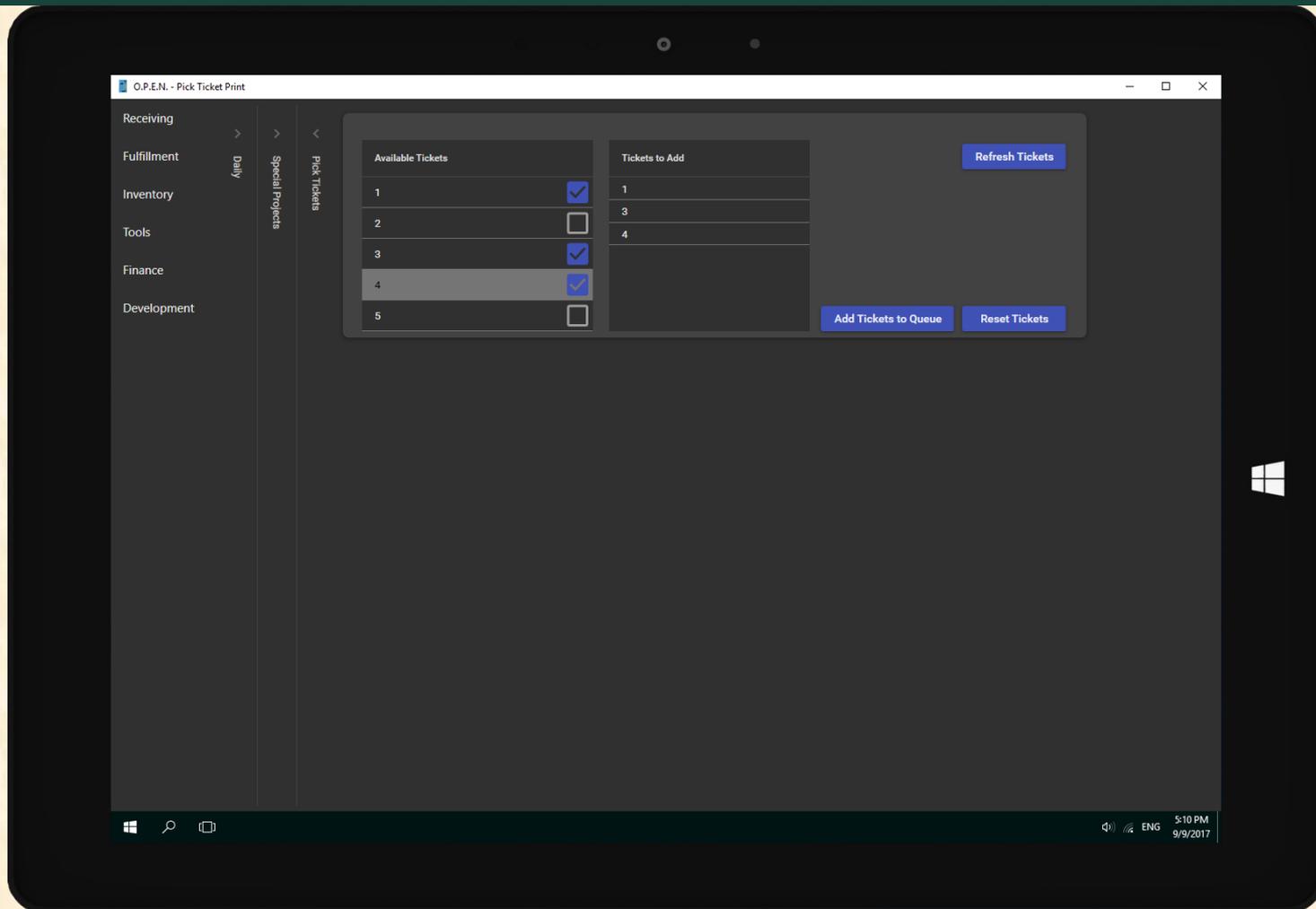


# System Architecture





# Pick Ticket Selection



# Map Order Routing

The screenshot displays a warehouse layout with various zones and a routing interface. The zones include Cage, Order Printing, Exceptions, Quality Control, Deployment, Shipping, and Mgr. A navigation menu on the left lists: Receiving, Fulfillment, Inventory, Tools, Finance, and Development. A top navigation bar shows numbers 1 through 12. A detailed view of a ticket is shown at the bottom.

Ticket ID	Item Name	Quantity	Aisle	Bin	Shelf
1	Attractive Answering System 1000	1	19	82	1



# Map Order Fulfillment

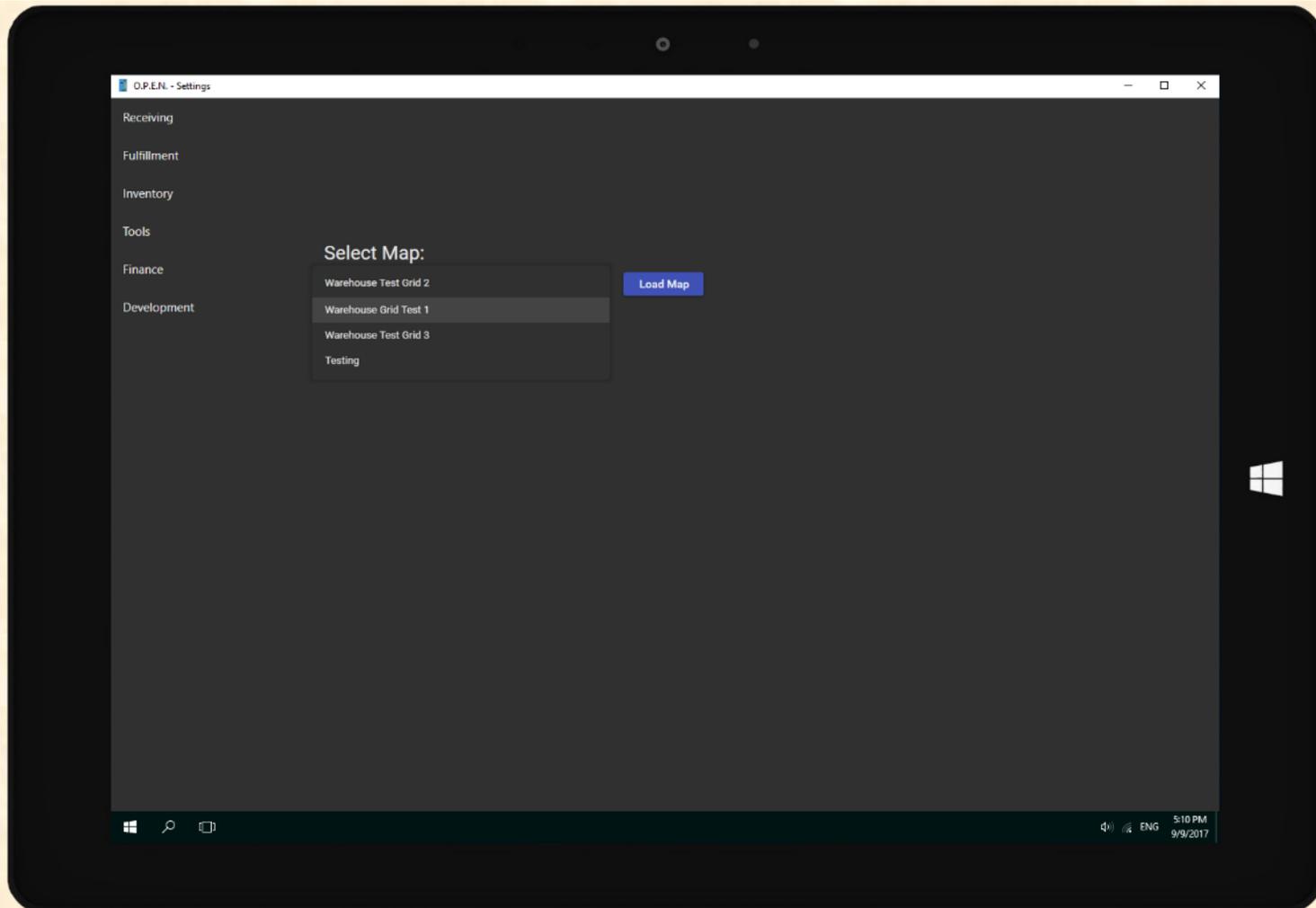
The screenshot displays a software interface for warehouse order fulfillment. The main area shows a floor plan with various zones: Cage, Order Printing, Exceptions, Quality Control, and Deployment. A route is marked with blue dots and arrows, starting from a 'START' point and moving through the zones. A 'Cage' area is highlighted with a red dot. The interface includes a sidebar with navigation options: Receiving, Fulfillment, Inventory, Tools, Finance, and Development. A top navigation bar shows a sequence of numbers 1 through 12. A bottom table lists tickets with their details and actions.

Ticket ID	Item Name	Quantity	Aisle	Bin	Shelf	Actions
<input type="checkbox"/> 1	Attractive Answering System 1000	1	19	82	1	Skip Item
<input type="checkbox"/> 1	Green Phone	1	93	59	3	Move to Front of Queue
<input type="checkbox"/> 1	Rubber Feet	1	26	77	3	Move to Front of Queue
<input type="checkbox"/> 3	256 meg SDRAM	3	36	96	1	Move to Front of Queue
<input type="checkbox"/> 3	8.4 gig Hard Drive	1	69	45	3	Move to Front of Queue
<input type="checkbox"/> 4	32x CD-ROM	1	56	83	2	Move to Front of Queue
<input type="checkbox"/> 4	333 Processor	1	62	45	4	Move to Front of Queue

# Inventory Page

The screenshot displays the 'Inventory Map' application window. The title bar reads 'O.P.E.N. - Inventory Map'. On the left is a sidebar with navigation options: Receiving, Fulfillment, Inventory, Tools, Finance, and Development. The main area shows a warehouse floor plan with several zones: 'Cage', 'Order Printing', 'Exceptions', 'Quality Control', 'Deployment', 'Shipping', and 'Mgr'. A 'START' icon is located near the 'CW' (Cage Work) area. A search bar is at the top with the text 'Search:'. Below the search bar, there are several data tables and diagrams. One table shows a grid of numbers, with a red highlight on the number '3' in the second row, second column. Another table shows a grid of numbers, with a red highlight on the number '2' in the second row, second column. A third table shows a grid of numbers, with a red highlight on the number '1' in the second row, second column. A fourth table shows a grid of numbers, with a red highlight on the number '1' in the second row, second column. A fifth table shows a grid of numbers, with a red highlight on the number '1' in the second row, second column. A sixth table shows a grid of numbers, with a red highlight on the number '1' in the second row, second column. A seventh table shows a grid of numbers, with a red highlight on the number '1' in the second row, second column. A eighth table shows a grid of numbers, with a red highlight on the number '1' in the second row, second column. A ninth table shows a grid of numbers, with a red highlight on the number '1' in the second row, second column. A tenth table shows a grid of numbers, with a red highlight on the number '1' in the second row, second column. At the bottom, the 'Item info' section shows: 'Item Number: 6541 Item: Power Supply Quantity: 2 Aisle: 96 Bin: 13 Shelf: 1'. The system tray at the bottom right shows the date and time: '5:10 PM 9/9/2017'.

# Map Caching and State Saving



# What's left to do?

---

- Load test the server
- Get data on battery life of the tablet
- Data analytics
- Polish UI



# Questions?

---

?

?

?

?

?

?

?

?

?

