Executive Summary

In this guide, we’ve identified the three goals necessary to future-proofing a city so that it can rise to meet the challenges in serving its businesses and its people.

Here’s a snapshot of these goals. **Economic development** is vital for attracting and retaining businesses and citizens intent on investing in the city – it is the backbone of a profitable and productive city. Cities that can attract and retain entrepreneurs and innovative businesses, as well as fostering local talent, are well positioned for future success. **Efficiency and the environment** are equally important as cities are asked to do more with less budget – cities will need to leverage technology and incentivise innovation to meet not just their targets, but also the service expectations of their citizens. But none of this will be possible without the cooperation, feedback and support of the city’s inhabitants – **citizen engagement** can make all the difference between success and failure.

Read on to learn more about these goals and how they can be turned into opportunities for you.

Want to know more about how Vodafone is working with government, business and people to help them future-proof their cities? You can download **Why Vodafone for Ready Cities** at [www.vodafone.com/business/readycities](http://www.vodafone.com/business/readycities).
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What is a Ready City?

A Ready City is a Smart City – connected, digital and intelligent.

The concept of the Smart City was developed in order to find smarter ways for cities to meet the challenges that they face in creating growth, prosperity and happy citizens. Increasingly these are being addressed via technology and the Internet of Things (IoT). The Internet of Things connects everyday devices together via the internet and machine to machine (M2M) technology, to allow them to transmit and receive data. With this technology, and the innovations it inspired, a whole range of possible applications and solutions were created – and are now being implemented in Smart Cities around the world.

But a Ready City is more than just a Smart City. Ready Cities also adapt and plan for the future – they are positioned to take advantage of every opportunity and capable of rising to meet the uncertain challenges that tomorrow can bring.

By leveraging a range of technologies and capabilities, they can utilise the best of the internet, M2M, big data analytics, smart devices and cloud services and match them with ambitious, strategic plans.

A Ready City can also employ information communications technology (ICT) to encourage the flow of conversation between people, business and government in order to reduce costs and improve services – building a stronger, more productive and better connected city.

So Ready Cities are more than just a concept, or a set of technologies, or an existing label (such as a Smart City) – they’re an attitude. They recognise the need to be closer to their population and businesses, and build the infrastructure and approach that mean they can respond quickly to changing needs.
Economic Development

Efficiency and the Environment

Citizen Engagement

Yes  No

Yes  No  No
1 Economic Development

Many factors impact the way cities change and grow. Rising to meet the challenges – and being able to take advantage of the opportunities – will be determined by planning, investment, talent and a willingness to innovate.

Creating profitable and more productive cities, towns and regions is key to supporting the changing demographics of urban life. In years to come, the ability to meet the challenges of increasing urbanisation, ageing populations and greater migration will all play a key role in determining the economic health of cities.

54% of the world’s population currently live in cities – by 2050 it will be 66%¹

12.3% of the population are over 60 – by 2050 it will be 22%²

It’s estimated that by 2050, over 25% of the population of OECD countries will be over 65 and 43.2% of those will be living in cities³

All of this adds up to increasing stresses on the urban infrastructure. For example, a larger urban population, while potentially helping the economy grow, also means a need for more schools, hospitals, homes and social care, all placing a strain on increasingly constrained city budgets. In addition, migration, while providing a needed workforce, can lead to changes in city use, social cohesion and transport requirements, adding new burdens to a city administration. The fact is cities will be expected to do more with less in the future and the productivity of all services will have to be improved to support this.

¹ un.org  
² World Health Organisation  
³ OECD
However, productivity rates across the globe are expected to slow significantly in coming years. For long-term growth to continue, and for cities to see the benefits of improved productivity, there will need to be a range of responses from city administrators – including the embracing of new technology and creation of services that will attract talent, innovation and enterprise. These in turn will drive efficiency and open up new revenue streams for cities.

Larger, older cities pose diverse challenges and opportunities – from accessibility and concerns over the cost of healthcare (e.g. repurposing existing housing to help older people maintain their independence) to new opportunities for technology to help lower operational costs and promote and create stronger, more efficient citizen-centred services.
Competing for people and business

In addition to driving economic growth, city management needs to be aware of the competition from other cities. But the era of cities competing only at the regional level is gone – cities need to be able to compete on a global scale.

Attracting talent, businesses and capital will rely on a city that invests in and nurtures innovation, supports new ways of working and provides valued service partnerships through:

- Efficient and reliable infrastructure
- Economical and environmentally-friendly buildings
- Excellent communications infrastructure and capabilities

Cities that create an environment and an agenda that attracts and retains entrepreneurs and tech innovators, as well as fostering local talent, are well positioned for future success. A willingness to embrace technology is also going to be the key differentiator if a city is to meet the future head on.

Tackling demographic changes, economic restructuring, productivity and increasing competition requires a co-ordinated, strategic response that looks to building partnerships between government, citizens and business.

So, economically prosperous cities will need a combination of enabling policies, visionary leaders, human capital and investment. Business leaders engaging with the local population, to provide a common front, will be as much a driving force for change and growth as governmental leaders. Clear and transparent city management is essential for encouraging trade, investment, enterprise and talent – these are the factors that are going to make a difference between a city merely surviving, or thriving.


2 Efficiency and the Environment

Equally important for a Ready City is the drive towards efficiency across every aspect – from government, business and serving inhabitants to its contribution to the environment.

Cities represent 75% of global energy consumption and 80% of global CO₂ emissions. There is increasing pressure to reduce this environmental impact, which will require massive efficiency gains in crucial services like housing, transport and utilities. The ability to leverage technology and innovation will prove a decisive factor when it comes to which cities meet efficiency and environmental targets.

By combining IoT technology with industrial practices, organisations are pioneering new approaches to delivering products and services – innovations that, in addition to improving delivery, are designed to help local authorities and their partners improve cost efficiencies.

By creating systems that combine real world assets with digital technology and analytics, cities can produce usable insights that can be quickly and cost-effectively implemented. This convergence has been called ‘industry 4.0’ and means better and more informed decision making for the providers of services, and more efficient spending of already stretched budgets.

1. UNEP
Efficiency on a shoestring

Regional and local governments, like many businesses, are increasingly being asked to do more with less – to deliver service improvements while saving money, to support business and innovation while reducing their investment, to drive better citizen engagement and spend less on vital services.

The cities that can organise infrastructure and services around enabling technologies and strategies are going to be the ones that not only thrive and meet the regulatory conditions for sustainable growth, but also drive costs down in the long run.

Better collaboration between partners, quicker delivery of initiatives for local councils and adherence to planning conditions – these are big picture concerns for cities building new infrastructure, and for those regenerating existing services.

Redesigning urban environments to cut energy consumption and reduce CO₂ footprint is a very real challenge, but one that is being met head on by advances in technology and strategic city planning.

Greener buildings

Buildings are the largest energy-consuming sector in the world and account for over 33% of final energy consumed.¹

Traditionally, the construction and maintenance of buildings and infrastructure has been kept separate. But by leveraging the right technology, a Ready City can join up these processes to help it meet sustainability targets.

From master planning, through building design and project management, to final construction, the lifecycle impact of projects can be calculated, measured and monitored to ensure compliance with policies and regulations.

Private homes as well as public buildings stand to benefit. Technology installed in smart homes can help homeowners benefit from better deals on energy tariffs and greater fuel efficiency, as well as improved security and enhanced connectivity – to name just a few benefits.

A Ready City leverages the tools and technology available to calculate, maintain and improve its sustainability, setting the standard for further innovation and improvement.

¹ IEA
Greener transport

Transport planning can help a Ready City to increase the efficiency of the way people move around urban environments. Better traffic flow management, more efficient and reliable public transport that reflects the people’s actual needs and other innovative green transport solutions are all on the agenda. City bike schemes, secured and tracked by M2M SIMs, can be designed and implemented to help ease the burden on public transport and encourage a healthier way for a city’s inhabitants to move about. The real point is that new technologies enable the development of new modes of transport – and that should be very exciting.

Using IoT technology, data analytics and well managed networks, cities and towns can build robust and agile systems that improve the way transport infrastructure works and reacts to changes in its needs. This leads to reduced journey times, lower carbon emissions, improved citizen health, more efficient routes, and better access to transport hubs and parking.
Generating citizen engagement is no easy task – but it’s of vital importance to the successful creation of a Ready City.

Good citizen engagement can lead to positive social outcomes, healthy and efficient governments, stronger business relationships and a thriving economy.

Poor citizen engagement can mean poorly planned and implemented policies, poor return on public investment, social isolation, fractured communities, and a declining trust in governing bodies.

Engagement will mean different things to different demographics though. For younger generations it means making sure that services are connected and mobile ready – the ability to check public transport by an app, or report a broken street light via social media, will be important ways of making the city attractive to younger people.

Conversely, with aging city populations, services need to be delivered appropriately to reflect how people live. Assisted living and in-home security, smart health devices and better public transport planning can all be improved through smart technologies – leading to higher living standards, better return on investment and improved trust between government and citizens.

According to the Edelman trust barometer, Government is the least trusted institution globally (48%)
Making a connection

The good news is that citizens are already primed to engage with their cities in new ways – as they already do with many brands, transport solutions, service providers and digital services over the internet. This way of connecting is the new norm and most efficient way for governments to interact with their citizens.

Increasingly there is a desire for personalised and digitally-enabled services that enable governments to engage directly with citizens and hear their views.

And these new ways of interacting don’t just work to benefit the individual – they can lead to greater efficiency and cost savings by:

• Transforming the way services are constructed and delivered through better understanding of citizens’ needs, priorities and desires
• The cost of delivering services digitally means making savings compared to analogue delivery methods by reducing staffing costs and cutting resource usage
• Combining data to generate insights that can lead to service improvements, and better citizen engagement

Stronger links between citizen and government is crucial for successful urban change and a strong economic development.

Using technology and innovation to meet these demands will require talent, expertise and long-term vision, but also presents myriad opportunities for building better, stronger cities that are ready for the future.
Next Steps

At Vodafone, we spend a lot of time thinking about how innovation and technology can help make cities future-proof.

Have we got you thinking too?

Visit www.vodafone.com/business/readycities and find:

- **Ready Cities Guide**
  Our take on the key drivers and trends

- **Why Vodafone for Ready Cities Guide**
  Our experience and global case studies

- **Contact your account manager or visit**
  www.vodafone.com/business/iot

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