

# Dynamic Business for Smart Government



White Paper

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# Dynamic Business for a Smart Government — Aspiration To Reality

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Traditional business applications are passive, backward-looking “systems of record.” Users do their work and then, as an added step, perform a transaction to tell the software what’s been done. Rules and reporting help enable compliance and control, but that’s where this kind of software stops. Today’s world is increasingly flattened by technology, global interconnectivity, and systems of information flow, making it critical for governments to be able to rapidly perceive and react to changing constituent demands, threats, and opportunities. Going one step further, in this world where the pace of business constantly accelerates, imagine being able to anticipate rather than react to those demands. Success today and tomorrow requires a new breed of proactive, agile software.

One way to view a government’s success is the optimal alignment of people, assets, systems, and data to maximize results. Microsoft Dynamics breaks the traditional business application mold today. Emerging as proactive and forward-looking, it connects people to their work, surfacing insights that enable better decisions and guiding processes that optimize results. Agile software empowers adaptation to changing economic and political conditions. Instead of a “system of record,” it delivers a “system of engagement and opportunity.”

As we look specifically at Cities, it’s no longer enough to do more with less. Modern cities need to do NEW with less. Cities need breakthrough ideas that connect governments, businesses, and citizens with innovative services that increase efficiencies and reduce costs.

Moving forward to the next chapter in the evolution of Microsoft Dynamics, we look at the challenges facing governments in the future. We are defining a new vision for how software can evolve to empower people for greater success, predict potential issues and opportunities, and enable agencies and departments to expand the possibilities for organizational empowerment. At Microsoft, we are making this a reality.

# Forces of Change

Governments worldwide face changing conditions—new technology, new political forces, increased citizen expectations as a result of consumer trends, and evolving regulatory landscapes are the norm and not the exception. As we look at the horizon, however, we see unusually dramatic change looming on four major vectors concurrently. More than ever, software that makes it possible for a government to be dynamic and capture opportunity in rapidly shifting conditions is essential for true success.



**People:** There is always a new generation entering the workforce. But now, for the first time, that new generation is one that has grown up always connected and always online. They enter the workforce approaching technology with new attitudes and new expectations. This both demands evolution from business software

and enables new scenarios. Today, citizens and constituents expect their government to be available around the clock—to renew a driver’s license, process a tax return, or respond to a grant application. This is not just about new technology; it’s also about a generation of users that is comfortable with the scenario. Delivering this capability 20 years ago to a generation of users that were accustomed to standing in line for hours to get a driver’s license would have been as inconceivable as the technology itself seemed at the time. Moreover, the new generation entering the workforce blurs personal life and work life, driving individual preferences for work styles and devices. They demand access to anyone or anything from anywhere at any time on any device. At work, they expect the same intuitive experience that they have in the rest of their lives with their slates, smartphones, and social networks. This goes beyond the consumerization of information technology (IT); it is the consumerization of enterprise.

**Economy:** Today we continue to observe many signs of recovery from the adverse economic events of 2009. Situations vary in different geographies, but U.S. stock markets are at levels surpassing pre-meltdown prices. Car companies are again thriving. Employment in many areas is improved. Still, some impacts appear far more permanent, defining a new economic reality or a “new normal.” Budget realities and taxpayer pressure to reduce the cost of government are at the core of the new normal for government. One dimension permanently changed by this new budgetary reality is how governments look at software projects. The era is over for IT projects centered solely on a technology agenda—whether scoped as wholesale systems replacement or with investment extending over

multiple years against a promise of future benefits. Time-to-value is now an essential component of any investment; shortening the time between initial expense and positive economic benefits returned to the agency or department is critical. Paying for capability and capacity as used instead of up-front investment for anticipated usage is expected. The change concerns not only how software is acquired, implemented, and deployed, but also how projects are scoped. The old model of replacing entire systems generationally no longer works. To meet the criteria of the new budgetary reality, business software must be able to address operational areas or workloads sequentially, driven by the ability to capitalize on an opportunity for the organization. The reality has reshaped how successful software must be procured, implemented, and deployed.

**Technology:** The cloud is emerging as the most significant technology shift in a generation. Beyond running today's applications in a new way, the cloud is enabling a set of business solutions that were previously impractical at best. Connected supply chains, powered by cloud hubs, are changing the way many governments operate. The cloud accelerates the ability of governments to derive insights from massive amounts of data and make better informed decisions. Data is growing at an exponential rate: the amount of digital data that exists today is 10 times the amount it was five years ago. Eighty-five percent of the data generated is from "new" sources (e.g., mobile phones and tablets, smart devices, sensors). Not only is data volume increasing, but the variety and velocity are growing dramatically as well. "Big data" helps governments address this changing world of complex data. With big data technologies, governments can quickly analyze

massive amounts of structured as well as unstructured data. This opens up new and interesting scenarios, such as transportation optimization, disaster response, logistics planning, pandemic tracking, social network awareness, environmental analysis, employment analysis, fraud detection, and economic forecasting.

**Geopolitics:** As the world becomes increasingly connected, evolving geopolitical conditions such as foreign policy, economics, and demographics must be rapidly understood and factored into operational strategies. Changes in one part of the world can ripple quickly through connected governments. Successful governments must react with increasing speed and agility to these changing conditions, executing programs that are aligned with the mission while achieving their true potential and meet expanding constituent demands. Speed and complexity drive new software requirements, including the ability to facilitate connected collaboration and identify optimal strategies.

## It's About People

At the heart of every organization are the people who make things happen. People garner insight from business applications to drive decisions that advance the organization. They manage relationships internally and externally to drive relevant actions forward. The most successful governments are powered by individuals who are contributing fully, able to make a difference, and committed to their



employer's success. Microsoft can help individuals—and organizations—realize their full potential and drive significant impact by offering an end-to-end business solution that is flexible and easy to use.

A study released by the Harvard Business School in 2011 reported that, even more than salary level, the leading source of job satisfaction is the ability to make a difference and deliver results. Moreover, the researchers found that workers who were able to be truly productive were not only happier, but also enjoyed stronger career advancement. This link between job satisfaction and productivity is one reason we believe that business applications must go beyond delivering functionality to helping inspire passion in individuals. Another reason is the growing evidence showing that the user experience affects hiring and retention. At Microsoft, we believe that by delivering solutions that both equip and impassion individuals, we can help our customers go beyond improving their organizations to transforming them at every level. We can help them break through the electronic concrete that has plagued the business applications industry for years.

Impassioned and empowered individuals are an organization's greatest asset; when governments can realize the full potential of their people, they better fulfill their mission and realize substantive benefits for the constituents they serve. The Dynamic Government we envision deploys people-centered, end-to-end solutions that both help employees work better and inspire them to a higher level of commitment, innovation, and leadership.

# The Dynamic Government

Microsoft is uniquely positioned to help organizations transform into Dynamic Governments that are connected and forward-looking and that realize the full potential of their people. To ensure that we build for the future, Microsoft focuses on delivering innovative, proactive, modern business solutions that connect organizations with their people and their IT ecosystem. With these solutions, organizations can deploy individual business scenarios or a fully integrated business suite, and they have the flexibility to meet tomorrow's challenges. Taken in sum, Microsoft business solutions deliver on the promise of enabling people to do their best work and drive data from insight to action as they seek to make a difference in creating smart governments.

## **INNOVATIVE AND PROACTIVE APPLICATIONS—BETTER, FASTER, SMARTER**

Traditional business applications evolved as passive, backward-looking systems of record. Microsoft Dynamics already changes that model today, introducing embedded, declarative workflow that brings an understanding of government processes into the application and helps guide users forward through their work. When this is combined with pervasive built-in business intelligence (BI) that transforms the data captured in the system into insight empowering better decisions, the system becomes a more active, forward-looking partner for the people who drive a government organization toward mission success.

Microsoft Dynamics delivers innovative application scenarios today. These include, for example, a solution for the public sector that offers out-of-the-box visualization of task queues, business processes, and organizational performance measurements accessed via multiple devices using a familiar Microsoft interface. They can help you improve citizen services through constituent relationship and case management as well as manage initiatives with multiyear grant and project accounting. In addition, there's an Audit Workbench that enables you to define your organization's policies and automate the auditing process.

This is only the beginning. Microsoft Dynamics will evolve to embed constraint optimization and machine learning to deliver even more advanced, forward-looking capability to Dynamic Governments. For example, we are developing solutions that combine transaction history with information about key factors like weather, traffic, local event calendars, and demographics to optimize resource requirements for government agencies and departments. These solutions will help maximize budget and grant funding management and transparency while promoting greater citizen support.

"Big data," social connectedness, and contextual analytics present new opportunities for business applications insight, and they open up a whole new range of possibilities for government. Modern business applications won't just make individuals and organizations smarter; they will go beyond this in new directions and to new levels of impact that we are just beginning to imagine.

Driving impact has always required insight, but

most systems today only focus on retrospective views and data. They are passive, reactive, and backward-looking. Modern business applications will at the onset be proactive. They will inform with insights and possible actions while constantly evolving to point to what comes next.

Data continues to grow exponentially, as does the ability to derive meaning from it. Social commentary has accelerated the pace of the review cycle, with likes, links, and tweets providing instant clues to success or failure. Capturing this data and being able to tap into its rich and valuable insight is a new requirement.

Business solutions from Microsoft help people not only integrate and understand these new data sets, but also get to better answers with suggested actions so they can excel in the work they do. Microsoft achieves this by creating solutions that people can use to calculate and recalculate organizational possibilities in real time. By focusing on connected, forward-looking systems, Microsoft offers people access to actionable information with greater speed and agility, enabling government to respond more efficiently, effectively, and proactively to changing political, socioeconomic, and environmental conditions.

### **CONNECTED ORGANIZATIONS: BETTER INFORMED PEOPLE MAKE BETTER DECISIONS**

Today's social connectedness, mobile devices, and growing opportunities for interaction "any time, any place" have changed the way many people live and work. They are increasingly linked together and dependent on connections across the global network.

Modern business solutions not only connect people inside and outside the organization, they also give them context and insight that drives better decisions and boosts productivity. An important part of the Microsoft mission is to drive connections with people, with constituents, and with public and private partners across processes, data, and the ecosystem in which organizations operate. This commitment to connected organizations includes our vision of anywhere, in-context collaboration services that link people and companies to the right people in the right place, in the right context, at the right time, across multiple avenues of communications. Microsoft business solutions include everything from email to voice to video to presence to social—all designed with the singular goal of giving people and organizations more effective ways to:

- Take advantage of the exploding number of channels to connect with constituents at the time and place of their choosing.
- Create an inclusive, listening organization by extending collaboration scenarios that exist internally to include constituents.
- Evolve from an organization that engages with individual constituents to one that leverages the crowd to overcome challenges and solve problems.

Our commitment to connected organizations is about removing the impediments that generate friction within the organization and providing people with a broader array of insights and actions across internal and external connections. With greater transparency, agility, and insight, people can make better, more informed decisions and transform their organization into a Dynamic Government.

## **“INSTANT ON” WORKLOADS AND SUITES**

Traditionally, deploying new business applications has been costly, challenging, and, in some instances, downright painful. That’s why Microsoft is committed to delivering the most intuitive business applications on the market. Only by eliminating the budget overruns and implementation delays associated with new business applications—and making those applications easy to use—can software help an organization become a Dynamic Government.

Microsoft Dynamics products have always stood apart from other business applications by delivering fast, low-cost implementation. Today’s economic and budgetary challenges demand a quantum leap forward with regard to speed and lower costs, and Microsoft will continue to lead the way. Increasingly, governments look to evolve their applications into smaller chunks—addressing one operational workload at a time. Smaller chunks mean more rapid return on investment and more precise targeting of IT spend to areas that contain the most important opportunities or challenges for government. The Gartner Group describes this as a “pace-layering strategy,”<sup>ii</sup> recognizing that some parts of a government’s application landscape must evolve more quickly than others.

Traditionally, organizations have had to choose either best-of-breed solutions that could target a single workload or entire suites. The best-of-breed approach presented enormous integration challenges because the separate workload solutions rarely came from the same application vendor. The suites naturally delivered integration, but don’t support workload-at-a-time implementation. To solve

this problem, Microsoft Dynamics is evolving into a suite solution composed of workload services that are designed to work together but can be deployed independently. Governments can consume the Microsoft Dynamics technology in the model that works for them—as an integrated suite in a government or branch, or workload by workload in larger organization, with the workloads together composing the simplicity of a suite.

Systems with modules that can be turned on and off, depending on what people need for their jobs, will enable shorter, less expensive implementation cycles. A workload can be an individual business process such as expense management, can answer the needs of a grantee or contractor, or can address the operational requirements of logistical support. Large governmental organizations, especially, need the flexibility to adapt and change their business systems one workload at a time, whether those workloads are contractor relationship management, human capital management, or citizen service. This is why Microsoft designs its business applications as complete solutions seamlessly composed of separately deployable services. Governments can deploy as much or as little as they need while also benefiting from the synergy of an integrated suite.

### **Modern Cities**

Cities can do NEW with less, by building on existing investments at their own pace to create a modernization approach that works today and is sustainable into the future. Microsoft and our partners bring cloud, Big Data, mobile, and social technologies together in solutions that empower cities to put people first—whether optimizing infrastructure, increasing access to

education and health services, or improving services. Imagine what's next for your city.

# It's a Government Business Solutions From Microsoft

There is a virtuous cycle between applications and platforms. Applications drive the requirements that make platforms great, and in turn, the platforms empower innovation in the application. At Microsoft, this goes to our roots, with Office driving Windows and the graphical interface of Windows empowering the growth of Office. It is equally true today. As an application that consumes the full breadth and depth of Microsoft platform technology, Microsoft Dynamics plays a critical role within Microsoft, helping to drive the platform to excellence, both historically with the on-premises server stack and today with the Windows Azure cloud platform.

Microsoft Dynamics brings together the broad range of Microsoft technology, spanning both commercial and consumer, making it easier for governments to collaborate, connect, and deliver results. Microsoft Lync, SharePoint, and SQL Server BI tools provide embedded communications, collaboration, and analytics capabilities within the end-to-end business



solution. Microsoft Dynamics CRM runs in Outlook, so users can move between tasks with greater ease and without disruption. This pervasive interoperability creates a better user experience, reduces IT costs and complexity, and puts new Microsoft products into customers' hands without headache. Because we are committed to engineering for simplicity of upgrade, we test real customer scenarios that cut across Microsoft products and services so customers can benefit from advancing technology more quickly, consistently, and seamlessly. For example, the can easily move data between Microsoft Dynamics business applications and Microsoft Excel to enable ad hoc analysis and maintain budget visibility and control.



The cloud is another area where Microsoft Dynamics demonstrates the exceptional benefits of a business solution from Microsoft. First, the Microsoft Dynamics roadmap commits to cloud delivery on the scalable, cost-effective, global Windows Azure platform driving key requirements into that platform. This commitment includes building on its unique platform-as-a-service (PaaS) architecture to achieve new heights for cloud-delivered business software. Second, customers will have the ability to discover, acquire, and manage Microsoft Dynamics, Microsoft Office 365, and

Windows Azure cloud services through a unified marketplace and portal experience, simplifying the consumption of a broad set of services. Third, we have seen with our own customers that organizations do not switch all of their IT assets to the cloud instantaneously. Rather, most or all organizations will first live in a hybrid environment, combining some assets on-premises with others in the cloud. Windows

Azure uniquely enables this with federated identity options that allow one consistent use of people's identity across cloud and on-premises, as well as the capability to help secure virtual private networks between the Microsoft cloud and a customer's on-premises infrastructure. Microsoft Dynamics builds on this extraordinary capability with the power of choice—the same business application is uniquely available for cloud or on-premises deployment. Together, Windows Azure and Microsoft Dynamics offer Dynamic Governments the "cloud on their terms."

Across the board, Microsoft products are synonymous with productivity, touching and improving the lives of people in every facet of work and life. We are relentlessly committed to improving the user experience, with investment exceeding \$9 billion in annual R&D—all geared toward building the most intuitive and simple solutions for governments and citizens. Microsoft business solutions deliver a broad

array of capability to customers in their aspirations to become Dynamic Governments through technology innovation.

## **TRANSFORMING GOVERNMENT THROUGH CONSUMER INNOVATION**

Twenty years ago, the personal computer moved beyond the home and entered the workplace. Specialized terminals, word processors, and office calculators were replaced, ushering in the PC era. Powered by Microsoft Windows and Microsoft Office, the PC became the platform of choice for business applications and redefined individual productivity and group collaboration at work. We sit now on the cusp of the next wave of innovation, with consumer technology entering the workplace and transforming how we work. Once again, Microsoft is uniquely positioned to lead the revolution.

Our approach begins with **modern** Windows 8-style user interface, optimized for touch, coming from the consumer focus of Windows Phone and Xbox, ultimately, to Windows 8 and a broad range of desktop and tablet devices. Microsoft Dynamics will bring the same exciting and soon-to-be familiar style to business applications, in the way that it now delivers the current Office look and feel.

**Collaboration in context** is essential to enabling the connected government. Microsoft Dynamics today delivers embedded presence and Lync interoperability. Tomorrow, this will extend through Skype and the connection of business and social user graphs. It will empower workers to connect to whomever they need to for work or personal interaction, using the same familiar devices and tools, and to seamlessly manage their own boundary between work and

personal life.

Kinect launched a transformation in **natural user interface** (NUI) for the gaming world. The simple tag "You are the controller" tells the story of how a person's voice and movements seamlessly drive the experience—in many cases eliminating the need for explicit interaction with the software as the software simply reacts to what you do or say. Microsoft Dynamics will lead the same transformation in business applications. For example, using Kinect to provide a disaster-response and gesture-based recovery instrument that visualizes external data feeds—such as the location of injured residents—and allow first responders to interact with the data in an immersive video-conferencing environment.

Bing began as a traditional consumer search engine. In recent years, it has evolved to become a "decision engine," using technology to **decode a user's intent** and harness structured data and capability to more completely answer the user's request. Beyond pure search, this Bing capability is harnessed in other consumer scenarios, seamlessly allowing Windows Phone to respond to voice commands and Xbox with Kinect to help users navigate an ever-expanding world of information and social content. Microsoft Dynamics will surface the Bing capability to deliver business software that more naturally decodes user queries, typed or spoken, and understands intent so it can deliver results that transform the software into a truly empowering digital assistant.

Our unique leadership in research and development across enterprise and consumer technology helped lead the transformation of the workplace empowered by the introduction

of the PC. It positions Microsoft and Microsoft Dynamics to drive the next wave of consumer technology reshaping how we work tomorrow.

## **EXPLICIT COMMITMENT TO SIMPLICITY AND AGILITY**

At Microsoft, our approach to enabling the transformation of organizations into Dynamic Governments is grounded in our passion for individuals and what they can do. Business solutions from Microsoft are simple to use, simple to customize, simple to deploy, and simple to maintain and support. We deliver this simplicity through architectural innovation that eliminates the need to write code with every change, which makes the systems easier to use and support, as well as through new user interface design that is intuitive and delivers a great experience on a range of devices. With Microsoft business solutions, governments can adapt their systems as they evolve their organizations, simply by dragging icons and modifying their HR and financial systems to support that change. There's no need to create an IT work order; users can accomplish the task themselves in minutes.

Our continued focus on application architecture innovation increases the simplicity of creating, using, and maintaining the software's fidelity to core governmental needs, and it reduces, if not eliminates entirely, the cost and complexity associated with legacy business applications. Governments will no longer be "stuck" with a best practice they implemented in the past, as they have been with previous business applications. Microsoft enables governments to use best practices as a starting point and then to take advantage of the architectural innovation in our end-to-end business solutions to evolve those best practices when

requirements require change. This inherent simplicity and agility empowers governments to gain agility and a leading edge in an ever-changing political and economic landscape. If a solution is simple for line of-business users, leaders, IT, and partners, the solution can create even more value and help achieve a real impact for better government.

### **Microsoft CityNext**

With Microsoft CityNext you can:

- Better manage city assets and reduce costs with efficient energy, building, and transport infrastructure management
- Improve access to education, health, public safety and city services
- Transform your city to attract a vibrant skilled population and inbound investment to drive the city's economy

## SUMMARY

It is the impassioned individual equipped with the right tools who enables companies to stay ahead of the competition in this world of constant change. Microsoft transforms organizations into Dynamic Governments that enable people to do their best work no matter where they are in the organization. We are already seeing the impact as customers make the transformation, and Microsoft is committed to delivering modern business solutions, built using the broad portfolio of Microsoft technology, with intentional simplicity as a core design element. The solutions are innovative, proactive business applications that help users work in new, more effective ways. Moreover,

they deliver tools for a connected organization to drive data from insight to action anytime, anywhere. The solutions also offer the flexibility to deploy and consume business workloads and suites in a way that delivers on today's needs while also providing the ultimate flexibility necessary to be ready for the future.

- 1 Teresa M. Amabile and Steven J. Kramer, "What Really Motivates Workers" in "The HBR List: Breakthrough Ideas for 2010," <http://hbr.org/2010/01/the-hbr-list-breakthrough-ideas-for-2010/ar/1>.
- 2 Jim Shepherd, "How to Get Started with a Pace-Layered Application Strategy," Gartner Research, March 28, 2011.

## Learn more about Microsoft Dynamics

**United States and Canada toll free: (888) 477-7989**

**Worldwide: (1) (701) 281-6500**

<http://www.microsoft.com/en-us/dynamics/crm-government.aspx>

<http://www.microsoft.com/government/ww/public-services/city-next>

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