



BPI VUStats PROJECT

FINAL PRESENTATION

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AUGUST 17, 2021

Agenda



Framing the problem

Methodology

Findings

Recommendations

Next steps

Discussion





Framing the problem

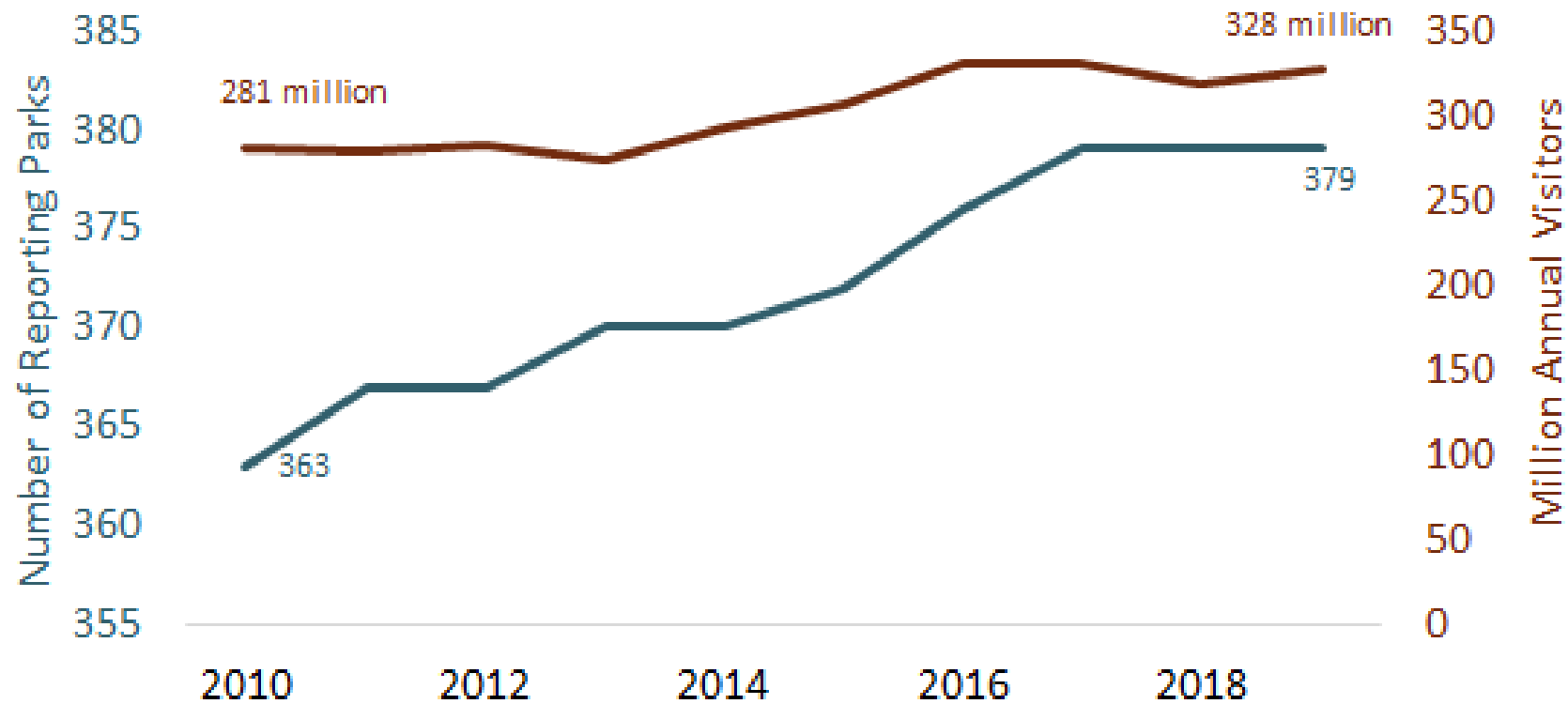


- **SOW:** *There is a need to better understand the challenges faced by the customers who deliver data to the official reporting system for VUStats and about their knowledge/use of tools and resources available to them for assistance. As a complement to this, VUStats need to understand challenges faced by data users in accessing and consuming visitor use statistics. This project will reinforce ongoing work in the Social Science Program to develop new and enhance existing information delivery / communication tools in CY2021.*
- **How might the NPS Social Science Program better deliver critical information to its customers about NPS Visitor Use Statistics to enhance customer experience and improve data quality and usability?**

Framing the problem

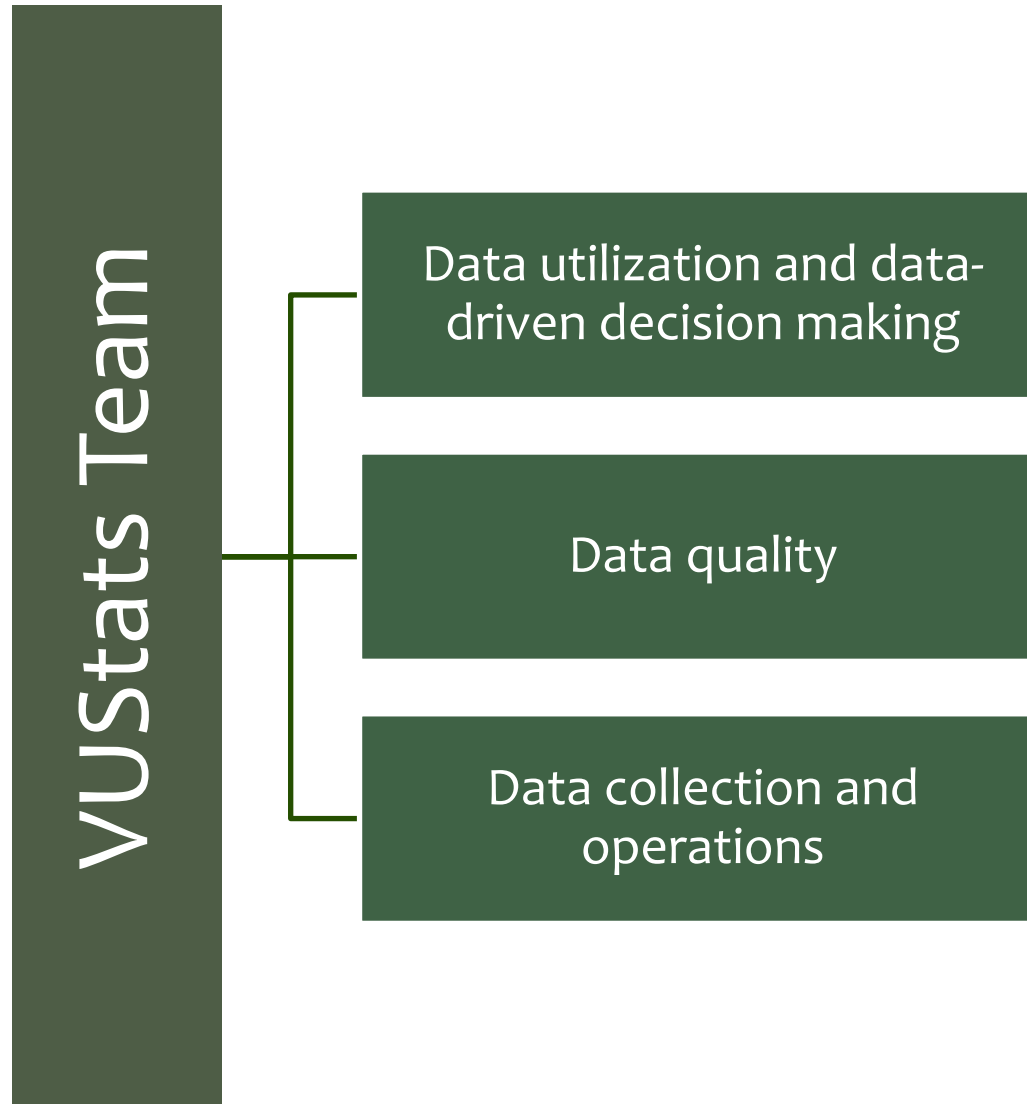


Visitation and the number of parks reporting visitor statistics have increased over the last decade

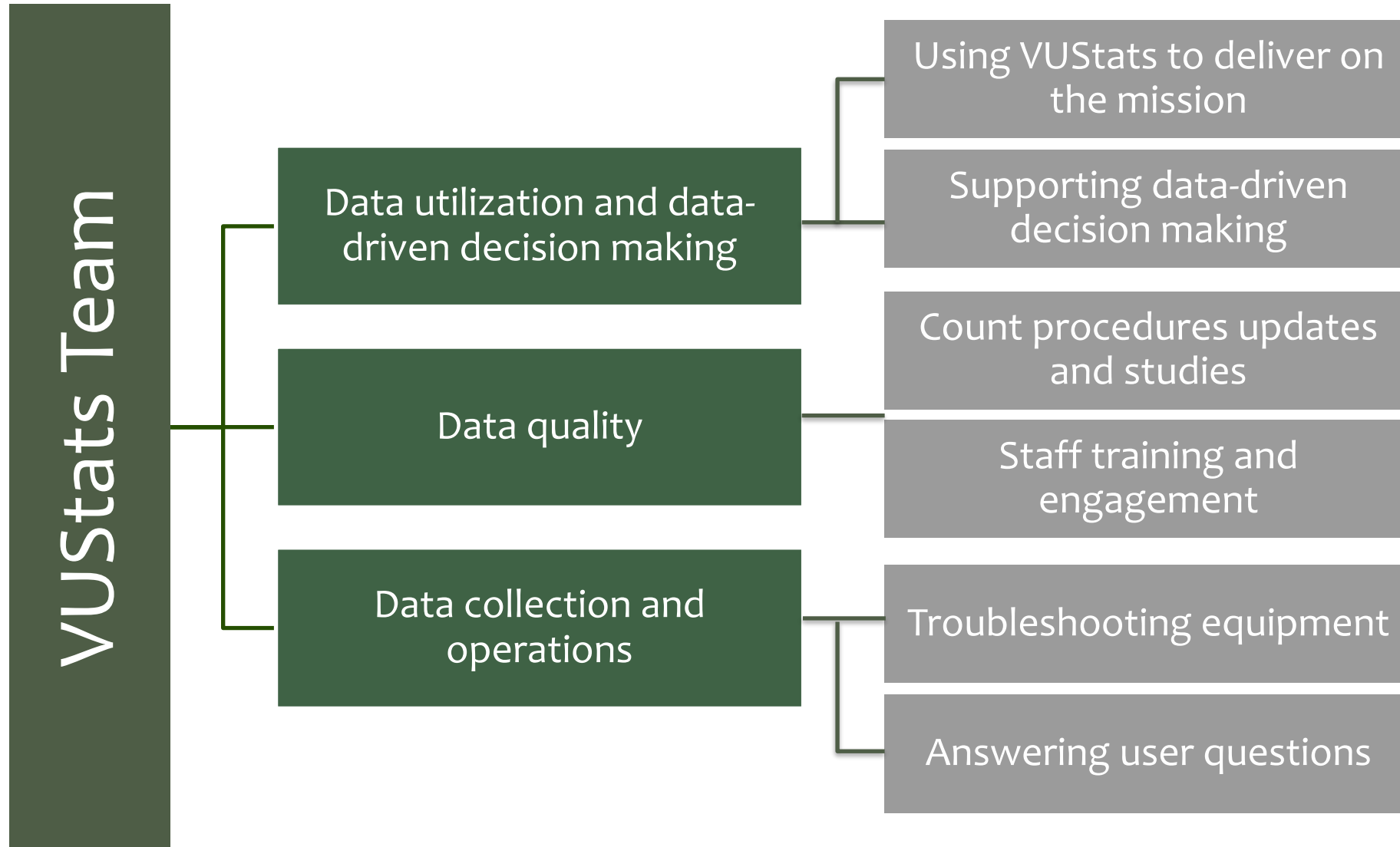


IRMA Annual Summary Report for all parks, 2009-2019

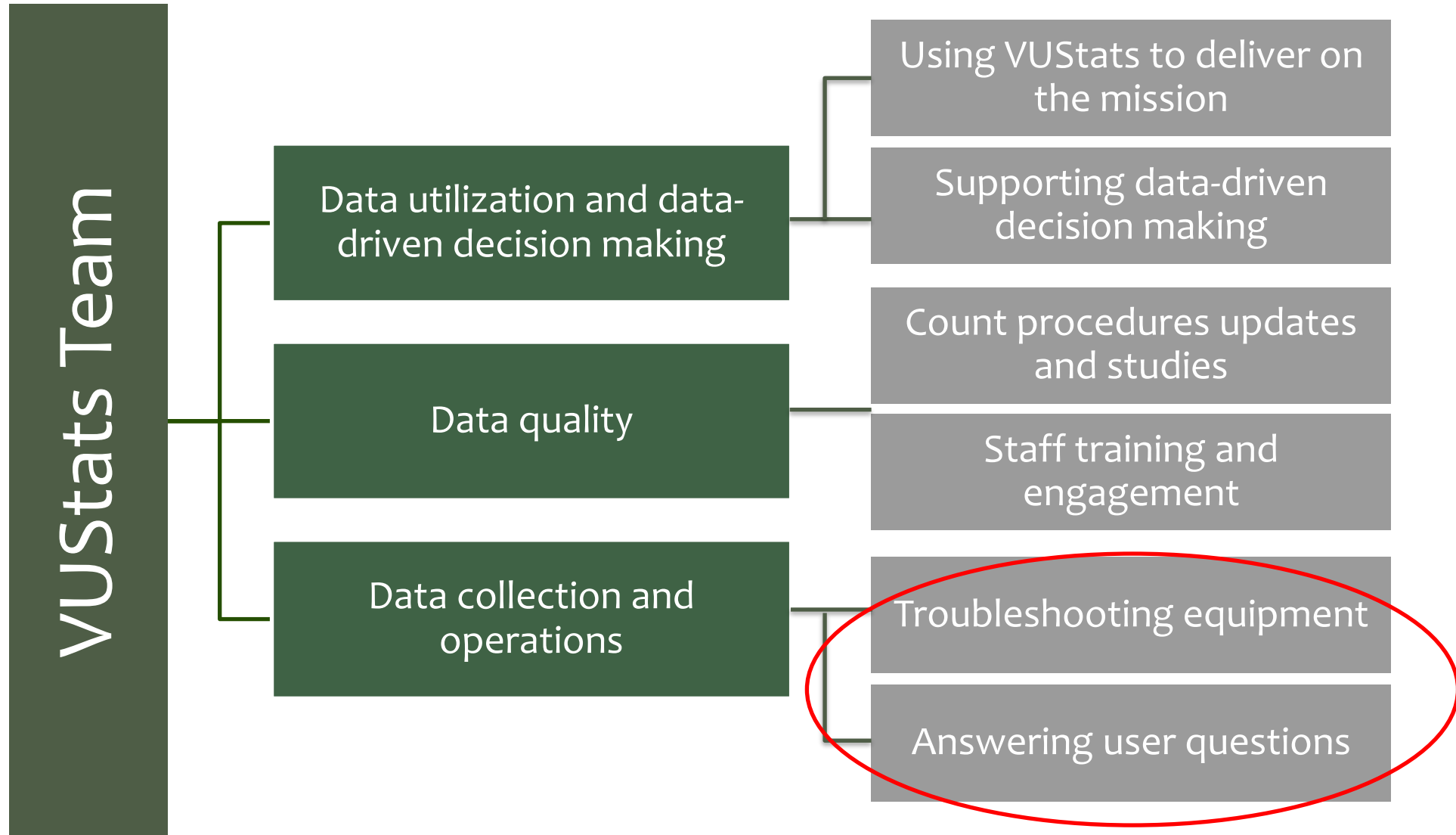
Framing the problem



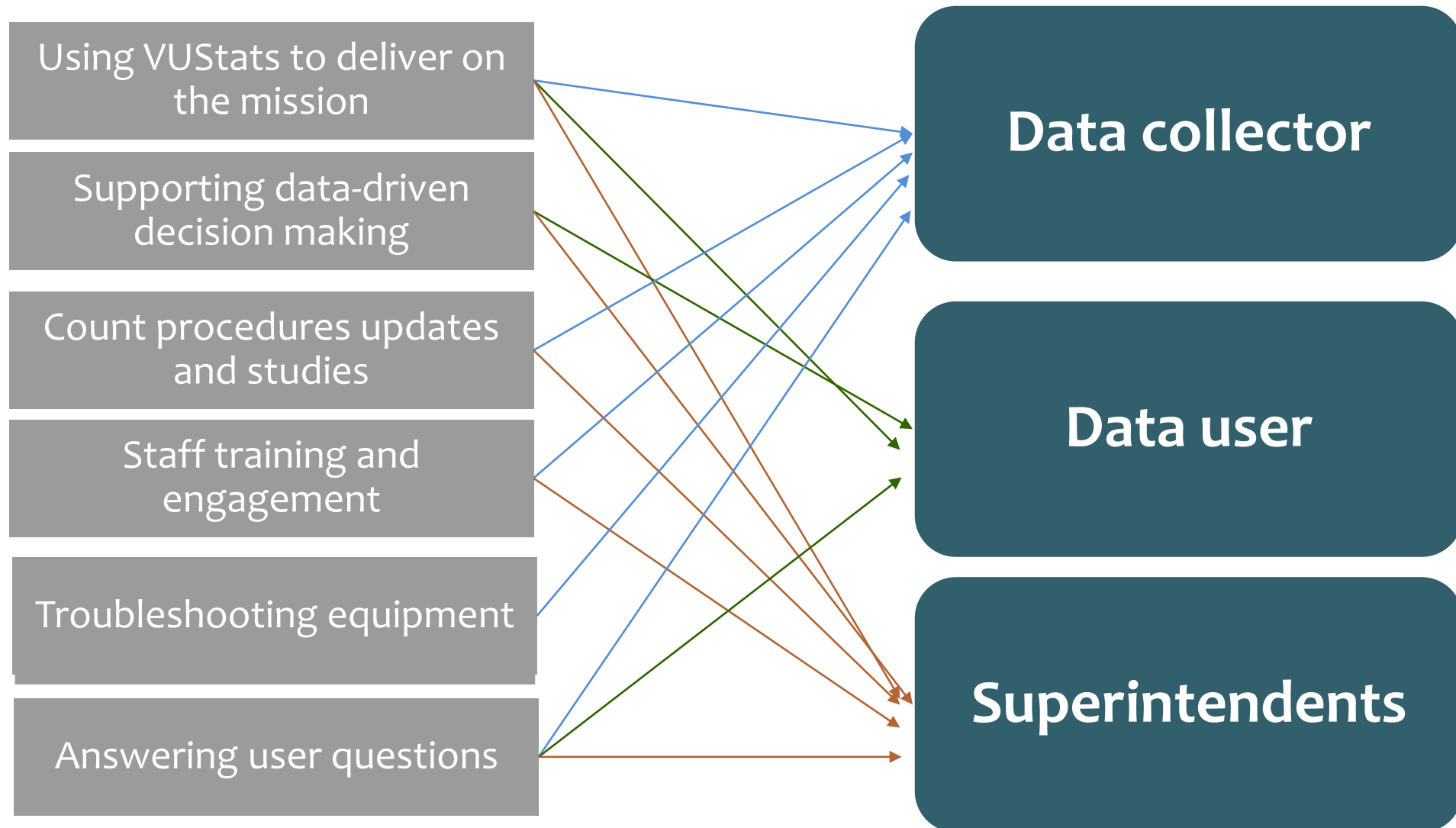
Framing the problem



Framing the problem



Framing the problem



METHODOLOGY

Participant Selection



Data collector

Stratified random sample of parks to identify data collectors

8 park strata based on size and type

Data user

Selected based on contact with the VUStats team

Superintendents

Selected based on contact with the VUStats team

Additional superintendents interviewed based on referrals

42 interviews completed

30-60 minutes long on average

78% response rate

7 out of 8 strata had 2+ participants

Data Users (13):

Kris Barnes
Rachel Collins
Charles Notzon
Erica Cole
Joanne Blacoe
Krista Sherwood
Donny Leadbetter
Ginger Irvine
Leslie Richardson
Christine Lipinsky
Spencer Wood
Bing Pan
Gregor Schuurman

Superintendents (10):

Eric Leonard (GUMO)
Steve Black (LIRI/RUCA)
Leslie Morlock (SARA)
Jeff West (CALO)
Scott Bentley (RIRA)
Jon Burpee (LEWI/VALR)
Paul Deprey (SAIR/SAMA)
Brenda Todd (LAKE)
Susanne Fleek-Green (LACL)
Brenda Pennington (STRI)

Data Collectors (19 parks):

Susan Kowlok (WRBR)	Keri Nelson (CANY)
Sarah Bone (MANZ)	Tyler Teuscher (KOVA)
Emilee Helton (AZRU)	Ryan Koepke (INDU)
Dave Meyers (AZRU)	Duane Michael (NERI)
Melissa Corsaut (JEFF)	Chris Olijnyk (FIIS)
Luke Howard (JEFF)	Kristin Santos (FIIS)
Aly Baltrus (NAMA)	Scott Berry (PIRO)
Steve Hazelton (NAMA)	Eduardo Chaidez (JOMU)
Jonathan Gagne (MIMA)	MOJA
Theresa Moore (MORA)	EVER
Mary Sturdivant (SEQU)	GOGA

1

Code the interview data at a high-level, to develop summary statistics and identify insights.

2

Evaluate online resources like IRMA, the Common Learning Portal, and the SharePoint.

3

Interpret the themes and insights & consult with VUStats team during the development of recommendations.

Code Book

Based on common answers to interview questions, we developed a high-level code book for summarizing interview data.

Interview coding

We coded 42 interviews in Excel, with notes to ensure that all relevant insights of interviews were captured.

Summary statistics

We developed summary statistics quantifying key insights gained from coding.

Evaluating online resources



IRMA

Evaluated the usability and functionality of IRMA.

SharePoint

Evaluated the intuitiveness and resources available on the SharePoint.

CLP

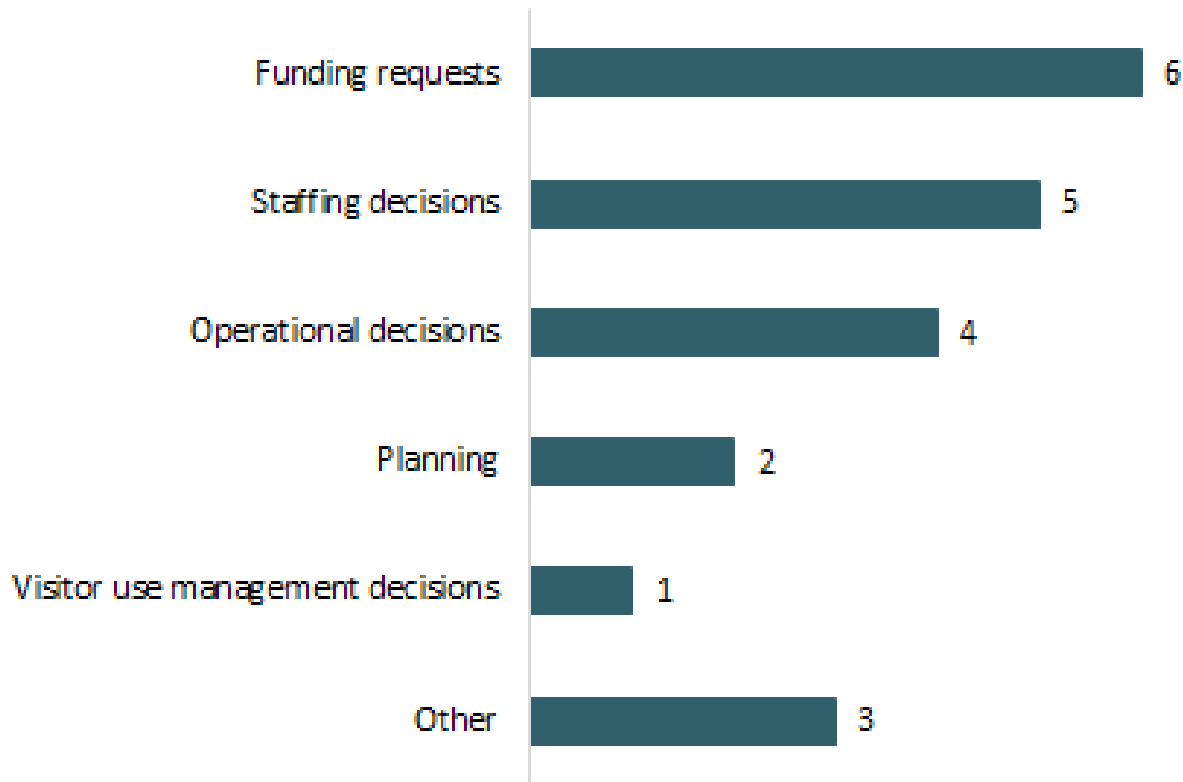
Evaluated the usability and resources available on the Common Learning Portal.

FINDINGS

The VUStats Program is crucial to park and NPS operations



Visitor use statistics are used in decision-making at parks



NPS-wide, VUStats data is used for:

- Park planning and management decisions
- Regional planning and management decisions
- Allocation of GAOA funds
- Economic impact estimates for local communities
- Damage assessments
- Asset management and valuation

“(Visitor use statistics) are so helpful in management decisions and looking at benefits to the park and how we understand what is happening to the park if you are not out there.”

Superintendent, SARA

Most parks share their visitor statistics with partner organizations

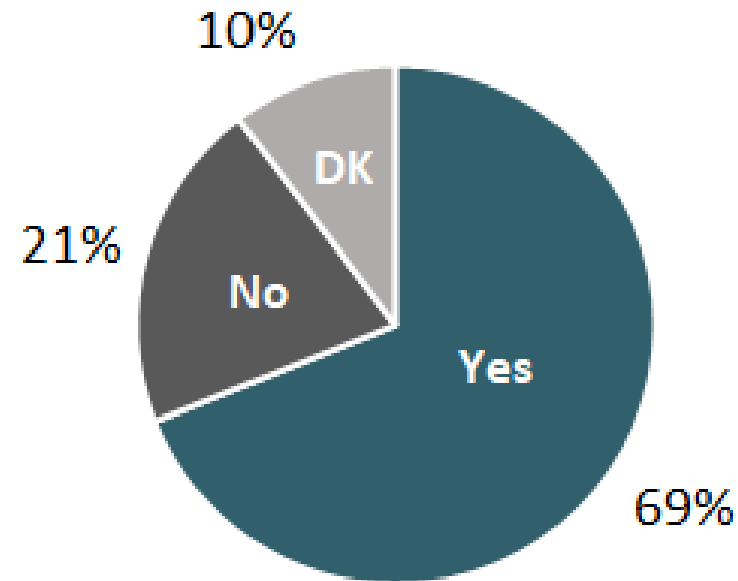
Partners include:

- Congressmembers
- Local governments
- State Tourism Departments
- Local economic development group
- Chambers of Commerce
- Media outlets
- Cooperating organizations
- Park donors

“I’m using (VUStats) now trying to get a budget increase for the park. Showing that we do not have enough staff. Our Friends Group is using this data to lobby Congress. We’re using this data a lot.”

Superintendent, LIRI/RUCA

Does your park share visitor use statistics with partner organizations?



Count procedures often do not sufficiently capture visitation



“Almost every cultural park has fallen by one third to one half visitation compared to the 1970’s and 1980’s. We have the same demographic still visiting these historic sites, they’re not mom and dad with the kids, it’s now grandma and grandpa, who might have the kids, but for the most part not. I have a funny feeling the multiplier is probably down.”

Data collector, FOLA

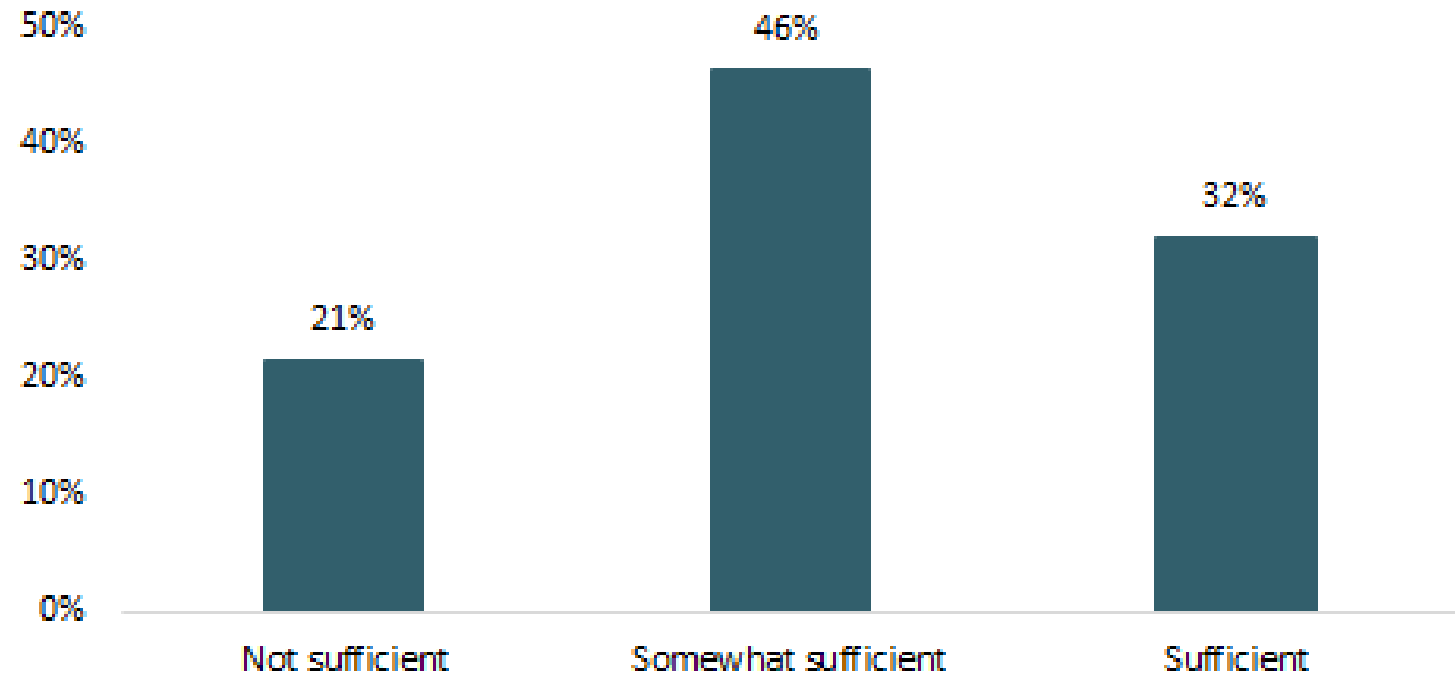
“We’re definitely selling ourselves short on camping and even more so on backcountry camping. There is probably some trails that we are selling ourselves short on... Our systems are antiquated.”

Data collector, NERI

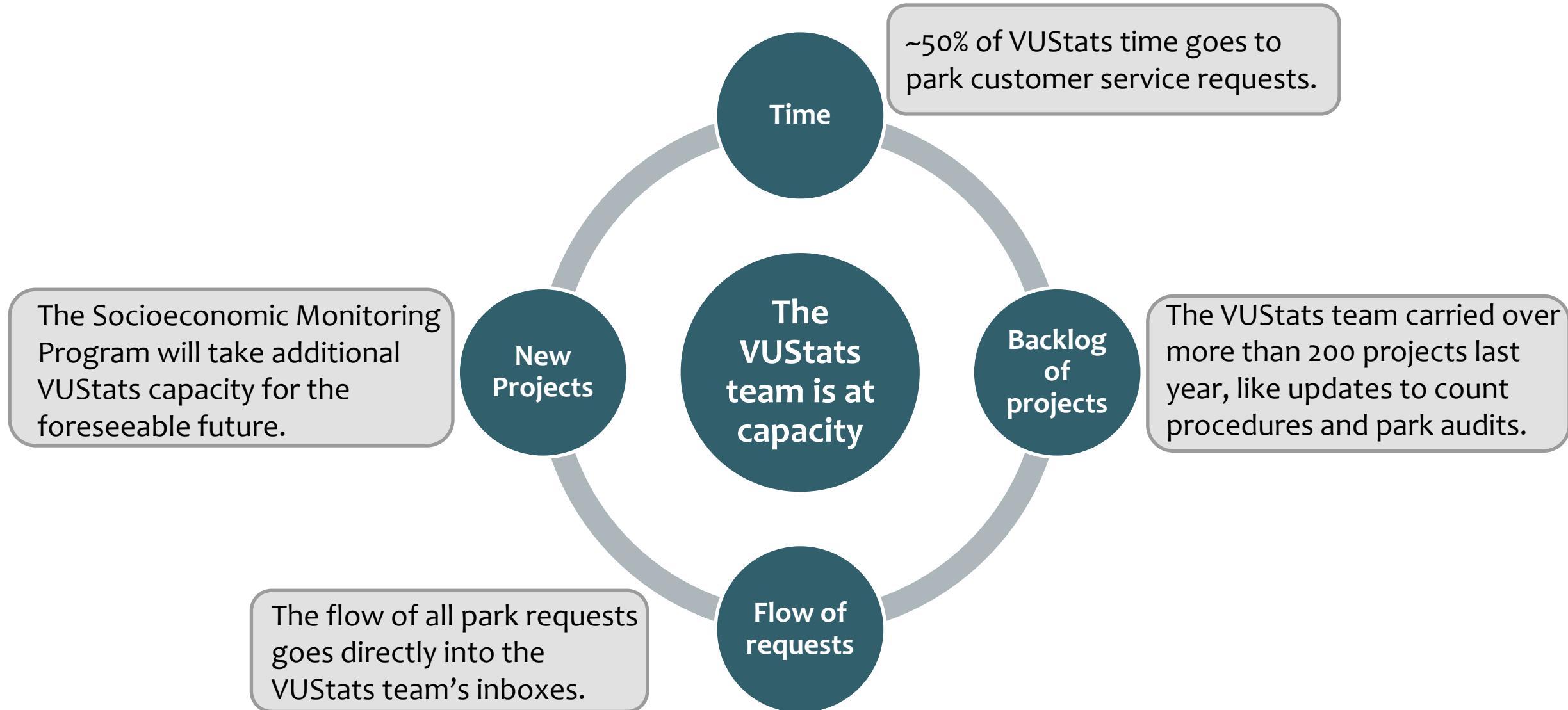
“We’re absolutely undercounting. We don’t know if we’re undercounting by 5%, 10%, or 20%”

Superintendent, LACL

Are your count procedures sufficient to estimate visitation?



Capacity of the VUStats team



Customers feel supported by the VUStats team



"Pam is always so accommodating and available. 100% of the time we have had things clarified and fixed to the degree that they can be (without a VU study)."

Superintendent, CALO

"(VUStats team) is great, I wish more people could talk to them and listen to them."

Regional interpretation planner

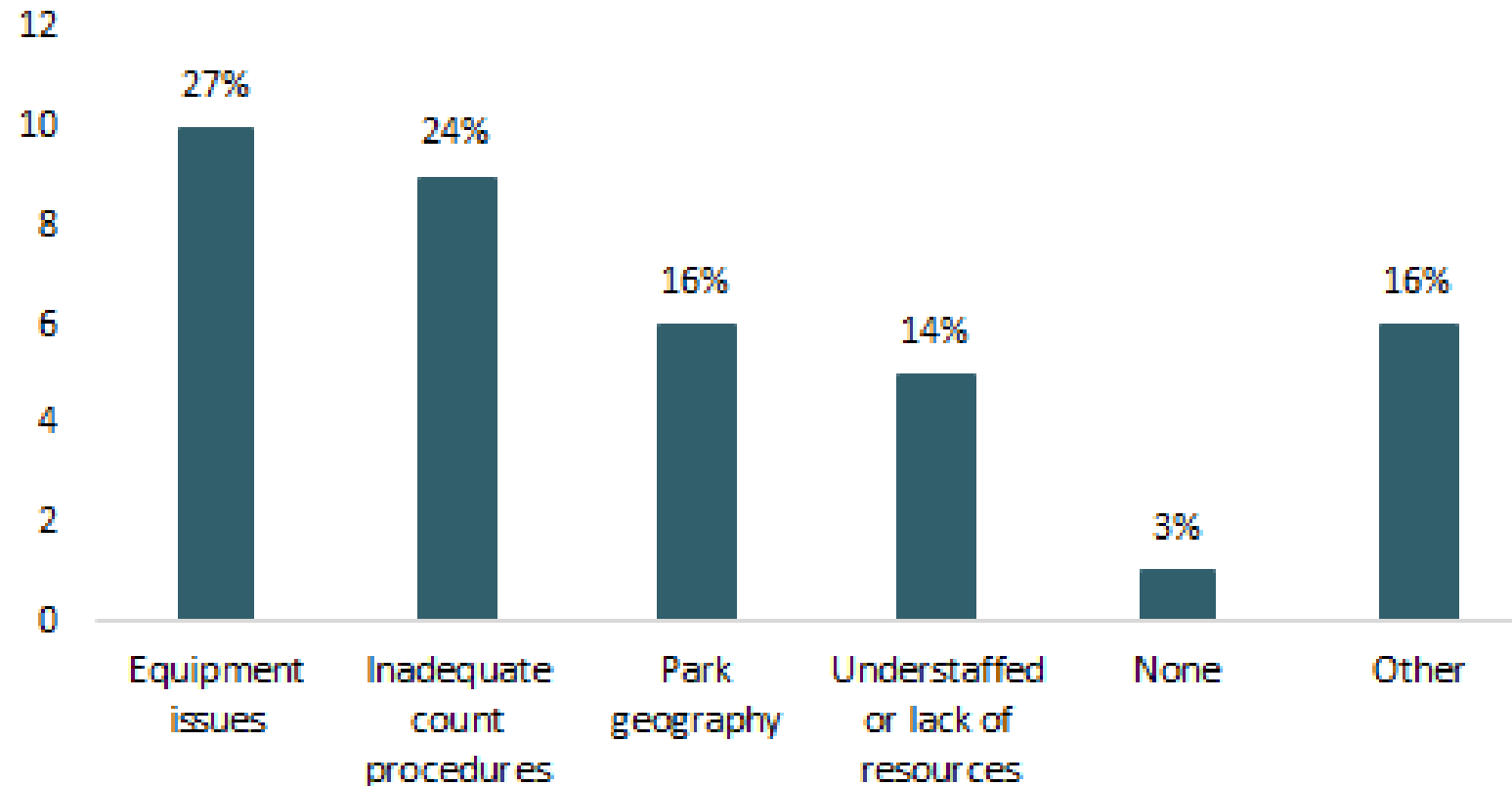
"I find that (the VUStats team) is very responsive in getting back to us, setting expectations around 'we can help you, but we need XYZ'. I'm a superuser, I am coming at this with over a decade of engaging that office."

Superintendent, GUMO

Common challenges related to visitor use data collections



Challenges faced by parks



Data collection and operations

Can parks collect and report data easily and accurately?

Quality of data

Is the methodology accurate and is the equipment reliable?

Data utilization in decision-making

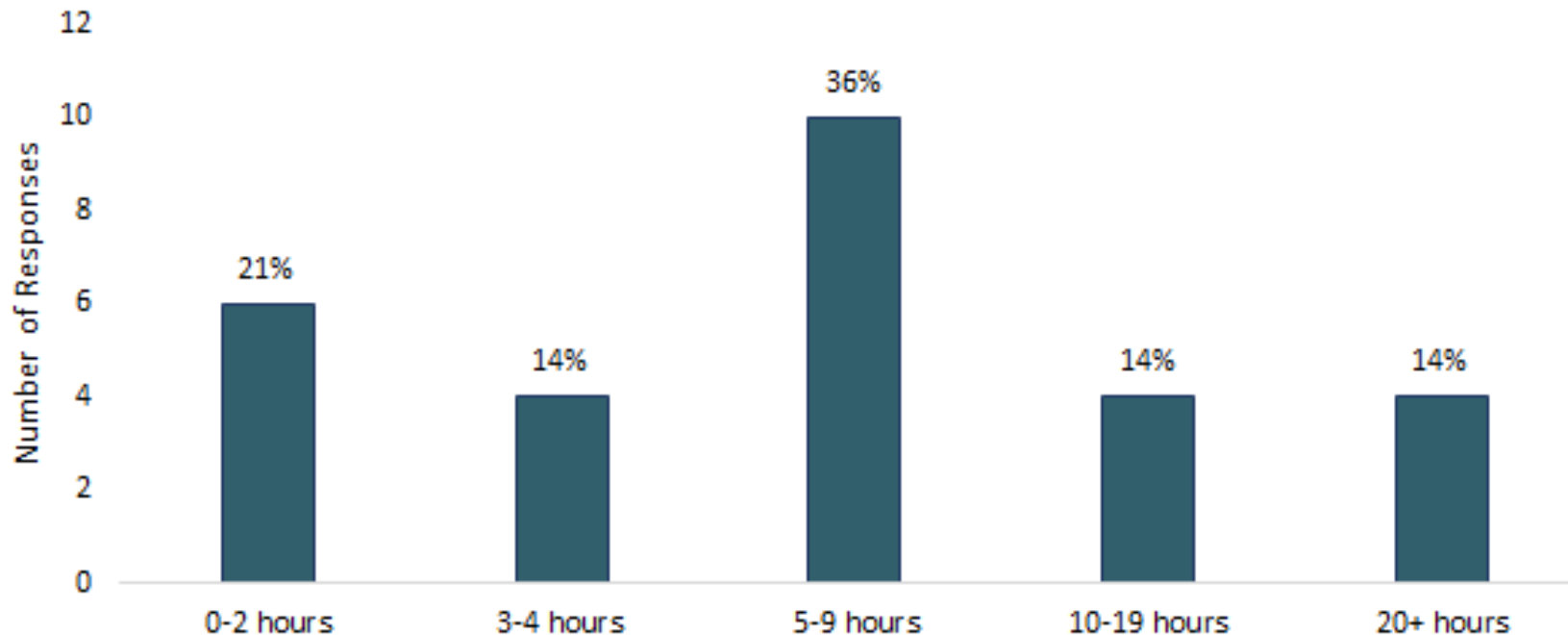
Is the data suitable for end users and can it be used for decision-making?

Data collection and operations

Time spent on visitor use data collection and entry



Data collectors spend a median of 5 to 9 hours collecting and entering data per month



Data entry and collection feels like a **significant burden**, given the other staff responsibilities.

Parks are spending different amounts of time collecting and entering data. This is due to:

- Park type,
- Park size, and
- Complexity of count procedures.

There is a lack of formalized training for data collectors

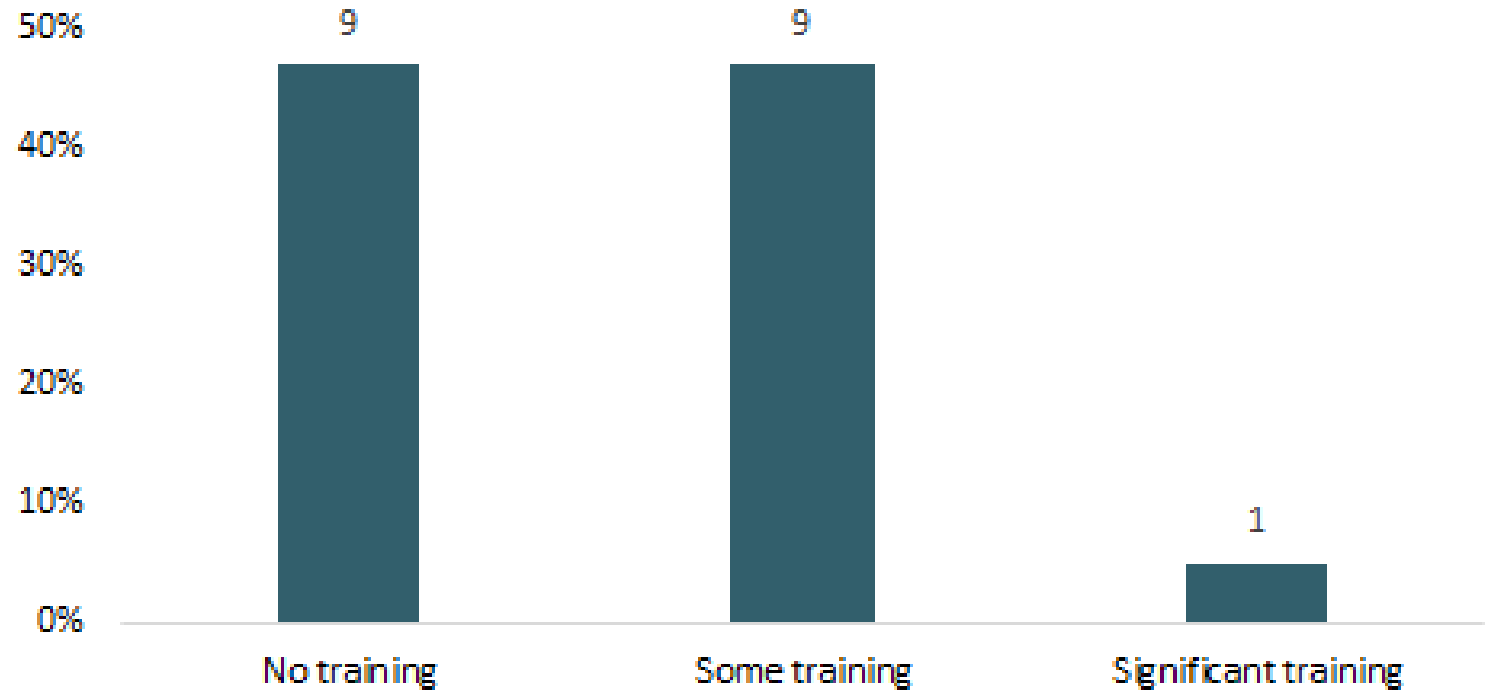
“I just inherited the data input. The person who had done it before me took 5 minutes to go over what he had been doing.”

Data collector, JEFF

“It’s all been kind of on-the-job training. I had a good working knowledge of statistics from my previous roles ... this has helped me understand the broader picture.”

Data collector, NERI

Most data collector do not receive significant training



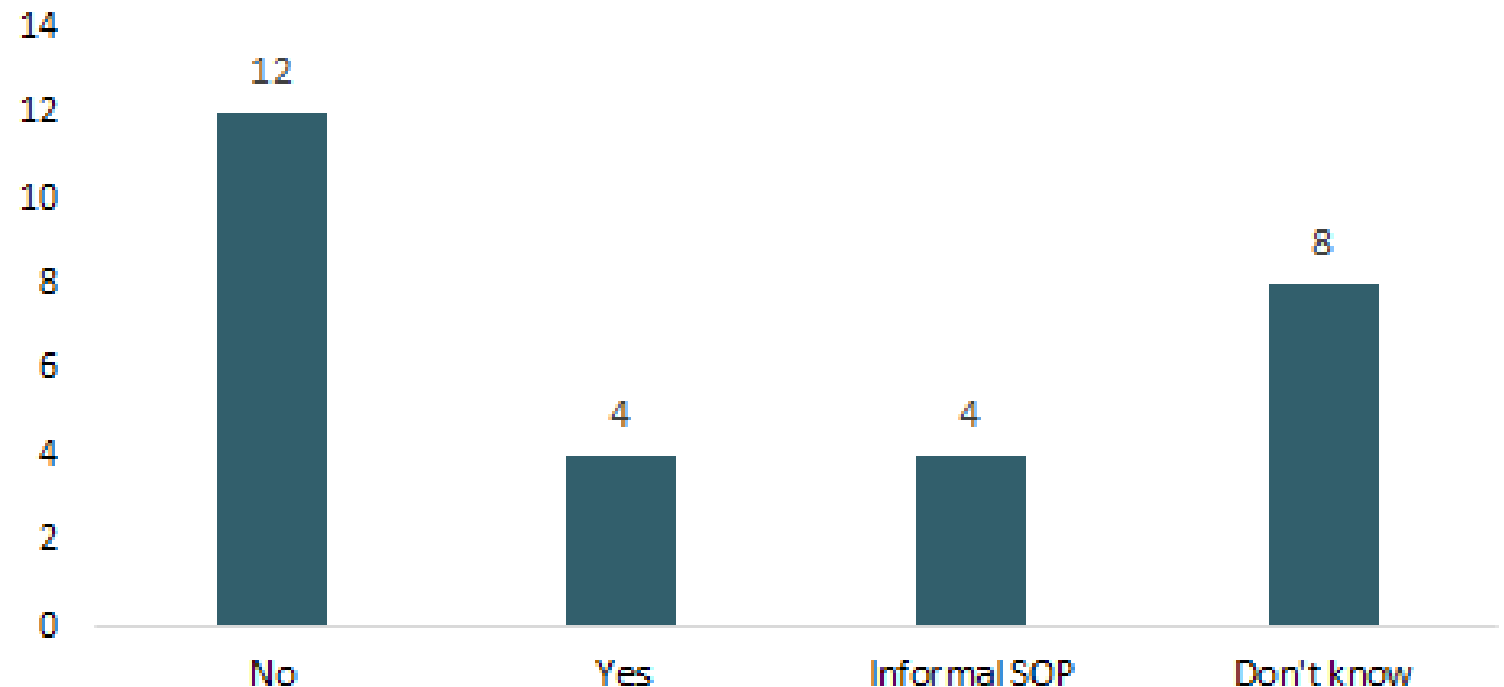
Most parks do not have formal VUStats SOPs

63% of parks do not have formal SOPs and **half** of those that report having some form of SOP have only informal documents.

“It pretty much just lives in my head, at one point we did have (an SOP), but it has not been updated for some time ... People move in and out of the parks too fast to pass that information on orally. So, I think (we need) a hard copy document.”

Data collector, FOLA

Does your park have a formal SOP related to visitor use statistics?



Available online resources are underutilized



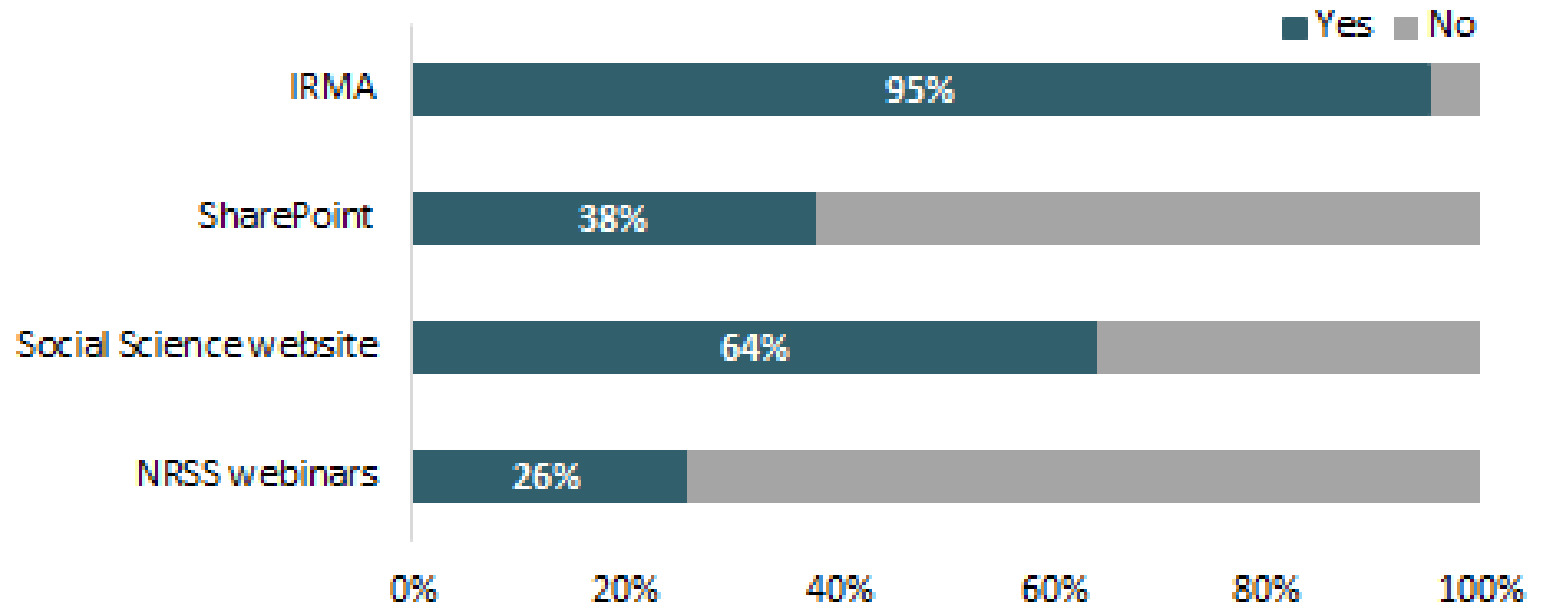
“Didn’t even know there was (a SharePoint site), that is really good information.”

Data collector, MORA

“We have so many of those things (SharePoint sites). I think I had 414 that were bookmarked. I’ll pick up the phone and call before I (visit the SharePoint). They may direct me there, that’s great. I’m gleeful to do that. But a 30-second phone call will take the place of trying to find something on a SharePoint site.”

Superintendent, CALO

Use of online resources by data users, collectors, and superintendents

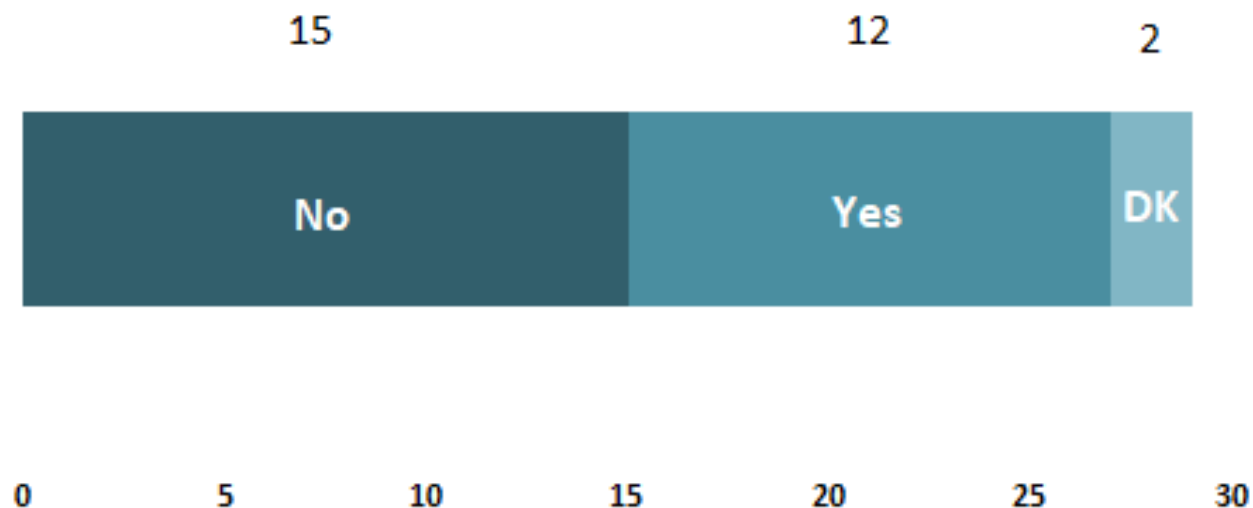


Data quality

Frequency of count procedures updates



Has your park updated count procedures recently?



“The park service needs to figure out some kind of schedule so that the stats are actually valid.”

Data collector, FOLA

“I think I have count procedures, but they’re really old. I have thoughts on where counters are placed and how we can improve their placement. The concern is that if we change it now it just ‘whacks out’ 40 years of historical data that was collected differently.”

Data collector, WRBR

Main barriers to count procedure updates



VUStats team capacity

- The VUStats team reported having over 200 projects on their backlog. This number grows every year.
- “Ideally, these would be updated every 5-10 years, I’d say about every 7, this would be sensible based on my experience. At one time, I figured we’d need about 6 people to do this. This may grow as we add parks” (Pam Ziesler)

Parks not knowing how to initiate updates

- Many parks expressed a desire to update count procedures but were unsure of how to get the process initiated or how to identify funding.
- “Explaining to parks how they can get new visitor use studies funded, beyond just that there are visitor use studies. Like a prime PMIS project, having that type of portfolio of current and relevant guidance would really, really help.”

Superintendent, LEWI

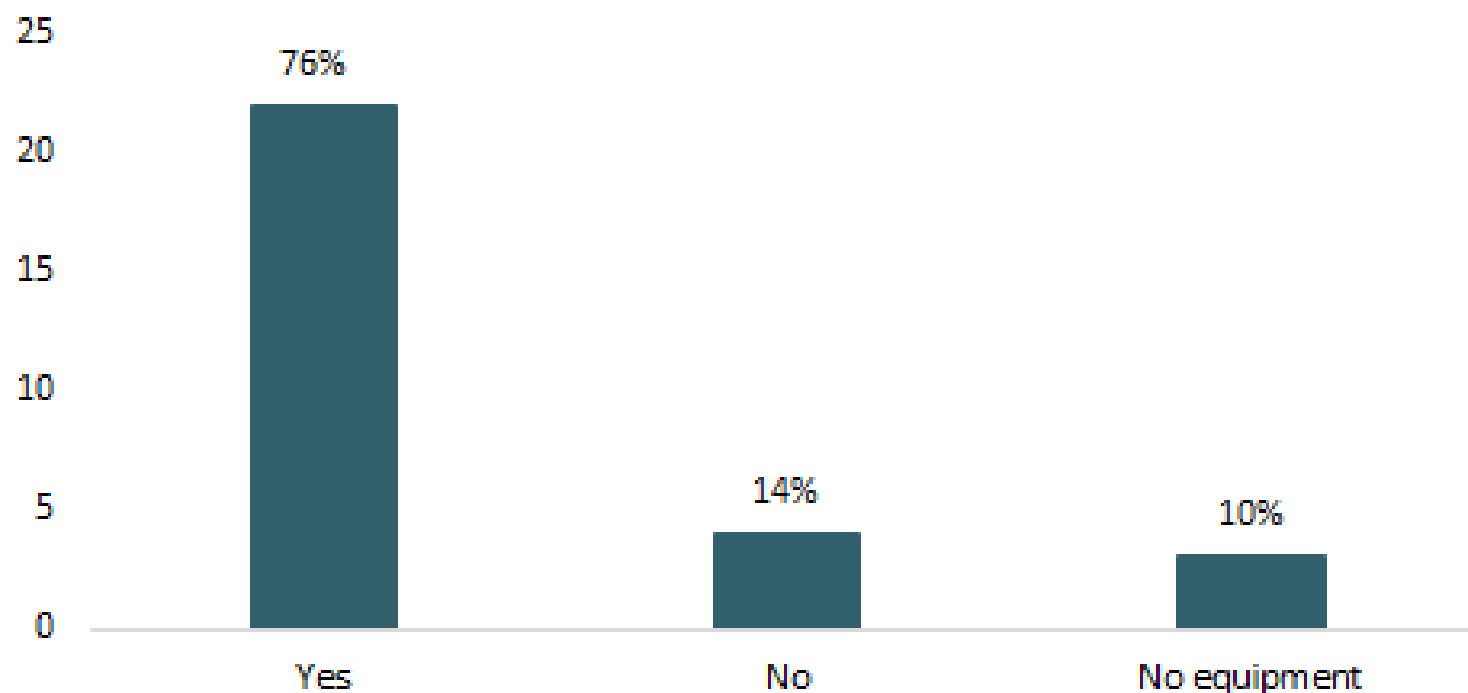
Counting Instructions for Mesa Verde NP

1994 - Present

View PDF Report

Close

Most parks had issues with their counting equipment



“The main counters are fine, but the little ‘end of the road’ counters are gone, we don’t have any way to gather the data. I think it’s related to not having anyone available to do it, I don’t necessarily think it’s budget related. But I’m not in a position to go install a traffic counter.”

Data collector, SEQU

“We got some trail counters and I’d like to use those, but I don’t know what I should be subtracting and that kind of thing.”

Data collector, PIRO

Common equipment challenges



Vandalism / theft	Purchasing	Tracking / maintenance	Weather
<p>“We have lots of issues with vandalism of counters. The automated counters have electronics, and we need to take extra precautions in housing or hiding counters to prevent vandalism. Or we just end up repairing and replacing them more often. We’re an urban park and deal with urban problems.”</p> <p>Data collector, GOGA</p>	<p>“We need to have someone in place who can say ‘here are the 45 pieces of equipment that are most needed at parks’ and have them available.”</p> <p>Superintendent, SAIR</p> <p>“Every year, with end of year money, we’ve been buying more (TrafX traffic counters)”</p> <p>Superintendent, LIRI/RUCA</p>	<p>“We had an issue where we buried one of them and then the person that buried it couldn’t find it.”</p> <p>Data collector, WRBR</p> <p>“It’s so remote. Getting the data to report, getting the equipment to be functional and figuring out where to put it are our big challenges there.”</p> <p>Superintendent, LAKE</p>	<p>“(The counters) don’t like forest fires!”</p> <p>Superintendent, LIRI/RUCA</p> <p>“In a marine environment, our counters oxidize really easily. We have to resort to 3- or 5-year averages when that happens”</p> <p>Data collector, GOGA</p>



Data utilization and data-driven decision making

Feedback from data users

Data quality is variable and unclear / lack of understanding of underlying methodology.

"If you see a visitation trend, in one way or another ... something this system doesn't have is context. Were the counters broken? Were there lapses in the personnel?"

Tourism program manager

"Bad data is worse than no data"

NPS Economist

"I'd like to see variability built in...being an end user, I don't know anything that's going on in any of the parks. I don't know if the variability has anything to do with how they are collecting data or changes in the process."

Internal Data User

IRMA is easy to navigate for experienced users but is not intuitive.

"I (find it easy to navigate) because I know what I'm looking for. But I don't think other people do. The menu page is inconsistent. I don't think it's intuitive for a lot of people unless they use it a lot"

Regional interpretation planner



Rocky

Select a park:

Rocky Mountain NP (ROMO)

Annual Park Recreation Visits (1915 - Last Calendar Year)

Report displays annual recreation visitors from when the selected park began repor

Annual Park Recreation Visits with Graph (1915 - Last Calendar Year)

Graph displays annual recreation visitors from when the selected park began report

Monthly Public Use

This report shows the current month and YTD visitation for this park. The numbers

Monthly Visitation Comments By Park

This is an optional data entry parks may use while reporting their monthly visitation

Overnight Stays (1979 - Last Calendar Year)

Report displays overnight stays broken down by type of stay. Can be filtered by par

Recreation Visits By Month (1979 - Current Calendar Year)

This color-scaled report displays recreation visitors by month and year for all report

Rocky Mountain NP YTD Report

Yellowstone

Select a park:

Yellowstone NP (YELL)

Annual Park Recreation Visits (1904 - Last Calendar Year)

Report displays annual recreation visitors from when the selected park began report

Annual Park Recreation Visits with Graph (1904 - Last Calendar Year)

Graph displays annual recreation visitors from when the selected park began reporti

Annual Traffic Counts by Month

Camping Report

This Year to Date Report includes a detailed view of individual data collection points

Detailed and Seasonal

Monthly

Monthly Public Use

This report shows the current month and YTD visitation for this park. The numbers

Monthly Visitation Comments By Park

Superintendent data utilization



Inconsistent utilization of VUStats at the park-level

Some superintendents use VUStats to make park management decisions:

“Visitor use is critical to where we put positions, where we fund positions. Resource management, maintenance positions. If we have terrible stats, we don’t know how busy we are.”

- **Superintendent**

Others are less confident:

“Because I think we’re getting such limited numbers as to what’s actually happening, sadly we are making more decisions based upon inference ... (planning decisions) are not really based on numbers, it’s based on (what we’re seeing in) our field. We’d sure love to base it on numbers.”

- **Superintendent, LEWI**

The lack of formal VUStats training for superintendents

“As a superintendent, getting trained up on what visitor use stats you have and how it can help you manage the resources of the park. It’s not something, as a new superintendent, you really get trained on. There needs to be a lot more training at that superintendent level.”

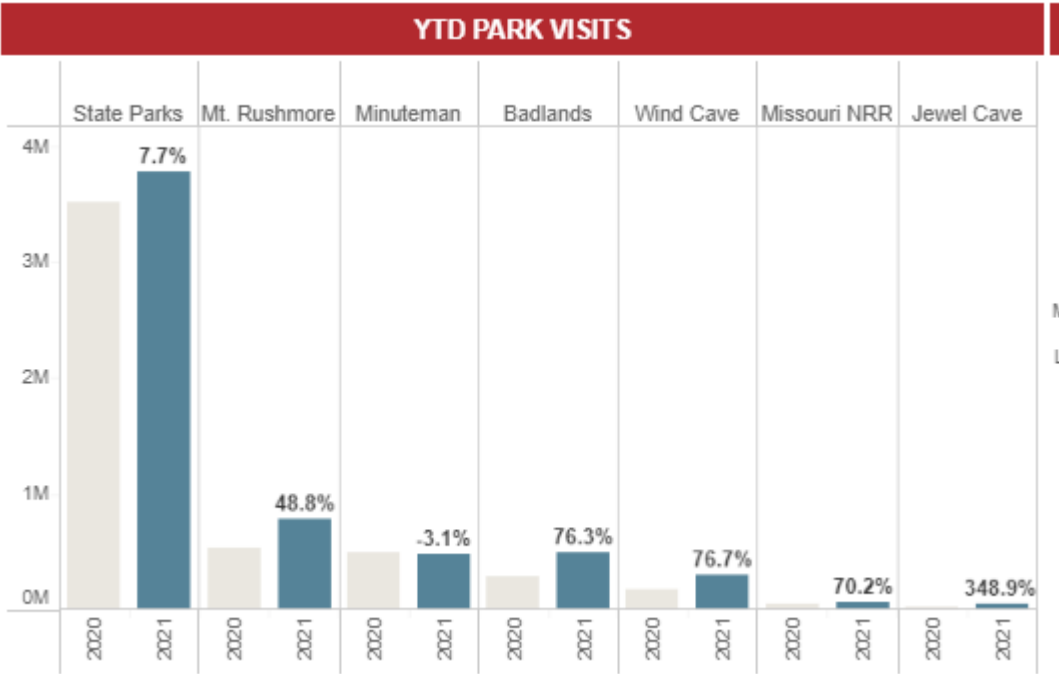
- **Superintendent, LACL**

“The opportunity here is that VUStats is not being represented at the (superintendent) level. There is an opportunity to somehow change that. There is a critical need to put (VUStats) in front of superintendents.”

- **Superintendent, GUMO**



South Dakota Dept. of Tourism



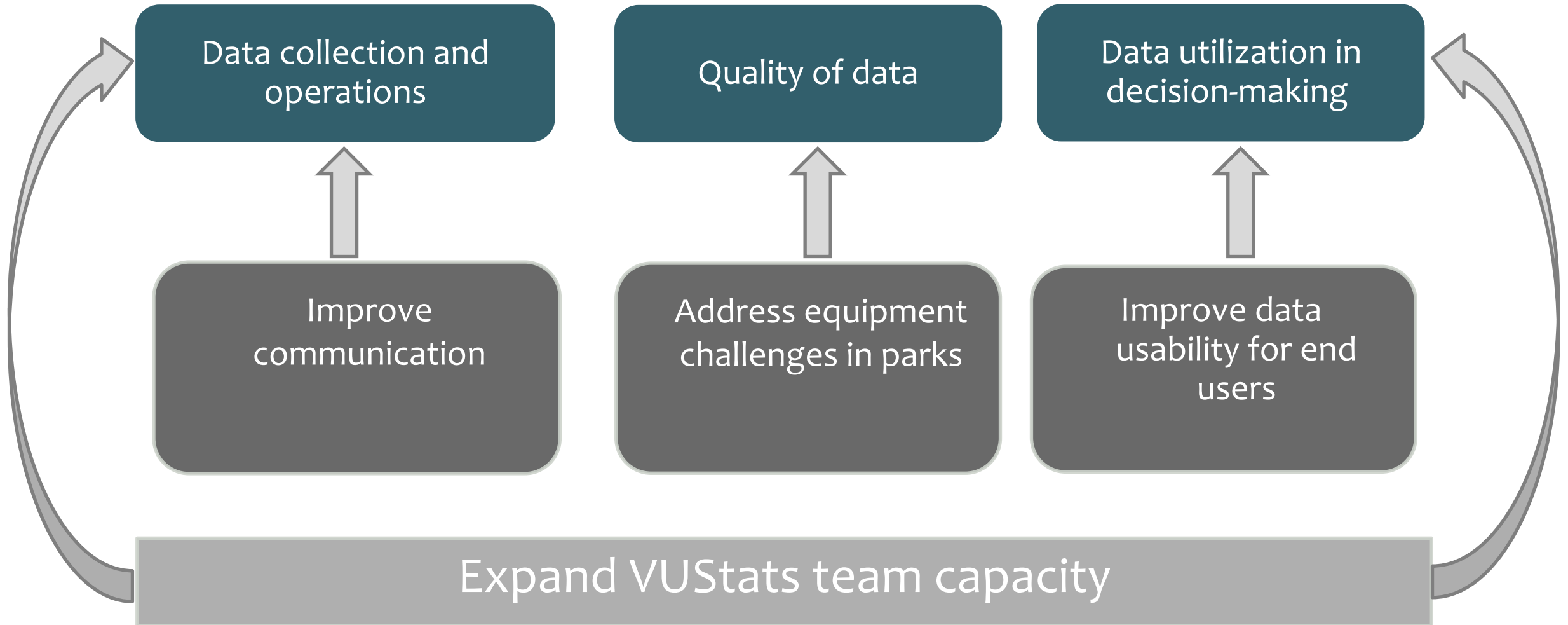
Guadalupe Mountains Visitor

Backcountry site popularity rank					
1	Pine Top	Pine Top	Pine Top	Pine Top	Pine Top
2	Guadalupe Peak	Guadalupe Peak	Guadalupe Peak	Guadalupe Peak	Guadalupe Peak
3	McKittrick	Mescalero	McKittrick	McKittrick	McKittrick
4	Tejas	McKittrick	Tejas	Mescalero	Tejas
5	Mescalero	Tejas	Mescalero	Tejas	Mescalero
6	Bush Mountain	Bush Mountain	Bush Mountain	Bush Mountain	Bush Mountain
7	Blue Ridge	Blue Ridge	Blue Ridge	Blue Ridge	Blue Ridge
8	Wild Ridge	Marcus	Wild Ridge	Wild Ridge	Marcus
9	Marcus	Wild Ridge	Marcus	Marcus	Wild Ridge
10	Shumard	Shumard	Shumard	Shumard	Shumard



RECOMMENDATIONS

Recommendations



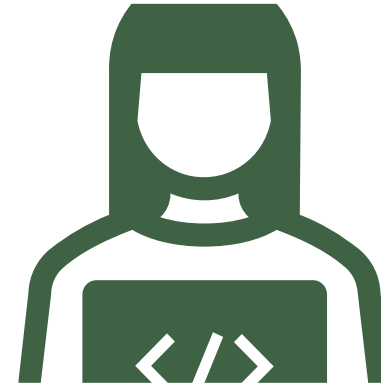
Recommendations



**Improve
communication**



**Address equipment
challenges in parks**



**Improve data usability
for end users**



**Expand the capacity of
the VUStats team**

Centralize online resources – immediate



Goal:

Increasing awareness and use of already available online resources

Link all online resources in IRMA.

Increases access to online resources since 95% of customers access IRMA regularly.

Saves the VUStats team time spend on directing customers to various online resources.

Improves use of training material and understanding of data collection.

NPS Stats
National Park Service Visitor Use Statistics
Stats-2.7.1.17543_20191220:12:49:45

Home ▾ Reports ▾ Data Collector ▾ Admin ▾

Data Collector Reports

Park Reports

Select a park:

Source: IRMA

Create a ticketing system for contacting the VUStats team – immediate



Goal:

Offload the customer service burden on the VUStats team.

Ticketing system for contacting VUStats team.

Organizes requests so that multiple staff members can see them.

Saves time answering basic questions by making the landing screen a list of FAQs and links to resources.

Serves as a central place for making equipment requests.

Contact Us

How can we help you?

Streamline the VUStats SharePoint and Common Learning Portal



Goal:

Make online resources easier to utilize and navigate.

Improve the VUStats SharePoint and CLP.

More intuitive navigation for users needing assistance.

Less requests to the VUStats team for basic support and troubleshooting.

Improved knowledge sharing and collaboration across parks.

SharePoint Improvements:

- Redesign the sections to improve intuitiveness.
- Highlight training resources.
- Add context about the importance of visitor use statistics to parks.

CLP Improvements:

- Make CLP more visible
- Invite new data collectors to the CLP
- Create threads by park type to help parks connect about common issues

Establish consistent email communication with park staff



Goal:

Increasing awareness of VUStats team and program.

Communicate
regularly with parks
staff by email.

Increases the visibility of the
VUStats program.

Ensures all park staff are aware
of updates and new VUStats
resources.

Communicating with staff:

- Send out quarterly emails
- Contribute a VUStats section on an existing newsletter
 - News from NROC
 - PPFL Newsflash

News from around Park Planning, Facilities, and Lands (PPFL) Directorate

Monthly
NewsFlash

Source: PPFL Newsflash

Develop case studies that exemplify the importance of visitor use statistics

Goal:

Improve data collector understanding of the importance and uses of visitor use statistics

Develop case studies, including damage assessment cases and outcomes.

Convey importance of VUStats to park staff.

Increase the visibility of how VUStats are used.

Source: NPS
Deepwater Horizon Oil Spill

Create standardized data collector and superintendent training materials

Goal:

Improve park staff data collection capability and consistency and provide superintendents with a foundational understanding of VUStats.

Create and launch standardized training materials.

Improves data quality by ensuring data collectors understand collection methodology.

Saves VUStats team time and resources by reducing the number of basic questions they must address.

Improves superintendent understanding of how to effectively use VUStats for decision-making.



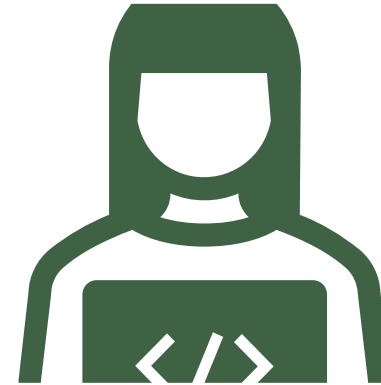
Recommendations



**Improve
communication**



**Address equipment
challenges in parks**



**Improve data usability
for end users**



**Expand the capacity of
the VUStats team**

Distribute documentation for best equipment brands and models - immediate



Goal:

Standardize equipment purchasing and make recommendation based on specific park needs.

Share documentation for best equipment on SharePoint.

Cuts costs incurred from trial-and-error approach to selecting equipment.

Saves park staff time researching equipment individually.

Reduces training time for staff that is frequently on detail.

TRAFx Trail Counter



TRAFx Vehicle Counter



Source: TRAFx website, Eco Counter website, Diamond Traffic website

Provide recommendations to park for avoiding equipment vandalism



Goal:

Reduce vandalisms and equipment theft.

Evaluate and share strategies for avoiding equipment vandalism.

Cuts costs incurred from replacing equipment.

Saves park staff time replacing and repairing equipment.

Property of
Federal Government

Equipment under
surveillance.
GPS monitored.

Property of NPS.
Used for park management.
Please do not touch.
If you would like to know
more, please visit [nps.gov](https://www.nps.gov).

Provide parks with information about securing funding for equipment



Goal:

Ensure parks secure the necessary equipment to capture visitation.

Provide a resource outlining options for securing equipment funding.

Ensures parks have functioning equipment for capturing accurate visitation.

Saves park staff time in individually researching equipment.

Options for equipment funding:

- PMIS
 - GOGA has a 5-year request.
- Requests to the VUStats team
 - Using the ticketing system
- Allocating park budget for equipment purchases

Create an organization-wide method for tracking count equipment



Goal:

Understand which parks have equipment issues and allow parks to keep track of equipment.

Create a way to track counting equipment.

Creates visibility around which parks are checking their equipment.

Creates transparency around which parks are missing equipment or have broken counters.

Allows parks to track and maintain expensive equipment more efficiently.

Options for tracking equipment:

- Create a new field in IRMA
 - Equipment type
 - Date last checked
 - Is it functioning?
- Utilize FBMS for tracking equipment as assets.
 - Already has an asset category for traffic equipment

Establish a relationship with counting equipment providers



Establish a relationship with popular counting equipment providers.

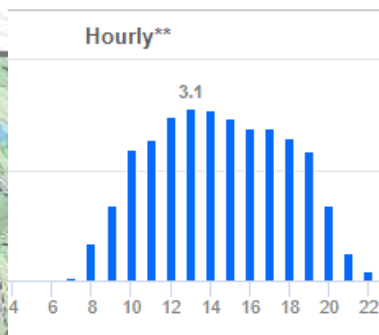
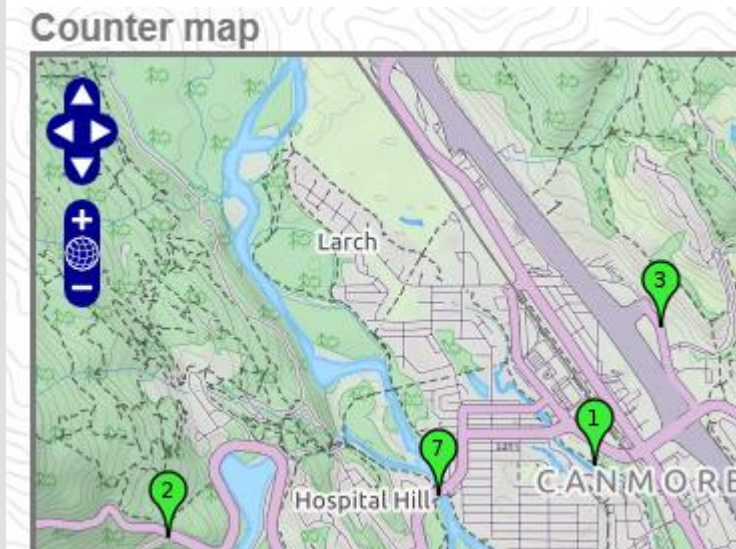
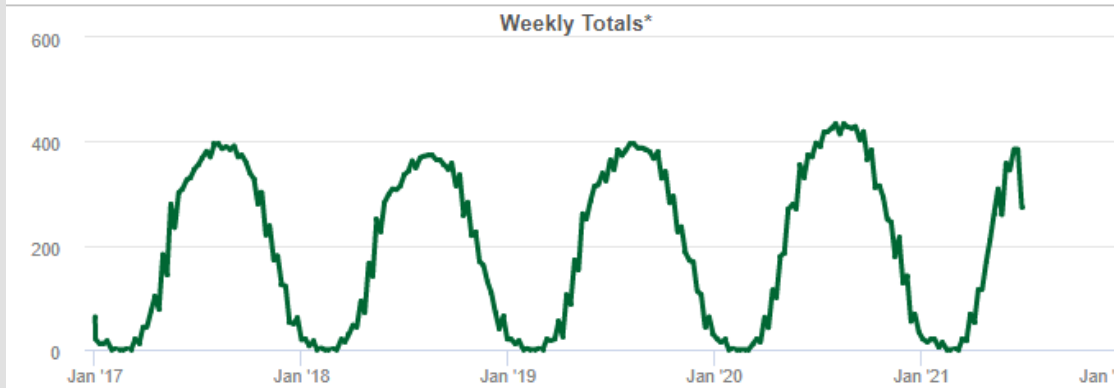
Reduce equipment cost by purchasing equipment in bulk.

Reduce park staff time spent on individual equipment purchases.

Allow for more technical assistance from equipment providers.

Boardwalk Trail

Site report: from 2017-01-01 to 2022-01-01
Made by: guest@example.com on 2021-08-12
Made with: TRAFx DataNet (www.trafx.net)



Source:
TRAFx Datanet Demo

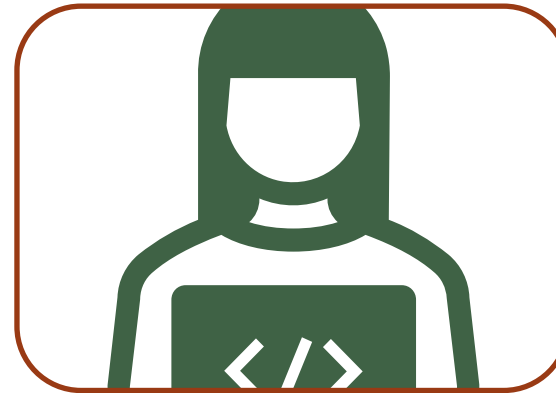
Recommendations



**Improve
communication**



**Address equipment
challenges in parks**



**Improve data usability
for end users**



**Expand the capacity of
the VUStats team**

Implement a system for indicating data quality to internal users - immediate

Goal:

Create transparency around visitor use data quality.

Implement a data quality indicator system.

Allows data users to understand more context.

Prioritize areas for improvement for individual parks VUStats processes.

Create groupings of parks based on similar characteristics.

Time since last count procedure update

Reliance on estimates vs hard counts

Score
0-5

Difficulty of data collection based on park geography

VUStats team confidence in the data

Flag changes in count procedures



Create a system for flagging changes in count procedures.

Creates more transparency and context for fluctuations in visitation.

Create more awareness around outdated count procedures.

Graph Detail Data

Year	Recreation Visitors
1915	31,000
1916	51,000
1917	117,186
1918	101,497
1919	169,492
1920	240,966
1921	273,737
1922	219,164
1923	218,000
1924 *	224,211
1925	233,912
1926	225,027
1927	229,862

Improving navigability of IRMA



Goal:

Make IRMA easier to use for data collectors and users.

Improve organization and navigability of IRMA.

Provide links to training and background documents related to VUStats.

Standardize report lists for parks and make descriptions easier to read.

Call out “commonly used reports” to reduce time spent looking for specific reports.

Useful Links

[AAA Fuel Costs](#)

[Visitor Spending Effects](#)

[NatureNet](#)

[Social Science Home](#)

Source: IRMA

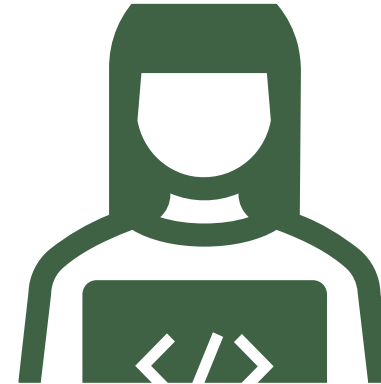
Recommendations



**Improve
communication and
knowledge sharing**



**Address equipment
challenges in parks**



**Improve data usability
for end users**



**Expand the capacity of
the VUStats team**

Expand the VUStats team capacity



Option	VUStats team capacity	Accountability and engagement	Cost
Create a VUStats task force with a representative from every region.	Slight increase	Moderate	Low

Expand the VUStats team capacity



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Create a VUStats task force with a representative from every region.	Slight increase	Moderate	Low
Hire a new administrative staff member on the SSP.	Increase	Low	Moderate

Expand the VUStats team capacity



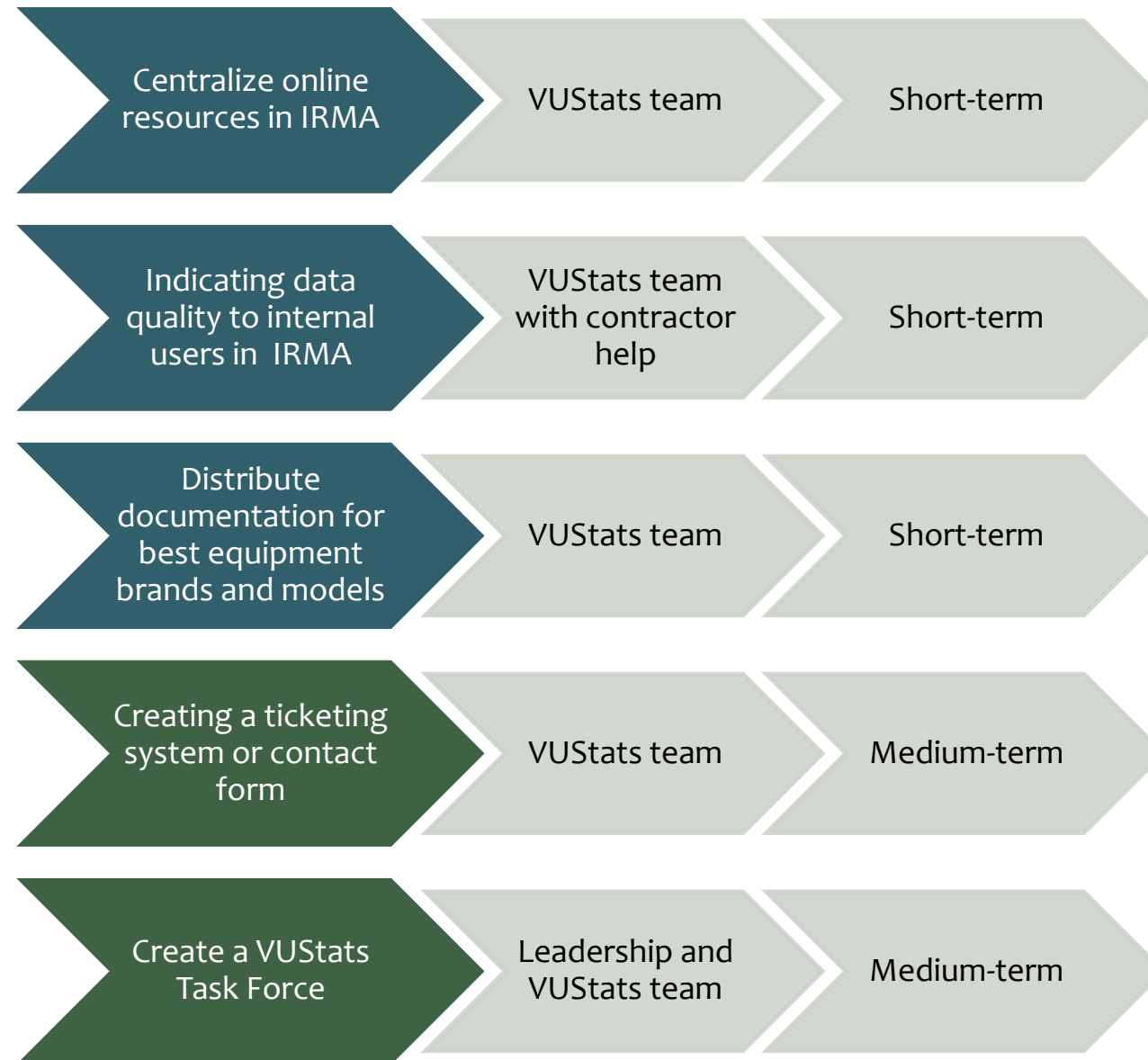
Option	VUStats team capacity	Accountability and engagement	Cost
Create a VUStats task force with a representative from every region.	Slight increase	Moderate	Low
Hire a new administrative staff member on the SSP	Increase	Low	Moderate
A new staff member in each regional office focused on supporting VUStats and the SSP	Significant increase	High	High

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Next steps



Final deliverables



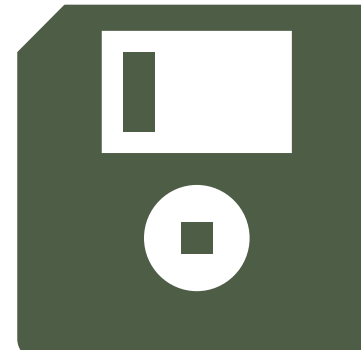
Presentation and
report



High-level business
case memo



Recommendations for
IRMA and SharePoint



Raw data: Interview
recordings, notes, and
codebook

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Discussion

