Driving Public Entrepreneurship

government of the future centre

Government as a catalyst for innovation and growth in Europe

In conjunction with: OXFORD ECONOMICS

Contents

This report reflects recent research undertaken by Accenture and Oxford Economics and is presented in collaboration with the Government of the Future Centre, a leading research centre and innovation hub that aims to shape high-performing and innovative public service organisations. The Government of the Future Centre was established by Accenture, the Lisbon Council and the College of Europe to support public service organisations with groundbreaking research and insights that help to improve the social, economic and health outcomes of the people they serve.

Europe's new Innovation Imperative

Innovation is fundamental to high-performing governments and businesses—offering the potential to achieve better social outcomes for citizens, and to fulfil the promise of sustained economic recovery. As Europe struggles to emerge from the worst economic crisis since the Great Depression, policymakers are looking to innovation to catapult economies into the new 'S-curve' of global growth. This report shows where progress is being made, and gives practical solutions for a new breed of public entrepreneurs who must innovate to address social challenges and catalyse growth.

Recent research by Accenture and Oxford Economics[1] identifies real opportunities for accelerated economic growth and job creation in both developed and emerging economies. Undertaking further detailed macroeconomic modelling for this report, we estimate that as many as 15 million jobs can be created and sustained in Europe in the next decade. But these opportunities are by no means guaranteed. To turn economic potential into tangible growth and improved social outcomes for citizens, government and public service leaders at all levels will need to take consolidated, focused action.

Traditionally, the role of government has been recognised as an enabling one—creating space for entrepreneurs to turn ideas into market opportunities, establishing a positive environment for investment, and designing policies and programs that stimulate private sector growth. Yet as the fiscal slowdown continues to dampen recovery and squeeze already tight public budgets, governments must go beyond enablement. Governments need to:

- reconsider how austerity can drive transformation and renewal
- ask how new forms of collaboration between government, businesses and citizens can challenge the status quo
- find new ways to seek out the mutually reinforcing goals of social progress and economic prosperity
- explore how promoting a culture of public entrepreneurship can drive innovation across government and help create sustainable growth.

Our research tells us that policymakers and public service managers already recognise they must help drive recovery by reforming the way they work. Many public service leaders are reshaping services to accommodate reduced budgets. Some are beginning to embrace innovation as a means of driving public value. Too few are actively considering how they *themselves* can be the leaders that inspire economic growth, by radically adjusting the way they work around new, collaborative business models. These actions are what we mean by public entrepreneurship[2]; using the whole range of policy levers to mobilise a broad resource base, catalyse innovation and drive the twin goals of social progress and economic growth.

An ageing population, increasing social demand, new technologies and a changing, multi-polar world are all reshaping the landscape, and forcing a rethink of traditional roles and ways of working.

- How can public service leaders balance tight budgets and continue to deliver public value with fewer resources?
- How can they mobilise the co-productive strength of businesses and citizens to drive social and economic wellbeing?
- How can governments and public service agencies, as key players in this process, focus efforts and use their combined strength to catalyse innovation and growth?

Building on research by Accenture and Oxford Economics, this report uses macroeconomic analysis, case studies and a broad range of interviews with policymakers, academics and public managers to offer answers to these questions.

"For the first time in generations there is an active platform for change. The general model of social security has essentially been the same for the last 60 years. But the world we live in today is vastly different. We need to stop and think about whether the system we have today is appropriate to respond to the changing needs of citizens and employers."

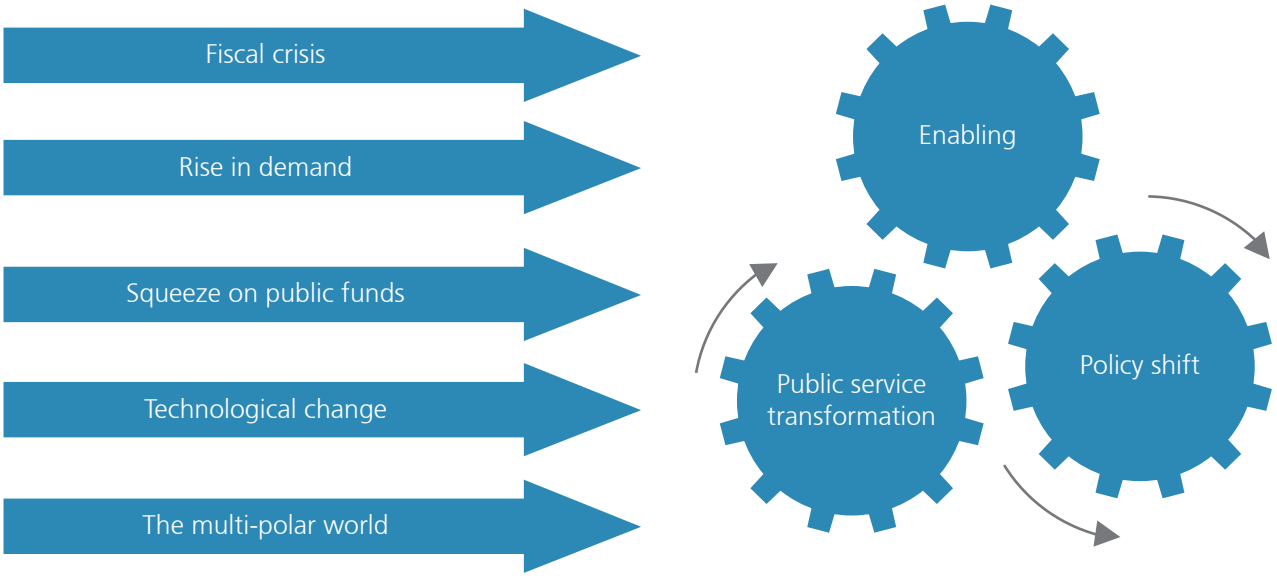
Terry Moran, Director General, Universal Credit Programme, Department for Work and Pensions, United Kingdom (UK)

Focusing the Power of Government

Scaling up growth-focused innovation demands a profound change in the relationship between government and the wider society. This change goes beyond traditional public, private and civil society distinctions. It is about reconfiguring the state and public services around a shared focus on social and economic outcomes. The process begins by reflecting on the economic size and power of government. Overall, public spending across Europe makes up half of total gross domestic product (GDP), with public sector employees accounting for 20 percent of the workforce. Governments are major consumers too: as a European average, public procurement budgets make up approximately 17 percent of total GDP.

This sheer size and purchasing power means that government and public service leaders have both an obligation and an opportunity. Their obligation: to use this power creatively; to utilise all the levers at their disposal to catalyse innovation towards new waves of growth. Their opportunity: to become new public entrepreneurs who creatively pursue mutually reinforcing goals of social and economic progress.

Figure 1. The transformative powers of the public entrepreneur



"If systems are not working we need to have the courage to address the problems and face up to them. It is importance to focus on the outcomes, understand the effect of the changes we make and promptly address what needs to be improved. We need to move beyond simply making 'checklists' detailing the current situation."

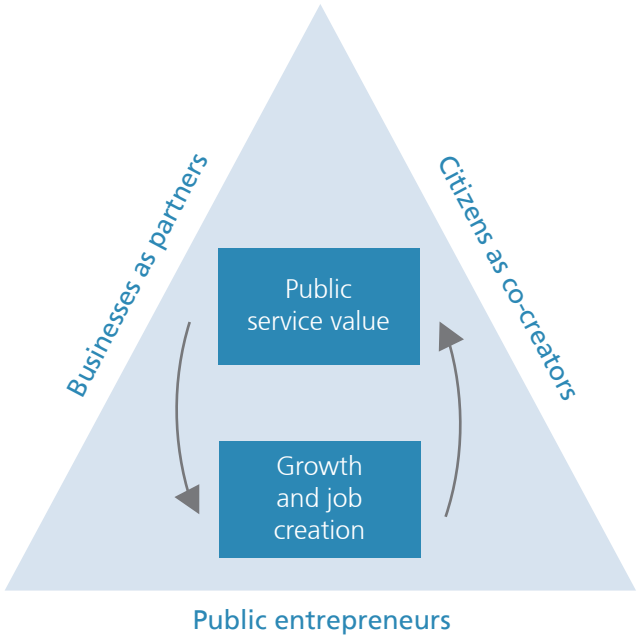
Michel Praet, Advisor to the President of the European Council

Governments have a range of levers at their disposal: from strategies to transform the provision of public services or enabling businesses to flourish and grow; to setting the broad policy context for innovation and job creation.

- **Public service transformation**—Governments must align new, diverse, open and collaborative service models with new opportunities for growth. Through smarter procurement, mobilising new forms of finance and creating digital platforms for service planning, delivery and the engagement of citizens and businesses, governments can meet new social demands—and catalyse innovation in the economy—transforming the way it delivers services.
- **Enabling markets for innovation**—Governments have a key role to play in the development and regulation of existing and emerging markets. As global economic competition intensifies, governments must make sure that entrepreneurs and leading-edge researchers are rewarded, the investment climate is attractive, and regulatory regimes manage—rather than stifle—innovation and risk-taking across public service markets and beyond.
- **Shifting the policy context**—Reshaping service delivery and enabling markets for innovation can only occur with a set of macro-policies that push toward the same direction. As governments recognise the need to focus on growth, they must simultaneously create a macro-policy context that encourages innovation, frees up public service managers, and allows openness and collaboration.

The rise of a new form of public entrepreneurship can be the stimulus for revitalised operational models across government and in the wider economy, which seek synergies through partnerships between government, businesses and citizens. Such models will harness new learning and technological advances to achieve innovative solutions to social problems, and secure competitive advantages for European businesses. With entrepreneurial spirit mobilised across the economy, the challenges of today can be turned into opportunities that launch Europe towards a new trajectory of social wellbeing and prosperity for the future.

Figure 2. Mobilising the entrepreneurial spirit of government, businesses and citizens



To truly transform European economies, governments must begin by examining the key drivers of economic recovery and creating a long-term vision of economic sustainability that can guide reform. This process is not stargazing; it is being smart about the long-term trends that are likely to shape the future of the global economy and harnessing them now. As the United States Government recently argued, "*The greatest job and value creators of the future will be activities, jobs, and even industries that don't exist yet today. The countries that catalyse their development will reap the greatest rewards.*"[3]

"The financial crisis creates a powerful impetus for change and there are real opportunities for governments to innovate and utilise resources in better ways. Often, doing this entails a more open and co-creative way of working—with different public service agencies across different levels of government, with businesses and, importantly, with citizens."

Christian Bason, Director, Mindlab, Denmark

Transforming Government, Achieving Growth

New Waves of Growth, a recent study from Accenture and Oxford Economics, identifies numerous opportunities for accelerated economic growth and job creation in Europe and beyond. The study is based on in-depth research that marshals evidence from expert panels, secondary data and extensive economic modelling. The research shows that, despite pervasive economic uncertainty, massive untapped opportunities for further economic growth and job creation lie within the grasp of both mature and emerging economies. These opportunities are driven by long-term, durable trends that affect us all: an ageing population; the growing scarcity and regulation of energy and national resources; the proliferation and spread of new technologies; and a growing prominence of emerging markets. Though often perceived as challenges, these trends can drive growth within four key areas: the silver economy, the resource economy, the multi-technology future and the emerging markets surge.

We believe these four new waves of growth are the focus around which governments and businesses must coalesce. By transforming themselves, European governments can deliver improved social outcomes for citizens, at the same time as they kick-start their economies out of a financial abyss.

"Sustainable growth needs businesses, governments and civil society to work more effectively together. But this does not happen by accident—it requires mutually beneficial incentives, effective and transparent brokerage, and a clear set of shared goals."

Graham Baxter, Director, Global Programmes, International Business Leaders Forum

The New Waves of Growth

Based on detailed modelling in three key countries in Europe, we estimate that the new waves of growth could generate and sustain 15 million additional jobs in the European Union (EU) by 2020 and provide growth of an extra €1.2 trillion, 8 percent over current projections of gross domestic product for the EU.

The Silver Economy

Contrary to conventional wisdom, ageing populations represent a massive untapped growth opportunity in the developed world. Key opportunities include new forms of health and social care, third-age learning and experiential goods and services.

The Multi-Technology Future

Technology's key contribution to economic growth is its ability to spur productivity improvements and innovation in products and services. The sectors shaping this revolution are core technologies, ancillary technologies and services, convergence technology and technology-enabled business models.

The Resource Economy

The way the world responds to scarcer resources presents fertile ground for growth and new jobs. Identified growth sectors include intelligent energy; green infrastructure; food and agribusinesses; alternative energy sources and eco-ethical products; waste, water and land management; eco-consultancy; carbon finance and investment; and building green skills.

The Emerging Markets Surge

Economic activity is gravitating toward the powerhouse economies of Asia and Latin America, while Africa's untapped growth potential is attracting increased attention. Key growth opportunities include low-cost business models, financial services for South and South East Asia, infrastructure, citizen services, international knowledge exchange and the emerging global middle class.

"Implementing creative and innovative solutions within government not only help to improve the way in which we serve citizens and businesses; it is also an important driver for innovation in the wider economy."

Leong Keng Thai, Deputy Chief Executive of IDA, Singapore

Figure 3. The United Kingdom: additional 2.6 million jobs by 2020

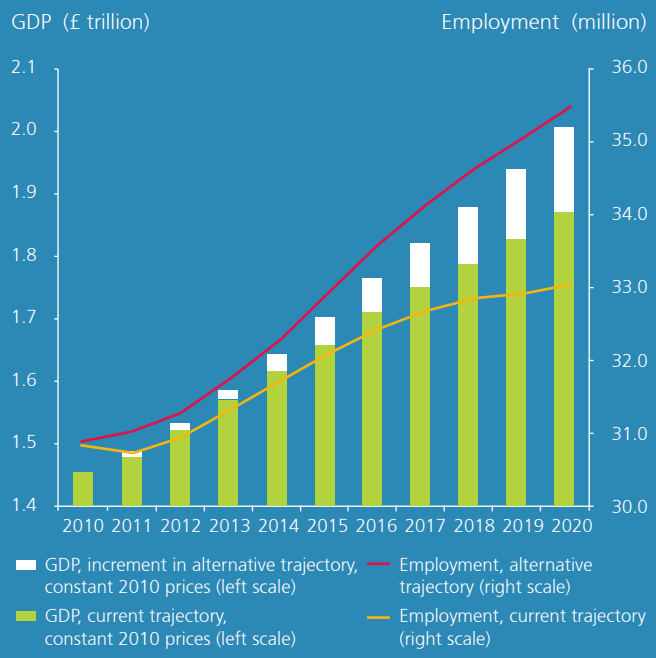


Figure 4. Germany: additional 3 million jobs by 2020

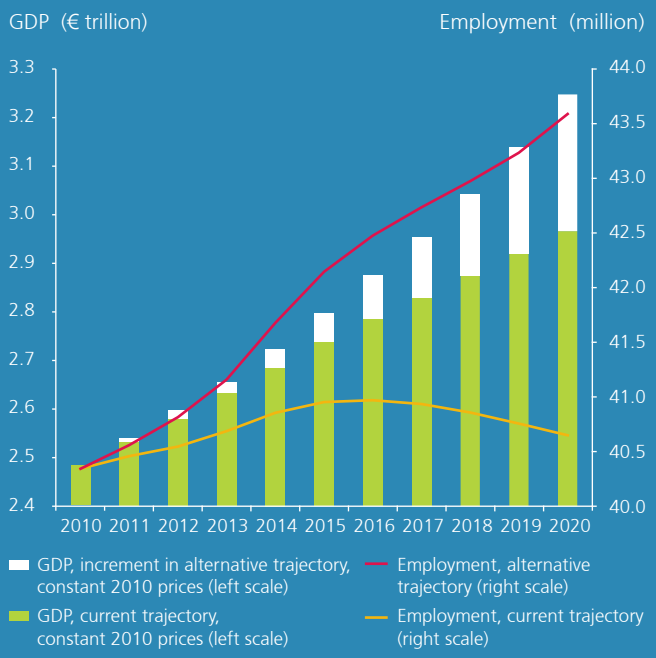
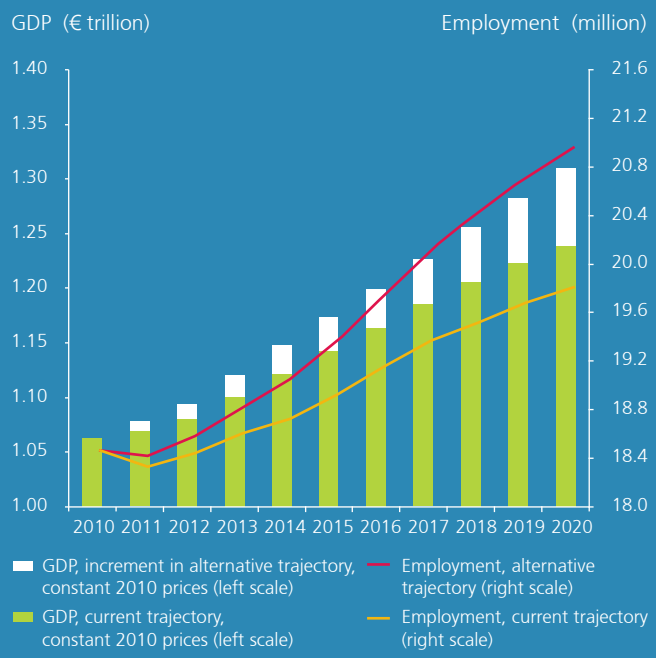


Figure 5. Spain: additional 1 million jobs by 2020



The Silver Economy

Europe is ageing, not only bringing huge future demand challenges for governments, but also real opportunities to create new markets and unlock resources.

The old-age dependency ratio in the EU 27 is projected to rise from 25.9 percent in 2010 to 38 percent in 2030.[4] By 2050, there will be just over two people aged 20 to 64 for every person of 65 years of age or older. An ageing population places new demands and dependencies on traditional welfare states. Areas such as health, social care and pension finance will come under increasing strain. Associated costs must all be met from a shrinking taxpayer base, with the younger generation being asked to provide funding for a level of benefits and services that they have no expectation of getting themselves when they reach retirement.

Governments can be instrumental in transforming this challenge into an opportunity; demographic change brings with it untapped growth opportunities. Overall health spending, for example, including long-term care for the elderly, is projected to increase by around 3 to 3.5 percentage points between now and 2050. Healthier, wealthier and more active elderly populations will increase the demand for recreational activities, tourism and culture. Markets for finance into old age, pharmaceutical products and third-age learning are also projected to grow. According to our research, in Germany alone the silver economy could add €61 billion in addition to 2020 GDP, 2.1 percent above the current trajectory, creating 1.5 million additional jobs in the country. This growth, however, cannot be realised without urgent and focused action by governments, businesses and citizens in Europe. In the words of Martin Schuurmans at the European Institute of Innovation and Technology (EIT): "*The clock is ticking. Without further concrete positive action, it is likely that by 2020 our children and grandchildren will be growing up … with less wealth and limited hope of catching up with the true global economic leaders in the USA, China and (maybe) India.*"[5]

Using technologies to transform patient care

Governments can harness these opportunities to reshape services to meet new needs. At the same time, governments can open up new markets and create innovative synergies with the private sector by fostering new ways of living and working for third-age citizens. Nowhere is this more significant than in healthcare, where countries such as Spain are using the potential of new technology to transform patient care in the silver economy.

Transforming the way we live and work in the silver economy

Demographic change demands that we look very differently at living and working in the silver economy. Older people are active for longer and represent a largely untapped human resource that can be mobilised by voluntary agencies, government and business—driving cost savings, creating new markets and challenging the existing models of delivery within public services.

Social care innovations illustrate the potential. One London borough council is working with a social enterprise, Participle, to develop a 'circle membership initiative' that actively involves the borough's elderly residents in helping each other, thereby multiplying resources available and reducing pressures on public services. Members have quick and easy access to a social network, a host of skills and aptitudes, and a way to combat loneliness and isolation. Encouraging citizens to support each other (and thus reduce reliance on government services) is also a key social policy in Singapore. For example, the government provides a housing grant for adults who decide to live near to their parents to be able to better look after them. New technologies can also unlock resources; for instance, the Netherlands' Health Buddy initiative uses mobile and remote health solutions to help citizens diagnose and monitor their own care.

Governments can do more to help older people to remain self-sufficient for longer, thereby reducing demand for resource-intensive and expensive formal care. In 2008, Fredericia Kommune, a local authority in Denmark, set about doing just that: tailoring solutions to improve the whole-life experiences of citizens over 65 years of age and breaking down organisational barriers to deliver a joined up set of services designed to meet individual needs. The initiative places emphasis on early

Connected health in Spain

In Spain, more than 18 percent of citizens are aged 65 or older. This percentage is set to grow to 34 percent by the year 2050. Recognising the fact that older people are the main users of healthcare, many of Spain's highly devolved regional governments are using new technologies to digitally link up hospitals, doctors and healthcare managers.

Most Spanish hospitals and primary care facilities have an electronic medical record (EMR) in place, and these investments have already enhanced patient experiences, improved access and generated cost savings. One example is Madrid's Servicio Madrileo de Salud, which is deploying EMR, social networking and electronic prescription technology to connect the region's hospitals, specialist care and primary health facilities. Professionals have access to a scientific social network and the Salud@ collaborative workspace; and the technology allows citizens to choose their primary and specialist healthcare professionals regardless of their location.[6]

Another example is the Canary Islands, where virtual intensive care units enable medical care professionals across the islands to access all patient information online. Seamless access to information provides the foundation for a network of effective and efficient care management regardless of where and when an incident happens, and larger hospitals can assist smaller hospitals that typically have less capacity and capabilities.

In the Basque country, the Multichannel Health Services Centre is promoting an integrated approach to healthcare that encourages streamlined clinical pathways and information sharing, and better communication between citizens and health professionals. An important element of the initiative is the application of mobile health technologies to facilitate more care in patients' own homes. Early indications from telemonitoring patients with chronic diseases in primary care in the region suggest improved patient satisfaction, increased communication between patients and professionals, and a potentially lower hospitalisation rate.[7]

Remote technologies are also creating opportunities to provide elderly care at lower cost. The OECD recently highlighted a telestroke initiative in the Balearic Islands that provides "access to life-saving care (that) was previously unavailable" using "real-time assessment (with) merged audio, video and data."[8] Extremadura's Telemedicine Network for Primary Care (TmAPEx) reduced processing times and costly primary-to-specialist care referrals by 50 percent in 2007. Thanks to the introduction of digital radiography as part of the region's connected health program, 86 percent of all diagnostic reports are ready less than 12 hours after treatment, compared to a previous 3 percent. Electronic prescriptions have also improved the quality of care as doctors have up to 30 percent more time for patient consultations.

"A transformation is needed to an extent not seen before. To address the challenges of today governments need to take a completely different approach to designing and delivering services."

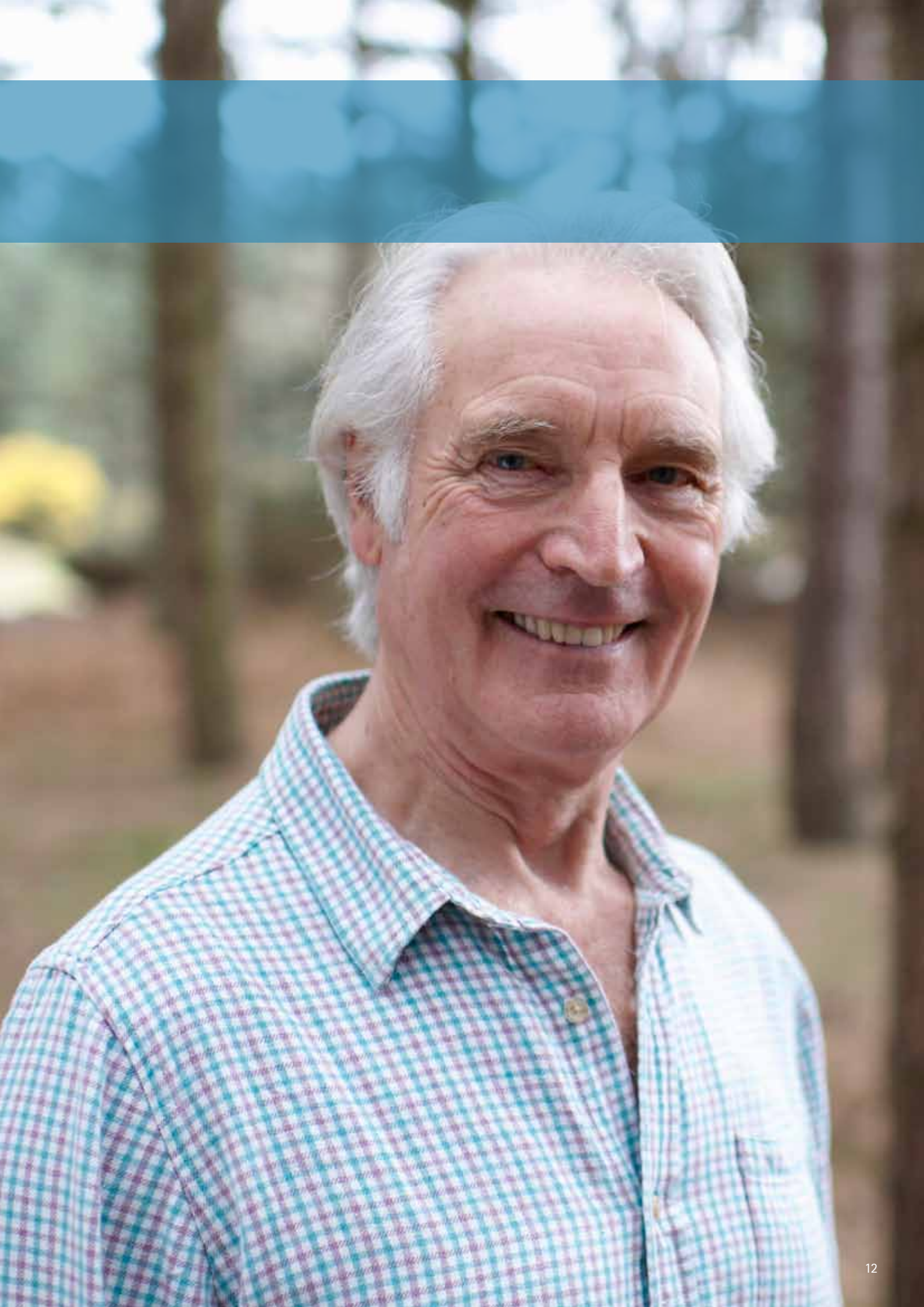
Prof. Dr. Gerhard Hammerschmid, Hertie School of Governance, Germany

intervention, personalised rehabilitation and health education. Importantly, a range of smart technologies are provided to elderly citizens, such as electronic medicine boxes that automatically trigger an alarm if left unopened for a day, to robotic vacuum cleaners, and toilets that automatically wash and dry the user.

The program was developed by a cross-section of public service organisations, along with private sector providers and citizens. Together, they identified the barriers to self-sufficiency and then set about breaking them down. Since its launch just three years ago, this multi-disciplinary, cross-cutting initiative is already generating significant savings as the demand for formal care reduces. For example, 43 percent of users of rehabilitation services today end their treatment being completely self-sufficient, compared to only 5 percent three years ago. This has generated significant savings of 15 million kroner or 14 percent of the total budget. User and workforce surveys show demonstrable improvements in satisfaction and rating of quality of care. The success of the initiative has earned Fredericia Kommune a prestigious innovation prize and the program is now being rolled out in other local authorities across Denmark.

As well as funding or providing new types of service, governments can play a key role in shaping new markets to tap into the silver economy. France, Austria, Belgium, the Netherlands and the UK are among the European countries trialling personal budgets and direct payments, which allow patients to purchase their own care according to their own and their family's personal needs. Legislation not only allows greater personalisation and freedom to manage their own care, but aids the development of new markets for local care solutions, enabling technologies and commercial health and wellness products.

Of course, service delivery innovations such as those described above should not stand alone. A significant role for government in the silver economy is to shift the policy context to change the way we view old age and unlock the vast productive potential of older people. For instance, the UK is currently enacting a government review of long-term social care funding, exploring the potential of cost-sharing and the role of private insurers. The French parliament recently passed pension reform legislation, despite significant public opposition. Meanwhile in Germany, Initiative 50 Plus aims to increase the employment rate of older workers over the medium term.[9] To tap into this new silver labour market, governments will need to explore the policy implications of cost-sharing for long-term care, and remote and more flexible working. Developing a 'productive ageing' strategy also means encouraging learning and skills development over the long term—which we know can deliver significant health and wellbeing benefits for lifelong learners[10]—and facilitating intergenerational knowledge and skills transfer.



The Resource Economy

The resource challenges ahead create new imperatives for sustainable government, but also significant opportunities to transform services and foster innovative markets.

The global resource squeeze will impact the way every government around the world does business. Reducing fossil fuel dependency will, over the long term, open up space for new sustainable technologies and approaches. Intelligent energy, green infrastructure, resource management and carbon finance and investment provide important opportunities for European leadership and growth. Regulation and environmental targets at national and EU levels are important drivers for change—for businesses, government, voluntary agencies and private households.

For instance, as part of the Europe 2020 flagship project on building a resource-efficient Europe, the European Commission (EC) is currently considering a 30 percent cut in greenhouse gases by 2020 (from 1990 levels), compared to its current target of 20 percent. These are stringent targets, but they also represent great opportunities for job creation and business growth.

A bloc of Northern European nations led by Germany, Denmark and Sweden is already well placed in this field, having built up 'green skills' among the workforce and carved out competitive advantages.[11] These green skills present great opportunities for growth, not only within the EU market, but also as exports to emerging economies. In the words of Angel Gurría, Secretary-General of the Organisation for Economic Coordination and Development (OECD): "*We should not repeat the environmental mistakes we observed in the industrialisation process of advanced economies. With energy efficiency, technology transfer, green investment and innovation, we have a lot to offer to fast-developing countries. Green growth is not about green protectionism but about a 'win-win' situation where all economies involved can gain.*"[12]

Intelligent cities

The imperative to become more 'resource-smart' is pushing path-breaking new technologies and industries to the fore—transforming the way cities are structured, the way people communicate and work, and the way resources are managed within urban settings. The Dutch city of Amsterdam is one of Europe's leading cities in terms of setting ambitious targets, and is already reaping great benefits from its range of Smart City initiatives. Europe can also take inspiration from leading global examples, such as the Smart Grid in Boulder, Colorado in the United States, which has seen the installation of intelligent electricity meters in thousands of homes, allowing real-time monitoring and more efficient network distribution.

Smarter procurement

Tapping into the resource economy means reshaping the role of government in the market, using its purchasing power and strategic procurement capability to promote socially desirable—and greener—outcomes. Governments at all levels are major consumers. As a European average, public procurement budgets make up approximately 17 percent of total GDP. At the local or regional level, public procurement is even larger, accounting for 40 percent of the city budget in Helsinki[13], for example. With such large resources at its disposal, governments have both the opportunity and obligation to lead the way and use their purchasing power to catalyse innovation and growth in the resource economy.

Intelligent city—Amsterdam

Amsterdam is turning the challenge of resource-dependency into an opportunity for strategic change and economic growth, through its groundbreaking Intelligent City programme. The programme has ambitious goals, exceeding EU targets by aiming for a 40 percent reduction in CO_2 emissions by 2025. How will it achieve this? By aligning the goals of sustainable living, smarter working and more efficient transport and infrastructure. Several initiatives have been launched, such as 'smart schools', a 'climate street' initiative in the city centre and intelligent domestic energy management systems.

Through a series of integrated technological, environmental and economic initiatives, city leaders are creating a hub for more sustainable, collaborative and resource-efficient ways of delivering services to households and organisations, and governing public spaces. The 'climate street' project is a snapshot of this, creating a green ecosystem through smart energy meters, efficient transport and waste collection, and opportunities for citizens to monitor progress through transparent, open data portals.

By creating incentives for greener, more sustainable behaviour, the initiative is opening up new avenues for innovation and growth. A smart grid infrastructure enables integration across key public services and departments. The infrastructure brings together diverse providers and utilities from transport, waste management, housing and telecoms, creating new opportunities for local government to generate efficiency gains and deliver better outcomes for citizens. As Director of the Amsterdam Innovation Motor, Joke van Antwerpen, has argued, it is *"a unique co-operation between the citizens of Amsterdam, businesses, knowledge institutes and authorities."*[14]

Collaboration across government, public and private sectors is key to the scheme. New public–private consortia have been created to finance investment and roll out the delivery of smart technologies. Intra-agency working is enabling commercial shipping vessels docked in the Port of Amsterdam to connect to the city grid. Municipal offices are using smart meters and other energy-saving technologies. Transport infrastructure in the city centre is being reshaped using low-emissions and electric vehicles.

A greener, cleaner, more efficient city can do much to generate inward investment, boost tourism and provide the conditions for creativity and enterprise in the new resource economy. Those designing the scheme estimate that the impact on employment will also be significant, directly creating 800 new jobs. Over the long term, there is potential for the city to transform the way citizens interact with services and, in doing so, become a hub of innovation in the wider economy.

"Government holds major procurement budgets. We are missing a trick if we don't use this lever to help catalyse innovation. We can set parameters and selection criteria that will encourage private sector providers to come up with new solutions."

Mark Bennett, Green Business Officer, Dublin City Council, Ireland

The EC recognises the importance of green public procurement (GPP). Promoting GPP is one of the major strands in the Europe 2020 flagship initiative to build a resource-efficient continent, and the EC is currently in the process of modernising EU public procurement policy to set the foundation for more sustainable public spending at pan-national, national and local levels. The aim is to use public procurement budgets to stimulate eco-innovation by creating *"a critical mass of demand for more sustainable goods and services, which otherwise would be difficult to get onto the market."*[15] A number of European countries already have national GPP criteria, and the challenge now is to ensure these criteria are compatible between Member States. A level playing field will boost the single market, ensuring that what is good for the EU is also good for the environment.

At the same time, individual governments are initiating a number of programmes that use procurement to drive innovation. For example, the Small Business Research Initiative in the UK brings innovative solutions to specific public sector needs, by engaging a broad range of companies in competitions for ideas that result in short-term development contracts. One such competition, launched in co-operation with the UK Department for Energy and Climate Change, has resulted in a contract award to retrofit government buildings in London so they are more energy efficient and have lower CO_2 emissions.[16]

The Multi-Technology Future

By embracing the multi-technology future, governments can transform their operations and strengthen their relationships with citizens.

Public investment is already driving growth in the technology sectors. Total global government IT spending is expected to increase by US$52 billion between 2010 and 2014—reaching almost half a trillion dollars—despite a general backdrop of fiscal retrenchment. Our research shows that three investment areas are vital for governments to reap social and economic benefits: open data and innovation, digital government, and technological infrastructure.

Open data and innovation

Government data or public sector information (PSI) is the single largest source of information in Europe[17], and a market worth an estimated €27 billion.[18] Making this information source more readily available has over the last year or so become increasingly important for governments wanting to be perceived as transparent. Yet it also has economic benefits. For example, such information can help the private and voluntary sectors create innovative solutions to solve real-world problems and improve the quality of life for citizens. Through 'data mashing,' for example, published information can be re-used and merged with different types of data to produce new products and services. As evidenced by its directive on the re-use of PSI in November 2003, the EU has long recognised the importance of encouraging governments to make data publicly available and use it as an engine to stimulate economic activity within member countries.

Many countries around the world already have a range of open data initiatives in place to shape innovative solutions in the public, private and voluntary sectors. In June 2008, the UK government set up the Show Us A Better Way competition for people to develop their own ideas and solutions to concrete problems. Entrants were encouraged to create mash-ups from a wide range of available PSI. In the best cases, the result was co-designed public services, blending public information with local innovation. In the US, former mayor of Washington DC Vivek Kundra launched 'Apps for Democracy'—an open competition costing US$50,000 to run, but saving the state government US$2 million in internal operations and contractual costs through generating innovative ideas. One of the award-winning applications is iLive.at, which mines a number of different data sources for Washington DC. The user can type in any Washington DC postcode, and will access a comprehensive overview of the neighbourhood, including crime statistics, schools, shopping centres and post offices.

The Danish government's Open Data Innovation Strategy has a similar focus on access to data for citizens and entrepreneurs. These examples demonstrate the powerful impact of opening up the way government works. Europe has just begun. Open data can help promote transparency and accountability, challenging businesses and citizens to help create innovative solutions to improve public value and drive growth.

Digital government

Digital government has moved beyond digitalisation of public services and putting things online to using the next wave of technologies (for example, cloud computing, social media, mobility and analytics) to connect and improve performance across all aspects of public services—controlling costs, streamlining administrative processes, supporting businesses and strengthening relationships with citizens. Recent years have seen dramatic advances in this field, with promises of more to come as governments reap the benefits of changed patterns of use. Encouraging more citizens to use digital channels to help themselves will not only enable people to access a range of interconnected services in their own time; it can also generate great savings in public budgets if there is political will to make the difficult decision to reduce the number of the more traditional (and expensive) physical service delivery channels.

One leading example is the Norwegian government's Altinn online portal. Altinn—which in Norwegian means all-in—simplifies the interaction between government, businesses and citizens through a single point-of-contact portal covering the whole range of government agencies. Today, almost all Norwegian businesses make use of the portal for aspects such as tax returns, VAT accounting and employment management. Altinn has also made it significantly faster and more efficient for new entrepreneurs to set up a business and the portal holds important information to help them manage vital aspects of their businesses.[19] Across Europe, other countries are looking at the Altinn solution with interest and considering how they may be able to realise the rewards of similar solutions, and possibly utilise emerging cloud technology as a means of minimising start-up and running costs.

Open data innovation in Denmark

Over recent years, the Danish government has taken significant steps to open up access to public data and encourage its widespread use to drive economic and social outcomes. With the launch of the Open Data Innovation Strategy in July 2010, the Danish National IT and Telecom Agency aims to create *"easier and more uniform access to public data as raw material for the private sector in the development of innovative digital products and services, useful analyses, data visualisations and data journalism."*[20]

Although still in its early stages of development and use, some entrepreneurs are already making use of publicly available data to drive business growth. Often, the insights from public data are used to inform business planning and strategies. For example, many Danish retailers are using data from the Danish Meteorological Institute and demographic data to plan the sale of ice cream, beer, skiing equipment and other product sales driven by seasonal demand. Publicly available data is also used to develop innovative products and services. For example, the growth of the Danish company Geomatic is attributable to publicly available geographic and demographic data from a wide range of government sources. The company combines these information sources in new ways that allow them to help businesses better understand their customers and the market.[21]

There are, at present, significant obstacles to encouraging the widespread re-use of public data. For example, many businesses and entrepreneurs do not know that specific data exists; many public service agencies are still not aware of the potentials of privately re-using their data and there is no common standard for how the data is made available or how it can be used. To address the legal, economic and practical challenges, the Danish government is working to develop an overarching vision and a concept for how businesses, entrepreneurs and citizens can access public information in a standardised way. This may include creating a 'one entry to public data re-use' policy as well as services to improve access and foster innovation.

The drive toward greater use of PSI offers considerable benefits for Denmark. A recent study estimates that PSI could generate additional growth of at least 600 million Danish kroner (more than €80 million) while at the same time helping create better, smarter public services and strengthening e-democracy.[22]

"Delivering public services through electronic channels offers great potential to deliver services more efficiently and effectively. But, to realise the potential efficiency gains, e-Government should not be seen as an add-on to existing models."

Gonçalo Caseiro, Member of the Board of Directors of the Agency for the Public Services Reform (AMA), Portugal

Electronic media is also transforming performance management within government, combining the capture of valuable aggregated data and sophisticated analytics to understand gaps and overlaps in demand and supply. By having access to a range of performance data, managers are able to benchmark agency performance against that of comparable agencies. In New York City, fundamental and far-reaching government transformation is enabled through NYC 311. 311 is New York City's website and phone number for all major public services and government information. With more than 100 million calls to the 311 number logged each year, the city administration has a rich source of data on local problems. Applying analytics means they can gain better insights on aspects such as patterns of need and government response time and quality. Using this aggregated and complex set of information analytically enables the city to obtain a broad view of usage and problem areas. City departments can use this evidence to develop priorities and plans that are directly informed by actual experiences and needs. As such, the 311 initiative not only provides faster and more efficient service to citizens, businesses and visitors, it also enables service providers to improve the quality of life of citizens dramatically and make the city more attractive for companies to do business.

Crucially, the use of multi-technologies enables governments, businesses and citizens to engage with each other as true partners[23] and recent years have seen a steady rise in governments inviting citizens and businesses to develop innovative solutions. In the UK, for example, the Prime Minister launched a new online tool, the Innovation Launch Pad, to invite small businesses to pitch their ideas for how they could do the business of government more efficiently. The measure is designed to open up the public sector marketplace and use these ideas to drive efficiencies.

Technology has a great impact on the way governments regulate labour markets and skills development. In Germany, for example, online job markets (Jobboerse) and skills-matching services (VerBIS) bring together employers and job seekers in a virtual labour market (VLM). The Web-based portal has more than 50 million page views per day and more than 2 million daily matches are made automatically.[24] Used by all labour market participant groups (including government departments and private sector employers, job seekers, educational and learning institutions, holders of private job portals and private recruiters), it is one of the largest e-Government solutions in Europe to date. The VLM initiative also allows Germany's Federal Employment Agency to use the wealth of information in the portal to intervene and help those citizens who are unable to find a job by themselves. As part of the service, employment agency professionals provide tailored information and support—either online via e-mail, by telephone or in person. The wealth of aggregated data on the site can also be used for analytical purposes to inform the further development of labour market policies and programs.

Technological innovations are helping to drive efficiencies for the back- and front-office. Cloud computing, for example, offers great potential to securely store government and citizen data, eliminating the need for departments to house their own IT infrastructure. The demand for cloud computing is set to grow dramatically: in just four years, the total value of cloud-based software alone has reached US$7.5 billion in 2010 and is forecast to exceed US$20 billion.[25]

At the citizen-service interface, multi-technologies and social media are facilitating more open and collaborative ways of achieving better outcomes. Businesses and citizens can now tell public service organisations what they need and what they think about a range of issues—from school closures and hospital standards, to regulation, public sector reform or cost-cutting measures. Such feedback can drive innovations in service delivery, and form the basis for communication strategies to shape citizens' perceptions of government.

Two examples from Canada illustrate the potential of technology-enabled, employee-driven innovation. Firstly, in Peel Region, Ontario, the chief administration officer spends every Wednesday afternoon talking remotely to his front-line staff. Secondly, Service Canada is a single-point portal for Canadian citizens to interact with their government, access public services and obtain crucial information and advice on a broad range of issues and life challenges, such as how to find a job, prepare for retirement and start a new business. As part of the initiative, employees take a more active role in shaping and delivering service excellence. The organisation captures feedback from employees and, using sophisticated segmentation and analytics, can evaluate performance and drive productivity.

"New technologies are transforming the way we do business and the way we live. They offer huge opportunities for innovative new solutions. The train is running. Governments must decide to get on it or not."

Frank Leyman, Head of International Relations for Fedict, Belgium

Technological infrastructure

Creating a sound technological infrastructure is one of the key enablers for digital government and for economic growth. According to OECD estimates, broadband communication will contribute one-third to the productivity growth of highly developed countries by 2011.[26] Through strategic and long-term policy direction, governments can focus economic development where comparative advantage exists and drive change towards new waves of growth.

One example is Singapore's Intelligent Nation (iNation) 2015 initiative. iNation is a 10-year strategic vision to put the country at the forefront of smart technology use across its market sectors. Cutting across a number of core industry programs, the strategy has provided the foundation for expansion of Web-based public service delivery, digital citizen engagement and private sector growth. The next-generation connectivity Next Generation Nationwide Broadband Network is currently being rolled out, aiming to enable 95 percent of all households and businesses to use ultra high-speed broadband by mid-2012.[27] Interoperable Electronic Medical Record (EMR) technology is being deployed across the health system to enable more integrated and effective healthcare delivery. And, in Singapore's schools, students and teachers are using Web 2.0 technologies to share information, learn collaboratively and access resources in cost-effective ways.[28]

Where this kind of central government policy impetus is lacking—as in many European healthcare and welfare systems—investors will have less confidence in the climate for future investment, and entrepreneurs will find less opportunity to incubate and grow their products domestically. It is crucial that European governments embrace multi-technologies in their strategic planning for the future.

The Emerging Markets Surge

In the increasingly multi-polar world, the emerging markets surge presents an opportunity for new collaboration and market-shaping.

Emerging economies pose an economic challenge to the established order. The traditional concentration of wealth and economic power in the developed economies of the West is consigned to the past. Economic activity and political power are now dispersed among multiple centres across the world. The ever-growing interconnectedness of nations and the rising importance and influence of emerging nations means the governments of developed nations now have to operate and negotiate in ways considered non-standard a few years ago. The new era of the multi-polar world presents fresh, and sometimes extreme, challenges for European governments.

The flipside of competition is opportunity. Demands for knowledge, consumer goods, services and access to finance can all provide a spur for growth across European economies. Predominantly due to economic growth in India and China, the global middle class is expected to rise from 1.7 billion to 3.6 billion between 2010 and 2030. As the middle class in emerging economies grows, so does the demand for household and luxury goods, which presents major opportunities to boost Europe's exports. Since 2002 for example, UK exports to India have grown by an average 14 percent a year. Exports to China have grown at an annual 19 percent.[29] With the right policies, the effects on growth could be considerable. According to the modelling undertaken for this report, the emerging markets surge would lead to €138 billion being added to 2020 GDP for Germany alone, 4.6 percent above the current trajectory, creating a staggering 1.1 million additional jobs.

To support businesses in capitalising on emerging markets, European governments must take a long-term, strategic view. Governments must take steps to reduce the barriers to doing business in the developing world —through promoting good governance and creating strong diplomatic engagements and synergies. Tailored support for business can identify strategic opportunities in export market sectors—such as for infrastructure, energy and green technologies.[30] Forward-thinking governments can use the new global supply chain market more intelligently, creating opportunities for collaboration and skills-sharing through bilateral research and innovation initiatives.

Collaborative learning and skills development

There is enormous potential for knowledge and skills transfer between European and developing world economies. Universities and further education institutions are already establishing mutually beneficial partnerships—creating student and staff exchanges, co-creating curricula, and forging stronger links to current and future economic growth opportunities. European governments must provide the right education and skills to equip young people (and lifelong learners) to take advantage of the new economic opportunities ahead.

New markets for public service innovation

The potential of collaborative working is clear in areas such as telemedicine—where new digital imaging and communications technologies can facilitate diagnosis, consultation and treatment across thousands of miles. This collaboration is already happening between the US and India, where remote radiology is easing problems of staff shortages and infrastructure costs for some American healthcare providers.[31] Such practices are not traditional outsourcing, but rather plugging into the emerging potential for collaboration with the new global economic players. This is not a one-way street. To tap into the new growth opportunities that result from such collaboration, European governments must take the lead in developing innovative products, and employing beneficial business processes.

As public service markets in the developing world mature, those organisations driving innovative policy and growth potential will be increasingly important. India's Unique ID initiative is a prime example. In the next two decades, as many countries deal with ageing populations, India is poised to reap a demographic dividend. If current trends hold, India will become the world's most populous country, with about 1.5 billion inhabitants by 2030. More significantly, the working-age

Learning and skills in the multi-polar world

The multi-polar world—The rise of the multi-polar world is creating new markets and new opportunities for education and skills development. Examples include:

International campuses and joint ventures—The Observatory on Borderless Higher Education has reported that the number of international university branch campuses doubled to 162 between 2006 and 2009. The UK's University of Nottingham, for example, has campuses in China and Malaysia. New joint ventures are also emerging: New York University in Abu Dhabi aims to be a fully integrated research university and part of a global network of learning organisations. London's Imperial College and Nanyang Technological University in Singapore have established a joint medical degree, including a number of e-learning modules. Online technologies are also being utilised by the International Virtual Medical School—a collaborative, global network of partners based in the US, Pakistan, Australia and the UK.

Strategic relationships and innovation centres—The UK India Education and Research Initiative is a good example of a strategic-level initiative to boost educational links. Its three main strands are higher education and research, schools, and professional and technical skills. Key achievements include 103 new research collaborations, 380 schools linked between the two countries, 88 travel grants, 67 research awards (worth up to £150,000 each), six major research awards, and numerous doctoral and post-doctoral fellowships. Also, multi-national business is creating innovation hubs in the developing world, with companies such as Microsoft, Intel, Nokia and Accenture establishing research and development centres in China and India and tapping into a vast new pool of skills and resources.

"The Government is still playing in too many fields. The competition in the innovation space from emerging countries is increasing and focus is needed."

Dr Tim Jones, Program Director, Future Agenda, United Kingdom

population is expected to grow from 780 million to just over a billion in that period. The implications for the global economy are staggering: UN estimates suggest that India will be home to one-fifth of the global working-age population by 2030.

The Indian government's response shows that turning this opportunity into transformative, sustainable growth depends on targeted innovation and an inclusive relationship between government, businesses and citizens. UID is a national biometric ID system that has the potential to bring about a wide range of benefits both to individuals and to the country as a whole. It is able to promote an inclusive growth agenda by plugging in citizens who have been excluded from access to public and financial services and employment opportunities. For example, easier identity verification will enable more small-scale farmers, peasants, micro-entrepreneurs and poor women to establish bank accounts, which will create a stronger-organised monetary system in India and make additional funds available to lenders. Similarly, the UID program will enable growth in digital and e-Government, increasing efficiencies and reducing the likelihood of fraud in the public and private sectors.

A universal ID system is a platform for growth but it is not only the Indian economy that could benefit. Development and growth offers positive benefits on a wider scale. A platform such as this creates new inclusive markets for European and global enterprise, opens up space for international trade, and provides a model of how public services can be built around the new realities of the multi-polar world.

Making it Happen

Europe's economic crisis has reinforced what we already know: innovation across government and the wider economy is vital—not just to safeguard the quality of public services that citizens and communities need, but to drive new waves of growth that can create jobs and prosperity in the future.

Our research shows how innovation can help turn austerity into opportunity, by transforming government practice to sustain improved social outcomes for citizens, yet also realising the benefits of groundbreaking change in the way public services are run. Too often, the scaling up of innovative, long-term change is shut down at the outset. Such change is seen as too expensive, too difficult, or not a priority.

Yet innovation leaders all over Europe are telling us a different story. Although under huge fiscal pressure, governments across the continent are presented with an opportunity for radical reform. The key: public service leaders must begin thinking like public entrepreneurs.

The idea of public entrepreneurship is not new, but its ethos has never been more vital. As director of the UK's Institute for Government, Lord Andrew Adonis argues: "*What we need now is a new generation of public entrepreneurs.*"[32] This new generation consists of public service leaders that understand the interrelationship between social progress and economic growth; who can foster new collaborations between government, businesses and citizens; and who are able to create the profound shift in culture needed to drive the innovation that can create sustainable growth during fiscal austerity. Public entrepreneurs take a holistic approach to public service transformation, embarking on programs that create synergies across the social and economic ecosystems. Ministers and advisors already know that, without a new spirit of entrepreneurship and innovation, it will not be possible to realise the potential of the new waves of growth, and it will become increasingly difficult to safeguard public service value. Measures are in place to support this, at an EU level, nationally and locally. Yet to bring these initiatives into the mainstream, a more fundamental shift is needed. Public managers all over the continent must rethink their roles, delivering public service value, but at the same time promoting innovation and growth. In future, social progress and economic goals must be even more fundamentally aligned.

In the journey towards public entrepreneurship, public service leaders must seek answers to five fundamental questions:

How can I harness resources, many of which are outside my own control, to execute my mission?

As Europe embarks on the road to recovery, the squeeze on public funds is set to continue. The public entrepreneur recognises this and creatively pursues alternative strategies for securing the support and resources necessary to deliver. By unlocking the innovative and co-productive capability of citizens, businesses and civil society, public entrepreneurs can bring a much broader range of private, public and social resources to bear on social problems.

How can I creatively deploy public funds and develop new funding models to drive change?

Public entrepreneurs think strategically about how they leverage limited funds to find different ways of delivering public services and driving growth. Through strategic outcome-based commissioning, for example, the public entrepreneur can use the significant procurement budgets at their disposal to inspire innovation. Similarly, payment-by-results contracts, new forms of public-private partnerships and social impact bonds can help generate the levels of up-front investment necessary to drive long-term improvements—without putting additional pressure on public budgets.

"We need to be much more flexible and open-minded about change. Within public services, achieving this would require a major culture change. Public sector workers at all levels need to be encouraged to take risks and do things differently."

Gerry Breen, Lord Mayor of Dublin, Ireland

How can I use the full potential of new technologies to drive innovation?

Technological advances and the rise of the digital citizen offer sound opportunities to transform government in ways that build stronger relationships with businesses and citizens; enable faster, cheaper and more effective service delivery tailored to need; and help promote innovation and growth in the wider economy. The public entrepreneur embraces the transformative potential of new technologies to drive open and collaborative innovation efforts across government, and with businesses and citizens.

How can I maximise value–serving citizens more effectively and helping catalyse innovation and growth?

Public entrepreneurs are driven by a clear vision of how to improve social and economic outcomes. Their ambition goes far beyond meeting often narrowly defined performance targets; they constantly seek synergies between their objective of creating more efficient, effective services, and supporting wider social and economic goals.

How can I foster a cultural shift towards creativity, openness and calculated risk-taking?

Transforming the promise of change into reality remains a major challenge for public entrepreneurs. To deliver progress social and economic goals, they must work creatively within constrained environments, negotiate strict accountability structures and challenge a risk-averse culture where it prevails. The public entrepreneur —driven by a strong vision and motivation to improve —constantly encourages employees and partners to suggest new ideas, take calculated risks within tight strictures, embrace and learn from failure and, courageously, bring to scale what works.

"Public service leaders currently have very few incentives to make things better and more user-driven. Governments need to build incentives for innovations in public services."

Dr Veli-Pekka Saarnivaara, Director General of Tekes, Finnish Funding Agency for Technology and Innovation, Finland

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About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with more than 215,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US$21.6 billion for the fiscal year ended Aug. 31, 2010. Its home page is www.accenture.com.

Oxford Economics

Oxford Economics was founded in 1981 to provide independent forecasting and analysis tailored to the needs of economists and planners in government and business. It is now one of the world's leading providers of economic analysis, advice and models—including forecasting for 190 countries, 85 sectors, and over 2,000 cities sub-regions in Europe and Asia; economic impact assessments; policy analysis; and work on the economics of energy and sustainability. Its home page is www.oxfordeconomics.com.

The Lisbon Council

The Lisbon Council is a Brussels-based think tank and policy network, committed to making a positive contribution by engaging political leaders and the public at large in a constructive exchange about Europe's economic and social future. Incorporated in Belgium as an independent, non-profit and non-partisan association, the Lisbon Council is among Europe's most authoritative and thoughtful voices on economic modernisation and social renewal. Its home page is www.lisboncouncil.net.

The College of Europe

The College of Europe, founded in 1949 and based in Bruges, Belgium and Natolin, Poland, was the first and is one of the most reputed institutes of European postgraduate studies, which prepares annually up to 400 students from over 50 countries to work and live in an international environment. The European Political and Administrative Studies programme offers a wide range of courses on the functioning and policies of the European Union. Its home page is www.coleurope.eu.

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