

Prince George's County Dept. of Parks & Recreation

Asset Management UX Design Study

Team Members:

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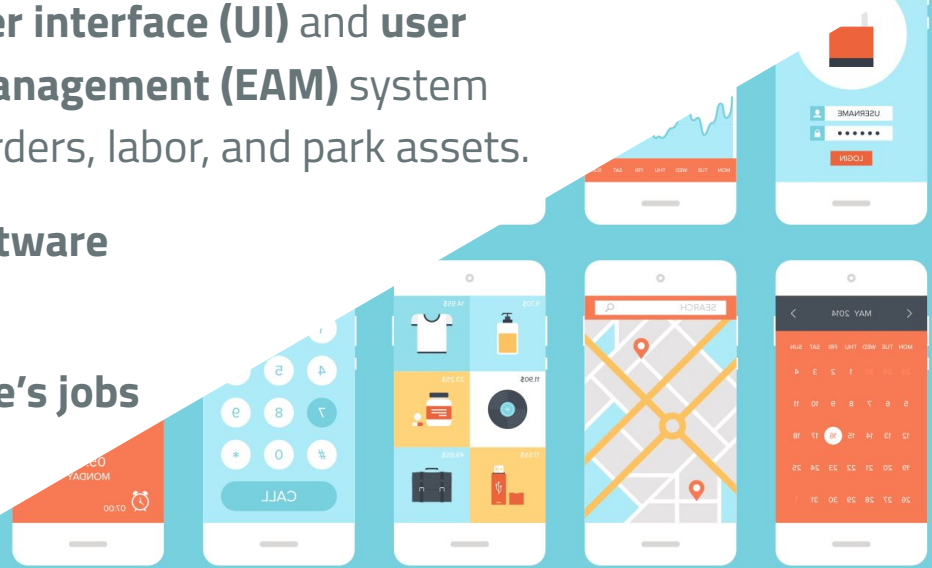
About Us



We are a team of students from the University of Maryland that have been working with the Prince George's County Department of Parks & Recreation to improve and innovate the **user interface (UI)** and **user experience (UX)** of the **Enterprise Asset Management (EAM)** system used by the department to manage work orders, labor, and park assets.

We find ways to make mission-critical software simple, intuitive, and easy to use.

In short: We're here to help make everyone's jobs a little easier.

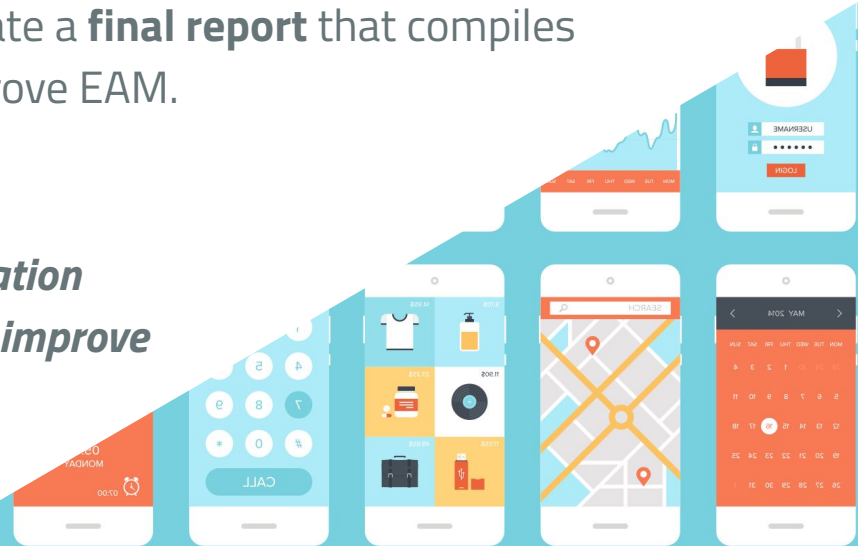


About our Project

We have been brought onboard by the **Prince George's County Department of Parks & Recreation** as student UX consultants to help evaluate the usability of EAM. Our tasks were to **interview stakeholders**, analyze the **application interface**, and create a **final report** that compiles our findings and recommendations to improve EAM.

Our mission:

Understand user needs, evaluate the application interface, and report our findings on how to improve the application to best fulfill those needs.





Record View Checklist x Activities x Schedule Labor x Book Labor x Comments x Tools x Parts x Repair Parts x Closing x

More

Informational Only*:

Comments /
Documents:

Work Order: <Auto-Generated>

Type: Service Request

Class: Q

Status: Work request

Park / Building / Asset: Q

Location: Q

Work Address:

Physical Location*:

Access Location:

Operating Hours*:

Region*:

Sched. Start Date: 04/28/2021

Maint Area / Division: Q

Division Work: Q

Requestor Type*:

Who To Contact*:

Contact Name*:

Phone Number*:

Master Park:

Master Park Name:

Generic Version Notes:

Organization: M-NCPPC

Date Created:

Route: Q

Priority: ▼

Start Date: Q

Sched. Start Date*:

Sched. End Date: 04/28/2021

Date Completed: Q

Created By: 910019

Authorizer*:

Authorizer Name*:

ACR / Old SmartParks*:

Problem Code: Q

View GIS Map

Event Log



The Starting Line

At the outset of this project, we were given two key areas to focus on for our UX improvements and design recommendations.

These areas were **user adoption** and **data quality**.

User Adoption: *The rate at which users “pick up” the software and decide to use it on a regular basis as part of their daily workflow.*

Data Quality: *The reliability, consistency and accuracy of the data that is entered into the software.*

Objectives

As we began our design study, we set out to achieve 4 primary goals with our work. These objectives were to:



- ① **Identify existing usability issues within EAM**
- ② **Formulate realistic, workable solutions for each issue**
- ③ **Understand the needs of user groups who rely on EAM to do their work**
- ④ **Ensure that our recommendations enable business insights to drive future improvement**

Methods

For our design study, our team utilized **user interviews**, **survey data**, and **direct engagement** with the EAM interface and EAM users to gauge the system's user-friendliness.



Project Roadmap!

Create project plan,
introduce team to client

1

Interview stakeholders to
gauge end user sentiment,
understand user needs

3

Create our final report
detailing our UX
recommendations

5

Bust out the champagne
and balloons

7

Gain access to EAM
environment for direct
evaluation

2

Compile our findings from
interviews, surveys and
UX evaluations

4

Present our findings to
Parks executives, deliver
final report

6

YOU
ARE
HERE

The background of the slide is a teal-colored field filled with a white, stylized circuit board pattern. The pattern consists of numerous small circles (representing solder pads or vias) connected by thin, white lines (representing traces). The pattern is dense and covers the entire area. A white diagonal line runs from the top-left corner to the bottom-right corner, creating a white triangular area in the top-left and bottom-right corners.

**How does EAM stack up
across different devices?**

Desktop View

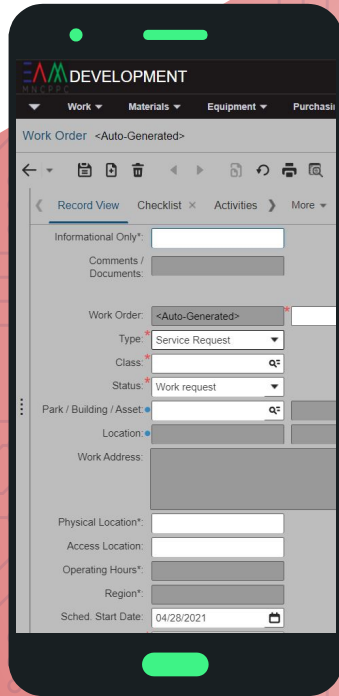
- Too many options! This page has 85 data entry fields alone.
- Spacious, but cluttered
- Text entry fields are vectors for poor quality data
- Flawed, but works
- By far the most common way EAM is currently used

The screenshot displays the 'EAM DEVELOPMENT' desktop interface. At the top, there's a navigation bar with tabs for 'Work', 'Materials', 'Equipment', and 'Purchasing'. Below this, a breadcrumb trail shows 'Work Order <Auto-Generated>'. The main area is filled with a complex form for creating or editing a work order. The form is organized into several sections: 'Informational Only*' at the top left, 'Generic Version Notes' at the top right, and a central area for 'Work Order' details. The 'Work Order' section includes fields for 'Type' (set to 'Service Request'), 'Class' (set to 'Work request'), 'Status' (set to 'Work request'), 'Park / Building / Asset', 'Location', 'Work Address', 'Physical Location', 'Access Location', 'Operating Hours', 'Region', 'Sched. Start Date' (set to '04/28/2021'), 'Maint Area / Division', and 'Division Work'. There are also fields for 'Requestor Type', 'Who To Contact', 'Contact Name', 'Phone Number', 'Master Park', and 'Master Park Name'. The right side of the form contains fields for 'Organization' (set to 'M-NCPPC'), 'Date Created', 'Route', 'Priority', 'Start Date', 'Sched. Start Date', 'Sched. End Date' (set to '04/28/2021'), 'Date Completed', 'Created By' (set to '910019'), 'Authorizer', 'Authorizer Name', 'ACR / Old SmartParks', and 'Problem Code'. The form is cluttered with many fields, some of which are disabled (grayed out). There are also buttons for 'View GIS Map' and 'Event Log'.

Tablet View

- Very similar to desktop layout
- Some elements are no longer visible due to smaller screen
- Horizontal scrolling is required to see every text entry field
- Occasionally used in the field by maintenance staff

The screenshot displays the 'Work Order' form in a tablet-oriented view. The interface is titled 'DEVELOPMENT' at the top. Below the title bar, there are navigation tabs: 'Work', 'Materials', 'Equipment', and 'Purchasing'. The current view is 'Work Order <Auto-Generated>'. The form is organized into sections with labels like 'Informational Only:', 'Comments / Documents:', 'Work Order:', 'Type:', 'Class:', 'Status:', 'Park / Building / Asset:', 'Location:', 'Work Address:', 'Physical Location:', 'Access Location:', 'Operating Hours:', 'Region:', 'Sched. Start Date:', 'Maint Area / Division:', 'Division Work Assigned:', 'Work Unit Assigned:', 'Assigned To:', 'Assigned Name:', 'Warranty:', 'Requestor Type:', 'Who To Contact:', 'Contact Name:', 'Phone Number:', 'Master Park:', 'Master Park Name:', 'ADA Validation:', 'Safety:', 'Shutdown Required?', 'Additional Contact Information', 'Reported By:', 'Reported By Name:', and 'Facility / Park Manager:'. The form is designed for horizontal scrolling to view all fields. The bottom of the screen shows a green home button.



Mobile View

- Very difficult to use
- Cramped layout makes it impossible to see everything you need at once
- Text entry fields are small, difficult to select
- User has to navigate page up, down, sideways and diagonally
- Is not used by anyone we interviewed

What did this tell us?

- EAM user activity is predominantly desktop-based
- Our work towards improving EAM should prioritize the experience on desktop over tablet and mobile layouts
- With this in mind, we took a closer look at EAM's desktop layout.

Inbox



Folder: To Do List

There are no records to display.

Charts



Select a chart type.

Chart Controls



Organization: M-NCPPC

Chart Type:

Chart Period: Months

Show
Year/Year:

KPIs



Resize KPIs

No KPIs available.

Inbox



Folder: To Do List

There are no records to display.

Charts



Select a chart type.

Chart Controls



Organization: M-NCPPC

Chart Type:

Chart Period: Months

Show Year/Year:

This is the current EAM welcome screen. It is the first thing users see when they log in. However, it does not contain features and info that are needed by several user groups.

KPIs



Resize KPIs

No KPIs available.

To access the features they need, maintenance workers must click this drop-down menu and navigate to the “Work Orders” section, which is relatively far down the list and not immediately obvious to new users.

Select a chart type.

Chart Controls

Organization: M-NCPPC Q=

Chart Type: ▼

Chart Period: Months ▼

Show Year/Year:

KPIs

Resize KPIs

Work Order <Auto-Generated>



Record View Checklist x Activities x Schedule Labor x Book Labor x Comments x Tools x Parts x Repair Parts x Closing x More v

Informational Only*:

Comments / Documents:

Work Order: <Auto-Generated>

Type: Service Request v

Class*: Q

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Date Completed:

Created By: 910019

Authorizer*:

Authorizer Name*:

ACR / Old SmartParks*:

Problem Code: Q

View GIS Map

Event Log

Production

Work

Materials

Equipment

Purchasing

Reports

(NEW) Resources

at - 47112 / I-MAINTSCHPL / M-NCPPC

Inbox

Folder: Maintenance

Bock Road Grounds WO's

67

WOs Assigned to Me *

0

Booked Hours - Today*

0

Scheduled Activities*

0

Work Requests Submitted*

16

Project Requests*

0

Work Requests - To Authorize*

0

Charts

KPIs

Resize KPIs

0

Notifications

0100

Open P.G. Citizen Requests - Southern, 43

Facilities - Out of Service to Public, 25

Original - MM Projects Completed this FY, 0 %

0100

BreakdownFix vs Total WO's, 0 %

0500

Pending WO> 5 Days, 0

Start Center

Assets

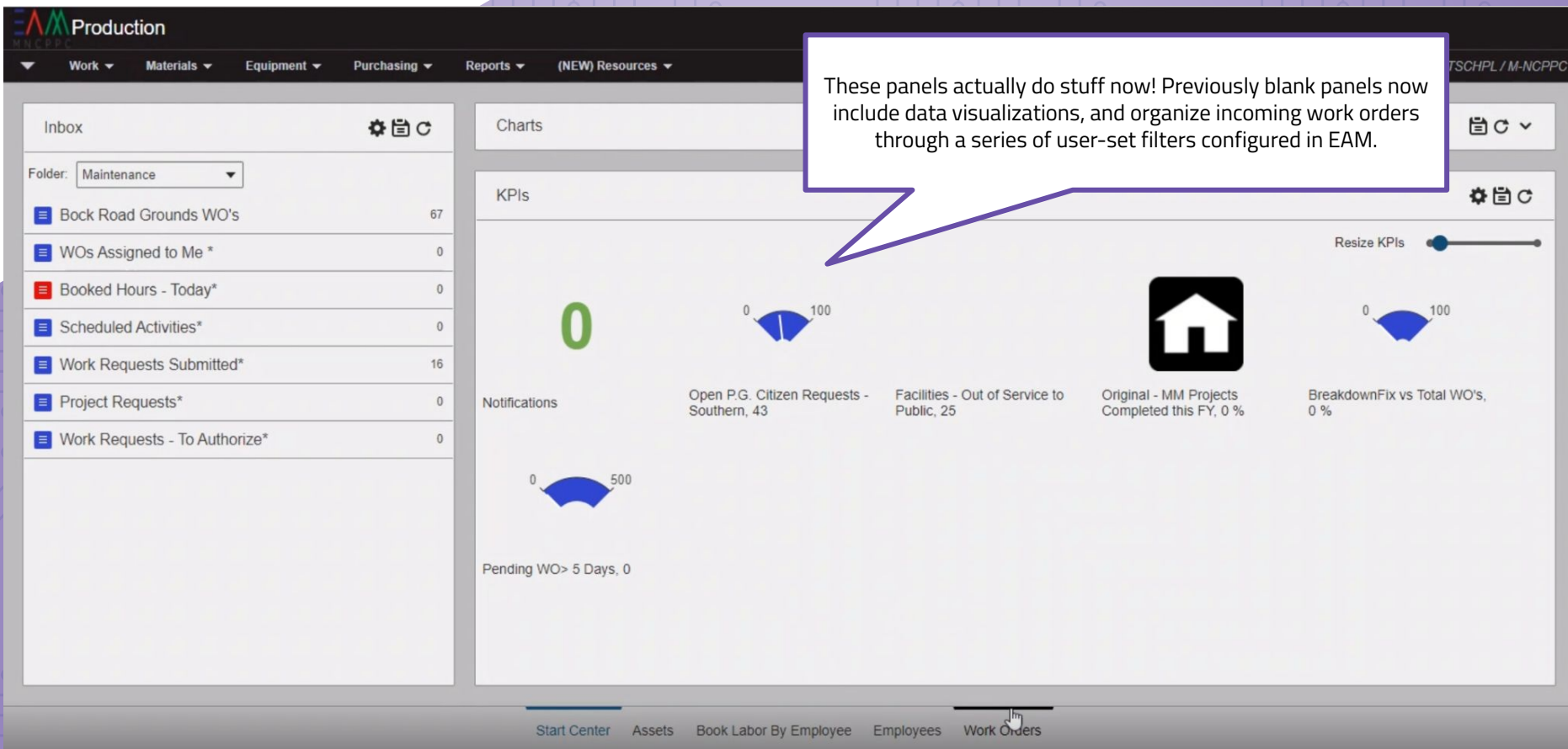
Book Labor By Employee

Employees

Work Orders

This is a modified configuration of EAM created by an end user we interviewed that adds shortcuts, work order information and a data visualization dashboard to the welcome page.

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Production

MNCPPL

▼

Work ▼

Materials ▼

Equipment ▼

Purchasing ▼

Reports ▼

(NEW) Resources ▼

EAM / SmartParks / ParkStat - 47112 / I-MAINTSCHPL / M-NCPPC

Inbox

⚙️📅🔄

Folder: Maintenance ▼

☰

Bock Road Grounds WO's

67

☰

WOs Assigned to Me *

0

☰

Booked Hours - Today*

0

☰

Scheduled Activities*

0

☰

Work Requests Submitted*

16

☰

Project Requests*

0

☰

Work Requests - To Authorize*

0

Charts

📅🔄▼

KPIs

⚙️📅🔄

Resize KPIs

●


0

Notifications

0100

Open P.G. Citizen Requests - Southern, 43

Facilities - Out of Service to Public, 25



Original - MM Projects Completed this FY, 0 %

0100

BreakdownFix vs Total WO's, 0 %

0500

Pending WO> 5 Days, 0

Start Center

Assets

Book Labor By Employee

Employees

Work Orders

Important pages that were previously hidden behind drop-down menus now have shortcuts at the bottom of the welcome page. The user can instantly swap from one page to another with a single click.

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The best part?

This modified page was created entirely with tools that exist in the current EAM production environment.

All it took was a few configuration tweaks to dramatically improve the way EAM functions and feels.

Design Feedback for EAM

- **Keep it simple.**
- **Minimize the number of clicks/taps required to perform common tasks.**
- **Customize the default EAM Welcome Page to be more user friendly.**
- **Leverage different designs for different user groups.**
- **Make EAM mobile friendly.**
- **Continue employee outreach on improving and understanding EAM.**

Where to from here?



- Unfortunately, our involvement with this project ends with our Spring semester.
- **However, our findings can be used and implemented by the Dept. of Parks and Recreation to dramatically improve the experience of using EAM long after the end of our design study.**
- We believe our recommendations will make EAM **simpler, more intuitive, easier to use, and more effective** than it has ever been in the past.
- Going forward, our findings will inform both the future work of the Department and future UX Design Studies our team members will perform in the future
- This experience was a valuable example of what a UX Design Study is like in the real world, and we all learned a ton



That's All!

Thanks for listening!

Any questions?