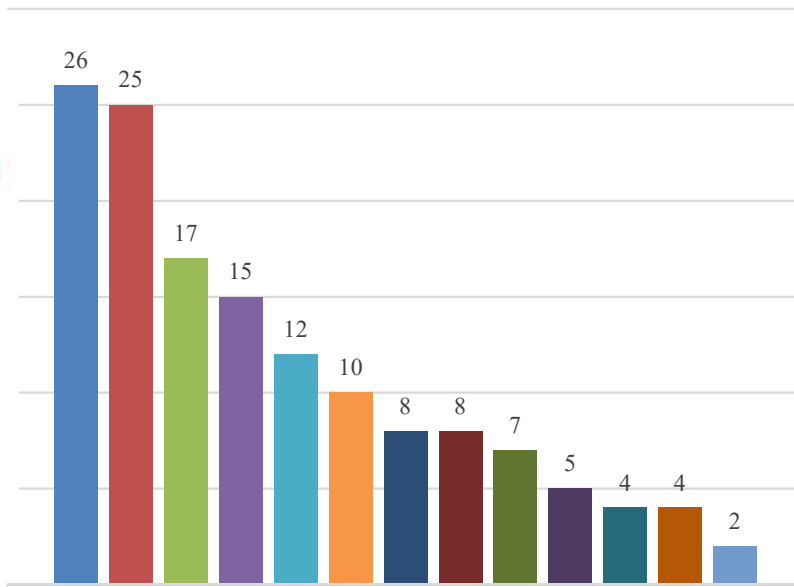


## Roundtable Discussion Results

Sunday, September 22, 2018

1. What was the most fruitful/beneficial action you took this year?



	Number of Votes
■ Software Implementation	26
■ Data Integration	25
■ Piloting	17
■ Workflows	15
■ Business Process Improvements	12
■ Internal Communication	10
■ Collaboration with Industry	8
■ Training Materials	8
■ Requirements	7
■ Planning	5
■ Quality Improvement	4
■ Staff Positions	4
■ e-Construction	2

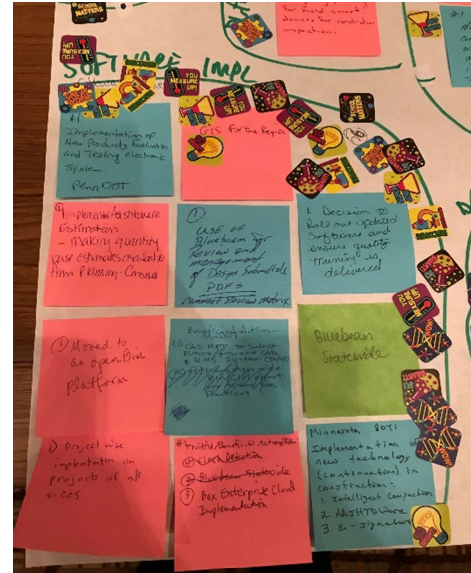
## Post-It Notes Comments:

### What was the most fruitful/beneficial action you took this year?

Sunday, September 22, 2018

#### Software Implementation (26 votes)

1. "Implementation of new products evaluation and testing electronic system"
2. "GIS for the regions"
3. "Implemented AASHTOWare Estimation - making quantity base estimates available from planning - construction"
4. "Use of Bluebeam for review and management of design submittals PDFs, comment review matrix"
5. "Decision to roll out updated software and ensure quality training is delivered"
6. "Moved to an Open BIM platform"
7. "CAD RFP to select future/forward CAD & DMS systems (3D/4D)"
8. "Bluebeam statewide"
9. "ProjectWise implementation on projects of all sizes"
10. "Box Enterprise Cloud Implementation"
11. "Implementation of new technology (continuation) in construction: intelligent compaction, AASHTOWare, e-signatures"



#### Data Integration (25 votes)

1. "Facilitating greater use of digital geospatially located data by DOT construction staff"
2. "Advancing the use of FME to extract design data and make available thru collector on mobile devices in the field. Ability to seamlessly & effortlessly deliver pre-con 3D data to contractors"
3. "CAD-GIS Integration"

## Piloting (17 votes)

1. "We have (2) full scale 3D design & construction projects underway both design-build, no in-house projects, the benefits have not been evaluated yet"
2. "Implementation of mobile devices for field & project delivery staff and start of PlanGrid pilot"
3. "PS&E pilot"
4. "Pilot partial model delivery and holistic project deliverables"
5. "Beginning to develop best practices by using pilot projects"

## Workflows (15 votes)

1. "Dedicated to 3D workflows"
2. "Clash detection"
3. "Show and prove the value of using data downstream on a project - develop workflows around data"

## Business Process Improvements (12 votes)

1. "Contract language modification for 3D process"
2. "Implement change control, accountability meetings and project delivery super teams"
3. "Working on incorporating digital signatures/stamps/seals"
4. "Electronic approval of change orders"
5. "Implemented an electronic submission of district plans"
6. "Page numbering was changed to alphanumeric A1, B1, B2... to allow engineers to sign sheets and others do not need to modify even the page # of the sheet in late project reviews"

## Internal Communication (10 votes)

1. "Communicated goals and objectives to managers throughout agency"
2. "Obtained top leadership"
3. "Talking to upper management about digital delivery"
4. "Open communications"
5. "Field staff have started to ask questions about how to use tools they have to check contractor auto systems and work"  
"Sharing information, reducing repeated work & duplication"

## Collaboration with Industry (8)

1. "Partner with vendor & consultant on creating paperless bridge plans"
2. "Taken proposed digital delivery concepts to industry for collaboration and buy-in"
3. "Completed an 'as-is' to be exercise with our major civil integrated management stakeholders"
4. "Construction initiatives and hosting peer exchange on e-Construction. Easier way to integrate data from Design to Construction to work management and operations"
5. "More active conversations with clients about digital implementations resulting in a contracted model"

## Training Materials (8 votes)

1. "Training material updates"

## Requirements (7 votes)

1. "Client training and expectation management. Team training and deployment digital deliverables: team consensus, training auditing"
2. "Built a set of standards for 3D structures design to be used throughout many different projects"
3. "Began the conversation OR applied levels, OR digital data development statewide"
4. "QAQC documentation and process"
5. "Developed better 2D CAD standards to get our house in order for implementing full 3D model delivery"
6. "More agencies actually requiring 3D models to build new and improved workflows to prove value"

## Planning (5 votes)

1. "Initiated a BIM road mapping effort"
2. "Budgetary planning for field smart devices for construction inspection"

## Quality Improvement (4 votes)

1. "We are creating better models that the industry can use"

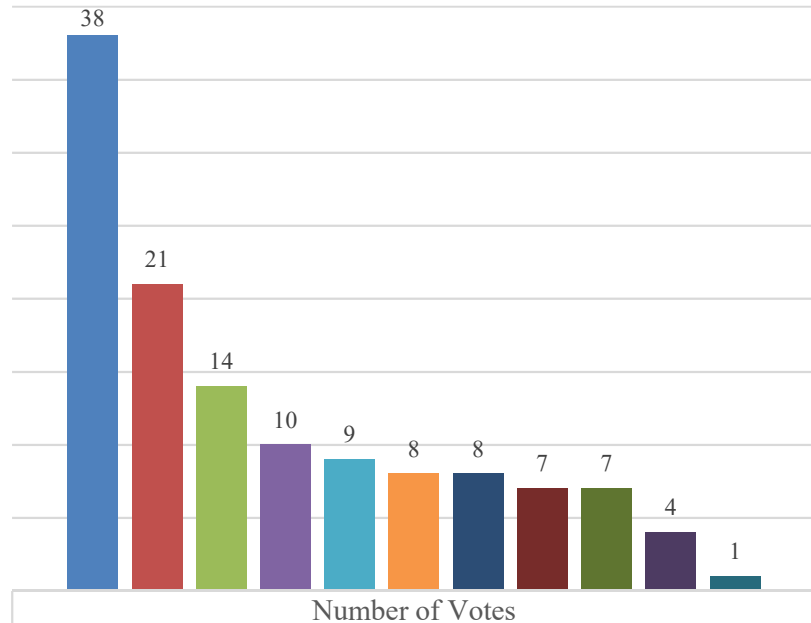
## Staff Positions (4 votes)

1. "Launched 365 SharePoint cradle to grave project management by hiring an experienced cloud developer"
2. "Identifying a core team of business CADD leaders to shape development and champion ProjectWise implementation"

## Roundtable Discussion Results

Sunday, September 22, 2018

### 2. What would you change about your software?



	Number of Votes
■ Data Integration	38
■ Better Solution for Construction	21
■ Open Data Standards	14
■ Mobile Solutions	10
■ More Mature Software Before Releases	9
■ Software Features	8
■ Balance: Agency Control & User Flexibility	8
■ Bus. Owners Involved in Decision Making	7
■ Tools Compatibles with Security Requirements	7
■ Better Training	4
■ Get Newer Software	1

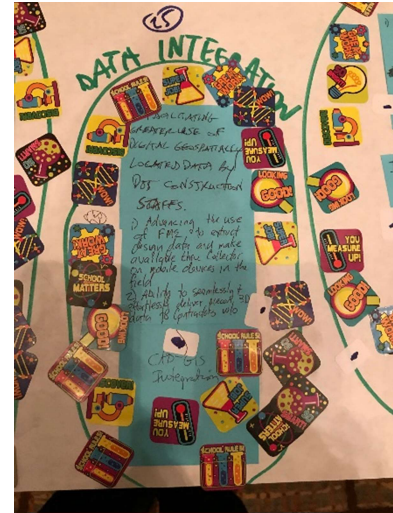
## Post-It Notes Comments:

### What would you change about your software?

Sunday, September 22, 2018

#### Data Integration (38 votes)

1. "Open data formats/better API integration"
2. "Easy transfer of data"
3. "Increase interoperability - compatibility cross-platforms"
4. "Better integration with limited configuration. Being able to use more of one stop shop instead of heavy customization to work with homegrown systems"
5. "Ensure seamless integration with other data sets"
6. "Software changer - open source data exchange capability"
7. "More universal outputs"
8. "Integration with other software. Very complicated"
9. "Non-proprietary (vendor neutral) solution for viewing data"
10. "Easier/more consistent output for all users downstream"
11. "Allow for improved interoperability with design software outside of the manufacturers design suite"
12. "Increase collaborative/interoperability of software with other vendors"
13. "Better integration of design software with authoritative asset databases & GIS"
14. "Better integration with the state design manuals by use of reference tags that could be tied to ORD specific function"
15. "Better opportunities for integration across platforms"



#### Better Solutions for Construction (21 votes)

1. "Software for DOT construction staff that enables greater use of 3D models"
2. "Want tools to improve QC"
3. "More site licenses to allow remote offices/districts use software"

#### Open Data Standards (14 votes)

1. "Lack of government data standards"
2. "Elimination of iModels (native meta data)"

#### Mobile Solutions (10 votes)

1. "Mobile friendly. Easier to access info in field"
2. "Simple model based mobile interface"

#### More Mature Software Before Releases (9 votes)

1. CAD software complete before releasing - crashes are frustrating and unproductive. Tough to sell collaboration with non-functional software"

## Software Features (8 votes)

1. "Surface refinement matching model (C3D) corridor XS"
2. "Simplify process for 3<sup>rd</sup> party verification of digital signatures"
3. "Better software to finish the 3D model"
4. "Imagery to coordinate systems both for CAD & GIS improvement"
5. "Improved visualization models for construction (small footprint)"
6. "Rules-based clash detection"
7. "Better error or conflict detection tools"
8. "Better scheduling tools that integrate with document workflow software"

## Balance: Agency Control & User Flexibility (8 votes)

1. "Striking a balance between organization control and project specific flexibility for end users. As well as enabling data mobility across solutions"
2. "The software is fine - the trouble is the amount of oversight from department of administration and the rule & procedures that come with their investment"
3. "Make everyone use some enterprise software for functions"

## Business Owners Involved in Decision Making (7 votes)

1. "Integrating more business owners into decisions about software use and implementation agency wide"

## Tools Compatibles with Security Requirements (4 votes)

2. "That the software would meet our minimum security standards"
3. "Cloud-based solutions with mature security, identity, access control modes & SLAs"

## Better Training (4 votes)

1. "We will need to invest more in 3D design software & training, but typically we are looking for more interoperability specifically with structural design software"
2. "Increase training and on-the-job usage of new applications"
3. "Learn how to regularly leverage existing tools & software"
4. "Cost simplification & training"

## Get Newer Software (1 vote)

1. "Getting people to use newer software and not sticking with only things they know"
2. "Continue to take steps to advance to the next generation of new software"
3. "Get newer generation of software, implement cleaner agency standards for deliverables"