

# APPLICATION MODERNIZATION IS AN IMPERATIVE

For State Governments



# LEADERSHIP PERSPECTIVE AND TEAM INPUT PROVIDED BY 42 STATE EXECUTIVES

Including CIO, CTO, CISO & Chiefs of Application Development

## Citizen Expectations Have Never Been Higher for Digital Services

Software modernization is not a new concept for state governments and the demand for digital citizen services has escalated. Older legacy systems have not had the capacity and capability to meet citizen demand – the pandemic forced action on all states to respond posthaste. Government organizations are responding with digital transformation initiatives to provide a “no wrong door” portal capable of bringing single access integration across program services to provide more efficient and effective outcomes. The technical capabilities have vastly improved – making it easier to eliminate technical debt, rather than adding to it. This, along with organizational change management, will foster a new way of working for government IT.

## The timing is right, and we are at a nexus where federal funds and citizen demand is forcing a hyper-focus to modernize.

State CIOs have long recognized the importance of keeping applications up to date. This critical initiative ranked in the top 10 National Association of State CIOs (NASCIO) priorities over the past several years\*. The VMware - NASCIO Application Modernization study offers insights into the current state of software development, application portfolios and modernization strategies for state governments.

This report also provides recommended plays for creating excellence in application modernization and enabling state governments to **“Do Something Great!” for citizens**, taxpayers and state employees.



“THERE IS TREMENDOUS VALUE IN RELATIONSHIP BUILDING AND PURSUING A COLLABORATIVE APPROACH TO ANYTHING INCLUDING APPLICATION MODERNIZATION.”



# A JOURNEY IN APPLICATION MODERNIZATION

The report is divided into six sections, beginning with an introduction that distills the survey results into three application modernization imperatives.

The first two sections cover the current state of application modernization and various processes that are currently being managed by state IT organizations. Following that, the report highlights how states are approaching the planning of application modernization. It also illustrates how state executives utilize acquisition, overcome challenges, achieve key benefits and leverage drivers of modernization.

Finally, the report offers recommendations for your application modernization program, which can serve as a critical data-gathering process for starting an effective application modernization journey.

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Defining Application Modernization

## Application Modernization Success

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Imperatives For State Planning

**Imperative #1:** Determine Your Risk

**Imperative #2:** Upskill and Reskill your IT Workforce

**Imperative #3:** Adopt Agile Procurement and Business Relationship Management

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- Key Questions for Moving Forward

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## APPLICATION MODERNIZATION IS NOT A STATE, BUT A PROCESS

- ☆ How can state governments capitalize on the current momentum of change to focus on the citizen experience?
- ☆ How can state IT teams innovate and upgrade their methods of service?

### The Definition

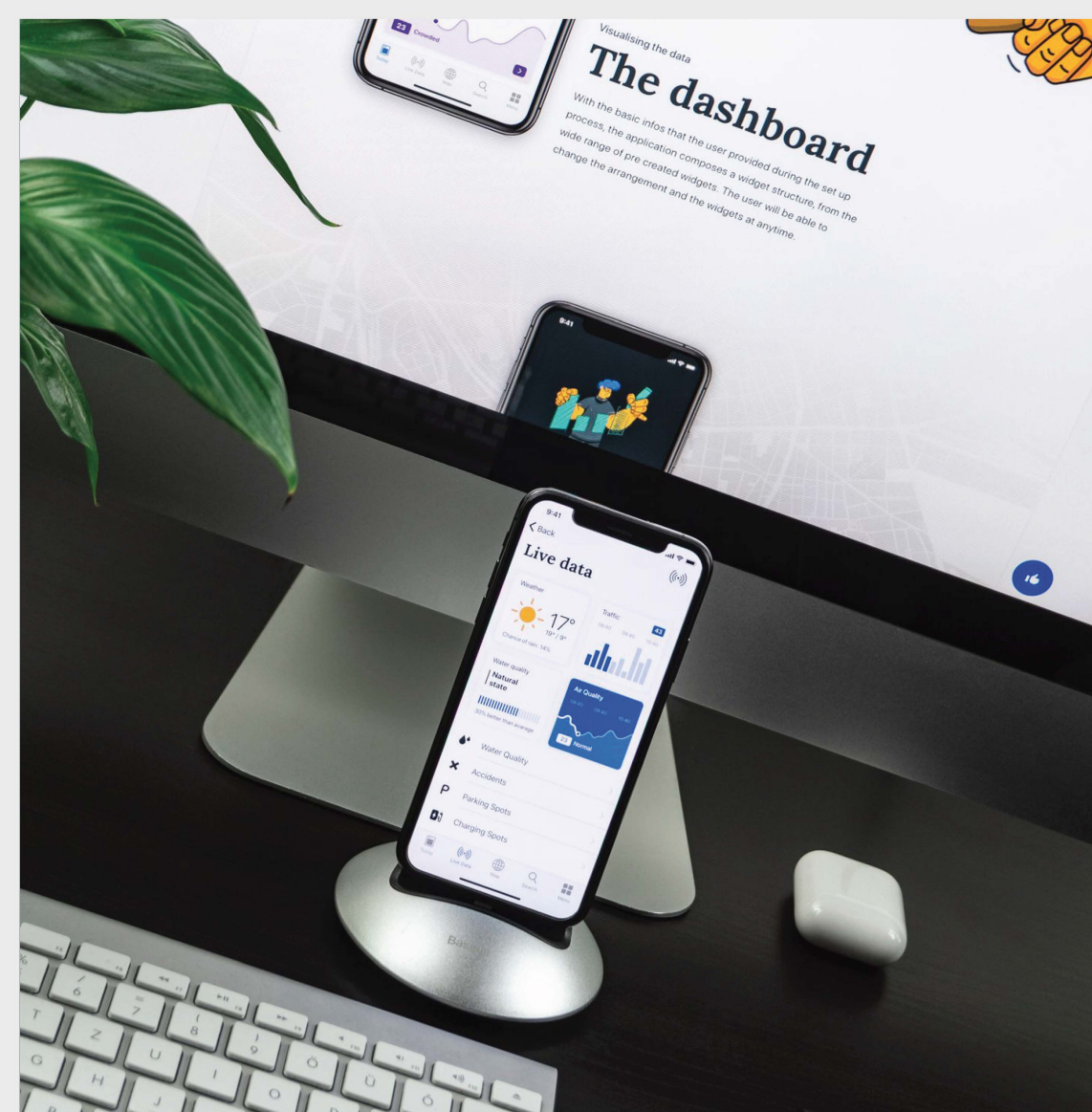
We have defined application modernization as the transformation, improvement, and migration of existing IT systems. This includes adopting DevSecOps practices, and taking advantage of new tools, architectures and shifts in software development to improve operations and security at every layer.

### The Process for the 2022 State CIO Application Modernization Report

- ☆ NASCIO Member State Executives responded to a confidential online survey to provide insight on application modernization within state governments. The strong response rate indicates the importance of application modernization at the state level. Respondents had the opportunity to provide additional comments for many of the questions, and did so often providing detailed insights into state programs.
- ☆ Individual interviews were conducted with seven state CIOs to provide further insights into state application modernization portfolios and strategies.\*

### Imperative Aspects to Driving Application Modernization Strategy

This study shows that successful IT programs are leveraging new and emerging advancements, and concludes with a bold action list that can set a state government up for success.



“We really are focusing around strategy, governance, portfolio management, program management and enterprise architecture.”



SECTION 2: APPLICATION MODERNIZATION SUCCESS

# IMPERATIVES FOR STATE PLANNING





## IMPERATIVE #1: DETERMINE YOUR RISK

# MEASURE THE BUSINESS VALUE OF YOUR APPLICATIONS

Create an Enterprise Application Portfolio Management Practice

### **Do You Know Your Big Picture?**

A key data point from the study is that 69% of states have or are considering a documented application management strategy. In addition, 48% indicated that at least half of their applications need to be modernized.

### **Application Inventory**

A typical state has more than a thousand applications in their portfolio. This points to the vital need to have an overall application inventory.

### **Balancing Value and Risk**

A framework to measure the business value of your applications and de-risk your application modernization efforts is essential. Adopting a framework for enterprise portfolio management will help to plan a consistent method of execution. This will ensure the integration and integrity of financial, human resources and IT planning.

### **Framework for Planning**

A solid application modernization framework will also ensure repeatable, consistent project management processes for state government to sustain changes in administrations, as well as ensure improved delivery of projects on time, within budget and scope.

### **IT Management Framework**

A highly successful business and technical framework is vendor agnostic. The IT program framework is an effective tool for state governments to plan and manage IT initiatives. It must be based on the idea that effective modernization efforts balance the need to maintain existing systems, the need to improve them, the need to migrate them to new platforms or architectures, and the need to sunset them and possibly replace them with new solutions.

By taking into account these modernization imperatives, state government leaders can efficiently upskill and reskill their workforces, develop a comprehensive IT strategy, and de-risk the path to modernization.



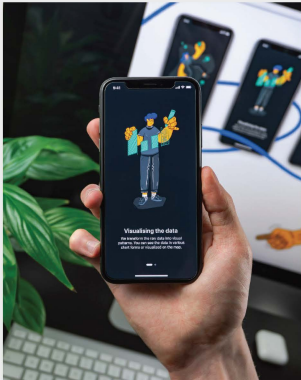
## IMPERATIVE #2: UPSKILL & RESKILL YOUR IT WORKFORCE

### ELEVATE YOUR INTERNAL RESOURCES

The ability to upskill and re-skill your IT workforce is critical. Agencies will need to invest in training and development programs to ensure that their employees have the necessary skill sets to support these initiatives. According to a 2022 IDC study\*, 70% of IT leaders believe that their organizations will face a skills gap in the next three years.

As consolidated models come to the forefront, there's a need to both rationalize all systems and platforms, as well as provide clear career paths for employees to match this paradigm. While many state government leaders are aware of the need to upskill and reskill their workforces, they may not be aware of the magnitude of the skills gap that exists within their organizations.

Maintaining legacy applications, while planning for enhancements, doesn't always align with current staffing matrices. States must augment their staff throughout the transformation process. Strategic teaming will allow for a knowledge transfer to take place throughout the modernization project. It's also important to note that this is not a one-size fits all approach. Agencies need to build their matrix organization based on current and future skills and capabilities.



\*Links Provided In Appendix

“Even pre-COVID, we had trouble recruiting certain skill sets as state employees. Now it is even more difficult. Also, legislators will never fund enough staff to recruit for even the most critical applications, so managed services can be a way to do this well.”



## IMPERATIVE #3: ADOPT AGILE PROCUREMENT AND BUSINESS RELATIONSHIP MANAGEMENT

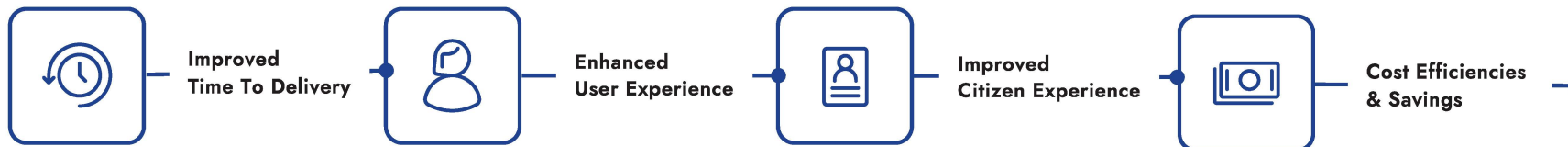
# THE STRATEGIC ALIGNMENT OF ACQUISITION

In any current IT modernization project, aligning the IT strategy with procurement is critical. The typical legacy process creates a single contract to deliver the final product, and will stretch out over the years. However, progress in technology occurs at a rapid rate. Contracts become outdated as technology requirements contained in the program(s) change. Acquisition strategy can become agile by adapting a procurement process to the application modernization framework and thinking of three stages (proof of concept, pilot projects, and then production and scale).

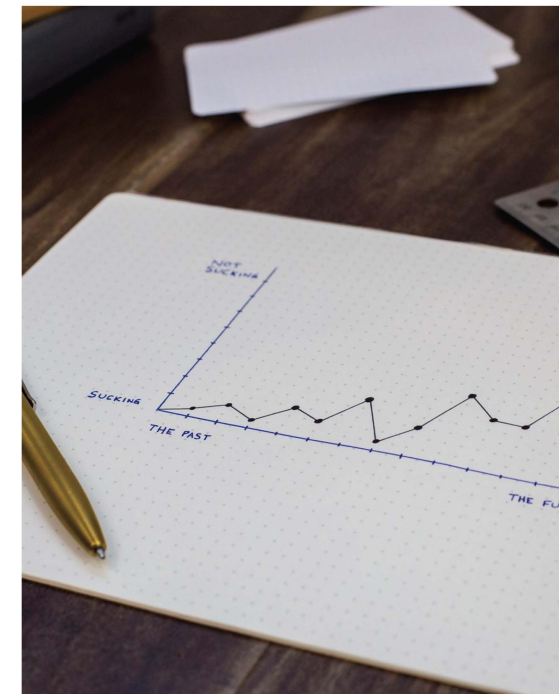
If any of the application modernization projects fail to meet the needs of the customer's intended outcome(s), the program may be adjusted early in the process. Multiple contracts to deliver IT capabilities will promote and accelerate innovation. As government employees work alongside multiple vendors and contractors applying agile methodology, everyone is focused on the business outcomes.

This win-win strategy is reflected in Business Relationship Management (BRM). NASCIO recently published its "Evolving Relationships: Business Relationship Management and the New CIO Operating Model" report.\* According to NASCIO, BRM is an ecosystem of relationships that can be described as a disciplined approach to proactively managing effective working relationships with internal staff, departments, agencies, suppliers and partners.

The following key performance indicators (KPIs) will help you to create an ecosystem with improved, more effective results:



\*Links Provided In Appendix





SECTION 3: THE APPLICATION MODERNIZATION JOURNEY

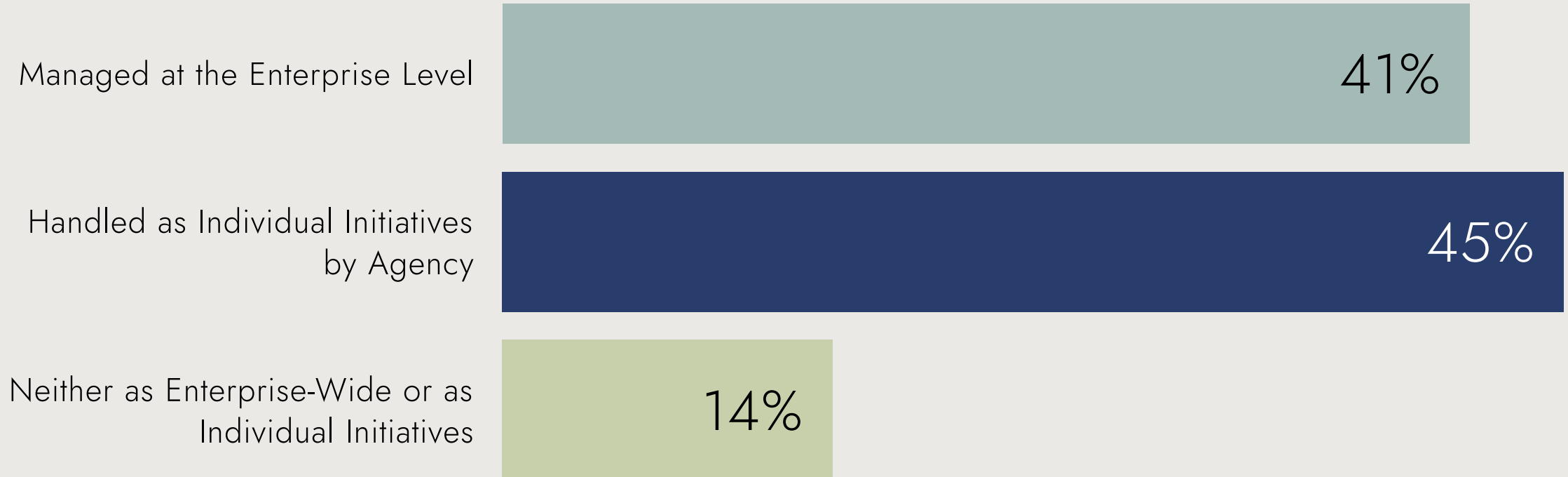
# WHERE ARE THE STATES TODAY?





# APPLICATION MODERNIZATION MANAGEMENT

Survey Respondents Clarified How Application Modernization is Approached at a State Level



“The CIO’s office, through agency-focused teams, works with agency leadership to prioritize application modernization.”

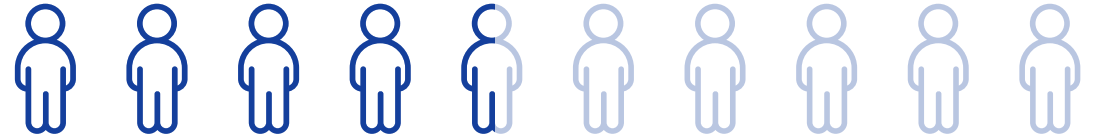
## DOCUMENTED AND ACTIVE APPLICATION STRATEGY

The study found that 69% of respondents have/are considering a documented and active application modernization strategy. Specifically, 19 states are already pursuing and 10 are considering pursuing a strategy.

This illustrates how state governments are focused on strategy and moving away from a “one and done” software delivery approach (which can be harmful and counterproductive).

Thirteen states do not have a documented strategy. Of those, 11 manage application modernization on an agency level.

45%



States With a Documented & Active Strategy

24%



States Considering a Documented Strategy

31%



States Without a Documented & Active Strategy

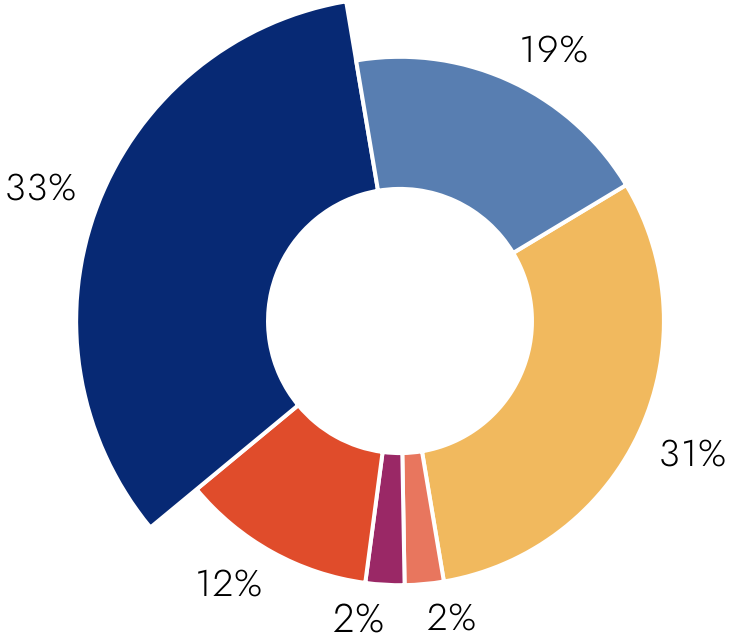
“Each agency is provided detailed documentation (40 pages) of our assessment of their environment with our recommendations. To date, the agency response has been overwhelmingly positive.”



# HOW ARE APPLICATION MODERNIZATION INITIATIVES AUTHORIZED?

Respondents Selected All Options That Applied

- State CIO Directive
- Executive Order
- Administrative Regulation
- Statute
- No Formal Authorization
- Some Combination of Listed Authorizations



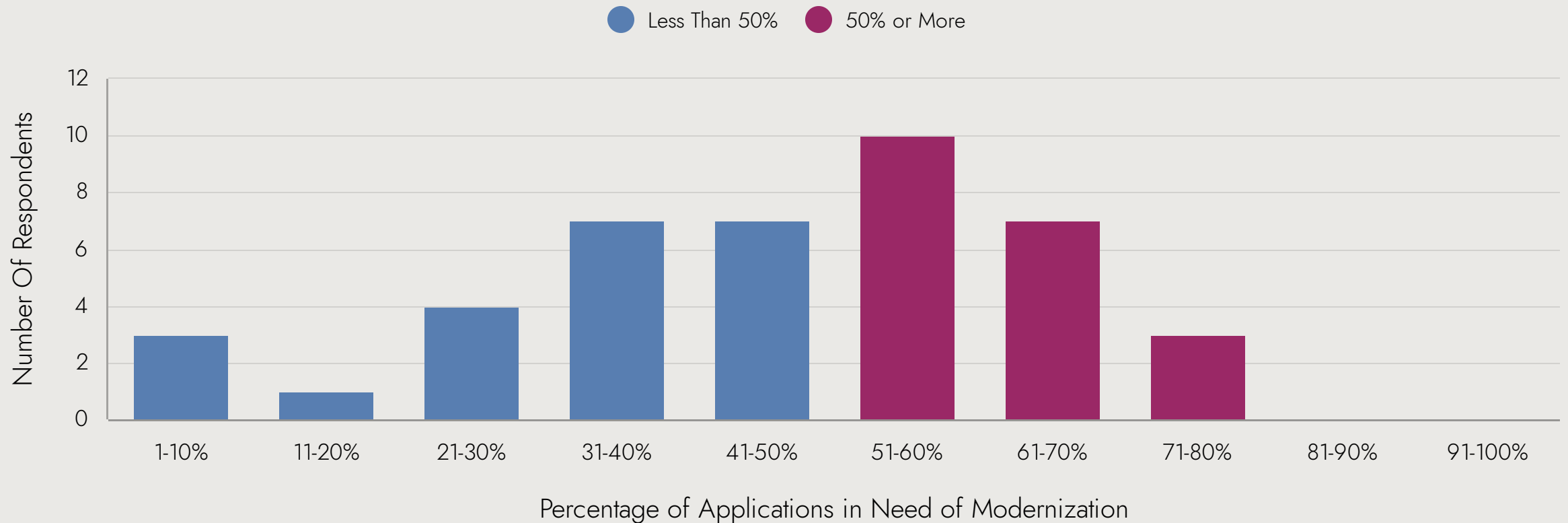
**33% of Respondents have no formal authorization process for initiatives.**

**Respondents who indicated that the portfolio was not granular enough to assist in planning provided these insights:**

- ☆ "We sought money to accelerate application modernization but were unsuccessful."
- ☆ "Application modernization historically would be a CIO directive. There could be a different method for authorization depending on the modernization approach."
- ☆ "No formal authorization as of yet. With all the application attack vectors, IoT is working toward this goal."

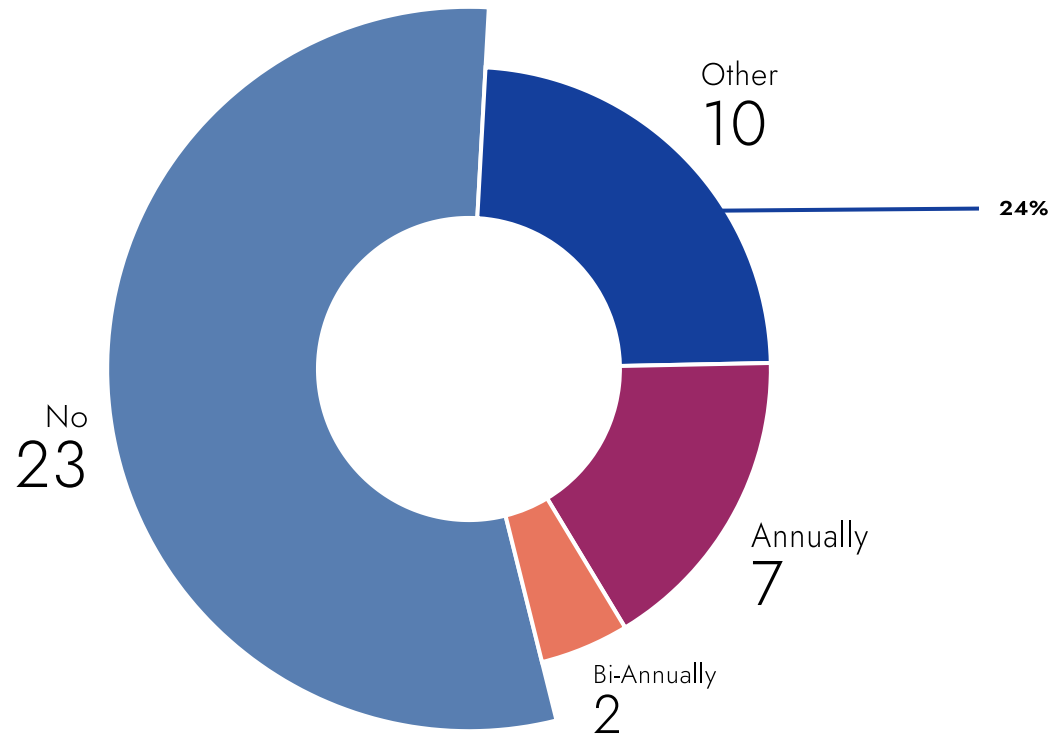
# APPLICATION PORTFOLIOS IN NEED OF MODERNIZATION

48% of the State Respondents Indicated a Majority of Their Applications Need Modernization.



Respondents selected a percentage (in segments of 10%) in regards to applications needing modernization

# ASSESSMENTS OF APPLICATION PORTFOLIOS



Respondents Requiring Periodic Assessments or Reviews

By performing periodic application modernization assessments or reviews, states can achieve many benefits, including increased agility, faster time to market, improved quality and reduced costs.

**The study found that 55% of the states are not participating in a periodic review of their application modernization efforts.**

• Respondents answering “other” provided insight on the state tactics:

“We conduct a review to provide assurances of current infrastructure.”

“We periodically review our assessment based on the application.”

“The plan is to assess and adjust our modernization initiatives bi-annually.”

“We anticipate agencies having a regular cadence of review.”

“We perform an annual survey with our client agencies regarding applications being operated on their behalf along with notification of current known risk.”



# FIVE STAGES OF APPLICATION MANAGEMENT MATURITY

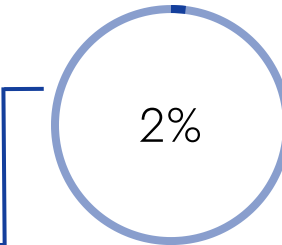
Business Programs Must Review What Applications are Mission Critical, Versus Just Being Operational, to Best Evaluate Their Portfolios.



The vast majority (62%) of states have active programs to manage their application portfolio or their application life cycle.

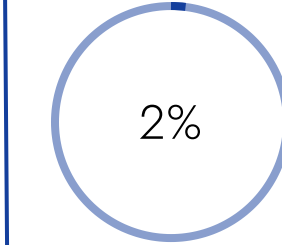


Additionally, 16% of the states have a significant maturity level to manage application life cycles.



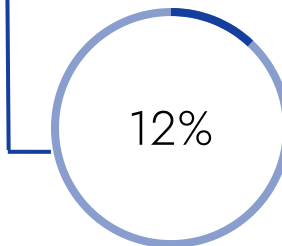
## 1. Optimized

Processes stable and flexible with continued improvement and response to changes.



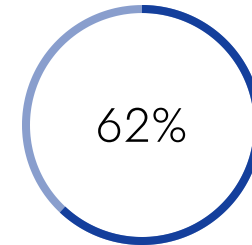
## 2. Quantitatively Managed

Processes measured and controlled to meet organizational goals.



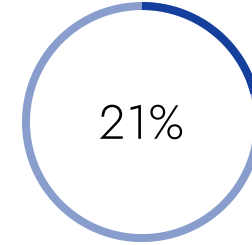
## 3. Defined

Processes well-understood, proactive, standards provide guidance.



## 4. Managed

Processes characterized by projects, iterative.



## 5. Initial

No definition provided.

There is no one-size-fits-all solution for maturity improvement, but the Capability Maturity Model Integration\* (CMMI) is one of the most popular and widely used within States. To assess maturity, organizations should start by identifying the processes that are most critical to application management. These processes should be aligned with business goals and measured against the CMMI model. Once maturity levels have been assessed, organizations can develop a plan for improving them.

\*Links Provided In Appendix

**64% OF PORTFOLIOS  
NEED MORE DETAILS  
TO SUPPORT PLANNING**

## ARE STATE APPLICATION PORTFOLIOS GRANULAR ENOUGH?

To enable application modernization, the information in an application portfolio must be contemporary and detailed.



**36%**  
**indicated "yes"**

"Our application portfolio is granular enough to give stakeholders a business value and technical health score of the application and investment recommendation for each application, as well as other key performance indicators regarding application risk and usage."



**40%**  
**indicated "no"**

"Our portfolio was built with incident and change management in mind. We would need to update information, as well as add key information, to utilize the portfolio for application modernization."



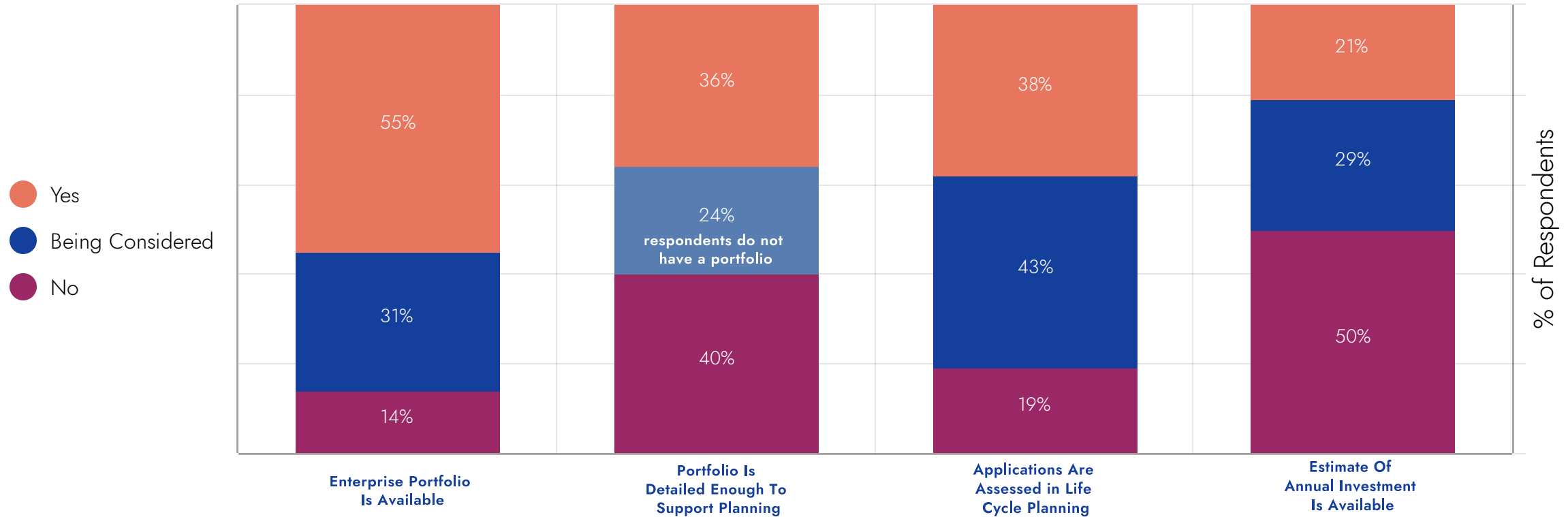
**24%**  
**do not have a portfolio**

"We are currently envisioning a future state platform that will host investment, application, technology, capability and service portfolios to assist with several initiatives, application modernization being one of them."



# STATE APPLICATIONS STRATEGIES AT A GLANCE

Eight Out of Ten States Without a Detailed Portfolio Are Considering an Enterprise-wide Portfolio to Assist with Planning



"We are in the middle of consolidating technology resources, including applications and support. Goals of this effort are to have the complete base of technology risk, including applications for better modernization planning and implementation. We are actively transitioning from agency driven to central driven."



SECTION 4: THE APPLICATION MODERNIZATION JOURNEY

# WHAT AFFECTS THE STATE MODERNIZATION PLANS?

# TOP CHALLENGES FOR APPLICATION MODERNIZATION INITIATIVES

Experienced by 10 or More of Survey Respondents



1. **Funding**



2. **Dedicating Staff Time**



3. **Large Legacy Systems**



4. Significant Business Process Redesign



5. Agency Resistance to Change



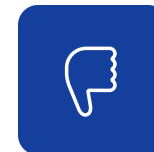
6. Lack of Enterprise Insight



7. Procurement



8. Technical Know How



9. Shadow IT



10. Maintaining Current Enterprise Architecture



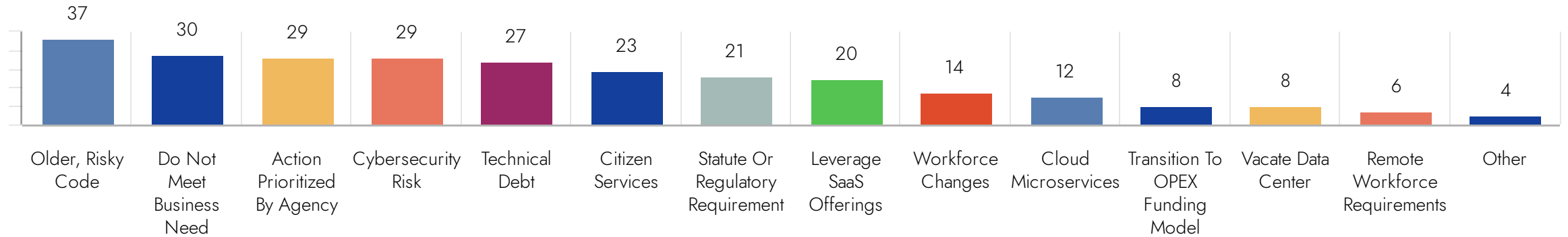
11. Cybersecurity



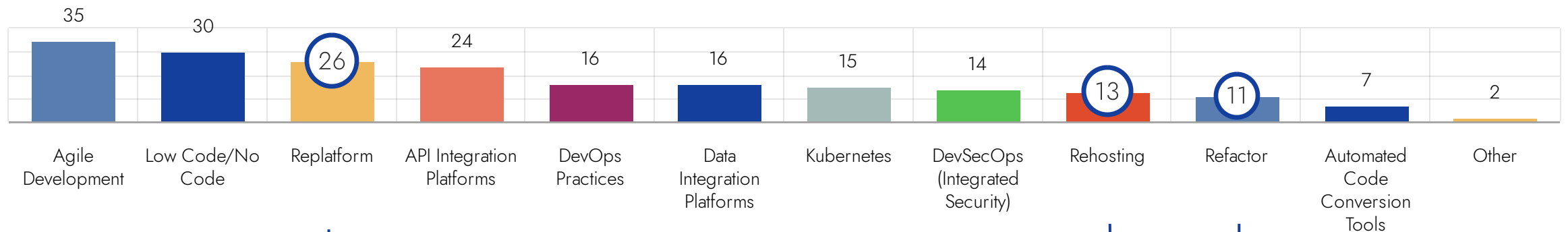
# THE APPLICATION MODERNIZATION JOURNEY

State Respondents Selected All Options That Applied

## Primary Drivers to Modernize Applications



## Approach to Application Modernization Effort



24% of responses indicated a replatform, rehost and/or refactor approach

# TOP BENEFITS OF APPLICATION MODERNIZATION INITIATIVES

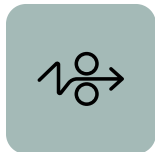
State Respondents Selected Top Expected Benefits



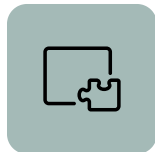
88%  
Better Security



71%  
Easier & Faster to Make Changes



76%  
Prompt & Efficient Response To Constituent Needs



67%  
Better Integration with Other Applications



71%  
Better Program Outcomes



33%  
Reduce Infrastructure Costs



71%  
Reduced Enterprise Risk



24%  
Continual Evaluation/Renewal

## “Customer needs should be #1.”

“The essential benefit to the application modernization initiative is to provide improved government services through cost-effective government operations by establishing clear and measurable outcomes, which align to statewide goals. **We must focus on “why” the investment is being made, and not allow the current processes, “the how” to limit the potential of technology.**”

“In addition to better serving constituents, security, reduced risk, and protecting constituent data are top of mind for any application development effort. **We are embarking on a digital government initiative that will focus more on integration with other applications.** However, as previously stated, modernization initiatives are largely driven by each agency and rarely focus on integration with other applications.”

SECTION 5: THE APPLICATION MODERNIZATION JOURNEY

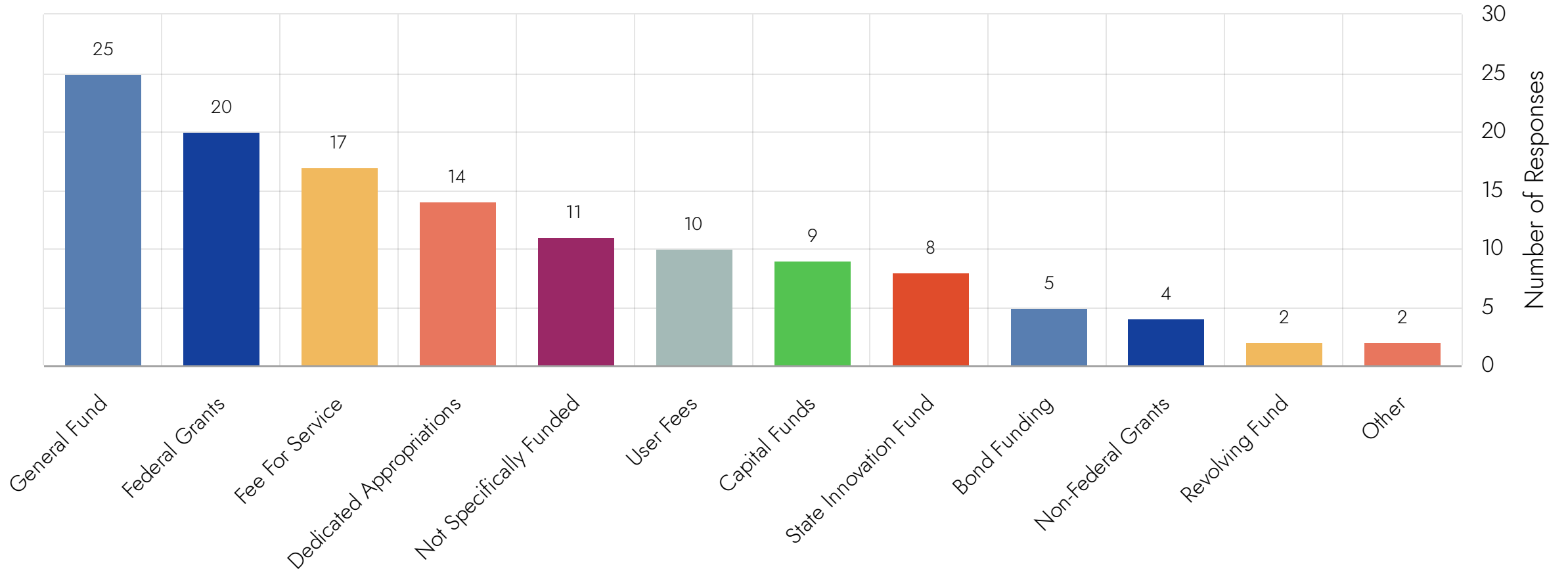
# HOW DO STATES FUND MODERNIZATION?





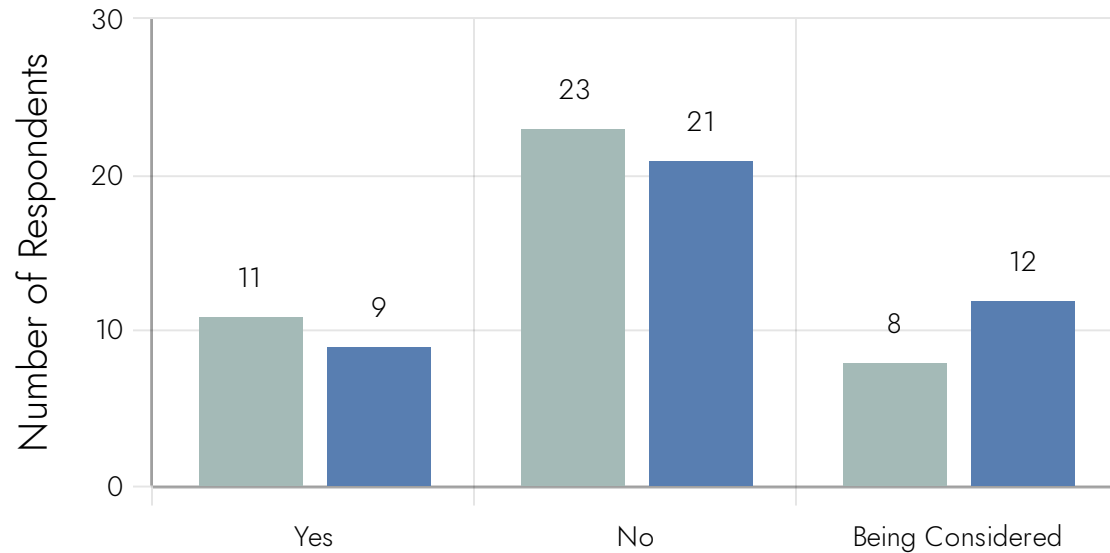
# FUNDING SOURCES FOR APPLICATION MODERNIZATION

State Respondents Selected All Options That Applied



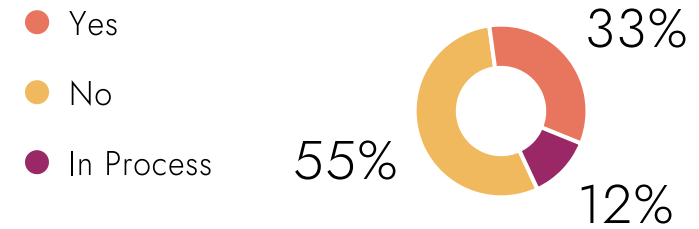
# STATE APPLICATION MODERNIZATION BUDGETS

## Application Modernization Program Funding

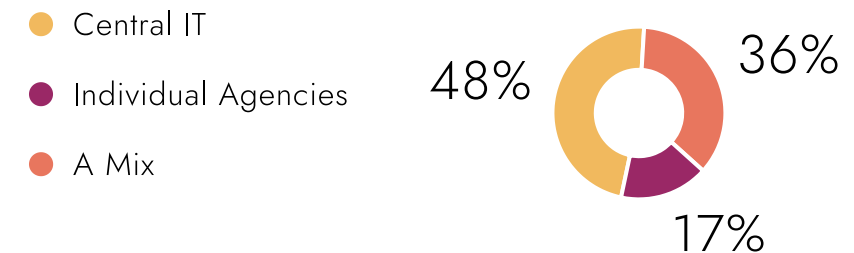


- Is There A CIO Discretionary Fund?
- Is There An Estimate Of The Annual Investment Across State Agencies?

## Is There a Capital Investment Process?



## Budget Holders



“Most individual agencies use federal funded initiatives as the impetus for modernization.”

SECTION 6: APPLICATION MODERNIZATION IS NOT A STATE, BUT A PROCESS

# KEY ACTIONS FOR STATE PLANNING







## STRATEGY FOR STATE GOVERNMENTS

# APPLICATION MODERNIZATION IS NOT A STATE, BUT A PROCESS

“ OUR PORTFOLIO WAS BUILT WITH INCIDENT AND CHANGE MANAGEMENT IN MIND. WE WOULD NEED TO UPDATE INFORMATION, AS WELL AS ADD KEY INFORMATION, TO UTILIZE THE PORTFOLIO FOR APPLICATION MODERNIZATION. ”

“ BY TAKING A CONTINUAL MODERNIZATION APPROACH, IT MOVES STATES AWAY FROM LEGACY ISSUES THROUGH ONGOING RECHARTING AND REEVALUATION OF EFFORTS. ”

## THE APPLICATION MODERNIZATION JOURNEY

# BEST PRACTICES

### The Executive View

#### **BUILD A BUSINESS RELATIONSHIP MANAGEMENT ORGANIZATION**

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- ✔ Determine how to gain authority to manage an application inventory either through Executive Order or CIO Policy.
- ✔ Use a methodology to determine business and technical value.
- ✔ Establish a modernization life cycle for each critical application.
- ✔ Develop a business continuity and Disaster Recovery (DR) plan for each critical application.

#### **DEVELOP AN INVENTORY OF CRITICAL APPLICATIONS BY AGENCY**

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- ✔ Establish an application life cycle for each application.
- ✔ Work at an enterprise level to reduce the number of duplicative business functions, such as licensing, finance, case management, etc.
- ✔ Enact a governance process that oversees investments in applications across the enterprise.
- ✔ Use Business Relationship Managers (BRMs) to be experts on each agency's business and applications and serve as a key member of the agency staff.

#### **CREATE AN APPLICATION PORTFOLIO MANAGEMENT PROCESS INCLUDING GOVERNANCE**

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- ✔ Utilize BRMs to help establish the agency-by-agency application portfolio as they serve a key role in understanding the future direction of the program areas in each agency.
- ✔ Establish a marketing program for BRMs to market IT and application services delivered from central IT.
- ✔ Implement a transparency reporting system by agency on finance and central IT performance to show value.
- ✔ Create a strategic vendor program enabling a stronger partnership in common delivery of solutions to the state.

## THE APPLICATION MODERNIZATION JOURNEY

# ACTIONABLE RESOURCES FOR PROGRAM TEAMS

The “best practice” mindset is based on application modernization not happening at a single point of time – but being part of normal and ongoing operations. This can be achieved by having the real work inform the larger strategy, as opposed to waiting a year to develop a comprehensive roadmap.

Rather than creating a strategy binder that will sit on a shelf, this is all about getting started through small steps. Finding and fixing initial challenges will set you on the path to modernization with the goal of achieving “optimal, not perfect” performance.

- ☆ **Own Your Journey**
- ☆ **Quick Wins**
- ☆ **Agile Procurement**





PROGRAM TEAMS

# OWN YOUR JOURNEY: ENABLE BUSINESS RELATIONSHIP MANAGEMENT

Do Something Great! Play #1



## Collaboration

Think of your contract development and implementation as a collaboration between you and your partners.



## Trusted Partners

The right partners can build the initial capabilities that scale over time. For example, a solution provider can develop the ingredients that solve immediate problems that can set a strong future state. In this case, the real work drives the overall strategy and development of a detailed roadmap. Meanwhile, system integrator partners can assist with overall implementation, once the journey has started.



## Complete Control

The agency and/or program team must maintain complete control of product direction, feature prioritization, and release timing, with your service practitioner providing a mix of qualitative and quantitative data to help make product choices.



## Mission Balanced to Users

Your team must balance mission objectives against both user demands and wants, as well as technical feasibility. This will allow the team to deliver features with a positive impact on the day-to-day and strategic goals.

# QUICK WINS: DEVELOP AN INVENTORY OF CRITICAL APPLICATIONS BY AGENCY

Do Something Great! Play #2



## Framework/Methodology

Use a framework to quickly assess critical business apps to prioritize your portfolio, and begin migrating old software right away. Identify future landing zones and develop an initial backlog by doing hands-on work to inform a strategy, suggest future targets, and create a preliminary list.

Examine existing tooling and procedures, as well as possible improvements to deliver an outcomes-based plan of action that can adapt to changing business goals.



## Early Champions

Break down larger portions of the project into more manageable parts, which will make it much easier for employees to iterate throughout the project.

Create early champions by finding applications that have enthusiastic program owners to be the first adopters. It is also recommended to design a consistent approach to calculate features, and develop a regular cadence of frequent and quick updates. Frequent feedback from employees regarding procedures and overall performance should also always be encouraged.



## Constant Process

Embrace that modernizing is not a single state and enable a continual process to make the applications that matter more reliable, accessible, and scalable. An example of a quick win is gaining overall applications situational awareness in 10 to 12 weeks.



## Elevate Your Team

As you upskill and reskill, focus your teams around a new way of thinking and doing things that quickly validate your concepts and transform them from concept to production in days, not months. A clear and open channel of communication between developers, designers, stakeholders, and sponsors will set achievable objectives.

## QUICK WINS: DEVELOP AN INVENTORY OF CRITICAL APPLICATIONS BY AGENCY

# A TIMELINE FOR A QUICK WIN\*

### ASSESSMENT



#### EXPLORE

Discovery Workshops determine the execution strategy. The **Explore** phase can take one day or up to two weeks.

### EXECUTION

In the **Navigate** phase, you'll build out a robust app modernization strategy through research, technical spikes, and business analysis; deliver an outcome-based plan; and enable your team with required skills. This phase can overlap with the Accelerate based on custom strategy.



#### NAVIGATE - Portfolio Strategy



#### ACCELERATE APPLICATIONS - Migrate, Replatform, Modernize



#### ACCELERATE SUPPLY CHAIN - DevSecOps, Dev Productivity

During the **Accelerate** phase, you'll migrate apps quickly and securely and build modernization process to help you scale quickly. These phases should take two to ten weeks based on the execution strategy.

### APPLICATION PORTFOLIO MODERNIZATION



#### OUTCOMES:

- ☆ Identify Opportunities to Accelerate Business Priorities
- ☆ Decision Framework, Value Stream Mapping and Roadmap for Identified Applications
- ☆ Rapid Migration With Minimal Downtime
- ☆ Replatform Selected Applications and Upskill/Reskill Your Team



# AGILE PROCUREMENT: CREATE AN APPLICATION PORTFOLIO MANAGEMENT PROCESS INCLUDING GOVERNANCE

Do Something Great! Play #3



## Align Funding and Technology

Consider both improving the network and the user experience (at the same time). Essentially agencies are building a hybrid environment and should accept that they may not be ready to fully go to the cloud.

However, this model helps to avoid creating legacy issues – especially when procurement and funding are aligned with agile processes. By aiming to improve the network and the experience, it's like having an electric car with the fully optimized infrastructure for charging the vehicle.



## Human Outcomes

The goal of an IT budget request is to solve a nontechnical problem, and fulfill the mission – technology is simply a tool in this case.

Because the state is ultimately responsible for its goals, agencies must have control and accountability for the projects that aid in their attainment. Though, they don't need to carry out all of the work themselves. Rather, it's about setting clear expectations regarding human outcomes and technical standards relating to data security, usage, interoperability, monitoring, and evaluation. Periodic assessments will help with these efforts.

“We need to know what applications are mission critical, what applications must have a disaster recovery plan, because of their importance to the agency and its programs.”

# AGILE PROCUREMENT

## Procurement Models



### Proof of Concept

#### Procurements Normally Under the Simplified Acquisition Threshold (SAT)

- Statement of Objectives
- State Desired Outcomes
- Discovery
- Potential IT Solutions

### Pilot

#### Procurement Normally Above SAT

- Performance Work Statement (PWS)
- Broaden the Scope
- Test IT Solution from Development to Production Environment
- Develop KPIs
- Feasibility and Total Life Cycle Cost

### Production & Scale

#### Firm-Fixed Price IT Solutions to the Maximum Extent Possible

- Statement of Work
- Incorporate KPIs
- Performance at Scale
- Quality Assurance Surveillance Plan
- Service Level Agreement

# LARGE SCALE PORTFOLIO ANALYSIS

## Proceeding With An Application Modernization Program

At a high level, develop a decision framework based on as much objective data as you can collect. This allows you to assess applications on both technical feasibility and business impact. Then, apply this framework to a subset of applications to identify the first modernization candidates. **This first-pass decision framework should only take about 4-6 weeks to develop.**

Your decision framework will contain numerous assumptions at this point. It is important to validate those assumptions with some real work. Start the modernization process on the subset of applications your decision framework identified, establish modernization patterns, test your assumptions and feed them back into your decision framework.

From that point, continue to iterate rapidly by assessing larger swaths of your portfolio -- iterating between assessing, decisioning and modernizing applications. This iterative process builds skills both on the assessment/decision aspect, as well as the application modernization aspect.

While collecting objective data may be challenging, it is possible to do it through conversations, workshops and interviews. Through the use of advanced tools, you can rapidly collect data on larger portions of your portfolio, which further accelerates the modernization journey.

**With this in mind, next is a series of actionable questions that will help your team to proceed on the state application modernization journey. For state CIOs, you can take these to your agencies for further exploration.**





# KEY QUESTIONS FOR MOVING FORWARD



## Initial Stage

- Are you in the initial stages of planning or evaluating your applications?
- Do you know where to start?
- Do you have a specific overall business goal in mind?
- Do you have a willing agency or executive to be an early champion?
- Do you have a rapid way to assess/collect data for a number of apps, and make recommendations to have app candidates in a few weeks?



## Implementation Stage

- Do you have an application portfolio and are ready to modernize? Have you started your planning?
- Are you satisfied with your planning and timeline? Are you ready to start implementing?
- What is the quality of your plan?
- Do you know where to start? Is there a rapid path and clear direction with your app candidates?
- Are you ready to deliver the solution into your environment? Is there a clear path to production? A way to validate your assumptions?



## Progress Stage

- Do you have a portfolio, but would like to improve it before proceeding?
- Are you making timely progress?
- Have you identified the common patterns, and created one solution that can scale across many applications?
- Are you capturing the patterns and solutions developed to scale so new people to the project can develop next steps?
- Are you building these skill sets?
- How do you scale the assessment, the solutioning, and the implementation?



# ABOUT

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## **VMware**

VMware is a leading provider of multi-cloud services for all apps, enabling digital innovation with enterprise control. At the heart of everything we do lies the responsibility and the opportunity to build a sustainable, equitable and more secure future for all. VMware Tanzu enables development and operations teams to deliver business value faster, more securely, and at scale in a multi-cloud world. You may have hundreds or even thousands of applications - both existing monoliths and new cloud native microservices. They're all different and critical to your business. VMware has the technologies that enable you to build, run and manage all your applications across any cloud, and the team to guide you along the way. For more information, please visit [www.vmware.com](http://www.vmware.com).

## **National Association of State Chief Information Officers**

Founded in 1969, the National Association of State Chief Information Officers (NASCIO) represents state chief information officers (CIOs) 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 and publications, briefings and government affairs, NASCIO is the premier network and resource for state CIOs. For more information, visit [www.NASCIO.org](http://www.NASCIO.org).

# APPENDIX

1 State CIO Top Ten Policy and Technology Priorities for 2022

2 State CIO Insight Interviews

- Mark Raymond, State of Connecticut
- Matt Behrens, State of Iowa
- Kevin Gilbertson, State Of Montana
- Ed Toner, State of Nebraska
- James Weaver, State of North Carolina
- John MacMillan, Commonwealth of Pennsylvania
- Amanda Crawford, State of Texas

3 IDC Survey Spotlight: Skilled Workers Shortage

4 Evolving Relationships: Business Relationship Management and the New CIO Operating Model

5 CMMI: An Introduction to Capability Maturity Model Integration

