

# Streamlining Field Operations

Michigan State University

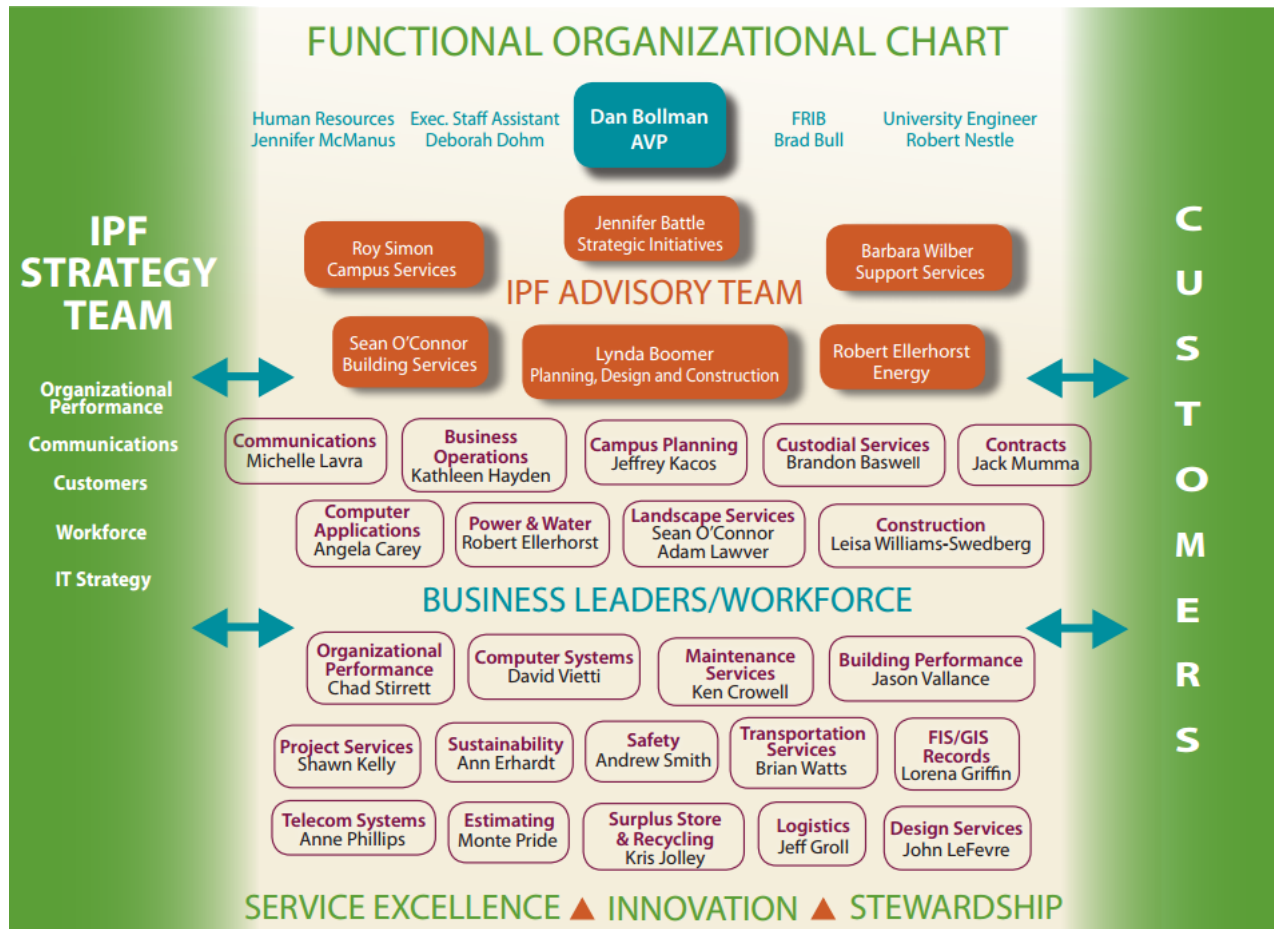
# Presenters

- Jade Freeman
  - GIS Manager - Infrastructure Planning and Facilities
- Adam Lawver
  - Landscape Services Assistant Manager Infrastructure Planning and Facilities
- Brian Keesey
  - GIS Analyst - Infrastructure Planning and Facilities

# MSU Facts

- 549 buildings / ~23 million GSF
- 5200 Acres / ~2000 developed acres / ~1600 managed acres

# Infrastructure Planning and Facilities



# Higher Education Financial Turmoil...

**The New York Times**  
EDUCATION LIFE | VIEWPOINT | BALANCE SHEET

## Colleges Struggling to Stay Afloat

By JEFFREY J. SELLINGO | APRIL 12, 2015

**The Washington Post**  
Grade Point

## Three predictions about the future of higher education

By Jeffrey J. Sellingo | Jan. 27, 2015

THE WEEKEND INTERVIEW



## How to Save American Colleges

*The Purdue president on freezing tuition, how to reduce student debt, and busting the accreditation cartel.*

By KATE BACHELDER  
Updated April 24, 2015 6:17 p.m. ET



Landscape Services  
competitive advantage is to  
operate with evidence-based  
management along with  
experience & intuition.

**SPARTANS WILL.**

# Employee Engagement

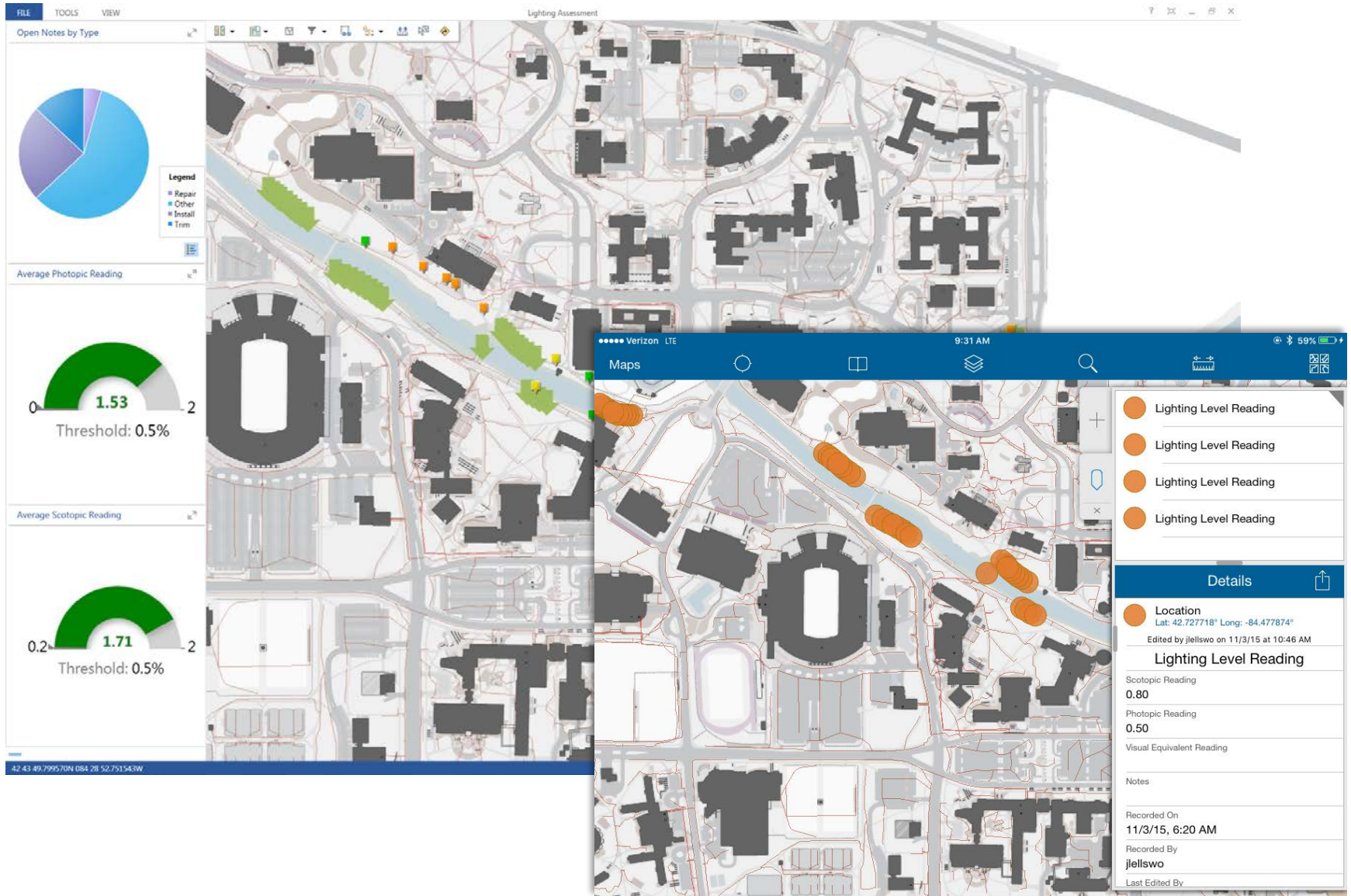
“At the end of the day when we come back to turn in our timecards and punch out, everyone passes by the dashboards and it’s motivating to see how much work you did today and think about whether you can do a little more tomorrow to move the needle going forward....”



*“It’s instant gratification. I did this today...this is where I need to be tomorrow...and this is the goal that I want to meet. ...I’m going to push myself to do better because now I can see the numbers...”*

*“...I see what other crews are doing and I want to be a part of that and I feel that’s the way our culture is going, I feel it’s very positive and I’m extremely excited to be a part of it...”*





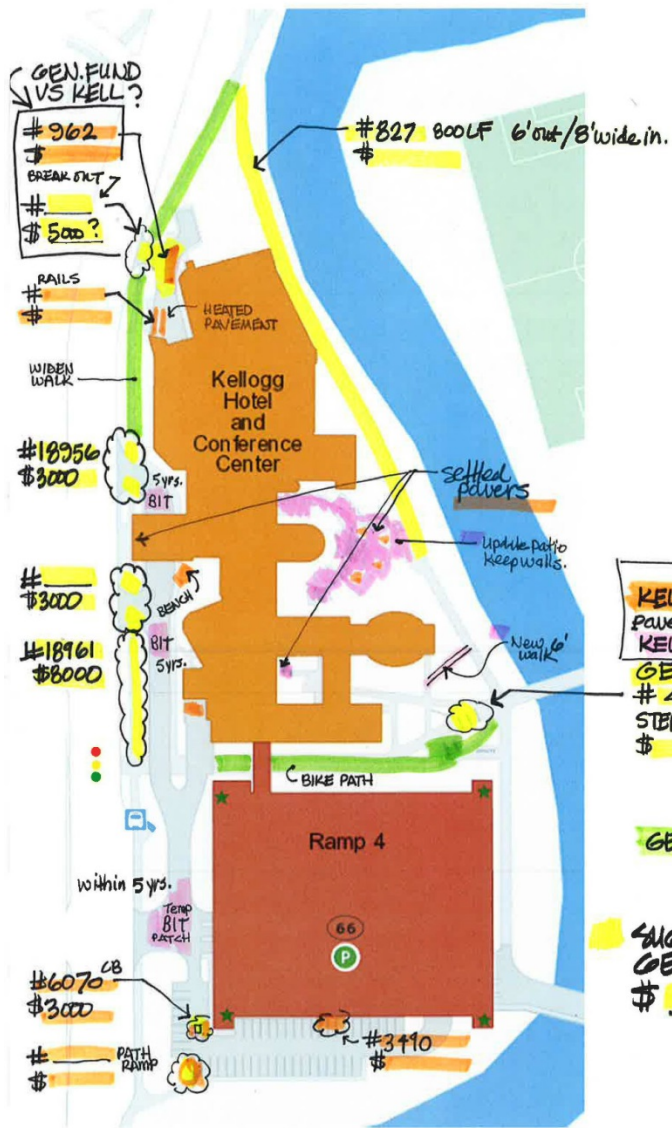
The screenshot displays a mobile application interface for infrastructure inspection. At the top, a blue header bar contains the status 'Verizon LTE', the time '10:02 AM', and a battery level of '65%'. Below the header, there are 'Cancel' and 'Submit' buttons. The main area is a map showing a campus layout with several purple circular markers indicating inspection locations. A data entry form is overlaid on the right side of the map, containing the following fields:

- Inspection Date
- Inspection Status
- Inspection Notes
- Inspection Type: **Catch Basin Inspection**

On the left side of the screen, there are two charts:

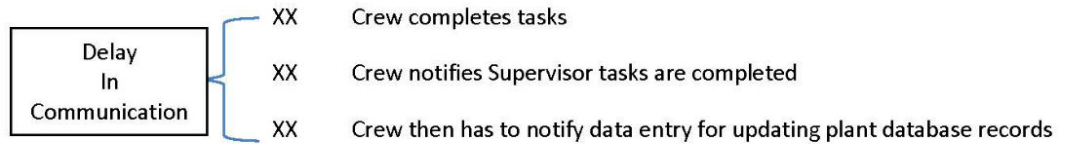
- A bar chart titled 'Remaining Cleanings' with a y-axis ranging from 0 to 260. The legend includes GLF, ATH, FRM, and OTH.
- A bar chart titled 'Cleaning % Complet' with a y-axis ranging from 0 to 260. The legend includes GLF, ATH, FRM, and OTH.

At the bottom right, there is a bar chart titled 'Cleaning Req'd by Funding' with a y-axis ranging from 0 to 260. The legend includes FRM, UK, NF, HSG, PKG, and ACD.



Past Process 2.5 Hours

- .1.5hr Site Visit (Designer & Arborist Supervisor)
- .5hr Designer converts field notes/map into readable format and email to Arborist Supervisor
- .5hr Arborist Supervisor prints map/notes and meets crew onsite to explain notes for specific trees

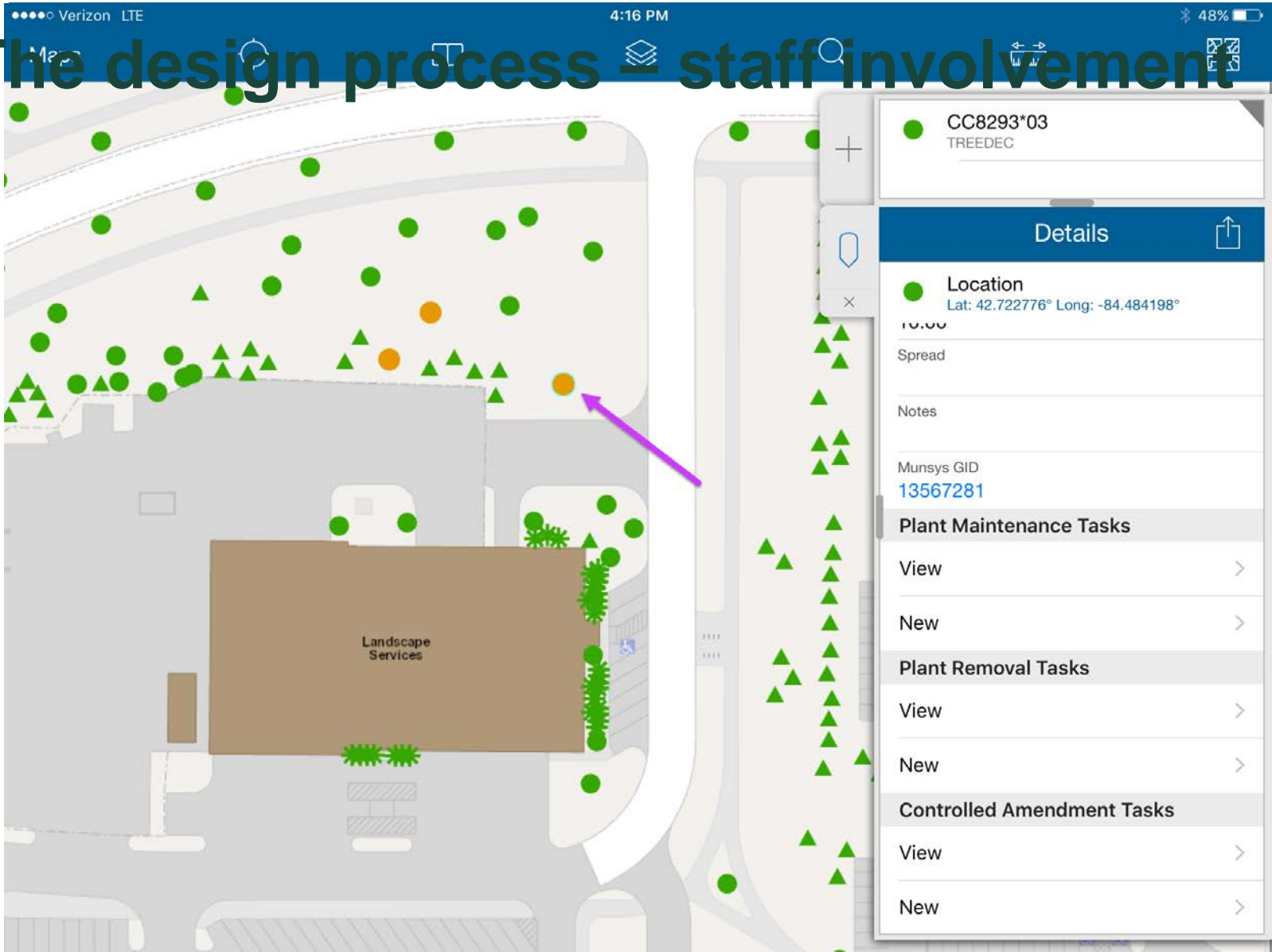


GENERAL FUND later

SUGGESTED GEN. FUND ITEMS  
 \$ \_\_\_\_\_ TOTAL around \$100,000

dk  
11/9/15

# The design process — staff involvement



Cancel

The screenshot shows a GIS application interface. At the top left, there is a blue bar with the text "Cancel". The main area is a map with various symbols: green circles, green triangles, and orange circles. A blue line is drawn on the map, starting from a red circle at the bottom left, moving through several white circles, and ending at a blue square. A dialog box titled "Sending Updates" with a loading spinner is positioned over the map. On the right side, there is a vertical menu with the following items: "Length 370.1 ft" (with a red line icon), "Install" (with a plus icon), "Install/Move/Remove" (with a right arrow), "Install" (with a right arrow), "Work Order" (with a right arrow), "Notes" (with a right arrow), "Task Status" (with a right arrow), and "Assigned to Crew" (with a right arrow).

Length  
370.1 ft

Install

Install/Move/Remove >

Install >

Work Order >

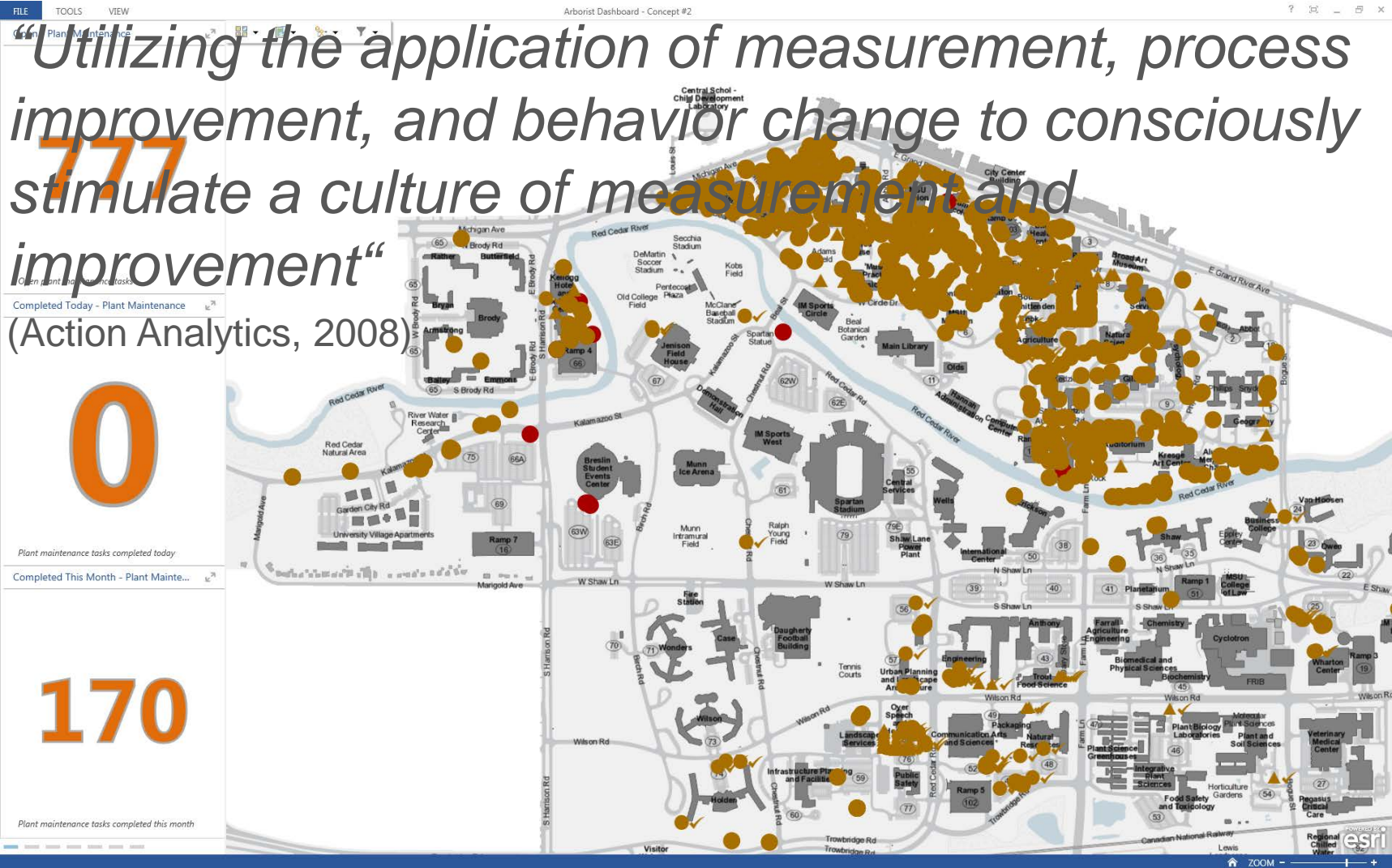
Notes >

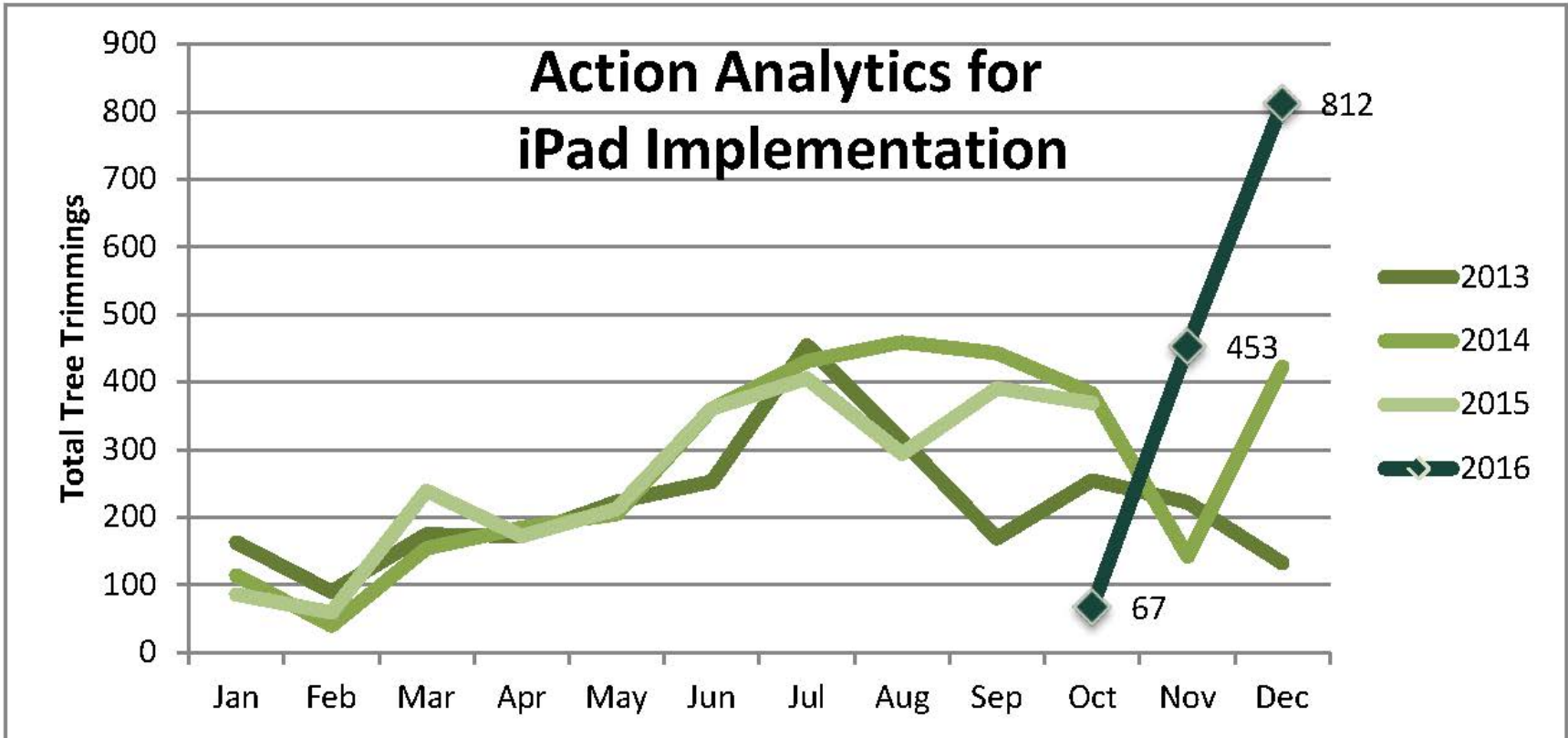
Task Status >

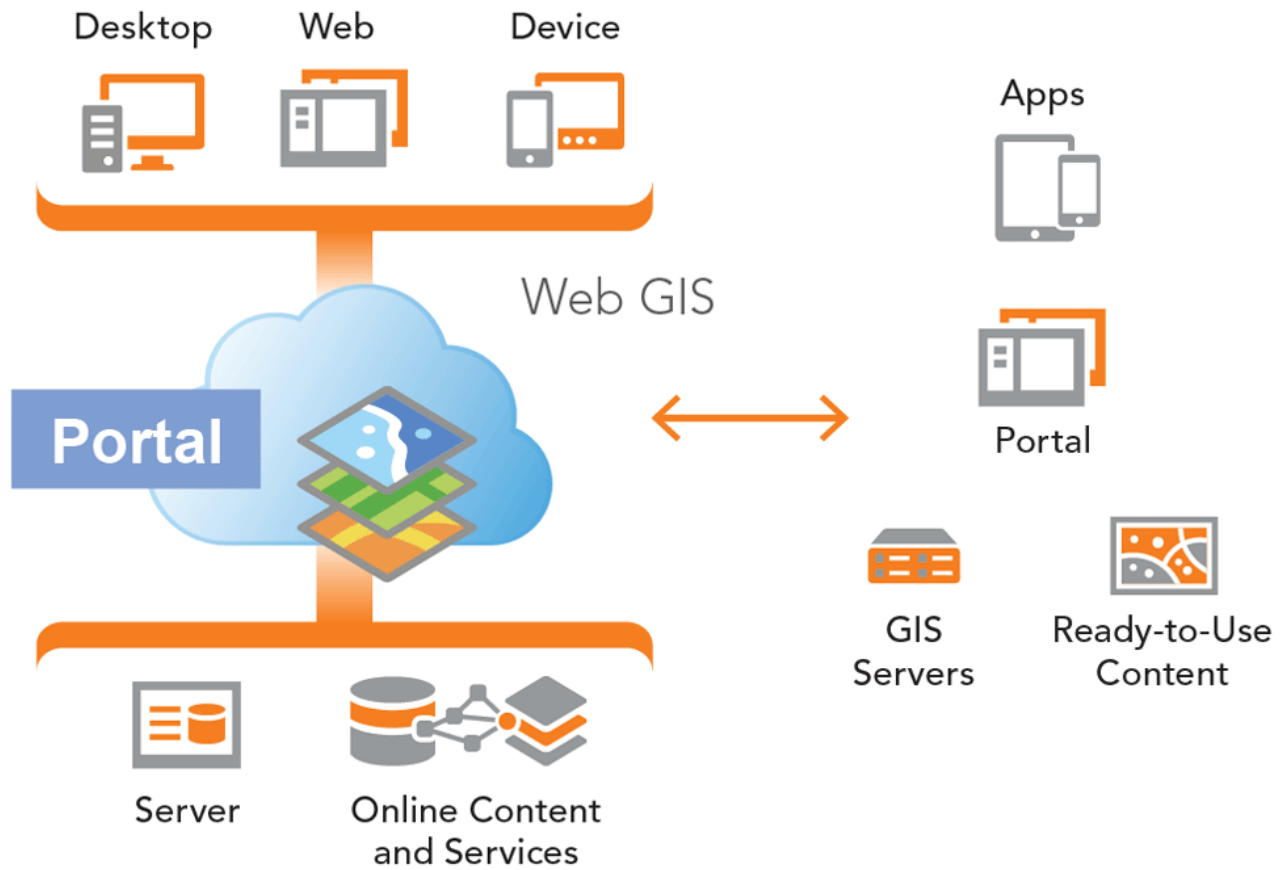
Assigned to Crew >

Sending Updates

Landscape Services









# Lessons Learned, Considerations

- ArcGIS Server infrastructure
- Licensing – Portal, ArcGIS Pro
- Phased approach, solve small problems first
- Celebrate early wins
- Dashboard design and metrics
- Mobile device strategy and management philosophy
  - Wireless plans and device acquisition
  - Employer vs. Employee provided devices

# Thank you!

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