INTEGRATING OBSERVATIONAL DATA ASSESSMENT INTO SPACE AND SERVICE DESIGN

Joyce Chapman

Assessment Coordinator

Duke University Libraries

SE Library Assessment Conference

November 17, 2015

Agenda

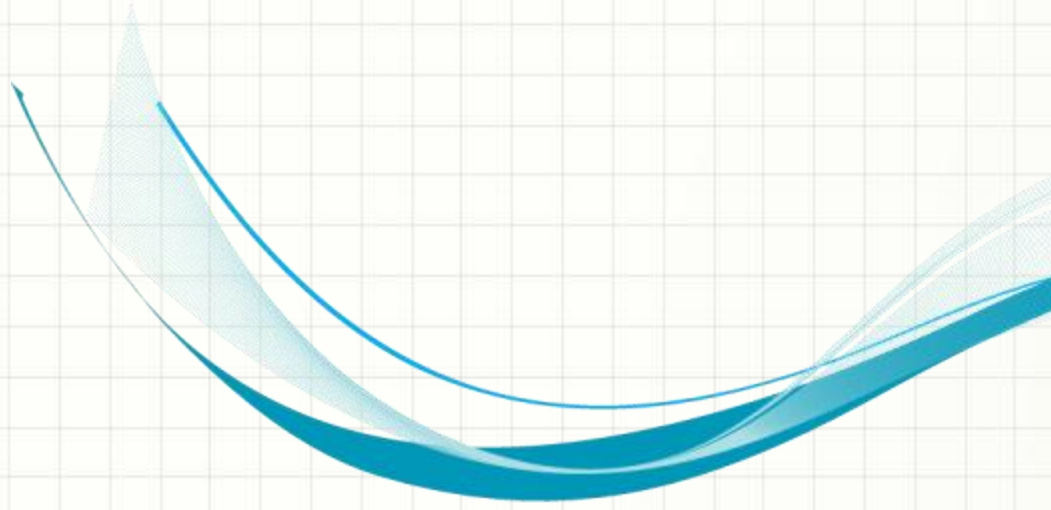**1** • Suma

2 • Observational assessment at Duke

3 • Breakout groups

Suma

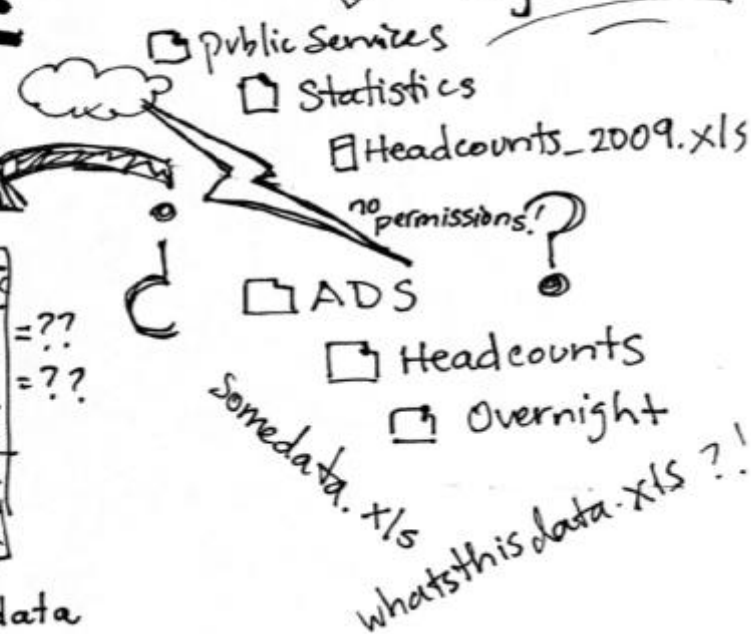# Problem statement

Digital library   Physical library
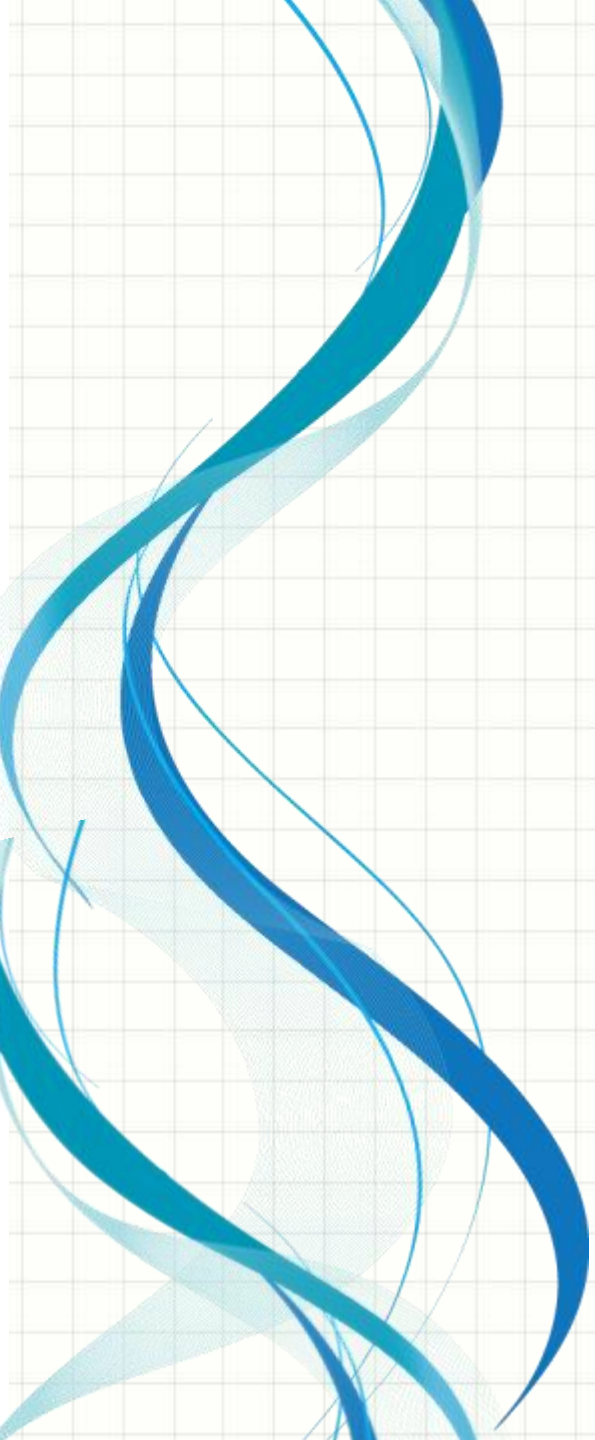
+suma An open-source, mobile tool enabling observational data collection and analysis

- Streamline existing data collection
- Enabling fast, mobile data collection
- Centralize data storage
- Eliminate multiple data stores with fragmented data across time/topic
- Provide data analysis and visualization capabilities for non-technical users

A pocket data analyst

How Suma works
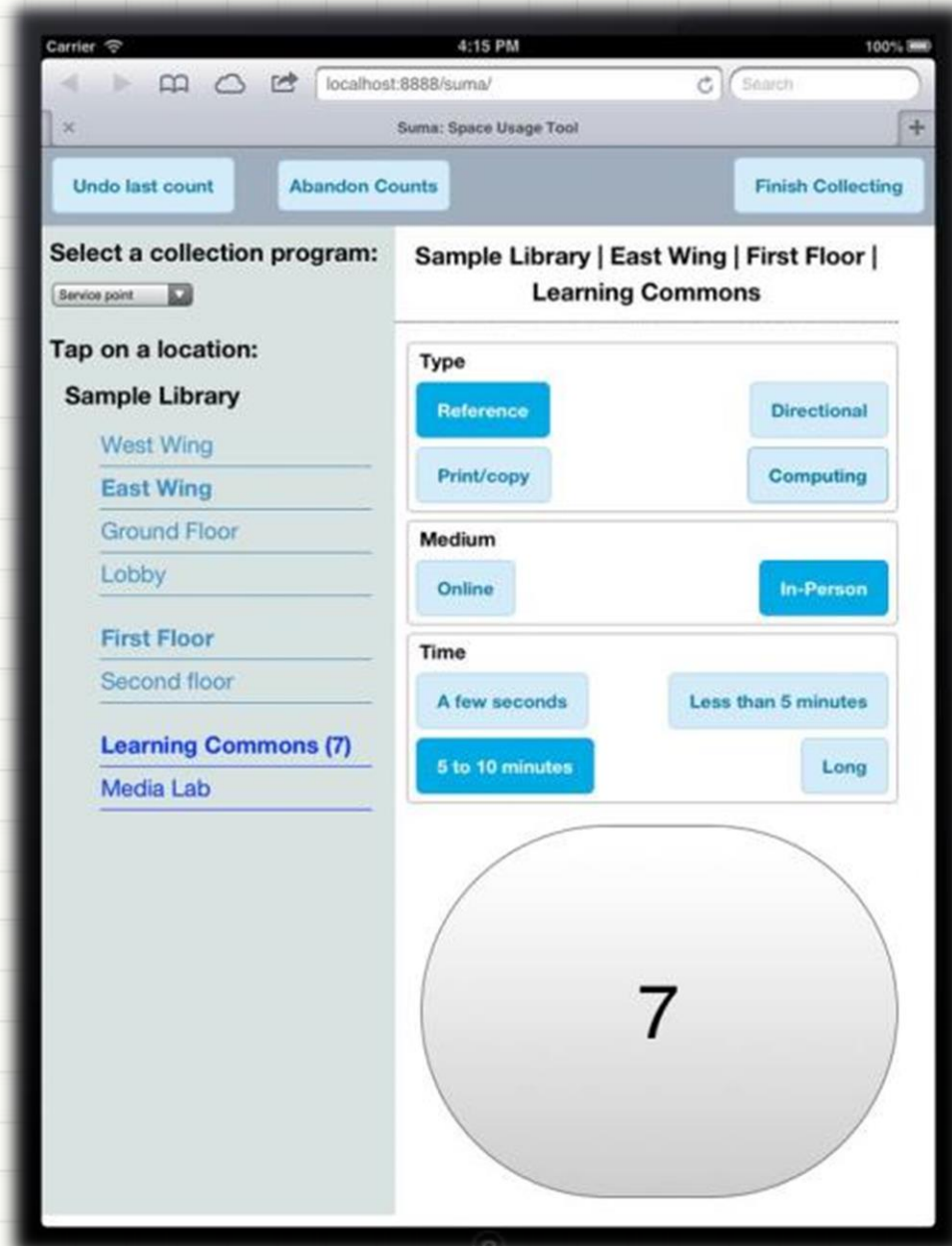
Data collector
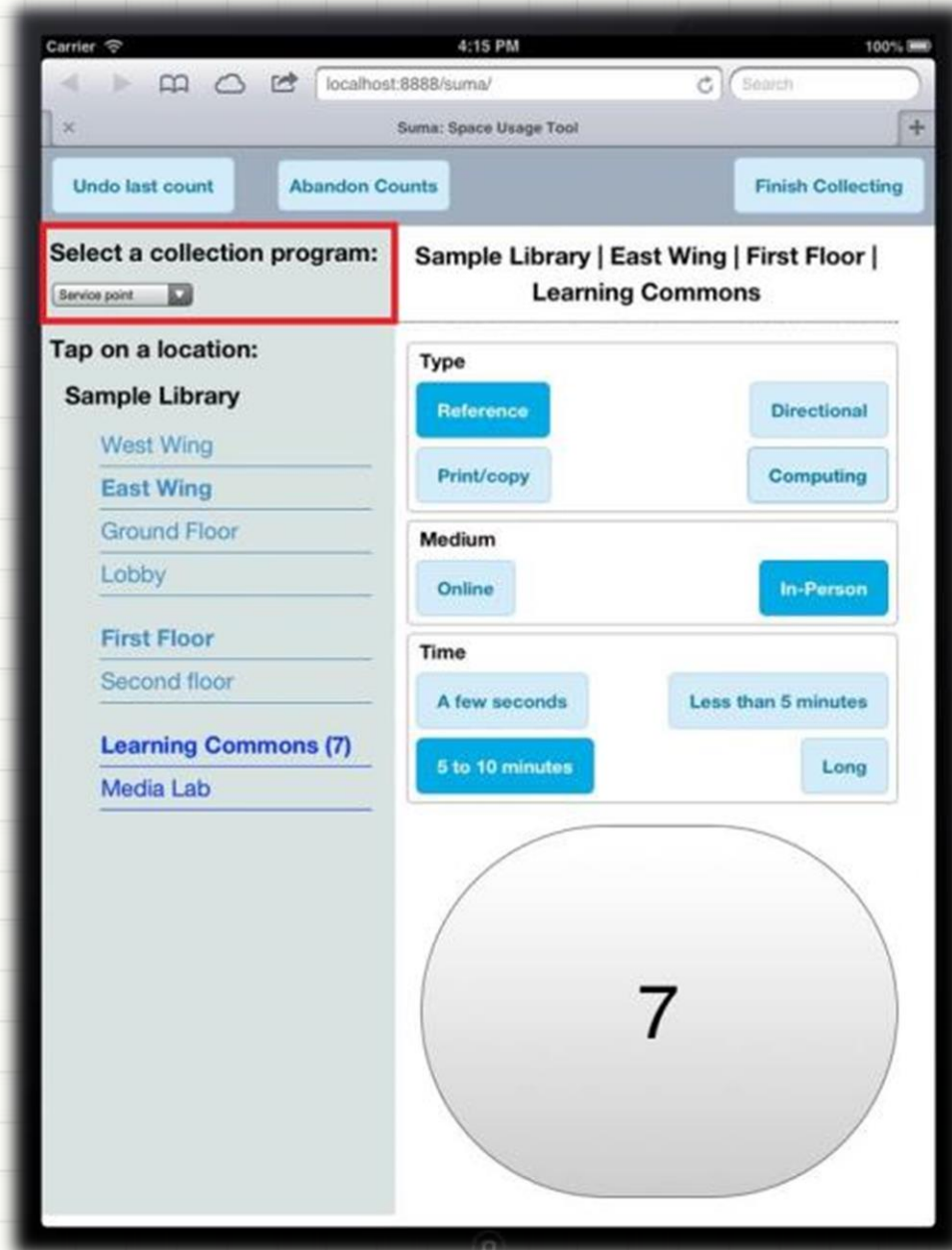
Data collector

- Add as many collection initiatives in the admin interface from your web browser as you want.
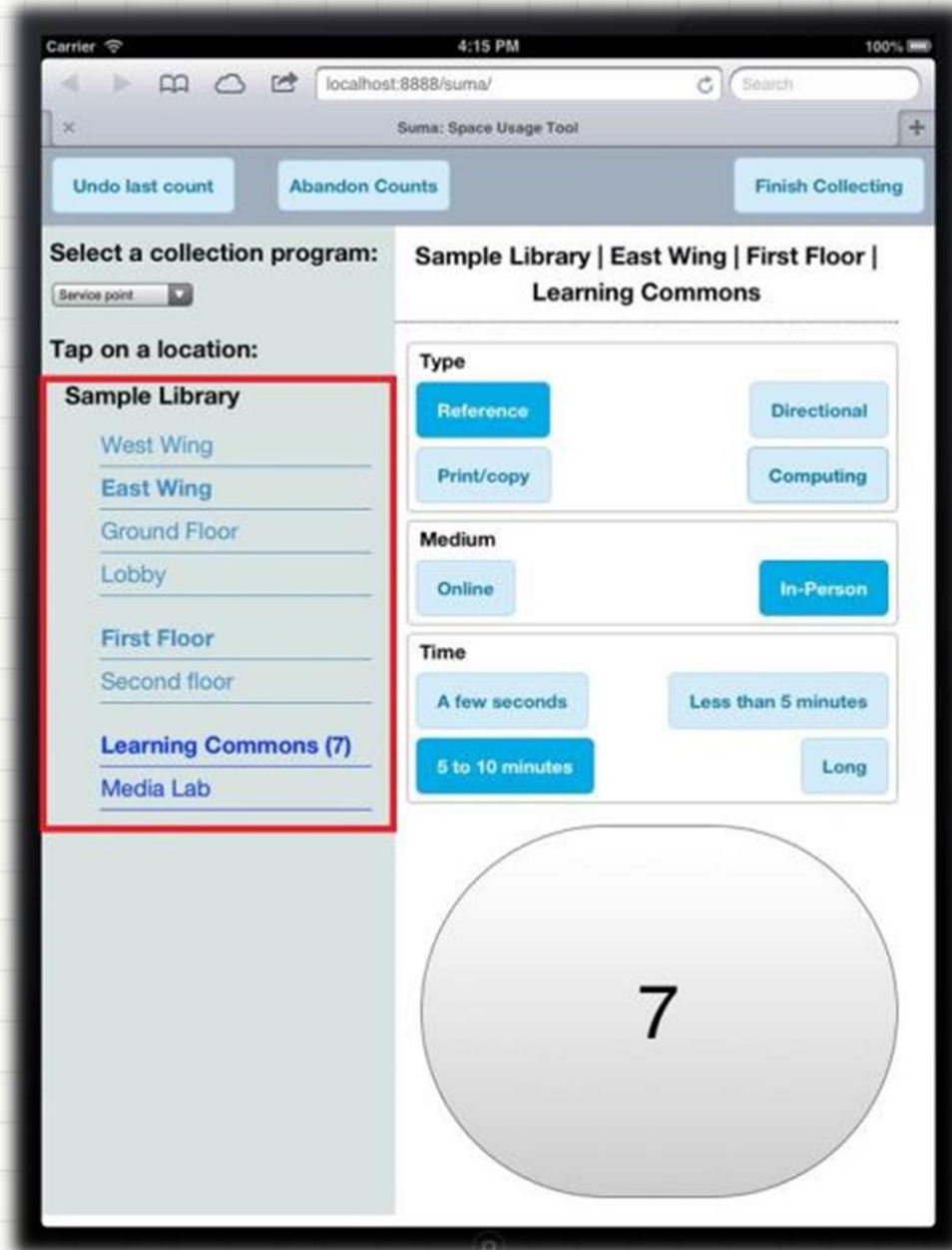
Data collector

- Set up the specific spaces/locations for each initiative, or reuse between initiatives.
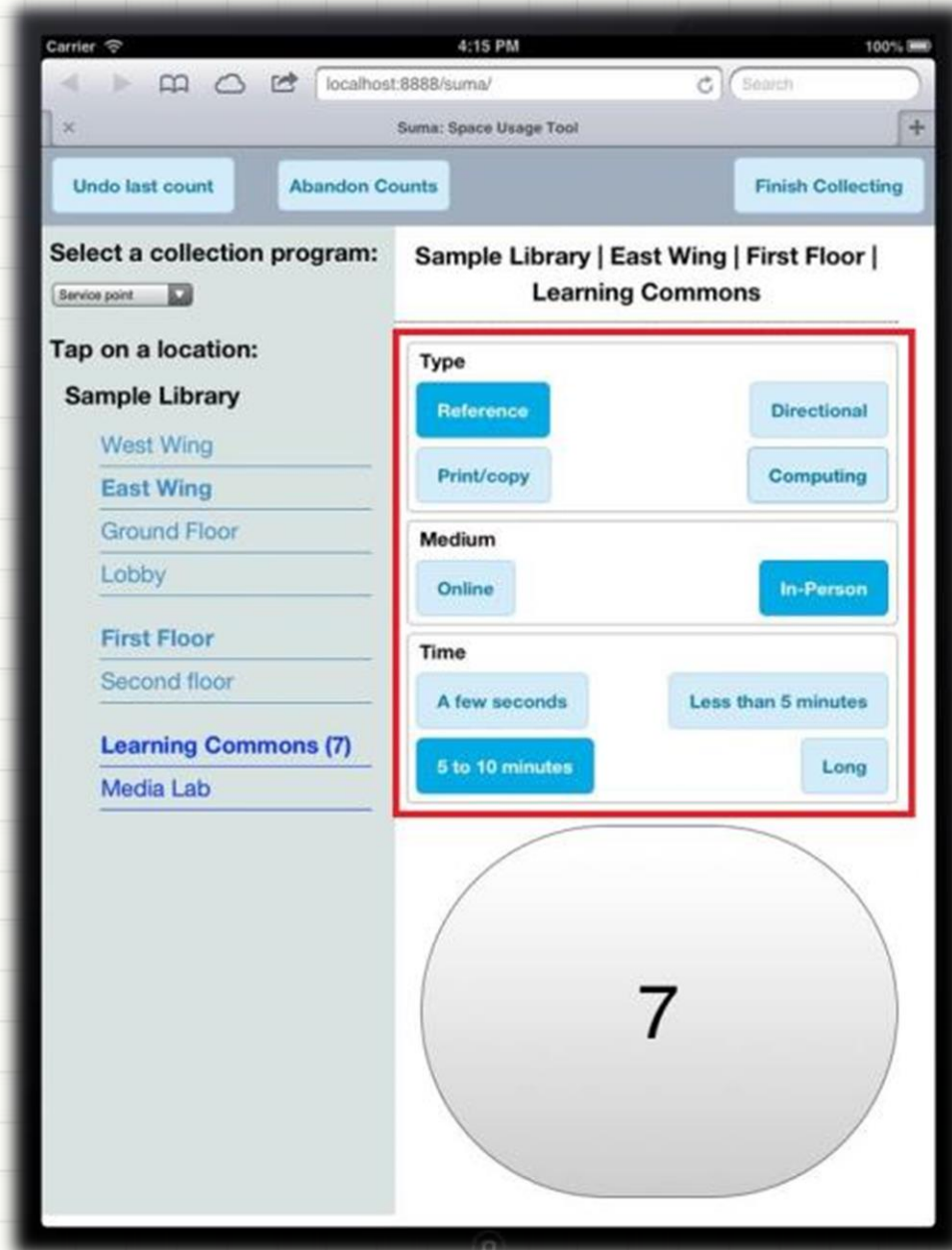
Data collector

- Create activities and activity groups for each collecting initiative.
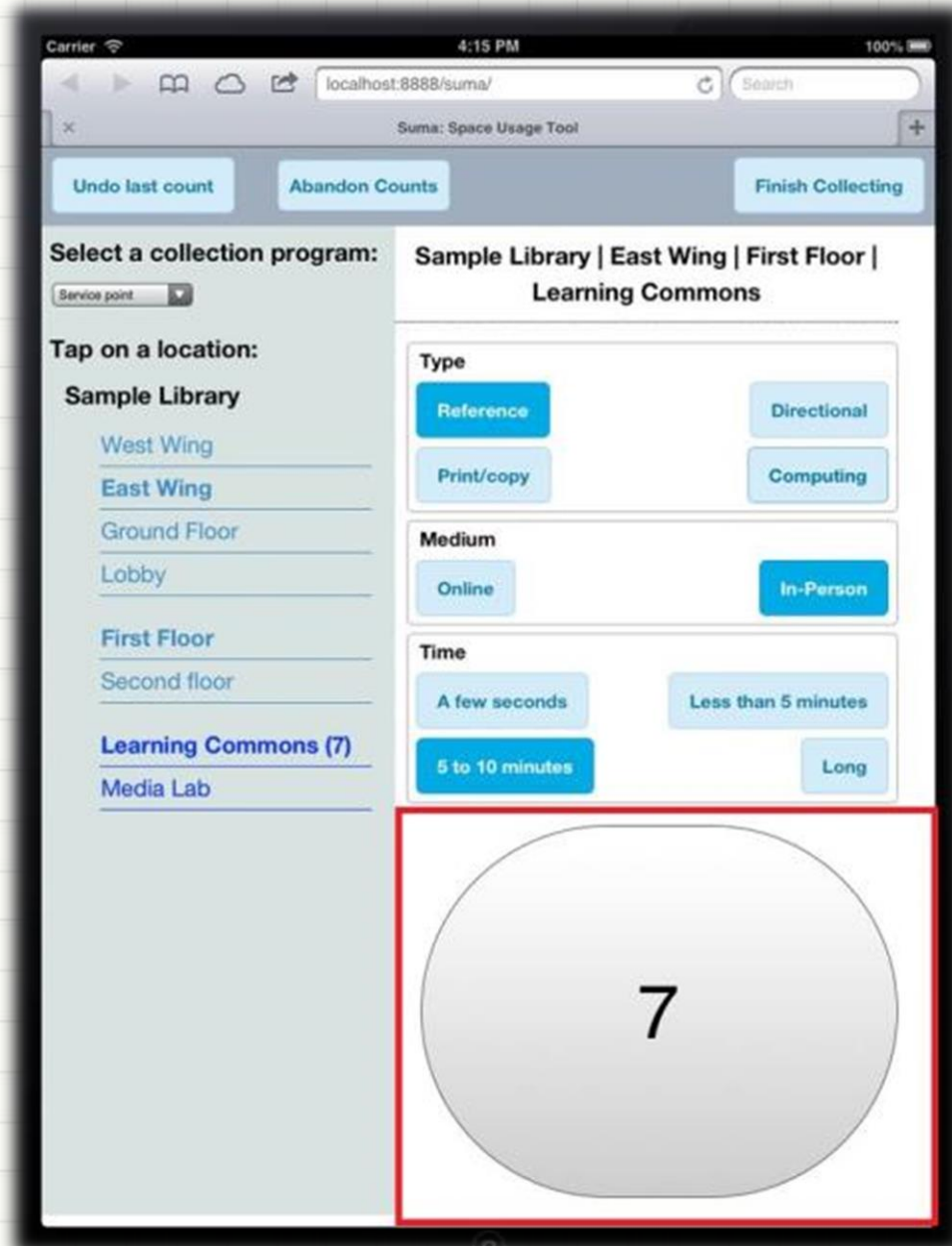
Data collector

- Tap activities to select, then tap the "count" button to count a person engaged in all selected activities.

Why the big button?

Da

Initiative: Reference tracking
Classify By: Count Date **Whole Session:** No
Dates: 2015-01-01 - 2015-04-30 **Subset:** 00:00 - 23:59
Days: Mo, Tu, We, Th, Fr, Sa, Su **EL:** None
EA: None **RA:** None **EAG:** None **RAG:** None

Export Raw Data | Summary Data | Save Chart | Daily Avg | Daily Sum
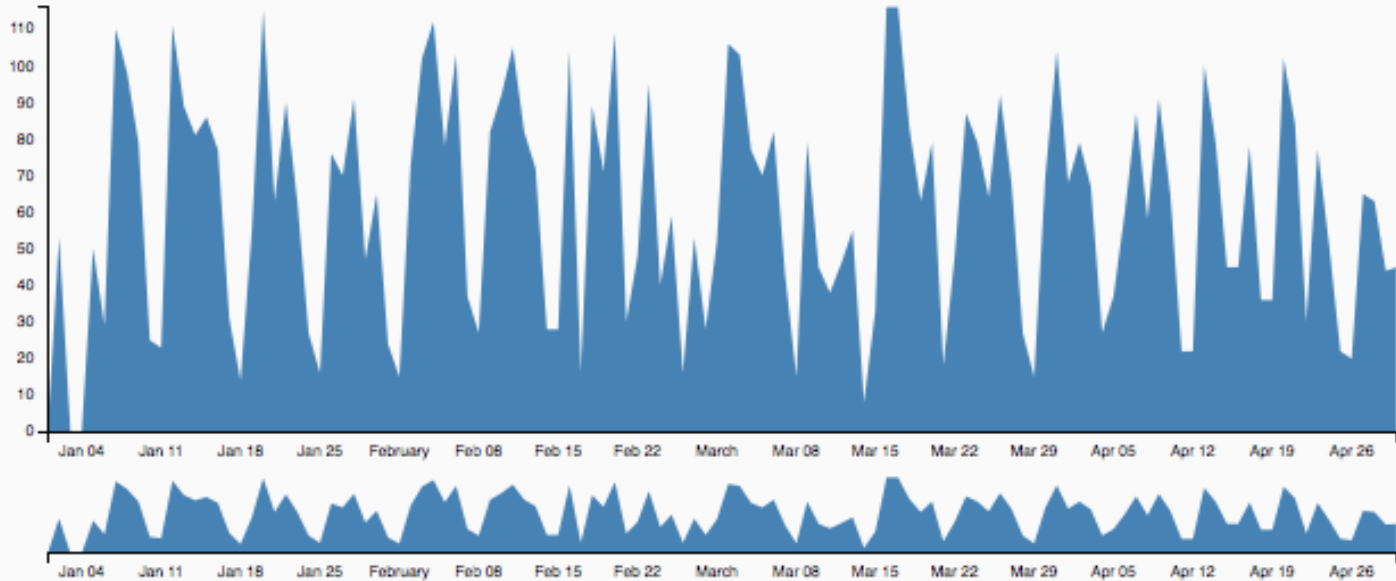
Modify Chart

Select Initiative
Reference tracking

Classify Counts By
Count Date

Always Include Whole Session
No

Use Zero Counts for Locations
No

Start Date
2015-01-01
YYYY-MM-DD

End Date
2015-04-30
YYYY-MM-DD

Start Time
00:00
24-hour format, e.g. 08:00

End Time
23:59
24-hour format, e.g. 08:00

Initiative Filters

Limit Days of the Week
☑ Mo ☑ Tu ☑ We ☑ Th
☑ Fr ☑ Sa ☑ Su

Limit Locations
Limit Locations

Limit Activities
Limit Activities

Submit

Initiative: Reference tracking
Classify By: Count Date **Whole Session:** No
Dates: 2015-01-01 - 2015-11-16 **Subset:** 00:00 - 23:59
Days: Mo, Tu, We, Th, Fr, Sa, Su **Locations:**
EA: None **RA:** None **EAG:** None **RAG:** None

Save Chart   Daily Avg   Daily Sum

Potential Outliers ▪ ▪   Less ▫ ▪ ▪ ▪   More (65.00+)
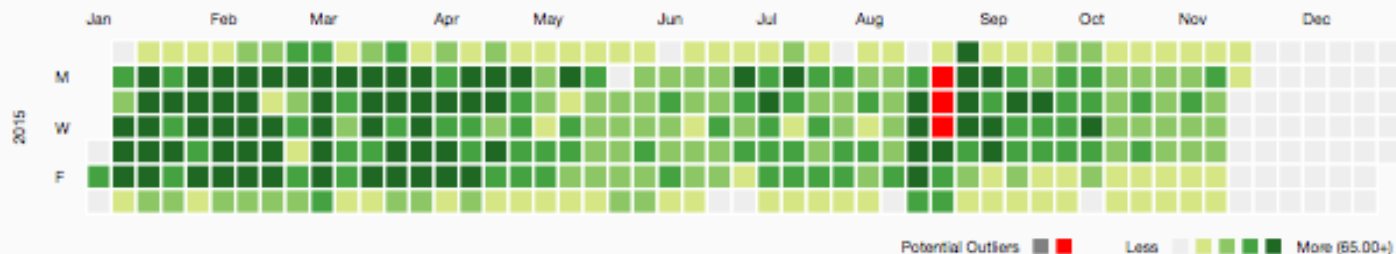
Modify Chart

Select an Initiative
Reference tracking ▾

Classify Counts By
Count Date ▾

Always Include Whole Session
No ▾

Start Date
2015-01-01   📅
YYYY-MM-DD

End Date
2015-11-16   📅
YYYY-MM-DD

Start Time
00:00   🕐
24-hour format, e.g. 08:00

End Time
23:59   🕐
24-hour format, e.g. 08:00

Initiative Filters

Limit Days of the Week
☑ Mo ☑ Tu ☑ We ☑ Th
☑ Fr ☑ Sa ☑ Su

Limit Locations
Limit Locations

Limit Activities
Limit Activities

Submit

Summary Statistics

Min	0
Max	172
Quartiles	(27.00, 43.00, 65.00)
Median	43.00
Interquartile Range	38.00

Locations and Activities

| Activities | Locations | | Avg of Sum | Avg of Avg | Sum | Pct | Save Chart |

Medium: Phone	13.33
Medium: In-person	63.33
Medium: Email	11.11
Type: Research	16.67
Type: Directional	24.44
Type: Technology	8.89
Type: Informational	24.44
Type: ADS/ILL	11.11
Duration: 0-1 min	33.33
Duration: 2-5 min	16.67
Duration: 6-15 min	5.56
Duration: 16-30 min	1.11
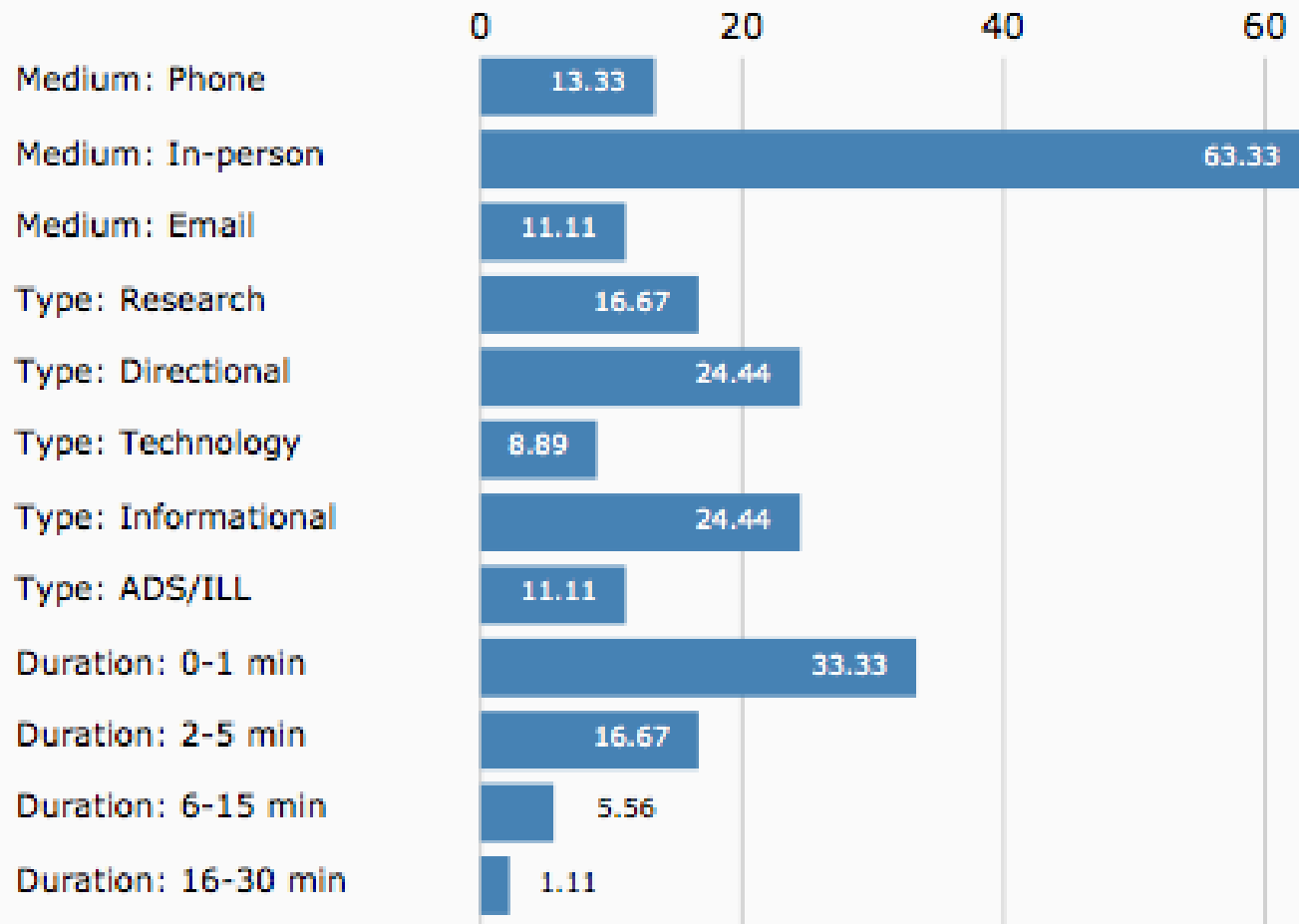
Totals by Location

Location	Total	Percentage
—Unity lab	7	1.41%
—2nd floor	0	0.00%
—3rd floor	17	3.42%
—4th floor	13	2.62%
—5th floor	20	4.02%
—7th floor	0	0.00%
—8th floor	1	0.20%
Ground Floor	211	42.45%
Lobby and Mezzanine	126	25.35%
—Technology Sandbox	9	1.81%
—Quiet		
—Terrac		
—ConeZ		
—WW 1		
—WW 2		
—EW 1s		
—EW 2n		
—Specia Room		
—Digital		

Totals by Year

Year	Total	Percentage
2013	387	77.87%
2014	110	22.13%

Totals by Month

Month	Total	Percentage
January 2013	1	0.20%
April 2013	43	8.65%
May 2013	54	10.87%
June 2013		
July 2013		
August 2013		
September 2013		
October 2013		
December 2013		
January 2014		
February 2014		
March 2014		
April 2014		
May 2014		

Totals by Weekday

Weekday	Total	Avg	Percentage
Monday	86	7.82	17.30%
Tuesday	98	9.80	19.72%
Wednesday	136	9.07	27.36%
Thursday	116	6.82	23.34%
Friday	61	8.71	12.27%

Totals by Activity

Activity	Total	Percentage
—Knitting	47	9.46%
—Computer	46	9.26%
—Laptop	2	0.40%
—Tablet	29	5.84%
Activities	88	17.71%
—Foosball	9	1.81%
—Reading	44	8.85%
—Sleeping	9	1.81%
—Computing	14	2.82%
—Collaborating	12	2.41%
—No Activity	381	76.66%

Totals by Hour

Hour	Total	Percentage
08:00 AM	56	11.27%
09:00 AM	66	13.28%
10:00 AM	64	12.88%
11:00 AM	57	11.47%
12:00 PM	5	1.01%
01:00 PM	31	6.24%
02:00 PM	38	7.65%
03:00 PM	98	19.72%
04:00 PM	81	16.30%
08:00 PM	1	0.20%

Suma resources

- Suma project webpage
  http://www.lib.ncsu.edu/dli/projects/spaceassesstool

- GitHub page (source code download)
  https://github.com/cazzerson/Suma

- Want to try out the data dashboards? Use the Sandbox to play
  http://anchovy.lib.ncsu.edu:8888/sumaAnalysis/reports/#/

Observational assessment at Duke

Graduate Reading Room

- How often is it used? At what times of day or days of the week? What furniture should we have in the room?

- Sampled for one week in fall, one week in spring. 5-7 observations per day between 8am - 11pm.

- See report: http://dukespace.lib.duke.edu/dspace/handle/10161/10815

Graduate Reading Room: actions

- In this first assessment of the new space, administration was satisfied with use levels, which met their goals

- Plan to add standing desks

- Removed some comfy seating, increased number of desks and tables

3rd floor planning

To inform newly available space design:

- Which types of furniture are most heavily used? What types of activities are patrons perform while using different types of furniture? How many people use this type of space at different times of day?

- Two weeks of sampling in fall and spring; 2-5 observations each day

3ʳᵈ floor planning: activities tracked

- Furniture types, i.e., small table, large table, carrel, comfy chair.

- Regular activities: eating, sleeping, collaborative work, individual work, analog work, digital work

- Less common activities: furniture moved, cord strung across walkway, etc.

- See report: http://dukespace.lib.duke.edu/dspace/handle/10161/10818

3rd floor planning: actions

- Will not recover worn "comfy" chairs
- Chose furniture that would promote/accommodate individual work
- Made plans to remove stacks in order to incorporate many more individual seats
- Relocate comfy/group seating to lobby areas
- Conducted follow up group meetings with students resulting in development of new quiet and food free zones

Desk traffic

- New building opening August 2015, planning for new desk and staffing model in fall 2014.

- Concern that many desk transactions were not being captured with LibAnalytics.

- Switched to Suma for desk traffic on a trial basis; after one month over 50% more transactions recorded, over 90% more research transactions recorded.

Desk traffic: actions

- Implemented Suma for desk traffic on a permanent basis for the main library.

- Patterns identified by the data were folded in to the new service design and staffing models.

- Transitioned to "on call" shifts during 2-hour blocks that are especially light

- Merged IM and desk shifts on the weekends

Computer/monitor usage

- Do we have enough/too many computers?
- Ratio of patrons at a computer station using the computer versus doing something else
- Are external monitors being used?
- One month of data collection 4 times a day
- See LabStats report: http://dukespace.lib.duke.edu/dspace/handle/10161/10819

Computer/monitor usage: actions

- Decided that the decision to remove half the public computers had been justified
- Improved signage for external monitors and moved them to a lower traffic area
- Decided not to remove any additional computers
- Informed the addition of more table/carrel seating in the building

Sperling lobby

Observations in the entrance lobby of the newly renovated special collections Library

- Are people confused when they enter?

- Do we need to improve signage?

- What do they most use (informational kiosk, signs, eprint stations) in this area?

- Read the report http://dukespace.lib.duke.edu/dspace/handle/10161/10893
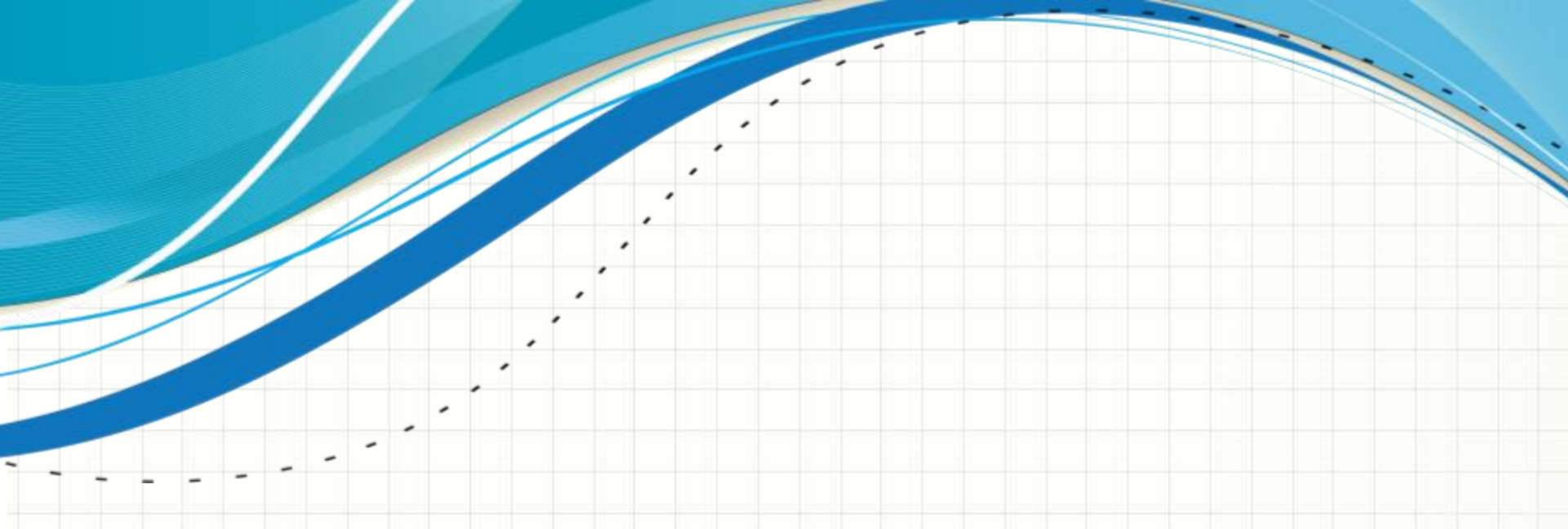
Sperling lobby: actions

- Only 7% of people were confused upon entering the lobby; this was lower than our goal and deemed successful

- Added more prominent directional signage

- Added signage explaining what eprint stations in the lobby were

- In progress: analysis of web analytics for kiosk usage to combine with observation
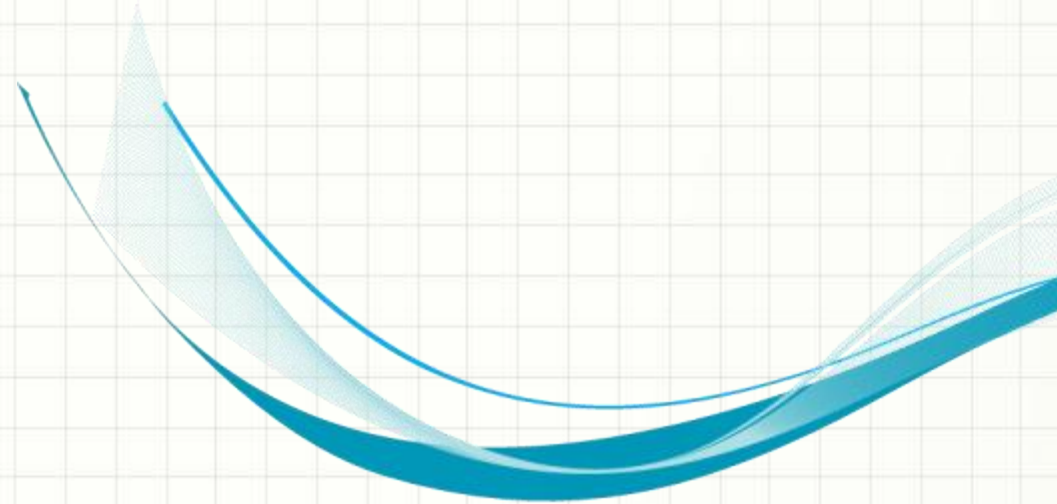
Breakout groups!

Let's talk about observational assessment (10 minutes)

- What's worked for you and what hasn't
- Interesting ideas, directions, or applications for space assessment in libraries
- Tools: we talked about Suma, what else are you using?
- Whether a tool like Suma or something else could work in your environment

THANK YOU! QUESTIONS?

Contact:

Joyce Chapman joyce.chapman@duke.edu

Assessment Coordinator, Duke Libraries