

X's and O's: Connecting Visitor Experience Data and Operational Data to Drive Institutional Change

Association of Science and Technology Centers Annual Conference

Saturday, September 21, 2019



Outline of Session

- Introduction to COVES
- Rapid-fire presentations of...
 - Crowding studies
 - Traveling exhibits vs in-house fabrications
 - Visitor groups and experiences
 - COVES community data and internal decisions
- Questions

COVES

=

Collaboration for Ongoing
Visitor Experience Studies



COVES is designed to unite science centers in systematically collecting audience-level data, with a focus on institutional and field-wide improvement.





provides:

- a common instrument & shared measures
- institutional flexibility
- analytical assistance
- evaluation capacity building resources
- dynamic reporting
- systematic comparison



Methodology overview

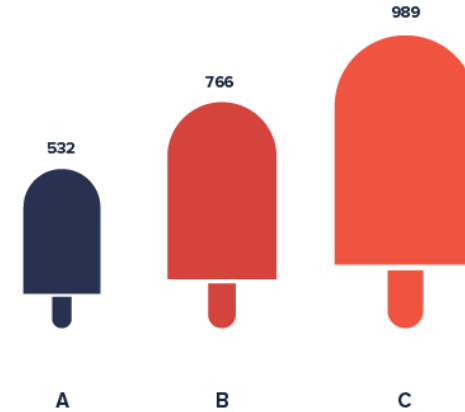


Onsite survey with exit intercept



Systematic random sampling

Sample size proportional
to institution size



General public audiences (no school/tour groups)



What do we need to know?

Who visits



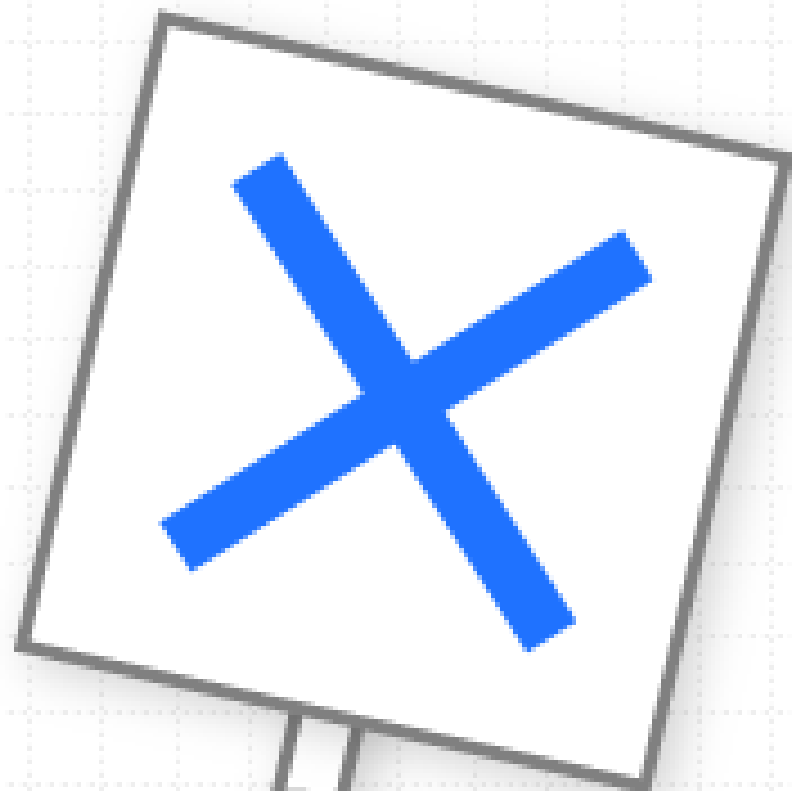
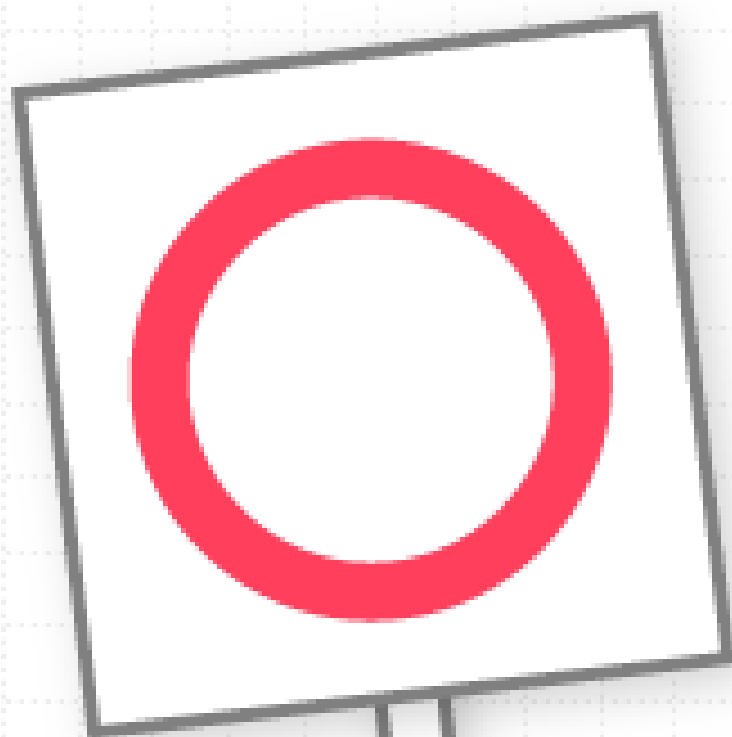
Why they visit



What they see & do



How they feel



Operational Data

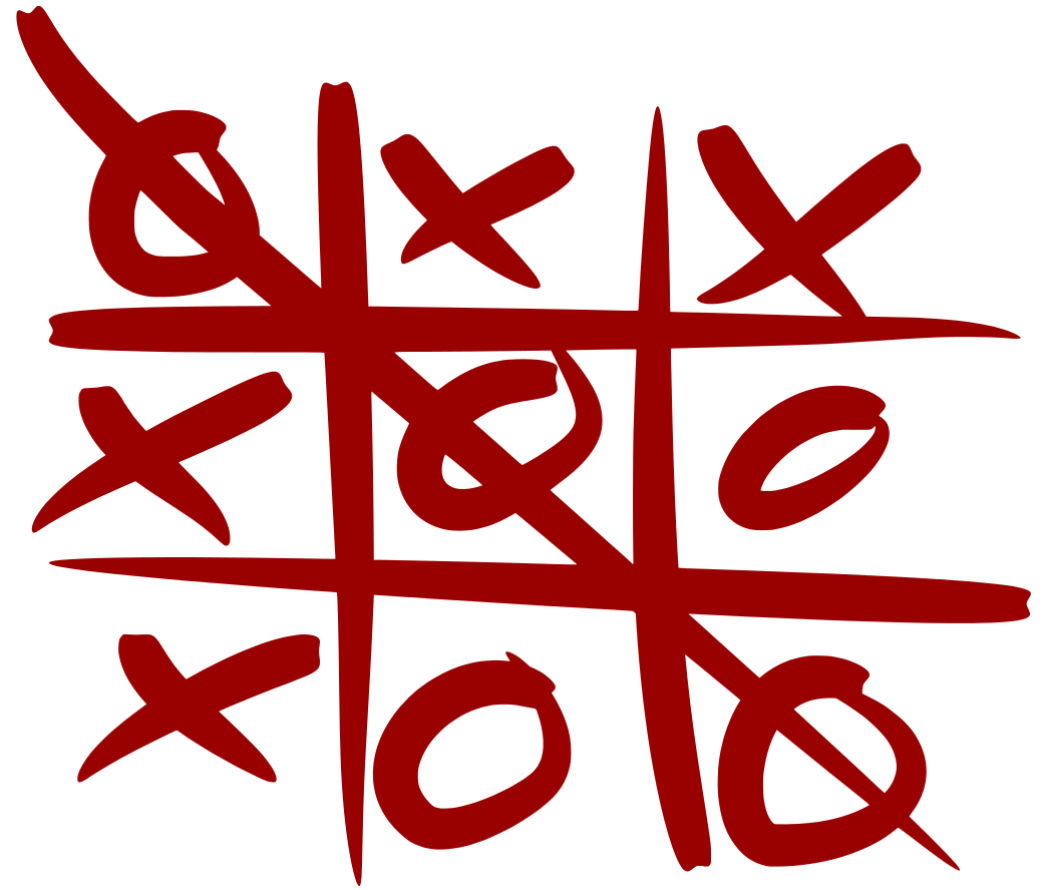
Examples:

- Attendance
- Memberships
- Revenue

EXperience Data

Examples:

- Reason for attending
- Activities done onsite
- Perception of quality



Connecting the X's and O's



CROWDING

Crowding:

Connecting Survey Data
and Daily Admissions



Historic Data:

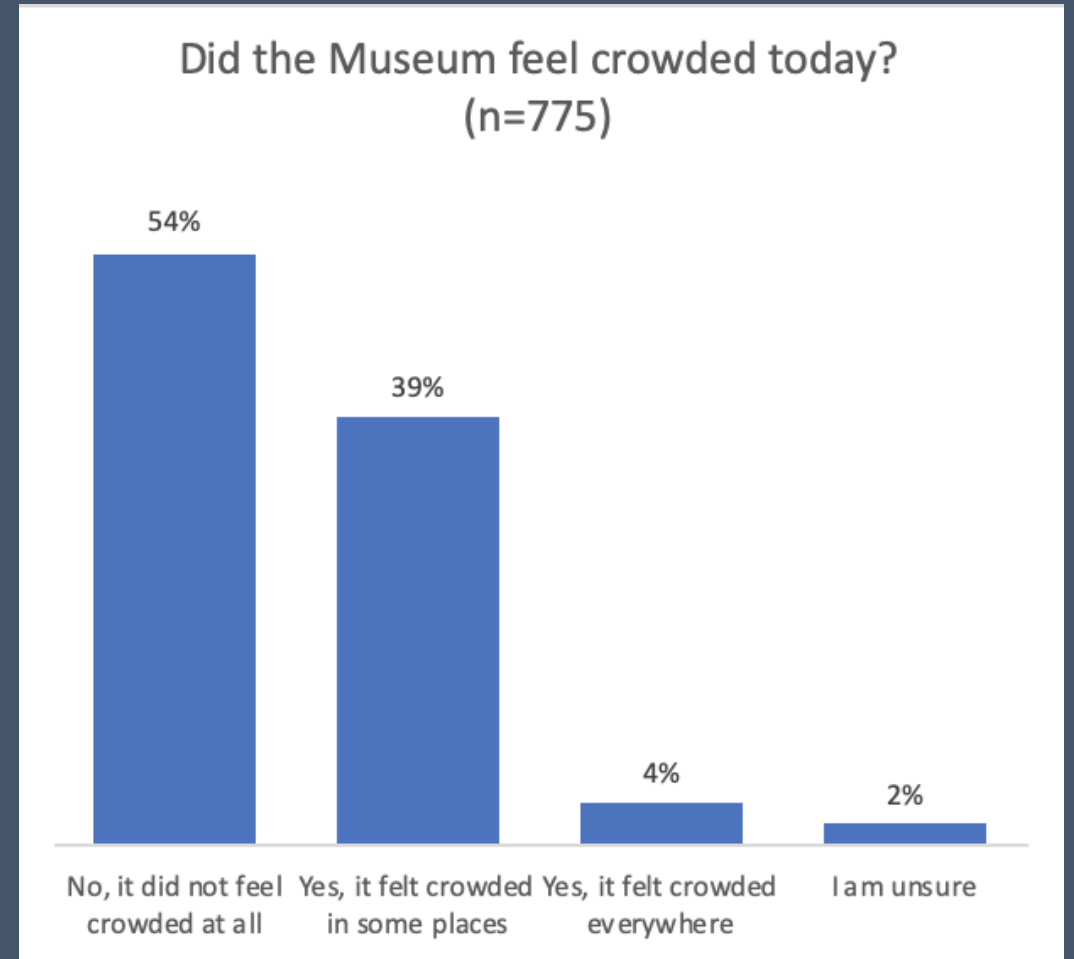
Date	Day	Identified?	Total Attendance	School Attendance
1/14/17	Sat	Yes	4440	0
1/27/17	Fri	Yes	3407	976
1/28/17	Sat	No	4657	0
2/5/17	Sun	Yes	2324	0
2/11/17	Sat	Yes	4409	0
2/17/17	Fri	Yes	4055	1433
2/19/17	Sun	Yes	2881	0
2/20/17	Mon	No	5159	0
2/25/17	Sat	Yes	6530	0
3/3/17	Fri	No	3515	965
3/4/17	Sat	Yes	5703	0
3/7/17	Tue	No	1542	430
3/14/17	Tue	Yes	3006	651
3/17/17	Fri	No	4695	862
3/18/17	Sat	No	6452	0
3/19/17	Sun	Yes	3875	0
3/22/17	Wed	No	2473	1089
3/25/17	Sat	Yes	6007	0
3/26/17	Sun	Yes	4638	0
3/28/17	Tue	Yes	2473	307
4/14/17	Fri	No	5739	415
4/15/17	Sat	No	5328	0
4/27/17	Thu	Yes	2328	949
4/29/17	Sat	Yes	4084	0
5/5/17	Fri	Yes	2185	1605
5/9/17	Tue	No	1681	1448
5/10/17	Wed	No	1970	1618
5/11/17	Thu	No	2043	1337

Crowding:

Connecting Survey Data
and Daily Admissions



Current Data:



Crowding

- To what degree does crowding impact satisfaction ratings?
 - Likelihood to recommend (NPS)
 - Overall visit experience (OER)



Crowding Levels

Green – up to 1,999 visitors

Yellow – 2,000-2,999

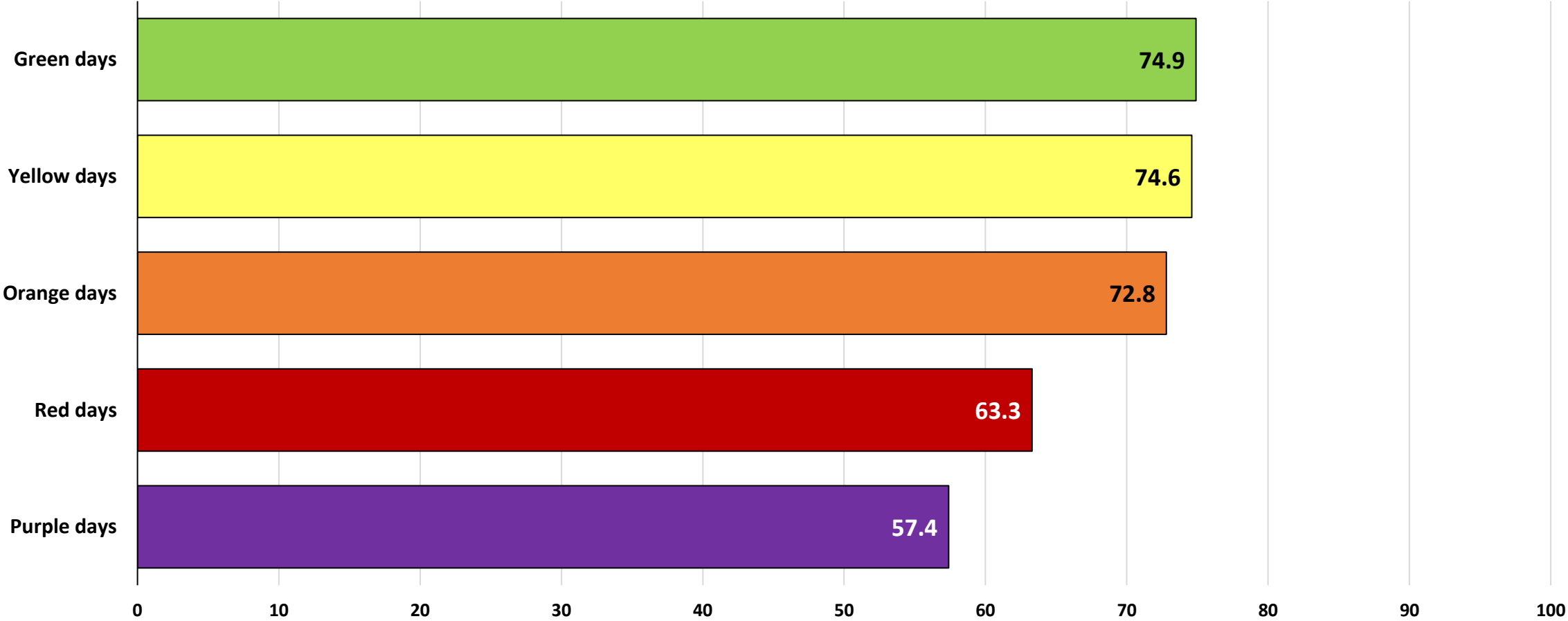
Orange – 3,000-3,999

Red – 4,000-4,999

Purple – 5,000+



NPS by Crowding Level



Overall Experience Rating - Crowding Level

Less than Excellent

Excellent or Superior

Green

Fair
1%

Good
13%

Excellent
49%

Superior
37%

Yellow

Fair
3%

Good
14%

Excellent
54%

Superior
29%

Orange

Fair
3%

Good
14%

Excellent
56%

Superior
27%

Red

Fair
3%

Good
18%

Excellent
52%

Superior
26%

Purple

Fair
1%

Good
15%

Excellent
53%

Superior
31%

Crowding

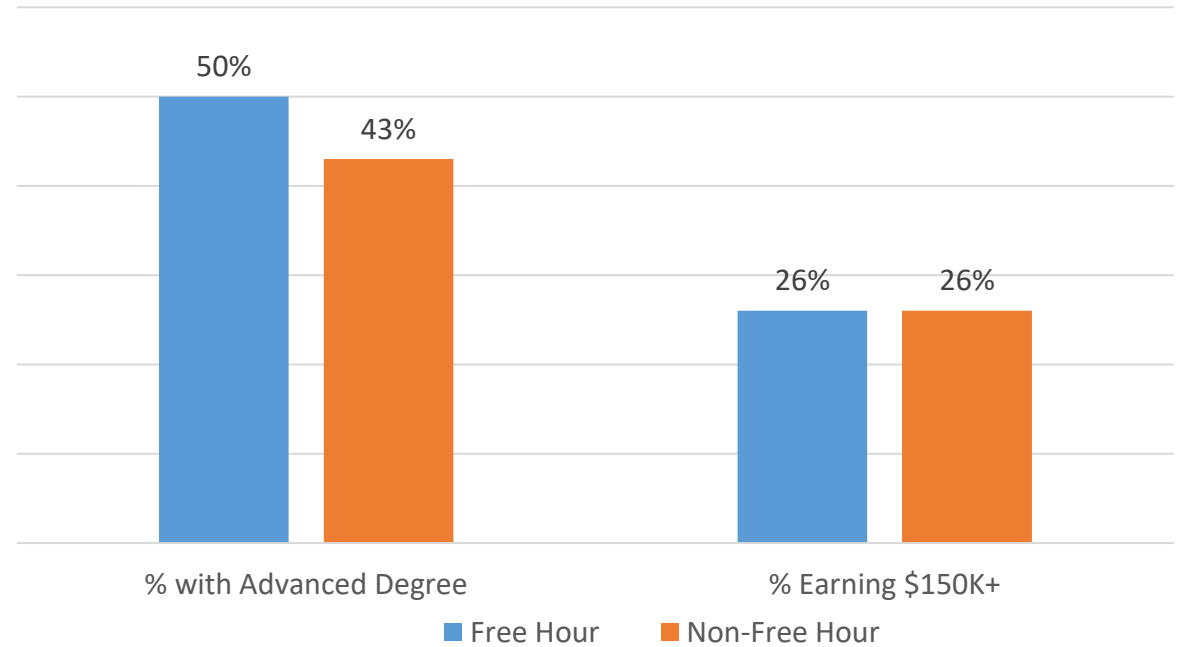
- Likelihood to recommend and overall experience are not the same thing – crowding may affect them differently.
- Crowding seems to more negatively impact NPS than OER.



Investigating the Efficacy of Free Hour

Free Hour visitors do not differ from non-Free Hour visitors in terms of educational attainment, or annual household income.

Free Hour vs. Non-Free Hour Visitors



PANEL DISCUSSION



Traveling vs In-House Exhibitions

Using COVES for planning at Great Lakes Science Center



Rent or Create In-House?

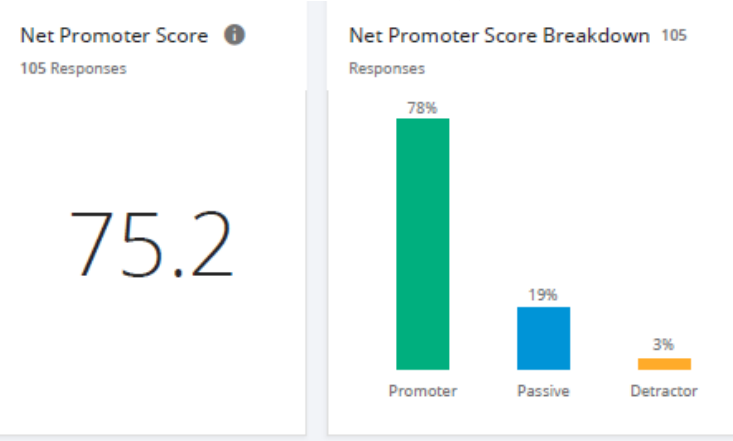
	PRO	CON
RENTAL	<ul style="list-style-type: none">➤ Built-in marketing assets➤ Recognizable brands➤ Track record of success➤ Turn-key educator resource package	<ul style="list-style-type: none">➤ Expensive➤ Unpredictable quality➤ Lose audience / lose exhibit➤ Not catered to our region➤ Experience isn't always deep
IN-HOUSE	<ul style="list-style-type: none">➤ Retention of knowledge gained from R&D➤ Scale content to other programs➤ Move best pieces to permanent exhibits➤ Scale to budget➤ Up-to-date content	<ul style="list-style-type: none">➤ Extra staff costs➤ Brand identity needs built➤ Storage of exhibit after close of run

Data-Driven Decision Making

Setting the Bar for Future Exhibit Expectations

GROSSOLOGY

October 12, 2018- January 10, 2019

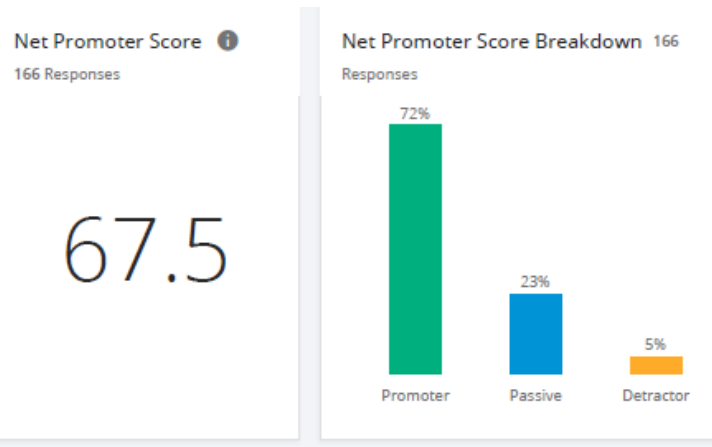


Overall Experience Rating 📘 104 Responses



VROOM!

March 15, 2019- September 2, 2019



Overall Experience Rating 📘 164 Responses



Other Factors to Consider

- Timing on installation
 - Scores trend higher in the Fall
- Ability to create programming and exhibits to use permanently

Moving Forward

Completed One In-House Exhibit and
Developing Two More!

10 Components Moved from Vroom! Into our
Permanent Exhibit Spaces



Up Next:

CURIOSITY CARNIVAL
★★★★★

Step right up for an exhibition like no other, featuring amazing feats of science!

OPENS NOVEMBER 15
MIDWAY GAMES
FEATS OF PHYSICS
TRICKS & PERFORMANCES

SPY SCIENCE
MISSION POSSIBLE

Your mission, should you choose to accept it - enter the world of espionage and experience the science behind being a top secret spy!
It's a hands-on, over-the-top covert op!
Coming in March 2020 from the Science Center.



Museum of Science[®]

X's and O's

ASTC 2019



Key Takeaways

- **All Aboard spend:**
approx. \$160,000
- **Income:**
approx. \$304,000
- Offerings benefitted members and locals



Travelling Exhibitions Why do we love them? (Or do we??)

Rita Deedrick
Senior Director, COSI Center for Research and Evaluation

Attendance!

New content, fresh experience
Drive attendance???

ROI

Operations Data:

- Attendance & TE ticket sales

Experience Data:

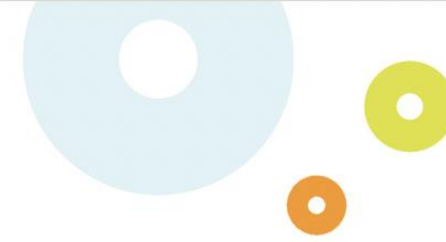
- COVES – Motivation, Experience, & Satisfaction
- Travelling Exhibition studies

Operations:

- Attendance is good, but...

Experience:

- “See a specific exhibit, program, or show...” is the 4th highest reason to visit
 - Of those TE “Mythic Creatures” far outranked other things for most visited
- High overall satisfaction



Study the Travelling Exhibitions

- What do visitors take away from their experience in the gallery?
- How do visitors perceive the gallery, and how do they feel about their experiences inside?

- The Power of Poison
- Crocs: Ancient Predators in a Modern World
- Dragons, Unicorns & Mermaids: Mythic Creatures
- The Jim Henson Exhibition: Imagination Unlimited
- Teenage Mutant Ninja Turtles: Secrets of the Sewer

PANEL DISCUSSION



Visitor Groups and Experiences



Discovery Center Stats

- Rockford, Illinois
- Founded in 1981 by the Junior League of Rockford and the Rockford Area Arts Council
- Budget ~\$2.0 M
- Receive ~ 146,000 visits/year (22,000 of those are group visits)
- Size: 23,000 ft² + 5,000 traveling exhibit hall (shared)



Discovery Center Data

NPS change from reported activities while visiting.

Live Science Demo – 2.6 

Visited Tot Spot – 5.2 

Planetarium Show - 10.6 

Discovery Center Data

Tot Spot Role Play area is for 6 and under.

We moved a roleplay area outside of Tot Spot as a transition area for older kids who still wanted that experience.

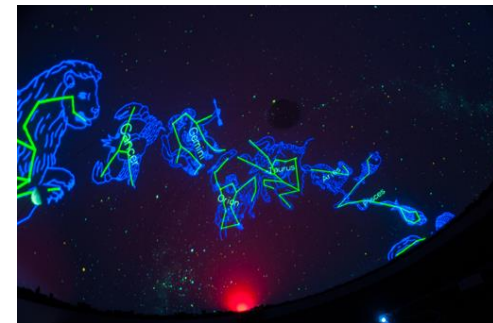


Discovery Center Data

Only 2.7% of visitors see a planetarium show when they visit.

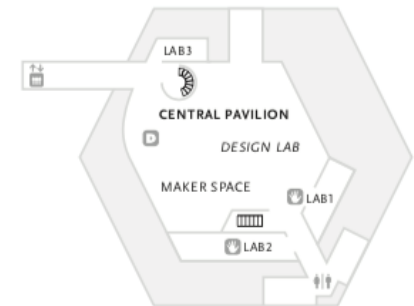
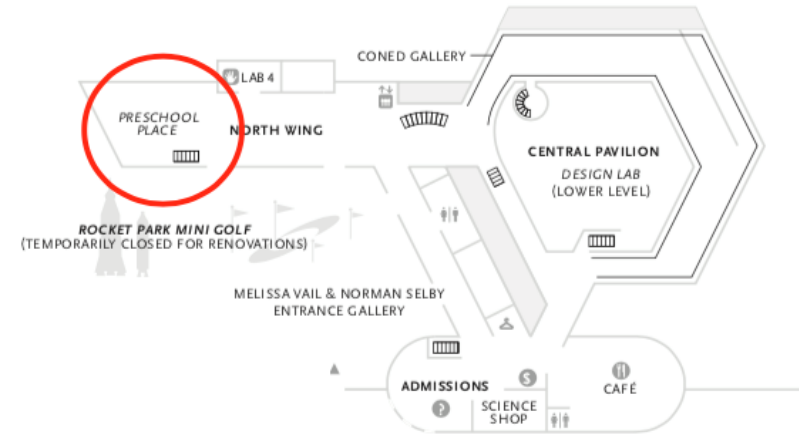
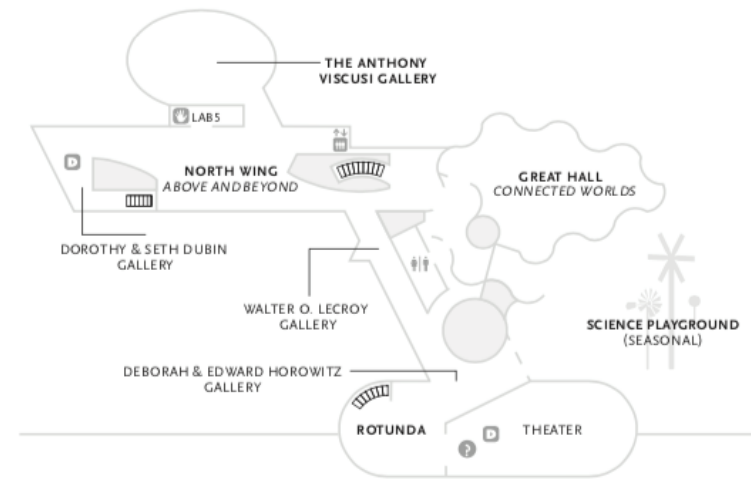
\$1.00 for Public / \$0.50 for members

- New shows on the way (including preschool)
- Better advertising and signage
- Admissions staff sharing info at check-in

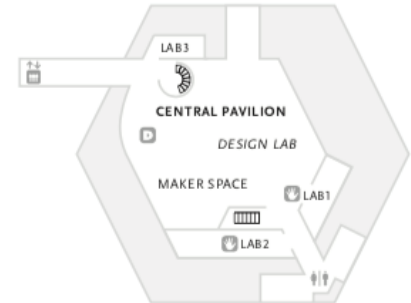
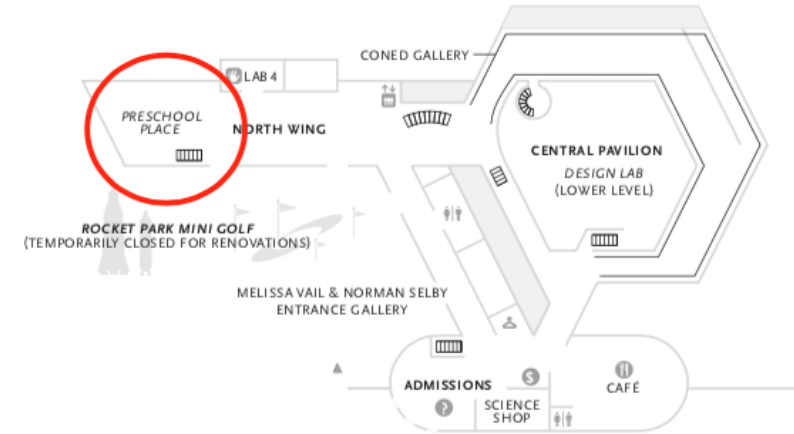
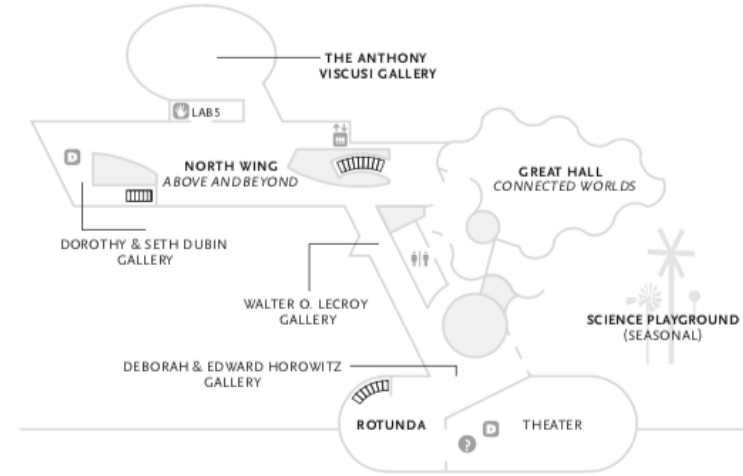
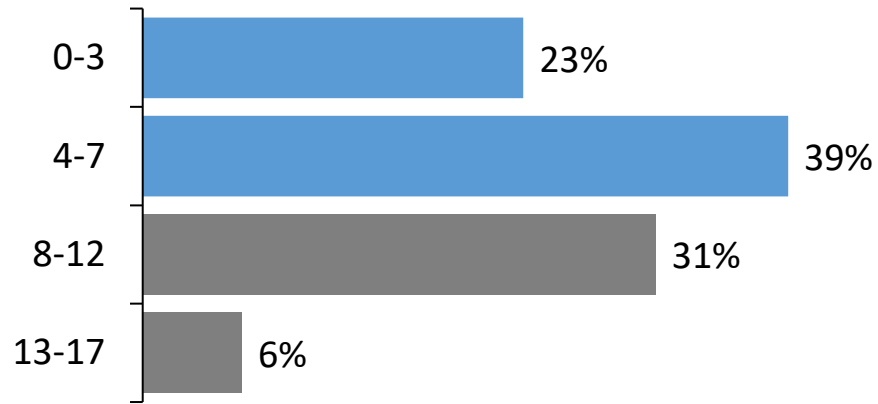


Justifying the Expansion of the Early Childhood Exhibit Area

The Exhibit Area built explicitly for our Early Childhood Audience (ages 7 & under) occupies less than 10% of our exhibit space.



Children age 7 and under make up 62% of visiting children.



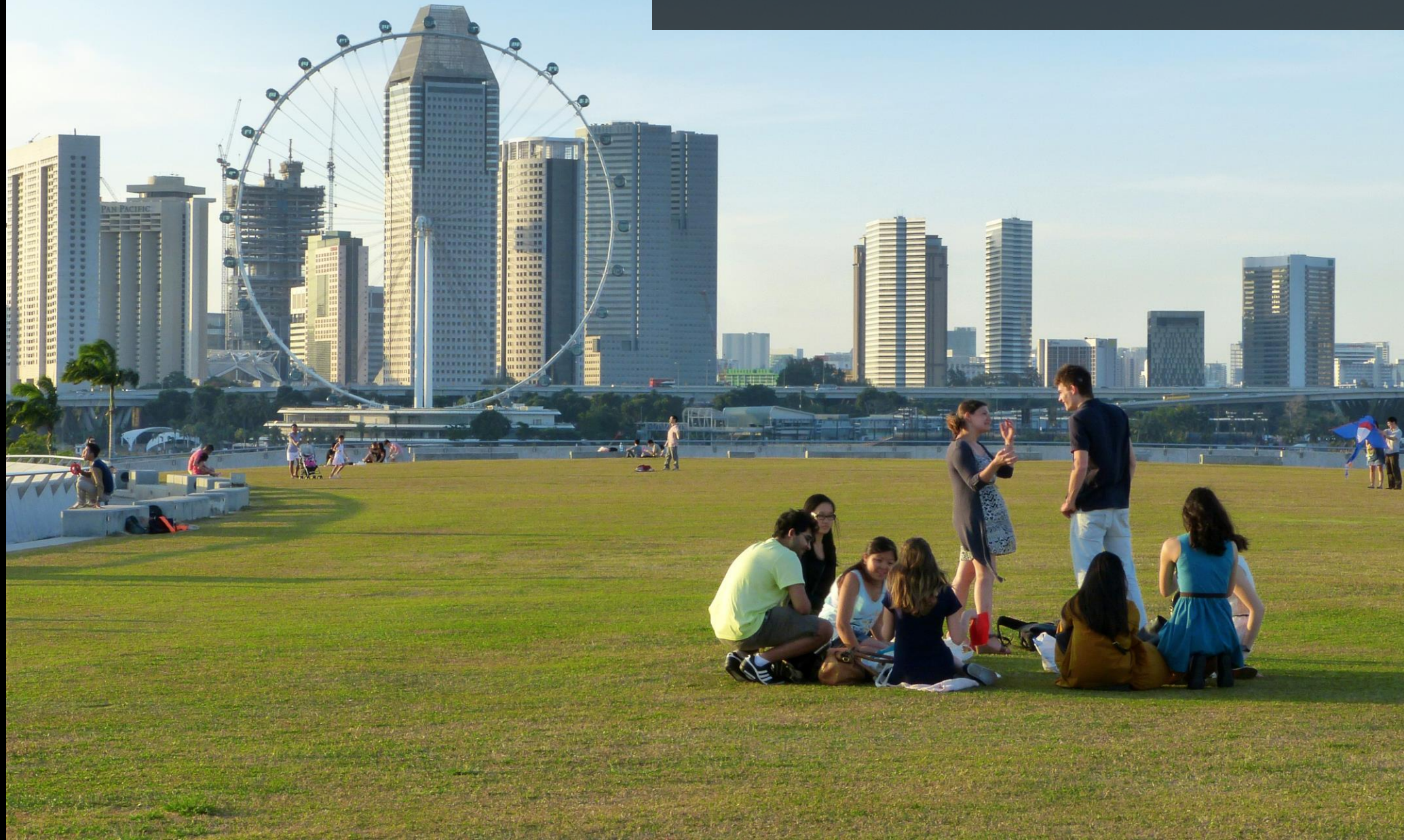


Welcome to

Our Neighborhood

That is all of the supporting evidence we need to justify expanding our Early Childhood Exhibit Area.

PANEL DISCUSSION



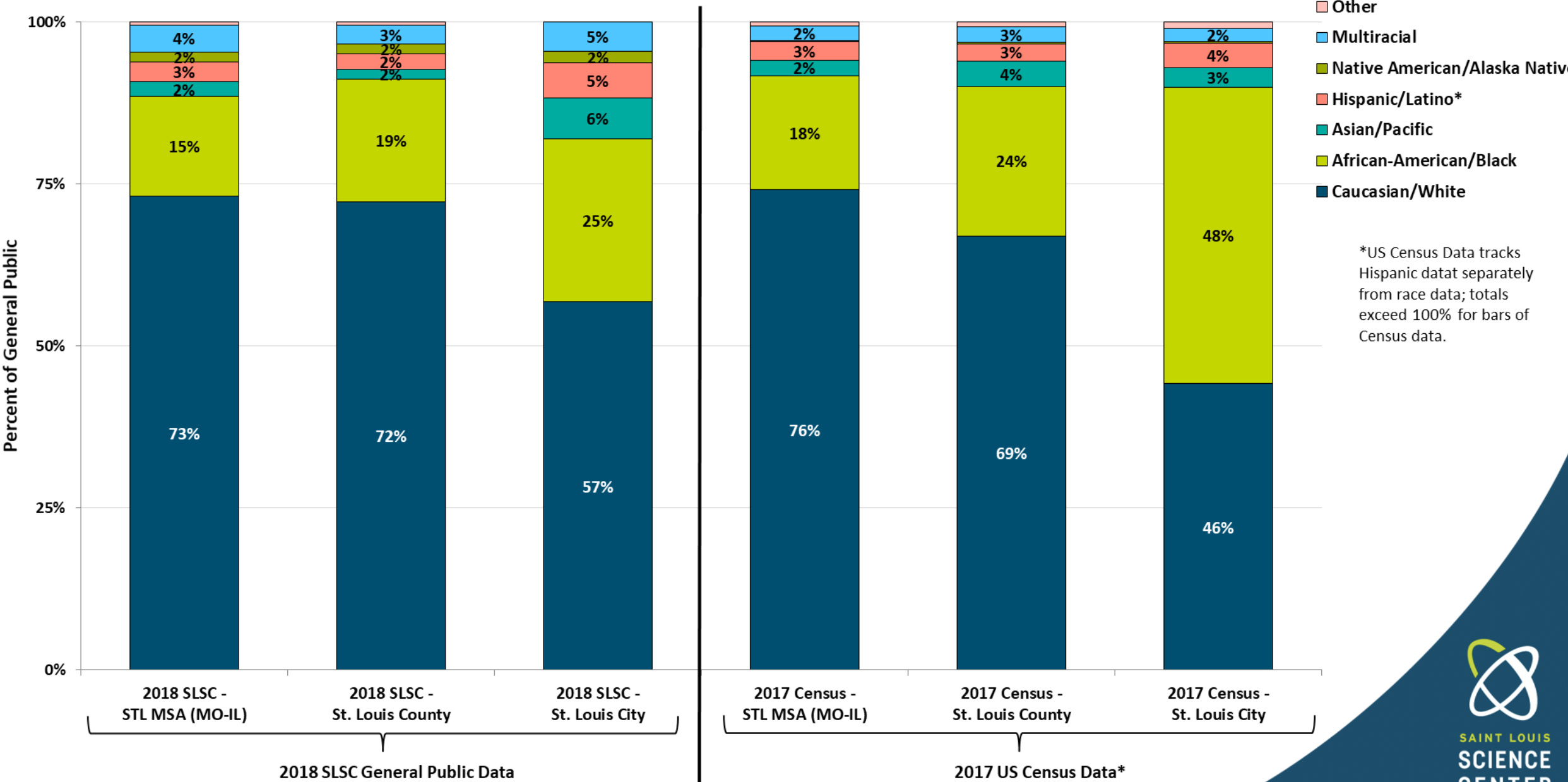
COVES
Community
and Decisions

Comparing Demographics to Census Data

- How representative are our local visitors of our local population?
- Local visitors from:
 - St. Louis City
 - St. Louis County
 - St. Louis Metropolitan Statistical Area (MSA)

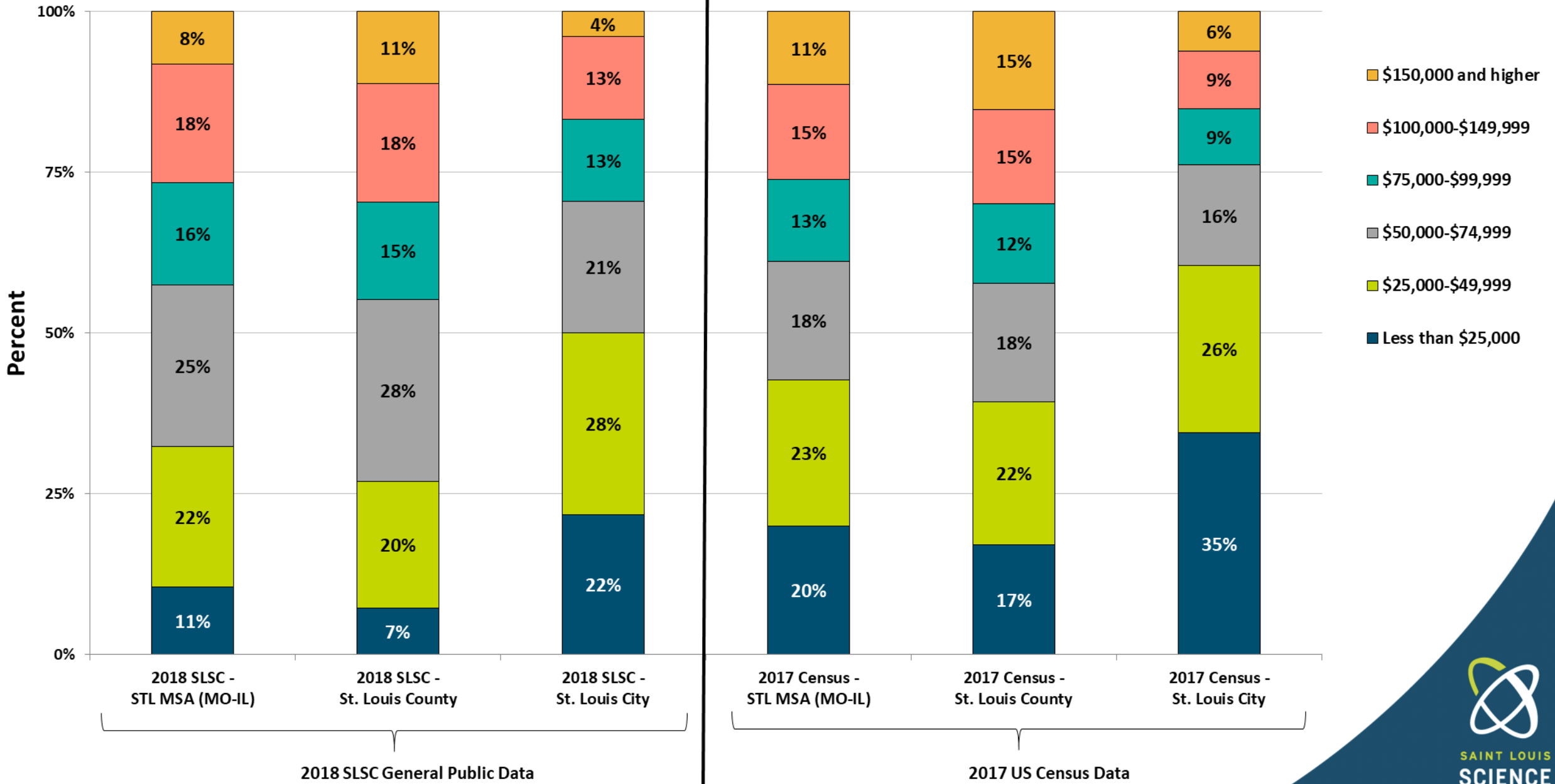


Ethnicity - SLSC 2018 Data Compared with 2017 US Census Data*, STL Metro Area Comparisons

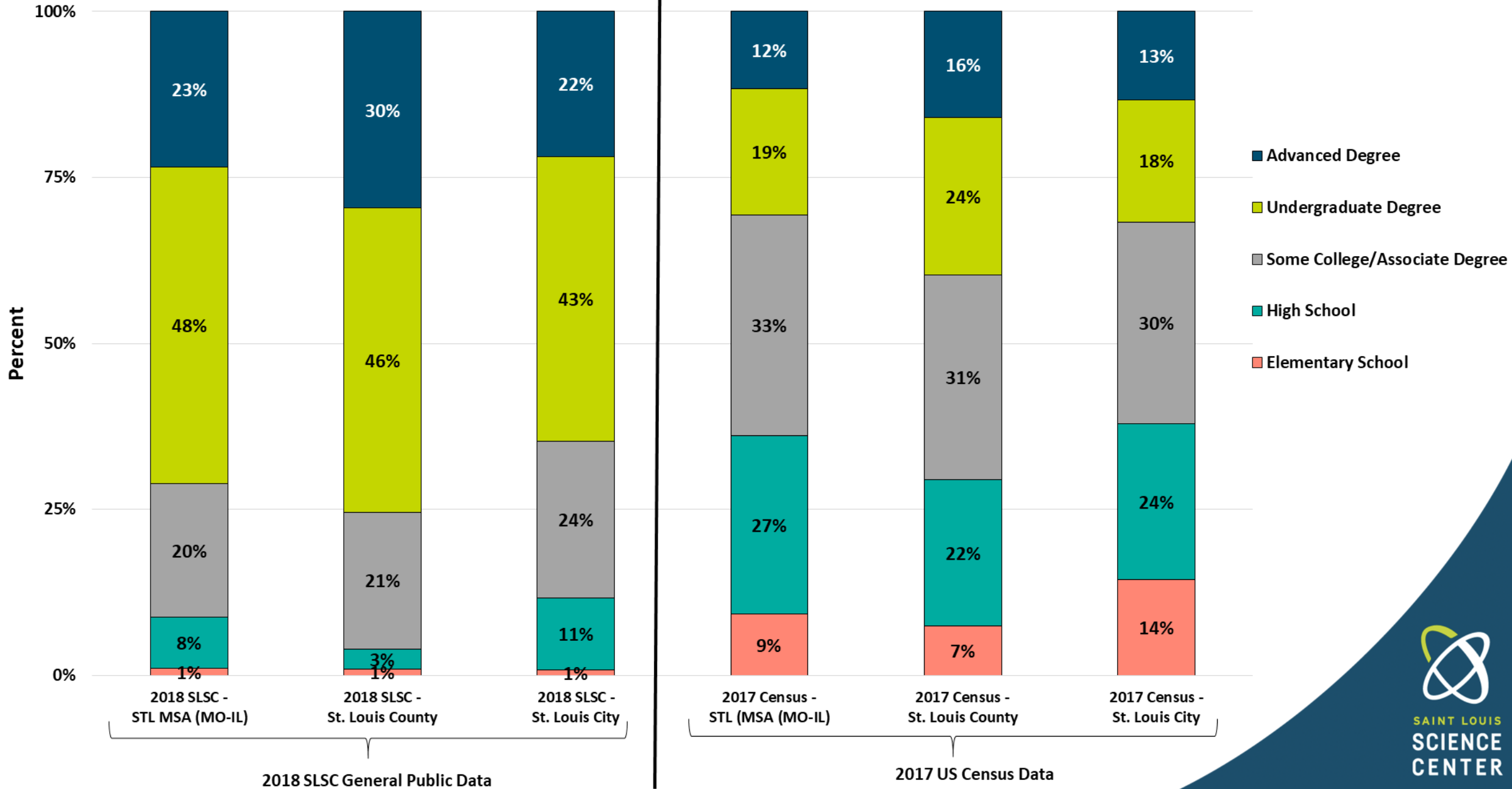


*US Census Data tracks Hispanic data separately from race data; totals exceed 100% for bars of Census data.

Household Income - SLSC Local Data for 2018 Compared to STL-MSA Census Data for 2017



Educational Attainment - SLSC Local Data for 2018 Compared to STL- MSA Census Data for 2017



Comparing Demographics to Census Data

- Racial/Ethnic identity of local visitors is somewhat similar to the local population
- Household income is similar in some income brackets, but not across the board (especially at the lowest income range)
- Big differences in educational attainment



PANEL DISCUSSION





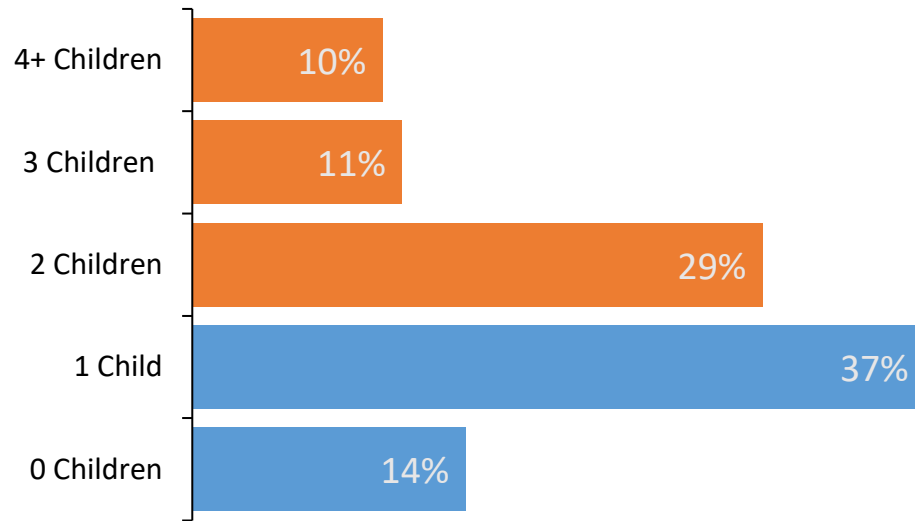


Visit us at Booth 540!

EXTRAS

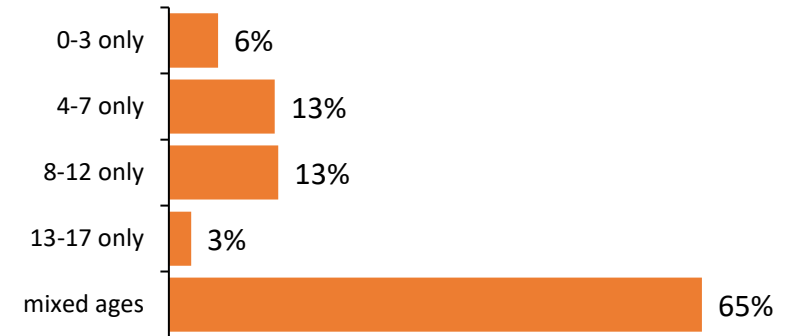
Should the Early Childhood Exhibit Area have Age Restrictions?

49% of visiting families have **more than 1 child**.



65% of those families have **children of mixed ages**.

Child Ages (In groups with 2+ children)



49% of visiting families
have **more than 1 child**.

65% of those families have
children of mixed ages.

This information can shape our policies, and can inform how we design experiences intended for young visitors.