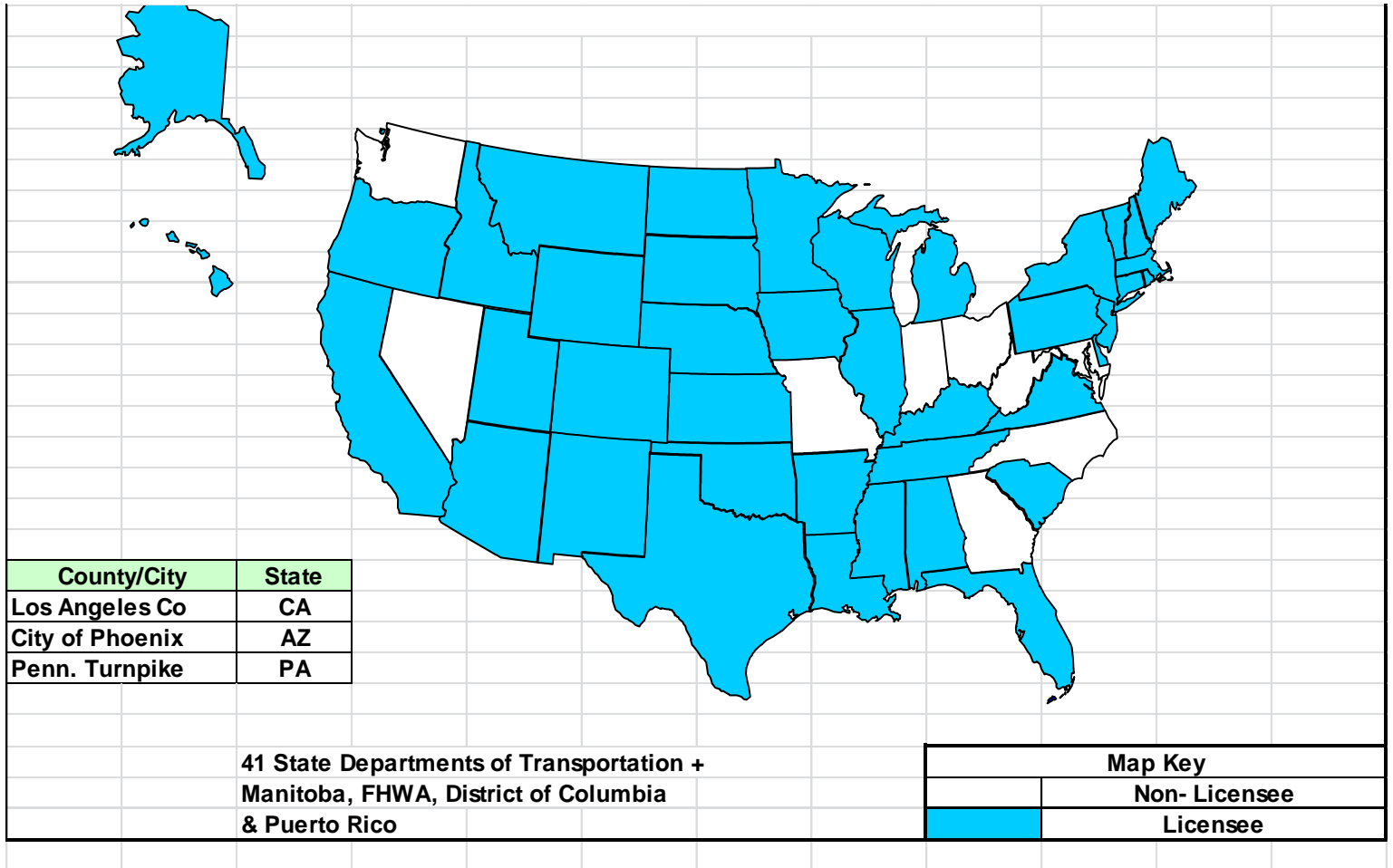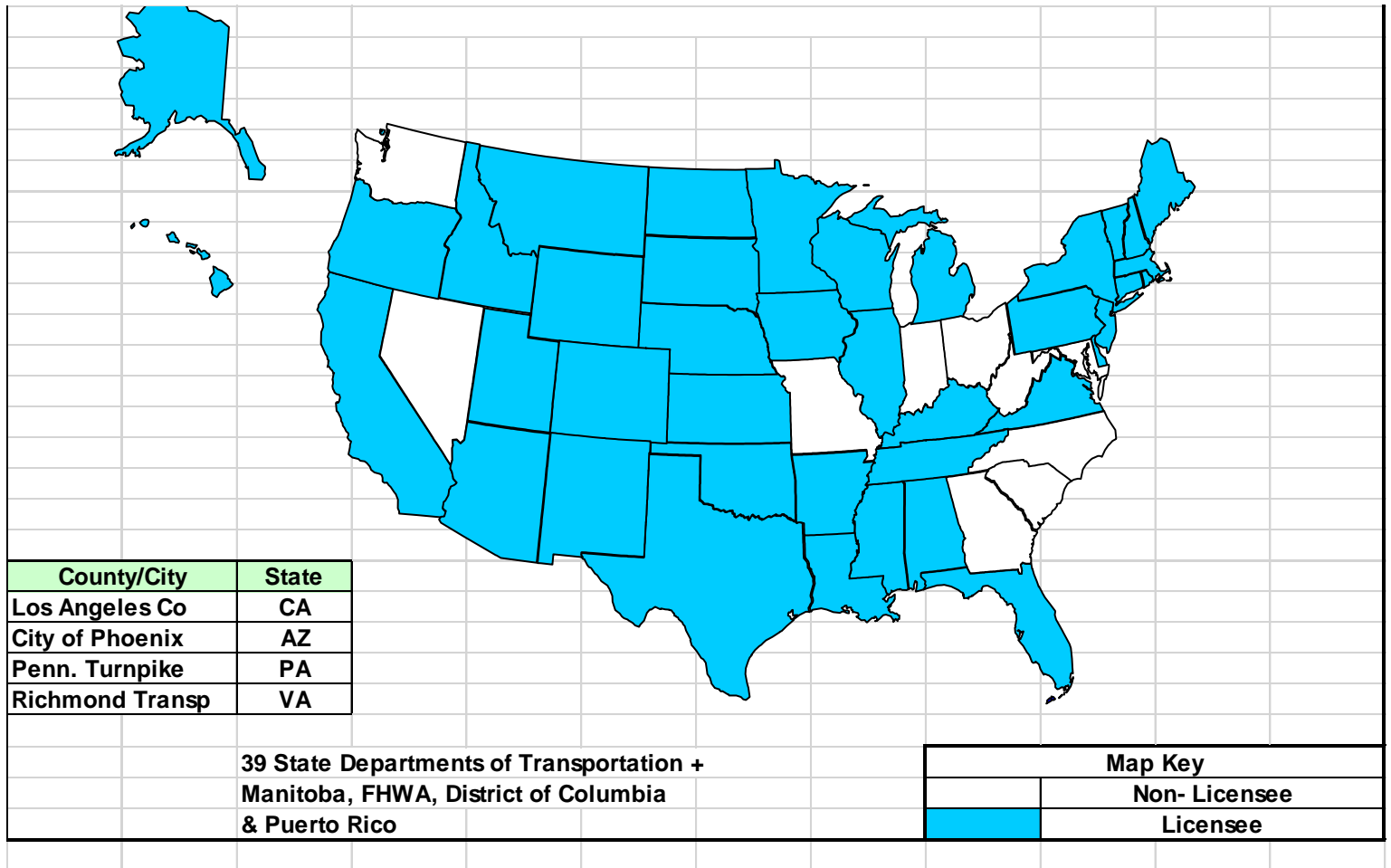# Bridge Management 2015 Administrative Overview

BrMUG Meeting

Park City, UT
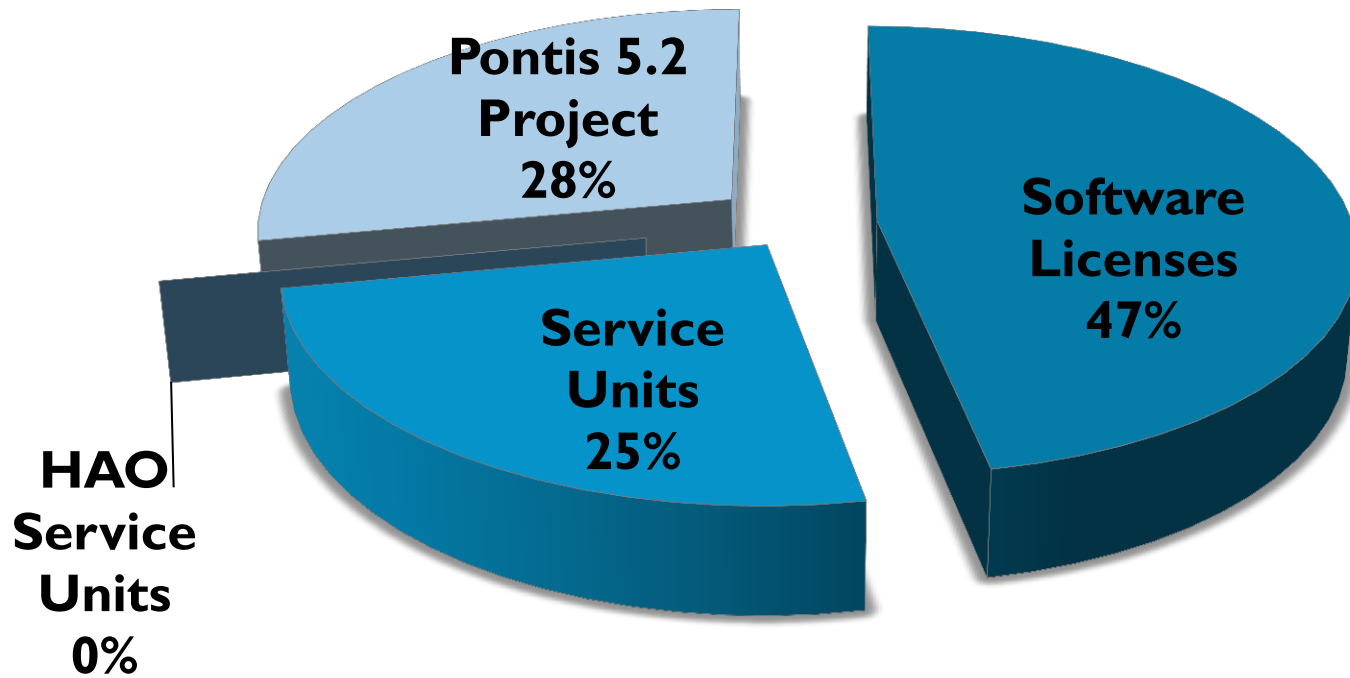
FY2014 Licensees

County/City	State
Los Angeles Co	CA
City of Phoenix	AZ
Penn. Turnpike	PA

41 State Departments of Transportation +
Manitoba, FHWA, District of Columbia
& Puerto Rico

Map Key	
	Non- Licensee
	Licensee

FY2015 Licensees

County/City	State
Los Angeles Co	CA
City of Phoenix	AZ
Penn. Turnpike	PA
Richmond Transp	VA

39 State Departments of Transportation +
Manitoba, FHWA, District of Columbia
& Puerto Rico
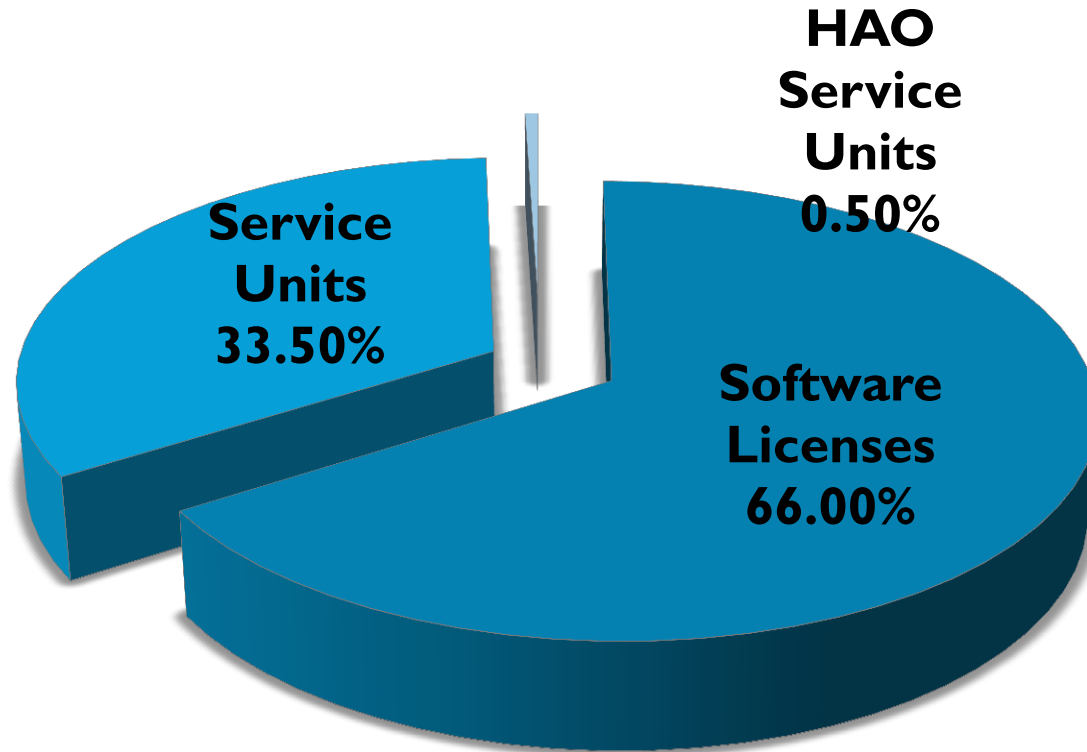
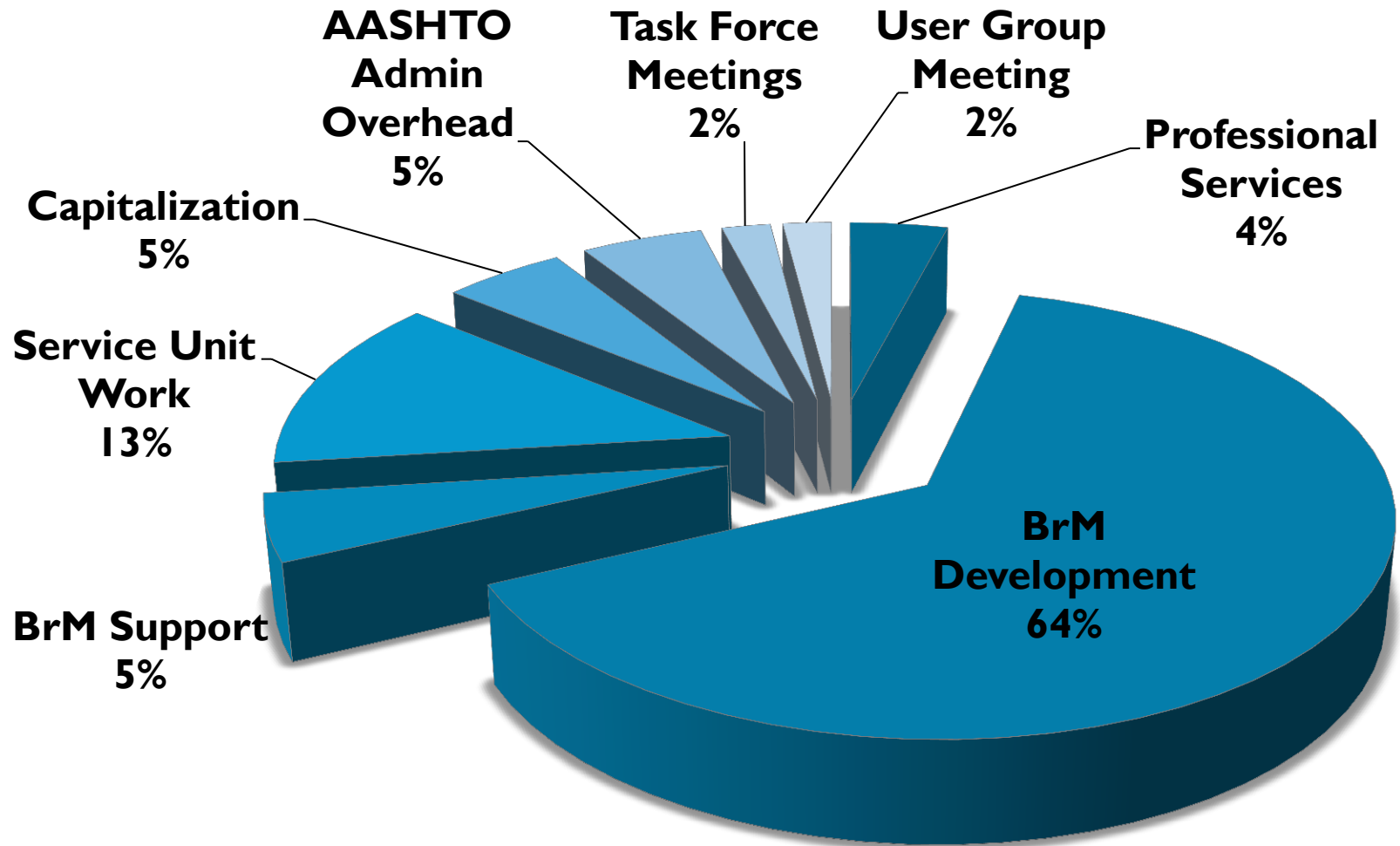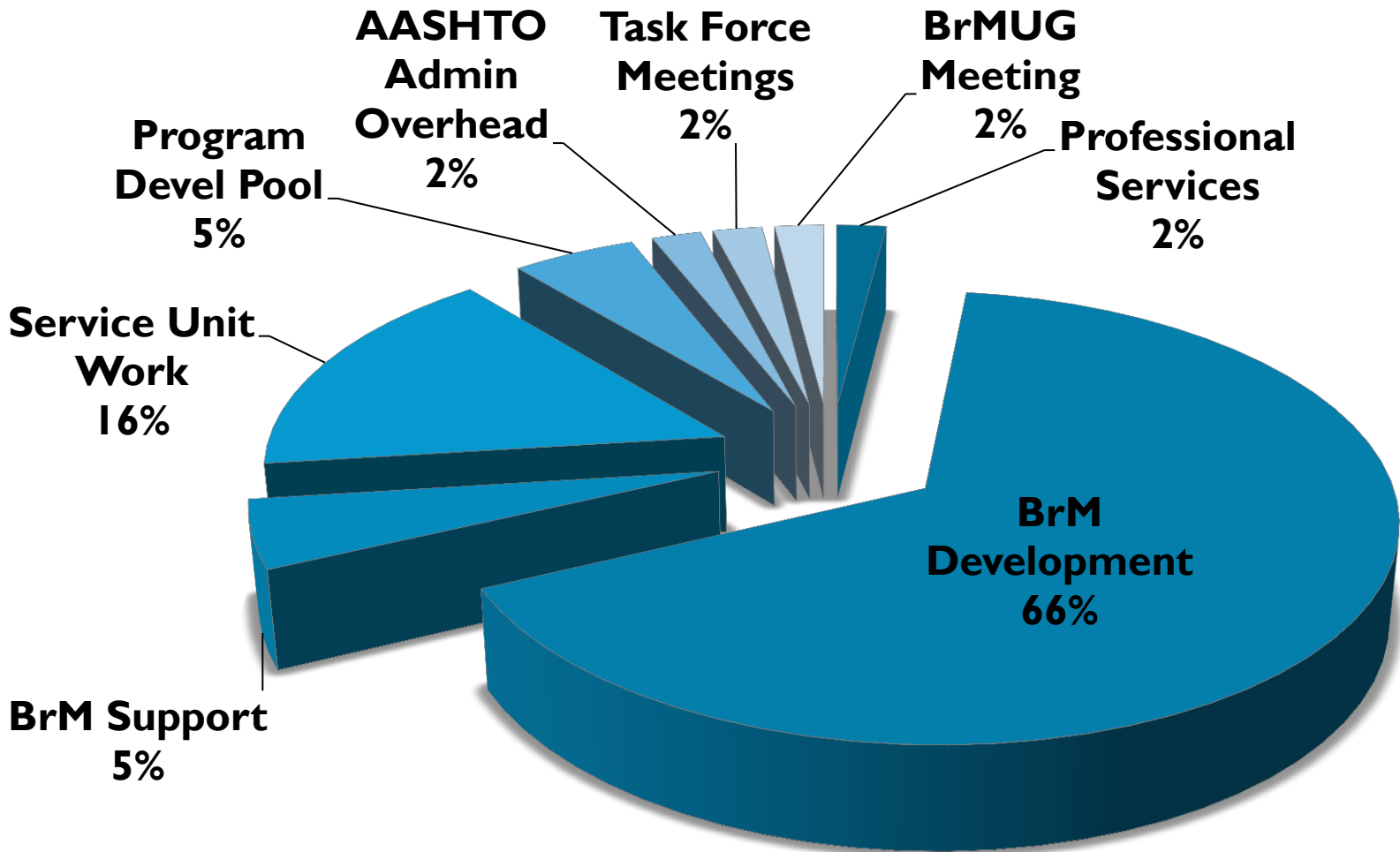| Map Key	
	Non- Licensee
	Licensee

FY2014 Revenue

FY2015 Revenue

FY2014 Expenditures

FY2015 Expenditures

AASHTO Administrative Overhead

- AASHTO Administration & Overhead
  - Staff salaries, benefits, and overhead
  - Contracted Project Manager
  - Proportional share of SCOJD, T&AA and indirect costs
  - Legal Services
- Technical and Applications Architecture Task Force
  - Technical resource for SCOJD and product task forces
  - Develop and maintain software standards and perform QA Reviews

Why Use AASHTOWare?

- Incorporates "best practices"

- Users share solutions and costs

- License fees cover overall expenses ensure software products are kept current with technology and functional requirements

- Each product is self-supporting

- Non-profit operation

- Management and oversight by agency (DOT) personnel

- AASHTO staff project management/assistance

AASHTOWare Program Management
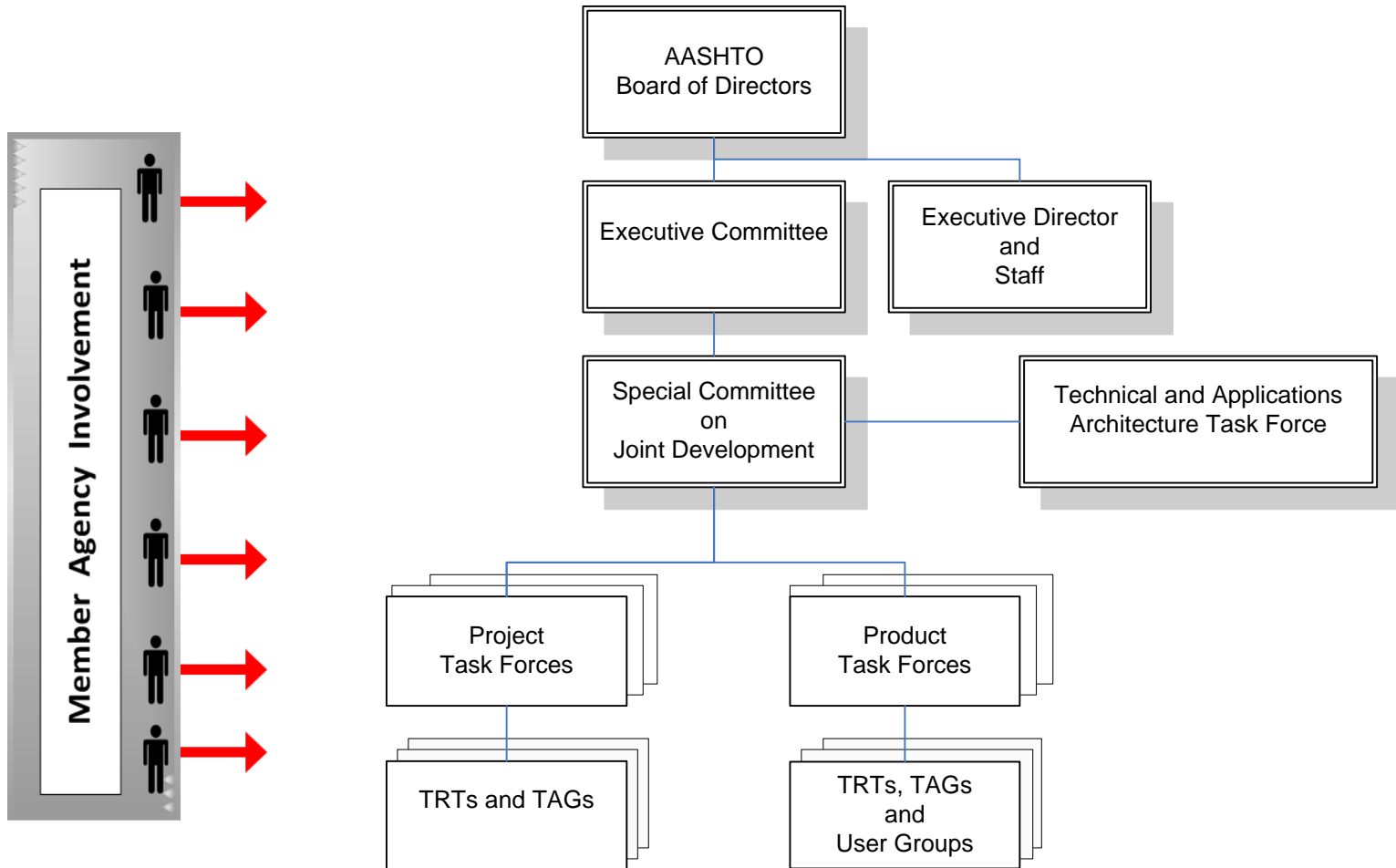
AASHTOWare Service Units

A Brief Overview

AASHTOWare Service Units

- Agencies can gain convenient access to services provided by the AASHTOWare contractor via service units.

- AASHTO serves as facilitator by accepting the commitment for contractor-provided services, invoicing and receiving payment from the agency and forwarding the order to the contractor for the appropriate number of service units.

- AASHTO makes payment for services rendered to the contractor following agency approval of the invoice.

- Service units remaining at the conclusion of a fiscal year are carried forward into the next fiscal year.

AASHTOWare Service Units

Service units are intended to provide consultation and support to incorporate functional enhancements or to assist the licensee in the implementation of AASHTOWare products.

Service Unit – Example Activities

- Adding new agency-specific features to the system
- Developing custom reports
- Providing specialized training in the use of AASHTOWare products
- Updating prior releases of product databases
- Incorporating analytical or specification engines into AASHTOWare products

Service Unit – Example Activities

- Supporting common software enhancements unfunded through product licensing fees – to become part of the common code base and supported by Maintenance, Support and Enhancement (MSE) costs
- Funding software development projects / solicitations

Use of Service Units

- The example activities outlined may require more than one Service Unit each, depending on the specific agency requirements.
- Service Units may not be used to provide reimbursement for travel expenses by agency personnel.
- Service Units should not be used for work involving major new software development by member agencies.
- Service Units may be converted to provide additional enhancement funding under the guidance of the Task Force.

Fee for Service Units

- Service Units can be ordered in unit increments of $11,600 (this fee includes AASHTO administrative costs)
- Service Units must be paid upon receipt of the invoice
- Each service unit provides $10,000 in routine contractor services

Hosting and Add-On Service Units (HAOs)

- Hosting and maintenance of 5.2.X on contractor servers

- Purchase of approved plug-in modules for 5.2.X (as they become available)

- Ordered in unit increments of $3,000

- Each HAO Service Unit provides $2,500 in contractor services

- HAO Service Units must be paid upon receipt of the invoice

Service Unit Process

- Partnership between requesting agency, Task Force and contractor
- Secure Task Force approval to ensure contractor resources are available
- Analyze opportunities for collaboration between agencies and Task Force product work plans

www.aashtoware.org
Service Unit Procedures

AASHTOWare
Service Unit Procedures

2015 Bridge Management
Customer Satisfaction Survey Results

Conducted July 23 – September 11, 2015

Survey Participation

- Only Member Agency End User Designees were surveyed
  - ensure multiple / conflicting responses were not received from each agency
  - capture member agency software environment / configuration information
  - 29 Member Agencies responded
    - 33 Member Agencies responded in 2014

Software Version Used
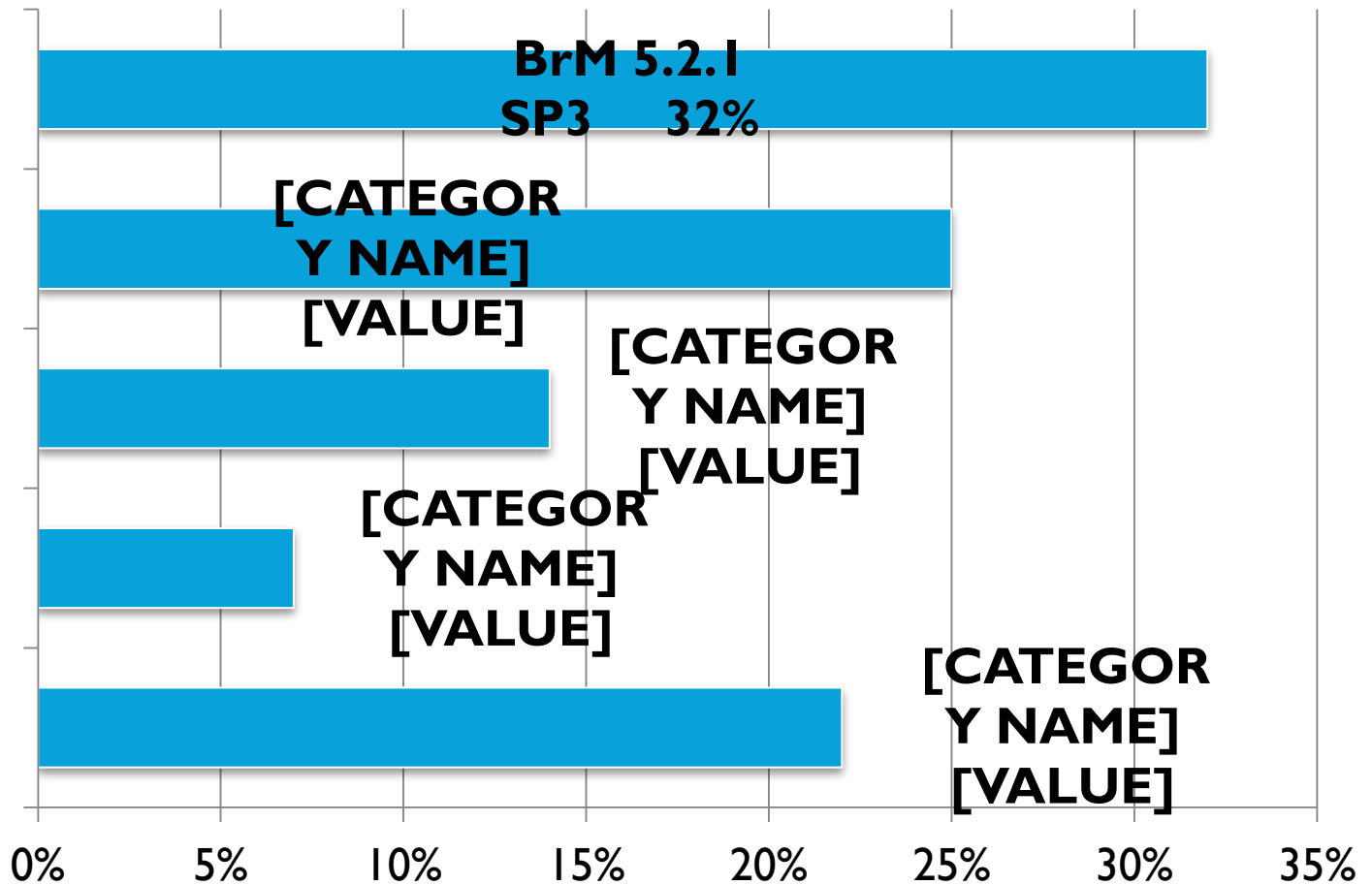
If you are using version 5.X, which platform are you using?
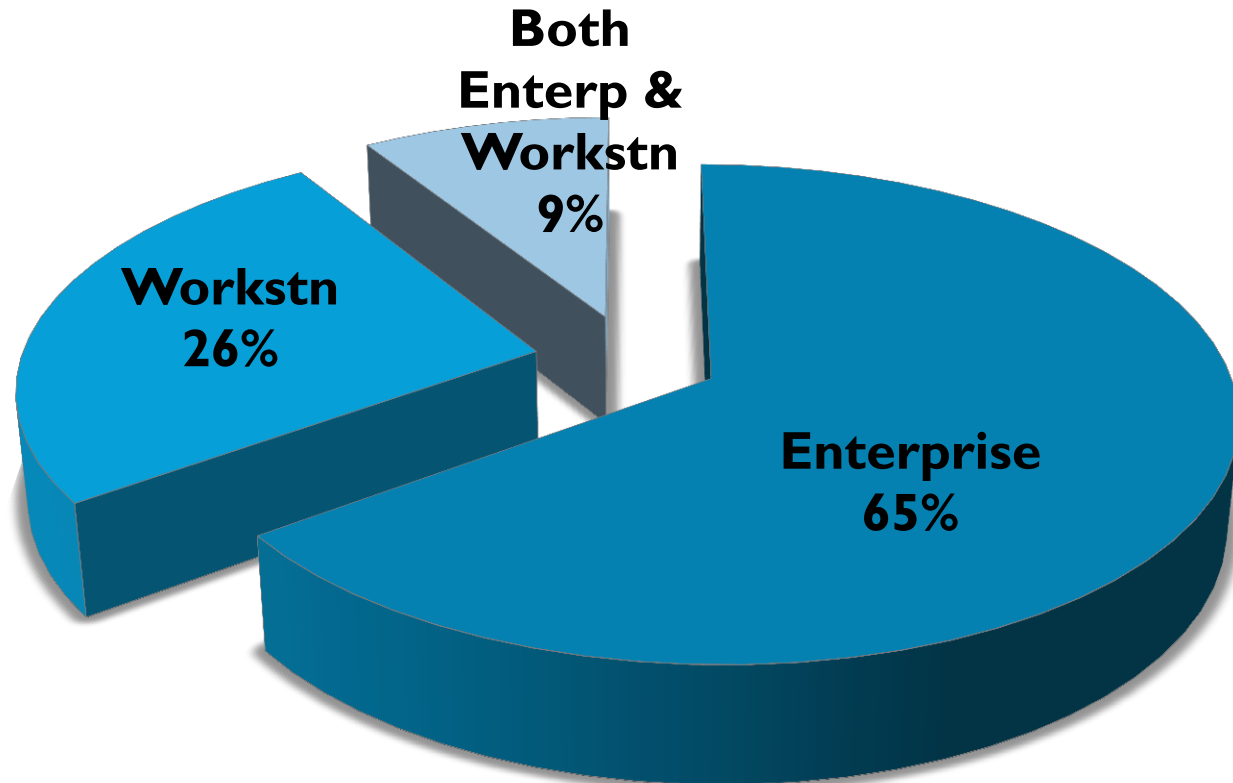
Workstation Operating System

Windows 7
100%
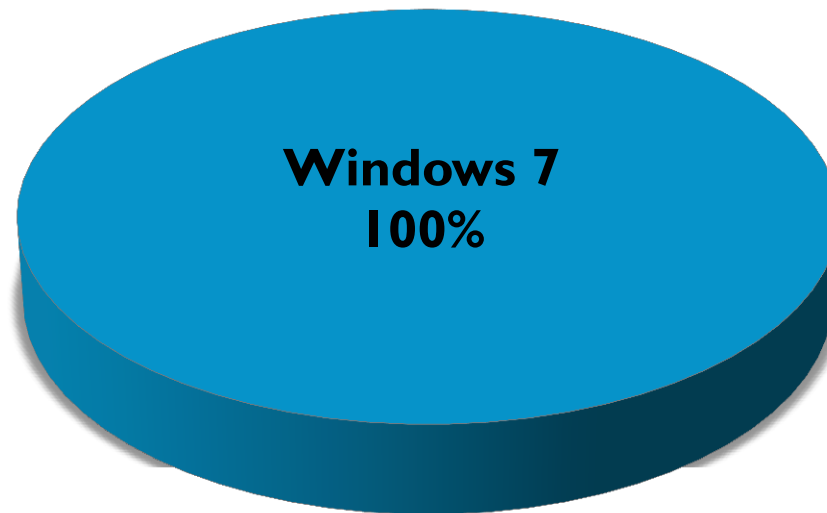
Enterprise Operating System
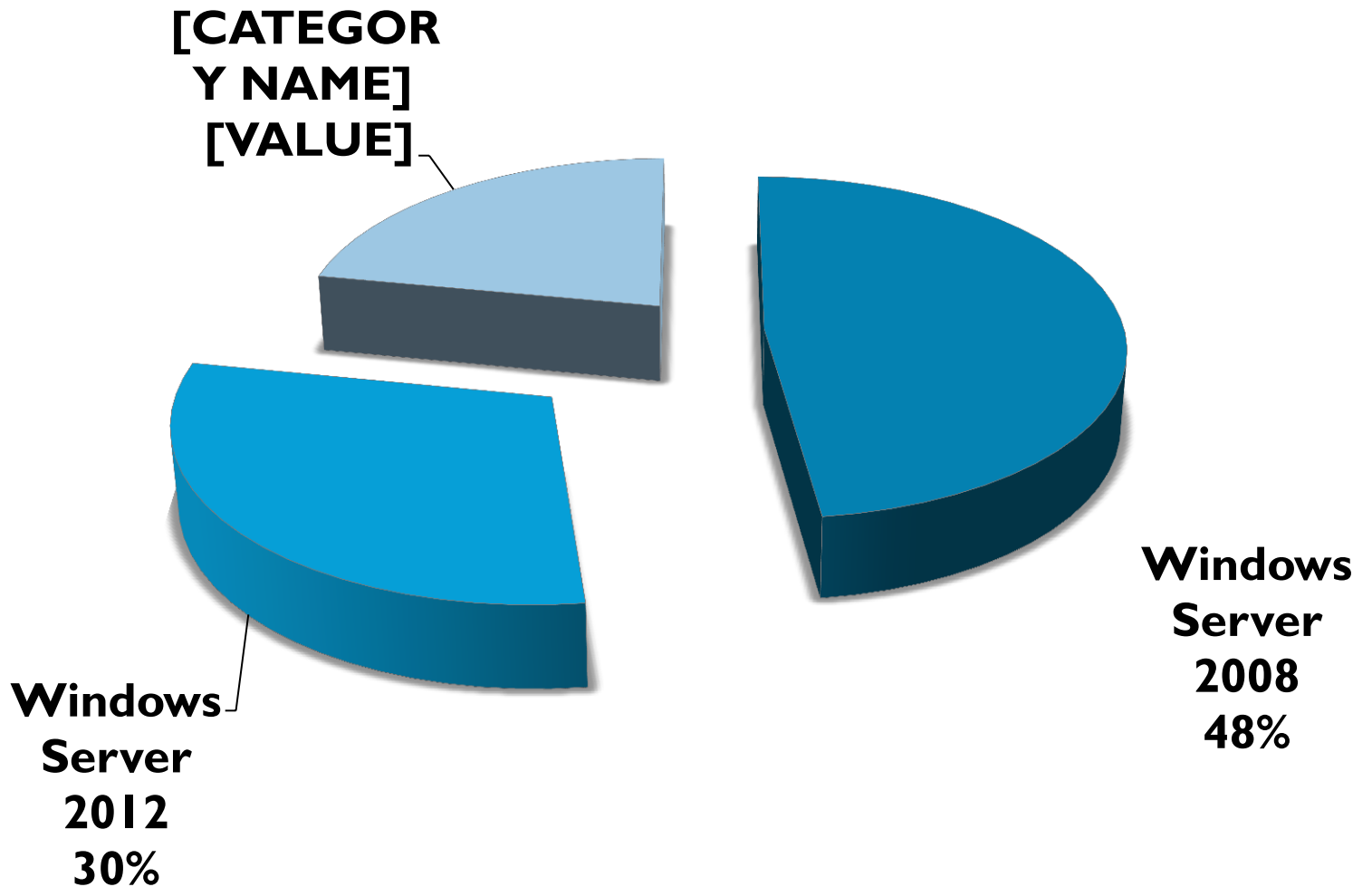
Server Environment
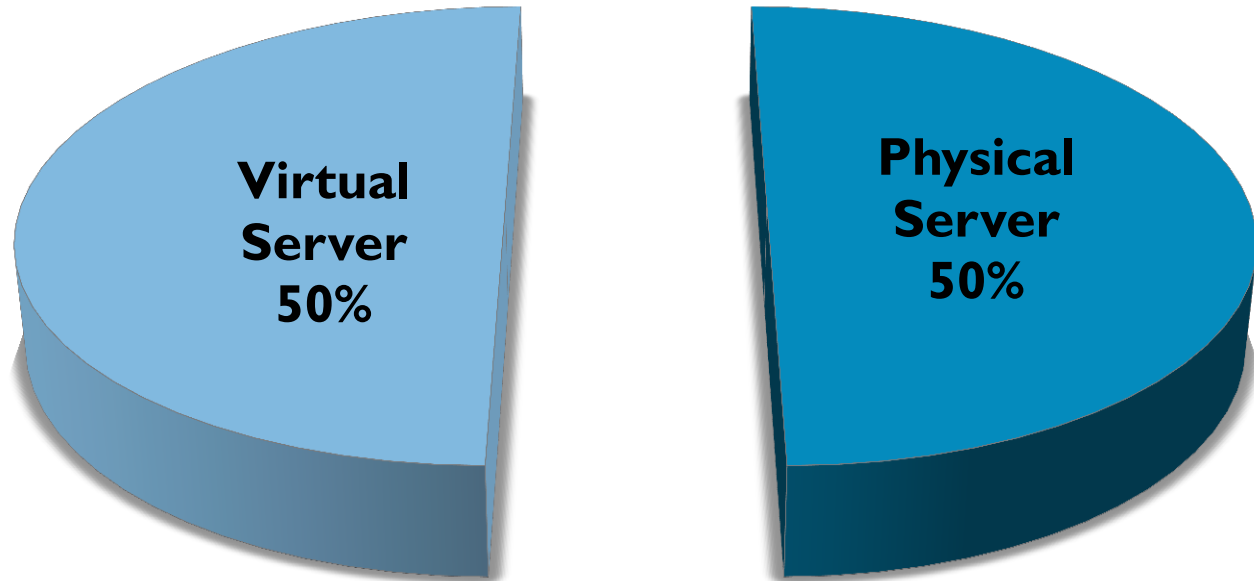
If you are not using 5.2.1, do you plan to move to version 5.2.1 in the next year?

No
3%

Yes
97%
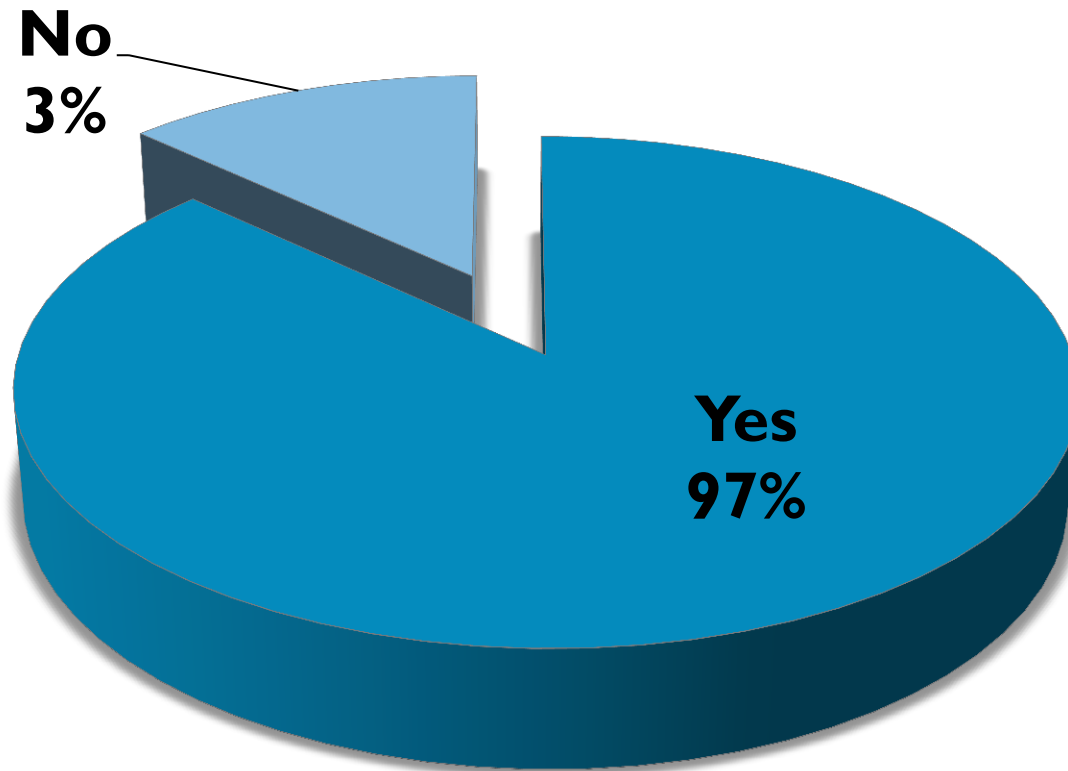
What do you need to start using 5.2.1?

- Need to ensure that GUIDs don't break other agency applications that access the database
- Agency is using an in-house developed HSIS system for inspection and inventory management. Agency would like to use BrM for modeling and assessing future needs etc.
- Our state is highly customized. There are many layouts, filters, agency forms and reports that need to be created.
- User security needs to be implemented.

BrM Version Planned to Upgrade

Web Browser Used

Firefox
3%

[CATEGORY NAME][VALUE]

IE 9
24%

[CATEGORY NAME] [VALUE]

IE 10
28%
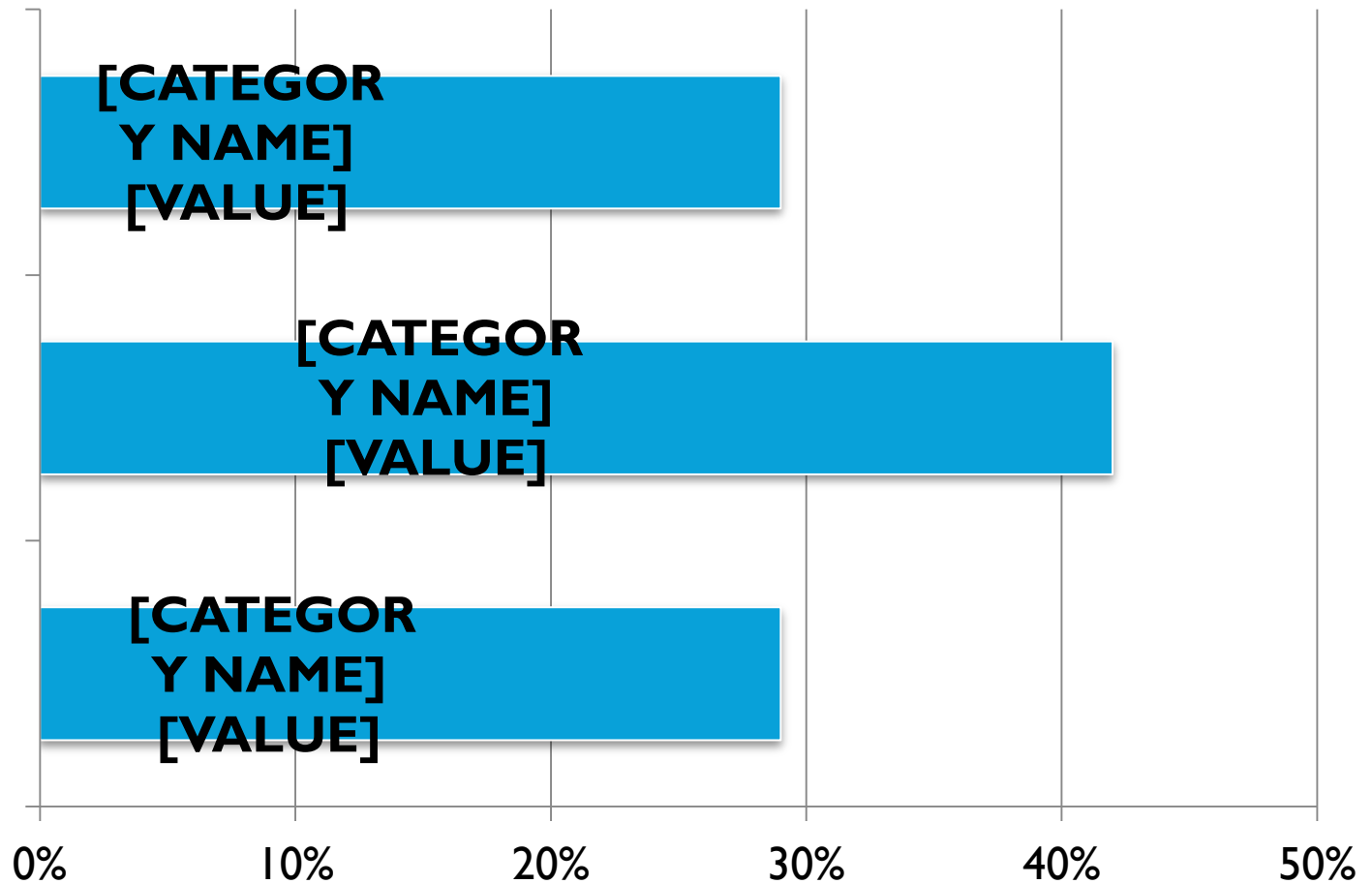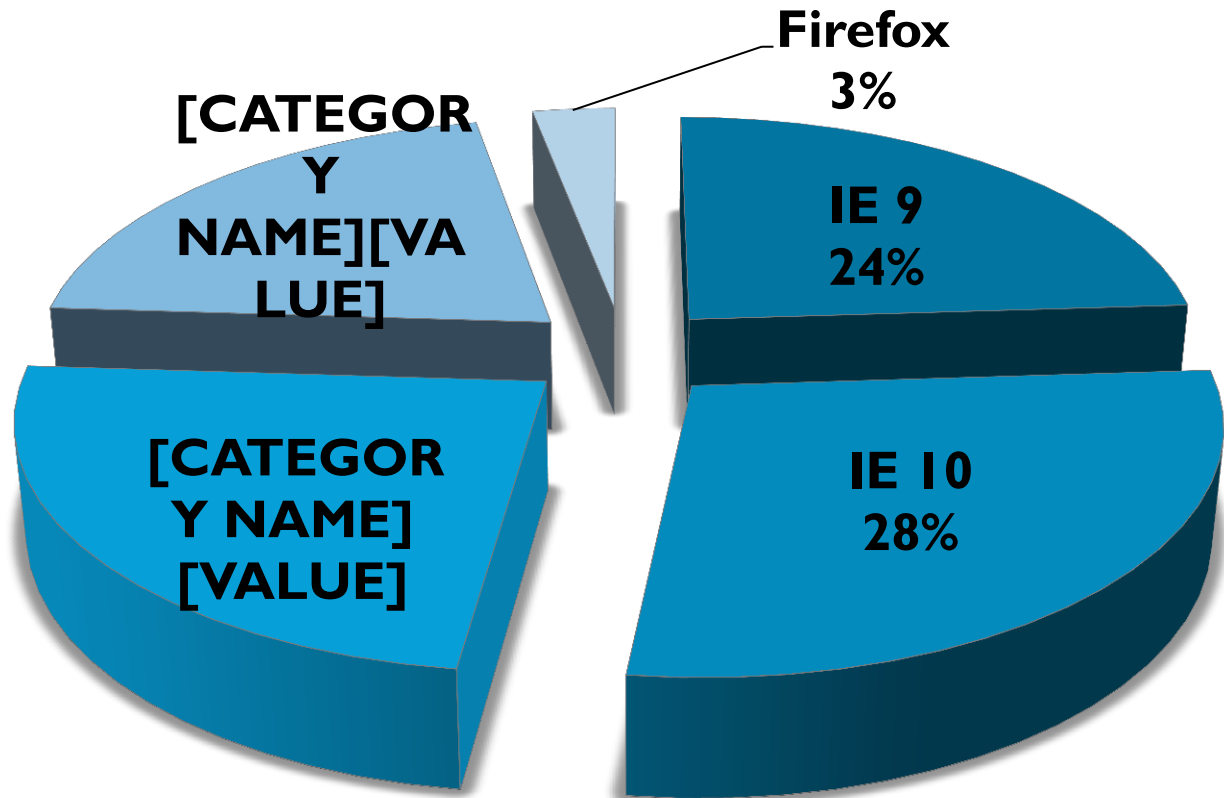
Are you planning to upgrade to a new web browser?

- IE 11 in the future (8)
- No (6)
- Will stay with IE9
- We use Chrome, IE and Safari
- Web browser decisions are dependent on other enterprise software applications

Element Data Collection

More than NHS but not all Bridges 18%

Only on NHS 0%

On All Bridges 82%

Number of BrM Users

1 User
3%

2-5 Users
28%

[CATEGORY NAME]
[VALUE]

[CATEGORY NAME]
[VALUE]
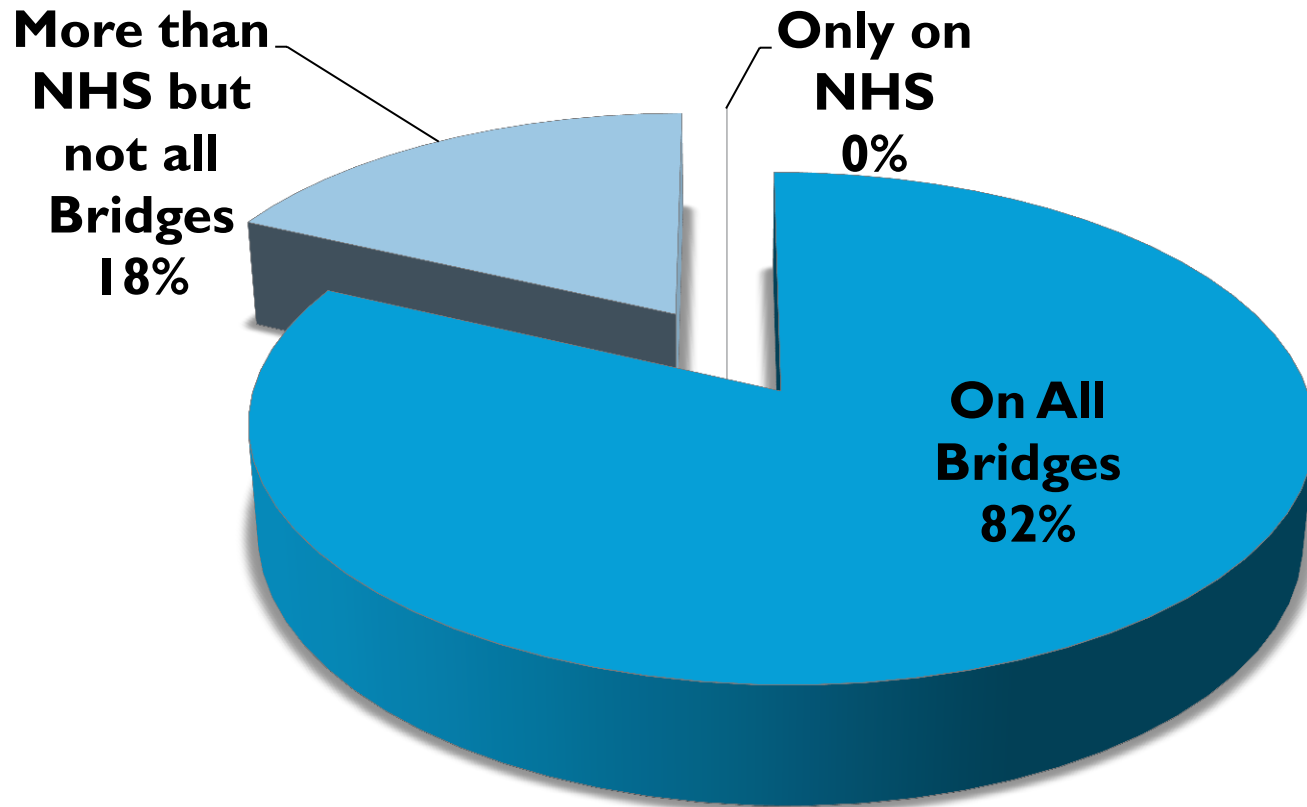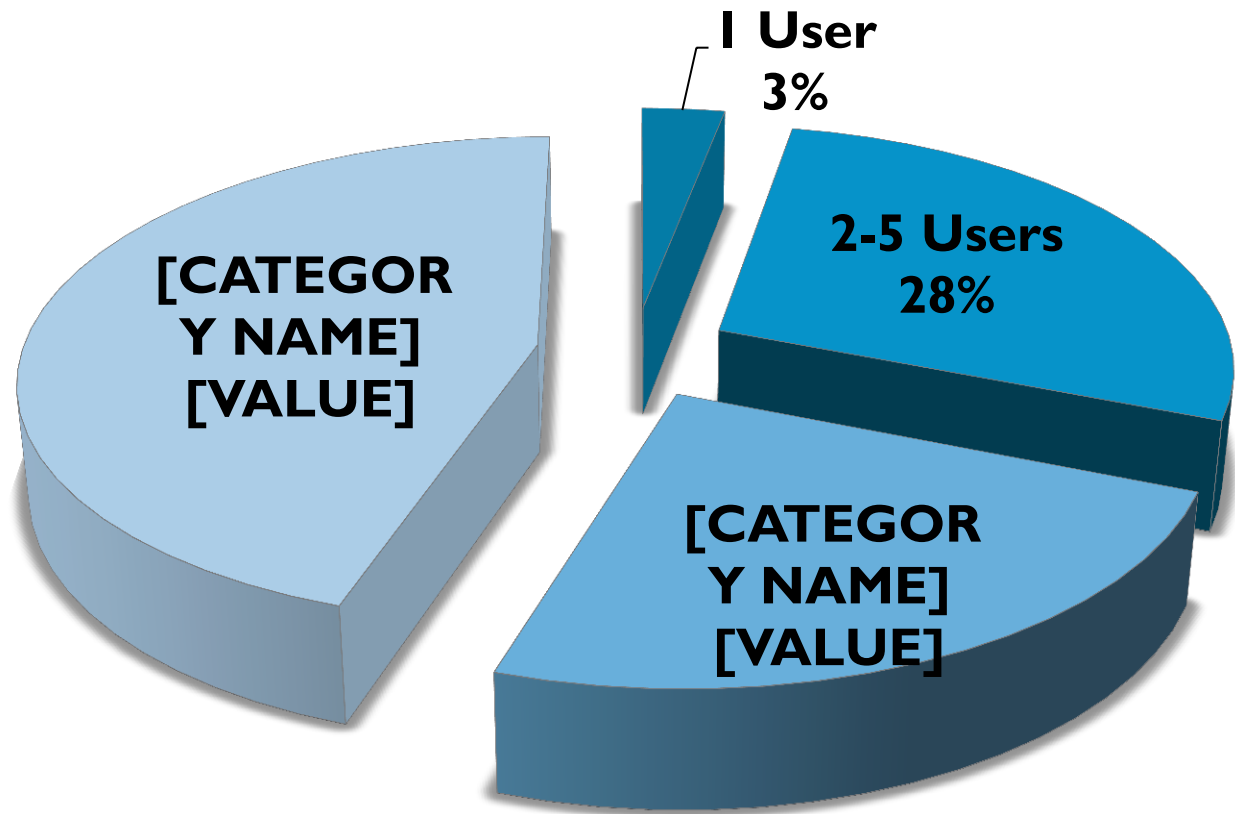
Most Significant Bridge Management Challenge

- Speed (4)
  - Enterprise version slower than 4.X desktop
  - Delays between switching screens
  - Multiple saves
- Stability (4)
  - Confidence in analysis results
  - Meeting original design specifications
  - Need to fix software bugs
- Lack of Up to Data Documentation (4)

Most Significant Bridge Management Challenge

- Adoption of NBE in Agency (2)
  - Getting inspectors to take data collection seriously
- Upgrades (2)
  - Constant installation of new versions
- Reports (2)
  - Difficult to create reports on a complex relational database
- Modeling (2)

Most Significant Bridge Management Challenge?

- Training (2)
  - Not enough time to train users
- Web browser compatibility
- Keeping up with FHWA changes
- My friends in OIT
- Security Issues

Database Used

Features Used

Multi-Media Image Storage 31%

Network Scenario Analysis 24%

Deterior Modeling 31%

Project Planning 24%
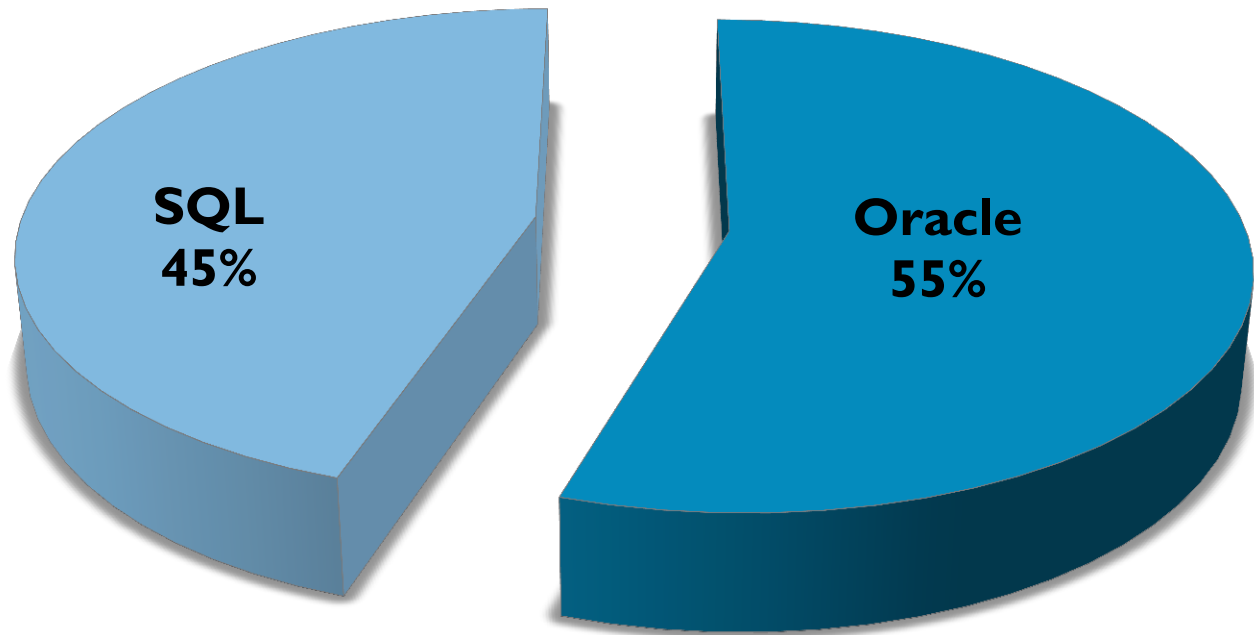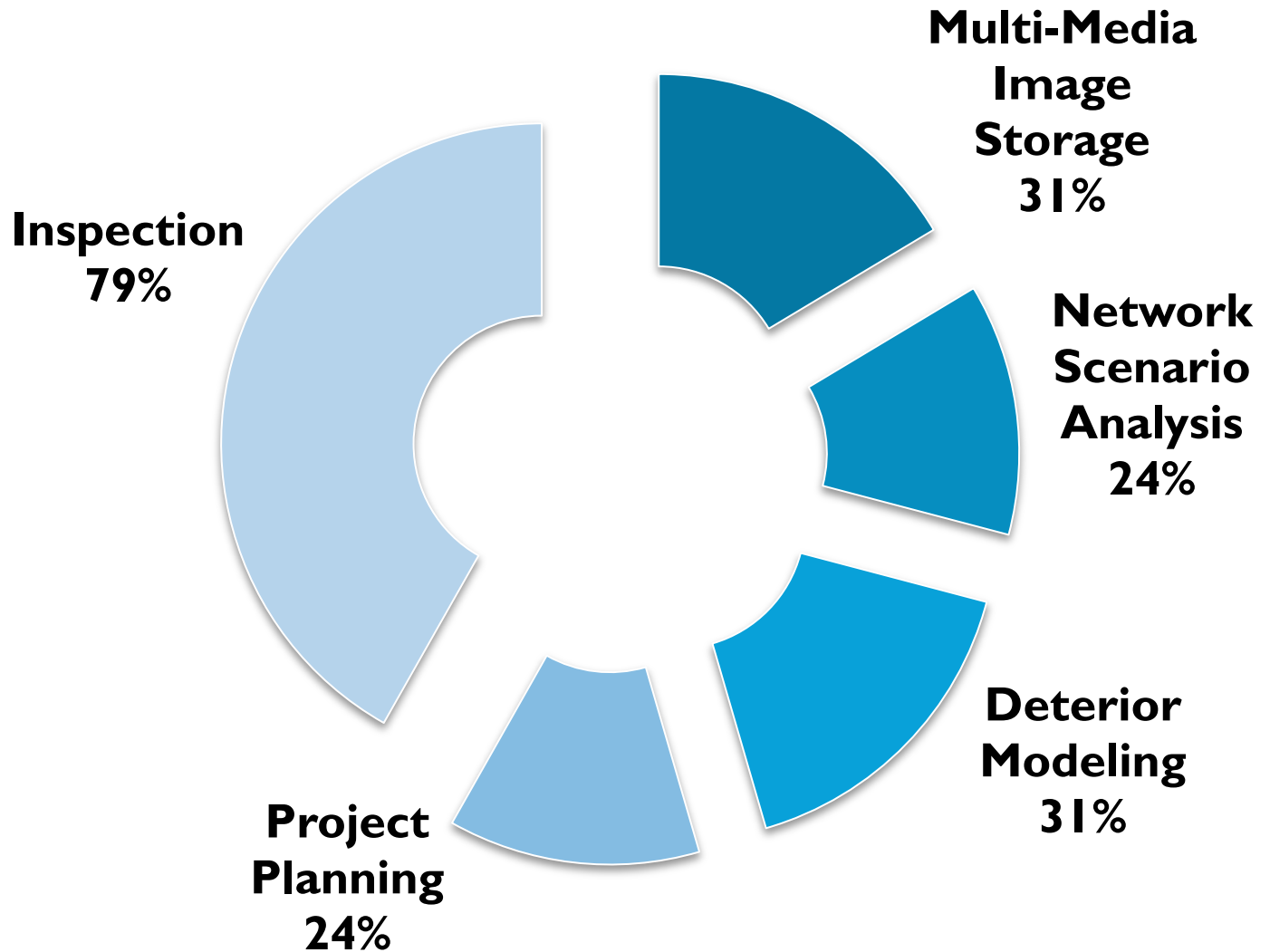
Inspection 79%

Using Data Collection Software in Addition to BrM?
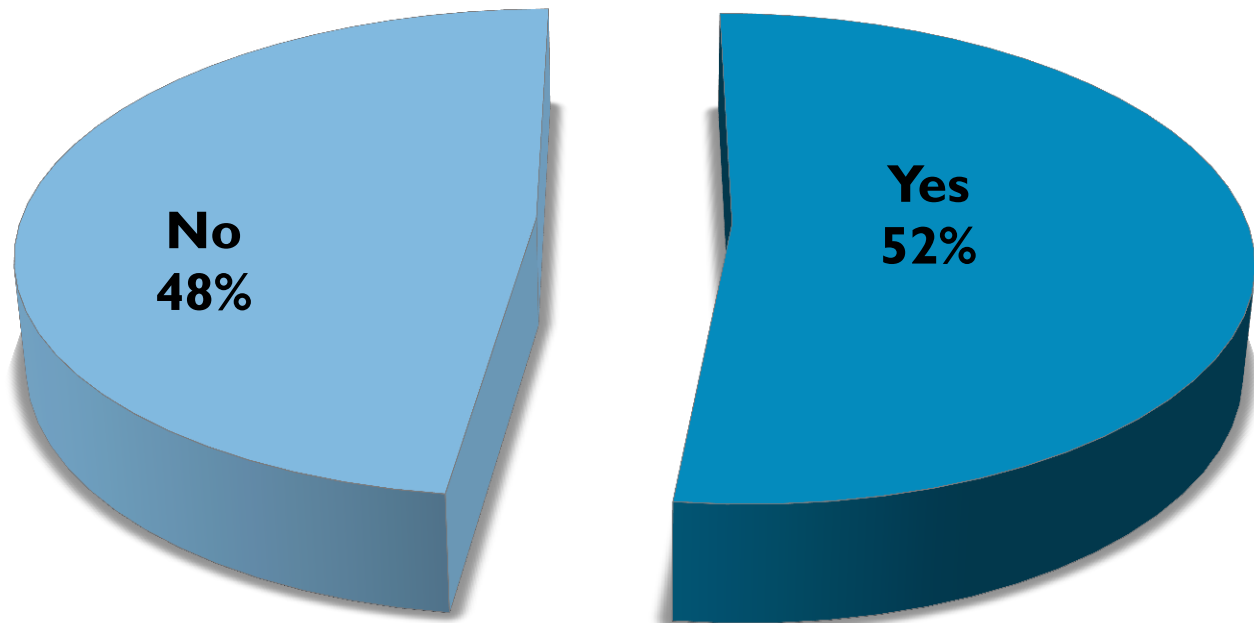
Other Data Collection Software Being Used

- In-House Developed Applications (11)
- InspectTech (4)

Ease of Installation
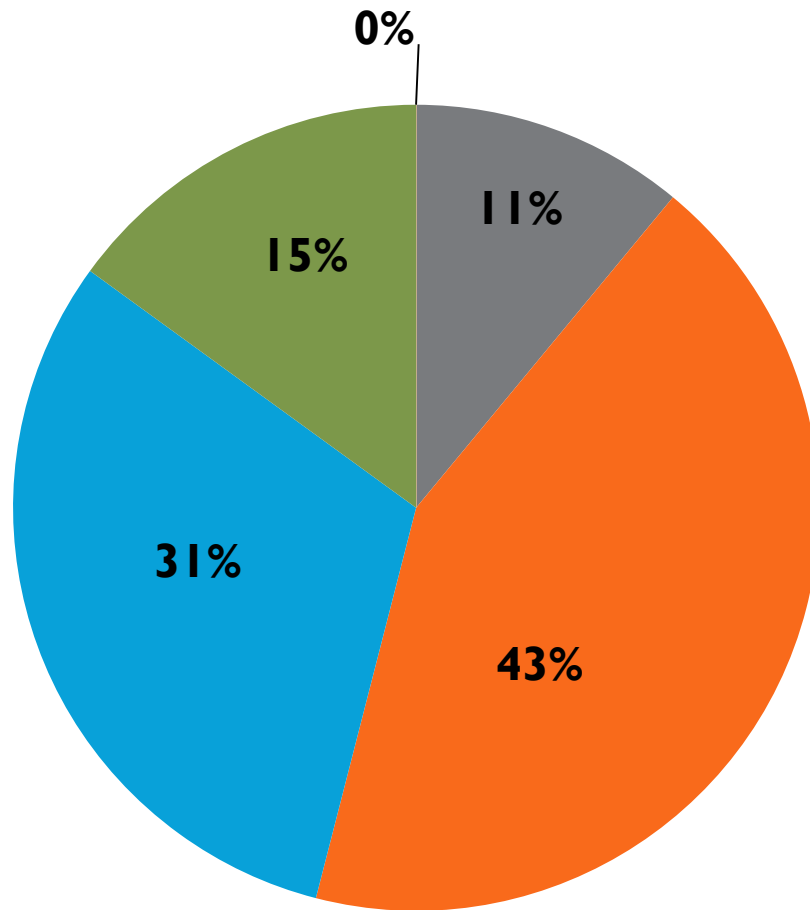
	2014
■ Extremely Satisfied	3%
■ Moderately Satisfied	43%
■ Neither satisfied nor dissatisfied	26%
■ Moderately dissatisfied	17%
■ Extremely dissatisfied	11%

Pie chart values: 0%, 11%, 15%, 31%, 43%

Software Operation (speed, ease of use, reliability)

2014

■ Extremely Satisfied	**3%**
■ Moderately Satisfied	**44%**
■ Neither satisfied nor dissatisfied	**23%**
■ Moderately dissatisfied	**21%**
■ Extremely dissatisfied	**9%**
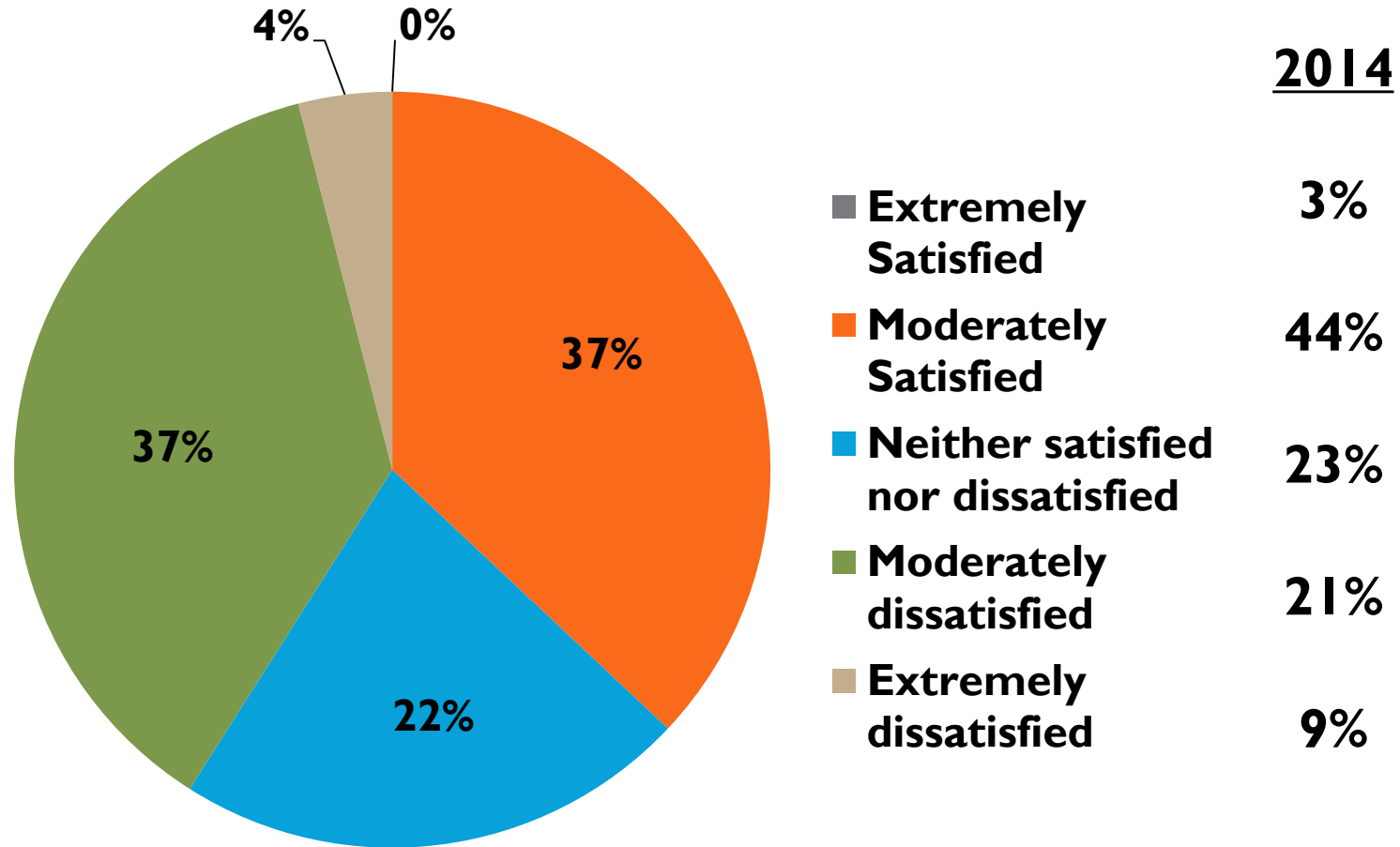
Inspection Features of BrM

	2014
■ **Extremely Satisfied**	**3%**
■ **Moderately Satisfied**	**24%**
■ **Neither satisfied nor dissatisfied**	**60%**
■ **Moderately dissatisfied**	**10%**
■ **Extremely dissatisfied**	**3%**

Pie chart values: 4%, 0%, 8%, 34%, 54%

Reports (delivery, quality and completeness)
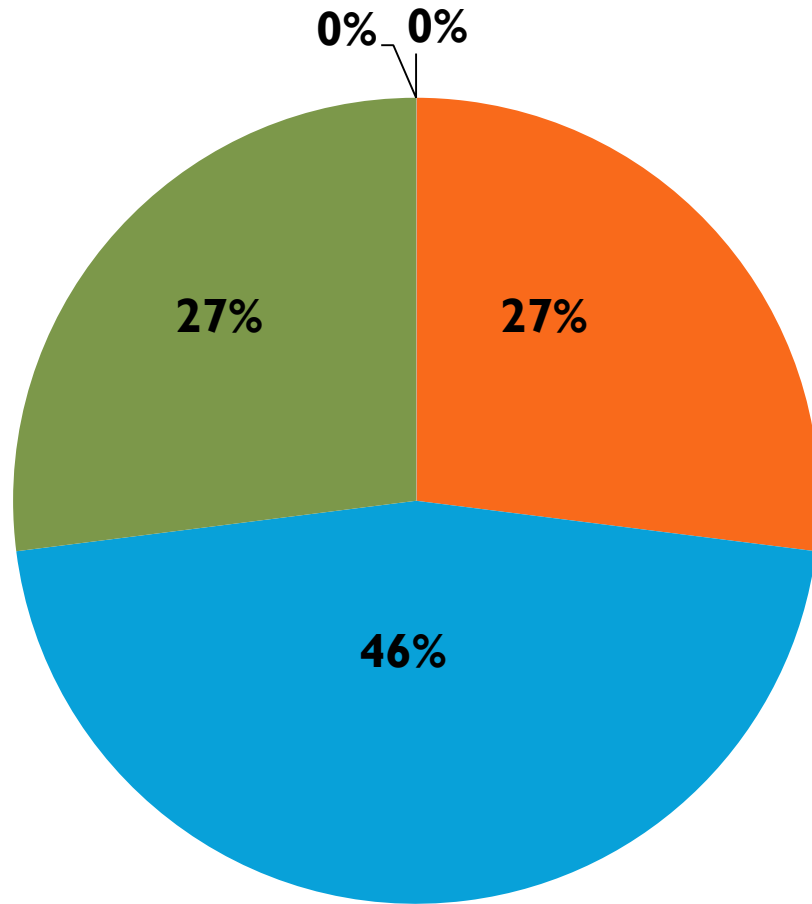
	2014
■ Extremely Satisfied	0%
■ Moderately Satisfied	27%
■ Neither satisfied nor dissatisfied	43%
■ Moderately dissatisfied	30%
■ Extremely dissatisfied	0%

Enhancements to support features not currently used

- Documentation is out of date (4)
  - Need more detailed documentation
  - Need up to date step by step documentation
  - Complete help manual needs to be delivered
- Waiting for Deterioration Modeling (3)
- The speed of the application is our main concern (3)
- Software needs to be more reliable, better performance, less bugs, more QC by the contractor (3)

Enhancements to support features not currently used

- The software is not the problem – dealing with internal agency issues (2)
- QA/QC of XML submission to FHWA
- Need query tools to identify which bridges are due for inspection
- Modeling of bridge condition for a list of bridges
- Bridge number doesn't stay in selection box (has to be keyed in every time)
- Ability to import Pontis 4 layouts, reports, filters, etc. into BrM 5.2.1 without recreating

Use of Technical Support from Bentley - 74% of respondents
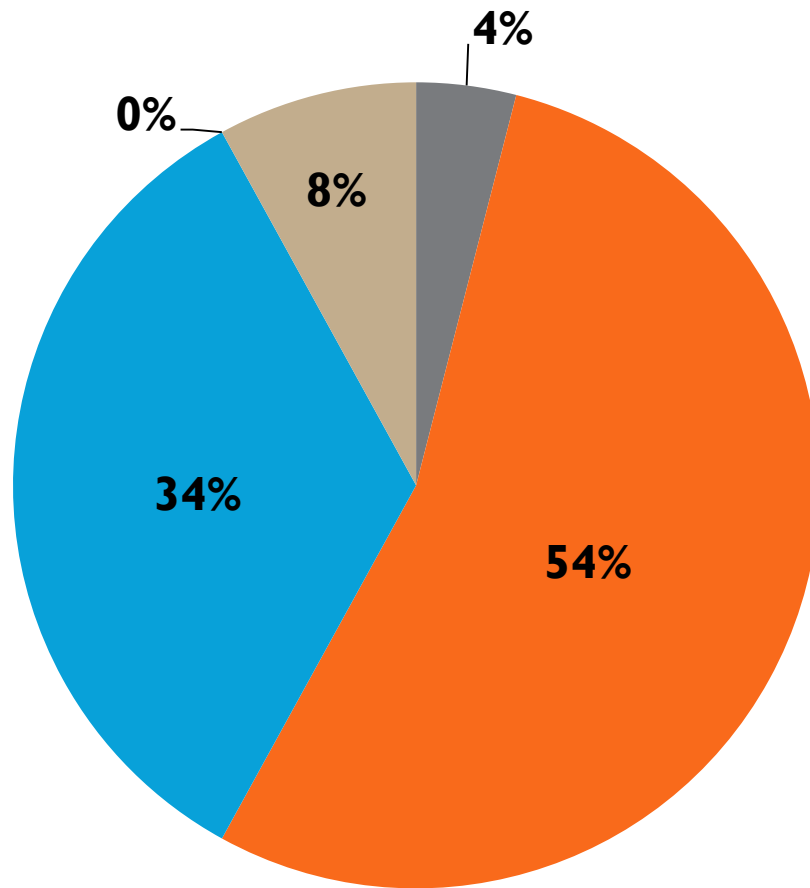
	Extremely satisfied	Moderately satisfied	Neither satisfied nor dissatisfied	Moderately dissatisfied	Extremely dissatisfied
a) quality of the support provided	**14%** 19%	**57%** 54%	**19%** 8%	**10%** 15%	**0%** 4%
b) contractor communication and follow-up	**24%** 23%	**48%** 50%	**19%** 8%	**9%** 11%	**0%** 8%
c) effectiveness of contractor telephone & e-mail support	**14%** 31%	**43%** 31%	**24%** 15%	**19%** 15%	**0%** 8%
d) knowledge of the contractor help desk staff	**14%** 23%	**62%** 46%	**10%** 12%	**14%** 19%	**0%**
e) overall quality of contractor problem resolution	**10%** 16%	**57%** 44%	**19%** 20%	**14%** 12%	**0%** 8%

Use of Development or Custom Technical Support - 26%

	Extremely satisfied	Moderately satisfied	Neither satisfied nor dissatisfied	Moderately dissatisfied	Extremely dissatisfied
a) quality of the support provided	**29%** 0%	**57%** 86%	**14%** 14%	**0%**	**0%**
b) contractor communication and follow-up	**14%** 0%	**71%** 57%	**14%** 29%	**0%** 14%	**0%**
c) effectiveness of contractor telephone & e-mail support	**14%** 0%	**71%** 86%	**14%** 14%	**0%**	**0%**
d) knowledge of the contractor help desk staff	**57%** 29%	**43%** 57%	**0%** 14%	**0%**	**0%**
e) overall quality of contractor problem resolution	**29%** 0%	**57%** 86%	**14%** 14%	**0%**	**0%**

Comments on Contractor Support

- They are very knowledgeable and helpful in resolving our issues with the software

- Bentley may be over booked

- Seems effort is concentrated more on moving ahead that on fixing existing problems. Fixes keep getting moved to the next version.

- BrM is getting close to being a useable product

- The quality of contractor support seems to have declined since Bentley acquired InspectTech

Comments on Contractor Support

- Our migration from existing in-house inspection software to BrM went poorly
  - After using the extremely buggy BrM 5.2.1 SP1 since last October with no proper manuals, we have on our own moved forward by trial and error.
  - We are migrating to BrM 5.2.1 SP3 in a few weeks and it appears to be a much more stable software.
  - So far, Bentley has solved our issues in a timely manner.

Participation in Contractor-led Webinars
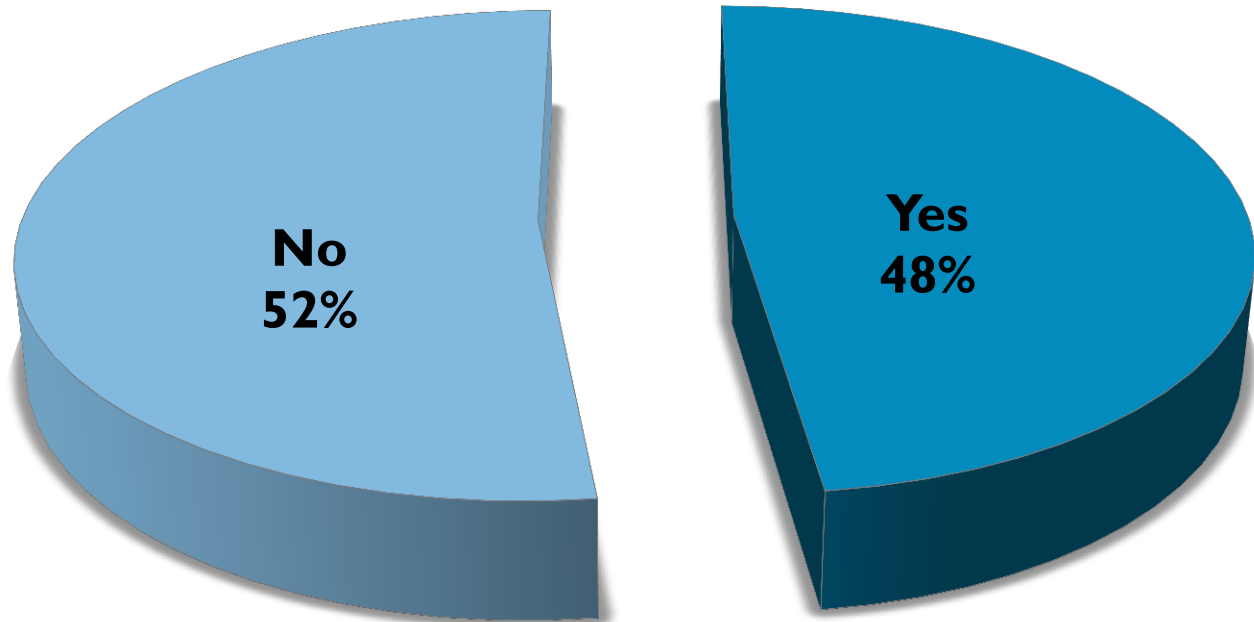
Webinar Participation (number of webinars attended)
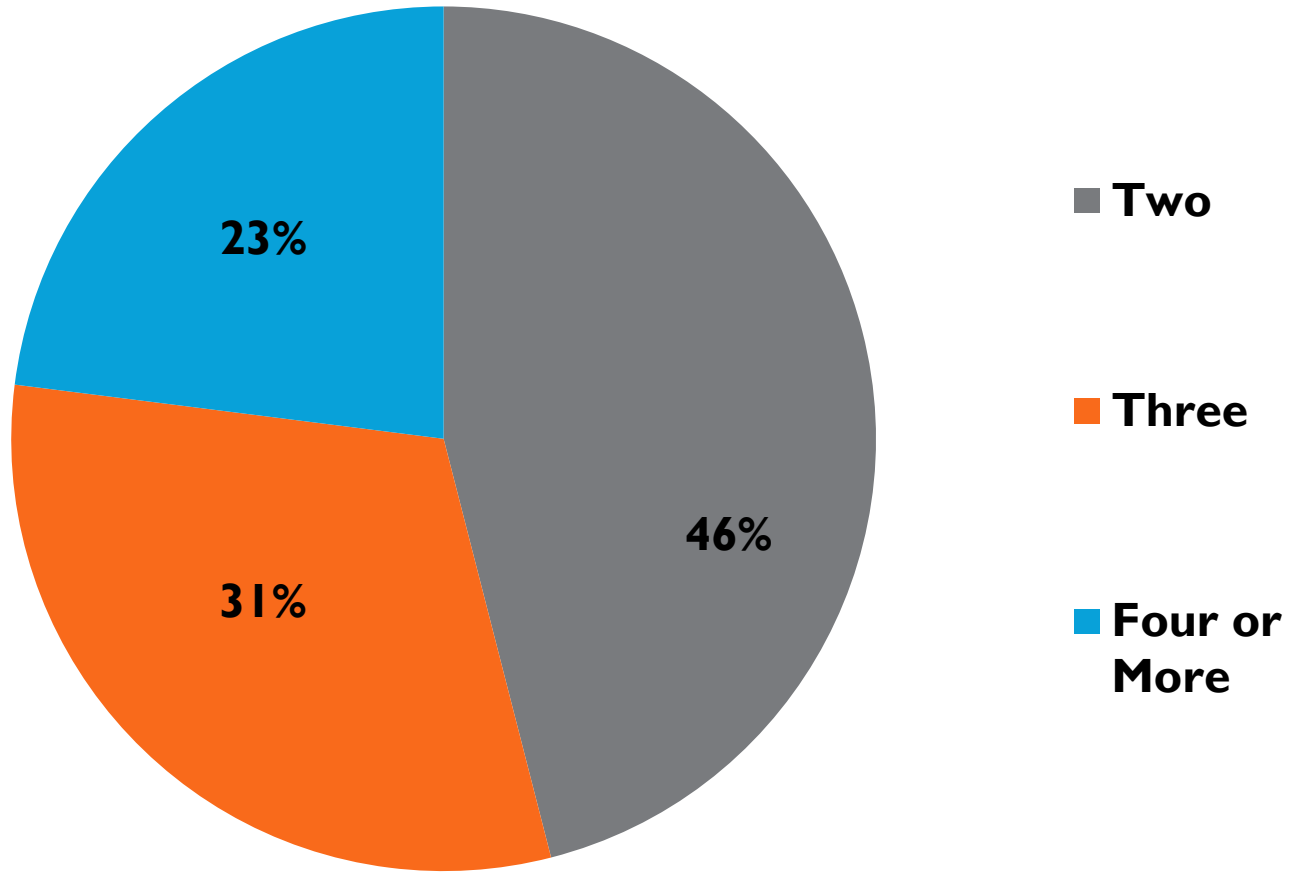
Webinars

	Extremely satisfied	Moderately satisfied	Neither satisfied nor dissatisfied	Moderately dissatisfied	Extremely dissatisfied	Don't Know
a) Quality	14% 16%	57% 60%	22% 16%	0%	0%	7% 4%
b) Length	21% 20%	50% 68%	22% 8%	0%	0%	7% 4%
c) Frequency	7% 4%	43% 48%	29% 28%	14% 12%	0% 4%	7% 4%
d) Recordings	15% 17%	23% 46%	46% 17%	0%	0%	16% 20%

Webinars - Usefulness
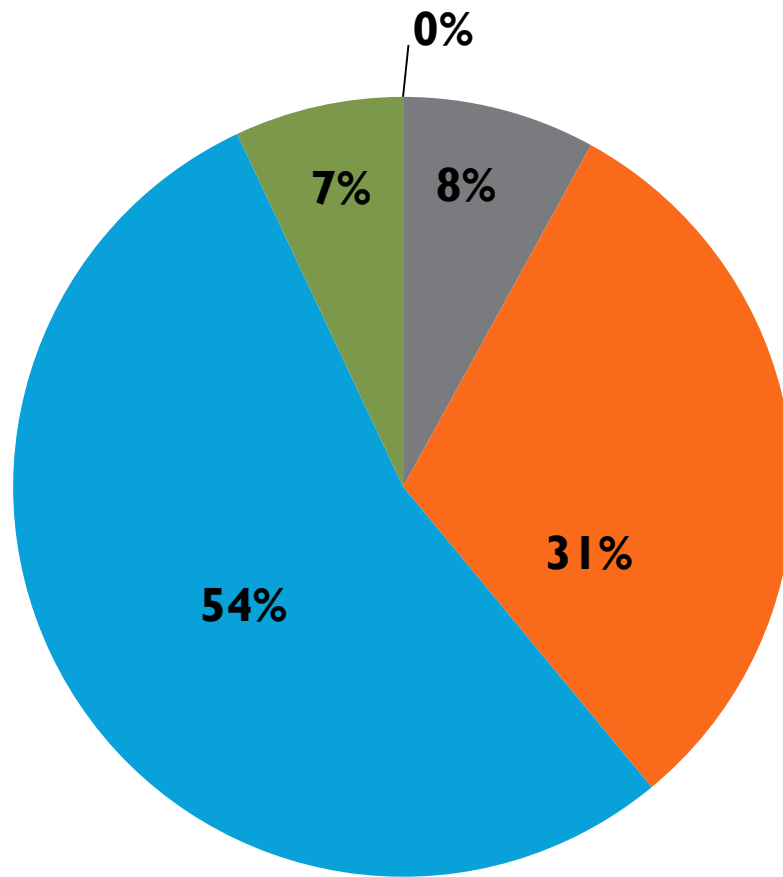
2014

■ **Extremely useful**	**0%**
■ **Very useful**	**36%**
■ **Moderately useful**	**52%**
■ **Slightly useful**	**12%**
■ **Not at all useful**	**0%**

Pie chart values: 0%, 8%, 31%, 54%, 7%

Comments on Webinars

- I don't seem to be getting notifications for the webinars
- The webinars are either too basic or too advanced. Would like to see three levels of webinars:
  - Basic - technician or input level user
  - Intermediate – inspectors or data modification users
  - Advanced – administrators manipulating the data

Interested in the Incorporation of other Asset Types

No
31%

Yes
69%

Other Asset Types of Interest
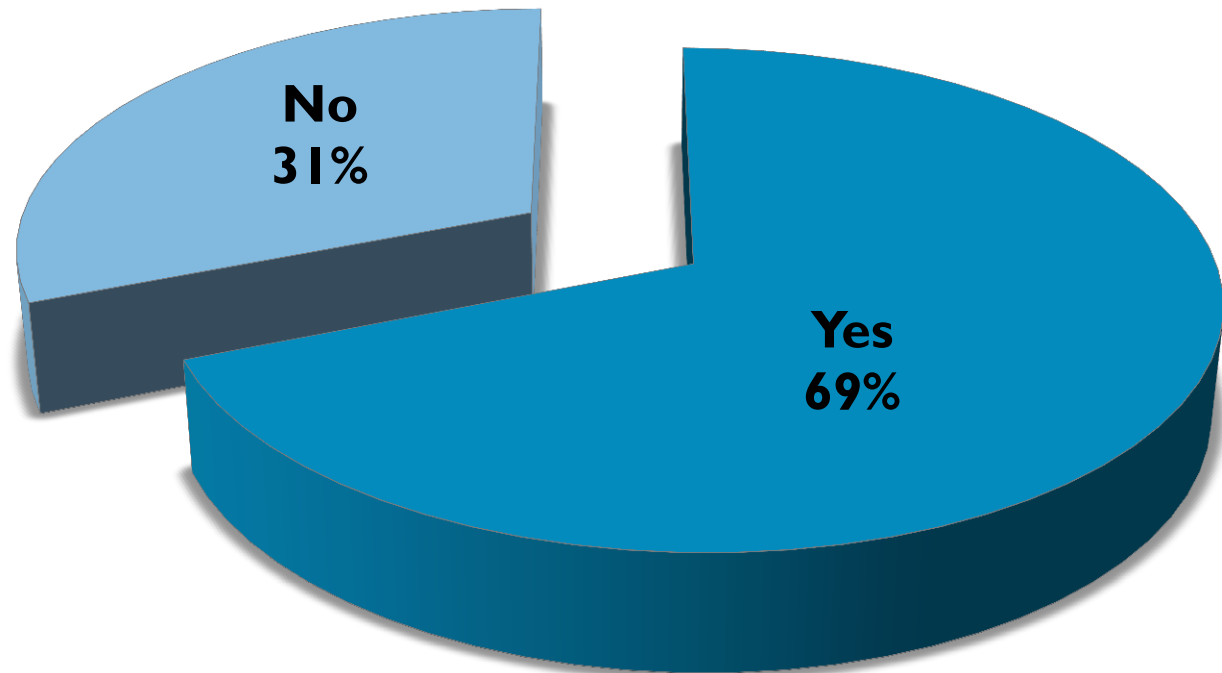
Functions for Additional Assets

Inspections
27%

Management / Analysis
14%

[CATEGORY NAME]
[VALUE]
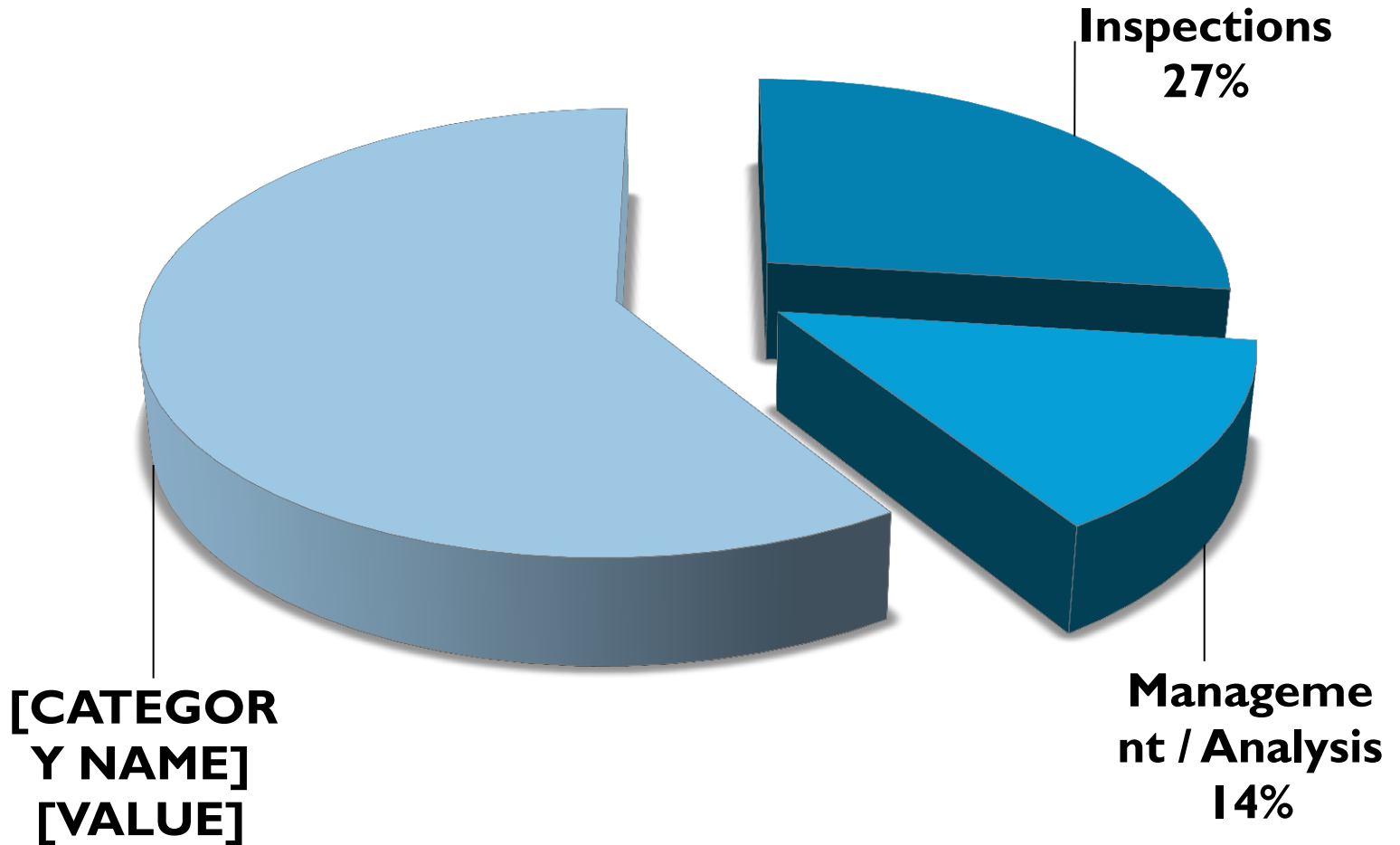
Third Party Software Integrated with BrM or using BrM Data
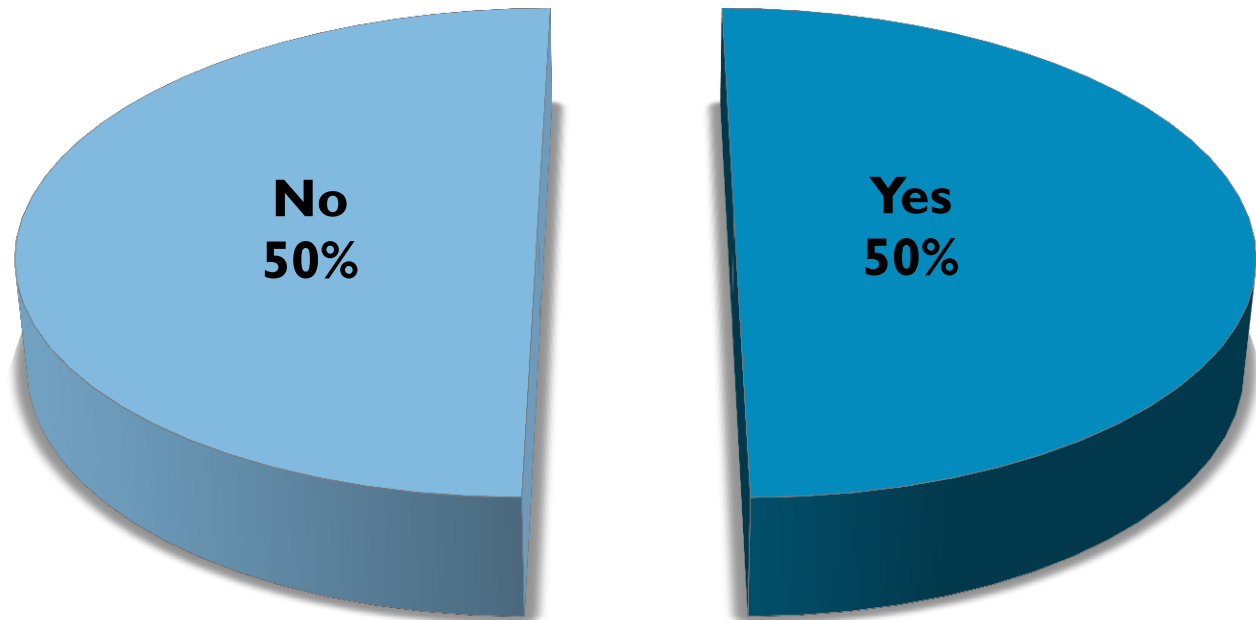
If Yes, What Software Tools

- InspectTech (4)
- Excel-based project level and network analysis tools (3)
- In-House Bridge Inspection Portal
- Arc-GIS
- PL/SQL
- Home grown
  - Cold Fusion Reports
  - Load Raters Database Update Tools
  - Scour Plan of Action Generator
  - Traffic ADT Updater

If Yes, What Software Tools

- MS SQL Reports
- Extraction of modeling/analysis results to custom software
- HIS
- HPMS
- TIMS
- PennDOT BMS and iForms

Agency / Task Force Contact
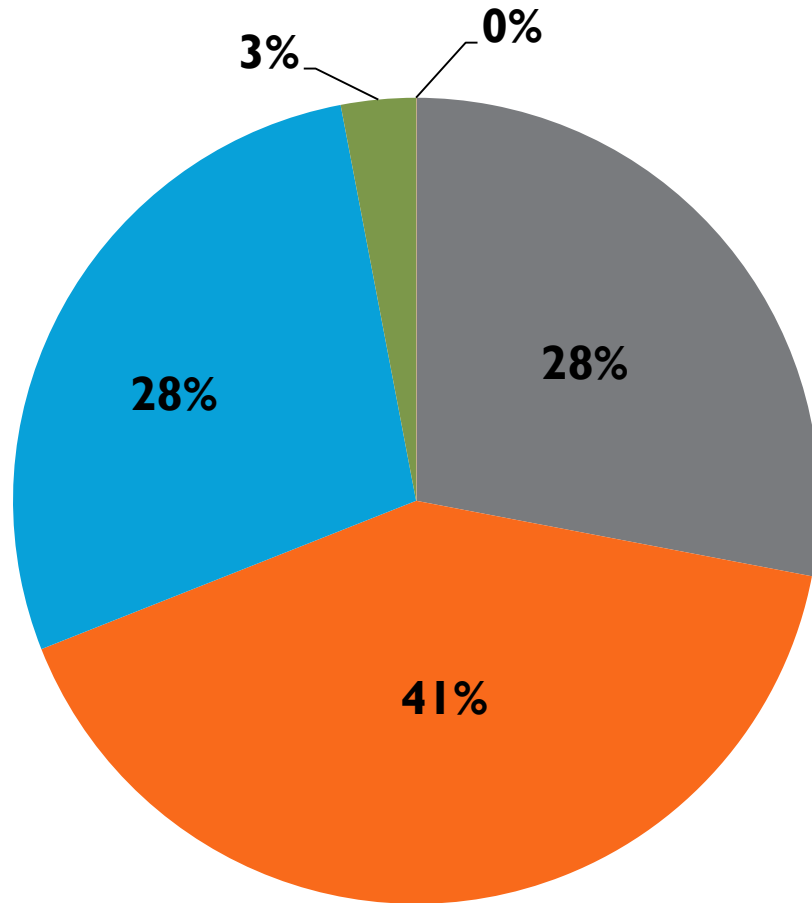
2014

■ **Extremely Satisfied** — 24%

■ **Moderately Satisfied** — 61%

■ **Neither satisfied nor dissatisfied** — 12%

■ **Moderately dissatisfied** — 3%

■ **Extremely dissatisfied** — 0%

Task Force Responsiveness
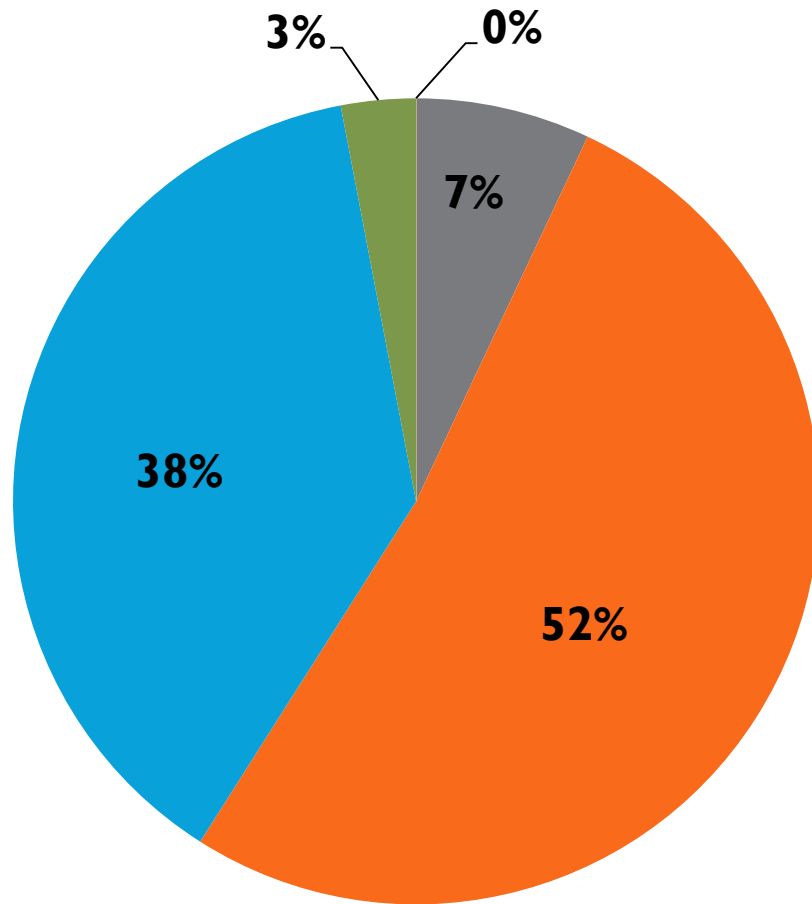
	2014
■ Extremely Satisfied	21%
■ Moderately Satisfied	49%
■ Neither satisfied nor dissatisfied	21%
■ Moderately dissatisfied	6%
■ Extremely dissatisfied	3%

Suggestions for Improvement Agency / Task Force

- Better communication to let us know what the Task Force is doing.
- Task Force should ask users at least once a month how they are doing and what Bentley could improve on.
- More repair fixes for existing software
- Phone number support should be available for certain cases if needed
- Software speed really needs to be improved.
- Auto log out time should be adjustable.

User Group / Task Force Relationship
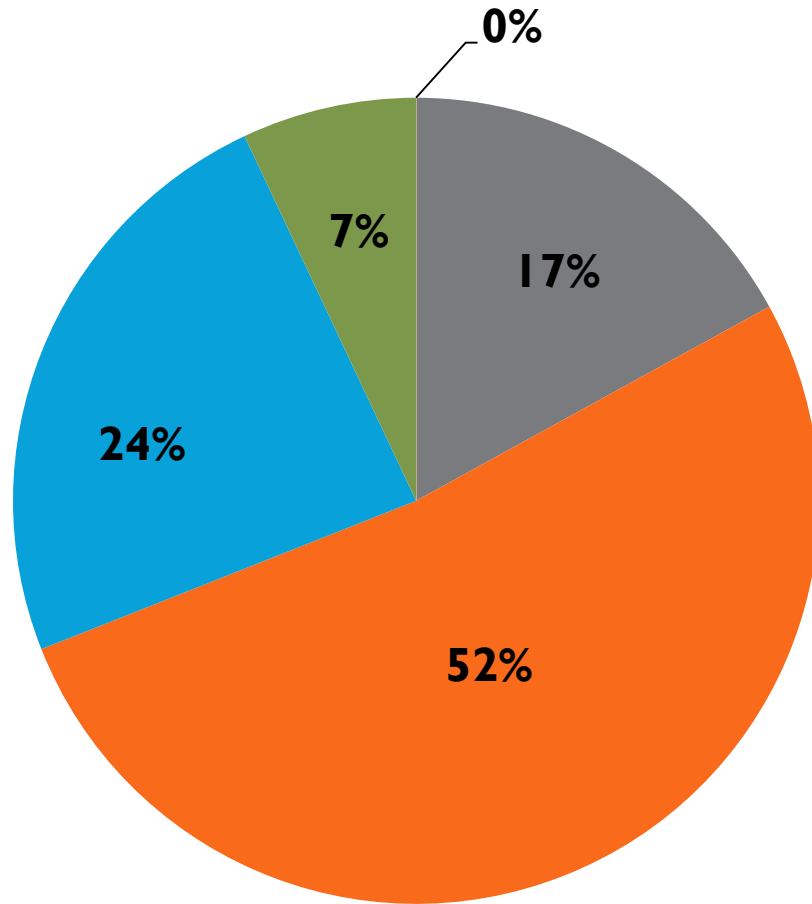
	2014
■ Extremely Satisfied	14%
■ Moderately Satisfied	61%
■ Neither satisfied nor dissatisfied	17%
■ Moderately dissatisfied	8%
■ Extremely dissatisfied	0%

Pie chart values: 0%, 17%, 52%, 24%, 7%

Suggestions for Improvement
User Group / Task Force

- Communicate with users
  - Let users know what is going on
  - Share decisions with users
  - Address specific JIRA issues periodically
- Task Force needs to listen to the users more
  - Need to maintain the old database keys even if GUIDs are adopted
- Software speed really needs to be improved.
- Auto log out time should be adjustable.

Specific Issues / Concerns

- I've been hearing that the software will be modeling in 2 years for the last 5 years – the pressure by my management to have it done is increasing every year
- The user need for a stable product has not been met
  - Stop putting out new versions without fully fixing all bugs and settling on a stable version
  - We are trying to make 5.2.1 SP3 work for us but Bentley is already deferring problems to 5.2.2 or 5.2.3

Specific Issues / Concerns

- Many department applications access the bridge database using the brkey as their connection. We cannot remove the brkey from the tables, even if GUIDs are adopted.

- Software speed really needs to be improved.

- Auto log out time should be adjustable.

- Setting up BrM for first time use is very complicated. I've heard that no state is truly happy with the product and several are switching to the Agile Assets product. This is very concerning about the future of BrM.

Follow-up Actions

- AASHTOWare Bridge Task Force Meetings (September 24 and November 3-5, 2015)
    - Review the detailed results of the survey
    - Discuss opportunities for improvement
    - Assign action items to implement changes sooner than later
    - Incorporate changes into FY17 work plan as appropriate

Thank You

- Questions?
- Comments?