citizen

solutions and services

setting new standards of cost efficiencies

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New deal for citizens

Relations between citizens and the public sector are profoundly different from what they once were.

Digital connectivity has changed everything. Equipped and comfortable with technology that links us to each other and to information sources all over the world, anytime and anywhere, we citizens are today empowered by limitless knowledge, and expect the same standards of speed, joined-up service quality, and transparency from governments that we find every day in our private lives.

Enlightened public sector organizations are committed to meeting this challenge, but even the most visionary face a major dilemma. Financial times are tough, in just about every country. As citizen demands and expectations grow, budgets are under intense pressure, jobs are being cut, and service design and delivery seems to get more complex and costly every year.

Healthcare, pensions and social services are under growing pressure as the population ages and new expensive medical treatments emerge. Traditional methods of delivering key services simply won't be affordable in the long-term.

How can this apparent contradiction be resolved? How can public organizations get closer to citizens and their requirements and also become more cost effective – when the drive for efficiency only seems to increase the gap with the people they must engage?

There is a way to square that circle. Public bodies can and must harness the very same data-led digital mobility that is now changing citizens' perceptions of the world, the governments they elect, and the services they pay for. They must design digitally-driven mobile services that are truly citizen-centric, and set new standards of cost-effectiveness in the process.

By providing easy-to-use digital self-service tools to access local authority services, for example...or joining up hospital, regional and national networks to ensure collaborative care...or equipping learners with smart resources...governments can and must shape the intelligent, intuitive, and personalized engagement that citizens expect and demand.

And crucially, at the same time government, healthcare and education staff can be informed to make faster, better, prioritized decisions, and are able to design innovative and streamlined, cost-effective services and processes, based on a wealth of actionable data intelligence about what citizens want and will actually use – not on irrelevant assumptions from the past.

This kind of insightful planning – designed to match citizen behavior and aspirations – is at the very heart of sustainable efficiency across public organizations. It provides a platform for digital public sector bodies of today and tomorrow: predictive actions and differentiated citizen services, data transparency and security, ability to manage increasing complexity in society, and firm preparation for emerging policy and governance models.

Changing landscape sets a new agenda

Digital everywhere

Describing our times as a digital revolution is no exaggeration. The impact of technology across the world on institutions, processes, products – and most of all on people – is unparalleled in history, and is accelerating.

Some of the most dramatic changes in our lives spring from the mobile developments of the last 10 years. Young and old now have smart phones and tablets in their hands with massively greater power than the computers that put man on the moon 45 years ago, keeping us connected and informed on the move, wherever we are.

And we are not just using connectivity to get train schedules and other useful information. Mobile technology has changed the way we all buy products, source services and work with each other. More and more people are used to taking what they want, when and how they want it on a self-service basis.

We are also talking to each other more often: social media web sites count for nearly one-quarter of internet visits. We are using our digital networks to critique our lives: web buzzing friends and strangers to report experiences with restaurants, banks, and any other service provider.

We are sending photos, videos and audio files now as easily as words, because we have the bandwidth to do so, and processing and storage capabilities to manage it – 44 zettabytes of global data expected by 2020: more than 50 times the 2010 figure.

As the Internet of Things becomes part of our lives, more and more devices will be interconnected, networked without human intervention, storing unimaginable volumes of data all the time.

Little wonder that this deep change in the ways we live our lives affects our views on the governments we elect, and the public services we fund. With our heightened global awareness, citizens are demanding much greater transparency of information and much better reassurance about the ways it is used.

We know that there is a tax revenue loss estimated at $3.1 trillion annually worldwide, for example. So we expect our governments to be rigorous in the management of the money cycle, and are more vocal than ever about how we want our taxes to be spent.

We know that more and more information is being generated about us and our habits by sensors in energy meters and along the roadside, 24 hours a day. We know that we are captured on camera at every turn. So we expect public organizations to operate the highest standards of privacy and security to prevent that data being misused.

People shifts and shake ups

We are also in a time of amazing change in the size and balance of our population. Our current global population of more than 7bn is expected by the UN to rise to between 8.3bn and 10.9bn by 2050.

But that's not all. The balance of ages is becoming unrecognizable from the past. The ratio of children to older citizens stands at about 3:1 today, but is quickly declining. By around 2040, there will be more older citizens than children in the population.

That aging process is rapid. The time taken to double the share of those over 60 years old from 7% to 14% of the population took more than a century in France. In many countries of the world – largely due to improving medical provision – that milestone is being reached in about 20 years. And within the group of over 60s in the rich world in 2050, the number of people aged over 80 will have risen six times to about 120 million from today's figure.

What this means is that governments have little time to build the financial infrastructure and social security systems to deal with an aging population and rising old age dependency. It also means that the public service funding burden will fall more and more on the younger, more vociferous, and more digitally equipped citizens.

No matter how much they are committed to the care of older people, these citizens will expect public bodies to operate and use their hard-earned money as efficiently as the best managed private company uses its customers' investment; purchasing and deploying the most cost-effective technology and processes, avoiding wasteful duplication and costly service errors.

And there is another major shift ahead in population trends. By 2050, experts expect that 80% of our bloated world population will be living in cities.

Research about the behavior of city dwellers is clear: today's urban citizen is more bound up with technology than people living in the countryside. City people expect to have high quality connections to the web and to a multitude of social networks via their chosen personal devices. And they increasingly expect to be connected with the objects around them: their cars, homes, and the wider infrastructure.

Enabling citizens to exist in this networked and connected mode is therefore imperative for governments and the management of cities in the future. To succeed, cities must put in place deep connectivity foundations: robust, flexible networks and data centers, free wireless networks, strengthened links between central and local government, and easy access to municipal services via mobile devices.

Starting the digital journey

Towards service excellence – delighted customers and optimized resources

These are the kind of life developments that are changing today's citizens' habits and perceptions of what they want and need from public sector organizations and agencies. In order to be relevant now and in the future, governments must respond, and begin a carefully planned journey to design, implement, and manage the digital, mobile and flexible solutions that deliver what citizens want – as workers and tax payers, medical patients, or students.

Public services in future must work seamlessly and securely across every channel, from face to face, to mobile, to online. They must be as simple to use as consumer digital services.

They must allow public sector professionals and specialists to get closer to people, understand their personal requirements, and work more directly in partnership with them. They must also square the circle, and enable delivery of service excellence that represents both delighted citizen users, and optimized resourcing and cost-effectiveness.

The starting point for the digital journey is of course to gain best understanding about citizens and their needs.

Public organizations are awash with information. The sheer volume, velocity and variety of structured and unstructured information that now swirls around public agencies can be overwhelming.

But properly managed, that information offers priceless intelligence about what citizens really want, and how to deliver it as innovative and streamlined, cost-effective services and processes.

At the same time – squaring the circle once again – that information, often called 'big data', presents new opportunities to maximize and optimize digital assets, make performance and interoperability improvements, and design comprehensive operational reporting systems that enable faster and more cost-effective compliance solutions.

The critical requirement for achieving all these objectives is to make sure that data is accurate, current, and reliable.

Government and public sector organizations are increasingly using advanced analytics to work on their data:

- Improving the ways they understand the data picture, revealing subtle but important trends in the ways services work, developing innovative new services, and addressing operational risks ahead
- Sharing information between local government and emergency services to identify vulnerable citizens who need particularly sensitive and careful support, and to provide the right kind of services in a timely manner based on ability to predict from the data what vulnerable people want and need most
- Analyzing output from smart sensors to create actionable traffic management intelligence with unheard of levels of accuracy and optimized emergency services, and creating a better city in which to live
- Putting citizens in control of their health information, enabling doctors, hospitals, and administrators to access patients' data, but empowering those patients to decide what can and cannot be shared
- Transforming smart maps for citizens, ensuring important changes to the urban environment and transport infrastructure are continually updated, based on very latest geographic and landscape data
- Consolidating data from more than 80 sources so that a national government network of labor exchanges can make major cost cuts and improve effectiveness.

Meeting challenges head on

Public services are wide-ranging and varied. The digital journey is not about creating a template for citizen demands in central and local government, health, education and all the other areas of dedicated public services. It is about developing a new way of thinking about citizen-centricity, and applying digital solutions that deliver personal and organizational benefits in all transactions with the citizen.

Data-driven public sector organizations are equipped to think more creatively, pioneer new methods, and build innovative two-way relationships with citizens that deliver the best service most efficiently – across the whole of the public sector.

Central and local government

Central and local government cannot stop what it is doing in order to redesign, re-engineer or reorganize its services. Taxes have to be collected, streets policed, benefits paid, and the roads kept open. Governments have to be ready for the unexpected: from terrorist attack to natural disasters, from floods to pandemics. They have to monitor regulations and stay compliant.

Digitally transforming services is not a barrier to service delivery. More responsive interfaces and easy-to-use self-services can be introduced in an environment of complete security, where citizens benefit from accessing services anywhere, anytime.

Self-service empowers citizens to communicate quickly and easily with governments through e-channels. So they become partners in a dynamic public services evolution, shaped by their own feedback. Self-service should also mean reduced delivery costs for governments, because staff intervention is required much less than for traditional paper based services.

The performance improvement and productivity potential from self-service can be highly significant. For example, key staff can be redeployed from handling standard enquiries in call centers to critical and complex cases where their expertise, case sensitivity, and unique insights can make a real difference to citizens' lives.

With focus increasingly moving to urban life, self-service solutions also enable the city to completely reimagine vital things, such as approval for licenses by business. Easy applications – say the right for a restaurant to offer outdoor eating on the street – are simplified, while automatic triggers ensure deeper review of more complex cases, such as late hours drinking, or a street fair, or the right to stage a protest.

The lesson for cities is that digital solutions enable us to be creative in the way we do seemingly small things. Efficient self-service and agile license approvals create cascading efficiencies. Local business becomes more viable, and therefore areas can be more easily energized and employment goes up. There is also speeding up of processes and removal of waste in terms of forms, travel, time and so on. Larger investors see the city as adaptable and practical: all based on the idea that citizens can be treated as, and given, the tools of customers.

The digital city can embrace localism, adapting on a micro-level to the needs of the people, solving problems in a more agile way that's appropriate to the needs of the locality and community. The citizen-centered digital city can help the entire urban environment to become more livable, sustainable, and supportive of humanity.

Technology and the city

Today's urban dwellers are bound up with technology. Connected to the web, but also increasingly connected with the objects around them: cars, homes, and the wider infrastructure.

As a result, citizens are increasingly using only connected services and infrastructure to do almost everything that's important to them.

In this networked and connected mode, it is imperative for governments to enable citizens to:

- **Be safe** – with mobile alerts to failing street lights, crime incidents, traffic violations
- **Work** – easier remote working through high-bandwidth internet, easier communication with business and talent
- **Learn** – with online courses and tutorials
- **Socialize** – enabling easier social network access and sharing
- **Pay and transact** – creating easy, secure payments processes for tax and other dues
- **Sustain** – enabling access to recycling services and locations
- **Access care** – by linking personal records with medical and social services, enabling contactless prescriptions
- **Move** – as people connect their own preferred model of private and public transport according to their individual needs
- **Decide and govern** – enabling mobile, connected access to citizen services and to feed back to government, and even affect policy or decide elections.

Healthcare

Our healthcare services are in the vanguard of change. People are living longer, and needing personal care for many more years than in the past. Treatments are improving, but so are treatment costs, and so are patient expectations. Perhaps healthcare is facing the biggest challenge across the public sector: how to pay for new treatments and changing patient demands, while still delivering best possible wellbeing.

Healthcare managers all over the world are driving an increasingly sophisticated digital agenda. Information silos in hospitals, general practitioner practices, and pharmacies in public and private sectors are being joined up – to create hospital, regional and national connectivity that delivers comprehensive and cost-effective citizen care, using data intelligence to predict local requirements and deliver more relevant, patient-centric and efficient services in response.

Online portals are enabling doctors and patients to share information, encrypted for security. Appointments are now driven by patient action, and reductions in 'Did Not Attend' rates are a measurement of real performance improvement as a result.

Mobile applications are increasingly critical to hospital operations. With healthcare professionals visiting bedsides to monitor patients' progress, patients' notes are now available on a highly functional tablet device, allowing data to be quickly and efficiently updated real time. As for cost savings and efficiency, hospitals are seeing massive reductions in papers stock and printing costs as a result, while healthcare professionals are more productive.

Education

Schools, colleges and other centers of learning face huge challenges in providing access to citizen demands for best-in-class education, regardless of location, age and income – including provision of continuous digital learning opportunities for the growing number of older people.

To some extent, the delivery platform is already there: the explosion of smartphone and mobile device ownership amongst young people has created a new student learning culture, changing traditional students into education consumers. Whether student-owned, or institution-supplied, mobile technology means information retrieval anywhere and anytime, a process that not only empowers students to take more control over their learning, but also offers teachers the chance to free up and enhance their roles as facilitators of learning.

With students now able to study at home or on the bus, the classroom can become a center for project work, discussion, review and revision, and the relationship between the student and the teacher is being transformed in secondary and higher education.

There are significant examples where digital transformation enables a network of partners – learners, colleges, and industry to work together to better understand changes in the education and work skills now required, by sharing and analyzing data. The percentage of dropouts in the colleges involved is a recognition that training is significantly more relevant to learners, and enables the colleges to operate much more efficiently.

Defense and security

Security and defense is a real issue for citizens today and tomorrow. There is no such thing as a 'foreign' war any more. Citizens feel exposed to the dangerous effects of conflict in any region of the world, and homeland safety is more entwined with overseas campaigns than ever before. Technology has a major part to play in helping citizens feel safe, and many of the most effective and proven deployments are generic – used widely elsewhere with great effect in government.

Fast, stable and secure state-of-the-art communications enable situational awareness, without endangering lives. Terrorists and other conflict originators can be actively identified, using eID processes that also help to speed up border checks. New and less well-defined nonlinear threats such as cyber security can be controlled using the most innovative networked collaboration available. Defense forces are able to maintain operational effectiveness in tactical situations by depending on robust and proven security architecture, able to react to threats in real-time.

Citizens also want to know that all this costly investment in defense equipment and human resources is being efficiently managed, and deployment is relevant. The whole ecosystem of our defense and security agencies must drive out inefficiency from IT practices.

Conclusion

Doing things the same way as before, but just a bit faster with a bit more automation, is no answer to the new environment in which we all live, and in which governments serve us.

The public sector is being challenged to think more creatively, pioneer new digitally-shaped services and build innovative two-way relationships with citizens and private sector partners. It is the only way it can reach new, higher levels of quality and efficiency.

To achieve its goals, governments and public sector organizations need partners with a breadth of experience and depth of expertise. The need is for partners that do not simply design, build and deploy solutions, but transform how people work, and the citizen services they deliver.

Organizations need tangible results: better outcomes for the citizen and improved front line delivery, with enduring cost savings and efficiency measures.

Based on years of global experience, with governments and public service organizations of all types and sizes, Atos business technologists are dedicated to improving the citizen services we all use. We adopt service integration and management processes (SIAM), for example, so that public sector agencies can now select and procure services, products and technologies, in a more controlled and structured approach, moving away from the more traditional procurement of end-to-end services selection.

We like to think we go a bit beyond technology, believing that putting people at the center is the real secret of service excellence, practicality, and efficiency – from which all technology solutions then flow. We are committed to implementing solutions that help workers collaborate, which connect organizations and technology, and which enable the public sector to fulfil its duty of care to all of us now and into the future.

We do not pretend to have all the answers, but as one of the largest system integrators in the public sector marketplace, we are confident that we will find and deliver the right and best support you need to become a data driven government organization.

About Atos

Atos SE (Societas Europaea) is a leader in digital services with 2013 pro forma annual revenue of €10 billion and 86,000 employees in 66 countries. Serving a global client base, the Group provides Consulting & Systems Integration services, Managed Services & BPO, Cloud operations, Big Data & Security solutions, as well as transactional services through Worldline, the European leader in the payments and transactional services industry. With its deep technology expertise and industry knowledge, the Group works with clients across different business sectors: Defence, Health, Manufacturing, Media & Utilities, Public Sector, Retail, Telecommunications, Transportation.

Atos is focused on business technology that powers progress and helps organizations to create their firm of the future. The Group is the Worldwide Information Technology Partner for the Olympic & Paralympic Games and is listed on the Euronext Paris market. Atos operates under the brands Atos, Atos Consulting, Atos Worldgrid, Bull, Canopy, and Worldline.

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