

MOSCOW, RUSSIAN FEDERATION

A Territorial Approach to the Sustainable Development Goals in Moscow, Russian Federation



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Abbreviations and acronyms

AI	Artificial intelligence
BRICS	Brazil, Russian Federation, India, China, and South Africa
CCTV	Closed-circuit television
CDP	Carbon Disclosure Project
CEDES	Economic and Social Development State Council (<i>Conselho Estadual de Desenvolvimento Econômico Social</i>)
CNCPS	National Council for Social Policy Coordination (<i>Consejo Nacional de Coordinación de Políticas Sociales</i>)
CFE	OECD Centre for Entrepreneurship, SMEs, Regions and Cities
CIS	Commonwealth of Independent States
DFIs	Development finance institutions
EEE	Electronic and electrical equipment
ESD	Education for Sustainable Development
ESG	Environmental, social and governance
EU	European Union
FUA	Functional urban area
GDP	Gross domestic product
GHG	Greenhouse gas
GRP	Gross regional product
GVA	Gross value added
HLPF	High-Level Political Forum
ICT	Information and communication technology
IT	Information technology
ITU	International Telecommunication Union
KPI	Key performance indicators
LAU	Local administrative unit
LOSI	Local Online Service Index
MKAD	Moscow Automobile Ring Road (Московская Кольцевая Автомобильная Дорога)
MOEX	Moscow Stock Exchange
NEET	Not in education, employment or training
NGOs	Non-governmental organisations
NPOs	Non-profit organisations
PCT	Patent Cooperation Treaty
PPP	Public-private partnership
R&D	Research and development
RCEs	Regional Centres of Expertise
Rosstat	Russian Federal State Statistics Service

SDSN	Sustainable Development Solutions Network
SDGs	Sustainable Development Goals
SMEs	Small- and medium-sized enterprises
SSE	Sustainable Stock Exchanges
U4SSC	United 4 Smart Sustainable Cities
UCLG	United Cities and Local Governments
UN	United Nations
UN DESA	United Nations Department of Economic and Social Affairs
UNESCO	United Nations Educational, Scientific and Cultural Organization
USD	United States Dollar
VLR	Voluntary Local Review
VNR	Voluntary National Review
WHO	World Health Organization

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Executive summary

Although the Sustainable Development Goals are not integrated explicitly into the main urban development plans of the city of Moscow, the municipality has started using them to assess its sustainable development strengths and weaknesses. Moscow presents very positive educational results, low unemployment rates and a strong innovation capacity, but challenges exist regarding sustainable consumption and production, affordable housing and air quality. The SDGs provide a framework to address these challenges in an integrated way and to contribute, in particular, to the transition towards a sustainable industrial sector, which accounts for 16% of the city's value added, especially through mechanical engineering, pharmaceutical goods and chemical production.

Key findings

A comprehensive planning system to promote sustainable development in Moscow

- Moscow uses the SDGs as a checklist to assess the contribution of its 13 sectoral programmes to sustainable development. In 2020, these programmes represented more than 95% of the city's yearly budget expenditure (USD 38.3 billion), with nearly all allocated to transport development, smart city technologies and open government (29%), followed by healthcare (21%), social support (20%), education (13%) and urban planning and housing (10%).
- Alongside these sectoral plans, the city has elaborated three comprehensive urban development plans: the *General Plan of the city of Moscow 2035*, which provides for a long-term development vision for Moscow; the *Investment Strategy 2025*, which aims to catalyse the necessary resources for urban development; and the *Smart City 2030 strategy*, which seeks to leverage digitalisation to improve public services and, in turn better quality of life.
- Although the SDGs are not integrated in the three plans, the plans contribute to several sustainable development outcomes, notably through measures to reduce car usage, expand housing supply, provide green spaces and improve citizens' living standards through digital technologies.

Education, low unemployment and innovative capacity are key strengths of Moscow, but there are challenges in ensuring sustainable consumption and production, improving air quality and affordable housing

- The city of Moscow compares with the top 5% of OECD regions in SDGs related to education (SDG 4) and economic goals such as decent work and economic growth (SDG 8) and industry and innovation (SDG 9).
 - Particularly positive results include a low unemployment rate (1.2% in 2018) and a relatively low long-term unemployment incidence (8.7% compared to the OECD average of 30%), alongside a gender gap close to zero in the unemployment rate.
 - The share of the population aged 25-64 holding a tertiary degree (around 75%) in Moscow is on a par with rates seen in Inner London for example and significantly higher than most OECD regions, providing the city with a well-skilled labour force.

- In accordance with high educational attainment of its workforce, Moscow exhibits very high shares of employment in knowledge-intensive services (44%) and patent applications per inhabitant (among the top 2% compared to OECD regions).
- Moscow faces challenges common to large metropolitan areas in OECD countries: traffic congestion, air pollution, and insufficient quality and affordable housing where the challenges are likely to grow, as with the population expected to grow by 300 000 by 2030.
 - While Moscow's waste per capita production of 370 kg slightly exceeds the suggested end value based on the OECD's best performing regions, the municipal recycling rate of 22% compares poorly to the OECD average (40%). An important government programme is the modernisation of Moscow's energy, water and waste infrastructure, through which the city aims to transition to sustainable consumption and production patterns.
 - Air pollution levels were at 14 micrograms per cubic metre of PM2.5 in 2019, 4 points above the air quality guideline values suggested by the World Health Organization (WHO), with road transport being the main source of air pollution (93% of total pollutants). The number of car-sharing vehicles and electric buses has been increasing rapidly since 2015, but the electric fleet is still relatively low considering Moscow's population size. In response, Moscow has taken important actions to offer better and greener options for mobility such as the expansion of the metro network.
 - A booming real estate market has contributed to increasing living costs in Moscow, which are considerably higher than in other Russian regions. As a result, only around one third of Muscovites expressed satisfaction with housing affordability between 2014-18 according to the Gallup World Poll. In response, Moscow has initiated the renovation of the municipal housing stock following international guidelines such as mixed urban zoning, increased social and spatial integration of residents and the creation of quality public spaces.
 - To better assess urban development challenges, the city of Moscow has developed a wide range of indicators available in an Open Data Portal and Integrated Data Warehouse. However, these indicators are not linked to the SDGs and nor are they aligned with global and localised SDG indicator frameworks, which prevents their use in measuring the city's progress on the various goals and targets.

Despite the absence of a nation-wide responsible authority and co-ordination mechanism for the 2030 Agenda, there are cases of cooperation at sub-national level

- In the absence of a national authority formally responsible for the 2030 Agenda and a countrywide co-ordination mechanism for the implementation of the SDGs, Russia's 2020 Voluntary National Review (VNR) was a first step to take stock of national efforts to achieve the 2030 goals and targets.
- However, despite weak engagement of local governments throughout the consultation and preparation of the VNR, some voluntary, bottom-up initiatives at sub-national level are being taken. For instance, the city and the region of Moscow co-operate in integrating the SDGs into their respective economic and social development plans, in particular those related to industry, transport and infrastructure development (SDG 9), children's recreation (SDGs 3 and 4), preservation of water quality (SDG 6), climate (SDG 13) and biodiversity (SDG 15).

Using the SDGs to guide a green industrial transition is a key priority for Moscow, but engagement with civil society organisations (CSOs) is limited

- Although private sector engagement is a priority for a sustainable industrial transition, levels of awareness among companies are very diverse. Large companies with global value chains and

sufficient resources often integrate the SDGs into their strategies, whereas small- and medium-sized enterprises (SMEs) tend to lack knowledge and resources to mainstream the 2030 Agenda in their processes and business models.

- While civil society can be an essential driver to achieve the SDGs, CSOs are not systematically consulted locally other than for environmental protection policies. An Active Citizen platform developed by the city does allow local residents to contribute to and vote on select urban and social development projects, however, it does not, at least yet, link them explicitly to sustainable development challenges.

Policy recommendations

To advance the implementation of a territorial approach to the SDGs, the city of Moscow could:

- **Use the SDGs as a framework to guide and improve local policies and related outcomes by promoting synergies across sectoral policies and programmes**, including by:
 - Considering the implementation of congestion charges, expanding the electric car-sharing supply and charging infrastructure to complement the existing car-sharing supply, while continuing to invest in public transport development to improve air quality.
 - Incentivising cross-departmental co-operation mechanisms, notably regarding public transportation (SDG 9), housing (SDG 11) and green amenities (SDG 15).
 - Enhancing a circular economy strategy to reduce waste production, increase the city's recycling rate and improve resource efficiency, through more usage of recyclable materials in public infrastructure projects, for example.
- **Enhance strategic alignment of federal, regional and local development priorities and strategies**, through a multi-level dialogue for a national strategy to reach the SDGs by 2030.
- **Better align investment priorities and allocate budgets based on sustainability criteria**, including through participatory budgeting schemes to engage local citizens, and mainstreaming sustainability in the next edition of the *Investment Strategy 2025*.
- **Define relevant SDG targets and key performance indicators for Moscow's 13 sectoral programmes and urban development plans to guide decisions for sustainable development**. In order to support evidence-based policymaking and go beyond using the SDGs as a checklist, Moscow should leverage the indicators available in its databases to establish an SDG-based monitoring system, including international comparisons where appropriate.
- **Enhance collaboration with businesses, in particular SMEs, to achieve the SDGs**. In order to support a sustainable industrial transition, Moscow should incentivise the integration of sustainable development practices into companies' core business, including by setting up a platform for exchange between companies of all sizes to increase awareness, share best practices and foster peer-to-peer learning, in particular for SMEs. The city government should also use sustainable public procurement to leverage SMEs contribution to the SDGs, by incentivising social and environmental sustainability criteria in addition to the value-for-money ones.
- **Raise citizen awareness of the SDGs to drive behavioural change towards sustainable consumption and mobility**. Moscow should use the Active Citizen platform to illustrate the contributions of different urban development projects to the SDGs and related tangible benefits such as smart mobility and the usage of public transport as an alternative to individual cars. The city should also encourage citizens to propose their own solutions to sustainable development challenges to increase local ownership and social buy-in of such initiatives.

1 Policies and strategies for sustainable development

The city of Moscow, capital of the Russian Federation and its main economic centre, considers the United Nations Sustainable Development Goals (SDGs) as a systemic framework that can help promote an integrated approach to urban development. To that end, Moscow is using the SDGs as a checklist to assess and highlight the contribution of its 13 government programmes to sustainable development. In addition, the city has put in place three comprehensive urban development plans: the General Plan of the city of Moscow 2035, a long-term ambition to improve transportation and access to quality housing and green areas; the Investment Strategy 2025 to raise the necessary resources for urban development and the Smart City 2030 strategy to take advantage of digitalisation in Moscow. Although the SDGs are not integrated in the three plans, those plans contribute to several sustainable development outcomes.

City of Moscow: Key facts and figures

The city of Moscow is the capital of the Russian Federation, its largest city and economic, political, scientific and cultural centre. Moscow is located on the banks of the Moskva River in the western part of the Russian Federation, around 640 km southeast of St. Petersburg and 480 km east of the border with the Republic of Belarus. The city has an estimated population of 12.6 million spanning over an area of 2 511 km² (Figure 1.1). Moscow's urban agglomeration is estimated to have up to 20 million residents, which corresponds to more than 10% of the total Russian population. As the capital of the Russian Federation, Moscow is home to the major political institutions of the country, an important tourist destination and cultural centre with various museums, galleries, theatres and several United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage sites. It is also a major hub for scientific research and education in the country, counting 153 higher educational institutions, 77 of them non-state entities (Moscow Investment Agency, 2021^[1]).

Figure 1.1. Moscow's administrative divisions



Source: Visual provided by the City of Moscow

Moscow's economy has experienced a drastic transformation after the dissolution of the Soviet Union in 1991 and the following free-market reform of the 1990s. In particular, the manufacturing and engineering sectors that had previously dominated the city's economy have been increasingly replaced by services activities. The privatisation of the Russian economy has in particular led to the development of a substantial financial sector, formation of numerous banks and several securities exchanges in the city. Moscow is for instance home to the Moscow Exchange, one of the 30 largest stock exchanges in the world and the stock market in Eastern Europe and the Commonwealth of Independent States (CIS) with the highest trading volume. In total, more than 50% of active Russian credit institutions are headquartered in Moscow and account for more than 90% of bank assets in the country. Furthermore, there are about 1 million legal entities and around 270 000 individual entrepreneurs located in Moscow, which corresponds to 15% of companies registered in the Russian Federation and almost 50% of foreign direct investments received in the country. Companies located in Moscow include the headquarters of most of the leading companies in

the Russian Federation and representative offices of major foreign corporations operating in the country. The retail and real estate sector are two other major economic sectors in Moscow. Financial services and business operations together with real estate transactions and research and development (R&D) activities contribute around 25% to the overall gross regional product of Moscow (Moscow Investment Agency, 2021^[2]).

Despite the tertiarisation of the city's economy, Moscow remains the country's largest industrial centre. The industrial sector accounts for around 16% of the city's value-added, in particular through mechanical engineering, pharmaceutical goods and chemical production that employ a large share of the city's industrial workforce (Moscow Investment Agency, 2021^[2]). Another important industrial sector is food processing, which is one of the few manufacturing-related industries that expanded following the privatisation of the 1990s (Encyclopædia Britannica, 2021^[3]). Following a period of economic growth of around 12.4% between 2010 and 2019, Moscow's total gross regional product (GRP) in 2019 was about RUR 19.7 trillion, which is equivalent to USD 1 125 billion. The per capita GRP of Moscow is close to 2.5 times the average level in the Russian Federation. In total, close to one-fifth of Russia's gross value added (GVA) is generated in the city (Moscow Investment Agency, 2021^[1]; 2021^[2]).

In line with Moscow's economic significance for the Russian Federation, the city has historically had one of the lowest unemployment rates in the country. In 2018, the share of people unemployed among the working-age population was at 1.8%, while the long-term unemployment rate stayed below 10%. Employment in Moscow is boosted by high levels of education among Muscovites: 99% of its labour force had achieved at least secondary education and around three-quarters of the city population aged 25-64 have completed tertiary education. As a result, the city of Moscow exhibits high shares of employment in knowledge-intensive services and has the highest rate of patent applications in the Russian Federation, exceeded by only 2% of regions in OECD countries.

As a large metropolis, Moscow possesses a multi-modal transport infrastructure consisting of multiple airports, railway and metro lines. The city of Moscow has several international airports amounting to air traffic of more than 100 million passengers in 2019. A ring road system around the city unites 17 federal highways and represents a major individual transport axis connecting different suburbs. Moscow also possesses 14 metro lines expanding over 408 km and the Moscow Central Ring, a metropolitan rail line surrounding the city. In 2016, Moscow launched a new surface transit network – the Magistral – to improve public transit in the city. Through the new system, the city changed the routing of buses, trolleybuses and tramway services, doubled the frequency of buses serving the city centre and established dedicated street lanes for public transport (City of Moscow, 2016^[4]). The passenger flow on the new routes has increased by 40%, from 385 000 in 2016 to 540 000 in 2018. Beyond that, the city has established a bicycle infrastructure consisting of 6 500 bikes across 629 rental stations and 900 km of bike lanes have been constructed (City of Moscow, 2020^[5]; Moscow Transport, 2021^[6]).














Traffic congestion nevertheless remains a major challenge for the city of Moscow. Citizens still widely use private cars and emissions stemming from transport are the main source of air pollution in the city of Moscow (93% of total pollutants) (Bityukova and Mozgunov, 2019^[7]), which exceeds World Health Organization (WHO) air quality guidelines. Further challenges for Moscow include a shortage in housing supply and a shrinking working-age population as well as inequalities among the local population. In particular, a booming real estate market has increased living costs in Moscow, which are considerably higher than in other Russian regions (Encyclopædia Britannica, 2021^[3]).

Policies and strategies to achieve the SDGs in Moscow

Mainstreaming the SDGs in local public action and programmes

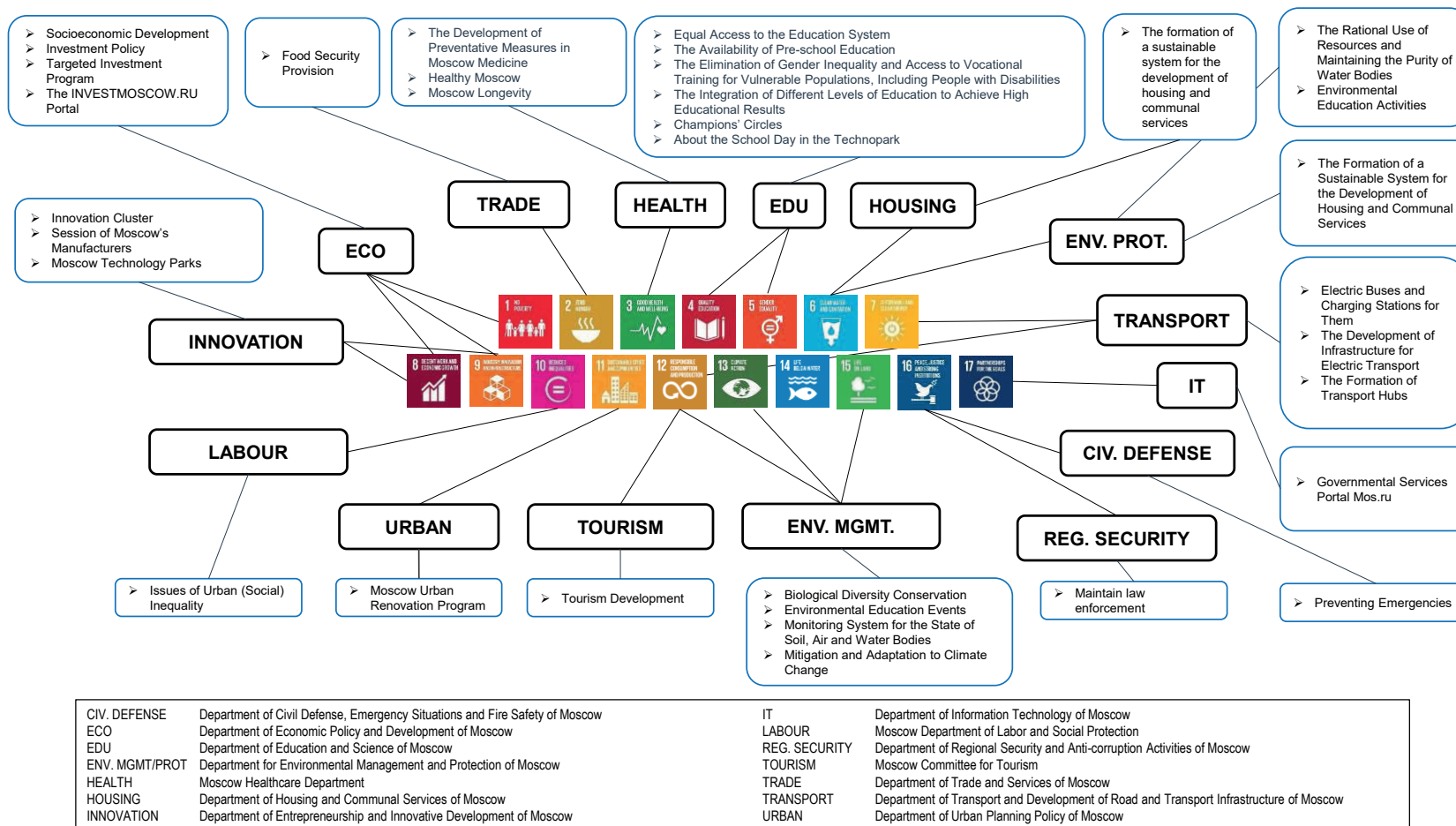
The city government of Moscow sees the SDGs as a systemic framework that can help promote an integrated approach to urban development and future proof public policies. Moscow is using the SDGs to strive for a balance between access to efficient transportation, green areas and quality housing. The city government considers the SDGs as a framework that can help plan and act in a systemic manner as well as to identify and manage synergies across different policy areas. Currently, the city is using the SDGs as a checklist to assess and highlight the contribution of its 13 government programmes – the city’s main sectoral policy plans – to sustainable development. Those 13 programmes, which are usually implemented over a horizon of 3 years, target various thematic areas such as transport planning, urban planning, culture, healthcare and economic development, and are designed to complement each other. The objective of the checklist is to identify the areas in which the city’s local actions have a strong sustainable development impact and where it should place a stronger focus in the short, medium and long terms. To this end, the government of the city of Moscow has mapped more than 30 projects that are undertaken in the framework of its government programmes and responsible departments for each SDG (Figure 1.2).

Table 1.1. Moscow Government programmes and their link to the SDGs

Government programme	SDGs addressed
Social support for residents of the city of Moscow	
Metropolitan healthcare	
Sports in Moscow	
Development of education in the city of Moscow	
Development of utility engineering infrastructure and energy conservation	
Development of the transport system	
Economic development and investment attractiveness of the city of Moscow	
Housing	
Urban development	
Urban planning policy	
Development of the cultural and tourist environment and preservation of cultural heritage	
Safe city	
Development of the digital environment and innovation	

OECD elaboration based on input from City of Moscow (2019^[8]), “Response of the city of Moscow to the OECD pilot project survey”.

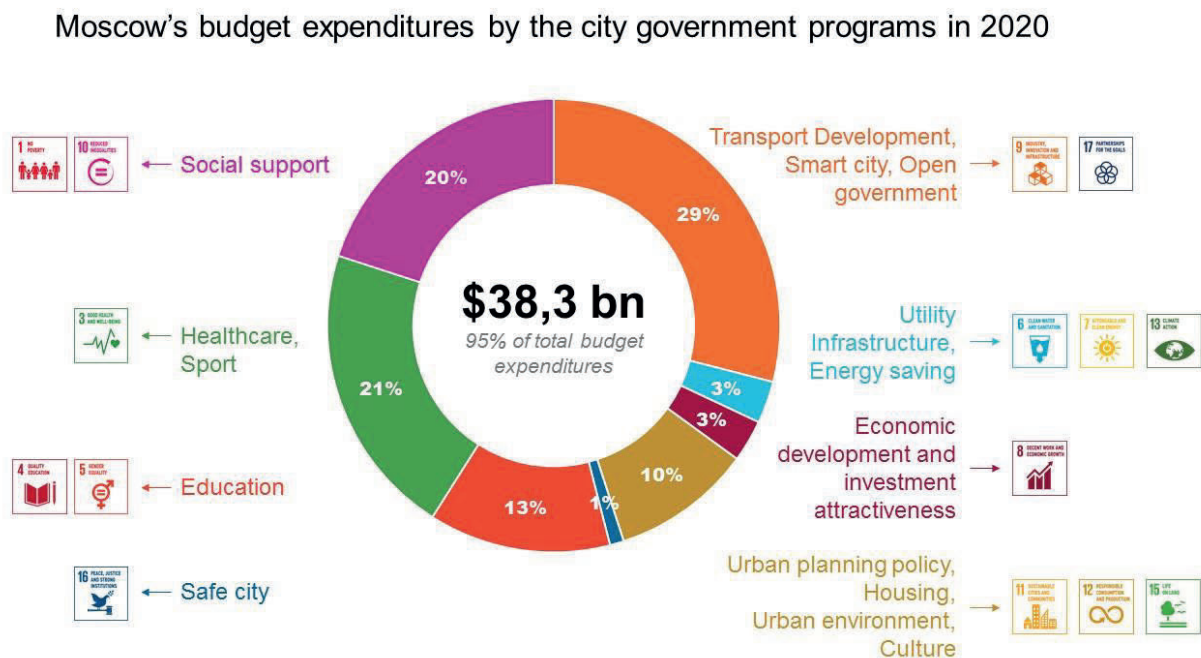
Figure 1.2. Overview of existing local programmes that contribute to the implementation of the SDGs in the city of Moscow



Source: OECD elaboration based on inputs received from the City of Moscow

Transport, smart city and open government are the areas where Moscow's public expenditure is the highest. In 2020, Moscow's government programmes represented more than 95% (USD 38.3 billion) of the city's yearly budget expenditure (Figure 1.3). 29% are spent on transport development, smart city technologies and open government, followed by healthcare (21%) and social support (20%).

Figure 1.3. Moscow's budget expenditure for city government programmes and link with the SDGs



Source: Visual provided by the City of Moscow

The development of the transport system is Moscow's priority programme. It accounts for the largest share of budget expenditure among all 13 sectoral plans of the city of Moscow and consists of 3 main projects that contribute notably to SDGs 9 and 12: the transition towards electric bus transportation, infrastructure development for electric transport and the formation of transport hubs in Moscow. The first electric buses were put into service in the city of Moscow in 2018. Until July 2021, the city expanded its electric fleet to more than 730 electric buses transporting close to 6.5 million passengers in that month, compared to currently 485 electric buses operating in London and 45 in New York (MTA, 2021^[9]; Transport for London, 2021^[10]). To foster the development of electric transport in the city, Moscow has put in place an infrastructure programme that foresees the installation of 600 electric charging stations for cars by 2023, a number that appears rather small considering the population size of Moscow and the expected increase in demand for electric cars in the coming years. Lastly, the city of Moscow has been working on the establishment of transport hubs that should ensure a comfortable passenger transfer corresponding to modern transport standards, including the provision of services for people with limited mobility. As part of its government plan for the development of the transport system, Moscow has opened two new international bus stations, the Northern Gate International Terminal at the Khovrino transport hub in the northwest of the city and the Salaryevo Terminal, located in the southwestern area of New Moscow that combine international and interregional bus services, are connected to several other forms of public transport and fully adapted to people with reduced mobility.

Expanding the social support to its residents is one of the objectives of the city of Moscow. As part of its programme Social Support for Residents, the city of Moscow has reorganised its city employment system,

introducing a new model of employment services, which aims to contribute to SDGs 1 and 10. More specifically, the city has introduced 56 employment centres across the city to provide residents with various job-related, targeted and individual services. These include resume writing, job vacancy research and assistance to obtain unemployment benefits. The city also established a flagship centre that provides an expanded range of employment services such as professional training to develop the necessary skills for employment. Another flagship centre was opened specifically targeted towards people with special needs on the labour market such as pre-retired employees, people with disabilities and youth. For the pre-retired, the city of Moscow has implemented a pilot programme for vocational training to reintegrate them into the labour market. Other measures to tackle urban social inequality undertaken by the city of Moscow include the provision of social rehabilitation services for the disabled and the improvement of accessibility to social, transport, engineering infrastructure, for instance through the expansion of the size of sidewalks, a decrease in the elevation of sidewalks and curbs on pedestrian crossings, and the establishment of further parking spaces across the city for the disabled. The city of Moscow has also implemented a project called Moscow Longevity to promote an active lifestyle and improve the quality of life among the elderly through physical activity classes, educational programmes, arts and crafts, dancing, singing and drawing classes as well as gaming activities.

In terms of health care, Moscow focuses on preventive measures. In order to raise health awareness of Muscovites, the city of Moscow conducts large communication campaigns. The city implements a set of informational and educational measures to motivate the population to maintain a healthy lifestyle and to prevent chronic non-communicable diseases, for example the project Healthy through the youth. In the framework of this project, the Youth Council under the Department of Health of Moscow and medical organisations in Moscow organised more than 100 events about preventive healthcare with more than 40 000 participants in the first half of 2019. During the summer, the city of Moscow sets up health pavilions in the city's parks that allow residents to undergo spontaneous preventive medical examinations.

An additional priority for Moscow are the city programmes related to urban planning, urban environment, housing and culture. As part of its city programme on housing, Moscow has initiated the renovation of the municipal housing stock (5 173 buildings with approximately 1 million residents) following international guidelines such as mixed urban zoning, increased social and spatial integration of residents and an improvement of the quality of public spaces to address increasing living costs and the challenge of affordable housing in Moscow. Additionally, in order to stimulate and ensure the urban development of unused former industrial territories in Moscow, the city is investing into R&D-intensive industries, social infrastructure facilities, such as kindergartens, schools and hospitals, additional housing in order to boost employment creation (City of Moscow, 2021^[11]). Another priority project falling into the area of urban planning and environment that aims at the sustainable development of the city is the landscaping of the embankments of the Moskva River. An additional 60 km of the river's embankments are envisaged to be landscaped by the end of 2021.

Another important programme for the city of Moscow is the development of utility engineering infrastructure and energy conservation, in particular the modernisation of its energy, water and waste infrastructure. Within that programme, which should impact multiple SDGs (6, 12, 13 and 15), the city envisages the transition to sustainable consumption and production patterns. The programme includes measures aimed primarily at the management of municipal solid and bulky waste through the operation and maintenance of urban solid municipal waste facilities, industrial processing and this waste as well as radioactive waste. In January 2021, Moscow for instance started the implementation of a separate waste collection programme. Two recent projects of the city of Moscow, an electronic and electrical equipment recycling project and an initiative for the disposal of sewage sludge aim to contribute respectively to greater levels of recycling and more efficient sewage treatment facilities (Box 1.1).

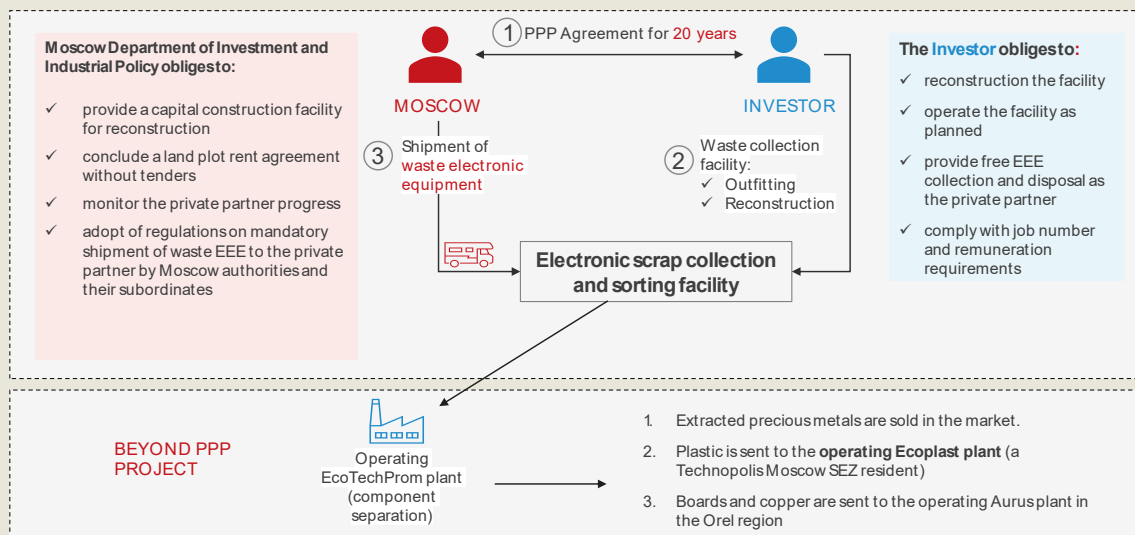
Box 1.1. Development of waste treatment projects in the city of Moscow

Improving waste management facilities and assets is a priority for the government of the city of Moscow. The city has launched two projects to improve waste treatment and recycling – an electronic and electrical equipment recycling project and a sewage sludge disposal, which shall help achieve SDG 12 on responsible consumption and production, among others through the contribution to SDG target 12.4 to achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, SDG target 12.5 to substantially reduce waste generation through prevention, reduction, recycling and reuse and SDG 15 on the protection of terrestrial ecosystems. Another objective the city of Moscow is pursuing with these projects is to improve its performance in environmental and water quality rankings comparing the city to other international metropolises.

Electronic and electrical equipment recycling

The recycling project will be the first of its kind implemented in the Russian Federation and is conducted as a public-private partnership (PPP) between the Moscow Department of Investment and Industrial Policy and an investor over the next 20 years (Figure 1.4). The agreement subject is a facility for accepting and sorting electronic and electrical equipment (EEE) with expired service life to be owned by Moscow. The city department will conclude a land lease agreement and adopt regulations on the shipping of EEE waste to the private partner, who will operate the electronic scrap collection and sorting facility. The PPP is expected to lead to annual cost savings on recycling for the city of about RUB 100 million, annual cost savings on tenders and prevention of pre-term equipment write-offs. Furthermore, EEE plastic components will be separated and sent to a plastic recycling plant.

Figure 1.4. The public-private partnership agreement for Moscow's electronic and electrical equipment recycling project



Source: Department of Investment and Industrial Policy of Moscow (2021_[12]), "Waste treatment line development", Presentation given during the 2nd OECD Mission to Moscow, April 2021.

Sewage sludge disposal project at Kuryanovo and Lyubertsy sewage treatment plants

On 24 February 2021, the city of Moscow and Greentech LLC concluded a concession agreement on the financing, construction and operation of two sewage sludge heat drying facilities. This agreement

is the reaction to large amounts of sewage sludge dumped by Mosvodokanal, Russia's largest water and sanitation supplier, at the quarries of Eganovo and Panovo located outside of Moscow due to the lack of nearby landfills suitable for sludge. Through the concession agreement, which will last 20.5 years (3.5 years of construction and 17 years of operation), Moscow and Mosvodokanal require the concession holder to construct and operate two sludge drying plants in Kuryanovo and Lyubertsy with a capacity of 1 million tonnes and to dispose of the dried sludge in cement plants. The facilities will be owned by the city upon commissioning, while the concession holder will be compensated for the drying services by Mosvodokanal at a tariff set by the Moscow Department of Economic Policy and Development to cover the operating costs and generate a return on investment.

Source: Department of Investment and Industrial Policy of Moscow (2021^[12]), "Waste treatment line development", Presentation given during the 2nd OECD Mission to Moscow, April 2021.

In addition to its 13 sectoral strategies, the city of Moscow counts with three main overarching strategies related to its urban development, namely the General Plan of the city of Moscow 2035 to promote balanced urban development, the Investment Strategy 2025 to create a favourable investment climate to provide the necessary financial resources and the Smart City 2030 strategy with the objective to foster new technologies to improve public policy outcomes. Although the plans are not directly aligned with the 2030 Agenda, they contribute to the objectives of the 2030 Agenda and can be seen as a first step towards addressing sustainable development (Box 1.2) as will be outlined in the following sections.

Box 1.2. Why a territorial approach to the SDGs?

The 2030 Agenda was not designed specifically for cities and regions but they play a crucial role in achieving the SDGs. The OECD estimates that at least 105 of the 169 targets underlying the 17 SDGs will not be reached without proper engagement and co-ordination with local and regional governments as cities and regions have core responsibilities that are central to sustainable development and well-being (e.g. water services, housing or transport). They also discharge a significant share of public investment (60% in OECD countries), which is critical to channel the required funding to meet the SDGs. Although the SDGs provide a global framework, the opportunities and challenges for sustainable development vary significantly across and within countries, regions and cities. However, they are also an integral part of the solution as the varying nature of sustainable development challenges, therefore calls for place-based solutions tailored to territorial specificities, needs and capacities. Place-based policies incorporate a set of co-ordinated actions specifically designed for a particular city or region and stress the need to shift from a sectoral to a multi-sectoral approach, from one-size-fits-all to context-specific measures and from a top-down to a bottom-up approach to policymaking. Based on the idea of policy co-ordination across sectors and multi-level governance, whereby all levels of government and non-state actors should play a role in the policy process, they consider and analyse functional territories, build on the endogenous development potential of each territory and use a wide range of actions (OECD, 2019^[13]).

The SDGs can help to advance conceptually the shift towards a new regional development policy paradigm and provide a framework to implement it because:

- The 2030 Agenda provides a long-term vision for strategies, and policies with a common milestone in 2030, while acknowledging that targeted action is needed in different places since their exposure to challenges and risk vary widely as does their capacity to cope with them.
- The interconnected SDGs framework allows the promotion of policy complementarities and the management of trade-offs across goals. Indeed, the SDGs enable policymakers to address the

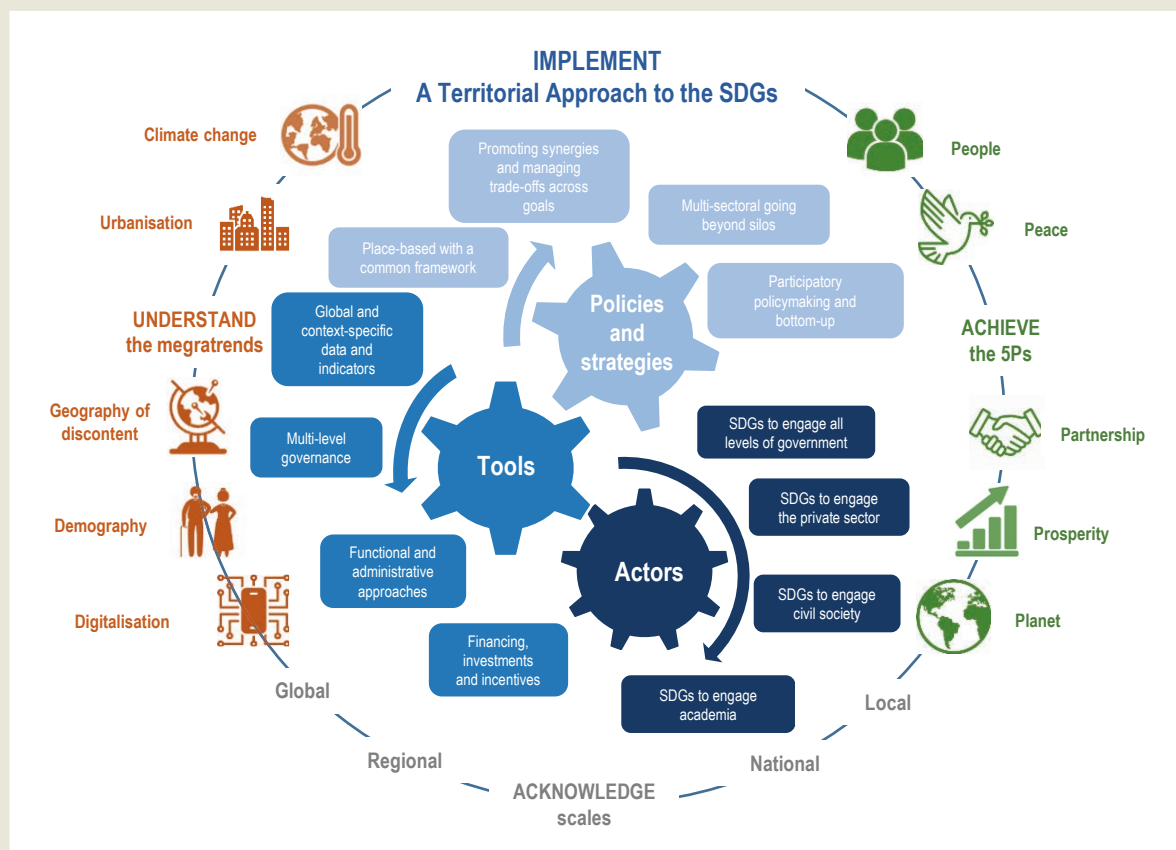
social, economic and environmental dimensions of sustainable development concomitantly, building on the synergies and taking interlinkages into account.

- The SDGs allow to better implement the concept of functional territories, a common framework that neighbouring municipalities can use to strengthen collaborations and co-ordinate actions.
- The SDGs can be used to promote multi-level governance and partnerships, including the engagement of various stakeholders in the policymaking process.

OECD's analytical framework for A Territorial Approach to the SDGs

The OECD has identified four critical megatrends influencing the achievement of the SDGs in cities and regions: i) demographic changes, in particular urbanisation, ageing and migration; ii) climate change and the need to transition to a low-carbon economy; iii) technological changes, such as digitalisation and the emergence of artificial intelligence; and iv) globalisation and the related geography of discontent. The SDGs provide a framework for cities and regions to respond systemically to such global megatrends. The proposed OECD framework foresees three key areas, policies and strategies, actors and tools, for cities and regions to implement a territorial approach to the SDGs (Figure 1.5).

Figure 1.5. The OECD analytical framework for A Territorial Approach to the SDGs



Source: OECD (2020^[14]), *A Territorial Approach to the Sustainable Development Goals: Synthesis report*, <https://doi.org/10.1787/e86fa715-en>.

Policies and strategies

Cities and regions can use the SDGs as a means to shift from a sectoral to a multi-sectoral approach, both in the design and implementation of their policies. The SDGs can help to bring various departments of a local administration together to strengthen the collaboration in policy implementation. Regional policy aims to effectively address the diversity of economic, social, demographic, institutional and geographic conditions across cities and regions. It also ensures that sectoral policies are co-ordinated with each other and meet the specific needs of different regions and provides the tools that traditional structural policies often lack in order to address region-specific factors that cause economic and social stagnation (OECD, 2019^[13]).

Tools

The effective implementation of a territorial approach to the SDGs implies the combined use of a variety of tools. These span from a solid multi-level governance system to global and context-specific data for evidence-based policies. They also consist in combining functional and administrative approaches to address territorial challenges and opportunities beyond borders, as well as investment and incentives, in particular for the private sector to contribute. Multi-level governance represents a key tool to promote vertical co-ordination (across levels of government) and horizontal co-ordination (across ministries and departments) – both within local, regional and national governments and between the government and other key stakeholders. National governments can also use the SDGs as a framework to promote policy coherence across levels of government, align priorities and rethink sustainable development through a bottom-up approach.

Actors

Participatory policymaking and the bottom-up process make up one of the core elements of a territorial approach to the SDGs. Shifting from a top-down and hierarchical to a bottom-up and participatory approach to policymaking and implementation is key for the achievement of the SDGs. The 2030 Agenda requires a more transparent and inclusive model that involves public as well as non-state actors to co-design and jointly implement local development strategies and policies. The SDGs provide cities and regions with a tool to effectively engage in multi-stakeholder dialogues with actors from the private sector, civil society, as well as schools and academia.

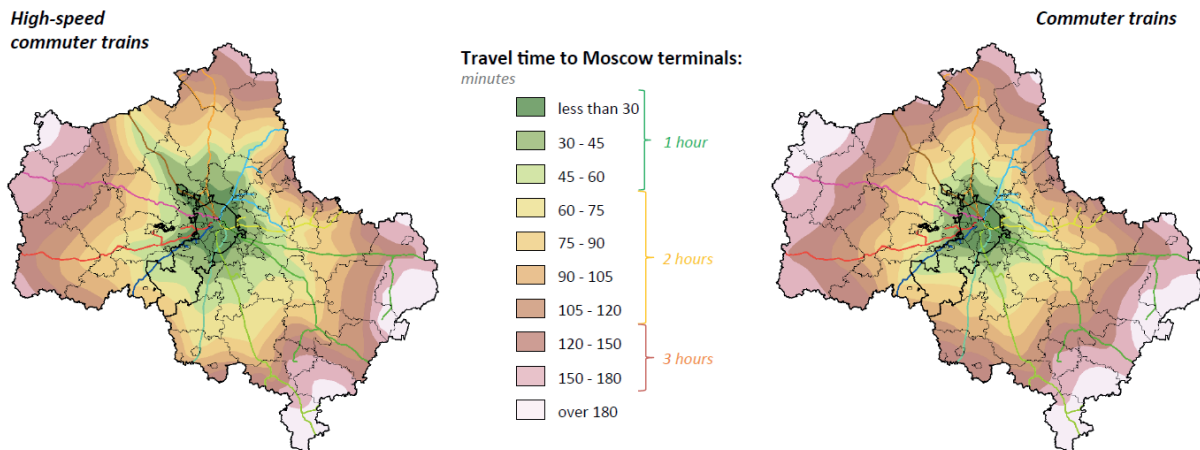
Source: OECD (2019^[13]), *OECD Regional Outlook 2019: Leveraging Megatrends for Cities and Rural Areas*, <https://dx.doi.org/10.1787/9789264312838-en>.

General Plan of the city of Moscow 2035: A long-term ambition to improve transportation and access to quality housing and green areas

Moscow's urban planning is guided by the General Plan of the city of Moscow, which outlines the city's local development priorities. In 2010, Moscow Government adopted its General Plan of the city of Moscow until 2025 (hereafter referred to as General Plan), developed by the Research and Design Institute of the General Plan of the city of Moscow, initially covering the period between 2010 and 2025 and later extended to 2035. Moscow's General Plan, the third one since the end of the Soviet Union, aims to guarantee certain social standards and quality of life for Moscow's population while providing the economically necessary infrastructure construction that contributes to these. This refers in particular to public transportation to improve mobility and curb the growth of motorisation and the establishment of business and industrial centres to densify the city centre while preserving green spaces adjacent to the Moscow Ring Road (MKAD). The plan was developed under consideration of around 70 000 comments and suggestions provided by the local population (Research and Design Institute of the General Plan of the City of Moscow, 2010^[15]).

The General Plan includes ambitious measures to reduce the use of private transport and improve environmental performance. In 2010, following 20 years of uncontrolled development of urban traffic, the city of Moscow introduced a rigorous and comprehensive set of policies as part of its General Plan to address the issues of mobility and traffic congestion (Box 1.3). In particular, the city placed strong efforts into the expansion and revamping of its transport infrastructure including the construction of transport hubs connecting various means of (public) transport. As an example, the city envisages the construction of an additional 1 257 km of roads and 257 km of metro lines between 2011 and 2023. Since then, related investments into the local transport infrastructure have led to notable improvements in travel times. Investments into the metro network have for instance reduced the average morning travel time by public transport from the MKAD to the city centre from 67 minutes in 2010 to 56 in 2019. In the same year, close to 90% of the city population was living within a radius of 2.2 km from metro stations, which corresponds to a 10 percentage points increase compared to 2014. Despite the notable improvements, this nevertheless remains a considerable walking distance, which might require the usage of additional means of transport. Going further, it is expected that the expansion of the high-speed railway transport system in Moscow, notably the construction of the Moscow Central Diameter rail line connecting the city centre with the suburbs, will increase the share of commuters residing within an hour travel time to Moscow's city centre from 55% to 70% (Figure 1.6). The city has also launched an ambitious programme to reduce traffic and related greenhouse gas (GHG) emissions (Box 1.3).

Figure 1.6. Transport accessibility within the Moscow agglomeration



Source: City of Moscow (2019^[16]), "Measuring the distance to the SDGs in OECD regions and cities: Framework and key trends - Spotlight on Moscow", <https://www.oecd.org/cfe/regional-policy/sdgs-cities-regions-roundtable.htm>.

Box 1.3. A comprehensive set of transport policies to reduce traffic in the city of Moscow

Measures put into place in Moscow during the last decade to address the gridlock on its streets

- Development of public transport:** The large expansion programme for the Moscow metro foresees 555 km of new metro lines by 2023. Moreover, the newly-built Moscow Central Circle, a light rail line, complements the metro by increasing suburban accessibility. The fleet for both metros and surface transport is currently being renovated or replaced. The bus route network has been optimised with over 100 new routes, an additional 380.5 km of public transport lanes put into operation from 2010 to 2021, more than 5 000 stops renovated and 552 electronic information boards installed.

- **Paid car parking** was introduced in 2012 and nowadays over 67 000 paid parking spaces are available in the city. Paid parking generates around EUR 90 million annually and these funds are used to improve the neighbourhoods where fees are collected.
- **Innovative ticketing:** Electronic travel cards, called Troika, were introduced in 2013 and now account for more than 50% of trips. The electronic travel cards have reduced queues in front ticket windows by one-third and led to savings of around EUR 15 million on the production of paper tickets. To encourage the use of long-term passes, Moscow decided to reduce the prices for this category of tickets.
- **Contracts for above-ground transport** are now awarded through open competitive tenders. Bidders must guarantee standards set by the Moscow city government, including comfortable buses, payment via city transit passes, unified schedules and the provision of free transit for eligible passengers.
- **Promotion of cycling:** As part of the city's shared bicycles system, 300 automatic bike stations have been constructed. Over 3 000 bicycles are now available to city residents at these stations. The total length of bike paths has increased over a hundredfold, from 2.3 km to more than 220 km. The legislation was changed to allow cyclists to use bus lanes and carry bicycles on surface transport for free.
- **Car sharing and taxi reform:** Moscow's first short-term car-sharing system started its operations in 2015. Since then, different companies have launched car-sharing services in the city. As of 2020 around 25 000 vehicles for sharing were available. In view of the city's population size of more than 10 million inhabitants, the city plans to expand this service. Taxis account for 260 000 daily rides in Moscow. Problems with unregulated cab services, including the use of potentially unsafe cabs, have been addressed through the issue of more than 60 000 official permits to cab drivers.
- **Environmental requirements restrictions** have been imposed on cargo vehicles to reduce polluting air emissions. Only trucks conforming to the emission standard Euro-3 or higher are allowed to enter Moscow's downtown.

Source: ITF (2016^[17]), "Moscow wins international transport award for tackling traffic gridlock", <https://www.itf-oecd.org/sites/default/files/docs/2016-05-19-taa-moscow.pdf>; City of Moscow (2021^[18]), "Коллективное хозяйство: как развивается шеринг-экономика в Москве (Collective farming: how the sharing economy is developing in Moscow)", <https://www.mos.ru/news/item/92115073/> (accessed on 8 September 2021).

In March 2017, Moscow City Council amended the General Plan to address the development needs of its new territories. Following a territorial reform that expanded Moscow's city boundaries southwest into the Moscow oblast in 2012 and increased the city's area by 1 480 km², the City of Moscow developed an updated version of the General Plan in 2017 and expanded its horizon to 2035. The plan aims to ensure a balance between access to green areas, efficient transport, job creation and high-quality housing and provides the basic principles for the development of the New Moscow area: i) integrated development; ii) multipolarity; iii) advanced infrastructure development; and iv) eco-friendliness.

- **Integrated development:** The creation of areas, where people live, work, study and relax and which allow for walking accessibility.
- **Multipolarity:** The creation of areas of economic growth, centres of industrial, business and social activity in the area of New Moscow to reduce commuting flows into the city centre of Moscow, notably through the creation of non-residential real estate such as office buildings
- **Advanced infrastructure development:** Housing is built simultaneously or after the creation of social facilities as well as the necessary transport and engineering infrastructure.

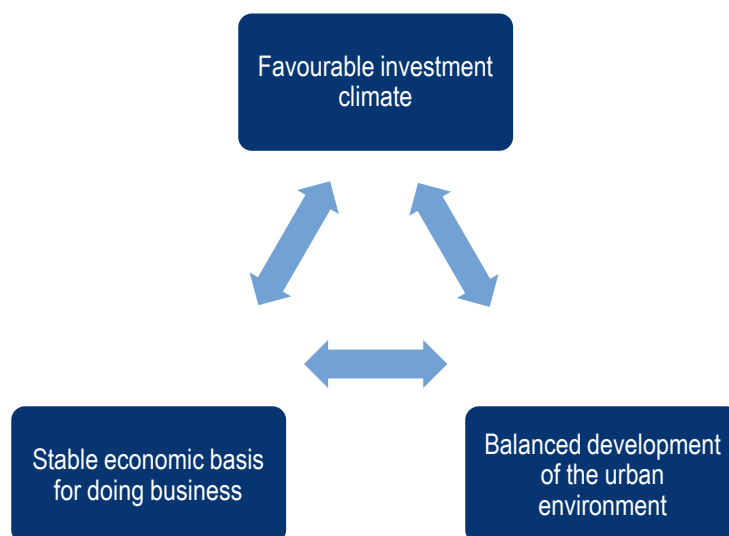
- **Eco-friendliness:** The recreational role of natural territories shall be preserved and their ecological potential carefully and effectively used in the interests of residents and to protect the environment, e.g. through landscaping projects.

In the territory of New Moscow, Moscow's General Plan foresees *inter alia* the construction of 300 new kindergartens, 110 schools, 20 hospitals and 100 culture and leisure facilities by 2030. Furthermore, it envisages large-scale development and modernisation of existing utilities, including water supply and sewage, heat, electricity and gas supply systems. Further investments foreseen in the latest version of the General Plan include the construction of 72 km of new metro lines and 33 new stations to connect settlements in the New Moscow area in the southwest of Moscow with the city centre (Research and Design Institute of the General Plan of the City of Moscow, 2017^[19]). Yet, while containing ambitious measures and plans that indirectly contribute to sustainable development and several of the SDGs, Moscow's General Plan does not refer to the 2030 Agenda and its objectives, nor aligns its actions with the SDGs, which should be a priority for the future, among other things to facilitate the co-ordination between different city departments responsible for its implementation.

Investment Strategy 2025: Raising the necessary resources for urban development

The Investment Strategy 2025's long-term objective is to create a favourable investment climate to mobilise the financial resources necessary to achieve balanced urban development. Adopted in February 2014, the Moscow Investment Strategy 2025 is the main guideline document for investment policy in Moscow. The strategy pursues three main objectives, namely: i) creating a favourable investment climate for the city; ii) ensuring a stable economic basis and business environment; and iii) fostering a balanced urban and living environment (Figure 1.7). In particular, the strategy aims at increasing the size and share of competitive investments and attract private investments in infrastructure. The strategy is based on an assessment of Moscow's attractiveness and current position in the global market, and was elaborated under the consideration of Moscow's various sectoral policy plans and in line with national strategies such as the concept for long-term socio-economic development of the Russian Federation (see the section on "Vertical co-ordination across levels of governments in the Russian Federation" in Chapter 3). It sets strategic goals in investment policy, offers a methodology for their achievement, sets sectoral and territorial priorities of Moscow's investment policy, and contains an action plan for its implementation as well as indicators to measure its progress (City of Moscow, 2016^[20]).

Figure 1.7. Main components of the Investment Strategy 2025



Source: City of Moscow (2016^[20]), *Investment Strategy of the City of Moscow for the Period up to 2025 (updated version)*, <https://investmoscow.ru/media/3327475/moscow-investment-strategy-up-to-2025-in-english.pdf>.

The Investment Strategy 2025 contains a variety of measures aimed to improve the investment climate in the city. When pursuing its objective of an improved investment climate in the city, Moscow can build on some assets such as low labour costs in comparison to other global cities, an advantageous position for exporting countries as a result of the depreciation of the rouble, a large domestic market capacity in Moscow and the Russian Federation at large and also its scientific and educational potential and information and communication technology (ICT) infrastructure. Yet, there are key challenges for the city of Moscow such as the uncertainty of the economic situation in the Russian Federation in general, restricted access and rising costs of debt financing, the contraction of cash turnover as well as inflation that leads to real household income declines. In order to overcome these challenges, the city of Moscow is envisaging several systemic measures. Among other things, Moscow plans to simplify administrative procedures for businesses and citizens (*inter alia* through the digitalisation of processes), to update its system of public procurement with regards to transparency and access, and increase the competition in land and property tenders. Furthermore, the city aims to improve the conditions for competition-driven investments through tariff optimisation, enhanced monitoring of investment programmes of natural monopolies and involving utility user representatives in the tariff planning for electricity, water, heating and gas. Another key priority is the establishment of direct communication with and feedback from investors, a deepening of the city's marketing activities, the establishment of the city as a brand and an expansion of the supply of information about business opportunities in the country in multiple languages. The city of Moscow will also continue to privatise city-owned property and implement further PPP projects.

As part of these efforts, the city of Moscow has implemented several measures to simplify and accelerate housing developments. Amongst others, Moscow has established clearer deadlines for the provision of public services in the area of real estate, determined the list of documents applicants must submit and elaborated a list of grounds for a refusal to provide services. The duplication and overlap of responsibilities of different authorities were streamlined and measures were taken that allow to simultaneously carry out the procedures for permit issuances and final project inspections. Furthermore, 23 construction-related public services have been converted to an electronic format. As a result, the deadline to issue the development plan for land plots and construction permits was reduced to 18 and 7 days respectively. These improvements are also reflected in the World Bank's *Doing Business* report, where the Russian Federation (70% of the data covering the city of Moscow) ranks 26th worldwide in terms of dealing with construction permits, up from the 178th position in 2012 (World Bank, 2021^[21]). The city furthermore is placed 22nd in the fDi 2021/22 Global Cities of the Future ranking that ranks cities based on a number of foreign direct investment indicators (fDi Intelligence, 2021^[22]).

Moscow's investment strategy targets both front-runner sectors and those lagging behind. The strategy foresees several sectoral priorities in areas that: i) are a bottleneck preventing the city from achieving its investment policy objectives; ii) make a substantial contribution to economic output and employment but could benefit from higher efficiency; iii) are seen as contributors to Moscow's international competitiveness; or iv) have the potential for the relocation of production. These sectors are transport infrastructure, education and healthcare, science-intensive production, "traditional industry", the financial and business services sector, tourism, communal infrastructure and the urban environment. The city supports these sectors through tax incentives, city guarantees and subsidies, public and infrastructure investments, subsidies for services provision, long-term public procurement, training and non-financial measures. In terms of territorial priorities, Moscow puts emphasis on the comprehensive development of the new territories that have been integrated into the city as part of the 2012 territorial expansion, the redevelopment of old industrial and inefficiently used territories, and the establishment of a special economic zone in the suburb of Zelenograd to form an industrial and innovation cluster.

The investment strategy takes the objectives of the General Plan 2010-35 into consideration. More specifically, it mentions a balanced development of the residential, transport and social infrastructure of Moscow and a better urban environment as one of its main investment policy tasks. In order to reach that objective, the Investment Strategy 2025 foresees strategic investments into public spaces, the transport

and education infrastructure, health services as well as the development of cultural amenities in the city and the rehabilitation of historic buildings.

Despite the incorporation of a component on balanced urban development, Moscow's investment strategy currently does not put much emphasis on sustainability and the SDGs. As an investment plan, Moscow's investment strategy naturally focuses mostly on economic opportunities and the city's investment climate. While it also considers the social priorities and infrastructure of the city, notably education and health and public spaces facilities, but it does not mention, for instance, environmental aspects and impacts of the city's measures and investment plans. The latest version of the investment strategy from 2016 does not make any reference to the 2030 Agenda and the contribution to sustainable development is not featured as part of the city's investment objectives. Yet, some of the measures outlined in the strategy support the achievement of the SDGs, notably the expansion of public transport infrastructure, investments in healthcare and education as well as urban renewal projects. Considering the timeframe of the Investment Strategy 2025, the development of Moscow's next long-term investment strategy in the next years provides the opportunity to integrate a stronger focus on sustainable investments and the incorporation of the SDGs as a planning tool.

Smart City 2030: Making the most of digitalisation

The Moscow Smart City 2030 strategy, released in 2018, is an attempt by the city government to respond to citizens' demands and to leverage the potential of new technologies to improve public policy outcomes. While digital innovation is essential for the smart city concept, a key question is whether investment in smart technologies and digital innovations ultimately contribute to improving the well-being of citizens. The OECD therefore defines smart cities as "initiatives or approaches that effectively leverage digitalisation to boost citizen well-being and deliver more efficient, sustainable and inclusive urban services and environments as part of a collaborative, multi-stakeholder process" (OECD, 2019^[23]). Moscow's Smart City 2030 strategy sets priorities, and related key performance indicators for the governance and development of the digital economy in Moscow until the year 2030, yet without setting quantifiable targets. It is conceived as a lever to boost balanced urban development, notably through the achievement of SDG 11 and was developed building on an analysis of global megatrends in urban development such as accelerated urbanisation, innovations and technological progress, changing consumer preferences, demographic developments and globalised value chains. Moscow considers smart cities to be an integral component of the pathway towards sustainable development. The core idea behind Moscow's Smart City strategy is to provide digital technologies for sustainable improvement of citizens' living standards and favourable conditions for entrepreneurship, implement a comprehensive and transparent city governance on the basis of big data and artificial intelligence technologies and ensure a more cost-effective public service provision. In particular, the strategy contains six main development domains, for each of which it provides an analysis of the current situation, the anticipated future development and Moscow's goals for 2030 (Box 1.4). Measures envisaged to achieve these goals are defined for some of the domains, yet remain broad and are more of a conceptual nature. Nevertheless, Smart City 2030 is a step and vision towards the achievement of sustainable urban development through smart technologies and Moscow's first overarching guiding document that mentions the SDGs.

Box 1.4. Action domains of Smart City 2030

- **Human and social resources:** Create an integrated digital environment to enhance healthcare standards, increase longevity, provide social support and boost the educational achievements of citizens. It also aims to improve access and quality of services provided in education, healthcare, culture and the social sector through digital technologies.
- **Urban environment:** Accelerate an effective digitalisation of urban life including the provision of quality public-utility services and urban dwellings. Another goal is to optimise urban planning and housing development using cutting-edge analytics, big data and digital technologies.
- **Digital mobility:** Focus on transitioning from standard transportation schemes to intelligent mobility systems. This will include developing new communication technologies to foster virtual presence and reduce commuting times.
- **City economy:** Support the creation of a favourable business ecosystem for the digital economy, establish incentives to expand the digitalisation of businesses to improve productivity, and support the development of artificial intelligence (AI) systems to gain a competitive advantage in the global market.
- **Safety and ecology:** Improve the environmental situation in the city through environmental condition assessment using digital measurement technologies, upgrade firefighting, law enforcement and security monitoring systems using advanced digital technologies to improve decision-making with respect to the environment based on the AI analysis of the city's big data.
- **Digital government:** Transform Moscow into a data-driven city where decisions are based on automatic processing and analysis of big data. The city, therefore, plans to install sensors in power, heat, gas and water systems, strengthen weather and ecological monitoring systems, and automate and robotise city infrastructure processes.

Figure 1.8. Smart City 2030: Development domains



Source: City of Moscow (2018^[24]), *Moscow 'Smart City - 2030' - A Brief Version*, https://2030.mos.ru/netcat_files/userfiles/documents_2030/strategy_tezis_en.pdf.

The strategy was designed in a participatory manner that involved over 23 500 citizens and representatives of the business community. The process collected over 2 500 ideas and more than 6 000 comments on a previous draft of the document. Citizens were polled about areas where they already frequently use digital technologies (mostly financial transactions and retail), where they should be more active (healthcare and personal safety) and about technologies that they would like to see implemented by 2030. The majority of people surveyed were in favour of developing more personalised healthcare and smart home appliances. Further comments were submitted through a Moscow Government crowdsourcing platform that allows residents to hand in proposals for the development of the city. The strategy was also discussed at the industry portal ICT.Moscow, in industry conferences at the Moscow Urban Forum 2019. Lastly, the strategy was presented to leading experts attending Connected Cities 2020, an international forum of heads of city government information technology (IT) services (City of Moscow, 2018^[24]).

As part of its Smart City strategy, Moscow has engaged with the International Telecommunication Union (ITU) to implement the United 4 Smart Sustainable Cities (U4SSC) key performance indicators (KPI) on smart sustainable cities. Based on the ITU's recommendation on "key performance indicators for smart sustainable cities to assess the achievement of sustainable development goals", Moscow's Smart City strategy KPIs are designed to comply with existing city KPIs. More specifically, they build on the urban environment quality index of the Ministry of Construction, Housing and Utilities of the Russian Federation

and the OECD Better Life Index. They are divided into the three categories: i) economy; ii) the environment; and iii) society and culture. Overall, the ITU and the city of Moscow identified 91 indicators, with verifiable data available for 75 of them. They are a key tool to measure Moscow's progress on the achievement of its Smart City strategy and to guide the city on its pathway towards accomplishing the 2030 Agenda more broadly (ITU, 2018^[25]).

Moscow has already achieved notable progress in implementing goals of digital development. A distinctive feature in the city's development is the transformation from informatisation (transfer of business processes into digital form) to digitisation (digital technologies transform business processes). Moscow's public services for example are taking advantage of the cutting-edge developments in ICT: 50% of all requests in the municipal contact centre are solved by a virtual operator using speech recognition and synthesis technologies. The provision of information about the status of documents is fully automatised. The provision of public services in an electronic form made large-scale virtual interaction between citizens and organisations possible. At the moment, there are more than 380 of such services available in the portal of the Moscow Mayor and Moscow Government. These include searching and paying for fees, scheduling an appointment with executives, organisations and service delivery centres. More than 13 000 000 residents have a personal online account to use public services in an electronic form using different public services. Almost 100% of socially significant institutions such as schools, healthcare facilities and public administration have access to the Internet. The city-wide Wi-Fi network of free wireless Internet access points located in the streets across the city centre, in all of Moscow's parks and public transport is in operation. Digital tools for feedback such as Active Citizen (an online referendum system through which residents can vote on city development projects), Our City (a feedback channel allowing residents to comment on utility service issues) and the crowdsourcing portal crowd.mos.ru have been put in place.

The city of Moscow is actively involved in the promotion of digital projects and uses information systems aimed at the improvement of quality of life in the city. One notable example is the project Moscow Electronic School (MES), a comprehensive and large-scale education project aimed at the qualitative improvement of the educational process through modern educational content and the introduction of information technology. At the same time, the project takes into account all groups of students including children with disabilities. More than 2 million citizens of Moscow have already become active users of MES services thus contributing to the achievement of SDG 4 on quality education. The most important part of MES is a city-wide platform of electronic educational materials (MES Library). The platform is both a classical library and a special tool that provides educational content and allows for closer interaction between teachers and students. Teachers develop and hold interactive lessons due to the tools and electronic materials of the MES Library. Following the COVID-19 outbreak in early 2020, the existence of the MES platform allowed pupils in Moscow to use distant learning services, including digital textbooks, electronic schedules and video conferences through the Moscow electronic school platform. Another example is the Unified Medical Information and Analysis System, through which Muscovites are able to find the closest hospital, schedule medical appointments (online, through an app or at a clinic terminal) and receives sick leave papers as well as prescriptions online. The system administers the e-health records of 78% of the city's population (ITU, 2018^[25]). Hospitals in Moscow use machine vision to assist doctors with their diagnoses and a virtual second mind processes and analyses X-rays of lungs to search for evidence of malignant tumours. Closed-circuit television (CCTV) services provide access to video in real time or to archives and is used in order to ensure public safety. A unified system of ecological monitoring of the city has been established and is now operating in Moscow.

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2 Sustainable development challenges and opportunities

The city of Moscow's performance towards the Sustainable Development Goals (SDGs) is above the average of OECD regions in numerous indicators, particularly in the areas of education, jobs, industry and innovation. Indeed, high levels of tertiary education, low unemployment rates and a knowledge-intensive and innovative industry are among the city's strengths in terms of the SDGs. Policy areas where Moscow has space for improvement include waste management, air quality, housing and trust.

Measuring the distance to achieving the SDGs in the city of Moscow, Russian Federation

At the city level, Moscow possesses a wide range of indicators across various thematic fields related to the 2030 Agenda. One of the main sources for data and information about Moscow's urban development is the open data portal of the Moscow Government¹ that was launched in January 2013. It currently contains more than 1 140 datasets across different topics of the city development of Moscow such as education, sports, health, key cultural and leisure areas. While many of them are related to the 2030 Agenda, there is no link or mention of the SDGs in the portal. The same is the case for the Integrated Data Warehouse of Moscow Government's Analytical Center, a unique database of statistics on the city of Moscow and other Russian regions, which contains around 10 000 social and economic indicators. Mapping selected indicators of these two databases to the SDGs and harmonising those with an internationally comparable framework such as the OECD localised indicator framework for measuring distance to the SDGs in cities and regions could allow the development of a comprehensive SDG indicator framework for the city of Moscow, which currently does not exist. Putting in place such a framework building on existing data could be a simple way to set up an SDG monitoring system in the city of Moscow and to measure and evaluate outcomes of policies implemented as part of Moscow's 13 sectoral programmes and its three main urban development strategies.

This chapter assesses the performance of the city of Moscow towards achieving the SDGs (Figure 2.1) based on the OECD localised indicator framework for the SDGs (Box 2.1) compared to around 400 OECD regions.² It moreover considers additional context-specific indicators for Moscow. The section follows the structure of the five critical dimensions of the 2030 Agenda, namely people, planet, prosperity, peace and partnerships and covers 16 out of the 17 SDGs – as indicators for SDG 14 (Life below water) were not available, partially reflecting the lack of coastal areas in Moscow. Further information on the methodology of the assessment can be found in Box 2.1.

Figure 2.1. The 17 Sustainable Development Goals



Source: United Nations Sustainable Development Knowledge Platform (2020_[1]), *Sustainable Development Goals*, <https://sustainabledevelopment.un.org/?menu=1300>.

Overall, the city of Moscow has achieved very good results in the SDGs related to education (SDG 4), decent work (SDG 8) and industry and innovation (SDG 9) – where the city typically performs in the top 5% of OECD regions. Regarding sustainable consumption (SDG 12), Moscow has taken important actions

to improve outcomes, in particular to decrease the use of private cars by offering better options for mobility such as better public and greener transport. Nevertheless, important challenges remain in terms of its waste per capita production and recycling. Another area of improvement for the city of Moscow is the protection of environmental resources (SDG 15) and ensuring better air quality for its citizens (SDG 11).

Box 2.1. OECD localised indicator framework for SDGs

The OECD has developed a framework to localise SDG targets and indicators and measure the distance of regions and cities towards reaching each of the 17 SDGs. This consensual, comparable and standardised framework allows to benchmark performances within countries and across regions and cities to support public action across levels of government.

In the context of OECD countries, around 105 out of the 169 SDG targets have been identified as very relevant for regions and cities. Through an extensive literature review and expert consultation, the 169 SDG targets from the United Nations (UN) indicator framework have been classified by their level of relevance for subnational governments (place-relevant) and by their applicability to the context and specificities of OECD countries. The result is a selection of 105 SDG targets – and more than 100 indicators – for OECD regions and cities (also referred to as “subnational SDG targets”). With its 100+ indicators, the OECD localised framework covers at least 1 aspect of each of the 17 SDGs for both regions and cities. Nevertheless, the coverage in terms of indicators and targets is higher for regions than for cities (here defined as Functional Urban Areas). Although the set of indicators aims to cover the broad spectrum of all 17 SDGs, the coverage in terms of indicators also varies widely across SDGs.

To evaluate the achievements of cities and regions on the SDGs, the OECD localised framework defines suggested end values for 2030 through which regions and cities can assess where they stand today and seize their distance to reaching the intended objectives. When end values are not inferable from the UN framework, the OECD defines suggested end values for indicators based on the knowledge of experts in the field or, alternatively, based on the best performance of OECD regions and cities in that indicator. The OECD localised indicator framework attributes suggested end values to 88% of its indicators, of which 65% are defined using the criteria of “best performers”. The framework also normalises the SDG indicators from 0 to 100 – where 100 is the suggested end value of an indicator to be achieved by 2030 – and aggregates headline indicators that belong to the same SDG to provide an index score towards reaching each of the 17 SDGs. The distance to the target is the number of units the index needs to travel to reach the highest score of 100. Each of the 17 indexes uses a selection of indicators that better reflect the essence of the goal and that benefit from good coverage across OECD regions and cities.

Selection of indicators used to assess the city of Moscow’s achievements on the SDGs

The indicators used for the analysis were selected based on the OECD localised framework and a context-relevance assessment of these indicators reported by the city of Moscow. While indicators with high ratings in terms of relevance for the city of Moscow were prioritised, the analysis also considers other indicators in few SDGs with overall low data availability or to provide complementary information on specific policy areas.

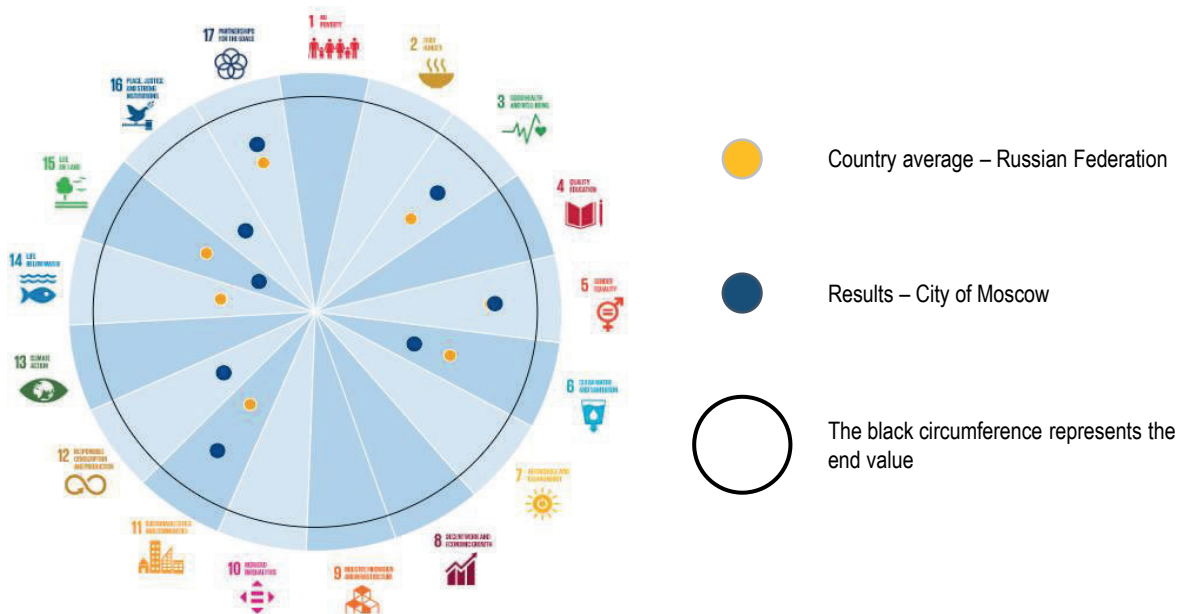
In addition to the available indicators of the OECD localised indicator framework, the section also considers 16 city-specific indicators for the city of Moscow that are not part of the OECD localised indicator framework, which implies that they are not currently available (and thus comparable) to most regions or cities in OECD countries. Nevertheless, they provide useful information about the development of the SDG implementation in the city of Moscow. Overall, the city-specific indicators for Moscow city cover mainly SDG 3 *Good health*, SDG 6 *Clean Water*, SDG 7 *Clean energy*, SDG 9

Innovation and infrastructure, SDG 11 Sustainable cities, SDG 12 Responsible consumption, SDG 13 Climate Action, SDG 16 Peace and Institutions and SDG 17 Partnerships for SDGs.

The only SDG where not a single relevant indicator was available for the city of Moscow is SDG 14 *Life below water* – to a certain extent reflecting the lack of coastal areas in Moscow city. For a subset of city-specific indicators, comparisons are possible with other 14 selected large cities for which data is available: Beijing, Berlin, Chicago, Hong Kong, London, Mexico City, New York, Paris, São Paulo, Seoul, Shanghai, Singapore, Sydney and Tokyo (“the 14 selected large cities” henceforth).

Source: OECD (2020^[21]), *A Territorial Approach to the Sustainable Development Goals: Synthesis report*, <https://doi.org/10.1787/e86fa715-en>.

Figure 2.2. The city of Moscow and the SDGs – Distance to suggested end values



Note: Index from 0 to 100 (100 is the end value: black circumference); Dark dot: City of Moscow; Light dot: Country value.

For more details about the methodology to build SDG indexes, see OECD (2020^[21]).





Source: OECD (2020^[31]), *Measuring the Distance to the SDGs in Regions and Cities (visualisation tool)*, <http://www.oecd-local-sdgs.org/>. (Accessed on 8 June 2021)

People: The city of Moscow performs very well in education but there is space for improvement regarding some health outcomes

In SDG 3 *Good health*, the city of Moscow performs slightly below the average of OECD regions regarding life expectancy but above when looking at the rate of active physicians. With a life expectancy of 77.8 years in 2018, the city of Moscow is performing below OECD standards. More precisely, life expectancy in Moscow is 2.3 fewer years than the average of OECD regions. This outcome places the city below 70% of OECD regions. On the other hand, the city is making progress in terms of infant mortality, with an infant mortality rate of 4.8 (number of deaths of children 1-year-old or younger per 1 000 live births) in 2019 and positive preliminary estimations for 2020 (infant mortality rate of 3.5), Moscow performs slightly better than the median of OECD regions (whose average infant mortality rate is 5.9). In terms of transport safety, the city’s transport-related mortality rate still lies considerably above the average of OECD regions. Indeed, the city of Moscow still has an important gap to close in order to reduce its transport-related mortality rates of 7.8 deaths per 100 000 people in 2018 to the suggested end value of 4.7 (based on OECD best




performers).³ It is worth highlighting that when focusing only on road traffic accidents – rather than all modes of transport and vehicles – the related mortality rates were lower and close to 3 deaths per 100 000 people in 2019 (Rosstat, 2021^[4]). Health resources – such as hospitals, medical equipment and physicians – together with good nutrition habits can contribute to reducing mortality rates and improving life expectancy (OECD, 2020^[5]). With 5.8 active doctors per 1 000 inhabitants in 2018, Moscow rates above the OECD average of 2.8 and has already reached the suggested end value of 4.8. On the other hand, in terms of nutrition patterns (which tend to be highly associated with comorbidities), only 40% of Muscovites report actively monitoring their daily food intake for weight control compared to more than 50% in cities such as Beijing, Paris and Shanghai, which places Moscow in the bottom half among 15 large cities across the world.

Table 2.1. OECD indicators used to assess the dimension People in the city of Moscow

SDG	Indicator
 1	Percentage of the population satisfied with efforts to deal with poverty
 3	Infant mortality rate (number of deaths of children 1-year-old or younger per 1 000 live births)
	Life expectancy at birth
	Satisfaction with life as a whole (from 0 to 10)
	Transport-related mortality rates (deaths per 100 000 people)
	Active physicians rate (active physicians per 1 000 people)
 4	Percentage of the population from 15 to 19 years old enrolled in public or private institutions
	Percentage of the population from 25 to 64 years old with at least tertiary education
	Gender gap in the rate of young population (from 18 to 24 years old) not in education, employment or training (NEET) (percentage points)
	Gender gap in employment rate (male-female, percentage points)
 5	Gender gap in part-time employment incidence (female-male, percentage points)
	Percentage of the population that believe women are treated with respect and dignity in their country

Source: OECD (2020^[2]), *A Territorial Approach to the Sustainable Development Goals: Synthesis report*, <https://doi.org/10.1787/e86fa715-en>.

Table 2.2. City-specific indicators for the city of Moscow

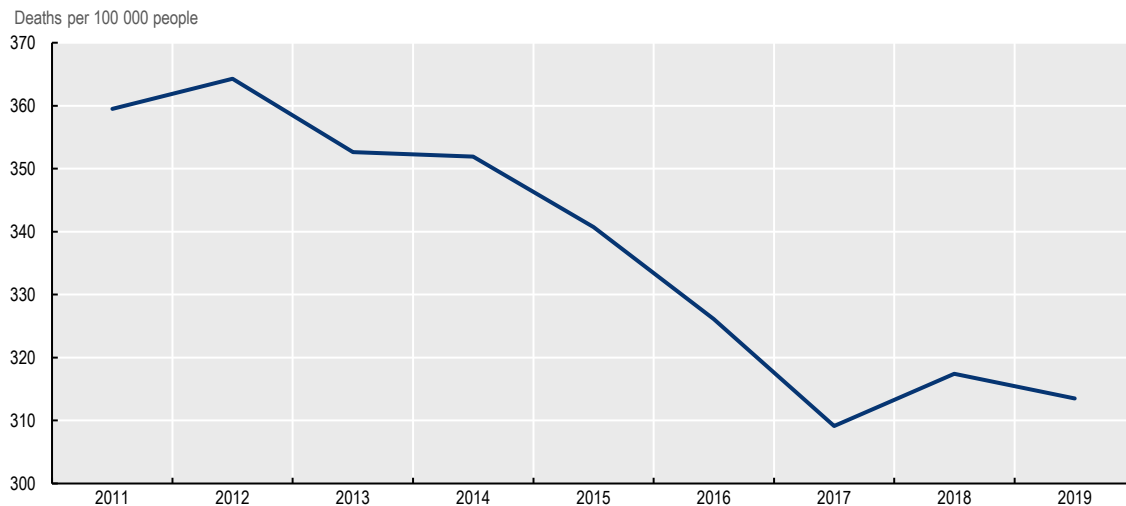
SDG	Indicator
 1	Percentage of the population living below the poverty line
 2	Percentage of the population actively monitoring their daily food intake for weight control
 3	Mortality of the working-age population (number of deaths per 100 000 people of the corresponding age)
	Ambulance travel time (all emergency calls), in minutes

In the city of Moscow, people's satisfaction with life and the healthcare system is below the OECD average. On a scale from 0 to 10, the inhabitants of the city evaluated their satisfaction with life as a whole with an average score of 6.0 between 2014 and 2018, which is lower than in two-thirds of OECD regions and leaves a moderate distance to bridge to the OECD average of 6.6. In the same line, satisfaction with the availability or quality of healthcare over the same period is quite low if compared to other OECD regions. With a satisfaction rate of 36%, Moscow city lags behind 95% of OECD regions, whose satisfaction rates with the healthcare system are on average close to 70%. To complement the measurement of SDG 3, the city of Moscow uses two further city-specific indicators: the mortality of the working-age population (number of deaths per 100 000 people of the corresponding age) and the ambulance travel time considering all emergency calls. While the overall satisfaction with the healthcare system remains low compared to OECD regions, the city has managed to reduce the average ambulance travel time from 17.5 minutes in 2010

to 12.7 minutes in 2019 (with recent preliminary estimates suggesting 9.7 minutes in 2020). This improvement could be partially reflected through the reduction in the mortality of the working-age population – which decreased by around 12% in a similar period, from 359.5 per 100 000 people in 2011 to 313.5 in 2019 (Figure 2.3).

Figure 2.3. Mortality rate of the working-age population, 2011-19

Number of deaths per 100 000 people of the corresponding age



Source: Rosstat (2021^[6]), 23220000400080200002 Смертность населения в трудоспособном возрасте (23220000400080200002 Mortality rate of the working age population), <https://showdata.gks.ru/report/276798/>

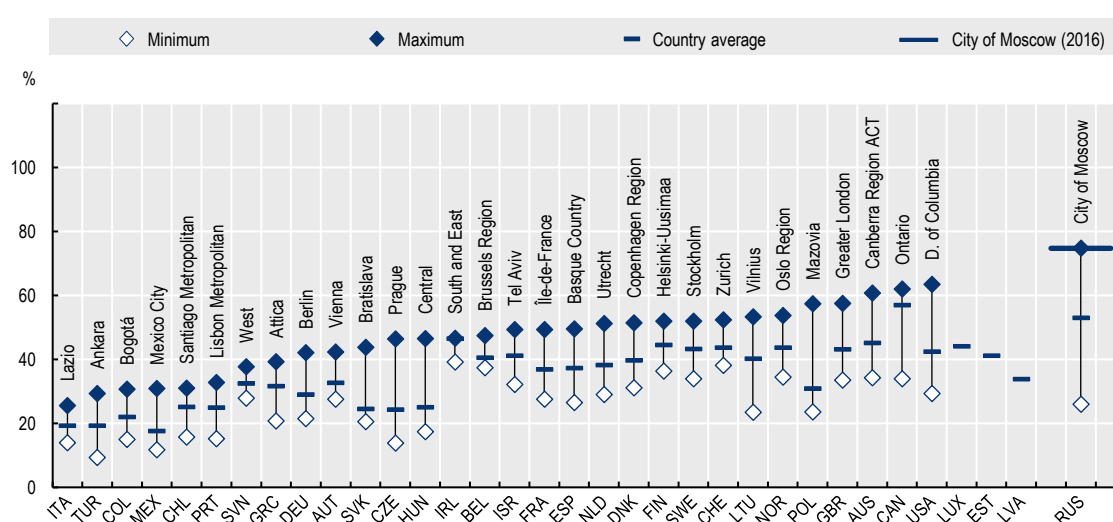
The city of Moscow exhibits achievements in education (SDG 4) that are significantly higher than the OECD average. With 100% of its 15-19 year-old population enrolled in public or private institutions in 2016, the city has already reached the maximum possible outcome in this indicator – this level is around 15 percentage points higher than the OECD regional average. In addition, around three-quarters of the city population aged 25-64 have completed tertiary education in 2016, the highest value among all 377 OECD regions where data is available, on a par with rates seen in Inner London (West) for example, and significantly above the average of OECD regions of 33% (Figure 2.4).

In SDG 5 *Gender equality*, the city of Moscow displays lower gender gaps in both employment rate and part-time employment incidence than most OECD regions; however, there is room for improvement regarding its residents' perceptions of the way women are treated. For the period 2014-18, around 66% of Moscow's population believed that women are treated with respect and dignity in their country. This percentage is similar to the OECD regional average but below the levels registered in 75% of OECD regions. On the other hand, when focusing on the city of Moscow's labour market, the gender gap in the employment rate (male employment rate minus female employment rate) is lower than in 57% of OECD regions. Despite not reaching the suggested and ambitious end value of 0 percentage points, the city's gender gap in employment of around 10 percentage points in 2018 lies well below the OECD average gender gap of 16.5 percentage points. In addition, the gender gap in part-time employment incidence (female part-time employment minus male part-time employment) is also less pronounced in Moscow than in most OECD regions. With a gender gap in part-time employment of 5.2 percentage points in 2018, Moscow outperforms 84% of OECD regions and is well below the OECD average of 17.3 percentage points. This outcome is relatively close to the suggested end value of 0 percentage points.

Although absolute poverty is below 7% in the city of Moscow, residents express low satisfaction with the country's efforts to eradicate poverty overall (according to Gallup World Poll). It is worth noting that there are important data gaps to monitor SDG 1 *No poverty* in the city of Moscow through the OECD localised framework. Since the indicators of the relative poverty rate and average income of the first quintile (based on OECD methodologies) were not available for the city of Moscow, it is very difficult to assess the distance of the city to the suggested end values for 2030 through an OECD perspective. However, according to the estimates of Rosstat, the number of people who had an average cash income per capita below the subsistence minimum in 2020 was 6.3%. Beyond objective measures, subjective indicators can contribute to understanding some trends on this SDG by shedding light on people's perceptions related to this policy area. For example, building on the Gallup World Poll database (OECD, 2020^[5]), the citizens of Moscow express a relatively low degree of satisfaction with the country's efforts to deal with poverty. Between 2014 and 2018, only around 20% of Moscow's citizens stated to be satisfied with the country's efforts. The respective OECD average is close to 38% – 18 percentage points higher than in Moscow. Overall, only 9.3% of OECD regions exhibit a lower rate of satisfaction than the capital of the Russian Federation in that period.

Figure 2.4. Percent of population with tertiary education, 2018

25-64 year-old population, large regions (TL2)



Note: Brazil, Mexico: 2015; Canada, Russian Federation: 2016; Australia, Chile, Colombia, Ireland, Israel, Lithuania: 2017.




Source: OECD (2020^[2]), *A Territorial Approach to the Sustainable Development Goals: Synthesis report*, <https://doi.org/10.1787/e86fa715-en>.

Planet: Moscow is making progress towards more responsible consumption, but some challenges remain in protecting environmental resources and mitigating pollution

Regarding SDG 12 *Responsible consumption*, Moscow has made progress in decreasing the excessive use of cars but important challenges remain regarding the reduction and recycling of waste. The number of motor road vehicles per 100 people in the city of Moscow was 29.6 in 2018. This value is lower than both the OECD regional average (of 39.2) and the suggested end value of 33.7 (based on best performers). On the other hand, according to the Department of Housing and Communal Services of Moscow, the city registered a municipal waste rate of 370 kg per capita in 2020, a rate slightly above the suggested end value of 366 kg per capita (based on OECD best performers) but lower than the OECD average (416 kg). In addition, considering that Moscow recycled only around 22.3% of its municipal waste in the same period, more efforts are needed to achieve a recycling rate closer to the average of OECD regions of 40%.



While the number of car-sharing vehicles has been increasingly rapidly since 2015, it is still relatively low considering the number of people living in Moscow. The city of Moscow uses two further city-specific indicators to measure its achievements in SDG 12, namely the number of car-sharing vehicles and the share of electric buses of the total fleet of non-rail vehicles. Different companies have launched car-sharing services in the city. As of 2019, 24 750 vehicles for sharing were available, which is a significant increase since the first operator started its business in Moscow back in 2015 (Figure 2.5). However, considering the city's population of more than 12 million inhabitants, the number of shared vehicles should rise in order to reach the ambitious objectives of Moscow. Moreover, the city has started to implement more eco-friendly standards in public transport through the usage of electric buses since 2018, which now account for 5.5% of the total fleet of non-rail vehicles.

Table 2.3. OECD indicators used to assess the dimension Planet in the city of Moscow

SDG	Indicator
 6	Change in water bodies (from 1992 to 2015, percentage points)
	Water bodies as a percentage of the total area in 2015
 12	Municipal waste rate (kilograms per capita)
	Percentage of recycled waste
	Number of motor road vehicles per 100 people
 15	Change in tree cover (from 1992 to 2015, percentage points)
	Terrestrial protected areas as a percentage of the total area

Source: OECD (2020^[2]), *A Territorial Approach to the Sustainable Development Goals: Synthesis report*, <https://doi.org/10.1787/e86fa715-en>.

Table 2.4. City-specific indicators for the city of Moscow

SDG	Indicator
 12	Moscow car sharing, vehicles
	The share of electric buses from the total fleet of non-rail vehicles
 13	Greenhouse gas emissions per capita (tonnes of CO ₂)

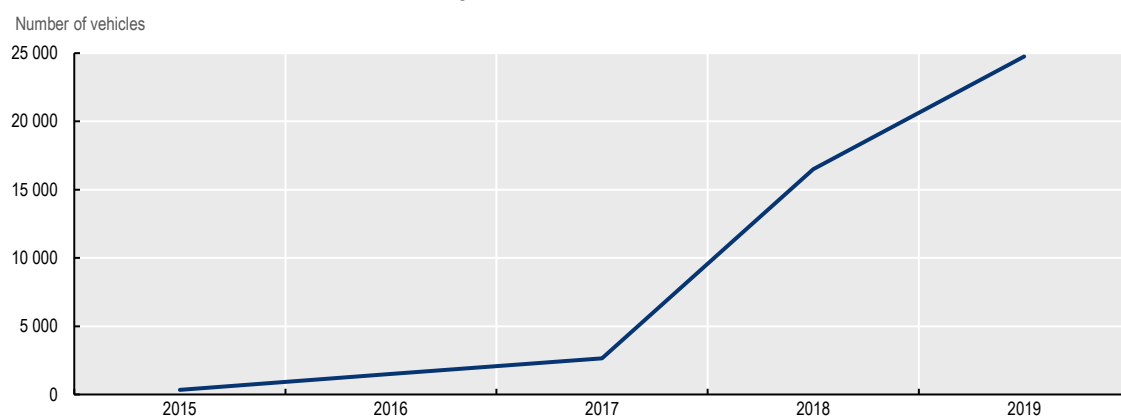
Regarding climate action (SDG 13) and environmental resources such as clean water (SDG 6) and life on land (SDG 15), the city of Moscow is lagging compared to most OECD regions. In 2018, 7.6% of the city's area had the status of protected natural area (OECD, 2020^[5]; Mackie et al., 2017^[7]), a share that represents less than half of the average of OECD regions of 16% (Figure 2.6). However, it is relevant to consider the share of protected “green” areas – a less restrictive type of management category, widely used by Moscow's Department for Environmental Management and Protection – which reveals that protected green areas in Moscow represent 26.6% of the total Moscow city area. In addition, the city of Moscow (here – for consistency over time – defined based on the administrative boundaries before the 2012 expansion) has experienced a decline in its tree cover area (of 3 percentage points) between 1992 and 2015 and a slight decrease in water bodies (0.2 percentage points) in the same period. To counteract this trend, the city is investing resources into the development of new public spaces by landscaping and upgrading existing areas (e.g. landscaping 120 km of embankments of the Moskva River) as well as by building new parks and sports facilities. The city government's efforts to increase the number of green spaces and to protect the environment in the last decade (e.g. from 2011 to 2020 around 9.5 million trees and shrubs were planted) have led to recent positive changes in the ecological situation.

According to the Department of Environmental Protection of Moscow, greenhouse gas (GHG) emissions within the administrative borders of Moscow amounted to 59.2 million tonnes of CO₂ equivalent GHG emissions in 2013 and 56.6 million tonnes in 2019, which corresponds to per-person emissions of 4.9

tonnes of CO₂ in 2013 and 4.5 tonnes of CO₂ in 2019. In 2021, Moscow was included for the first time in the list of cities of category “A” of the Carbon Disclosure Project (CDP) rating – a recognition of cities for their efforts to safeguard the planet (CDP, 2021^[8]). In order to tackle the impact of global warnings, Moscow Government has furthermore conducted a number of expert scientific assessments, including the forecasting of risks linked to the impact of climate change for the period up to 2040. Summary plans of measures to reduce the city’s negative impact on the climate and adapt to global warming are currently in the elaboration phase and are expected to be presented in 2022.

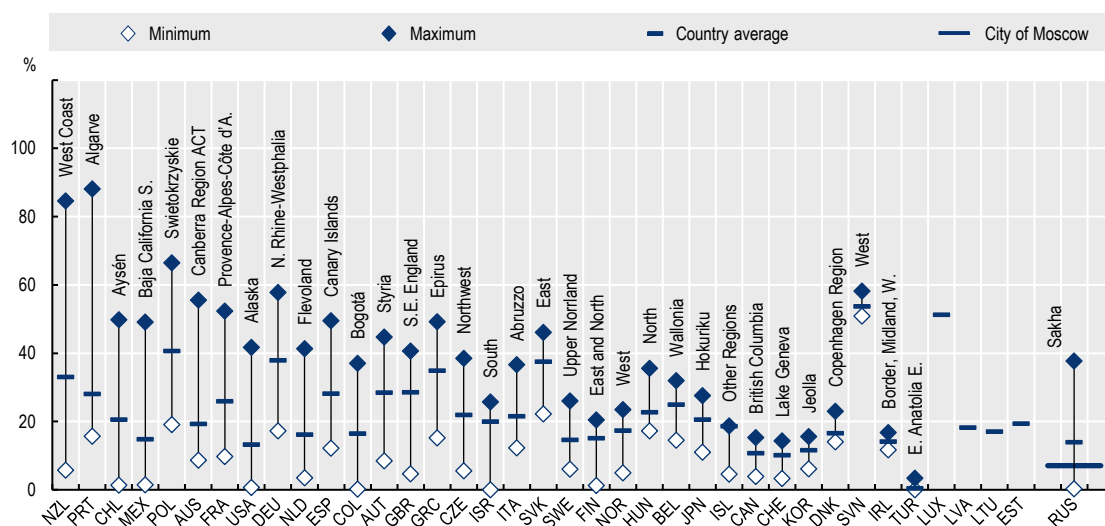
Figure 2.5. Car sharing in the city of Moscow, 2015-19

Total number of vehicles available for car sharing



Source: Data provided by City of Moscow, Department of Transport and Road Infrastructure Development.

Figure 2.6. Protected terrestrial area, 2017 Protected terrestrial area as a percentage of total area, large regions (TL2)







Source: OECD (2020^[5]), *OECD Regions and Cities at a Glance 2020*, <https://dx.doi.org/10.1787/959d5ba0-en>.

Prosperity: The city of Moscow displays very good outcomes in decent work, and industry and innovation, while some challenges remain on sustainable urbanisation

The city of Moscow's performance in SDG 8 *Decent work* is among the best in OECD regions. In line with its educational achievements for the adult population (covered by SDG 4), Moscow also has a very high share of the labour force with at least secondary education (99% in 2018). This value exceeds the suggested end value set for 2030 (of 84.7%, based on best performers) and is above the levels of all (390) OECD regions with available data. In 2018, only 1.2% of Moscow's labour force was unemployed – among the best outcomes compared to OECD regions with available data (Figure 2.7). On top of that, the gender gap in the unemployment rate was practically zero in the same year, which implies that Moscow has virtually achieved the end value for this indicator. In addition, the long-term unemployment incidence is much lower in Moscow than in most OECD regions – 8.7% in the city of Moscow compared to the OECD regional average of 30. Part-time employment incidence accounted for less than 6% of the total employment in Moscow in 2018. Hence, the city already undercuts by far the suggested end value of 15.4%. The same applies to the youth unemployment rate. In 2015, the latest year where data were available, the city's youth unemployment rate of 10.6% was lower than both the average of OECD regions (16.7%) and the suggested end value (10.8%). Furthermore, in 2018, only 3.9% of the young population (18-24 year-old) were not in education, employment or training (NEET) in 2018 – an achievement that outperforms all OECD regions (287) with available data.

Table 2.5. OECD indicators used to assess the dimension Prosperity in the city of Moscow

SDG	Indicator
	Percentage of the labour force with at least secondary education
	Unemployment rate (%)
	Gender gap in the unemployment rate (percentage points)
	Long-term unemployment incidence (%)
	Part-time employment incidence (%)
	Percentage of the young population (from 18 to 24 years old) NEET
	Youth unemployment rate (%)
	Employment in knowledge-intensive services (percentage of total employment)
	Patent applications (PCT) per 1 000 000 people
	Percentage of the labour force with at least tertiary education
	Percentage of the population that believes their place of residence is a good place to live for racial and ethnic minorities
	Percentage of the population satisfied with the affordability of housing
	Percentage of the population satisfied with the quality of public transportation systems
	Difference between built-up area growth rate and population growth rate (percentage points)
	Exposure to PM2.5 in µg/m³, population-weighted (micrograms per cubic metre)

Source: OECD (2020_[2]), *A Territorial Approach to the Sustainable Development Goals: Synthesis report*, <https://doi.org/10.1787/e86fa715-en>.

Table 2.6. City-specific indicators for the city of Moscow




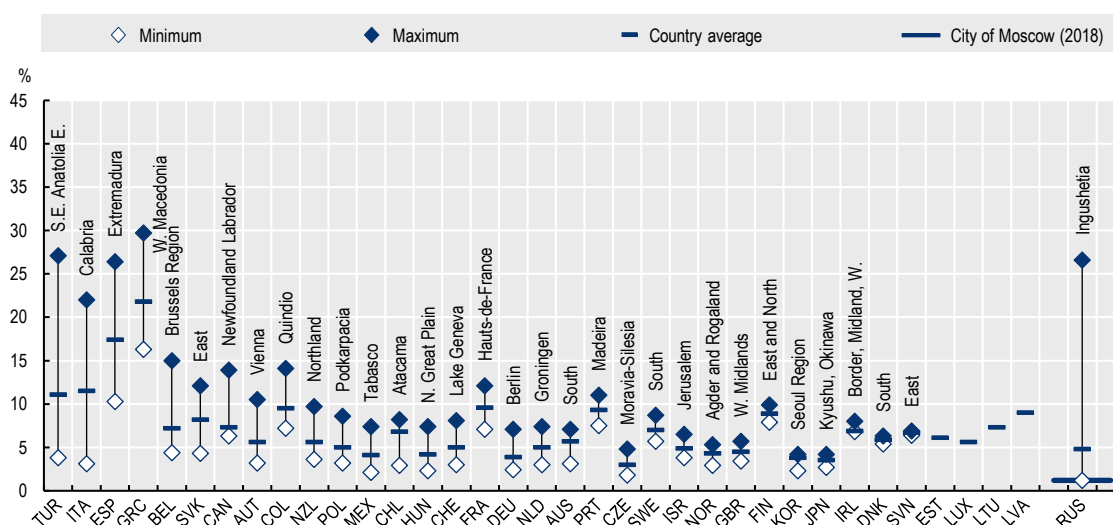
SDG	Indicator
	Price of a kilowatt of electricity (USD)
	Percentage of the population with access to electricity
	Start-up ecosystem strength index
	Percentage of parks and gardens available to residents (with respect to city area)
	Integrated and shared mobility index (integrated ticketing and fares), from 0 to 5

Figure 2.7. Unemployment rate, 2017

Percentage of unemployed with respect to the labour force, large regions (TL2)



Note: Japan: 2015; Australia, Canada, Chile, Colombia, Israel, Korea, Mexico, New Zealand: 2016; Russian Federation: 2018.

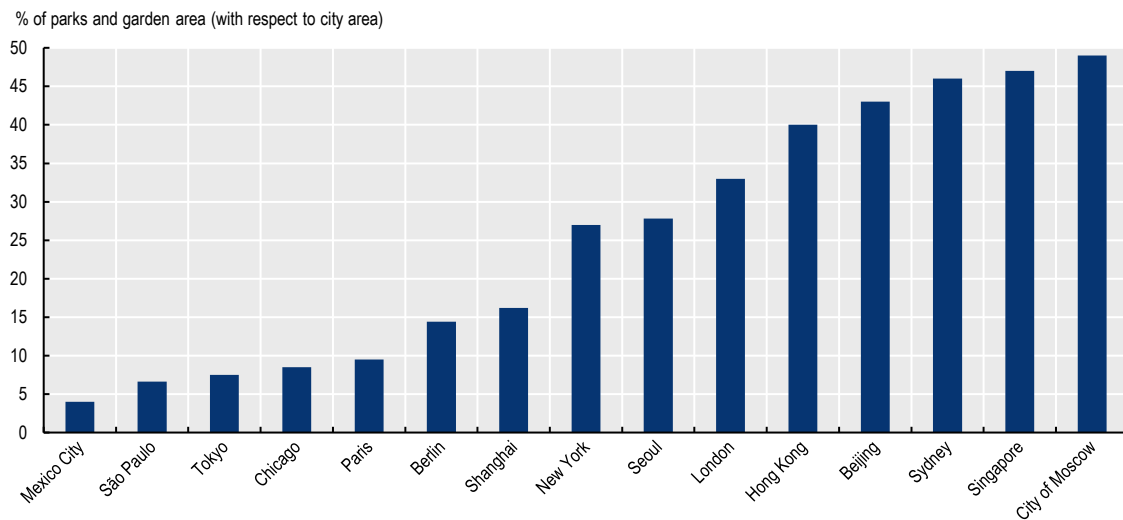
Source: OECD (2020^[2]), *A Territorial Approach to the Sustainable Development Goals: Synthesis report*, <https://doi.org/10.1787/e86fa715-en>.

SDG 9 *Industry and innovation* is another area where the city of Moscow performs better than the OECD average. As of 2018, around half of Moscow's labour force (49.7%) had completed tertiary education. This level is above the suggested end value for 2030 (of 45%, based on best performers) and greater than the average of OECD regions of 34%. In accordance with the high educational attainment of its workforce, the city of Moscow exhibits very high shares of employment in knowledge-intensive services and patent applications per inhabitant. Indeed, Moscow's 437 patent applications per one million people in 2017 exceed both the OECD regional average (of 134 per one million people) and the suggested end value defined for this indicator (of 208, based on best performers). Overall, only 2% of regions in OECD countries with data available (7 out of 379) exhibit an even higher rate of patent applications than the city of Moscow. Simultaneously, with almost 44% of its employment being concentrated in knowledge-intensive sectors, Moscow performs above the average of OECD regions by around 6 percentage points and is very close to the suggested end value (based on best performers) of 48%. In addition, compared to other 14 large cities, it ranks among the top 5 in terms of its start-up ecosystems – above cities such as Paris, Seoul, Sydney and Tokyo, but below Beijing, Berlin, London and New York (StartupBlink, 2020^[9]).

Regarding SDG 11 *Sustainable cities*, the city of Moscow is lagging in air quality and perceived housing affordability but performing well in sustainable land consumption and public transport. In the period 2014-18, only around one third of Moscow's respondents (to the Gallup World Poll survey) was satisfied with the affordability of housing. This level of satisfaction is lower than in 90% of OECD regions. Another area where the city of Moscow has space for improvement relates to the quality of the air. In 2019, air pollution levels in the city of Moscow reached 14 micrograms per cubic metre of PM_{2.5} – 4 points above the levels suggested by the World Health Organization (WHO, 2018^[10]). In the same line, only 38% of Moscow city's inhabitants expressed satisfaction with the quality of the air between 2014 and 2018 – half the average of OECD regions. One environmental amenity where the city of Moscow stands out is in the percentage of green spaces (parks and gardens) available to residents. In 2017, 49% of the city of Moscow could be classified as green spaces (World Cities Cultural Forum, 2020^[11]), which ranks Moscow the top performer across 15 selected large cities, including, Beijing, London, New York, Paris, Seoul and Sydney (Figure 2.8). This value should be put into perspective, however, as the majority of these green spaces are

large areas and forests located in the former suburbs, which were integrated into the administrative boundaries of the city in 2012 as part of the territorial reform. Nevertheless, Moscow has made strong efforts in the past decade to extend green spaces and extend its tree cover, for instance through the Million Trees project, which has led to the plantation of over 2.5 million trees and shrubs since 2013 (UNECE, 2021^[12]).

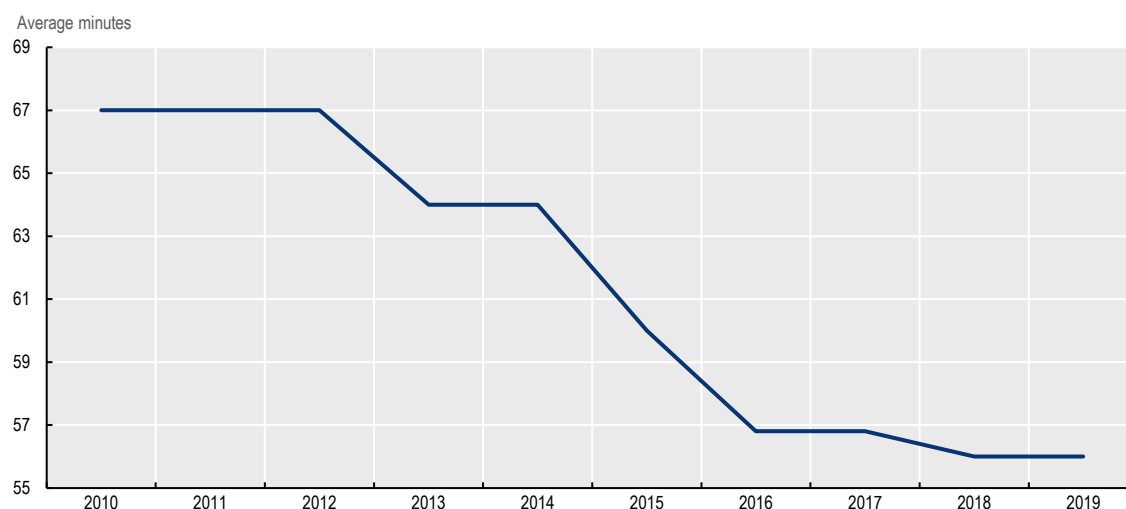
Figure 2.8. Share of green areas available to residents in selected 15 cities



Source: World Cities Cultural Forum (2020^[11]), *Percentage of Public Green Space*, <http://www.worldcitiescultureforum.com/data/of-public-green-space-parks-and-gardens>.

Regarding land consumption growth relative to population growth, the city of Moscow is displaying a more balanced pattern than in the majority of OECD regions where the built-up area is growing at a faster pace than its population. These urbanisation patterns are complemented by an efficient and inclusive public transport system. Between 2014 and 2018, around 78% of Muscovites reported being satisfied with the quality of public transportation systems – a satisfaction rate that exceeds the average of OECD regions by 18 percentage points. These satisfaction levels are in line with levels of integrated mobility and inclusiveness of transport in Moscow. For example, the Deloitte City Mobility Index (2020^[13]) assessed Moscow with a high score in integrated mobility (4 out of 5 in integrated and shared mobility). In addition, the efficacy of the public transport is also reflected through lower commuting times, which improve work-life balance and overall life satisfaction. The average morning travel time by public transport from the Moscow Automobile Ring Road (MKAD) to the city centre has decreased from 67 minutes in 2010 to 56 minutes in 2019 (Figure 2.9).

Although Moscow is facing important data gaps in SDG 7 *Clean energy*, selected city-specific indicators suggest good performance in terms of accessibility to electricity but some challenges in energy efficiency and the transition to clean electricity. On average, households in the city have access to electricity at relatively affordable prices. According to city-specific indicators, 100% of Moscow's households had access to electricity in 2018 (World Bank, 2020^[14]). Electricity prices are the lowest compared to 14 selected large cities (Global Petrol Prices, 2020^[15]) – including Berlin, London, Paris, Sydney and Tokyo. In the World Bank's 2020 Doing Business report, the Russian Federation (70% of the data covering Moscow) ranks among the best 10 countries worldwide with regards to getting electricity. Moscow in particular stands out due to a low number of procedures needed to get access to electricity and the city received the highest rating for the reliability of supply and transparency of the tariff index (World Bank, 2021^[16]).



Figure 2.9. Morning travel time by public transport from MKAD to the city centre

Source: Data provided by City of Moscow, Department of Transport and Road Infrastructure Development.

Peace and Partnership: Moscow city displays good outcomes in safety but some challenges remain in people's confidence in institutions



Homicide rates in the city of Moscow are below the average of OECD regions. In 2018, the city of Moscow registered 1.8 homicides per 100 000 people, an indicator measuring achievements in SDG 16 *Peace, justice and strong institutions*. This level is below the OECD regional average of 5.3 but slightly above the median of 1.4. Although this outcome is relatively good, the city still has some room for improvement in order to achieve the ambitious end value of a homicide rate of close to zero. Beyond objective indicators, self-reported measures can also help to understand people's experiences of personal safety and victimisation. For example, Moscow's share of the population stating to have been assaulted or mugged in the previous 12 months (between 2014 and 2018) is very similar to the average of OECD regions (around 4%).

Table 2.7. OECD indicators used to assess the dimensions Peace and Partnership in the city of Moscow

SDG	Indicator
	Homicides per 100 000 persons
	Percentage of the population that have been assaulted or mugged in the previous 12 months
	Confidence in the judicial system and courts
	Percentage of the population that believes corruption is spread throughout the government in the country
	Percentage of the population that have confidence in the national government
	Percentage of the population that believes their place of residence is a good place to live for migrants
	Percentage of the population that believes their place of residence is a good place to live for gay or lesbian people
	Share of <i>Patent Cooperation Treaty (PCT)</i> co-patent applications that are done with foreign regions (in % of co-patent applications)
	Percentage of households with broadband Internet access

Source: OECD (2020^[2]), *A Territorial Approach to the Sustainable Development Goals: Synthesis report*, <https://doi.org/10.1787/e86fa715-en>.

Table 2.8. City-specific indicators for the city of Moscow

SDG	Indicator
	Moscow city government debt to budget income ratio (end of year) (%)
	Electronic government development index, from 0 to 1
	Share of public services provided in electronic form (via online services), % of public services
	Free WiFi spots per capita (at any distance from the city centre)

According to its residents, the city of Moscow is a good place to live for migrants. However, the same perception is not reflected for gay or lesbian people and certain ethnic or racial groups. Between 2014 and 2018, around 63% of respondents (to the Gallup World Poll survey) among the city's population believed that the city of Moscow is a good place to live for migrants but only 30% believed the city is a good place for gay or lesbian people, a level 30 percentage points below the OECD average. In addition, only 55% believe their area of residence is a good place to live for racial and ethnic minorities, while the OECD average stands at 69%.

While survey respondents in Moscow reveal high trust in the national government, their opinions suggest that more efforts are needed to reinforce confidence in the judicial system and courts. Between 2014 and 2018, around 55% of respondents (to the Gallup World Poll survey) in the city of Moscow expressed having confidence in the national government, a level that exceeds the OECD regional average of 39% and that puts the city above 80% of OECD regions. However, when asked about the judicial system and courts, only 28% of the respondents stated to trust those institutions, compared to the OECD average of close to 52%. In addition, around 75% of surveyed Muscovites believed that corruption is widespread throughout the country's government – a share 12 percentage points higher than the OECD average. It is worth highlighting that although some indicators such as trust in the national government and the judicial system do not fall under the sole responsibility of the city government, they are relevant as they affect Muscovites' quality of life. In addition, these indicators relate to the idea that all levels of government and sectors of society need to work together in order to achieve the SDGs; in this sense, trust in different institutions (from the city population) is crucial for co-ordinated and effective responses.

One of the ways in which the city of Moscow is working to increase trust in institutions is through the use of digital tools for better service delivery and citizen engagement. In the United Nations Department of Economic and Social Affairs (UN DESA) Local Online Service Index (LOSI) (2020_[17]), the city of Moscow was already ranked 6th out of 86 municipalities and thus among the top performers regarding technology, content provision, services provision and participation and engagement of its local online services. Another indicator used by Moscow, which can boost residents' trust in institutions and denotes the level of financial capacity of the city, is the city government's debt to budget income ratio, which has significantly decreased over the past years. While in 2010 the ratio was around 30%, in 2017, it was brought down to a level of 1.3%.

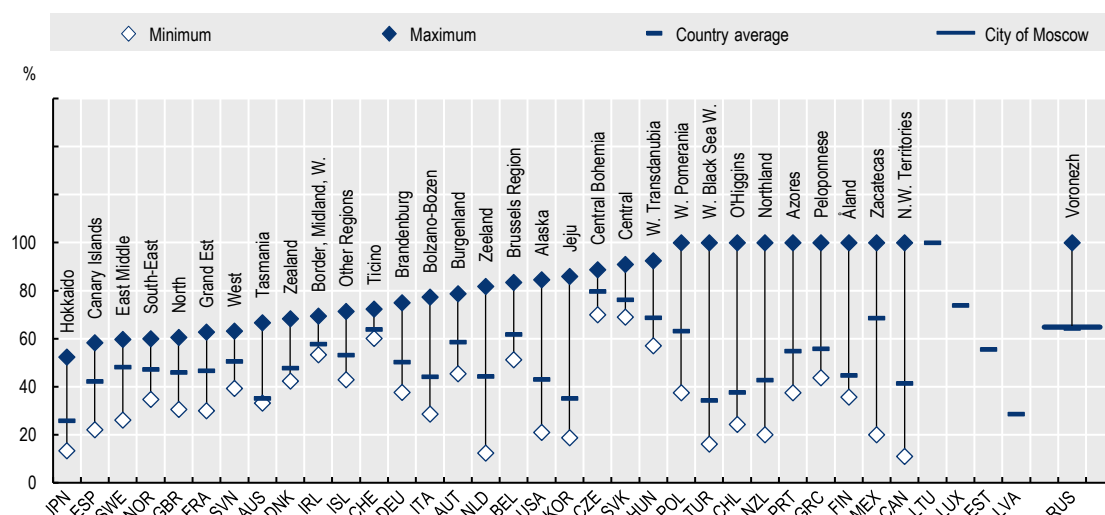
In terms of the Partnership dimension for the SDGs, Moscow performs above the average of OECD regions. More precisely, in the city of Moscow, around two-thirds of co-patent applications were implemented in co-operation with foreign regions in 2015, a value, which lies above the OECD regional average of 54% and the suggested end value of 79% (and is higher than in three-quarters of OECD regions) (Figure 2.10). A similar trend is observed for the share of households with broadband Internet access. In 2018, around 82% of Moscow's households had access to broadband Internet. This level is very close to the suggested end value of 86% and higher than the average of OECD regions (74%).

Altogether, Moscow is a frontrunner in the implementation of digital technologies for public services delivery and citizen demands in this respect have been growing. Between March and April 2018, Moscow residents were polled about the impact of digital technologies on their day-to-day life and their expectations with regards to digitalisation up to the year 2030.⁴ Altogether 73% of Muscovites claim to use online services for service provision and 92% claimed that their life is improving thanks to new technologies.

Citizens consider that digital technologies help them save time in administrative procedures (City of Moscow, 2018_[18]).

Figure 2.10. Share of PCT co-patent applications with foreign regions, 2015

Percentage of total co-patent applications, large regions (TL2)

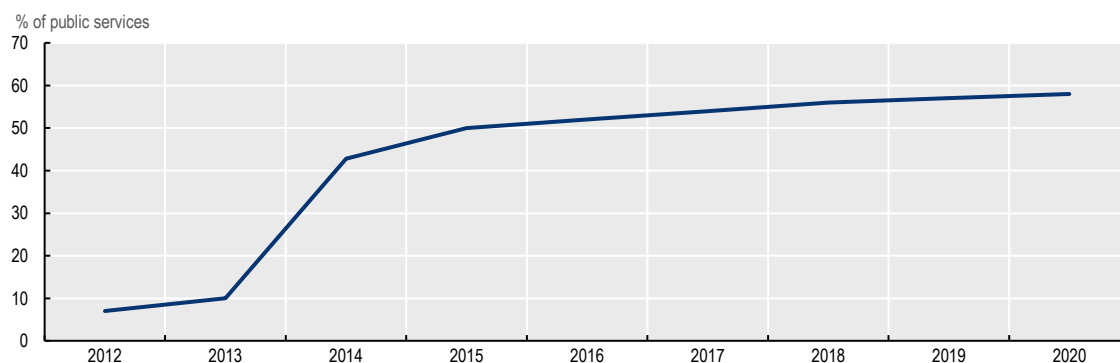


Note: PCT stands for Patent Cooperation Treaty.

Source: OECD (2020_[2]), *A Territorial Approach to the Sustainable Development Goals: Synthesis report*, <https://doi.org/10.1787/e86fa715-en>.

Public services are increasingly accessible online and close to 20 000 free WiFi hotspots are available in the city (City of Moscow, 2020_[19]). To complement the measurement of SDG 17, the city of Moscow is using city-specific indicators such as the share of public services provided in electronic form via online services and the number of free WiFi hotspots per inhabitant. Since its introduction in 2012, the share of public services provided online has grown from 7% to 58% in 2020. However, the increase in the share of electronically available public services has been slowing down since 2015 (Figure 2.11) – partially due to process optimisation and grouping of services. This is aligned with the efforts of the city to provide residents with free Internet, a technological enabler for the SDGs.

Figure 2.11. Share of public services provided in electronic form via online services



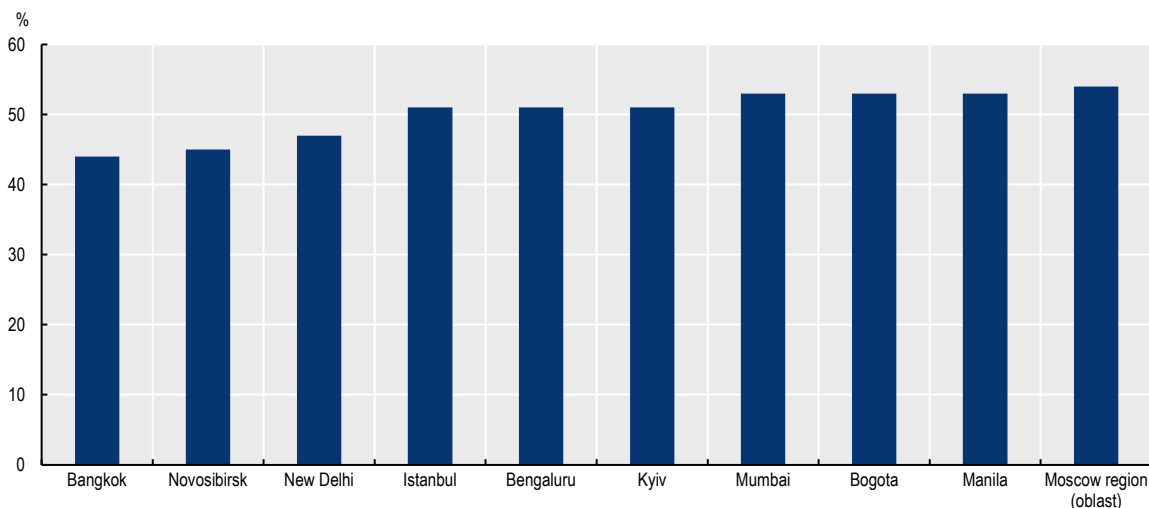
Source: Data provided by City of Moscow, Department of Information Technology.

Using the SDGs to promote balanced urban development in Moscow

The most complex challenge for the city of Moscow is to promote a “balanced urban development”, in light of population growth and urbanisation megatrends. Moscow experiences the typical challenges of large metropolitan areas: traffic and environmental issues, pressure on public services and difficult access to quality and affordable housing, partially due to population growth. Achieving a balanced urban development relates to promoting an integrated approach to urban planning, which should seek efficient transportation, quality and affordable housing and sufficient access to green areas, and will therefore remain a major challenge for the city.

Pollution resulting from road transport represents one of the main challenges for the city of Moscow. In the urban areas of the Russian Federation, transport problems tend to represent a burden to economic development, due to the increasing difficulties to attract new investment and workers to these areas. In line with the general pattern in the Russian Federation, road transport (including, car and bus transport) is the main source of air pollution (93% of pollutants) in the city of Moscow (Bityukova and Mozgunov, 2019^[20]). In reaction to high pollution levels, Moscow has been making numerous efforts to reduce traffic since 2010. Even though 600 new cars are registered in the agglomeration each day, the city administration’s measures have reduced the number of cars circulating in central Moscow by 25% and increased the average speed of traffic by 12% (ITF, 2016^[21]). Nevertheless, commuters still experience hours-long traffic jams. The TomTom Traffic Congestion Index ranks the Moscow region (oblast) as the city with the highest congestion levels among 416 cities analysed worldwide (Figure 2.12) (TomTom, 2021^[22]). Although still above the guideline threshold of the WHO, the concentration of PM_{2.5} has been decreasing over the last 10 years down from 19 micrograms of PM 2.5 per cubic metre in 2010 to 14 micrograms in 2019.

Figure 2.12. TomTom Traffic Congestion Index 2020

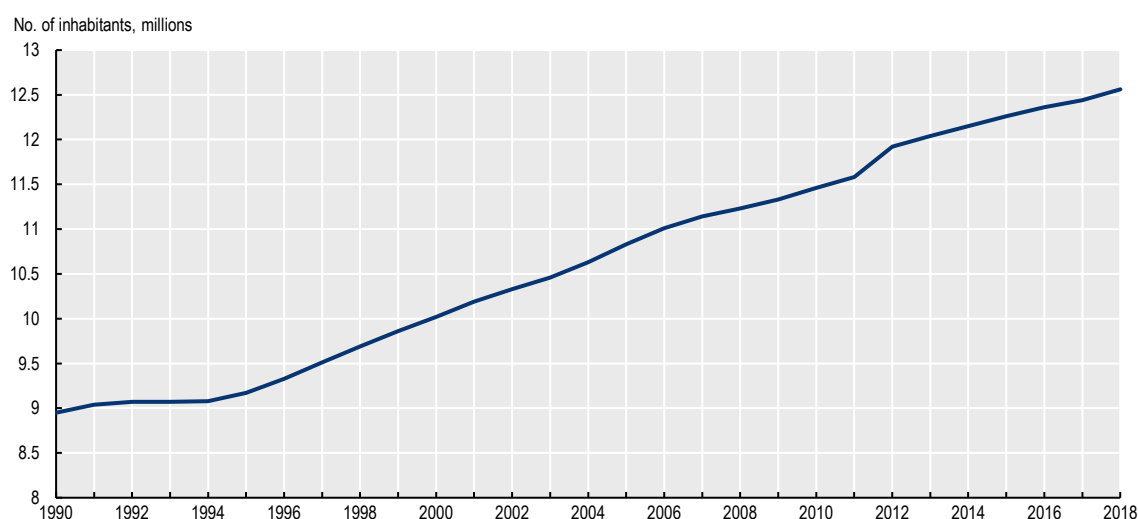


Note: A X% congestion level in a city means that a 30-minute trip will take X% more time than it would during its baseline uncongested conditions. Source: TomTom (2021^[22]), *TomTom Traffic Index 2020*, https://www.tomtom.com/en_gb/traffic-index/ranking/ (accessed on 4 February 2021).

The demographic developments of population growth, ageing and migration could bring significant pressure on public services. The population of the city of Moscow has increased from roughly 9 million inhabitants to 12.6 million between 1990 and 2018 (Figure 2.13). UN DESA estimates that Moscow’s population will further increase by an additional 300 000 people between 2018 and 2030 (2018^[23]) but legal and illegal migration make population figures unreliable (Rosstat, 2021^[24]). Thus far,

sustainable urbanisation (or land consumption growth relative to population growth) in Moscow is showing a more balanced pattern than in the majority of OECD regions where the built-up area is growing at a faster pace than its population. These urbanisation patterns are complemented by an efficient public transport system that around four out of five Muscovites are satisfied with. While the projected population increase will put pressure on the transport system, it could also impact the housing supply and affordability, an area where Moscow already has the potential to catch up. A study by PricewaterhouseCoopers found that the Moscow region ranks only 8th among 10 global cities investigated in terms of the available housing supply and 7th among 12 peers regarding housing affordability (PwC, 2019^[25]). In line with that, the satisfaction with housing affordability in Moscow reveals space for improvement compared to the average of OECD regions. Moreover, population ageing is reported to be an increasing trend in Moscow and it is estimated that by 2030, the city will have around 500 000 inhabitants over 80 years old calling for age-appropriate urban planning and infrastructure with a focus on accessibility.

Figure 2.13. Population growth in Moscow 1990-2018



Source: City of Moscow (2019^[26]), "Methods of statistical estimation of informal employment based on the integration of various data sources", Presentation at the 62nd ISI World Statistics Congress 2019, 18-23 August, Kuala-Lumpur.

A next step is to use the SDGs as an engine and opportunity to further improve policy outcomes in the city using the city's three main policy strategies (General Plan of the City of Moscow 2035, Investment Strategy 2025, Smart City 2030 strategy) in the coming decade. Moscow's policy planning could be further enhanced by using the SDGs to think, plan and act in a systemic manner and identify and manage synergies across different policy areas such as interlinkages between socio-economic and environmental goals. The city of Moscow has to deal with difficult trade-offs when addressing a key challenge such as adaptation to climate change (SDG 13), since reducing GHG emissions will imply maintaining and developing green spaces (SDGs 11 or 15), reducing private transportation in favour of public transport (while at the same time catering for a growing population with the need for affordable housing) or promoting sustainable consumption and production (SDG 12). Discussions across a wide array of departments of Moscow's city administration revealed that SDGs could be used as a systemic framework to strengthen the implementation of a multi-sectoral approach to sustainable development.

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Notes

¹ See <https://data.mos.ru/>.

² The OECD defines large regions (TL2) as the first administrative tier of subnational governments. Large regions (TL2) also include “administrative cities” that belong to the first administrative tier of subnational government, such as Mexico City and the city of Moscow.

³ Transport related mortality rate is defined as the number of deaths attributed to transport accidents (in the groups V01-V99 of the International Classification of Diseases – ICS) per 100 000 inhabitants.

⁴ About 5 000 citizens, from 18 to 65 years of age, were polled. The poll was conducted on city and open public sites: mos.ru, ICT Telegram channel, Yandex, Mail.ru, Odnoklassniki and VKontakte.

3

The SDGs to strengthen multi-level governance for sustainability

In the Russian Federation, the Sustainable Development Goals (SDGs) are mostly indirectly addressed. There is neither a formally responsible authority for the 2030 Agenda nor a co-ordination mechanism for the implementation across levels of government. Different levels of government develop their own strategies in line with the long-term socio-economic development goals of the Russian Federation. At sub-national level, the city of Moscow is co-operating with the surrounding region to integrate SDGs into economic development plans and social policies. Beyond cooperation across levels of government, the engagement of the private sector in the SDGs is also a priority of Moscow to boost the green transition of its industrial sector.

Multi-level governance of the 2030 Agenda in Moscow and the Russian Federation

Vertical co-ordination across levels of governments in the Russian Federation

In the Russian Federation, all levels of government have to pursue the goals set by the national government with regard to sustainable development. The first reference to sustainable development at the national level was established in the 1996 “Concept of the Russian Federation transition to sustainable development”. The concept called for a “balanced solution of socio-economic problems and challenges of maintaining a favourable environment and natural resources in order to meet the needs of present and future generations” (Russian Federation, 2012^[1]). The 1996 national goals were updated in 2008 in the “Concept of long-term socio-economic development of the Russian Federation until 2020” (Russian Federation, 2008^[2]). The concept outlined measures aimed at ensuring, in the long term (2008-20), sustainable improvements to the well-being of Russian citizens, national security, dynamic economic development and strengthening of the country’s position in the world (Russian Federation, 2008^[2]).

In 2020 and 2021, the Russian Federation adopted several decrees on sustainable development. These include the Decree of the President of the Russian Federation No. 474 of 21.07.2020 “On the national development goals of the Russian Federation for the period up to 2030” and the Decree of the Government of the Russian Federation No. 1912-r of 14.07.2021 “Goals and key directions on sustainable (including green) development of the Russian Federation”. The latter is aimed at developing investment activities and attracting additional funds for the implementation of national development goals of the Russian Federation in the field of green finance and sustainable development. It also provides policymaking guidelines for various sectors (waste management, energy, construction, transport, industrial sectors) to be coherent with the SDGs.

To foster the socio-economic development of the country and achieve the national development goals and strategic objectives of the Russian Federation up to 2024, the Russian Federation is currently implementing 12 national projects and a Comprehensive Plan for the Modernisation and Expansion of Main Infrastructure. The goals were endorsed in 2018 per decree of the President of the Russian Federation and contain several objectives such as an increase in life expectancy to 78 years, ensuring sustainable growth of real wages and pensions above inflation level, cutting poverty by 50%, improving housing conditions for at least 5 million households annually, speeding up the introduction of digital technologies and supporting high-productivity export-oriented businesses (Vaganova et al., 2020^[3]). The 12 national projects that should contribute to these objectives cover multiple areas related to the SDGs: i) demography; ii) healthcare; iii) education; iv) housing and the urban environment; v) the environment; vi) safe and quality roads; vii) workforce productivity and employment support; viii) science; ix) the digital economy; x) culture; xi) small- and medium-sized enterprises (SMEs) and support for individual entrepreneurial initiatives; as well as xii) international co-operation and export. The national government has developed roadmaps for all national projects to be implemented at the regional and city levels. These projects and the infrastructure development plan cover either directly or indirectly 107 out of the 169 SDG targets (Analytical Center for the Government of the Russian Federation, 2020^[4]).

The Russian Federation is addressing the SDGs mostly indirectly since there is no formally responsible authority for the 2030 Agenda. In order to evaluate the public administration’s preparedness for the integration of the SDGs, the Accounts Chamber of the Russian Federation conducted an audit in 2020 assessing the extent of the integration of the SDGs into the work of the public administration system. It also analysed the availability of information technology resources required for implementation and assessed the SDG monitoring system in the different executive bodies. The assessment revealed that regulations in the Russian Federation allow for the implementation of policies targeting all 17 SDGs. Although links to the SDGs are not formalised in the strategic planning of the country, the national development goals are largely related to the SDGs and different state programmes contribute in varying

degrees to the SDGs. Interagency engagement in the SDGs is limited despite the fact that almost all of the SDGs fall under the scope and mandate of more than one federal executive authority. Although the Russian Federation has been actively working on the development of a list of SDGs indicators and the preparation of its Voluntary National Review (VNR), there is no analysis or monitoring of the resources for SDG implementation at the national level. The analysis of the Accounts Chamber furthermore emphasised that there is no formal body responsible for a comprehensive implementation of the 2030 Agenda in the Russian Federation (Accounts Chamber of the Russian Federation, 2020^[5]).

The different government authorities of the Russian Federation are responsible for policies aimed at the implementation of SDGs within their own area of competency. Regarding SDG 13 on climate action, however, the Russian Federation is taking a co-ordinated approach through the Inter-Agency Working Group on Climate Change and Sustainable Development established in 2012. Its purpose is to ensure an efficient interaction, information sharing and statistical co-operation between federal executive authorities, other public authorities and associations, research institutes and other organisations that contribute to state policies targeting climate change and sustainable development including the 1996 Concept of the Russian Federation Transition to Sustainable Development (Analytical Center for the Government of the Russian Federation, 2020^[4]).

Within the overall context of sustainable development strategies in the Russian Federation, each level of government develops its own strategy in line with the long-term socio-economic development goals of the country. As pointed out in Chapter 1, the city of Moscow has put in place three key strategies to achieve the national goals set out in the Concept of the Long-Term Socio-Economic Development of the Russian Federation until 2020: the General Plan of the City of Moscow 2035, the Investment Strategy 2025 and the Smart City 2030 strategy. However, despite having several policies in place that contribute to the SDGs, there is as of yet neither a dedicated strategy for achieving the SDGs at the national level, nor a co-ordination mechanism for the implementation across levels of government (see Box 3.1 for more information about the different levels of government and administrative structure of the Russian Federation).

Box 3.1. The administrative structure of the Russian Federation

The Russian Federation has a complex multi-tiered administrative structure, which is asymmetric and consists of republics, provinces, territories, autonomous areas and cities with federal status. The differences in terms of actual power, prerogative or revenue sources between these different regional types are however small. The basic legal principles regarding subnational governance can be found in the 1993 Constitution. It recognises and guarantees the principles of local self-government (Chapter 1, article 12) and delineates the roles and functions of local governments (Chapter 8). According to the constitution, local self-government bodies shall independently manage municipal property; form, adopt and implement the local budgets; introduce local taxes and dues; ensure public order; and also solve other issues of local importance.

Since the early 1990s, significant reforms have been initiated with the aim of developing the local government structure in the Russian Federation. In 1995, a Federal Law underlining the general principles of local self-government in the Russian Federation was adopted. In 1998, the country signed the European Charter of Local Self-Government. In 2003 a new Federal Law “On general principles of local self-government” was adopted to reform the local self-government organisation. In addition, legal provisions regarding lower-tier governments are contained in many other codes and legislative acts, including the civil code, the budget code and the tax code of the Russian Federation. A municipal reform was carried out between 2003 and 2005, resulting in an increase in the number of municipalities from

approximately 12 000 to more than 20 000 today. Direct election of governors was re-established in 2012, after being abolished in 2005.

In addition to the legal provisions, a number of governing structures and institutions have been established over the years, including the Council of Local Self-Government of the Russian Federation, a Board of Local Self-Government Leaders, as well as specialised units within the federal ministries and the presidency in charge of local government issues. Federal constituencies (states or regions) are responsible for the regulation of all aspects of local government within their respective jurisdictions. Their regulation of municipal and local affairs must take into account the local circumstances of specific settlements (urban, rural or intra-city), the population and its traditions, the economic, social and national development of specific territories.

Source: OECD/UCLG (2019^[6]), *2019 Report of the World Observatory on Subnational Government Finance and Investment – Country Profiles*, http://www.sng-wofi.org/publications/SNGWOFI_2019_report_country_profiles.pdf.

The Russian Federation's first Voluntary National Review could have benefitted from a stronger involvement of the local level to improve multi-level governance in the country. In 2020, the Russian Federation published its first VNR, which was prepared by the Analytical Centre for the Government of the Russian Federation in co-operation with the Russian Foreign Ministry, the Russian Federal State Statistics Service (Rosstat) and federal executive authorities and organisations (Box 3.2). While more than 100 different institutions and organisations, including government bodies, development institutions, scientific and research organisations such as universities, the private sector and non-profit organisations (NPOs), non-governmental organisations (NGOs), civil society and international organisations, were involved in the preparation of Russia's first VNR, Russian cities did not directly participate in its elaboration process. However, some city associations such as the Russian National Congress of Municipalities and the Eurasia Regional Section of United Cities and Local Governments (UCLG) were part of the organisations preparing the Russian Federation's VNR. Considering the important role of local and regional governments in the achievement of the SDGs, the integration of and co-ordination with cities in the elaboration process could have had beneficial impacts on the alignment of policies and strategies across different levels of government.

Box 3.2. Voluntary National Review (VNR) 2020 of the Russian Federation

In 2020, the Russian Federation presented its first VNR of the progress made in the implementation of the 2030 Agenda for Sustainable Development at the High-Level Political Forum (HLPF).

The VNR assesses the institutional mechanisms in place for the implementation of the 2030 Agenda in the Russian Federation and analyses the extent of SDG integration into national strategic and policy documents. Beyond that, it measures the current status and progress on the achievement of the 2030 Agenda and identifies key successes and challenges regarding SDG implementation in the country. The Russian Federation considers the VNR as a tool to promote public awareness of the SDG implementation in the country and foster stronger partnerships between the government, private sector, civil society and the academic community for the implementation of the SDGs at the national level. The Russian Federation also considers the SDGs as a communication tool that makes policies and their impact more accessible to the population.



The VNR is divided into 17 sections for the different SDGs describing the Russian Federation's progress on the pathway to achieving the respective SDG and measures in place to achieve the different SDG targets as well as possible synergies with other goals and targets. The VNR also outlines the country's COVID-19 response measures with regards to support for economic activities, health and social protection and their link to the SDGs. The country considers SDG 1 *No poverty*, SDG 4 *Quality education* and SDG 8 *Decent work and economic growth* as those areas where it made the most progress in recent years, while acknowledging that the achievement of some targets will require further joint efforts from the government, private sector, and civil society. Priorities of the Russian Federation pointed out in the VNR include amongst others the achievement of a higher life expectancy (SDG 3), increasing access to preschool education and further education (SDG 4), increasing the share of population supplied with quality drinking water (SDG 6), increasing the share of good-quality urban road network and transport supply (SDG 9), reducing socio-economic disparities (SDG 10), providing additional housing supply (SDG 11), waste management and reduction of air pollution (SDG 12), forest preservation (SDG 15) and improving transparency and accountability of state-decision making (SDG 16).

In order to develop its VNR, the Russian Federation established 17 thematic working groups for the 17 SDGs consisting of representatives from the legislative branch, federal and regional executive bodies, municipal authorities, the Central Bank of Russia, development institutions, civil society, research organisations, as well as the private sector. Overall, more than 200 experts and 100 organisations were involved in the preparation of the Russian Federation VNR.

Source: Analytical Center for the Government of the Russian Federation (2020^[4]), *Voluntary National Review of the Progress Made in the Implementation of 2030 Agenda for Sustainable Development*, https://sustainabledevelopment.un.org/content/documents/26962VNR_2020_Russia_Report_English.pdf.

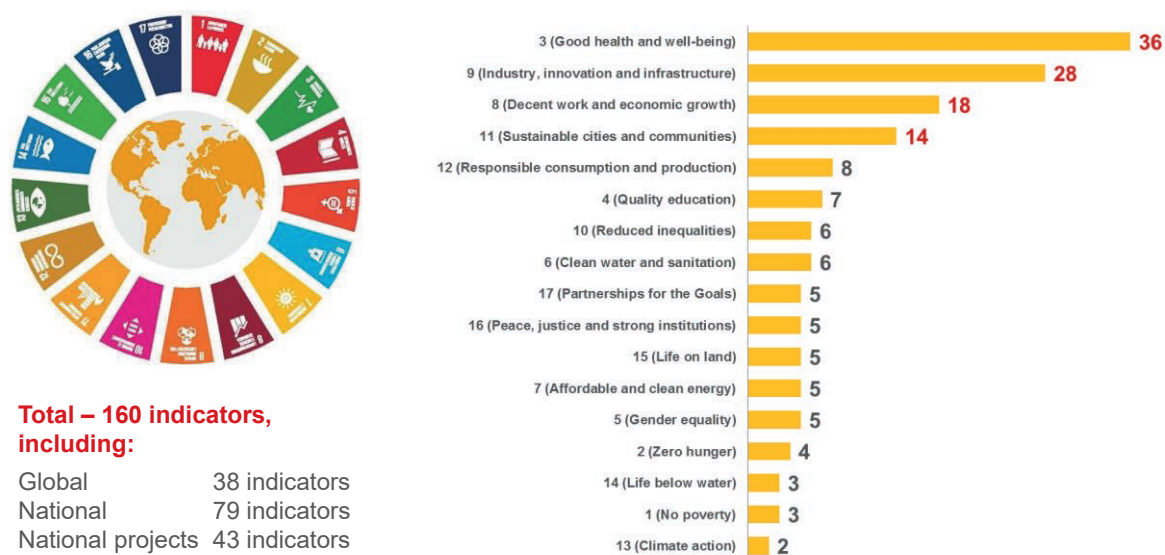
A key element of the 2030 Agenda for the Russian Federation is the involvement of the private sector. The Ministry of Economic Development of the Russian Federation, one of the main authorities implementing the 2030 Agenda in the country, is working to promote responsible business standards, primarily the OECD Guidelines for Multinational Enterprises, and non-financial reporting in the business environment. Currently, the Russian Federation is working on the presentation of best practices of Russian businesses contributing to the SDGs via international platforms as well as the involvement of Russian companies in

international development co-operation projects. In December 2020, the Russian Federation established an Expert Council for Sustainable Development under the Ministry of Economic Development of the Russian Federation (Order of the Ministry of Economic Development of the Russian Federation No. 802 of 3 December 2020), which currently includes about 60 companies and organisations from the metal industry, nuclear energy, chemical industry, telecommunications, banking, retail trade, etc. The council is a platform for regular interaction of the ministry with Russian businesses on sustainability issues. Together with representatives of companies, the ministry is working on the enabling social and environmental framework for doing business, as well as the contribution of the private sector more broadly to achieving the SDGs.

Tracking SDGs progress in the Russian Federation

At the national level, Rosstat, jointly with other federal authorities and the scientific and expert community has developed a national set of SDG indicators to monitor the country's SDG achievements. It reflects national characteristics and strategic documents of the Government of the Russian Federation and shall be used in the preparation of national reports and publications on the achievement of the SDGs in the future. The national indicator set of the Russian Federation consists of 160 indicators, including 38 global indicators, 79 national indicators and 43 indicators reflecting national projects (Figure 3.1). Rosstat currently reports on 99 SDG indicators that are collected by 23 ministries and national agencies. They are expected to be complemented by another ten indicators by the end of 2021. For 81 of the indicators, data are already available; for 16 indicators, there are proxies while for an additional 2, data is expected to be made available by 2023. The data coverage is best for SDG 3 (17 indicators with available data), SDG 8 (11 indicators with available data) and SDG 17 (10 indicators with available data each) (Rosstat, 2021^[7]; 2021^[8]). This information is publicly available through Rosstat's SDG web portal, which contains general information on SDGs, a detailed list of SDG indicators with the current status of their development and metadata on SDG indicators.

Figure 3.1. National set of SDG indicators in the Russian Federation



Source: Rosstat (2021^[7]), "SDG monitoring in the Russian Federation", Presentation given during the 2nd OECD Mission to Moscow - April 2021, Russian Federal State Statistics Service.

Since 2019, Rosstat also releases a yearly statistical handbook with information on indicators regarding the achievement of the SDGs in the Russian Federation. This handbook illustrates the development of various SDG indicators for all 17 SDGs at the national level over the previous decade. The second edition that was released in 2020 includes a comparison of 37 indicators of SDG achievements by the different regions of the Russian Federation in 2015 and 2019, including data for the city of Moscow, as well as several international comparisons across countries. In order to allow comparisons across cities and regions in the Russian Federation, it should be aligned with the national indicator framework and statistical handbook of Rosstat. An index of the quality of life in Russian cities, which aims to compare quality of life, well-being and achievement of the SDGs across Russian cities, is currently under development by VEB.RF, PricewaterhouseCoopers, the Russia-OECD Centre RANEPa and Calvert Research and Management (Box 3.3).

Box 3.3. Index of the quality of life in Russian cities

VEB.RF, a Russian state development corporation, together with PricewaterhouseCoopers, the Russia-OECD Centre RANEPa and Calvert Research and Management are developing an index of the quality of life in Russian cities to allow for an assessment of the strengths and weaknesses of quality of life, well-being and the achievement of the SDGs in the Russian Federation. The rationale for the development of the index was that many international city indices only assess a certain aspect of city development such as safety, ecology or innovation. Overall, the index uses 79 OECD indicators, mostly from the OECD Regional Well-Being framework and the OECD localised indicator framework for measuring distance towards achieving the SDGs in cities and regions. As of 2021, 63 out of the 79 indicators were measured across 115 cities in the Russian Federation. In order to improve data collection, VEB.RF is planning to collaborate with the Ministry of Economic Development and Rosstat to reform the collection data on cities based on the OECD methodology of functional urban areas (FUAs) from 2022 onwards, which would also allow for international comparisons.

Source: VEB.RF (2021^[9]), "Assessment of Russian cities for achieving the SDGs", Presentation given during the 2nd Mission of the OECD to Moscow, April 2021.

Horizontal co-ordination at the city level

In order to demonstrate its commitment to the 2030 Agenda, the city of Moscow is currently elaborating its first voluntary local review (VLR) to document its efforts towards a sustainable and resilient city and what role the co-operation with the national level plays in that process (UCLG/UN-Habitat, 2020^[10]). The VLR, prepared by UN-Habitat with the participation of the Analytical Center of the Moscow Urban Forum and in co-operation with the Departments of Urban Planning Policy of the City of Moscow, Economic Policy and Development of the City of Moscow as well as of Environmental Management and Environmental Protection, is scheduled to be published at the Moscow Urban Forum in July 2022.

Moscow is co-operating with other Russian territories on the incorporation of sustainable development goals into policy plans. The city of Moscow and other regional and city authorities have agreed to collaborate on their work on the SDGs and integrate the sustainable development goals into their respective economic development plans and social policies. Among others, Moscow concluded a wide range of specialised interstate agreements with other territories in Russia, in particular in policy areas that contribute to sustainable development as a whole. In 2018, the city of Moscow and the Moscow region signed a strategic document defining key areas for co-operation: industry, transport and infrastructure development, children's recreation, maintenance of water quality and environmental security (City of Moscow, 2018^[11]). Another example is a city-region agreement to use advanced digital and information

technologies to improve the quality of life of citizens, the efficiency of public administration in the implementation of the functions of state authorities and contribute to achieve the goals of the 12 national projects adopted in 2018. In 2020, the Department of Investment and Industrial Policy of Moscow together with VEB.RF launched a pilot project with Moscow and 11 monotowns (Cherepovets, Kamensk-Uralsky, Magnitogorsk, Naberezhnye Chelny, Nizhnekamsk, Nizhny Tagil, Norilsk, Novokuznetsk, Prokopyevsk, Severodvinsk, Togliatti, Zlatoust), a town whose economy is dominated by a single industry or company. As part of the project, the local administration and the Moscow Government departments analyse the current situation, strengths, weaknesses, challenges and opportunities in the 11 cities using the SDG framework (VEB.RF, 2021^[12]). The expected outcome of the pilot project is a short report containing an assessment about each town with recommendations on how to diversify the local economy, improve the socio-economic situation of citizens in the respective city and contribute to the city's sustainable transformation.

Leveraging the potential of its metropolitan area represents an opportunity for the city of Moscow to promote sustainable urban development beyond its city boundaries. Inspired by the OECD/European Union (EU) FUA methodology, Moscow's government estimated the boundaries of the Functional Urban Area of Moscow (Box 3.4). Following that approach, the Moscow metropolitan area has a population of around 20 million compared to 12.6 million living within the administrative boundaries of the city. Moscow's agglomeration encompasses 18 different municipalities and 9 different federal subjects (Figure 3.2). Administrative fragmentation in the agglomeration makes it crucial to co-ordinate closely with other municipalities on policy issues that go beyond administrative boundaries and can be better managed at the metropolitan scale, for example, transport or housing policies. Large metropolitan regions are better equipped than smaller cities to reap "agglomeration economies", which typically arise when firms and workers in close proximity share knowledge and become more productive together. Too much administrative fragmentation can however hinder the benefits of agglomeration economies. OECD research shows that the more fragmented a metropolitan region, the less productive it is (Box 3.5). The detailed picture of the socio-economic dynamics provided by the FUA approach in Moscow holds the potential to better understand the impact of housing, transport and land-use policies.

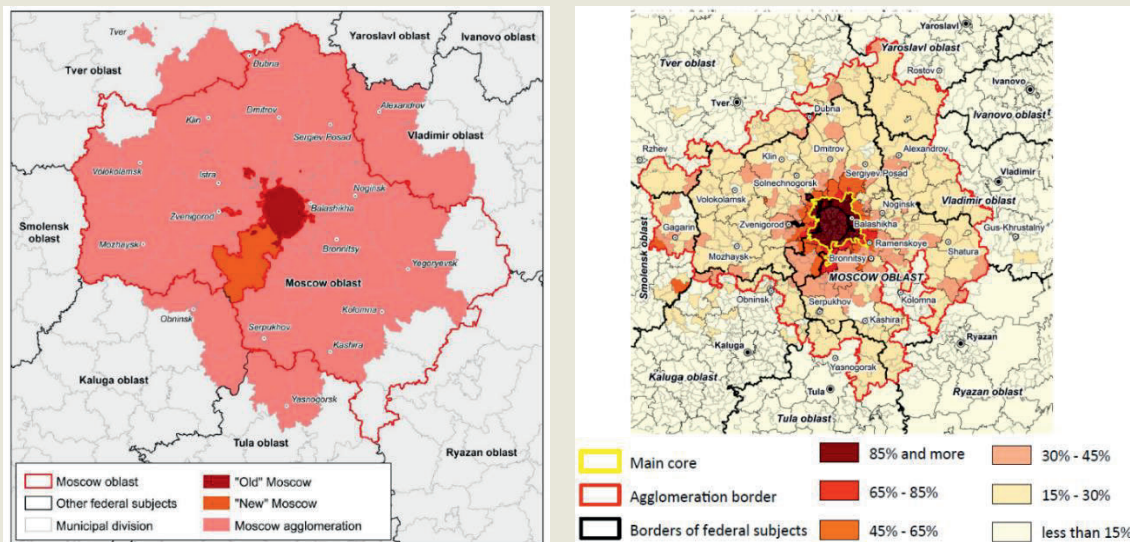
Box 3.4. Definition of functional urban areas (FUAs)

The OECD and the European Commission have jointly developed a methodology to define FUAs in a consistent way across countries. Using population density and travel-to-work flows as key information, an FUA consists of a densely inhabited city and of a surrounding area (commuting zone) whose labour market is highly integrated with the city. The ultimate aim of the OECD-EU approach to FUAs is to create a harmonised definition of cities and their areas of influence for international comparisons as well as for policy analysis on topics related to urban development.

In that context, a city is defined as a local administrative unit (i.e. LAU for European countries such as the municipality, local authorities, etc.) where at least 50% of its population live in an urban centre. An urban centre is defined as a cluster of contiguous grid cells of 1 km² with a density of at least 1 500 inhabitants per km² and a population of at least 50 000 inhabitants overall. Urban centres are defined using the population grid from the Global Human Settlement Layer database, referred to circa 2015. The commuting zone is composed of the LAUs for which at least 15% of their workforce commute to the city. Commuting zones of the functional areas are identified based on commuting data (travel from home-to-work). Commuting data are also used to define whether more than one city share the same commuting zone in a single polycentric FUA. To define commuting flows in Moscow, the government has used mobile phone data under the following assumptions: i) permanent residence: place where a mobile phone user resides from 23h to 6h and more than 20 hours a week; ii) workplace: place where a mobile phone user resides from 10h to 17h and more than 20 hours a week. Applying

the OECD-EC methodology, the OECD is currently working on defining the FUAs for 38 Russian cities, under the OECD National Urban Policy Review of the Russian Federation.

Figure 3.2. Moscow's functional urban area and transport time



Source: OECD (2013^[13]), *Definition of Functional Urban Areas (FUA) for the OECD Metropolitan Database*, <https://www.oecd.org/cfe/regional-policy/Definition-of-Functional-Urban-Areas-for-the-OECD-metropolitan-database.pdf>; City of Moscow (2019^[14]), "Socio-economic development of Moscow", Presentation by Polina Kriuchkova, Deputy Chief, Department of Economic Policy and Development, City of Moscow, Russian Federation, during the 1st mission of the OECD to Moscow.

Box 3.5. Implications of administrative fragmentation: an OECD perspective

Administrative fragmentation can be measured by the number of local governments within a specific geographical area (including across different regions/states or countries). Administrative fragmentation can have two potentially opposing effects on economic performance. On the one hand, more fragmentation may enhance economic performance as it may give greater choice over public service provision and put competitive pressure on local governments. On the other, however, it may lead to the duplication of efforts and reduced economies of scale. In a context of tight public finances, administrative fragmentation further complicates the efficient delivery of transport, housing, schools, hospitals and other services.

Evidence suggests that administrative fragmentation has, indeed, adverse effects on economic performance (see Martinez-Vazquez, Lago-Peñas and Sacchi (2017^[15]) for example). Ahrend et al. (2014^[16]) studied the impact of administrative fragmentation on labour productivity in 5 OECD countries (Germany, Mexico, Spain, the United Kingdom and the United States), exploiting observations on wages of more than 2 million residents across 430 OECD FUAs. The authors show that doubling the number of local governments within a metropolitan area reduces labour productivity by about 6%.

The OECD (2015^[17]) finds that, during the period 2000 to 2010, metropolitan areas with low administrative fragmentation experienced growth in gross domestic product (GDP) per capita that was more than twice as strong as those with high fragmentation. Bartolini (2017^[18]) shows that fragmentation harms growth in GDP per capita most in and around urban areas (where people are more likely to commute across administrative boundaries). Suboptimal provision of public transport

infrastructure (for example, subways end at administrative borders for no apparent economic reason) is an often-cited symptom of fragmentation.

Besides the amalgamation of municipalities, one way to overcome the adverse effects of administrative fragmentation is to create an overarching entity dedicated to policy co-ordination between local governments (often referred to as a metropolitan governance body). About two-thirds of 275 OECD metropolitan areas studied in the OECD Metropolitan Governance Survey have such entities in place, although with varying competencies (most co-operate in regional development, transportation and spatial planning) (Ahrend, Gamper and Schumann, 2014^[19]; OECD, 2015^[17]). Ahrend et al. (2014^[16]) show that the presence of metropolitan bodies can reduce the penalty associated with administrative fragmentation, on average, by half. Several transmission channels explain this positive relationship. Metropolitan co-ordination can help exploit synergies across different policy sectors (transport, spatial planning and housing, for example). It can also help reduce costs, reap economies of scale and improve the quality of public service delivery, thereby contributing to higher productivity.

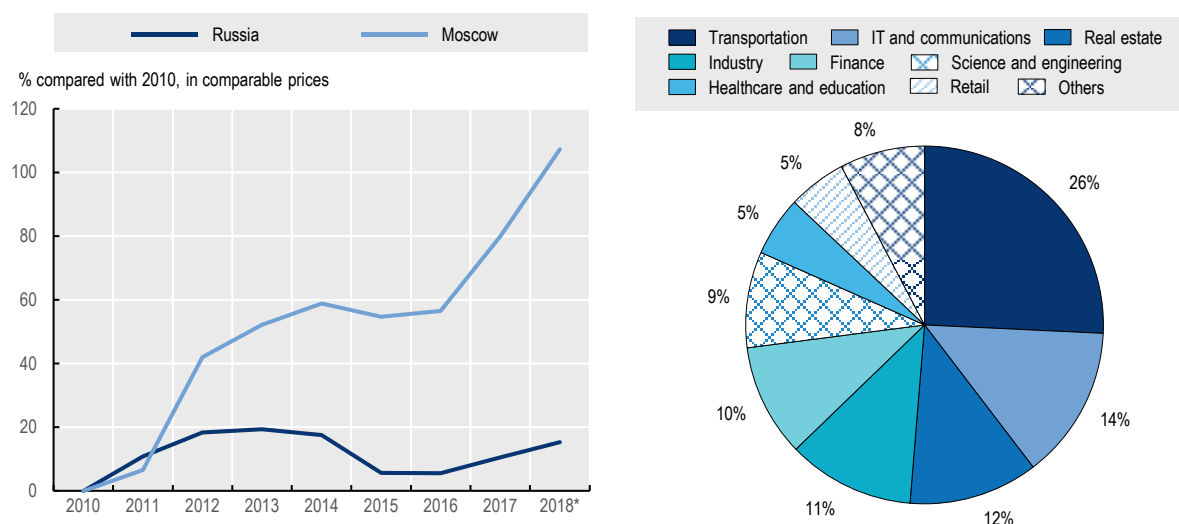
Source: Based on OECD (2019^[20]), *OECD Territorial Reviews: Hamburg Metropolitan Region, Germany*, <https://doi.org/10.1787/29afa27f-en>.

The roles of the private sector and civil society in the 2030 Agenda

Using the SDGs as a driver to engage the private sector in sustainable development

The private sector (businesses of all sizes) accounts for more than two-thirds of capital investments in the city of Moscow. Over the past years, Moscow was able to attract an increasing amount of capital investments. Between 2010 and 2018, capital investments have gone up by 107%, in particular to support the development of the high-tech industry and the transportation system (together, these two sectors represented 30% of total capital investments in 2018) (Figure 3.3). In total, private sector investments represent around 70% of capital investments in the city of Moscow (City of Moscow, 2019^[14]).

Figure 3.3. Private investment activity in Moscow, 2010-18



Note: Operational data

Source: City of Moscow (2019^[14]), "Socio-economic development of Moscow", Presentation by Polina Kriuchkova, Deputy Chief, Department of Economic Policy and Development, City of Moscow, Russian Federation, during the 1st mission of the OECD to Moscow.

In order to attract investments in the city, Moscow uses long-term contracts and its online investment portal. Moscow is making use of long-term contracts with suppliers to ensure the quality and cost-efficiency of

goods and services purchased. In particular, life-cycle contracts are being used extensively to purchase rolling stock (metro carriages, trams, etc.) and the city is expanding the use of these contracts to other sectors. The city's online investment portal, investmoscow.ru, provides up-to-date information on doing business in the Moscow region. It grants for instance access to an interactive investment map and provides information on city services for business (investment projects, auctions, support measures, tax services, etc.). The portal is frequented by more than 8 500 daily users and over 53 000 user accounts are registered overall.

The green transformation of Moscow's industrial sector is one of the key priorities of Moscow. The city is therefore co-operating with the national government, the private sector and research institutes to support sustainability projects. The national government, Moscow City Government, energy companies, vehicle manufacturers and leading research institutes have, for instance, signed a memorandum of intent to create a national consortium to foster the development of electric transport in the city of Moscow. An example in the field of electric transport, where the city of Moscow is already collaborating with the private sector, is the Going Electric programme, which aims at developing cutting-edge technology in the field of electric transportation and providing the necessary urban infrastructure to achieve a shift from fuel-based transportation towards electric vehicles (Box 3.6). Several companies located in Moscow are members of the Expert Council for Sustainable Development established by the Ministry of Economic Development of the Russian Federation.

There are also concrete initiatives and agreements in place, through which the public and private sectors collaborate on sustainability projects. Moscow Government has for instance signed a memorandum of co-operation and partnership with PepsiCo Russia and McDonald's in June 2021 to contribute to the achievement of SDGs in the city. Through this memorandum, the companies and the city government form a new platform for exchange between interested companies with the objective to exchange experiences, develop joint strategies and areas of work to contribute to the SDGs, including awareness-raising activities (Expert, 2021^[21]). Another project in Moscow is the Zero Waste League, an association of companies including Bonduelle, Danone and the Ecoline group. Representatives of those companies have founded the association with the objective to conduct educational activities regarding the responsible consumption of food and the disposal of industrial waste in Russia and become the initiator of new joint projects on sustainable and responsible development (Zero Waste League, 2021^[22]).

Box 3.6. Going electric in Moscow: A multi-stakeholder partnership

The city of Moscow has the objective to turn its urban bus transportation system 100% electric. To achieve this, the city government and KAMAZ, a Russian manufacturing company, signed an agreement to construct a modern engineering centre for the production of electric buses and its components. The centre also aims to produce cutting-edge technology in the development of other electronic components to improve the quality and speed of electric buses and reduce emissions. As of July 2021, more than 730 electric buses served 47 routes of ground urban passenger transport in the city of Moscow, transporting a total of more than 6.4 million passengers that month.

In addition, Moscow is building the infrastructure to promote electric transport. The city currently counts 80 charging stations for electric vehicles. By 2023, it is expected that around 600 charging stations will be made available. The development of the electric charging infrastructure is a step towards the development of more environmentally friendly transportation in Moscow. Yet, considering the population of the city of Moscow, the current number of electric charging stations can only be seen as a starting point on that pathway.

Source: City of Moscow (2019^[23]), "Response of the city of Moscow to the OECD pilot project survey"; City of Moscow (2021^[24]), "Документ (ответ на обращение) № 17-35-10675/21 от 25.08.2021 (Document (response to the appeal) № 17-35-10675/21 of 25.08.2021)", Internal document by the City of Moscow in response to an OECD request.

Several companies based in Moscow or subsidiaries located in the city have committed to the 2030 Agenda. The private sector plays an important role in the implementation of the SDGs in Moscow. There are several private sector actors, notably large and internationally active companies that are reporting on the SDGs as well as the link and contributions of their activities to the 2030 Agenda. Examples of private sector companies involved in the SDGs include MTS, a leading telecommunications group that has mapped its projects and their contributions to the SDGs (MTS, 2020^[25]), and Metalloinvest, a mining and metallurgy company that has conducted a survey among its stakeholders to determine the most important sustainability topics and 5 key SDGs for the company, and which discloses information about the company's contributions to 13 out of the 17 SDGs (Metalloinvest, 2020^[26]). Similar to Metalloinvest, PJSC Gazprom, the world's largest publicly-listed natural gas company, conducted an online survey among stakeholders to determine their assessment of the company's contribution to the achievement of the SDGs, which revealed that 59% of its activities are seen as significant contributions to the SDGs according to its stakeholders (PJSC Gazprom, 2020^[27]). The company reports on all 17 SDGs and various targets outlining the group's activities and contributions to the 2030 Agenda, but does not however provide any indicators or progress measurements that are comparable over time.

The companies that are active on the SDGs tend to focus their reporting and strategies on selected SDGs, where they consider having the most impact. For instance, Phosagro, a chemical holding company producing fertiliser, phosphates and feed phosphates, has defined the list of its 11 priority SDGs and 16 targets as well as measures undertaken by the company, its management approach to reach those targets and associated quantitative targets. This assessment builds on a matrix developed by the company consisting of four different elements: i) the identification of the impact of the company's business on the society across different SDGs; ii) the preparation of a list of goals and indicators used to measure the impact of mining and processing companies, including SDG indicators; iii) the correlation of the list of goals and indicators with categories and principles of responsible investing; and iv) connecting the list of goals and indicators with topics of significance for the company's key stakeholders. In particular, the company distinguishes between those priority targets where it can have a positive impact and those where it can minimise its adverse impact (Phosagro, 2020^[28]). RUSAL, an Aluminium producer, has analysed its role in the achievement of the SDGs resulting in a selection of 6 SDGs, where it can generate the most impact. These are notably linked to health, education, economic growth, responsible production and climate. Activities through which RUSAL is contributing to those SDGs include educational training, reductions in its greenhouse gas emissions and research and development (R&D) investments in more sustainable technologies (RUSAL, 2020^[29]). Severstal, a steel and mining company, with a location in Moscow, identified six priority SDGs and aligned current and future operations with specific targets of each of these goals, and defined indicators to measure progress towards each target (Severstal, 2020^[30]). The company also analysed its impact on the 17 SDGs classified from significantly negative (SDG 13) to significantly positive (SDGs 4 and 8 amongst others) (Severstal, 2021^[31]). Other companies such as Coca-Cola Russia are engaging citizens in awareness-raising activities related to environmental protection (Box 3.7). Yet, many large companies reporting on the SDGs in Moscow are active in extractive industries, which are by their nature prone to contribute to environmental degradation. It is thus of crucial importance that such companies do not misuse the SDGs for greenwashing but actually integrate them into their core business.

Box 3.7. Coca-Cola Russia's "Separate with us" waste collection and recycling project

In 2016, the beverage producer Coca-Cola Russia HBC has launched the flagship project "Separate with us", an initiative that aims to encourage local communities and citizens across the Russian Federation to promote the daily practice of separate waste collection and recycling. In the framework of the project, Coca-Cola works together with pupils, students and other residents of Moscow on strategies to reduce waste, in particular through awareness-raising events at universities in the city: 600 000 people have participated in such awareness raising events in 2019 in Moscow and other Russian cities and 1.9 million overall since 2016. Furthermore, the company is offering free environmental tours of production plants for high school students, educating them about separate waste collection through practical exercises.

More than 50 Russian cities have supported the initiative and permitted the company to set up more than 5 000 containers for separate waste collection and recycling in their municipalities. Since 2016, more than 87 000 tonnes of packing waste have been collected in these containers and recycled afterwards. Coca-Cola is also co-operating with several supermarkets in Moscow, in which the company has set up reverse vending machines for polyethylene terephthalate (PET) bottles that reward customers with discount coupons on returning used bottles for the purpose of recycling.

Source: Pecherina, I. (2021^[32]), "Sustainability strategy of Coca-Cola in Russia", Presentation given at the 2nd OECD mission to Moscow - April 2021.

One challenge that exists with regard to the implementation of the SDGs in the private sector is the gap between large companies and SMEs. Large companies with an international value-added supply chain and financial resources in Moscow tend to be more actively involved in the 2030 Agenda and integrate the SDGs in their strategies and projects, while this is less so the case for SMEs. These tend to lack sufficient financial and human resources to set up sustainability departments and dedicate much attention to the 2030 Agenda, which reflects a broader trend across OECD countries where micro firms, young, innovative and high-growth SMEs often face persistent challenges in accessing relevant finance in the appropriate forms and volumes (OECD, 2018^[33]). Moreover, since the public attention paid to SMEs is lower than for multinationals, there is also less public pressure for them to integrate the SDGs into their core business. In that context, the SDGs could be used by umbrella organisations, such as chambers for industry and commerce, to actively support local small and medium-sized businesses in mainstreaming sustainability as a standard for their core business and investments (e.g. sustainable supply chains, renewable energy).

Green investment is gaining momentum in Moscow. In April 2019, the Moscow Stock Exchange (MOEX), with the support of the Ministry of Economic Development, became a part of the international Sustainable Stock Exchanges (SSE) initiative joining other securities exchanges in a commitment to elevating sustainability practices. The SSE supports stock exchanges through technical assistance, consensus building and research to contribute to the SDGs and facilitate investment for a sustainable future. Through its commitment, the Moscow Stock Exchange aims at promoting environmental, social and governance (ESG) practices and investments both for MOEX and for the Russian market (Sustainable Stock Exchange Initiative, 2019^[34]). The increased interest in sustainable investment is also reflected by the city government. Forced to return to the debt market after an 8-year absence due to the COVID-19 pandemic, the city of Moscow placed its first tranche of green bonds (RUB 70 billion with a 7-year maturity) at the MOEX on 27 May 2021 to finance green projects such as the construction of an additional metro line and the purchase of electric buses (City of Moscow, 2021^[35]).

Responsible finance has also gained traction at the national level and provides opportunities for the financial sector in Moscow. In 2020, the development finance institutions (DFIs) of the BRICS states (Brazil, Russian Federation, India, China, and South Africa), including VEB.RF, signed the Memorandum of BRICS DFI Principles for Responsible Financing. Through the memorandum, the DFIs commit to integrate environmental and social due diligence in their lending processes, develop new financial services that will target sustainable development and provide transparent and accountable information on financial activities. The main idea behind the principles is to push the national financial markets towards a responsible approach to financing to achieve the SDGs. In line with these principles, several banks headquartered in Moscow have started to integrate ESG assessment into their core business. For instance, SberBank, for instance, has started to include ESG risk evaluations in their lending processes, while the Credit Bank of Moscow received a sustainable loan from the German LBBW – the first of its kind granted to a Russian bank – whose conditions are linked to the development of the Credit Bank of Moscow’s ESG performance. Adopting responsible financing principles and providing loans linked to ESG criteria or contributions to the SDGs could be a tool for other banks and financial institutions in Moscow to support the achievement of the 2030 Agenda.

Responsible business conduct and sustainable procurement could be a means to promote the SDGs through private sector companies. Pursuing responsible business practices to contribute to economic, environmental and social progress should be a key objective for the private sector in Moscow. To raise awareness of the SDGs and responsible business conduct contributing to them, the government of the city of Moscow could help SMEs through workshops and training on the introduction of SDG-related due diligence measures into their business activities. Responsible business conduct practices should also be implemented by city-owned enterprises to lead by example. The Russian Union of Industrialists and Entrepreneurs has released a report on decent work and sustainable businesses (2020^[36]) that contains case studies of 32 companies. The report has the objective to increase public awareness of responsible business practices and could provide valuable guidelines and best practices for companies in Moscow that have so far not paid much attention to the issue. Another opportunity that the city of Moscow could exploit in order to engage more companies in sustainable development is sustainable public procurement. Sustainable public procurement implies that, in addition to the value-for-money criteria, social and environmental considerations are integrated into a multi-criteria approach to procurement specifications. Moscow Government could consider establishing sustainable public procurement practices to support the deployment of innovative solutions to public projects. By doing so, the government could strategically achieve social and environmental outcomes, while at the same time supporting and rewarding private sector companies that comply with sustainability requirements. Linking public procurement to sustainability criteria and the SDGs could be a tool to support and incentivise SMEs to integrate the SDGs into their core business.

The integration of the SDGs into the city’s investment strategy could strengthen the engagement of the private sector in the 2030 Agenda. As has been described, the city of Moscow has placed efforts in closing large investments gaps, in particular in the transport sector. The challenge moving forward will be to identify less evident investment needs (e.g. improving access to public transportation for the population with disabilities) and mobilising the needed resources, either public or private. Moscow’s investment strategy could be a key tool to enhance private sector collaboration in achieving the SDGs and for the public sector to encourage innovative “SDG solutions” by de-risking private investments, for example through special economic zones and technoparks, or introducing awards for sustainability solutions. Yet, there is no direct link between the investment strategy, its objectives and the SDGs that encourages the private sector to contribute to the 2030 Agenda.

Civil society engagement for the 2030 Agenda in Moscow

The local government in Moscow interacts with civil society organisations with regard to environmental protection awareness-raising activities. The city of Moscow has established a Public Environmental

Council as the main institutional body through which the local government consults stakeholders on environmental policies. The council gathers representatives of environmental associations, scientific and educational institutions. Its mandate is to issue recommendations that help improve local decisions in the field of environmental safety, environmental protection and nature management. Beyond that, in 2018 the city created an International Expert Council on Environmental issues to analyse the existing environmental situation in the city of Moscow, assess ongoing and planned measures aimed at improving the quality of the environment based on international best-practices (City of Moscow, 2021^[37]). In the same year, the city government's department of nature management and environmental protection established a Youth Council to encourage young people to develop environmental initiatives in the city of Moscow and create opportunities for the implementation of the youth's innovative ideas in the field of environmental protection (City of Moscow, 2018^[38]).

In addition, the city is participating in yearly events and campaigns to inform the general public about the local activities and increase environmental protection in the city. For example, Moscow is taking part in Earth Hour, a worldwide movement organised by the World Wide Fund for Nature, encouraging individuals, communities and businesses to turn off non-essential electric lights, for one hour on a specific day in March each year. The city also promotes the World Car Free Day, encouraging people to give up their cars for a day. Another example of projects related to environmental protection in Moscow is the awareness-raising initiative Eco-Manifesto or 10 Ways to Love Moscow, organised by the Department for Environmental Management and Protection, in which popular Muscovites shared videos of how citizens can contribute to the preservation of the environment. There are moreover about 5 000 environmental volunteers in the city that are actively involved in projects such as trainings and lectures on environmental-friendly lifestyles, collection of waste and recyclable materials as well as food for animals living in protected areas (City of Moscow, 2021^[39]). However, Moscow's projects mostly focus on the environmental sphere and climate protection and do not make reference to the 2030 Agenda at large.

Civil society could become an important stakeholder for the implementation of the 2030 Agenda in the city of Moscow. In order to improve transparency and increase accountability in local decision-making, the city of Moscow encourages its citizens to contribute to and vote on local development projects. The Active Citizen platform, a blockchain-enabled voting platform run by Moscow Government created in 2014, allows citizens to provide inputs for development projects in areas related to urban and social development, including urban innovation, healthcare or the environment. To ensure wide usage, the city rewards its population for participation. Each time they cast a vote, citizens receive points that can be used to pay for parking tickets and metro fares or to enter contests to win opera tickets (Holder, 2017^[40]). More than 4.8 million people have signed up for the Active Citizen platform in electronic form. More than 4 800 votes about topical issues connected to the city management have been held and overall, more than 3 500 solutions, such as constructions of bike lanes and the expansion of pedestrian zones have been implemented based on the input of more than 150 million opinions of Moscow's citizens (ICT Moscow, 2021^[41]). Some data protection concerns remain as the surveys are not conducted anonymously and allow the collection of personal data. The crowdsourcing idea is also used in Moscow's crowd.mos.ru platform, launched in 2014. It is a similar project through which Muscovites can digitally suggest ideas on how to improve the city's urban infrastructure across several areas: i) the social sphere; ii) traffic organisation; iii) park improvements; iv) courtyards and pedestrian areas; and v) common urban spaces (City of Moscow, 2020^[42]). Going further, the city of Moscow could consider illustrating the contributions of different proposed projects to the SDGs and thus use the two platforms as an awareness-raising mechanism to increase knowledge about sustainable development and the 2030 Agenda among the local population and civil society.

Several universities and NGOs based in Moscow are members of the Sustainable Development Solutions Network (SDSN), which is an active contributor to the promotion of sustainability. Through its local office SDSN Russia adapts the SDGs to the Russian context by providing research, boosting youth leadership and engaging in a wide array of projects and partnerships to prepare the country for the achievement of

the 2030 Agenda counting several universities and NGOs based in Moscow among its members. As part of its activities, SDSN Russia has supported the development of regional and municipal strategies to localise the SDGs in Bryansk, Kursk and Togliatti. In addition, SDSN Russia experts have raised awareness on the need to foster a sustainable urban transition in different regional and local development fora, such as the XVII Strategic Forum Stakeholders of the Future held in Saint Petersburg in 2018.

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4

Policy recommendations and action plan

This chapter suggests concrete policy recommendations and an action plan to enhance the territorial approach to the Sustainable Development Goals (SDGs) in Moscow, Russian Federation, based on the OECD Checklist for Public Action to Localise the SDGs. The recommendations span from using the SDGs as a framework to guide local policies by promoting synergies across sectors and programmes, to enhancing the strategic alignment between federal, regional and local priorities and rethinking investment priorities to expand private sector collaboration on the 2030 Agenda.

Policy recommendations

Box 4.1. OECD Checklist for Public Action

The OECD has developed a Checklist for Public Action directed at governments at all levels to facilitate the implementation of a territorial approach to the SDGs. The checklist provides action-oriented recommendations around five main categories that emerged as key pillars for a territorial approach to the SDGs, namely:

- **Planning, policies and strategies:** Use the SDGs to define and shape local and regional development visions, strategies, plans, and re-orient existing ones. Cities and regions should use the SDGs to address concrete local challenges that require a holistic approach, such as clean forms of urban mobility, affordable housing, gender equality, access to green spaces, balanced urban development, clean water and sanitation, air quality, solid waste management, territorial inequalities or service delivery.
- **Multi-level governance:** Use the SDGs as a framework to align policy priorities, incentives, objectives across national, regional and local governments as well as to manage trade-offs and promote synergies across policy areas. In particular, regions and cities should be engaged in the process of Voluntary National Reviews (VNRs) to reflect progress at the subnational level and address regional disparities. Voluntary Local Reviews (VLRs) can also drive better multi-level governance of the SDGs and shed light on local initiatives.
- **Financing and budgeting:** Mainstream the SDGs in budgeting processes to ensure adequate resources are allocated for the implementation of the 2030 Agenda and to foster policy continuity across political cycles. Governments should allocate financial resources based on the identified place-based policy priorities and key local challenges, and use the SDGs framework as a means to foster integrated multi-sectoral programmes and priorities.
- **Data and information:** Leverage SDG data and localised indicator systems to guide policies and actions to better people's lives and to showcase the performance and positive stories of cities and regions. In particular, for more comprehensive assessment and policy responses, cities and regions should combine data and indicators at different scales, from those related to administrative boundaries (the unit for political and administrative action) to those related to functional approaches (the economic geography of where people live and work).
- **Engagement:** Use the SDGs as a vehicle to enhance accountability and transparency through engaging all territorial stakeholders, including civil society, citizens, youth, academia and private companies, in the policymaking process. Cities and regions should use a combination of various tools to engage local stakeholders, such as awareness-raising campaigns, networking opportunities but also de-risking investments in SDG solutions through grants or loans, as well as a fiscal incentive for innovative solutions towards sustainability.

Source: OECD (2020^[1]), *A Territorial Approach to the Sustainable Development Goals: Synthesis report*, <https://doi.org/10.1787/e86fa715-en>.

Box 4.2. OECD Action plan for a territorial approach to the SDGs in Moscow

The main objective of the action plan is to provide Moscow with a menu of options for the implementation of the OECD recommendations contained in the SDG draft pilot case. The action plan sets out a series of specific actions aiming at supporting Moscow's implementation of the SDGs. In particular, it identifies:

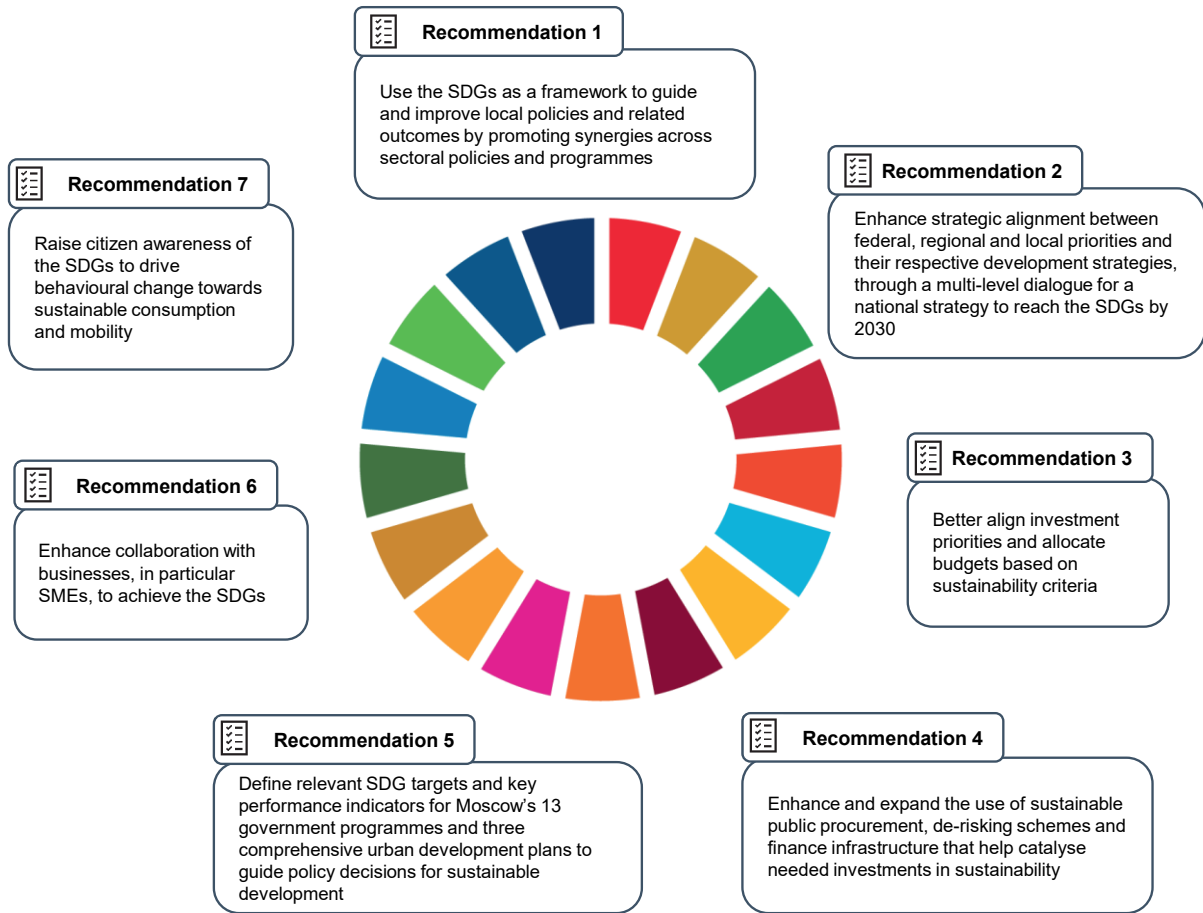
- **Objectives:** The action plan presents a number of objectives for each of the recommendations, in terms of expected outcomes.
- **Practical steps:** The action plan includes a set of actions that can be useful in advancing towards the achievement of the objectives.
- **Possible champions and partners:** This section refers to the stakeholders, institutions or organisations that can play a (leading) role in the execution of the actions.
- **International experiences:** These experiences include relevant practices carried out in the field of localising the SDGs by cities, regions and national governments as well as international organisations that can serve as inspiration. These experiences are not expected to be implemented as such but to provide the region/ municipality with a set of examples for the design and development of the suggested actions.
- **Timeline:** In order to implement the recommendations efficiently, it is necessary to prioritise the recommendations within the short, medium and long terms. These time scales are indicative and should be updated as actions are being implemented.

It is important to note that:

- *Actions are neither compulsory nor binding:* Identified actions address a variety of ways in which recommendations can be implemented and objectives achieved. They represent suggestions, whose adequacy and feasibility should be carefully evaluated by Moscow in an inclusive manner, involving stakeholders as appropriate. In turn, the combination of more than one action can be explored, if necessary.
- *Resources for implementation should be assessed:* The implementation of the actions will require human, technical and financial resources. When prioritising and assessing the adequacy and feasibility of the suggested actions, the resources needed to put them in practice should be carefully evaluated, as well as the role of stakeholders that can contribute to the implementation phase.
- *The action plan is a dynamic tool:* It requires to be updated as new potential steps and objectives may emerge as actions start to be implemented.

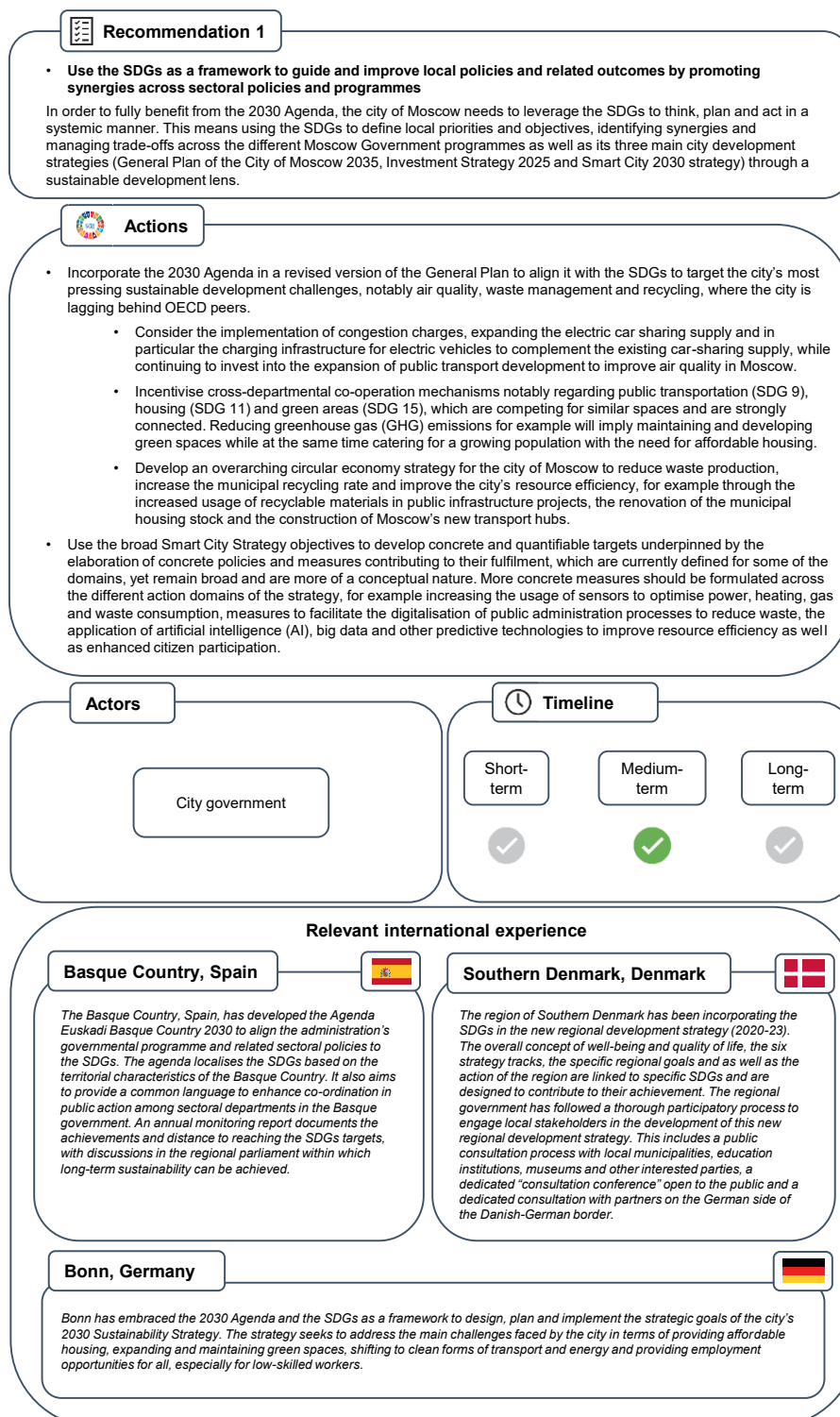
The SDGs represent an opportunity to strengthen the current actions of the city of Moscow and address pressing and emerging sustainable development challenges at the local level. Key recommendations are hereinafter proposed to that effect.

Figure 4.1. Seven key recommendations for a territorial approach to the SDGs in Moscow, Russian Federation



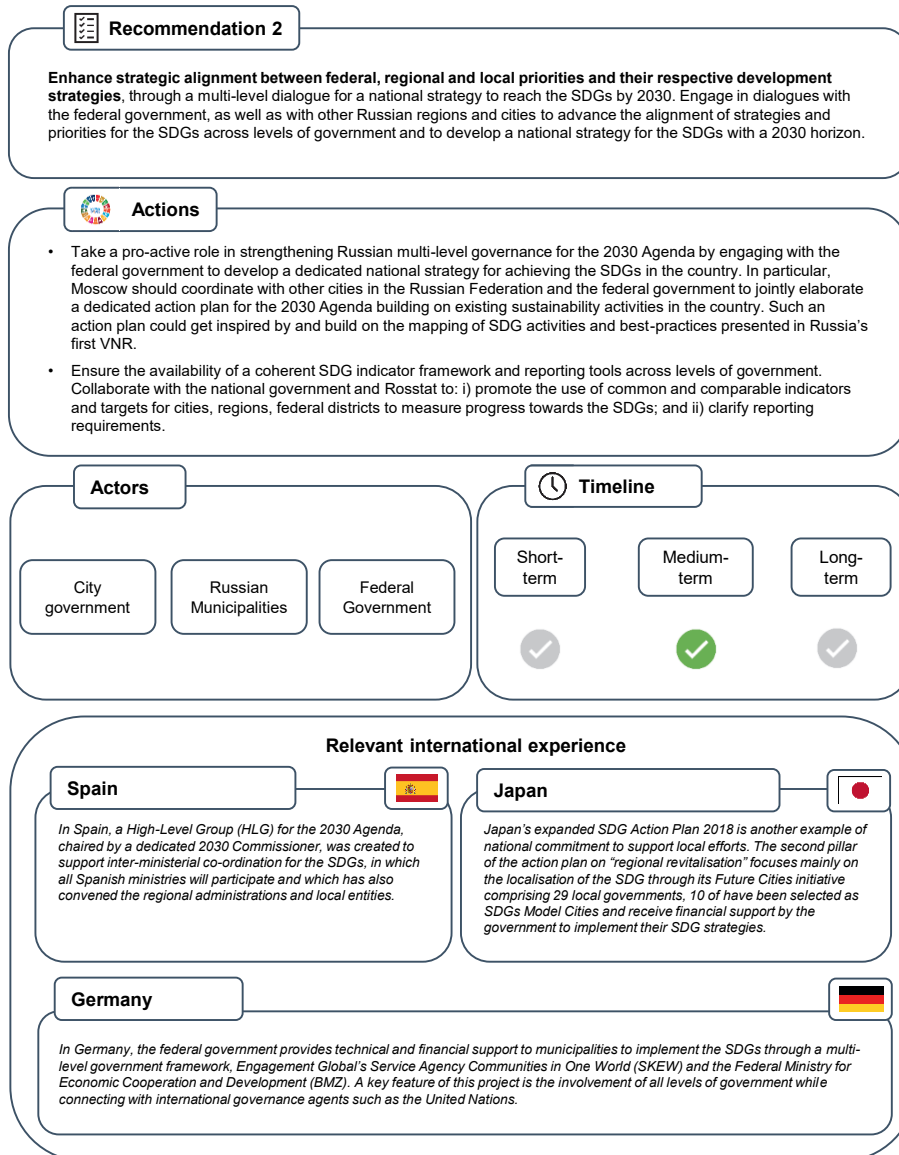
Policies and strategies

Figure 4.2. Action Plan to implement OECD recommendation 1 to use the SDGs as a framework to guide and improve local policies and related outcomes by promoting synergies across policies



Multi-level governance

Figure 4.3. Action Plan to implement OECD recommendation 2 to enhance strategic alignment between federal, regional and local development strategies



Financing and budgeting

Figure 4.4. Action Plan to implement OECD recommendation 3 to better align investment priorities and allocate budgets based on sustainability criteria

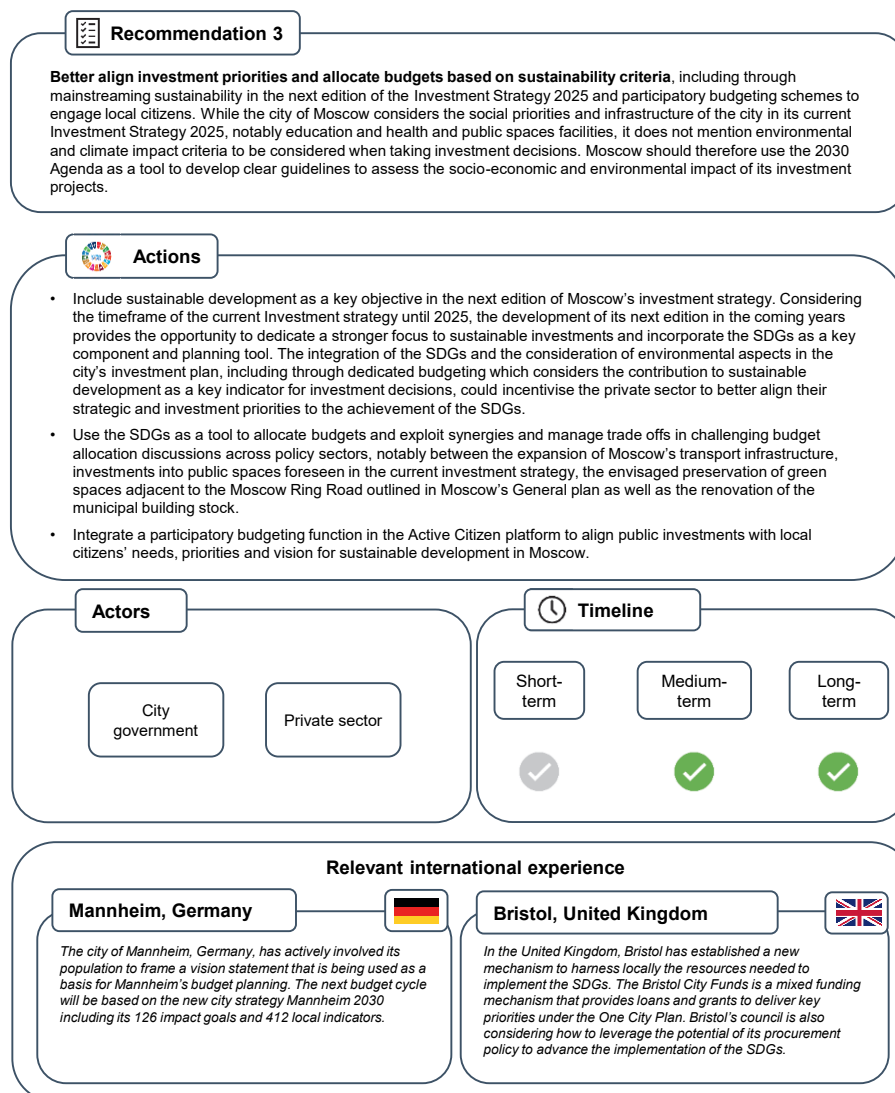
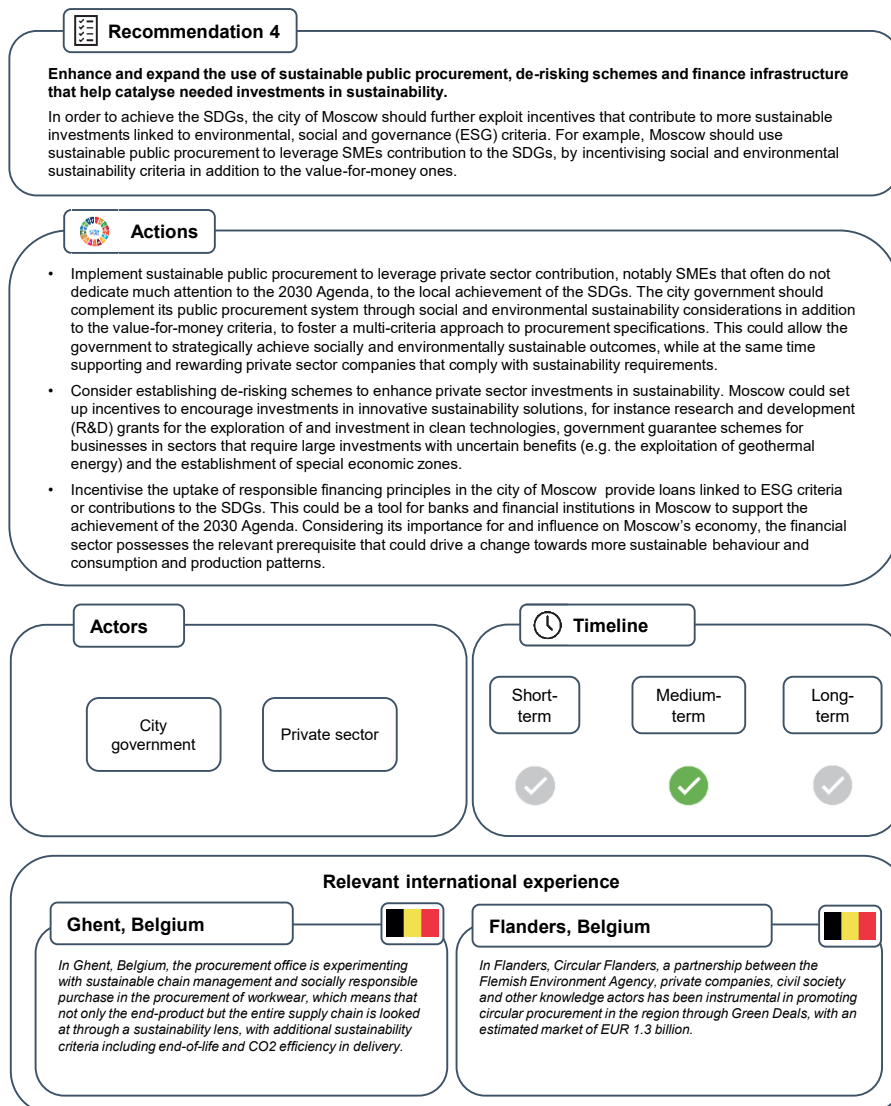
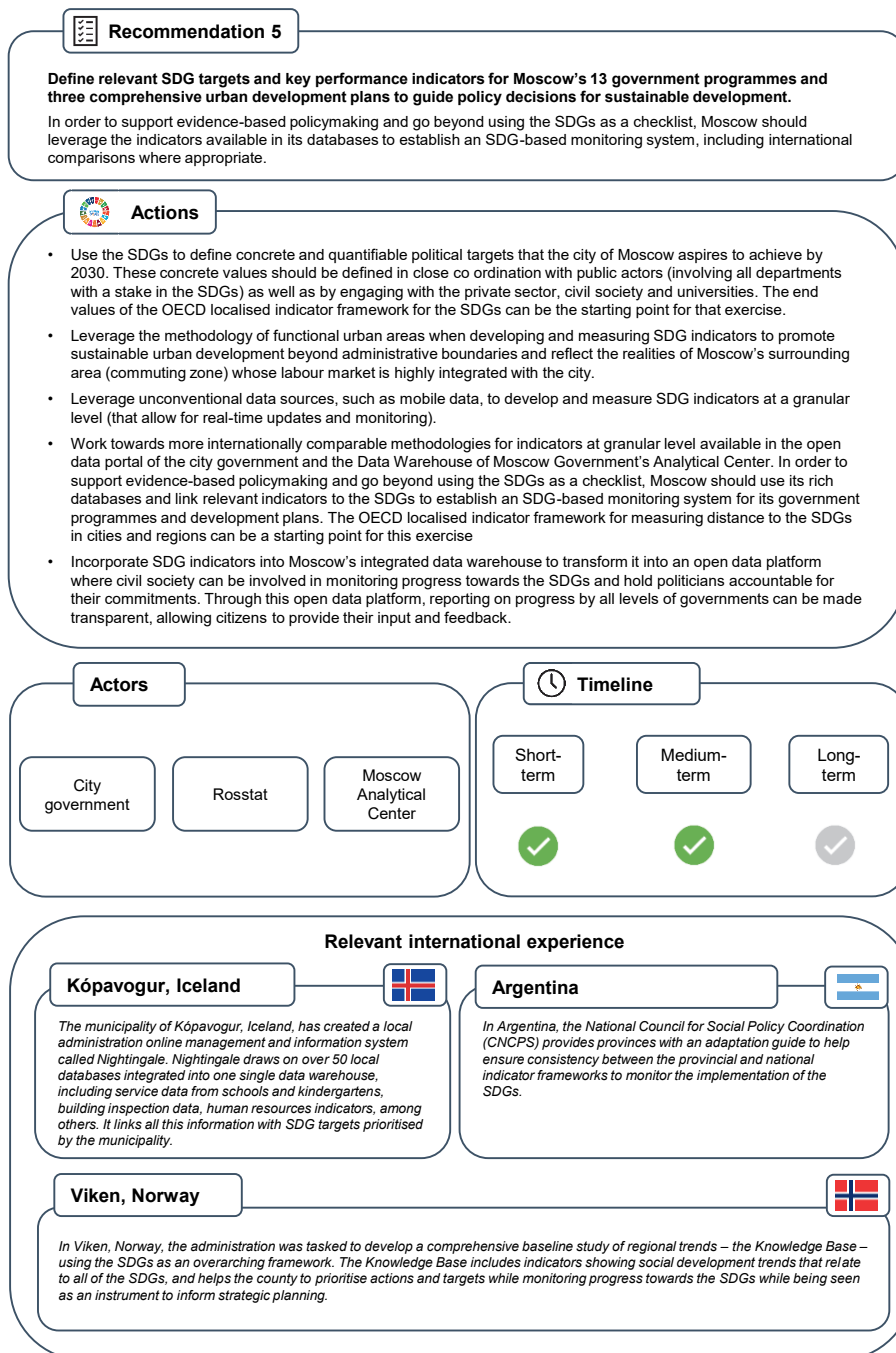


Figure 4.5. Action Plan to implement OECD recommendation 4 to enhance the use of sustainable public procurement, de-risking schemes and finance infrastructure to catalyse investments in sustainability



Data and information

Figure 4.6. Action Plan to implement OECD recommendation 5 to define relevant SDG targets and key performance indicators for Moscow’s government programmes and urban development plans



Engagement

Figure 4.7. Action Plan to implement OECD recommendation 6 to enhance collaboration with businesses, in particular SMEs, to achieve the SDGs

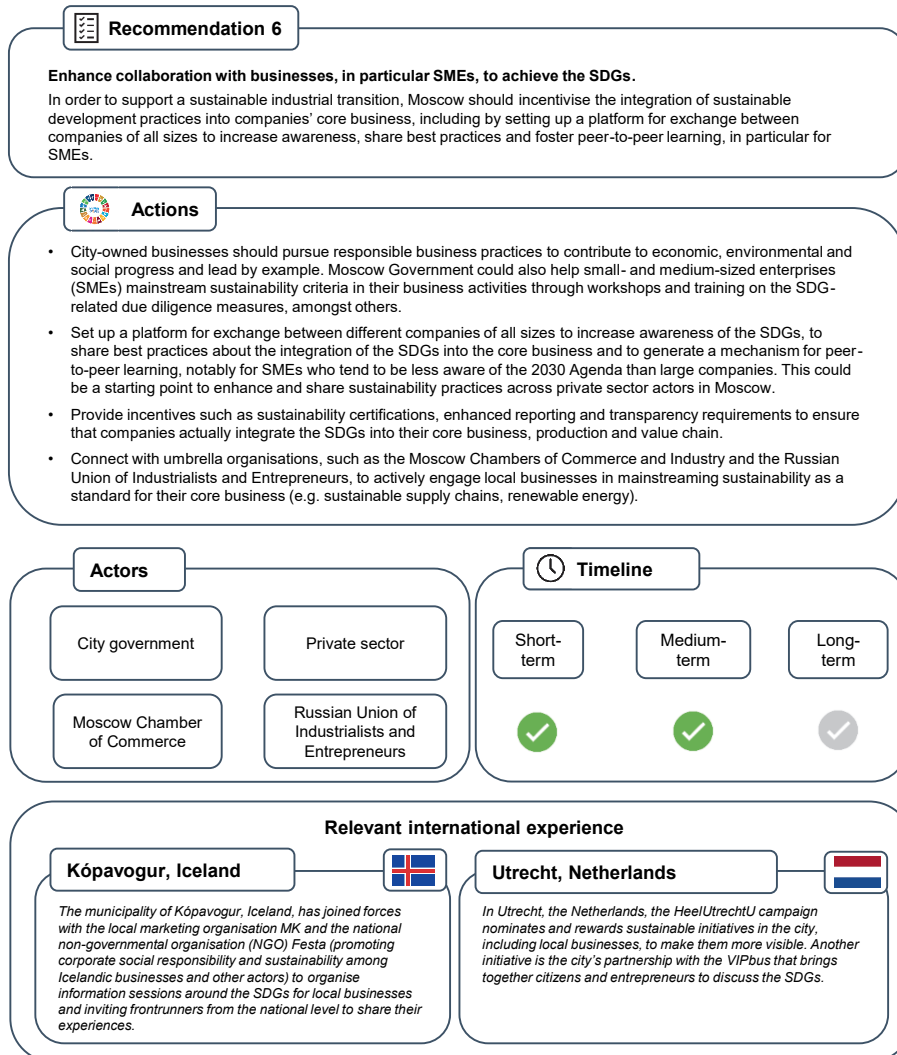
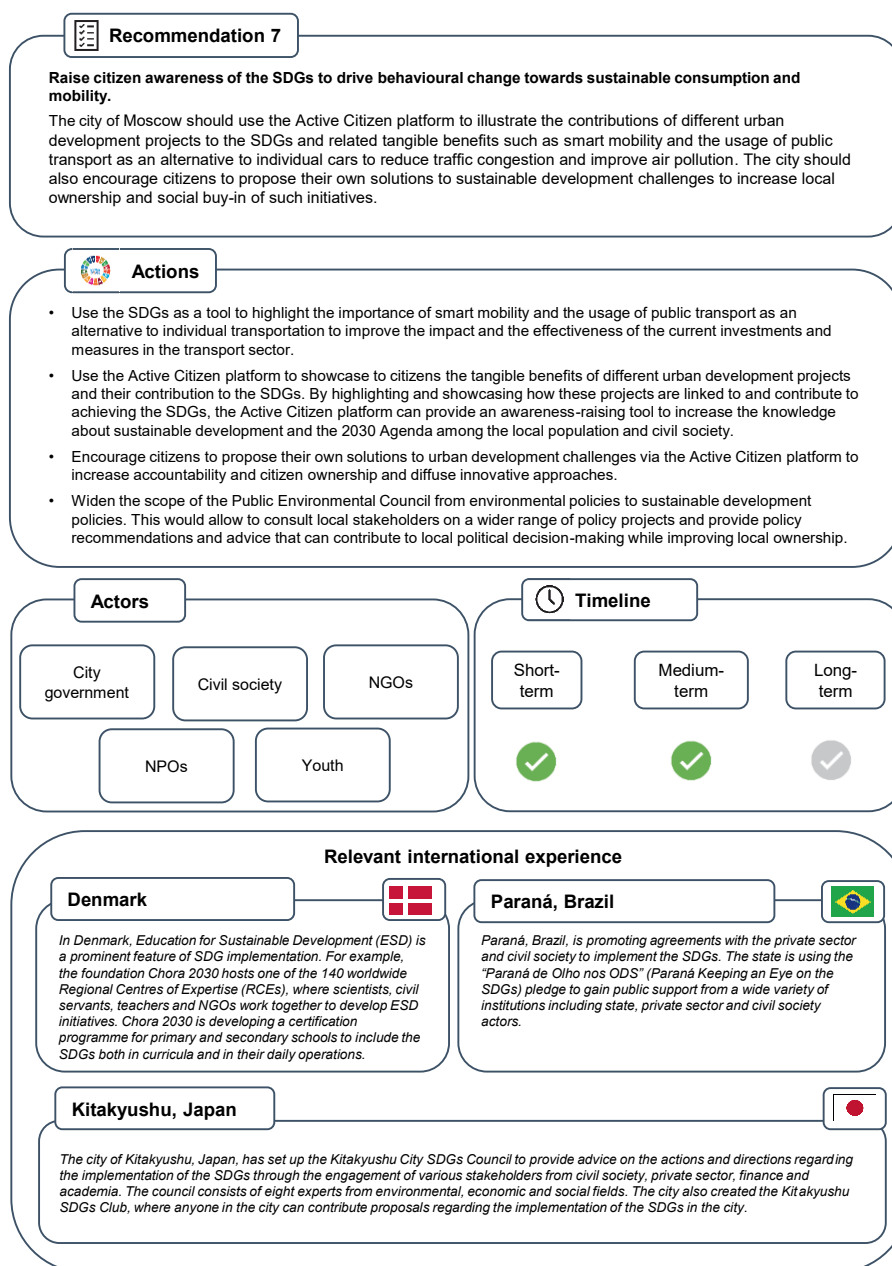


Figure 4.8. Action Plan to implement OECD recommendation 7 to raise citizen awareness of the SDGs to drive behavioural change towards sustainable consumption and mobility



References

OECD (2020), *A Territorial Approach to the Sustainable Development Goals: Synthesis report*, OECD Urban Policy Reviews, OECD Publishing, Paris, <https://doi.org/10.1787/e86fa715-en>.

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