



NEXT-GENERATION SYSTEMS FOR INTELLIGENT, EFFICIENT, CITIZEN-CENTRIC GOVERNMENT

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Next-Generation Systems for Intelligent, Efficient, Citizen-Centric Government

Introduction — The Urgency of Digital Transformation in Government

The COVID-19 pandemic increased pressure on senior civil servants to do things differently. Citizen trust in government grew to an all-time high in 2020 in many countries, according to the OECD¹. This trust in public institutions empowered governments across Europe and the Middle East to respond rapidly and plan bold investments for an inclusive recovery centered on innovation, digital and climate transitions, and resilience². With bold plans came elevated expectations to procure goods and services more efficiently and effectively, scale investments in digital infrastructure, and deliver seamless services to citizens and businesses, while making sure that costs do not spiral out of control, in the medium-to-long term (see Figure 1).

AT A GLANCE

KEY STATS

- » Over 88% of senior civil servants across EMEA think that enterprise application modernization is a medium or high priority
- » Across all government missions, including defense and public safety, the preferred deployment models for enterprise applications are a mix of private, public, and hybrid cloud

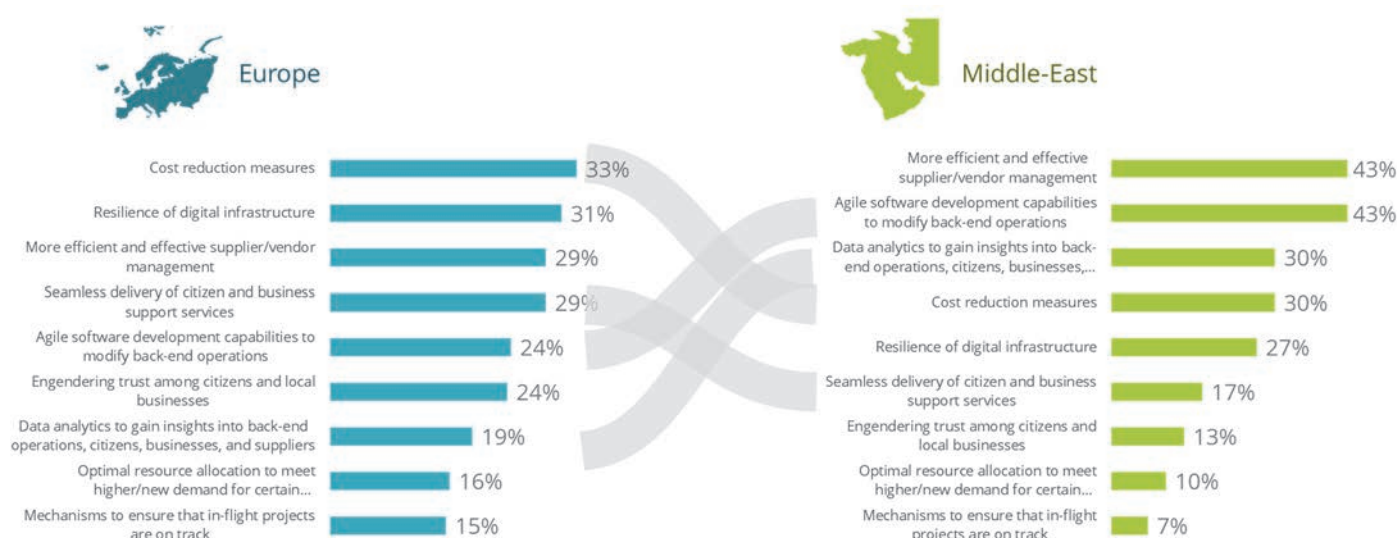
KEY TAKEAWAYS

Senior civil servants need to urgently modernize back-office operations by turning data into intelligent insights, increasing operational efficiency and resilience, and sharing data across departments for improved outcomes.

FIGURE 1

Business Priorities in the Next Two Years, to Address the Challenges of the Pandemic Recovery

Q: To address the challenges caused by the COVID-19 pandemic, which of these will be the key priorities for your organization over the next 2 years? [Choose up to 3]



Source: IDC Europe, ERP Modernization Government, Oracle, November 2021 — N = 225

¹ <https://www.oecd.org/gov/trust-in-government.htm>

² https://ec.europa.eu/info/strategy/recovery-plan-europe_en

As governments rolled out support and recovery measures, the need to scale, adapt, or rethink existing public health, welfare, tax, and economic development programs translated into new, complex back-office processes. Back-office operations often lacked the flexibility or capabilities to meet new requirements, thus creating an urgency to modernize legacy processes and enterprise applications that governments have used for over twenty years. Legacy enterprise resources planning systems delivered some benefits.

"The Government Resource Planning Systems are a creative solution that help drive the emirate's digital transformation. They provide a host of flexible electronic services for government entities and tens of thousands of employees, which helps streamline procedures and conduct operations safely and in record time."

His Excellency Younus Al Nasser, Assistant Director General of Smart Dubai, CEO of the Dubai Data Establishment³

However, senior civil servants have realized that the generation of enterprise applications deployed ten or fifteen years ago must be modernized. A holistic digital transformation requires more agile enterprise software capabilities that can adapt to the new requirements of back-office operations to **efficiently** support citizen-centric programs and **intelligently** analyze data to maximize the value of public expenditure.

"Tackling the coronavirus has been the biggest peacetime challenge faced by the Civil Service for 150 years. Despite this, the Civil Service always aspires to reach the very heights of professional excellence. The pandemic has proved, beyond doubt, the benefits of — and need for — agile back-office systems. It has opened our eyes to what is possible, and how we can be more efficient and cost-effective. This new Shared Services Strategy will iron out any systemic inefficiencies to leverage advances in technology, and improve our central processes, so that together we have more time and mental bandwidth to focus on delivering what the UK Government stands for."

Parliamentary Secretary for the Cabinet Office, Julia Lopez MP,
endorsement of reform of Government Shared Services

The Value of Enterprise Application Modernization to Accelerate Government Digital Transformation

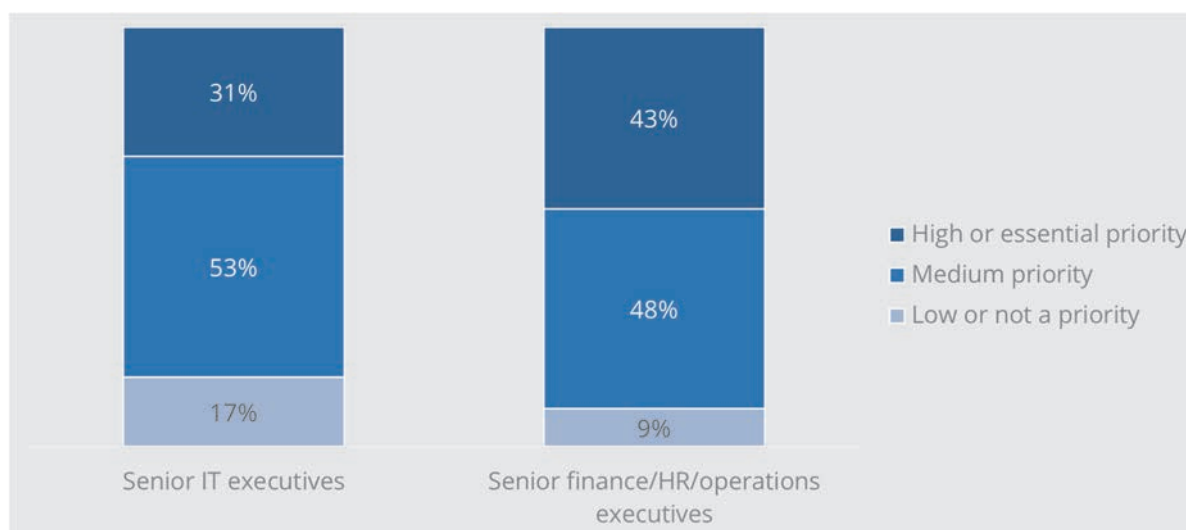
Senior civil servants across IT and, even more so, operational roles such as finance and treasury directors, HR directors, and chief procurement/commercial officers, consider the modernization of core enterprise applications a priority for their organizations as part of their digital transformation strategy for the next 2 years (see Figure 2).

³ <https://mediaoffice.ae/en/news/2021/Jan/12-01/smart-dubai>

FIGURE 2

Enterprise Application Modernization is a Strategic Priority for Governments

Q: To what extent is the modernization of core enterprise applications, such as ERP, a priority for your organization, as part of its digital transformation strategy for the next 2 years?



Source: IDC Europe, ERP Modernization Government, Oracle, November 2021 - N = 225

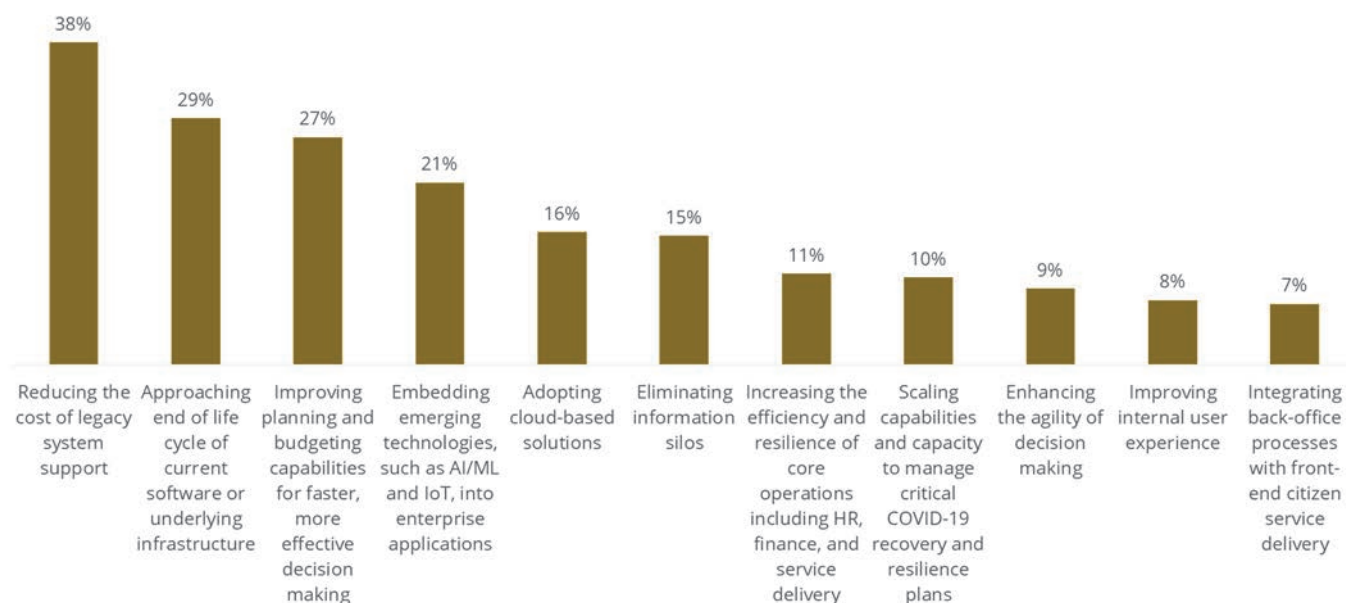
Forward looking senior civil servants understand that embracing next-generation cloud-based enterprise applications will enable them to bring together benefits both for their IT departments and their operational staff (see Figures 3 and 4).

- For the IT department, back-office application modernization will reduce the cost of legacy support, eliminate obsolete systems that create technical and operational risks, and have one platform that they can use to rapidly test and scale innovative capabilities, such as robotic process automation, artificial intelligence, and internet of things. And it will allow them to nurture competencies to productively offer end-user support and intuitively onboard new users.
- For operational managers and staff, back-office application modernization will allow a rethink of how they drive operational excellence and resilience through a unified, converged, and simplified data model and optimization of end-to-end processes. Modern back-office capabilities will enable them to discover innovative insights through scenario planning and predictive analytics, and to make informed decisions that connect financial, HR, and operational planning with citizen service outputs and program outcomes across departments and missions. They will improve staff and manager experience through digital assistants, consistent interfaces across back-office functions, and secure single-sign-on to end-to-end cloud-based application platforms.

FIGURE 3

Key Drivers of Enterprise Application Modernization in Government

Q: What are the key drivers for your organization to modernize its enterprise applications? [Choose up to 3]

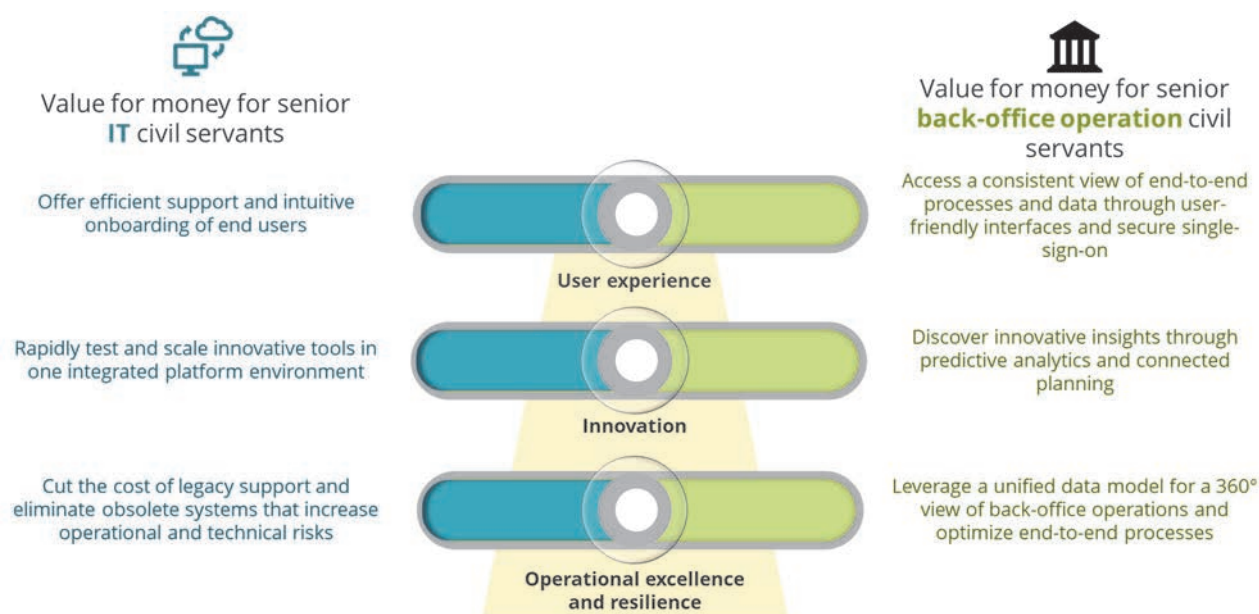


Source: IDC Europe, ERP Modernization Government, Oracle, November 2021 - N = 225

"The new integrated management information system that the State General Accounting Office is implementing to support the back-office operations of public administrations. The major benefits expected from the adoption of the new system can be described in terms of reduction of operations to be carried out by the user, reduction of redundancies, [and] better data quality. In particular, from the first point of view, with a user-centric perspective, the system will lead to a simplification of the back office civil servant's working life. The consolidation of legacy systems into a single integrated system will not only decrease the number of accounting entries that are necessary, but also reduce the probability of mistakes. From a management point of view, the system intends to provide even more robust support for the execution and control of spending at all levels, starting from the responsibility centers up to strategic-administrative control. The new system accelerates the standardization and harmonization of accounting processes. Last but not least, the integration of data into a single system will improve the quality of the data that citizens and analysts can access, as well as empower evidence-based analysis of public finance data."

Quoted from a national government back-office modernization program.

FIGURE 4
Next-Generation Enterprise Applications Bring Together IT and Operational Value



Source: IDC, 2022

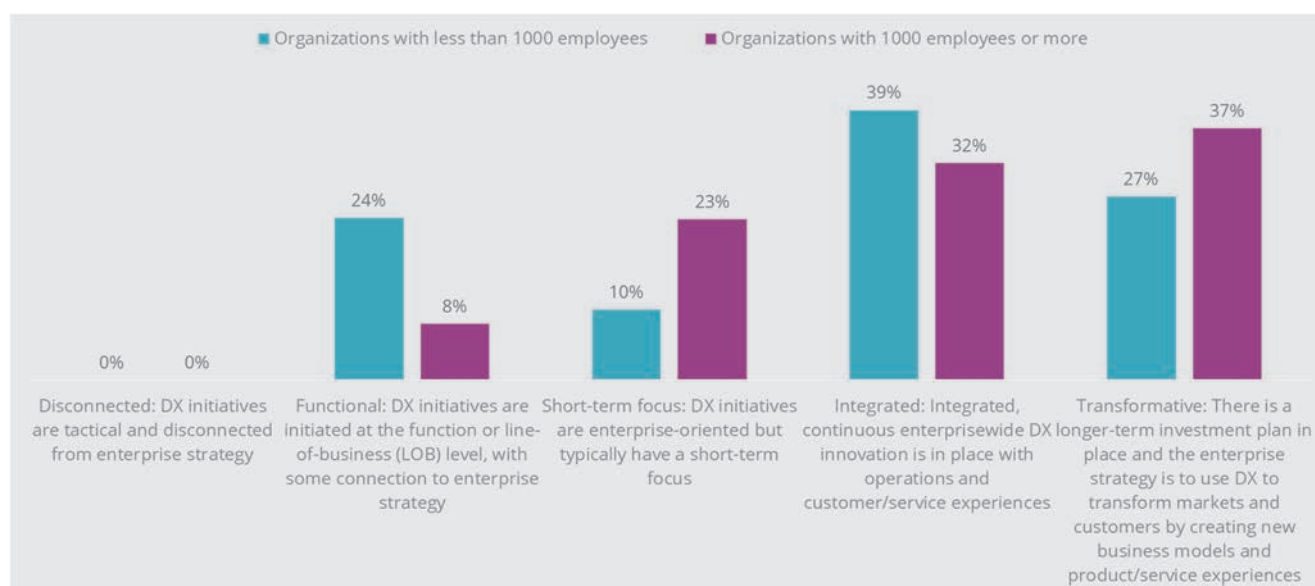
The Path to Enterprise System Modernization

Government digital transformation is not without challenges. Key barriers that senior civil servants face when engaging in technology-enabled innovation include lack of appropriate skills, lack of budget, lack of citizen trust or participation, ageing technology, regulatory compliance concerns, and organizational resistance to change. Nurturing skills and competencies is particularly complex, because it is not only about being able to scale existing workflows, but also understanding the complexity of future service delivery models that require collaboration across government missions and programs. Government organizations of different sizes, with different missions and in different geographies, can tackle those challenges at different speeds and scales. As a result, they are at different stages in their digital transformation journeys (see Figure 5).

FIGURE 5

Digital Transformation Maturity Self-Assessment

Q: How would you assess the state of digital transformation (DX) at your organization today?



Source: IDC Europe, ERP Modernization Government, Oracle, November 2021 - N = 225

As a result of different levels of maturity along the digital transformation journey, governments should select the modernization road map that best aligns with their competencies and capacity.

3.1 — Minimalistic Scenario

In this scenario, the organization makes limited yet well-targeted changes to back-office systems with minimal disruption — possibly making no changes at all. Smaller arm's length government agencies may still work with spreadsheets and do not have the resources and competencies to undergo the technical and organizational changes required to realize the benefits of next-generation applications. Large-scale central government departments that may operate in custom-built mainframe environments perceive the modernization as delivering too little value relative to the high cost of organizational change. In such cases, organizations tend to adopt new purpose-built and cloud-native best-of-breed back-office applications at the fringes of the environment and integrate them with the core. In some cases, the minimalistic approach can entail simple automations and integrations through robotic process automation.

- The benefits of this modernization archetype are the relatively low technical costs and skills requirements and the limited disruption to business operations or need for organizational transformation.
- The challenges of this modernization archetype are the risk of complicating the architecture by developing add-ons that increase maintenance costs, and, most importantly, the cost of "doing nothing" that in the long term can jeopardize the operational efficiency and resilience of back-office processes.

3.2 — *Innovate Around the Core*

In this scenario, the organization insulates its legacy back-office applications (either an ERP suite or best-of-breed), puts a cloud platform layer on top, and innovates around them. In this situation, external technologies are applied to produce new user experiences, new process integrations, and new analytical capabilities or to build new add-on applications. As a result, innovation is driven outside of the core system. Therefore, the organization can radically transform its business operations and processes without touching core ERP functionalities.

- The benefits of this modernization archetype are the relatively quick implementation and ability to deploy new functionalities not available in the core ERP, by drawing upon modern cloud platforms, while reducing dependence on one application vendor.
- The challenges of this modernization archetype are the need to invest in internal competencies to take responsibility to maintain and evolve new capabilities and the inherent organizational rigidity imposed by the legacy core.

3.3 — *Peel the Onion*

In this scenario, the organization can review current processes and systems — especially highly customized functionalities — to decide where it is best to rearchitect or refactor some of the functions (application modules) to make them cloud-native, where relevant, while some, such as applications that hold particularly sensitive information, can remain untouched. It is a step-by-step approach in which organizations deconstruct monolithic applications and find the right strategy for each of the pieces. The peel-the-onion scenario usually allows for standardizing some processes and adapting them to current needs, but organizations usually do not undergo a major transformation, keeping existing enterprise structures, business models, and culture.

- The benefits of this modernization archetype are the relatively low technical costs, although deconstructing and re-coding applications will require highly skilled system engineers and developers, and the step-by-step transformation that allows the organization to adapt and learn from mistakes without incurring major risks.
- The challenges of this modernization archetype are that infrastructure and applications cannot be completely reengineered to implement best practices and the increasing complexity of the architecture, with components at different stages of their life cycle that are costly to maintain and upgrade.

3.4 — *Kill the Datacenter*

In this scenario, the organization moves back-office applications to a cloud environment, usually in a lift-and-shift model, with minor changes applied to the code to eliminate redundant customizations or adapt applications to the cloud environment.

- The benefits of this modernization archetype are the infrastructure scalability, the elimination of legacy on-premises datacenter costs, and the limited disruption to the business.
- The challenges of this modernization archetype are the lack of business transformation that makes it difficult to prove value for money and the cost and risk uncertainties related to

moving legacy applications to an environment that has service levels designed for native cloud systems.

3.5 — Reimagine

In this scenario, the organization adopts a whole new system in the cloud using a public, private, or hybrid model. The transformation is not only technical, but also involves the reengineering, simplification, and standardization of processes that will be the foundation for implementing innovations and rethinking government operating and working models.

- The benefits of this modernization archetype are the achievement of one, harmonized, source of truth about back office operational data, the ability to eliminate deep-rooted costs and risks of legacy customizations and add-ons, and the flexibility to choose best-practice processes and architecture that are best aligned with the business requirements.
- The challenges of this modernization archetype are the high costs and complexity of the technical implementation and the need to commit to a large-scale transformation program affecting the entire back-office operations.

Of the five back-office modernization archetypes, the "reimagine" scenario is the most ambitious. But is also the best able to meet the elevated business and technical transformation requirements of the post-pandemic reality, such as reducing wasteful spending, increasing productivity and collaboration, and easing access to data, so that back-office personnel can contribute to delivering more intelligent, efficient, and citizen-centric public services.

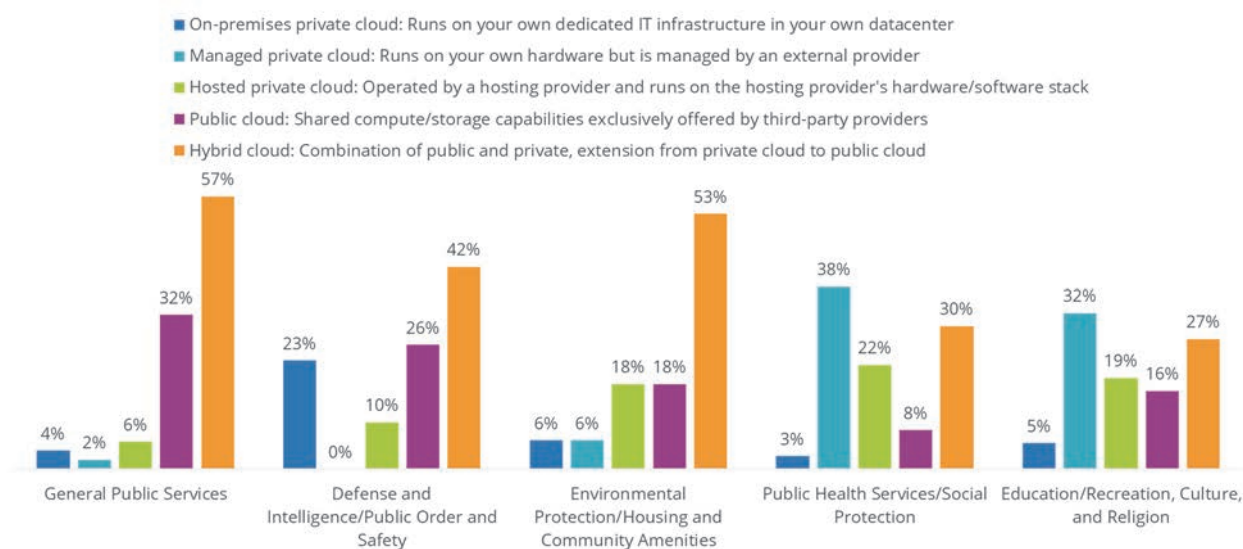
EMEA governments that are at stages four and five of digital transformation, or at stage three but with vision, leadership, and resources committed to move along the curve, should consider the "reimagine" archetype as their preferred option. If they do so, they will be able to realize the full benefits of **next-generation enterprise applications that are cloud-based and bring to bear process best practices and innovative tools**. In fact, all government missions, including those that were initially conservative, because of data residency and vendor lock-in, such as defense and public safety, understand that the benefits of cloud in terms of scalability, lower cost of maintenance and upgrades, and agile innovation, outweigh the risks when it comes to back-office operations workloads (see Figure 6).

"The Home Office is one of the largest and most complex government departments in the UK to have successfully migrated all of its finance, commercial, HR and payroll footprint to the cloud. This program has charted the path for other departments to build on our collective experience. This go-live is a critical step in delivering business technology that is more user centric and allows the Home Office to continually evolve."

UK Home Office chief people officer, Jill Hatcher

FIGURE 6
Enterprise Application Preferred Deployment Model

Q: What is the preferred deployment model for the modernization of your organization's enterprise applications?



Source: IDC Europe, ERP Modernization Government, Oracle, November 2021 — N = 225

Senior civil servants expect that next-generation enterprise applications offer resource planning, budgeting and performance management best practices, and innovative technologies in one integrated platform. Back-office operational best practices will provide robust process execution and resilience, such as the ability to simulate budget and plans that connect financial, HR, and procured goods and services, or the integration of government accounting systems with electronic invoicing and payment systems. Systems that embed innovative technologies like digital assistants, robotic process automation, AI and predictive analytics, and collaboration tools will empower evidence-based decision making and data sharing across departments and missions (see Figure 7).

FIGURE 7
Critical Capabilities of Next-Generation Enterprise Applications

Q: Which of these next-generation management system benefits will be the most crucial to your organization?

Critical capabilities of next-generation enterprise systems

Finance



1. Reduced waste through more effective budget allocation
2. Improved productivity with automation and more collaboration among teams
3. Enhanced cost/revenue management enabled by access to real-time data

Human resources



1. Improved decision making supported by accurate, up-to-date, and unified HR data
2. Improved collaboration and information sharing
3. Lower licensing costs arising from replacing multiple systems with just one system

Procurement



1. Effective supplier management
2. Automated supply chain management
3. Reduced inventory costs and more accurate and efficient acquisition planning

Asset management



1. Improving the quality of facilities services
2. Lower total cost of ownership (TCO) and increased yield throughout the asset life cycle
3. Predictive maintenance

Source: IDC Europe, ERP Modernization Government, Oracle, November 2021 — N = 225

Conclusion — Getting the Most out of Next-Gen Application Investments in Government

A system shock driven by the pandemic and a critical injection of investment that the pandemic prompted are offering senior civil servants across EMEA a once in a century opportunity to realize the benefits of digital transformation. Senior civil servants need to urgently modernize back-office operations by turning data into intelligent insights, increasing operational efficiency and resilience, and sharing data across departments for improved outcomes. To get the most out of next-generation enterprise applications, they must:

- Map back-office data, processes, and user experience needs to design a modernization road map that takes an outside-in view where operational excellence and resilience, innovation, and improved user experience converge with technology possibilities, rather than an inside-out view of technical software migrations that do not enable the reimaging of back-office operating and working models.
- Partner with cloud-based enterprise software providers that offer a modular platform architecture, in which best-in-class business process capabilities can be coupled with emerging tools, such as machine learning and robotic process automation. And that can provide support throughout the system life cycle to ensure continuous innovation and low TCO.
- Design and execute a program governance that aligns technical knowledge with adequate business change management resources, including engaging and training civil servants that carry out the daily processing, budget analysts, and officials that oversee planning the best course of action for critical citizen-centric programs.

Governments that do not follow this path to back-office modernization will waste the unique opportunity offered by the convergence of urgency to invest and citizen trust.

About the Analyst



[Massimiliano Claps](#), Research Director, IDC Government Insights

Massimiliano (Max) Claps is the research director in European IDC Government Insights team. His research empowers technology suppliers and public sector professionals to embrace disruptive technologies such as artificial intelligence, edge computing, and cloud, to realize the benefits of strategic initiatives such as smart cities and citizen-centric government services. He is also IDC Europe's lead analyst for passenger transportation, advising stakeholders across the transportation ecosystem on topics like mobility as a service and intelligent traffic management.

Max Claps has almost 20 years of public sector experience. After starting his career as a management consultant, he joined IDC in 2002 as the lead analyst for the government, healthcare, and education industries in Europe. He then held various analyst and management roles at both Gartner and IDC. In those roles he advised technology suppliers and professionals in the public sector globally. Max spent two years at SAP, where he was the global lead for the SAP Future Cities program.

Claps holds a degree in international business from Bocconi University in Italy.

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