

NASCIO and NASPO Topical Roundtable

*Designing for Agility: Advancing IT
and Procurement Modernization*

Charlotte, North Carolina
July 26-27, 2016





NASCIO and NASPO Topical Roundtable

Designing for Agility: Advancing IT and Procurement Modernization

"I'm struck by the significance of the digital revolution... and understanding what this change means for people. We have to double-down on the cultural part."

– Jim Smith
Chief Information Officer, State of Maine

The digital future is upon us and it's reshaping government. New technologies are helping state governments connect with citizens in novel ways to provide accessible, anticipatory, personalized, and simple services. In this digital age, public sector leaders have vast opportunities to increase efficiency, reduce costs, improve transparency, and advance collaborative services. However, as we redesign the "front-end" and "back-end" of government, leaders are encountering procedural, structural, and systemic barriers to driving technology-enabled innovations.

How can new technologies and cloud-based computing services help us to increase effectiveness, outcomes, and transparency? What policies and processes can we follow to safeguard state resources as this work evolves? How can procurement officials and technology officials find new ways to collaborate to make government more agile, responsive, efficient and effective?

To help public sector leaders address these questions and explore harmonizing the relationship between procurement offices and information technology offices in a world of innovation dominated by *agile* and *cloud*, Leadership for a Networked World and the Technology and Entrepreneurship Center at Harvard, in collaboration with the National Association of State Chief Information Officers (NASCIO) and the National Association of State Procurement Officials (NASPO), convened CIOs and CPOs for the inaugural



NASCIO and NASPO Topical Roundtable, *Designing for Agility: Advancing IT and Procurement Modernization*. This Roundtable provided opportunities for leaders to collaborate with their peers in other states to identify challenges, brainstorm solutions, and develop action steps for driving transformation.

Through a series of presentations, panels and moderated discussions, the Roundtable culminated in an ideation session, in which participants worked together to develop new ideas and strategies for advancing IT and procurement modernization in their states.

By sharing highlights from this event, leadership insights, and a practical agenda, we hope this report will inspire and inform public sector leaders across the country as they respond to a rapidly changing environment.

“It’s critical our two organizations are in lock-step and we establish formal alignment.”

– Jeff Brownlee
Chief Procurement Official, State of Michigan



“As the world grows more complex, government must become more agile - both in posture and practice. This new level of agility will require CIOs and CPOs to collaborate like never before.”

- Antonio Oftelie

Executive Director, Leadership for a Networked World

Contents

Dimensions for Change	5
The Leadership Landscape	6
Cases in Point.....	7
System Redesign and Agile Development in California.....	7
IT Optimization and Harmonization with Procurement in Ohio	9
Action Plan	12
Conclusion	15
Acknowledgments.....	16

Dimensions for Change

To address the leadership challenges of harmonizing the relationship between procurement offices and information technology offices while modernizing IT and procurement, during the Roundtable we examined four primary dimensions: governance and organizational structure, teaming and roles, interactions and processes, and budgeting and forecasting.

Governance and Organizational Structure

This dimension represents factors that shape the way work is structured and governed. It includes the overall vision for projects that sit at the intersection of IT and procurement, the design and structure of that work, and the allocation of resources to these efforts. To assess this dimension, leaders can consider the following questions: *Who sets the vision for this work and manages it? How have we organized our IT and procurement resources? Is our work together structured in the most effective manner? What are the new channels of accountability? Have we minimized the number of hand-offs between procurement, IT, lead agencies, and vendors?*

Teaming and Roles

This dimension represents the teams and roles we have established to lead this work, and their levels of authority, accountability and responsibility. To assess this dimension, leaders might consider the following questions: *What teams have we established to manage and conduct this work? Within those teams do we have clear roles and all of the roles necessary to succeed? Are people authorized to act out their roles? What new competencies must we develop to be successful?*

Interactions and Processes

This dimension represents the interactions between procurement and IT. It encompasses communications systems, structures, and approaches, decision-making processes, and tools to plan and fulfill tasks. To assess this dimension, leaders might consider the following questions: *Are there clear lines of communication between procurement and IT? Do we have effective strategies in place to make decisions? Are we able to make decisions quickly while maintaining consistency and abiding by safeguards? Are there sufficient levels of accountability and transparency in our processes? Do we have processes in place to promote coordination and ensure knowledge transfer?*

Budgeting and Forecasting

This dimension represents the process for predicting and allocating funding. It includes planning cycles, the frequency with which budgets are established and revisited, how funds are released, and the ability to adjust budgets and fund allocation. To assess this dimension, leaders might consider the following questions: *Do our budgeting and planning cycles allow us to rework and rebalance our efforts as necessary? Are we able to adjust resources as projects develop? Can we capitalize on opportunities to reduce waste? Do we have an appropriate level of transparency in our fiscal processes?*

Throughout the Roundtable participants reflected on what each of these dimensions currently looks like, what they should look like, and steps leaders can take to redesign work along this dimension.

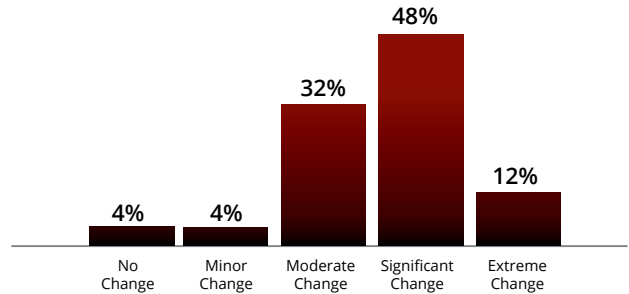
The Leadership Landscape

(Participant Survey)

Before the Roundtable, participants offered their perspectives, through an online survey, on the landscape for advancing IT and procurement modernization and harmonizing the relationship between procurement offices and information technology offices.

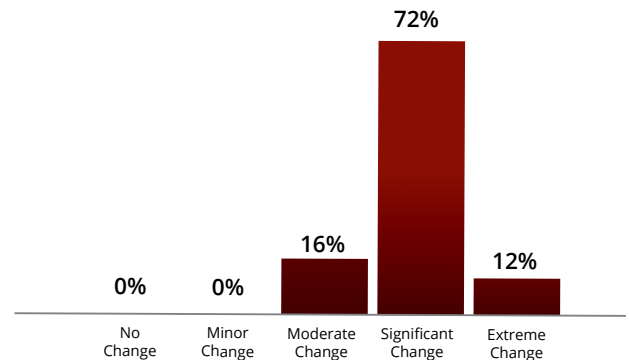
Most participants said digital technologies and business models have changed their operating environment and their role as a government leader significantly over the past five years.

Digital Impact on Environment & Role



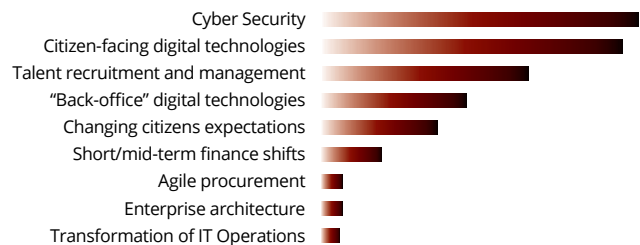
In the next five years, even more participants anticipated significant changes to their environment and role as a result of evolving digital technologies and business models.

Digital Impact on Environment & Role in 5 years



Participants identified cyber security, citizen-facing digital technologies and capabilities, and talent recruitment and management, as the three biggest drivers of change for the future.

Biggest Drivers of Change



Participants also reflected on major barriers and enablers to modernizing IT and procurement.

Participants cited "executive leadership," "data and analytics," "new collaborations and partnerships," and "increasing transparency and accessibility" as the most important enablers for IT and procurement modernization, while "organizational culture," "managing issues around control and accountability," "establishing a governance structure and operating model," and "workforce constraints" were the most significant barriers.

Cases in Point

To spur ideas, generate discussion, and highlight innovations, Roundtable participants examined promising cases of agile development, procurement modernization and cloud computing in California and Ohio.

Each case highlighted a unique set of opportunities and challenges to implementation or advancement. The strategies employed to meet these challenges and leverage opportunities shaped the discussion to develop Action Plan items for harmonizing the relationship between procurement offices and information technology offices.

System Redesign and Agile Development in California

In 2013, government officials in California decided to replace their Child Welfare Services Case Management System with a new system that would capitalize on technology to maximize efficiency and impact. Initially, to secure a vendor to lead the system redesign, the state developed a traditional Request for Proposals (RFP), which took over three years to assemble and was more than 1,500 pages long. However, state leaders realized their traditional solicitation approach would delay mobile, real-time access for case workers and ran the risk of binding the state to an ineffective vendor, so they decided to alter their approach. In partnership with 18F (a federal office that helps government agencies develop, build, and share digital products) and Code for America (a non-profit that helps local governments with technological innovation), California officials developed a new RFP.

Their new, agile procurement approach put the emphasis where it belonged – on providing relief to caseworkers. Taking a page out of the US Digital Services Playbook,¹ California created a pool of pre-qualified agile development vendors through a highly transparent, relatively quick, solicitation process designed to test vendors' ability to develop prototypes and understand the user-experience. Creating an RFP with an agile, modular (i.e. with the work broken down into discrete modules) format allowed California to bring more diversity into the process, create greater competition, and negotiate different services separately, producing greater precision and providing for alpha and beta phases and user-testing.

Chief Procurement Officer Jim Butler and Deputy CIO Rebecca Stilling outlined steps they took and key leadership lessons they learned on this journey, including:

Governance and Organizational Structure

Crafting an RFP with a modular, agile format necessitated redesigning the work requested, developing a new management approach, and refining the project's vision.

- All participants in this initiative have to agree on a shared vision, in this case focused on getting caseworkers the tools they need to help children.
- From a project management perspective, the state had to adopt a different relationship with the vendor and act as an integrator, helping with monitoring, validating and modifying efforts.

Teaming and Roles

Through this process, California adopted a new approach to teaming and roles, including expanding the role of users (in this instance caseworkers), creating new positions, increasing the frequency of interactions, and more.

- Adopting an agile approach requires expanding the roles and responsibilities of the end users. For examples, caseworkers were engaged in the governance of scrum teams (cross-functional teams, frequently comprised of software engineers, architects, programmers, analysts, user interface designers and other specialists that collaborate intensely to develop new technological solutions and innovations).
- Everyone – IT, procurement, users, and departments – needs to be involved all the time. The resulting healthy and frequent interactions changed the team dynamics.

1 For additional information on the US Digital Services Playbook, see: <https://playbook.cio.gov/> (accessed on November 21, 2016).

- New positions might be in order. California realized they had to create an architectural solution leader to work closely with vendors, the Department of Technology, and the Data Center System.
- States may need to take on additional authority and responsibilities. California had a bias for large projects produced by one big RFP with a single integrator or developing entity, which would result in “one throat to choke.” Shifting their approach put more authority back on the state, and meant the state had a greater responsibility in driving the system architecture and integrating discrete pieces.

“We’re all part of the solution. We’ve embraced the vision of using this methodology. We all realize what’s most important is getting case workers the tools they need to help children.”

- Jim Butler
Chief Procurement Officer, State of California

Interactions and Processes

On this journey, California had to make changes to their systems, structures, and approaches to communications, making decisions, and managing tasks.

- IT and procurement must share decision-making responsibilities. For example, the two offices worked together to establish the pool of vendors.
- It was essential to provide people with scrum training. California found this helped people to veer from a more traditional “chain of command” concept and made it easier for managers to relinquish control.
- Oversight systems might require modification. California realized their project management approach was geared toward waterfall development. With help from 18F, they created a checks-and-balances scrum team to consider questions such as: Is the project doing the right thing, at the right time? Do we have visibility into the project and risks? Do we have to make adjustments to our schedule, costs, and scope of work as the new system evolves?

Budgeting and Forecasting

California also shared insights on implications for their new agile procurement approach for budgeting and forecasting.

- Taking a modular, agile approach to procurement will necessitate more frequent interactions with legislators about budgeting and forecasting. As this work evolves, California expects to share more information on results and needs with leaders managing appropriations.
- This work is hard, so there will be failures. However, the state anticipates smaller failures, which they hope will be tolerated by legislators since they can be corrected sooner.
- Previously, legislators were frustrated with the slow pace of system improvements. They now welcome the chance for more frequent interactions and feedback and are enthused about the vision for a more rapid release. With the new approach, legislators have been promised monthly progress briefings, and an opportunity to change, reorder, and reprioritize efforts as things evolve.

While California is still experimenting with and learning from this project, there have been a number of initial successes. Already, the procurement process is moving faster, there’s greater transparency, they have expanded their vendor pool, and there’s great energy and excitement around the new approach. The state will continue to encounter challenges – for example, operations teams are used to having more notice before moving things into production, the state is still sorting out the best approach to requirements and standards for state security, and keeping all the moving parts coordinated will be an ongoing effort; however, everyone is cooperating, working to remain dynamic, and taking to heart lessons already learned.

IT Optimization and Harmonization with Procurement in Ohio

Just over five years ago the State of Ohio had a “monumental, silo-ed information technology (IT) situation.” Twenty-six agencies were using approximately 9,000 servers to support more than 32 data centers that were each running at less than 10% capacity. Moreover, of the close to one billion dollars total that was being spent to support IT, approximately 70% of that was dedicated to infrastructure, such as servers and routers, while only 30% was being spent on public-facing applications.

Over the last half decade, Ohio has made tremendous strides to restructure and optimize IT systems, migrate 5,000 servers to the cloud, and re-allocate spending to what’s important. Under their new consolidated, streamlined system, Ohio has developed a robust and scalable foundation to build agency applications and services. These changes have resulted in dramatic savings and strong new partnerships. The new State data center is now available to the Ohio University system and local governments and has attracted multiple county, university, and elected officials as co-location customers. In the past two years, Ohio has seen more than \$100 million in direct savings and produced \$60 million of cost avoidance for higher education and local government partners.

Chief Information Officer Stu Davis outlined steps Ohio took and key leadership lessons they learned on this journey of modernization and migration to the cloud, including:



Governance and Organizational Structure

To successfully implement these changes, Ohio had to develop a new vision and strategy, change their organizational structure, and look outside for a fresh leadership perspective.

- Early on, the state created a Multi-Agency CIO Advisory Council (MAC) that convenes CIOs from different state agencies every six weeks to discuss ways that the state could improve IT service. This governance structure generated buy-in, created a sense of urgency, and helped to align key stakeholders.
- Refocusing and refining the vision for IT initiatives is critical. In 2012 Ohio developed a new strategy for IT and in 2015 the state launched a robust transformation plan that clearly articulated a new goal of realigning IT spending and migrating agencies to a single mainframe. As part of their vision, Ohio now looks at all of their IT offerings as a service and focuses on getting the appropriate components.
- Simultaneously, Ohio has made a concerted effort to align procurement to an enterprise perspective. The CIO has created an ecosystem, including agencies, procurement, and the business community, that has a shared understanding of priorities.
- In addition, to restructure the relationship between IT and procurement, the state altered the reporting structures to have the CIO own IT procurement, and develop a shared IT procurement agenda.
- Ohio has been able to capitalize on external leadership resources as well. To support their work, the state established a CIO Council comprised of industry CIOs to vet ideas the agency is considering, share trade information, and ask strategic questions.

Teaming and Roles

Like California, Ohio adopted a new approach to teaming and roles, including repositioning the role of IT procurement, changing the role of the state, providing greater authority to project managers, and more.

- To succeed in Ohio, IT procurement had to take on a more consultative role. At the same time, the IT department maintained authority, as agencies must get final sign-off on IT purchases from the CIO's office.
- The IT project management office has served as an important nexus in this effort. Certified, knowledgeable, experienced project managers are responsible for procurement, cost management, timelines and so forth. They assist with vendor management, and help to keep the sponsor protected. However, Ohio has found they must be involved pre-RFP.
- Through this process the role of the state has evolved. For example, as Ohio progresses towards viewing data analytics as a service, they have moved away from "pulling" data. Instead they bring in industry and subject matter experts to manage the data and the state addresses the outcomes.

Interactions and Processes

Throughout this effort, Ohio has adjusted their processes, systems, and structures.

- The state has adopted a portfolio management approach to IT projects. They begin by looking at the user experience, trying to streamline that, and identifying a central place for citizens to enter. This has led them to mobile first, and cloud first.
- In the old days, IT built the systems and structures. Now, Ohio is moving into a service platform environment, where the focus is on obtaining customized packages from vendors.
- As a result of this shift, procurement now manages the IT procurement process. They begin with a conversation about goals between representatives from IT, procurement, and agencies. Next they identify where they have seen strong RFPs, potential issues with language in a solicitation, and possible concerns with contractual terms. Finally, after aligning intent, they put the ideas down on paper.
- IT and procurement have increased engagement with agencies to avoid problems and to develop a deeper understanding of an enterprise-wide perspective. In the past, they realized projects tended to "go south" when they were agency-specific and had no oversight and no engagement.

Budgeting and Forecasting

Finally, Ohio discussed lessons learned about the intersection between their new work and budgeting and forecasting.

- Leaders in Ohio realized that the budget could be a powerful tool for making the case for a new way of doing business. With no new money in the budget, the leadership team brought together CIOs from each agency and department and demonstrated that they could not continue with the current spending levels.
- They set financial thresholds to guide interactions and decision-making approaches. For example, for projects over \$15 million, business partners, technology leads, and procurement officials come together monthly for a meeting.
- Ohio was very mindful to engage legislators in their work. After rebuilding the Data Center, they invited legislators to take a guided tour and engaged them as ambassadors in efforts to expand partnerships to include other state agencies, universities, and local governments.

Ohio has made tremendous strides in advancing IT optimization and harmonizing IT and procurement. These efforts have saved the state millions of dollars, allowed Ohio to shift more of its IT spending to citizen-facing applications, and served as a springboard for innovation. Nevertheless, as its work and approach evolves, the state still has some obstacles to address, such as developing a cadre of talented project managers who are able to oversee large, complex, multi-agency projects, creating better mechanisms to keep all parties updated on procurement activities, enhancing governance structures to get to better decisions faster, and finding better ways to document gains in efficiencies.



Action Plan

At the end of the Roundtable, participants broke into small groups to explore various themes, lessons and insights that emerged over the course of the event. The following Action Plan represents a vision and a path to redesigning work between CPOs and CIOs along the dimensions of governance and organizational structure, teaming and roles, interaction and processes, and budgeting and forecasting.

Governance and Organizational Structure

Despite vast differences in how states approach structuring, organizing, governing, and delegating resources to work at the intersection between IT and Procurement, participants were able to find common ground around a core set of governance and organizational structure recommendations.

- Obtain executive buy-in, which is critical for success.
- Strive for a centralized governance structure.
- Develop a formal governance process that provides both CIOs and CPOs with an opportunity to approve or deny technology procurement.
- Start somewhere. Collaborate, be creative, and work towards developing an understanding of who needs to be on a governance committee, what roles participants should play, how to position this group to be effective, and how to routinize and make working together a regular occurrence.
- Consider cultivating a Technology Board (as seen in Indiana and Ohio) to facilitate collaboration.
- Develop and maintain enterprise-wide architecture in order to reduce replication, raise awareness about redundancies, and support a centralized governance model.
- Ensure early engagement with all agencies involved, including purchasing, IT, legal, and other key stakeholders.
- Make a concerted effort to lead by example and shift the culture in both procurement offices and IT offices.
- Implement strategies to develop mutual respect and understanding between procurement and IT offices.
- Generate alignment between the procurement and IT offices by establishing clarity and a strategy around goals, standards, and processes.
- Establish a common approach to IT contracts to manage risks and align general procurement and IT processes.
- Develop a joint prioritization rubric or strategy between the procurement office, the IT office, agencies, and executive leadership and resource it appropriately. When everything is an emergency or priority, nothing is.
- Implement a strategy to empower business and program staff. Provide the authority, tools, and expertise necessary to solicit more active participation and engagement.

Teaming and Roles

While participants noted that “personalities lead to success, and it’s hard to make an action step out of that,” they were able to identify recommendations, strategies, and tactics to establish effective teams, roles, and levels of authority, accountability and responsibility.

- Develop a new team to manage IT procurement, with the authority, skills, and perspective necessary to adapt the traditional procurement processes to meet new technology demands.
- Assign procurement officials to IT project teams early in the process.
- Position “gatekeepers” as a shared role between IT and procurement.
- Develop a deeper understanding of each other’s expertise and where each office can add value.

- Address stratified communication between procurement and IT officials in more operational roles by discussing and agreeing upon roles, authorities, and responsibilities.
- Establish clearer lines of authority.
- Education is critical. Take steps to ensure that procurement officials have a deep understanding of what IT does and their responsibilities, and information technology officials understand the procurement office.
- Collaborate to develop shared goals.
- Inventory and compare how each state approaches teaming, roles and responsibilities between procurement and IT, and highlight success stories, lessons learned, and best practices.
- Minimize the segmentation between vendors, buyers, IT, and procurement officials by establishing a common vision and overall goals and communicating frequently.
- Assess the new competencies needed for successful IT procurement. Whereas buyers in the past might have been focused on reducing costs, IT procurement often focuses on value. Provide the training necessary for people to develop these skills, approaches, and tactics.
- Cultivate employees with an enterprise-wide view who are experts in the patterns, trends, and direction in which the world is moving.
- Offer more intensive and intentional team-building exercises and activities at the operations level to cultivate stronger relationships.

“We might not hang at the same time, but we will certainly hang together.”

– Stu Davis
Chief Information Officer, State of Ohio

Interactions and Processes

Participants proposed several ideas to enhance interactions between procurement and IT by adapting structures, systems, communications processes, and decision-making approaches.

- Hold regular strategy sessions between the procurement office and the IT office to anticipate cooperative work, efforts, and initiatives.
- Clearly define communication protocols within and between procurement offices and IT offices.
- Stress frequent communication at all levels of the organization.
- Create shared systems and visibility into each other’s systems to facilitate the flow of information. For example, the IT office could share details on project planning with procurement officials.
- Hold regular meetings with IT and procurement officials to discuss approaches and philosophies.
- Develop a new case management approach to collaborate and plan together.
- Partner to understand each other’s business processes and develop more dynamic joint processes.
- Establish clarity around “rules of engagement” across functions and offices.
- Communicate early and often about what information and decisions each office should document at the beginning of the process and as things progress.
- Verify and share information about procurement processes and workflow.
- Develop and hold a “deep-dive” training session on procurement processes.

Budgeting and Forecasting

Together, participants developed a set of ideas, recommendations, and topics for exploration to better enhance the processes for predicting, allocating, tracking and assessing funding at the intersection between procurement and IT offices.

"We need clarity, communications, and consistency."

– Ellen Daley
Chief Procurement Officer, State of Illinois

- Acknowledge that by working together the CPO and CIO have tremendous opportunities to reduce waste and enhance efficiencies.
- Conduct a thorough inventory of what technologies and subscriptions are expiring, which agencies are involved, what activities are underway, and what large IT procurements will occur in the future.
- Implement tools and software to capture information on technology demands and capacity, such as an Eprocurement system or a comprehensive listing of IT services.
- Increase transparency to assess current activities and make stronger predictions moving forward.
- Partner to identify duplication in IT services, systems, and structures.
- Collectively address the challenges associated with estimating costs. Tools to accomplish this include engaging subject matter experts, collecting and analyzing longitudinal data, and engaging third parties in these efforts.
- Establish the goal of more uniform data entry.
- Begin collecting data on how IT platforms, services, and structures need to mature.
- Standardize the collection and analysis of data to assist the CIO in approving, aligning, and prioritizing all budgets for IT-related purchases.
- Create new feedback mechanisms on funding decisions.
- Recognize the impact funding streams have on the governance of this work.
- Identify and mitigate funding and budgeting pressures that reduce the likelihood of introducing positive changes after budgets have been approved.
- Capitalize on planning cycles.
- As seen in Michigan, encourage all agencies to submit IT project budgets, with rankings, to the IT and budget offices to make strategic decisions that can move the entire state forward technologically.
- Help all agencies report IT consistently as a cost item (perhaps with a legislative mandate) to determine IT spending, rationalize it, and avoid duplication.
- Conduct value-based rankings for all IT projects based on a shared strategic plan and a weighted set of priorities.



Conclusion

The dialogue and discussion during the Roundtable highlighted the value of bringing information officers and procurement officials together frequently to identify common goals, coordinate efforts, and collaborate.

Despite differences in governance, organizational structure, teaming, roles, interactions, processes, and budgeting, Roundtable participants acknowledged that they all face many of the same challenges. Although participants acknowledged that there was no single silver bullet to address common pain points, over the course of the day they identified significant opportunities for enhancement. By increasing understanding, engaging in open dialogue, focusing on a team approach, and considering each of the 'Dimensions for Change', the group recognized new ways they could work together to respond to the pace of change, help accomplish each other's missions, and help states across the country adopt an enterprise-wide perspective.

As the event came to a close, participants agreed to treat this initial conversation as the baseline for harmonizing the relationship between CIOs and CPOs. This Report and the accompanying Action Plan document ideas, insights, and recommendations for progress. However, the group agreed the true test will be to see what NASPO, NASCIO, and each of its members are able to accomplish one year from now.

Looking to the future, we are optimistic about the progress leaders around the country will make, and honored to be a part of this effort. We hope this Report and Action Plan will prove valuable for participants of the inaugural NASCIO and NASPO Roundtable as well as others who are striving to modernize procurement and IT.

"The pace of IT change today is as slow as it will be in our careers. We need to find ways to do things better to deal with this pace."

– Calvin Rhodes
Chief Information Officer, State of Georgia

Acknowledgments

Leadership for a Networked World, the Technology and Entrepreneurship Center at Harvard, the National Association of State Chief Information Officers, and the National Association of State Procurement Officials would like to thank the 2016 NASCIO-NASPO Roundtable Planning Committee for their vision and ideas that aided the development of this event.

- Jeff Brownlee State of Michigan
- Jim Butler State of California
- Gale Given State of West Virginia
- Michael Hussey State of Utah
- Alex Pettit State of Oregon
- Jim Smith State of Maine

We would also like to thank the speakers, panelists, and participants in the 2016 NASCIO and NASPO Topical Roundtable, *Designing for Agility: Advancing IT and Procurement Modernization*. Their participation created the foundation for a robust and successful learning environment.

- Darryl Ackley State of New Mexico
- Jason Allison State of Florida
- Jerilyn Bailey State of Florida
- Ron Baldwin State of Montana
- David Behen State of Michigan
- Karen Boeger State of Missouri
- Bo Bothelo State of Nebraska
- Jeff Brownlee State of Michigan
- Jim Butler State of California
- Ellen Daley State of Illinois
- Stu Davis State of Ohio
- Debbie Dennis State of Oregon
- Grant Gillespie South Carolina State Fiscal Accountability Authority
- Gale Given State of West Virginia
- Joanne Hale State of Alabama
- Spencer Hall State of Utah
- John E. Helmer IV State of Indiana
- Lauren Hirshon Leadership for a Networked World
- Michael Hussey State of Utah
- Michael Jones State of Alabama

Rich Kliethermes State of Missouri
 Cindy Lombardi State of Colorado
 John MacMillan Commonwealth of Pennsylvania
 Lawrence Maxwell State of New Mexico
 Keith McCook State of South Carolina
 Mark Myers State of Arkansas
 Dewand Neely State of Indiana
 Antonio Oftelie Leadership for a Networked World
 Keith Osman State of South Carolina
 Alex Pettit State of Oregon
 Shannon Rahming State of Nevada
 Sarah Razor NASPO
 Calvin Rhodes State of Georgia
 Doug Robinson NASCIO
 Jim Smith State of Maine
 Megan Smyth NASPO
 Jason Soza State of Alaska
 Mike Spicer State of South Carolina
 Ed Toner State of Nebraska
 Keith Werner State of North Carolina
 Meredith Ward NASCIO

Additionally, credit and thanks are due to staff of the National Association of State Chief Information Officers and the National Association of State Procurement Officials, particularly DeLaine Bender, Sarah Razor, Doug Robinson, and Meredith Ward; and Lauren Hirshon for writing and strategy, Amy Ramsay for editing, Christopher DeAngelus for technical design, and Todd Gillenwaters for graphic design.



Developed By:

Leadership for a Networked World (LNW) developed and managed the 2016 NASCIO and NASPO Topical Roundtable, *Designing for Agility: Advancing IT and Procurement Modernization*. Founded in 1987 at the John F. Kennedy School of Government at Harvard University, LNW is now a think-tank that works with the Technology and Entrepreneurship Center at Harvard and academic institutions globally to provide uniquely powerful leadership summits and transformation programs. Since 1987, LNW (E-government Executive Education - "3E," prior to 2005) has conducted more than 200 learning events and gathered more than 12,000 alumni globally. To learn more about LNW programs visit www.lnwprogram.org.



In Collaboration With:

Founded in 1969, the **National Association of State Chief Information Officers (NASCIO)** represents state chief information officers and information technology (IT) executives and managers from the states, territories, and District of Columbia. NASCIO's mission is to foster government excellence through quality business practices, information management, and technology policy. NASCIO provides state CIOs and state members with products and services designed to support the challenging role of the state CIO, stimulate the exchange of information, and promote the adoption of IT best practices and innovations. From national conferences to peer networking, research, publications, briefings, and government affairs, NASCIO is the premier network and resource for state CIOs. To learn more about NASCIO, please visit www.nascio.org.



In Collaboration With:

The National Association of State Procurement Officials (NASPO), Inc. is a non-profit association dedicated to advancing public procurement through leadership, excellence and integrity. It is made up of the directors of the central purchasing offices in each of the 50 states, the District of Columbia and the territories of the United States. NASPO is an organization that helps its members achieve success as public procurement leaders through promotion of best practices, education, professional development, research, and innovative procurement strategies. To learn more about NASPO, please visit www.naspo.org.

lnwprogram.org