Unlocking Public and Private Finance for the Poor

Building Urban Economic Resilience during and after COVID-19

URBAN ECONOMIC RECOVERY AND RESILIENCE

Diagnostic and Planning Tool

February 2021

UN-HABITAT FOR A BETTER URBAN FUTURE · UNCDF · UNECE · ECA · ESCWA · ECLAC · ESCAP

Table of Contents

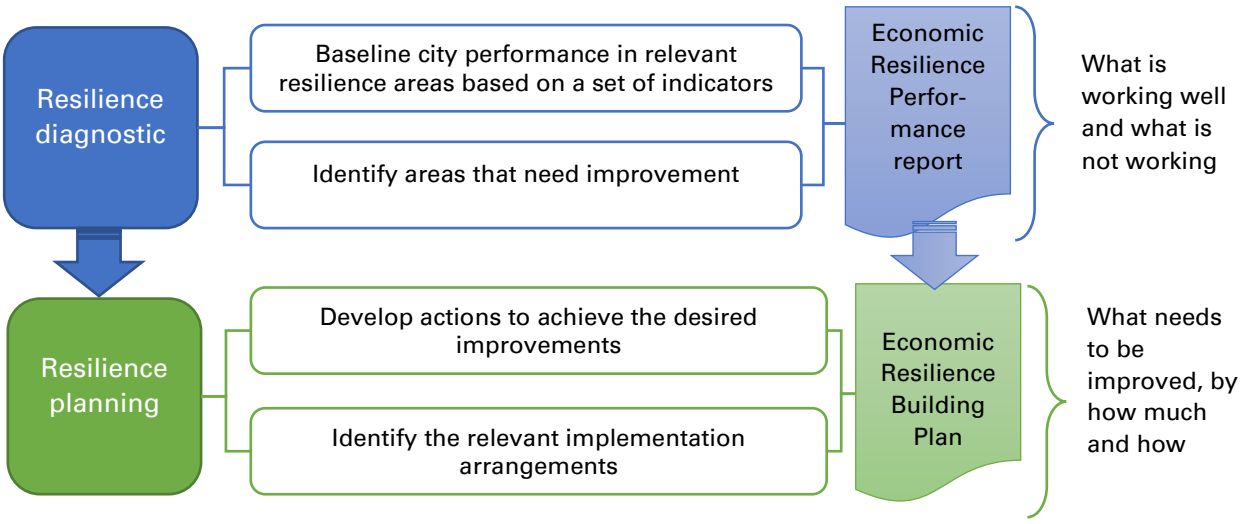
INTRODUCTION

OBJECTIVES AND STRUCTURE OF THE TOOL

The Diagnostic and Planning Tool (DPT) has a two-fold objective: (1) to help cities understand the strengths and weaknesses of their institutional and operating arrangements from the perspective of economic recovery and resilience building as well as to assess the structure and functioning of city economies to get a clear understanding of the economic performance/standing of each city and how this defines vulnerability and resilience; and (2) to define a process for the design and implementation of recovery plans/strategies to address the identified gaps, accelerate better recovery and improve longer-term resilience. The planning tool/component addresses "What"- key components of recovery planning and "How"- process for designing and implementing a recovery plan. Consequently, the DPT consists of two parts. The first part describes the diagnostic whereas the second part focuses on the planning aspect.

The structure and key products of the DTP are explained in Figure 1. The first part of the DPT (diagnostic), considered in Part I of this manual, will result in a City Economic Resilience Performance Report providing an overview of the city's performance in different resilience areas. This document is the key input two the second part of the DPT (planning) described in Part II. The man product of the DPT second part is an Economic Resilience Building Plan. At the same time, the Economic Resilience Performance Report is also a valuable product in its own right as it forms a baseline against which future improvements will be implemented and monitored.

Figure 1. Structure and products of the Diagnostic and Planning Tool



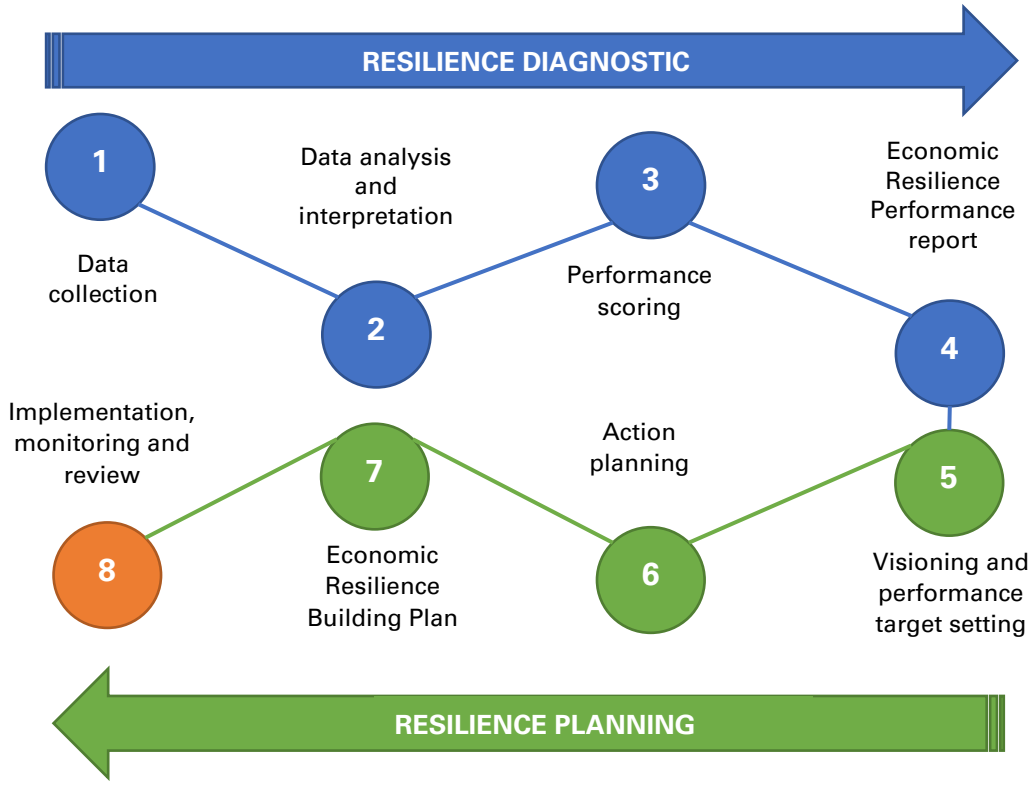
The tool is based on, and aligned with, the guiding principles for urban economic recovery and resilience building as well as the Compendium of global practices and should take into account the UN-Habitat urban resilience framework (www.urbanresiliencehub.org).

The DPT is developed in the context of the UN project on Building Urban Economic Resilience during and after COVID-19 and therefore looks at the challenge of resilience building from the perspective of economic shocks triggered by global developments beyond the control of not only city governments but also national governments and characterized, as indeed is the case in the current situation, by a combined effect of falling business activities and investment as well as rising unemployment, diminished household incomes, and shrinking consumer demand against the backdrop of disrupted global and regional supply chains.

The DPT consists of 5 resilience areas and 16 resilience performance indicators designed to measure the city performance and suggest areas for improvement. The DPT is envisaged as a developing and living instrument that may be adapted and adjusted to the local conditions. It may be used by city governments for their self-assessment to inform and facilitate their planning for recovery and longer-term resilience building.

The DPT includes the following 8 major steps presented in Figure 2.

Figure 2. DPT implementation steps



CONCEPTUALIZATION OF URBAN RESILIENCE

For the purposes of the DPT, resilience is defined as the capacity and related capabilities of cities or urban areas to plan for, anticipate negative shocks, including long-term stresses, to their economies, allocate, reallocate and mobilize resources to withstand those shocks, recover from the shocks, and

rebuild better, while placing their economies on the path to sustainable economic growth and simultaneously strengthening their capacity to deal with any future shocks.

The specific approach to resilience that guides the design of the DPT is based on the concept of balanced growth. On the balanced growth path, while output per capita increases, the capital-output ratio, the interest rate, and the distribution of income between capital and labour remain roughly constant (or declining for the capital-output ratio in the context of developing economies indicating higher marginal productivity of capital). These are macroeconomic concepts, usually based on national data, and often estimated through economic models, and hence conceptual and not directly measurable in this framework.

Rather, the following indicators are used as proxy measures for sustainable and inclusive economic development underpinned by balanced growth in the context of an urban economy[1]. It is posited that a resilient urban economy should be able to ensure a balanced growth in the longer term by minimizing the fluctuations in the following economic indicators caused by economic shocks and shortening the time required for the return to the pre-shock levels and restoring the balanced growth trend.

- ***Gross city product growth.*** Long-term growth in the gross city product (GCP) is determined by many factors, such as business investment and infrastructure provision by both local and national governments; growth and the quality of the labour force, as well as productivity improvements over time.

- ***Per capita gross city product and per capita revenue.*** This gives a broad view, in the case of GCP, of the local government's *potential* to be financially viable on the basis of economic growth. Per capita revenue (local or total revenue divided by the population), on the other hand, gives an indication of a local government's *ability* through actual revenue from economic activity to finance its operations. A rise in both indicators expands local fiscal space and thus contributes to the building of economic resilience.

- ***Labour force participation rate***. This represents the proportion of the working age population (15-64) who are either working or in search of work (with those working or looking for work together constituting the "labour force"). Because this indicator accounts for people who have given up looking for work, this makes the labour force participation rate a more reliable figure than the unemployment rate, which is often criticized for under-counting true joblessness. Indirectly, the labour force participation rate also indicates the quality of the available jobs as well as possible mismatches of skills, identity and place that drive workers out of the labour market.

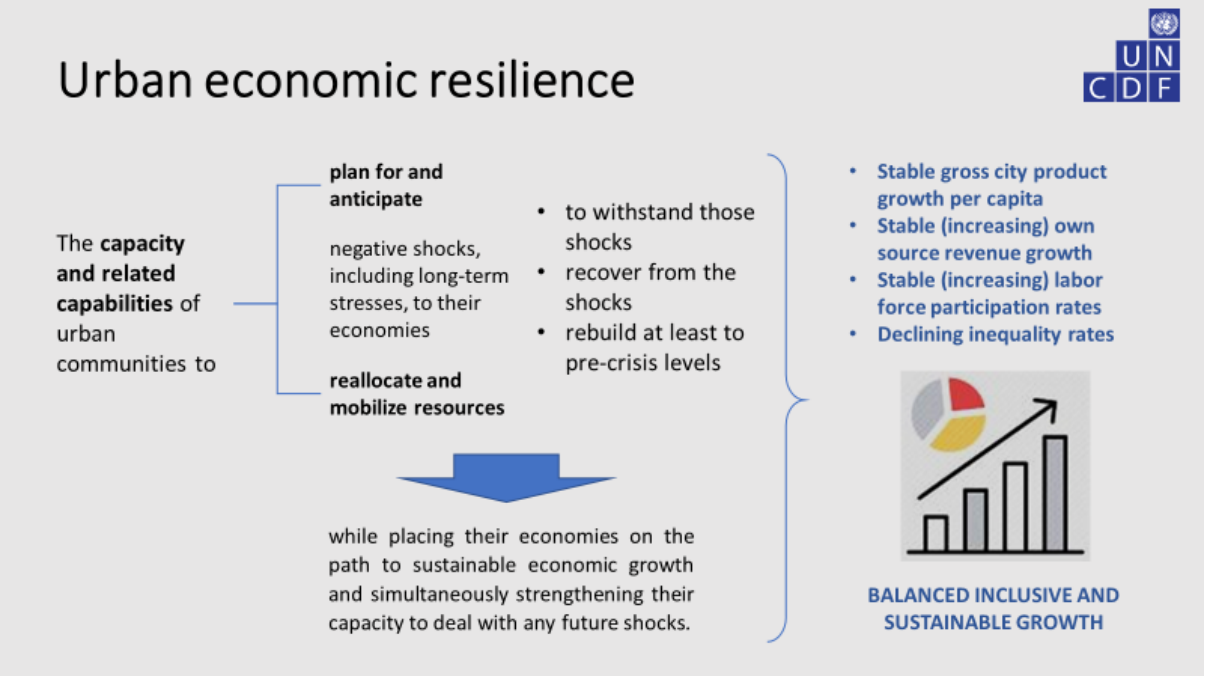
- ***Inequality***. In all its dimensions – such as income (across various socioeconomic groups), productive assets (such as land or skills), and geographical (with uneven distribution of economic opportunities and spatial distributions of services across administrative regions of a country) – inequality has been shown to pose a threat to economic development in particular, development in general, and by implication economic resilience. Addressing income and non-income inequalities should constitute a major

[1] The indicators are neither perfect nor exhaustive as the imperfection of any economic output measures (including GDP or its city equivalent) has been strongly argued by the "beyond the GDP movement" (Stiglitz et al. 2019). However, given the lack of consensus about the alternative measures and generally accepted methodologies for them as well as the current availability of statistical data, our concept uses the five indicators explained above.

part of any strategy to build urban economic resilience both in developing and developed countries.[2]

This approach is summarized in Figure 3. As defined, these indicators should be measured over a relatively long run (10 years or more) to establish the trends and understand whether a city is on the balanced growth path or not.

Figure 3. Conceptualization of urban economic resilience



[2] Economic theory suggests that the COVID-19 pandemic will generate rising inequality. The crisis has intensified the already existing trend of automation and transition to more capital-intensive businesses as machines appear more attractive to employers, particularly in the contracting sectors that use relatively more unskilled labor. The return to capital will thus increase. And, because low-income people must spend a larger share of their income on basic goods than those at the top, any automation-driven increase in inequality will be contractionary (Stiglitz 2020).

PART I. RESILIENCE DIAGNOSTIC

1. APPROACH AND DESIGN OF THE DIAGNOSTIC TOOL

1.1 General approach and sources

The first part of the tool is designed to measure economic resilience of a city (including its financial aspects) to inform actions for economic recovery and resilience building. It identifies the "What" of urban economic resilience and recovery and consists of a matrix including indicators in five areas of urban economy (Figure 4).[3] This part seeks to analyse the strengths and weaknesses of urban economy and identify the gaps that have a negative impact on economic resilience and therefore need to be addressed.

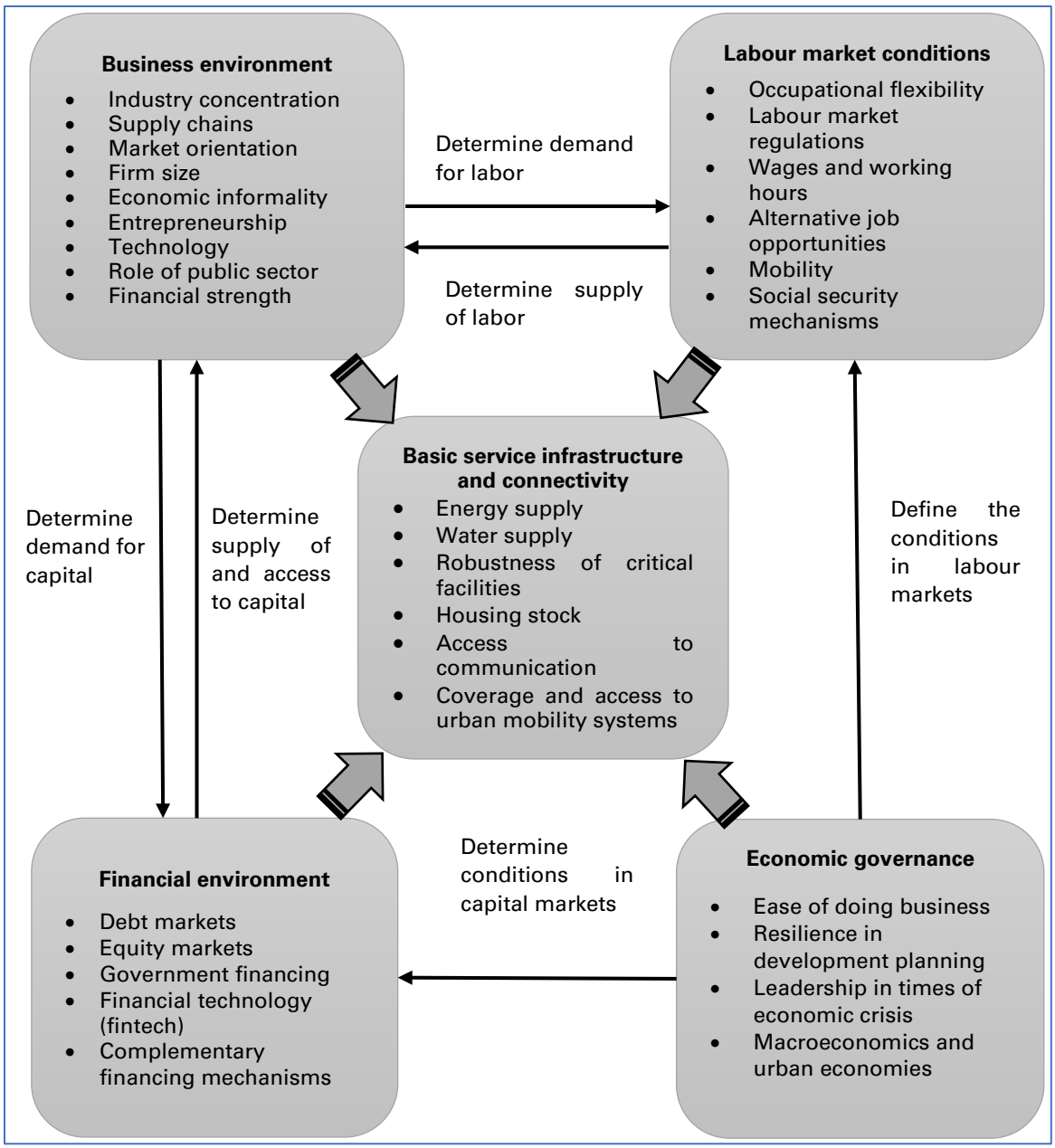
The sources used to design the diagnostic tool fall into two categories:

1. **Project products**. As explained above, the overall approach was informed by three products developed in the context of the project itself. These include (i) Conceptual Framework for Building Urban Economic Resilience during and after the COVID-19 Crisis; (ii) Guiding principles and practices for urban economic recovery and resilience; and (iii) Global Compendium of Practices for City Resilience. The former two documents reflect the consensus between the project partners about the definition and key dimensions of urban resilience whereas the latter offers an empirical validation by demonstrating how partner cities' experiences fit into the theoretical model.

2. **Existing diagnostic tools and frameworks**. A number of existing tools and frameworks designed to diagnose various dimensions of city resilience (as identified in the framework of the project itself) have been consulted. The major ones include:
    (i) General resilience diagnostics: City Resilience Profiling Tool (UN-Habitat), City Resilience Framework (Rockefeller Foundation and ARUP), Index of Resilience (Experian).
    (ii) City economic diagnostics: Toolkit to Assess and Promote Equitable Economic Growth in Cities (Cities Alliance), City Prosperity Index (UN-Habitat), City Strength Diagnostic Tool (World Bank).

[3] The original concept presented in the **Guiding principles and practices for urban economic recovery and resilience** included four components (business environment, labour market conditions, financial environment, and economic governance). Following consultations with the partner cities and internal consultations between the UN agencies participating in the project, the fifth component, basic infrastructure and connectivity, has been added. This component reflects the reality on the ground that the four components of the city economy (representing the factors of production operating within specific governance arrangements) cannot function without some basic infrastructure in place (e.g., energy, water, etc.) and require adequate connectivity for their efficient operation.

Figure 4. Components of city economy and resilience



(iii) Financial diagnostics: Local Authorities Financial and Institutional Management Tool (UNCDF); Infrastructure Financing Market Assessment Framework (UNCDF); the subnational guides for the Public Expenditure and Financial Accountability (PEFA) Assessment and Tax Administration Diagnostic Assessment Tool (TADAT), both by IMF; City Creditworthiness Tool (World Bank).

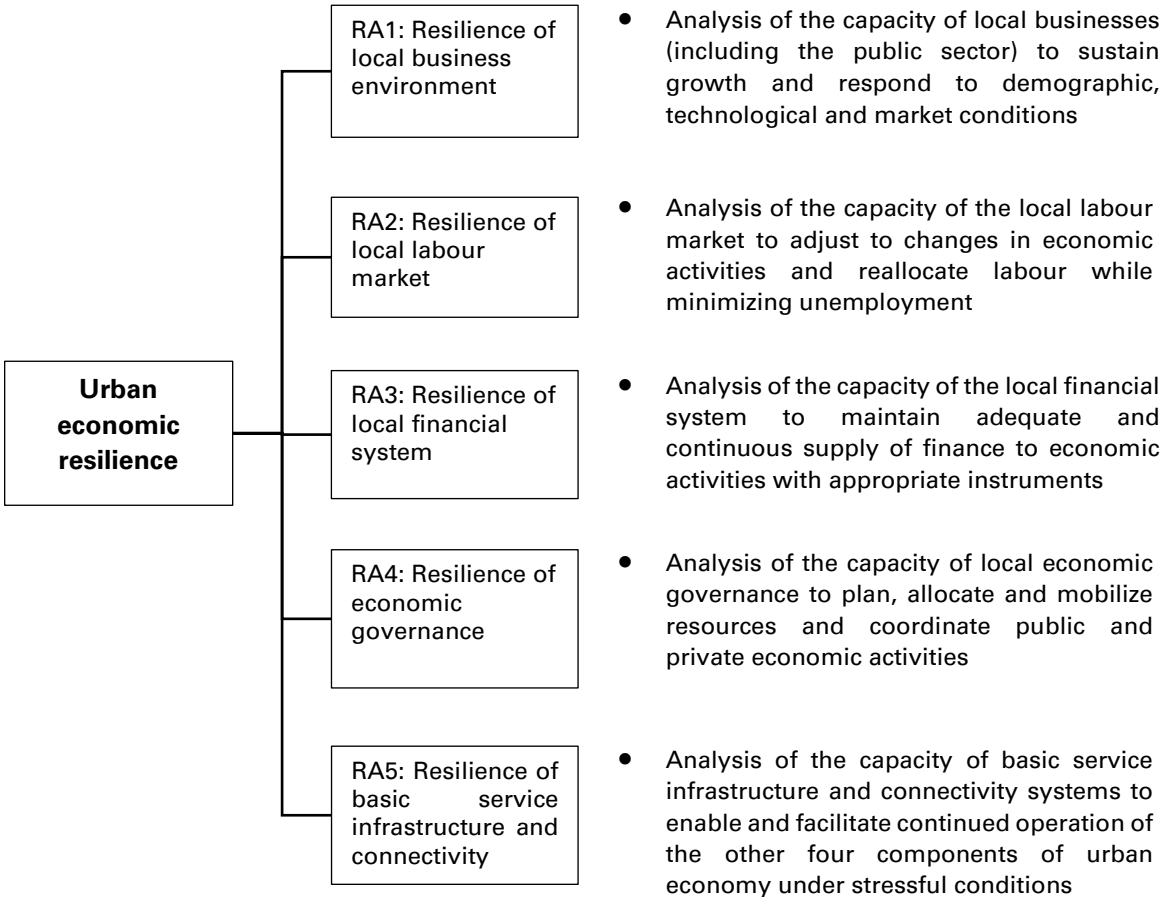
(iv) Cross-cutting diagnostics: Sustainable Development Goals Index (UN), Inclusive Digital Economy Scorecard (UNCDF), Women's Economic Empowerment Index (UNDP, UN Women and UNCDF), Ease of Doing Business Index (World Bank), Local Governance assessment Framework

(World Bank), Diagnostic Tool to Assess Asset Management Needs of Local Governments (UN-DESA and UNCDF).

1.2 Design and key components

The first part of the diagnostic tool has the following structure presented in Figure 6.

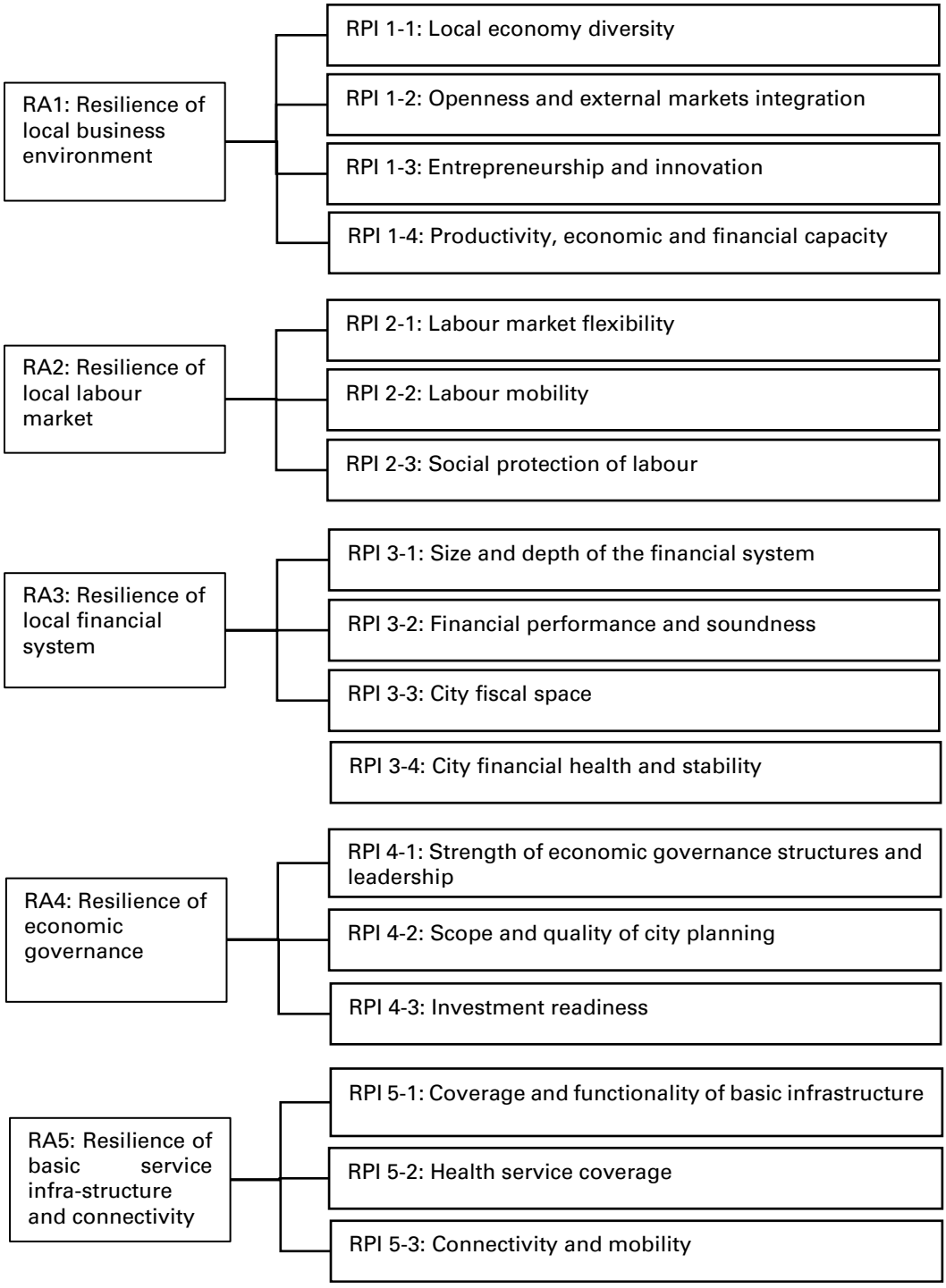
Figure 6. Overview of the diagnostic and planning tool



The diagnostic tool uses a system of qualitative and quantitative indicators (including composite indicators, indices, where necessary) in the four resilience areas discussed above further divided into a number of resilience performance indicators (RPI) and constituent dimensions in each resilience area. The objective is to help partner cities form a bigger picture of their resilience challenges in a holistic way.

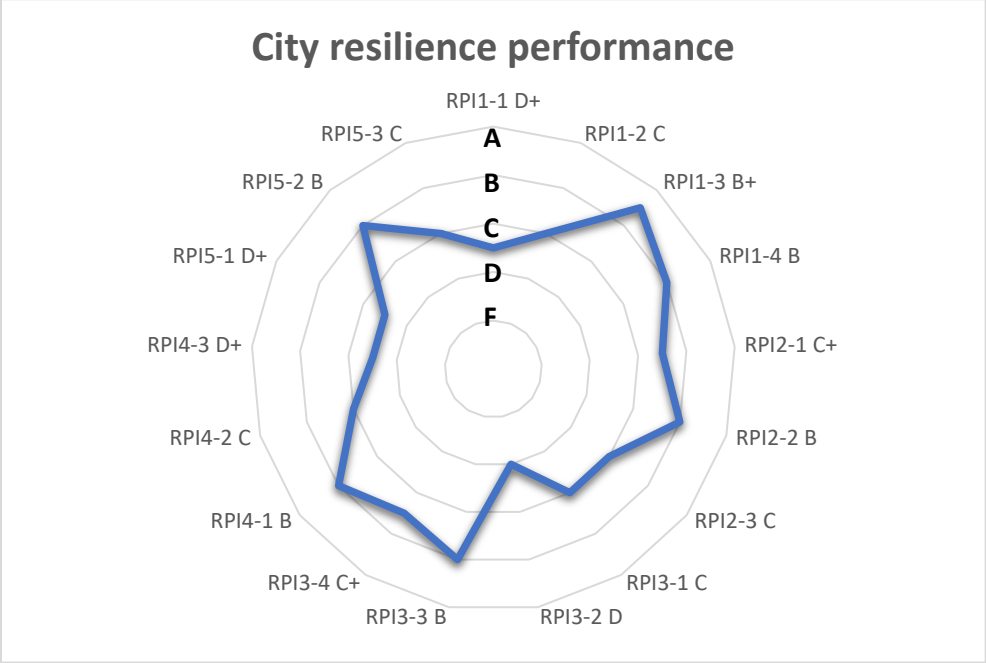
The design of the diagnostic tool is presented in Figure 7.

Figure 7. Design of the diagnostic tool



The resultant distribution of performance scores based on a methodology explained in Section 3 will present a snapshot of city economy resilience while allowing comparisons between different periods and between different cities (Figure 8).

Figure 8. Example of a distribution of performance scores



As will be explained Section 3, the indicators, whether quantitative or qualitative, will need to be translated into performance measures graded from A (maximum contribution to resilience) through F (no contribution to resilience at all).

There are five important considerations should be kept in mind when using the diagnostic tool and making conclusions and recommendations.

1. The indicators require access to relevant data. Importance of reliable and comprehensive data cannot be overestimated. Where data is not available, the diagnostic tool allows using proxy data (possible more readily available) to arrive at the indicators. For example, if survey data on the sectoral composition of all businesses (formal and informal) is not available, data from the business registration or licensing office can be used as a proxy. It is also possible to run quick surveys (even if not perfectly representative) to get some qualitative assessments of the situation.
2. As much as possible, an effort should be made to collect and analyse disaggregated data, particularly for the population groups that may be particularly vulnerable to economic shocks induced by future events similar to COVID-19, especially women who have been disproportionately affected by the crisis. Even if not explicitly mentioned in the guidelines below (Section 3), it is assumed that the data should be disaggregated to the extent possible. The more data are disaggregated by gender and other vulnerable groups (e.g., migrants and refugees, homeless, slum dwellers, etc.), the more relevant the resulting analysis becomes and the more targeted recovery and resilience building measures can be designed.

3. The indicators have been identified and constructed for validity, i.e. measurement of the dimensions they claim to measure. However, there is a degree of imperfection as the indicators do not necessarily capture completely all dimensions of a specific concept. Hence, caution is recommended as well as a holistic analysis when the indicators and particularly their resulting dimensions are viewed as one whole and are compared against each other.
4. The indicators allow interpretation of the data at the aggregate level but the underlying data matters as much as the indicators themselves. Due to their nature, indicators may return the same value for different underlying data. The data allow a level of granularity, which cannot be achieved with indicators only. This is why it is important to consult the underlying data to interpret the indicators and move to the next step, which is planning.
5. Interpretation of the indicators may also be not so straightforward. A more open economy may show more resilience in some cases but be less resilient in some other situations (for example, when global and regional supply chains are disrupted). There is also another dimension of resilience to consider: resilience involves both shock absorption and recovery. These two do not necessarily come together. For example, an economy with a large informal sector is likely to have a lower shock absorption capacity because of the inherent vulnerability of the informal economy but it may recover faster (at least to a point) because informal businesses require little in terms of assets or finance to resume their operation. Hence, the indicators should be interpreted in the context of specific shocks and the impact they produce on urban economies.

To summarize, a deep understanding of the structural factors and idiosyncratic characteristics of a city in the four dimensions of urban resilience that should result from application of this diagnostic tool and is far more important than performance scores. The diagnostic tool should provide city stakeholders with answers about what hinders the city resilience and what should, and realistically can, be done to improve it.

2. COMPONENTS OF THE DIAGNOSTIC

The diagnostic tool has five major performance areas as described above. Each performance area contains a number of indicators consisting of two or more dimensions as explained below.

It is recognized that not all data may be available at the city level (or not to the extent required). In such cases, cities have five possible options in the order of priority:

a) Use national statistics if there is reasonable confidence that the city data are not much different from the national statistics.
b) Use alternative quantitative measures suggested below (printed in italics).
c) Conduct a quick survey to collect the required data (if possible).
d) Use new alternative measures as agreed with the project.
e) Omit the measures for which no data can be obtained or an adequate substitute identified.

It is however strongly recommended that for the purposes of inter-city and inter-regional comparability the structure of the Resilience Performance Indicators (RPI) is kept as suggested. The resulting performance scoring sheet should document all deviations from the methodology described hereunder and explain the reasons while providing justifications for any alternative approaches.

Lastly, when the relevant data are absent and cannot be obtained (or the cost and time requirements for their collection would be too high) cities can use the qualitative scale suggested for each

indicator. Whether the scale is applied to quantitative data or qualitative assessment, it is important that the resulting scoring is based on a consensus developed jointly with city officials. The recommended approach is an iterative survey of experts based on the Delphi method.[4] While traditionally conducted via mail, other variations of Delphi can be conducted online or face-to-face. The methodology is recommended because its iterative approach allows a deep dive into problems that do not lend themselves to precise analytical techniques but can benefit from subjective judgments on a collective basis, which is obviously a case of performance assessment for urban resilience. It is important that the experts come from different sectors, not just from the city administration but also from the private sector, financial sector, civil society, academia and such like to the extent that their expertise is relevant.

The diagnostic tool has a companion Excel workbook which specifies the data requirements and calculation methods. Unless otherwise indicated, the data for year 2019 (or the latest available year) should be used.

2.1 RESILIENCE OF THE BUSINESS ENVIRONMENT

Resilience of the local business (both in the public and private sector) is defined as the capacity to adjust its economic activities and business models in response to the changing supply and demand. It is assumed that this capacity depends on three primary factors: local economy diversity; its openness and external market integration outside the region (national and international); and its capacity for entrepreneurship and innovation.

2.1.1 Local economy diversity (RPI 1-1)

i. City product diversity (Herfindahl-Hirschman Index) is designed to measure sector concentration. It is calculated using the distribution of city product by sector and summing the squares of the percentage shares for each economic sector. Lower values indicate greater diversification. *(Alternatively, where detailed data by sector are not available, a simple concentration ratio may be used measured as a percentage of the product share of four largest sectors to the entire economic product. A ratio above 50% indicates a less diversified (and therefore less resilient) local economy.)*

ii. Informality calculated as the geometric mean of the percentages of (a) share of the informal sector in the total CGP and (b) a share of the informal sector in total city employment. A higher informality above 0.6 usually indicates lower resilience performance.

iii. Public economy strength calculated as the share of public economy output in CGP. The higher values indicate a stronger public sector and a higher countercyclical potential with respect to the private sector of the local economy.

iv. COVID-19 impact concentration is designed to measure the extent of COVID-19 impact across various sectors. It is measured either as the Herfindahl-Hirschman Index or a simple concentration ratio based on (a) output percentage shares or (b) labour percentage shares of each economic sector.

The following scale is used to score the local economy diversity. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

[4] For a detailed description of the Delphi method, see, for example, Slocum-Bradley, N. (2003). Participatory Methods Toolkit: A Practitioner's Manual. King Baudouin Foundation & Flemish Institute for Science and Technology Assessment with the United Nations University. https://cris.unu.edu/participatory-methods-toolkit-practitioners-manual#:~:text=Abstract%3A,for%20Science%20and%20Technology%20Assessment.

A	*B*	*C*	*D*	*F*
City economy has a low sector concentration (e.g. no sector has more than 20% of the market)	*City economy has a low to medium sector concentration*	*City economy has a medium to high sector concentration*	*City economy has a high sector concentration*	*City economy has a very high sector concentration (dominated by just one or two sectors)*
Informality is low as a proportion of city's total economy (e.g. below 20%)	*Informality is relatively low as a proportion of city economy (e.g. 21-40%)*	*Informality is moderate (e.g. 41-60%)*	*Informality is high (e.g. 61-80%)*	*Informality is very high (above 80%)*
Public sector is large in relation to city's economy (e.g. 40% or above) and plays an important role	*Public sector is large to medium (e.g. 20-40%) and plays a relatively important role*	*Public sector is medium to small (e.g. 10-19%)*	*Public sector is small (e.g. 5-9%)*	*Public sector is very small (e.g. below 5%)*
COVID-19 impact is more or less evenly distributed across sectors	*COVID-19 impact on some sectors is slightly more than on others*	*COVID-19 impact on some sectors is significantly more than on others*	*COVID-19 impact is concentrated in just a few sectors (e.g. 3-4)*	*COVID-19 impact is concentrated in just a few sectors (e.g. 3-4)*

2.1.2 Openness and external markets integration (RPI 1-2)

i. Location quotient range based on the comparison of the share of city industries with the national shares. It attempts to compare the city economy and the national economy. If both are very similar in structure, then it can be reasonably expected that the city economy will experience the same shock as the national economy during a crisis. If however the structures differ, then the shock factors for the city economy are different from those for the national economy and there are good reasons to believe that the local economy may behave countercyclically. The local quotient range is calculated as the difference between the economic sector with the lowest local quotient and a sector with the highest local quotient (i.e. the share of city industries in total employment or CGP as a share in national total employment or GDP): $R_{LQ} = LQ_{max} - LG_{min}$. The higher range approximating 10 indicates a stronger potential countercyclical performance of the local economy with respect to the national economy.

ii. Local economy openness is designed to measure the dependency of city economy on external markets. It is measured by the trade openness index calculated as the ratio of the arithmetic mean of merchandise exports (*x*) and imports (*m*) to GCP: $TOI = \frac{\frac{1}{2}(x_{i,t}+m_{i,t})}{GCP_{i,t}}$. Both high and low values of the index are a matter of concern. A high value (meaning a less exposed economy and higher retention of local production) is likely to indicate missed value addition opportunities outside the region whereas a low value (a more open economy) implies high reliance on external markets, which may pose a serious problem when regional supply chains are disrupted. *Alternatively, if the data is available, a ratio of the city export value to city import value can be used. A ratio above 1 indicates less dependence on exports and greater reliance on local produce, which is unlikely to be affected by disruptions in global or regional value chains.*

The following scale is used to score the openness of city economy. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

A	*B*	*C*	*D*	*F*
City economy is structured very differently from the national economy in sectoral terms	*City economy is structured somewhat differently from the national economy in sectoral terms*	*City economy is structured similarly to the national economy*	*City economy is weakly balanced, similar to the national economy*	*City economy mirrors the national economy*
City economy is well balanced between internal and external markets in terms of value chains and exports/imports	*City economy is moderately balanced and relies more on external markets*	*City economy is significantly dependent on external markets for its economic activities*	*City economy is very significantly dependent on external markets for its economic activities*	*City economy is almost entirely export-oriented and depends on imported materials*

2.1.3 Entrepreneurship and innovation (RPI 1-3)

Measuring entrepreneurship and innovation directly is difficult due to the broad scope of this concept, which includes not only the hard-to-measure "entrepreneurial spirit" but also new products, processes and business models.[5] In addition, the metrics traditionally used for measuring innovation (e.g., R&D spend as a percentage of sales, the number of innovation projects started, number of new products launched, revenue/profit growth from new products, etc.)[6] are hard or impossible to obtain even at the national level, let alone at the city level.

This tool uses an indicator measured through three proxy dimensions: new business creation (reflecting the entrepreneurial spirit), business digitization rate (reflecting the share of the most innovative companies that also create a digital infrastructure for more conventional businesses) and digital access, which should reflect the ease of accessing new digital solutions (in terms of products, processes and businesses) by both businesses and customers. This approach certainly lacks comprehensiveness

i. New business creation calculated as a share of the new businesses created in the total number of existing (registered businesses). New business creation serves for a proxy for entrepreneurship, which is an indicator of the adaptiveness and flexibility of the private sector. Higher levels of entrepreneurship indicate a willingness of the population to take on new challenges. If the relevant data exist, new business creation may be further analysed by sector and firm size to identify the longer-term trends and structural transformation tendencies.
ii. Business digitization rate is calculated as the mean of the ratios of (a) fintech companies and (b) e-commerce companies in the total number of registered companies in comparison to the respective national shares. Higher digitization rates imply a greater potential of the city private sector to leverage digital technologies.

[5] Differential (2020). The 3 Types of Innovation: Product, Process, & Business Model. https://www.differential.com/posts/the-3-types-of-innovation-product-process-business-model/.
[6] OECD/Eurostat (2019). Guidelines for Collecting, Reporting and Using Data on Innovation, 4th Edition, OECD Publishing, Paris/Eurostat, Luxembourg.

iii. Digital access seeks to measure the degree to which population can consume digital services offered by businesses. It is calculated as an index of the simple average of (a) Internet access and (b) mobile network coverage as a percentage of the total population multiplied by the national GSMA mobile connectivity index[7] (from 0 to 1) as a proxy for the quality of Internet access. *(If the city-level data on Internet access and mobile network coverage are not available, it is possible to use the GSMA mobile connectivity index as a proxy for digital access provided that there is enough confidence that the city situation is not much different from the national situation.)*

iv. State of ecosystem for innovation support defined as availability of different financial and technical facilities for supporting innovations at different stages of their lifecycle. These include various public grant schemes, concessional financing facilities for innovations, financial incentives in the form of tax exemptions for investors in innovations, business incubators, etc.

The following scale is used to score the entrepreneurship and innovation of city economy. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

A	***B***	***C***	***D***	***F***
New business creation as a share of the existing businesses is high and stable (or accelerating over time)	*New business creation as a share of the existing businesses is high to medium and stable (or accelerating)*	*New business creation as a share of the existing businesses is medium to low and unstable (or decelerating)*	*New business creation as a share of the existing businesses is low and unstable (or decelerating)*	*New business creation as a share of the existing businesses is very low (or non-existent) and decelerating*
There is a large number of fintech and e-commerce companies; e-commerce is widespread	*The number of fintech and e-commerce companies is medium to large, e-commerce is relatively common*	*The number of fintech and e-commerce companies is medium to small, e-commerce is relatively uncommon*	*The number of fintech and e-commerce companies is small e-commerce is uncommon*	*Very few or no fintech and e-commerce companies, e-commerce doesn't exist*
Internet access is high and mobile network coverage is universal, fast and reliable (GSMA Index is high)	*Internet access is high to medium and mobile network coverage is almost universal, relatively fast and reliable (GSMA Index 65-75)*	*Internet access is medium to low and mobile network coverage is patchy, not fast enough and not very reliable (GSMA Index 50-65)*	*Internet access is low and mobile network coverage is patchy, somewhat slow and unreliable (GSMA Index 30-49)*	*Very limited or non-existent Internet access and a patchy and unreliable (or non-existent) mobile network (GSMA index below 30)*
Comprehensive ecosystem for innovation support with different financial and technical facilities fully operational for supporting	*Large ecosystem for innovation support with different financial and technical facilities mostly operational for supporting*	*Medium-sized ecosystem for innovation support with some financial and technical facilities operational for supporting*	*Small ecosystem for innovation support with very few financial and technical facilities operational for supporting innovations at*	*Very small or non-existent ecosystem for innovation support*

[7] GSMA Mobile Connectivity Index (2020). https://www.mobileconnectivityindex.com/#year=2019.

innovations at different stages of lifecycle	*innovations at different stages of lifecycle*	*innovations at different stages of lifecycle*	*some stages of lifecycle*	

2.1.4 Productivity, economic and financial capacity (RPI 1-4)

i. Business productivity is calculated as the ratio of an average labour productivity of the city to the average national productivity measured as the output in monetary terms per worker. This measure positions the city in relation to the national economy indicating its potential advantage or disadvantage.

ii. Share of businesses with access to any means of electricity supply and/or share of businesses with access to grid power calculated as a share of registered (or all businesses if the data are available) of the total number of businesses.

iii. Access to affordable finance seeks to measure the affordability of finance by measuring the spread between average commercial loan rates for small and medium enterprises and average concessional finance offered by domestic development finance institutions (DFIs). The spread is calculated as a difference between the cost of commercial loans and concessional loans. By definition, the difference is always positive. A spread of 10 percentage points or more) indicates a high cost of commercial loans and, therefore constrained access of commercial enterprises to affordable finance.

iv. COVID-19 induced business failure rate calculated as the share of companies, which stopped their operation after the onset of the pandemic in 2020 and have not reduced them since.

The following scale is used to score productivity and financial capacity of city economy. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

A	***B***	***C***	***D***	***F***
City business productivity is significantly higher than the national productivity	*City business productivity is somewhat higher than the national productivity*	*City business productivity is at the same level with the national productivity*	*City business productivity is somewhat lower than the national productivity*	*City business productivity is significantly lower than the national productivity*
Access to electricity is universal via the grid connection	*All businesses have access to electricity, most of them via the grid connection*	*Many businesses have access to electricity, at least 75% via the grid connection*	*At least half of the businesses have access to grid electricity*	*Only some businesses have access to grid electricity*
Commercial credit to SMEs is readily available and the spread is very small	*Commercial credit to SMEs is available and the spread is small (e.g. below 5%)*	*Commercial credit to SMEs is not readily available and the spread is above 5%*	*Commercial credit to SMEs is difficult to obtain and the spread is between 5-10%*	*Commercial credit to SMEs is very difficult/impossible to obtain and the spread is above 10%*
All or almost all businesses continue their operation	*Most business continue their operation*	*Not more than 20% of business have stopped their operation*	*Not more than 30% of businesses have stopped their operation*	*Over 30% of all businesses have not resumed their operation*

2.2 RESILIENCE OF THE LABOUR MARKET

Resilience of the labour market is understood as the capacity of the labour market to reallocate resources and adjust employment patterns and behaviours in response to internal and external shocks. It is characterized by three essential characteristics: flexibility, mobility and degree of social protection (the latter indicating the capacity to retain and preserve the labour force in a good shape under adverse conditions when neither flexibility nor mobility can offset the negative trends in the markets).

2.2.1 Labour market flexibility (RPI 2-1)

i. Employment diversity is calculated as the labour concentration by sector using the Herfindahl-Hirschman Index, which is calculated using the distribution of city employment by sector and summing the squares of the percentage shares for each economic sector. Lower values indicate greater diversification. *(Alternatively, where detailed data by sector are not available, a simple concentration ratio may be used measured as a percentage of the employment share of four largest sectors to the entire economic (employment). A ratio above 50% indicates a less diversified (and therefore less resilient) local economy.)*

ii. Population/Employment Ratio is used to assess the city's performance in capturing local markets as well as assess the level of relative dependence on a particular industry. P/E Ratio represents a simple measure of regional supply and demand. When local ratios are compared with national ratios, it can be determined whether or not local demand is being met, if there are local expansion opportunities, or if the area is importing demand from surrounding regions. In addition, a P/E Ratio that is relatively small (i.e., high levels of employment given the city's population) indicates higher levels of dependence on specific industries.

iii. COVID-19 induced unemployment is measured as the number of workers as a share of the total pre-COVID-19 labour force who have lost their jobs as a result of COVID-19 and who have not resumed their work (found a new job) since then. This demonstrates the capacity of the labour market to absorb the economic shock.

The following scale is used to score labour market flexibility. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

A	*B*	*C*	*D*	*F*
City economy has a low labour concentration by sector (e.g. no sector has more than 20% of the labour market)	*City economy has a low to medium labour concentration by sector*	*City economy has a medium to high labour concentration by sector*	*City economy has a high labour concentration by sector*	*City economy has a very high labour concentration by sector (dominated by just one or two sectors)*
Population to employment ratio is low; the city employment rate is above the national employment rate	*Population to employment ratio is low to medium; the city employment rate is above or the same as the national employment rate*	*Population to employment ratio is medium to high; the city employment rate is the same or below the national employment rate*	*Population to employment ratio is high; the city employment rate is below the national employment rate*	*Population to employment ratio is very high; the city employment rate is well below the national employment rate*

COVID-19 induced unemployment is insignificant (below 5%)	*COVID-19 induced unemployment is low to moderate*	*COVID-19 induced unemployment is moderate (below 15%)*	*COVID-19 induced unemployment is moderate to high (up to 25%)*	*COVID-19 induced unemployment is high (above 25%)*

2.2.2 Labour mobility (RPI 2-2)

i. Occupational labour mobility refers to the ability of workers to switch career fields in order to find gainful employment or meet labour needs. The Shorrocks index may be used as a summary measure of labour market mobility[8] (if the data at the city level are available). It captures the probability of moving across the three labour market states (employment, unemployment and inactivity) between the current and previous period. The index is bounded between zero and one, where a value of zero implies a zero probability of leaving any labour market state (i.e. no mobility) and a value of one implies full mobility. *(However, the required data are very unlikely to be available at the city level and hence this particular dimension can be omitted.)*

ii. Availability of worker (re)training programmes at the city level. This measure analyses the existing opportunities for workers to acquire new skills to move from sectors and occupations affected by the crisis to sectors where demand for labour force exists. For worker training programmes, consider any and all publicly-supported (either through subsidisation or direct funding) programmes or initiatives that endeavour to train or retrain the local workforce. Examples could include retraining for former factory workers or training courses for computer engineering (learning to code). Programmes should be implemented at the local level but may include nationally funded/administered programmes.

iii. Geographic labour mobility is used to qualitatively measure the ability of workers within a specific economy to relocate to find new or better employment. The suggested proxy for this indicator is the ratio of daytime city population to the night-time population (commuter rate). Although not all daytime visitors are workers, most of them are, and this is therefore a good measure of the movement of external labour force. It is a measure of the city accessibility for the workers coming from outside (including transport availability and proximity of labour reserve areas).

iv. Average proportion of a household's budget spent on rental housing is used as a proxy to measure the geographic labour mobility. A higher proportion of a household's income spent on rental housing (a most common option for labour migrants) is a significant barrier to labour movement to urban areas. Average rental income should reflect a citywide average within the formal housing sector (private and public categories) it is calculated as the average annual rental housing rate (excluding utilities) divided by average annual household income.

The following scale is used to score labour mobility. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

[8] Results on mobility are mainly based on transition matrix analysis while results on inequality are obtained using measures of earnings dispersion such as deciles ratios. The measure of Shorrocks based on the information on the diagonal of the transition matrix $M = [n - trace(P)]/(n - 1)$ (Shorrocks, 1978b) indicates the percentage of people who changes decile. For any given inequality index the measure indicates the degree to which lengthening the accounting period tends to reduce the level of inequality over a longer-term period. The index compares long-run or "permanent" inequality measured over several periods with a weighted sum of single-period income inequalities.

A	*B*	*C*	*D*	*F*
The Shorrocks index is very high (close to 1)	*The Shorrocks index is high (between 0.7 and 1)*	*The Shorrocks index is moderate (between 0.5 and 0.7)*	*The Shorrocks index is low (below 0.5)*	*The Shorrocks index is very low (close to 0)*
(Re)training programmes at the city level have a high capacity (in terms of trainees) and cover a very broad range of occupations in most sectors	*(Re)training programmes have a high to medium capacity and cover a broad range of occupations in most sectors*	*(Re)training programmes have a medium capacity and cover many occupations in many sectors*	*(Re)training programmes have a low to medium capacity and cover some occupations in a number of sectors*	*(Re)training programmes have a very low capacity (or don't exist) and/or cover some occupations in a small number of sectors*
High commuter rate; workers generally commute for short distances and/or transport is available and affordable	*High to moderate commuter rate; workers generally commute for short distances and/or transport is generally available and affordable*	*Moderate commuter rate; workers generally commute for medium distances and/or transport is to partly available and affordable*	*Low commuter rate; workers generally commute for medium to long distances and/or transport is partly available and affordable*	*Very low commuter rate; workers generally commute for long distances and/or transport is unavailable and unaffordable*
Average rental housing expense is low (below 15% of the household income)	*Average rental housing expense is low to medium (15-19% of the household income)*	*Average rental housing expense is medium to high (20-24% of the household income*	*Average rental housing expense is high (24-35% of the household income)*	*Average rental housing expense is very high (above 35% of the household income)*

2.2.3 Social protection of labour (RPI 2-3)

i. Unemployment rate is calculated as a percentage by dividing the number of unemployed individuals (those persons who were without work, available for work and seeking work during the reference period) by the number of individuals currently employed in the labour force. High unemployment rates, particularly in combination with weak social protection mechanisms, undermine local economic resilience. A useful technique here is to use a local quotient to estimate the unemployment rate against the national indicator. (*Alternatively, when the city-specific data are not available, the national employment rate can be used as a proxy if there are good reasons to believe that the city situation is not significantly different from the national.)*

ii. Unemployed receiving unemployment benefits (including benefits which are not directly described as "unemployment benefits" but form significant contributions) are calculated as a percentage of those unemployed. This measure is designed to establish the coverage of unemployment benefit schemes implemented nationally and/or locally). This estimates the city economy potential to maintain an aggregate demand against an economic shock and includes all recipients of unemployment benefits regardless of the source (state, regional or city).

iii. Informal employment rate is calculated as employment in the informal economy as a percentage of total non-agricultural employment. Most informal workers are lacking any social protection at all and are extremely sensitive even to small variations in market dynamics.

iv. City expenditure on social protection (sickness/health care, disability, old age, survivors, family/children, unemployment, housing, and social exclusion) paid as city-established benefits to complement other existing national and/or regional social protection schemes calculated as a percentage of the total annual city expenditure. It is measured as an average of city expenditures for 3 years in 2017-2019. This measures the strength of the city's social protection mechanisms.

The following scale is used to score social protection of labour. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

A	*B*	*C*	*D*	*F*
Unemployment rate is low (e.g. below 5%) and/or lower than the national rate	*Unemployment rate is low to average (up to 10%) and/or lower or the same as the national rate*	*Unemployment rate is average low (10-20%) and/or above the national rate*	*Unemployment rate is high (e.g. about 21-40%) and/or well above the national rate*	*Unemployment rate is very high (over 40%) and/or much higher than the national rate*
All officially unemployed are covered by an employment benefit scheme; the access to benefits is easy	*Most of officially unemployed are covered by an employment benefit scheme; the access to benefits is easy*	*More than 50% of all officially unemployed are covered by an employment benefit scheme; the access to benefits is easy/moderately difficult*	*Between 30 and 49% of all officially unemployed are covered by an employment benefit scheme; the access to benefits is may be difficult*	*A small number of all officially unemployed are covered by an employment benefit scheme or the benefit scheme doesn't exist*
Informal employment rate is low as a proportion of city's total employment (e.g. below 20%)	*Informal employment rate is relatively low as a proportion of city employment (e.g. 21-40%)*	*Informal employment rate is moderate to high (e.g. 41-60%)*	*Informal employment rate is high (e.g. 61-80%)*	*Informal employment rate is very high (above 80%)*
City expenditure on social protection is sizeable in relation to the budget (e.g. over 15%)	*City expends a reasonable amount on social protection (e.g. 10-15% of its annual budget)*	*City expends between 5 to 9% of its annual budget on social protection*	*City expends between 2 to 4% of its annual budget on social protection*	*City expends less than 2% of its annual budget on social protection*

2.3 RESILIENCE OF THE FINANCIAL SYSTEM

Resilience of the financial system is conceptualized as the capacity of the local financial system (banks and non-bank institutions, equity companies and other financiers) to expeditiously redistribute its investments between different economic sectors and expand credit to companies and individuals to withstand the worst time of a crisis and support a quick recovery. Resilience of the local financial system is considered dependent on three factors: the size and depth of the

financial system (its overall coverage), its financial performance and soundness, and the overall health of public finances, which gain additional importance at the time of crisis as a cushion against economic shocks.

2.3.1 Size and depth of the financial system (RPI 3-1)

i. Financial institutions per 100,000 inhabitants as a local quotient in relation to the national indicators. Financial institutions are defined as all regulated loan-taking institutions or their branches represented locally, including commercial banks, thrifts, credit unions, savings and credit cooperatives (SACCO), savings and loans associations (VSLA), etc. This measure seeks to compare the city situation to the national: a ratio above 1 indicates that the city is doing better than the nation overall. *(Alternatively, if the city-level data are not available, the national data can be used but this should be justified by reasonable confidence that the city situation is not much different from the national.)*

ii. Proportion of the population with a bank account. The proportion of the population that has a bank account should be calculated as the total number of adults with a bank account to the total number of adults. *(Alternatively, if the city-level data are not available, the national data can be used but this should be justified by reasonable confidence that the city situation is not much different from the national.)*

iii. Percentage of adult population with a registered Digital Finance account[9] is calculated as the number of adults with a registered Digital Finance account to the total number of adults. A higher proportion implies higher financial inclusion. *(Alternatively, if the city-level data are not available, the national data can be used but this should be justified by reasonable confidence that the city situation is not much different from the national.)*

iv. Market share of financial institutions and other financiers (equity providers, angel and impact investors) offering affordable finance[10] for start-ups and innovations as a total of the local financial market. This indicates the capacity and willingness of the financial system to finance innovations and assume investment risks. *(Alternatively, if the city-level data are not available, the national data can be used but this should be justified by reasonable confidence that the city situation is not much different from the national.)*

The following scale is used to score the size and depth of the financial system. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

A	*B*	*C*	*D*	*F*
Access to financial institutions per 100,000 at the city level is significantly higher than nation-wise	*Access to financial institutions per 100,000 at the city level is somewhat higher than nation-wise*	*Access to financial institutions per 100,000 at the city level is approximately the same as nation-wise*	*Access to financial institutions per 100,000 at the city level is somewhat lower than nation-wise*	*Access to financial institutions per 100,000 at the city level is significantly lower than nation-wise*

[9] Digital Finance account is defined as (a) a branchless banking account i.e. basic savings account or no-frills account that has stipulated transaction and operational limits; or (b) an e-money account offered in the form of mobile money wallet or electronic wallet (see Alliance for Financial Inclusion (2019). Digital Financial Service Indicators. Guideline Note No. 33 July 2019).

[10] Affordable finance is defined as finance at below the market lending rates specifically earmarked to support start-ups and innovations as part of the institution's investment portfolio.

Proportion of the population with a bank account is large (e.g. above 75%) and/or above the national level	*Proportion of the population with a bank account is relatively large (e.g. above 60-75%) and/or above or the same as the national level*	*Proportion of the population with a bank account is average (e.g. 50-59%) and/or the same or lower than the national level*	*Proportion of the population with a bank account is small (e.g. 30-49%) and/or below the national level*	*Proportion of the population with a bank account is very small (e.g. below 75%) and below the national level*
Percentage of adult population with a registered Digital Finance account is high; the use of digital accounts (e.g. mobile money) is widespread for formal and informal transactions	*Percentage of adult population with a registered Digital Finance account is high to medium; the use of digital accounts (e.g. mobile money) is common for formal and informal transactions*	*Percentage of adult population with a registered Digital Finance account is medium to low; the use of digital accounts (e.g. mobile money) is not very common for formal and informal transactions*	*Percentage of adult population with a registered Digital Finance account is low; the use of digital accounts (e.g. mobile money) is relatively rare for formal and informal transactions*	*Percentage of adult population with a registered Digital Finance account is very low (or non-existent); the use of digital accounts (e.g. mobile money) is very rare (or non-existent) for formal and informal transactions*
A sizeable market share: start-up and innovation finance sector is represented by many different investors and different types of finance are readily available	*A relatively large market share: there are different investors and different types of finance are available for start-ups and innovative businesses*	*A medium-sized market share: there are a limited number of different investors and different types of finance are generally available for start-ups and innovative businesses*	*A small market share: there are a few investors (mostly belonging to the same category) and a few types of finance are available for start-ups and innovative businesses*	*A very small (non-existent) market share: very few (or no) investors; finance for start-ups and innovative businesses is very limited or non-existent*

2.3.2 Financial performance and soundness (RPI 3-2)

The financial markets at the city level are likely to be part of the national system with very little autonomy if any. Therefore, the data to score the dimensions proposed below for this indicator should be collected at the national level (unless a city exceptionally has financial institutions with a high degree of autonomy, such as a city bank). At the same time, specific financial institutions present at the city level have their own characteristics which may be compared to the industry rates to elicit more insights into their financial performance and soundness.

i. Interest rate spreads are the difference between the average yield that a financial institution receives from loans—along with other interest-accruing activities—and the average rate it pays on deposits and borrowings. The net interest rate spread is a key determinant of a financial institution's profitability (or lack thereof). Narrower interest rate spreads are considered as a sign of more efficient financial markets and less market volatility.
ii. Nonperforming loans to total gross loans indicates the credit quality of banks' loans and their potential willingness to expand credit provision if necessary.

iii. Sectoral distribution of loans to total loans calculated as the Herfindahl-Hirschman Index (HHI). This shows the diversification of the bank's loan portfolio and therefore its risks. The lower the index value, the more diversified is the loan portfolio.
iv. Change in the nonperforming loans rate and percentage of loans restructured attributable to COVID-19. This dimension measures resilience of the local banking system in face of reduced capacity of businesses to service their debt obligations.

The following scale is used to score the financial performance and soundness of the financial markets. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

A	*B*	*C*	*D*	*F*
Interest rate spreads are low	*Interest rate spreads are low to medium*	*Interest rate spreads are medium to high*	*Interest rate spreads are high*	*Interest rate spreads are very high*
Nonperforming loans rate is low (much better than the industry rate when measured for individual banks)	*Nonperforming loans rate is low to medium (better than the industry rate)*	*Nonperforming loans rate is medium to high (on par or slightly worse than the industry rate)*	*Nonperforming loans rate is low (below the industry rate)*	*Nonperforming loans rate is very low (much below the industry rate)*
Loan portfolio is well diversified (low HHI index)	*Loan portfolio is diversified (low to medium HHI index)*	*Loan portfolio is diversified to some extent (medium to high HHI index)*	*Loan portfolio is concentrated in a small number of sectors (high HHI index)*	*Loan portfolio is very concentrated in just a few sectors (very high HHI index)*
NPL rate hasn't changed or changed marginally, very few cases of loan restructuring	*NPL rate has a small change, and a small percentage of loans had to be restructured*	*NPL rate has changed moderately and an average share of loans underwent restructuring*	*NPL rates have increased significantly, many loans had to be restructured*	*NPL rates rose very significantly, most existing loans had to be restructured*

2.3.3 City fiscal space (RPI 3-3)

i. City revenue diversity. Revenue diversity seeks to measure the degree to which a local government relies upon specific sources of funding from all sources including own source revenues, intergovernmental fiscal transfers and international grants (if available) less borrowing. Dependencies can be problematic, especially if such dependencies are not on own-source revenues. To measure diversity, this dimension relies upon the Herfindahl-Hirschman Index (HHI). The lower the index value, the more diversified is the city revenue composition. *(Alternatively, a simple ratio of own source revenues to total revenues may be used to establish dependency on external finance.)*
ii. Share of income inelastic revenues as a percentage of own source revenues. Many municipal taxes and revenues are income elastic (income tax, market fees, etc.) and decrease as the underlying economic activity decreases. On the other hand, income inelastic revenues are independent of economic activities and the city is in a position to legally enforce such revenues even if they have been deferred (such as the property tax or many other forms of land finance).

iii. Financial flexibility is measured as the share of (a) own source revenues, (b) unearmarked (discretionary) grants, and (c) maximum amount of debt a city can contract given its financial position in the total city revenues (as of the previous or current year): $FF = \frac{OSR+G_d+D_{max}}{R_{Total}}$. The maximum amount of debt that a city can contract is calculated against its Net Operating Surplus/Deficit (after debt service including capital repayment) with due regard to any existing statutory limitations on subnational borrowing. These three sources of revenues are the most flexible ones and allow the city to mobilize and (re)allocate funding expeditiously in response to a crisis. The higher the share, the more financially flexible is a city.

iv. Fiscal flexibility seeks to measure the fiscal autonomy of a city to manage its fiscal space. It is a qualitative indicator on the revenue side measured as the legal capacity of local government to set its tax rate and tax base. The stronger the fiscal autonomy of a city, the more its capacity to restructure taxes by towards, for example, more income inelastic taxes to offset an economic downturn.

The following scale is used to score the city fiscal space. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

A	*B*	*C*	*D*	*F*
City has a well diversified revenue space, dependency on external finance is low (below 50%)	*City has a diversified revenue space, dependency on external finance is low to medium (50-65%)*	*City has a somewhat diversified revenue space, dependency on external finance is medium to high (64-80%)*	*City has a lowly diversified revenue space, dependency on external finance is high (81-90%)*	*City has an undiversified revenue space, dependency on external finance is very high (above 90%)*
Very high share of income inelastic revenues (40% or more)	*High share of income inelastic revenues (30-39%)*	*Average share of income inelastic revenues (20-29%)*	*Low share of income inelastic revenues (10-19%)*	*Very low share of income inelastic revenues (below 10%)*
Very high degree of financial flexibility (over 70%)	*High degree of financial flexibility (50-70%)*	*Moderate degree of financial flexibility (30-49%)*	*Low degree of financial flexibility (over 20-29%)*	*Very low degree of financial flexibility (below 19%)*
Very strong fiscal capacity: the city has the legal capacity to set independently the rates for all taxes and fees assigned to it and introduce new taxes	*Strong fiscal capacity: the city has the legal capacity to set independently the rates for most taxes and fees assigned to it and introduce new taxes*	*Moderate fiscal capacity: the city has the legal capacity to set rates for many taxes and fees assigned to it (independently or with approval of the central government)*	*Weak fiscal capacity: the city has the legal capacity to set the rates for a small number of taxes and fees assigned to it; central government approval is necessary*	*Very weak fiscal capacity: few taxes and fees are assigned; the city requires the approval of central authority to set the rates for taxes and fees (or they are set by the central government); no right to introduce new taxes*

2.3.4 City financial health and stability (RPI 3-4)

i. The city share of the local financial market via municipal financial institutions (e.g., municipal banks) or financial institutions with the city participation (e.g., subnational pooled finance mechanisms) as a local quotient in comparison with the national government's share of the financial sector.
ii. City credit rating (if available) is given by credit agencies based on a variety of factors to inform investors of the relative risk of the city as a borrow (particularly, a bond issuer). A higher credit rating of an investible grade implies a greater potential of a city to borrow on better terms.
iii. City audit performance measures as the outcome of annual audit reports over the last three years available.
iv. COVID-19 impact on the city financial health and stability measured as the percentage change in the total city revenues as compared to the same period in the previous year (2019) disaggregated for three types of revenues: own source revenues, central (provincial) government transfers, and grants from other sources.

A	*B*	*C*	*D*	*F*
City's share of the local financial market is high (10% or more)	*City's share of the local financial market is relatively high (7-10%)*	*City's share of the local financial market is average (3-6%)*	*City's share of the local financial market is below 3%)*	*City's doesn't have a share of the local financial market*
Very high credit rating (AAA-AA)	*High credit rating (A-BBB)*	*Average credit rating (BB-B)*	*Low credit rating (C)*	*Default (D)*
Unqualified audit opinion over the last three years	*Unqualified audit opinion for at least 2 years out of the last three and no adverse opinion*	*Unqualified audit opinion for one year out of the last three and no adverse opinion*	*Qualified opinions for all three years or one adverse opinion*	*More than one adverse opinions*
City revenues increased or insignificantly reduced (up to 5%)	*City revenues somewhat decreased (by 6-15%)*	*City revenues decreased (by 16-30%)*	*City revenues significantly decreased (by 36-50%)*	*City revenues decreased very significantly above 50%*

2.4 RESILIENCE OF ECONOMIC GOVERNANCE

Resilience of economic governance is understood as preparedness of the relevant city mechanisms and systems to exercise uninterrupted governance of economic affairs under adverse conditions in an effective and inclusive manner.

2.4.1 Strength of economic governance structures and leadership (RPI 4-1)

i. Inclusiveness of economic governance structures measured as a share of non-government representatives in local economic governance structures (if any), such as a City Economic Council, City Development Forum and such like. It is important that the non-government representation is diverse and includes the private sector, academic, civil society organisations and other relevant stakeholders.
ii. Public participation in economic governance processes measured as the extent to which the public participates in development of the city economic policies and plans and the extent to which the public feedback is incorporated.
iii. Access to local public information on economic issues is measured as the type of relevant public information available to economic agents (e.g. public budgets and spending, tenders,

financial and nonfinancial assistance, access to statistics, etc.), the frequency of information release as well as its accuracy and quality.

The following scale is used to score the strength of the city's governance structures and leadership.

A	*B*	*C*	*D*	*F*
A variety of nongovernment stakeholders regularly participate in city economic governance structures, making up 40-50% of the membership	*A variety of nongovernment stakeholders regularly participate in city economic governance structures, making up 30-39% of the membership*	*A number of nongovernment stakeholders participate periodically in city economic governance structures, making up 20-29% of the membership*	*A number of nongovernment stakeholders participate periodically in city economic governance structures, making up 10-19% of the membership*	*City economic governance structures have a few or no nongovernment representatives limited to one sector only; participation is sporadic or ad hoc*
High degree of public involvement (via regular consultations, meetings, forums), public feedback is regularly sought and incorporated	*Relatively high degree of public involvement (via frequent consultations, meetings, forums), public feedback is frequently sought and mostly incorporated*	*Average degree of public involvement (via ad hoc consultations, meetings, forums), public feedback is sought from time to time and sometimes incorporated*	*Low degree of public involvement (very few consultations/ meetings and no dedicated forums), public feedback is rarely sought and incorporated*	*Very low degree of public involvement (no meetings or consultations), public feedback is not sought and/or not incorporated*
Information covers all relevant economic issues, is of high quality and provided regularly	*Information covers most relevant economic issues, is of high quality and provided regularly*	*Information covers many relevant economic issues, is of acceptable quality and provided relatively regularly*	*Information covers some relevant economic issues, is of low quality and provided irregularly*	*Information covers very few or no relevant economic issues, is of poor quality and/or provided sporadically, if at all*

2.4.2 Scope and quality of city planning (RPI 4-2)

i. Holistic planning system implies availability of a long-term city development strategy (vision), medium term plans as well as annual plans and budgets. It is important that the plans demonstrate interconnectedness at all levels and the specific planning targets and budget allocations in annual plans can be linked to the medium-term plans and eventually the development strategy (city vision). This measure looks at the robustness of the planning system which underlies urban resilience.

ii. Degree of integration of crisis management provisions in city planning and budgeting (medium-term and annual plans and budgets). This is a qualitative measure that looks at city preparedness for crisis situations including availability of relevant reserves, redundancies (financial and nonfinancial), business continued plans for delivery of public services as well as procedures to quickly mobilize and/or reallocate resources in case of need.

iii. Vulnerability assessment methodology exists and vulnerability assessments of basic infrastructure and systems are conducted regularly, relevant actions are incorporated in medium-term and annual plans and budgets.

iv. Extent of access and application of digital technologies for city planning and management, such as Internet of Things (IoT) and big data analytics comprised of sensors, networks, and applications to gather relevant data, such as traffic congestion, energy usage, and air quality to plan and deliver city services, including utilities, transportation, and public services.

The following scale is used to score the strength of the city's governance structures and leadership.

A	*B*	*C*	*D*	*F*
Comprehensive plans at three levels (strategic, medium-term and annual) exist and demonstrate a high degree of interconnectedness	*Plans at three levels (strategic, medium-term and annual) exist and demonstrate a relatively high degree of interconnectedness*	*Plans on at least two levels (strategic or medium-term and annual) exist and demonstrate a degree of interconnectedness*	*Plans on at least one level (annual) exist and some interconnectedness can be established*	*No plans (or plans only at the annual level unconnected to any other level of planning)*
Crises management provisions are comprehensive and systematically mainstreamed in plans at all levels (strategic, medium-term and annual)	*Crises management provisions are relatively comprehensive and mainstreamed in plans at all levels (strategic, medium-term and annual)*	*Crises management provisions address a number of relevant issues and are to some extent mainstreamed into respective plans*	*Crises management provisions address a few issues and not properly mainstreamed in respective plans*	*Crises management provisions are absent and/or poorly formulated and delinked from the planned actions*
Robust vulnerability assessment methodology exists; vulnerability assessments take place regularly; relevant actions incorporated in plans at all levels	*Vulnerability assessment methodology exists; vulnerability assessments take place periodically; relevant actions incorporated in plans at all levels*	*Vulnerability assessment methodology is rudimentary; vulnerability assessments take place ad hoc; relevant actions generally incorporated in plans*	*No coherent vulnerability assessment methodology exists; assessments take place rarely, if at all; relevant actions rarely incorporated in plans at all levels*	*No assessment methodology; no assessments; no attempts to incorporate relevant actions in plans*
IoT and big data analytics are advanced and most of the city services use them regularly	*IoT and bid data analytics are somewhat advanced and many city services use IoT and big data analytics frequently*	*IoT and big data analytics are moderately developed and used by some city services from time to time*	*IoT and big data are underdeveloped (nascent) used on a pilot basis by one or two services on a limited scale*	*No use of IoT and big data*

2.4.3 Investment readiness (RPI 4-3)

Investment readiness is broadly defined as the capacity of a city to prime itself towards the needs of external investors, by providing a credible and efficient framework and process for external investment, coupled with a development pipeline of bankable propositions and opportunities that meet the specific process, asset, scale, and risk management requirements of the investors.

i. Strategic planning and resilience proofing of investment projects. This measure is deigned to establish to what extent infrastructure investment projects are linked to longer-term planning, create opportunities for external investors and reflect resilience considerations.
ii. Access to public land as a factor of production. It is measured by the extent of the city authority to manage urban land (change the use, lease, sell, etc.) as well as the percentage of vacant/unutilized public urban land as a percentage of total registered urban public land. In combination, these two measures indicate the city capacity to (re)allocate land resources efficiently.
iii. Intensity of regulation/administrative burden (or days to start a business as a proxy) to measure how conducive is the investment environment to new private sector initiatives and how quickly businesses can diversify into other economic sectors if necessary.
iv. Investment-enabling environment defined as availability of relevant investment data and facilitation mechanisms for investors at the city level. Facilitation mechanisms may include technical facilities to support project development, PPP and investment promotion units as well as financial incentives in the form of tax exemptions for investors.

The following scale is used to score the city investment readiness. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

A	***B***	***C***	***D***	***F***
All investment projects are derived from the approved medium-term development plan and CIP, make provision for external finance when appropriate, and have project profiles that comprehensively address resilience issues	*Most investment projects are derived from the approved medium-term development plan and CIP, make provision for external finance when appropriate, and have project profiles that in general address resilience issues*	*Some investment projects are derived from the approved medium-term development plan and CIP, sometimes make provisions for external finance, and some of them have project profiles that address resilience issues*	*Very few investment projects are derived from the approved medium-term development plan (CIP may be absent), rarely if at all make provision for external finance, and only some (or none) have project profiles that address resilience issues*	*Investment projects are not derived from the approved medium-term development plan (such plans may not exist at all), no provision for external finance, and project profiles (if exist) do not address resilience issues*
City has a full autonomy to decide over the use and (re)allocation of land resources; a high percentage of vacant/unutilized public land	*City has a significant autonomy to decide over the use and (re)allocation of land resources; a high percentage of vacant/unutilized public land*	*City has a somewhat limited autonomy to decide over the use and (re)allocation of land resources (approval of higher government required for some actions); an average percentage of*	*City has a limited autonomy to decide over the use and (re)allocation of land resources (higher government approval is required for most actions); a low percentage of vacant/unutilized public land*	*City has a very limited (or no) autonomy to decide over the use and (re)allocation of land resources (all decisions are taken by the central government); a very low percentage of vacant/unutilized public land*

		vacant/unutilized public land		
Very light intensity of business regulation, quick and easy business registration procedures	*Light intensity of business regulation, relatively quick and easy business registration procedures*	*Average intensity of business regulation, registration requires some effort and is not very fast*	*High intensity of business regulation, registration takes a long time and requires significant efforts*	*Very high intensity of business regulation, very long and difficult registration procedures*
Detailed and properly designed investment data (investment profiles) and a variety of financial and nonfinancial facilities to facilitate investment	*A large amount of investment data (including some investment profiles) and a number of financial and nonfinancial facilities to facilitate investment*	*Some amount of investment data (including some investment profiles) and a small number of financial and nonfinancial facilities to facilitate investment*	*Little amount of investment data (including some investment profiles) and one or two dedicated financial or nonfinancial facilities to facilitate investment*	*Very little or no investment data, lack of investment profiles, no dedicated financial or nonfinancial facilities to facilitate investment*

2.5 RESILIENCE OF BASIC SERVICE INFRASTRUCTURE AND CONNECTIVITY

As observed in Section 2, the reality on the ground is such that the four components of the city economy (representing the factors of production operating within specific governance arrangements) cannot function without some basic infrastructure in place (e.g., energy, water, etc.) and require adequate connectivity for their efficient operation. Given the overall context of the tool and in particular its embeddedness in situations of global or regional epidemiological health emergencies, one more indicator is added to measure the health service coverage and its relative capacity to help the four components of the city economy to withstand the shock of such a health emergency. The three indicators below are designed to measure the resilience of basic service infrastructure (including healthcare) and urban connectivity.

2.5.1 Coverage and functionality of basic public services and infrastructure (RPI 5-1)

i. Public open space per 1,000 inhabitants (or per capita).[11] In light of the COVID-19 experiences, the availability of public open space in a situation when congregation of many people indoors becomes unsafe, is critical for many urban functions. Also, public open space is often the primary workplace for many informal businesses. *Alternatively, percentage of open public space as the total city area (administrative/jurisdictional spatial extent of a municipality).*
ii. Average number and length of interruptions per customer per year in the electricity network.
iii. Percentage of population with access to water and sanitation services.
iv. Percentage of population with regular municipal solid waste collection.

[11] Public space is defined as publicly owned land and available for public use. Public spaces encompass a range of environments including streets, sidewalks, squares, gardens, parks, sports grounds, conservation areas. Each public space has its own spatial, historic, environmental, social, and economic features (UN-Habitat. (2016). *Global Public Space Toolkit: From Global Principles to Local Policies and Practice*).

The following scale is used to score the coverage and functionality of basic public services and infrastructure. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

A	*B*	*C*	*D*	*F*
7 acres per 1,000 residents (28 sq m per capita) or more of public space[12] *or* *Over 45% of the total city area*	*At least 5-6 acres (20-27 sq m per capita)* *or* *41-45% of the total city area*	*3-4 acres (12-19 sq m per capita)* *or* *31-40% of the total city area*	*1-2 acres (4-12 sq m per capita)* *or* *21-30% of the total city area*	*Less than 1 acre (below 4 sq m)* *or* *21% and below of the total city area*
Very rare interruptions for short periods	*Rare interruptions for short periods*	*Relatively frequent interruptions for relatively short periods (4 hours or less)*	*Frequent interruptions for longer periods (4-8 hours)*	*Very frequent interruptions for more than 8 hours or even days*
Universal access to running water and sanitation services	*Most population (90% or more) have access to running water and sanitation services, water points and sanitation facilities are available in other areas*	*About 75% have access to running water and sanitation services, water points and sanitation facilities are available in other areas*	*50%-74% have access to running water and sanitation services, there are areas lacking water points and proper sanitation facilities*	*Less than 50% have access to running water and sanitation facilities, there are areas lacking water points and proper sanitation facilities*
Universal access to municipal solid waste collection	*Most population (90% or more) have access to municipal solid waste collection*	*About 75% have access to municipal solid waste collection*	*50%-74% have access to solid waste collection, unregulated dump sites are common, waste burning is the common method of waste disposal*	*Less than 50% have access to municipal solid waste collection, unregulated dump sites are common, waste burning is the common method of waste disposal*

2.5.2 Health service coverage (RPI 5-2)

i. City quotient for health workers (physicians, nurses, and midwives) per 10,000 population. This measure compares the health service coverage at the city level to the national situation. The density of health workers (physicians, nurses, and midwives) shows access to trained medical personnel.

ii. City quotient for hospital beds per 10,000 population. Similarly to the previous measure, this measure shows access to in-patient facilities and care.

iii. City expenditure on health as percentage of total city expenditure (an average for three years in 2017-2019).

[12] Based on the WHO recommendation of a minimum of 9 sq m of green urban space per person and UN-Habitat recommendation of green space as one half of the urban space allocated for open spaces such as streets and squares.

The following scale is used to score the coverage and functionality of basic public services and infrastructure. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

A	*B*	*C*	*D*	*F*
Number of city health workers is significantly higher than nation-wise	*Number of city health workers is somewhat higher than nation-wise*	*Number of city health workers is approximately the same as nation-wise*	*Number of city health workers is somewhat lower than nation-wise*	*Number of city health workers is significantly lower than nation-wise*
Number of hospital beds at the city level is significantly higher than nation-wise	*Number of hospital beds at the city level is somewhat higher than nation-wise*	*Number of hospital beds at the city level is approximately the same as nation-wise*	*Number of hospital beds at the city level is somewhat lower than nation-wise*	*Number of hospital beds at the city level is significantly lower than nation-wise*
City expenditure on health is sizeable in relation to the budget (e.g. over 15%)	*City expends a reasonable amount on health services (e.g. 10-15% of its annual budget)*	*City expends between 5 to 9% of its annual budget on health services*	*City expends between 2 to 4% of its annual budget on health services*	*City expends less than 2% of its annual budget on health services*

2.5.3 Connectivity and mobility (RPI 5-3)

i. Continuity of telephone and Internet operations measured by the frequency and length of interruptions per year
ii. Average commuting travel time disaggregated for the key modes of transportation. As the COVID-19 lockdowns demonstrate, longer commuting times may significantly impact the ability of workers to reach their workplace if there are restrictions on operating public and private transport.
iii. Total coverage of all superior modes of public transport (i.e. BRT, trolleybus, tram, light rail and subway, cable cars and ferry) measured as percentage of the total city area.
iv. Walkability and cyclability defined as a combination of the city performance on the sum of two measures: (a) percentage of streets with sidewalks and (b) percentage of streets with bicycle lanes.

The following scale is used to score connectivity and mobility. It can also be used for qualitative assessment, as described above, when relevant data are absent and cannot be obtained (or the cost and time requirements are too high):

A	*B*	*C*	*D*	*F*
Very rare interruptions for short periods	*Rare interruptions for short periods*	*Relatively frequent interruptions for relatively short periods (4 hours or less)*	*Frequent interruptions for longer periods (4-8 hours)*	*Very frequent interruptions for more than 8 hours or even days*

Short commuting times (under 1 hour)	*Relatively short commuting times (1-1.5 hours)*	*Longer commuting times (1.5-2.5 hours)*	*Long commuting times (2.5-4 hours)*	*Very long commuting times above 4 hours*
Superior modes of public transport cover 90% of the city area or more	*Superior modes of public transport cover 75-90% of the city area*	*Superior modes of public transport cover 50-74% of the city area*	*Superior modes of public transport cover 25-49% of the city area*	*Superior modes of public transport cover less than 25% of the city area od don't exist*
All streets have sidewalks	*90-99% of streets have sidewalks*	*75-89 of streets have sidewalks*	*50-74% of streets have sidewalks*	*Less than 50% of streets have sidewalks*
Bicycle lane density exceeds the national standard or is better in comparison to other similar cities in the country	*Bicycle lane density is the same or better than the national standard or is the same as in other cities of similar size in the country*	*Bicycle lane density is somewhat below the national standard or is slightly below in comparison to other similar cities*	*Bicycle lane density exceeds is well below the national standard or much below in comparison to other similar cities*	*Bicycle lanes a very few or non-existent*

3. OUTLINE OF THE PERFORMANCE REPORT

A City Economic Resilience Performance Report is a **performance assessment** that

- documents the resilience of different components of urban economy against a clear scoring system based on performance of highly resilient cities;
- identifies weaknesses and strengths of the urban economy from the resilience perspective;
- provides recommendations on what can/should be done to improve the resilience of the urban economy.

The total length of the report is 25-30 pages maximum.

The suggested outline for the report is as follows.

1. **Summary (1.5-2 pages)**. The summary is designed to summarize the contents of the report and present the key findings and recommendations of the diagnostic. It should include the summary diagram of the city's economic resilience performance (generated by the Excel Diagnostic Tool, see Figure 8).

2. **Introduction (3.5-4 pages).** The Introduction is designed to briefly explain the context of the DA13 project on Building Urban Economic Resilience, provide general information about the city, describe economic impacts of COVID-19 and the key activities implemented by the city to minimize adverse impacts and prepare for recovery as well as the process of the diagnostic.
   2.1 Programme context (0.5 page): Objective/ goals of DA13 Project
   2.2 General information about the city (0.5 page): Type of the city (primary, secondary), population, area, key economic indicators. This section may include charts and tables as appropriate.
   2.3 COVID-19 impact (0.5 page). The city case studies in the Global Compendium of Practices can be used to complete this subsection (https://urbanresiliencehub.org/wp-content/uploads/2020/12/global-compendium-of-practices-covid-19.pdf). It's

recommended to use charts and tables to describe various impacts to the extent that quantitative information is available.

2.4 Key crisis response and recovery measures (1 page). The city case studies in the Global Compendium of Practices can be used to complete this subsection (https://urbanresiliencehub.org/wp-content/uploads/2020/12/global-compendium-of-practices-covid-19.pdf).

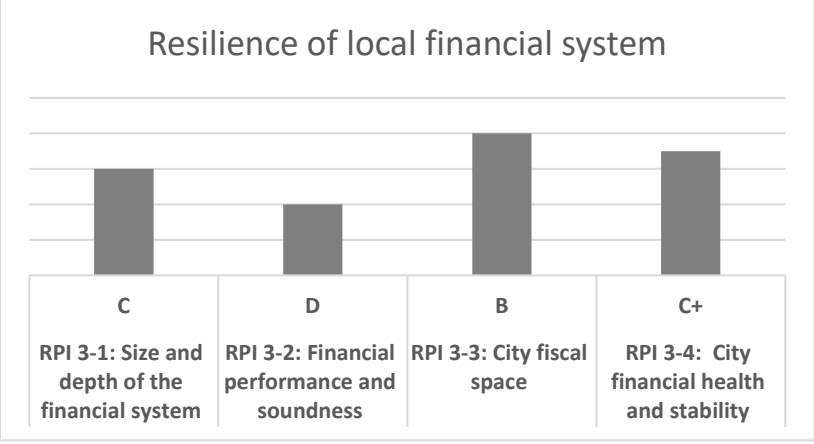
2.5 Diagnostic process (1-1.5 pages). Description of the diagnostic process: (a) the period of implementation; (b) key activities undertaken: stakeholders consultations and workshops, focus group discussions, expert panels, etc.; (c) key stakeholders involved (national and city governments, community representatives, private sector partners, academia, etc.); (d) main challenges encountered (access to data, methodology, etc.)

3. **Findings of the diagnostic (15 pages max).** This section follows the structure of the Urban Resilience Diagnostic Tool which includes 5 resilience areas and therefore has 5 subsections.
   3.1 Resilience of local business environment
   3.2 Resilience of local labour market
   3.3 Resilience of local financial system
   3.4 Resilience of economic governance
   3.5 Resilience of basic service infrastructure and connectivity

   Each subsection (2.5-3 pages) has the following outline:

   - A diagram including a column chart with the indication of the performance by each resilience indicator (generated by the Excel Diagnostic Tool in the relevant tabs for each resilience performance area) with a one paragraph description of the city's performance in the resilience area and what it implies for the city (Figure 9).

Figure 9. Summary diagram of a resilience area by performance indicator



   - A separate paragraph for each resilience performance indicator (RPI) with the following information:
     - Summary table for the indicator (copied from the Excel Diagnostic Tool) showing the scoring for the indicator as well as the value and scoring for each constituent measure (Figure 10).

Figure 10. Summary table for a performance indicator

RPI 3-1: Size and depth of the financial system		C
City quotient of financial system	#DIV/0!	
Proportion of the population with a bank account	#DIV/0!	
Percentage of adult population with a registered Digital Finance account	#DIV/0!	
Market share of financial institutions offering affordable finance	0	

- An explanation of how the indicator was scored (main considerations for the scoring) with a conclusion of what such scoring implies for the city.

4. **Conclusions and recommendations (6 pages max).** This section summarizes the overall performance of the city on urban resilience and provides recommendations based on the findings of the previous section. The recommendations establish the link between the diagnostic and planning phases of the project. Detailed activities will be identified during the planning phase of the project but it is important that the report informs the direction of future planning by presenting recommendations in a relatively general form. Yet, such recommendations should go beyond the obvious, such as "improve resilience of basic service infrastructure", for example. The recommendations should suggest some key actions that the city should consider and translate into specific activities during the subsequent planning phase.

   This section includes two subsections:

   4.1 Summary of the city's overall performance (1 page). This subsection presents the summary diagram of the city's economic resilience performance (generated by the Excel Diagnostic Tool). Although the Diagnostic and Planning Tool does not envisage an overall performance scoring, it is suggested that the overall performance is described in qualitative terms as strong/robust, moderately strong, weak or very weak.

   4.2 Recommendations (5 pages). Recommendations should follow the structure of the Urban Resilience Diagnostic Tool in 5 areas of urban economic resilience:
   - Resilience of local business environment
   - Resilience of local labour market
   - Resilience of local financial system
   - Resilience of economic governance
   - Resilience of basic service infrastructure and connectivity

   This section may also include general or cross-cutting recommendations on (re)building urban economic resilience if they cannot be easily categorized under any of the above resilience areas.

4. SCORING

The tool follows a similar approach to that followed in the Public Expenditure and Financial Accountability (PEFA) diagnostic tool and the Tax Administration Assessment Diagnostic (TADAT) tool, with some modifications. The essence of the approach is to assign a performance rating to each dimension and each criterion to come up with an overall performance overview rather than an index.

There are two main reasons for selecting this approach. Firstly, the construction of an index, particularly one that combines different quantitative and qualitative measures is fraught with many challenges that may significantly undermine its validity and usefulness. It is bound to raise methodological questions regarding both the arbitrariness of weights for the aggregation and the interpretation and comparability of the aggregate score. Second, interpretation of an index also poses certain difficulties. Whereas the scores are usually normalized to 100, it is not always obvious how a score of 70 differs from the score of 90 and what it entails for performance.

A performance-based approach addresses this issue by linking scoring to performance measures. Of course, it has its own challenges, not least a large degree of subjectivity in assessing the performance areas (albeit it is circumscribed in many cases by the quantitative values assigned to specific measures). In fact, the RDPT is not intended to be used as a scoring tool per se but rather as a tool to guide discussion about assessments from individual dimensions and drawing of lessons from good practice in different countries.

Each of the tool's measurement dimensions is assessed separately. The overall score for an indicator is based on the assessment of the individual dimensions of the indicator. These are scored on a four-point 'ABCDF' scale according to specific scoring criteria.

The previous section suggests criteria for scoring specific dimensions of each criteria. To summarize, the interpretation of the scores is broadly as follows:

- 'A' denotes performance associated with a very strong capacity to ensure economic and financial resilience. For the purposes of this tool and in line with the working definition of urban economic resilience introduced in Section 1, a very strong capacity ensures minimum impact while also allowing for a quick recovery. This is the level of capacity possessed by the cities that have been consistently demonstrating a high level of resilience to economic shocks.
- 'B' represents sound performance associated with a healthy capacity but a rung below the best performing cities. Such a capacity guarantees a low to moderate impact and a relatively quick recovery.
- 'C' means an average performance when the city's capacity to mitigate the crisis suffices to achieve low to moderate levels of impact and a somewhat longer recovery period.
- 'D' denotes a weak performance associated with a capacity that falls way below the best performers. At this level of capacity, a city experiences strong impact and has a long recovery period.
- 'F' essentially means lack of own resilience capacity such that without very substantial support from the central government a city would experiences a very strong shock (possibly an economic collapse) and a long recovery period.

The teams doing the diagnostic and assessment should be guided by these general considerations and adapt the specific scoring suggestions from the previous sections to the actual situation in the

partner cities. As has been already indicated, the impact of certain factors and conditions on urban resilience may differ depending on the overall context (e.g., role of the informal sector or economic diversification which may conflict with the principle of comparative advantages, etc.). In such cases, the teams should work out a consensus decision which reflects the city specificity and may differ from the suggested scoring.

The scoring method is based on averaging the scores for individual dimensions of an indicator. It is used for selected multi-dimensional indicators where a low score on one dimension of the indicator does not necessarily undermine the impact of higher scores on other dimensions for the same indicator. Though the dimensions all fall within the same area of the resilience system, progress on individual dimensions can be made independent of the others and without logically having to follow any particular sequence. The steps in determining the overall or aggregate indicator score are as follows:

- For each dimension, assess what standard has been reached on the 5-point 'ABCDF' calibration scale.
- Go to the conversion table (Table 1) for scoring and find the appropriate section of the table (2-4 dimension indicators).
- Identify the line in the table that matches the combination of scores that has been given to the dimensions of the indicator (the order of the dimension scores is immaterial).
- Pick the corresponding overall score for the indicator.
- Table 2 is a conversion table that applies to all indicators using the proposed scoring methodology. The conversion table should not be used to aggregate scores across all, or subsets, of indicators, as the table is not designed for this purpose.

Table 1. Scoring conversion table

2-dimensional indicators			
F	F		**F**
F	D		**F+**
F	C		**D**
F	B		**D+**
F	A		**D**
D	D		**D**
D	C		**D+**
D	B		**C**
D	A		**C+**
C	C		**C**
C	B		**C+**
C	A		**B**
B	B		**B**
B	A		**B+**
A	A		**A**

3-dimensional indicators			
F	F	F	**F**
F	F	D	**F**
F	F	C	**F+**
F	F	B	**D**
F	F	A	**D+**
F	D	D	**D**
F	D	C	**D+**
F	D	B	**C**
F	D	A	**C+**
F	C	C	**C**
F	C	B	**C+**
F	C	A	**B**
F	B	B	**B**
F	B	A	**B**
F	A	A	**B**
D	D	D	**D**
D	D	C	**D**
D	D	B	**D+**
D	D	C	**D+**
D	D	A	**C**

D	B	B	**C+**
D	B	A	**B**
D	A	A	**B**
C	C	C	**C**
C	C	B	**C**
C	C	A	**B**
C	B	B	**B**
C	B	A	**B**
C	A	A	**B+**
B	B	B	**B**
B	B	A	**B+**
B	A	A	**B+**
A	B	A	**B+**
A	A	A	**A**

4-dimensional indicators				
F	F	F	F	**F**
F	F	F	D	**F**
F	F	F	C	**F+**
F	F	F	B	**F+**
F	F	F	A	**D**
F	F	D	D	**D**
F	F	D	C	**D**
F	F	D	B	**D**
F	F	D	A	**D+**
F	D	D	F	**F+**
F	D	D	D	**D**
F	D	D	C	**D**
F	D	D	B	**D**
F	D	D	A	**D+**
F	C	C	F	**D**
F	C	C	D	**D**
F	C	C	C	**D+**
F	C	C	B	**D+**
F	C	C	A	**C**
F	B	B	A	**C+**
F	A	A	A	**C+**
D	D	D	D	**D**
D	D	D	C	**D**
D	D	D	B	**D+**
D	D	D	A	**D+**
D	D	C	C	**D+**
D	D	C	B	**D+**
D	D	C	A	**C**
D	C	C	C	**C+**
D	C	C	B	**D+**
D	C	C	A	**C+**
D	C	B	B	**C+**
D	C	B	A	**C+**
D	C	A	A	**B**

D	B	B	B	**C+**
D	B	B	A	**B**
D	B	A	A	**B**
D	A	A	A	**B+**
C	C	C	C	**C**
C	C	C	B	**C+**
C	C	C	A	**C+**
C	C	B	B	**C+**
C	C	B	A	**B**
C	C	A	A	**B**
C	B	B	B	**B**
C	B	B	A	**B**
C	B	A	A	**B+**
C	A	A	A	**B+**
B	B	B	B	**B**
B	B	B	A	**B+**
B	B	A	A	**B+**
B	A	A	A	**A**
A	A	A	A	**A**

PART II. RESILIENCE PLANNING

5. PLANNING APPROACH

As stated in the Introduction, the diagnostics described in the previous chapters serves a two-fold purpose of (1) baselining the city performance against the international standards of good performance and/or national performance and (2) identifying the critical underperformance areas. The planning tool presented in the following chapters serves the purposes of translating these findings into specific actions that should help city to address the identified shortcomings and performance gaps in the form of a City Economic Resilience Building Plan (ERBP).

5.1 OBJECTIVES OF THE ECONOMIC RESILIENCE BUILDING PLAN

The **main objective** of the ERBP is to provide a city with an evidence-based plan specifying time-bound actions against specific performance targets to improve city economic resilience in the medium term.

The ERBP has three additional objectives:

- Serve as a resource mobilisation tool for cities to raise additional resources in the form of technical assistance and finance from the central/provincial governments and development partners.
- Serve as an advocacy tool with the central/provincial governments. Often the legal and regulatory provisions of critical importance to urban economic resilience are outside the purview of cities and require a legal or regulatory action by the higher levels of government. Thus, the ERBP creates opportunities to formulate and present requirements for legal and regulatory reforms in a holistic way based on strong evidence.
- As a tool for public awareness raising and mobilization. Urban economic resilience building is a task that cuts across many sectors and requires substantive engagement and concerted actions of multiple partners. The ERBP helps raise public awareness about the challenges a city faces in terms of urban economic resilience and mobilize different stakeholders in support of the relevant actions.

The long-term goal of the ERBP is to create a conducive environment to continuous resilience building at the city level and apply the principles of economic resilience in a systematic way to the city visions as well as all city-level plans and budgets by designing relevant actions in medium-term and short-term perspectives.

5.2 PLANNING PRINCIPLES

To guide the planning of building urban economic resilience, the following general **Urban Resilience Principles** developed by UN-Habitat should be adhered to:

Principle 1: Dynamic nature of urban resilience

Resilience is not a condition but a state that cannot be sustained unless the system evolves, transforms and adapts to current and future circumstances and changes. Therefore, building resilience requires the implementation of context-specific and flexible plans and actions that can be adjusted to the dynamic nature of risk and resilience;

Principle 2: Systemic approach to cities
Recognising that cities are comprised of systems interconnected through complex networks and that changes in one part have the potential to propagate through the whole network, building resilience requires a broad and holistic approach that takes into account these interdependencies when the urban system is exposed to disturbances;

Principle 3: Participation in planning and governance
A resilient system ensures the preservation of life, limitation of injury, and enhancement of the 'prosperity' of its inhabitants by promoting inclusiveness and fostering comprehensive and meaningful participation of all, particularly those in vulnerable situations, in planning and various governance processes. Such an approach can ensure sense of ownership, thus achieving successful implementation of plans and actions.

Principle 4: Multi-stakeholder engagement
A resilient system should ensure the continuity of governance, economy, commerce and other functions and flows upon which its inhabitants rely. This necessitates promoting open communication and facilitating integrative collaborations between a broad array of stakeholders ranging from public entities, private sector, civil society, and academia to all city's inhabitants.

Principle 5: Strive towards development goals
Resilience building should drive towards, safeguard and sustain development goals. Approaches to resilience should ensure that efforts to reduce risk and alleviate certain vulnerabilities does not generate or increase others. It must guarantee that human rights are fulfilled, respected and protected of under any circumstances.

In addition, more specific principles for managing COVID-19 economic response and recovery developed by UNCDF should also be kept in mind (Table 1):

Table 1: Specific Principles for Managing Covid-19 Response and Recovery

Learning lessons from the crisis	Throughout the world, the COVID-19 crisis has exposed and in some cases aggravated all kinds of inequalities that have long existed side by side with growing prosperity in other segments of the larger population. This has provided useful lessons for extending immediate relief to populations in need and initiating processes for recovery, reconstruction, and regeneration towards more equitable and sustainable societies in the future. Vulnerabilities exposed by the crisis that require prominence in recovery and rebuilding efforts are *income and wealth inequality, digital inequality, poor sanitation systems, poorly planned cities, weak databases, informality and vulnerability,* and *inadequate governance systems.*
Financing recovery and reconstruction	With most city economies severely weakened and businesses and households under profound financial strain from the crisis, local and national governments will bear varying shares of the burden of financing recovery and reconstruction, depending on the financial health of each city before the crisis and existing national laws governing intergovernmental financial transfers. For developing countries with incipient or no markets for municipal bonds to finance resilient infrastructure (SDG 9), this is an opportunity to develop such markets over the medium-to-long term, along with better use for other alternatives, such as public-private partnerships. At the same time, the quest for own-source revenues that are more resilient and resistant to economic shocks should continue as well as the efforts to improve local revenue

management systems and eliminate inefficiencies in public expenditures. National and local governments should work towards improving their investment attractiveness and readiness without a damaging race to the bottom by municipalities in an attempt to outcompete each other.

Leaving No One Behind

This is a central feature of the UN's 2030 Agenda and should include serious efforts to identify groups that might be at risk of being harmed by the recovery and reconstruction efforts or excluded from them. In the words of the UN's socioeconomic response framework, ensuring that no one is left behind should include an "analysis of the human rights and gender impacts to inform the design of policies that address these risks, protect development gains and reduce the risk of social violence in the coming months and beyond." In addition to this, particular attention should be paid to industries most likely to provide employment for vulnerable groups, while paying attention to other industries, for example, those most likely to pay taxes and sustain the overall local economy.

Mainstreaming resilience into sustainable urbanisation

In addition to targeted interventions based on the peculiar needs of each locality, cities should also pursue "resilience-proofing" by ensuring that all local development plans include such key ingredients as emergency or contingency funds (that are managed and replenished periodically in line with law), emergency food reserves, special emergency committees made up of government, the private sector as well as community leaders and civil society organizations.

Promoting sustainable urbanization

Every decision taken and initiated as part of the recovery and reconstruction effort must pass the test of sustainability by being assessed for its impact on the environment and marginalized and vulnerable groups in line with the 2030 Agenda as well as other global frameworks, such as Paris Climate Agreement, that aim to promote sustainable development in all its forms. Indeed, the crisis should be an opportunity for cities to revise and recalibrate their pre-crisis development plans in line with the SDGs and the new COVID-induced realities, such as the role of digital technology in the future and the need to address old problems with new and innovative solutions.

Entrepreneurial government

A government, either local or national, may be run *like* a business, even if not *as* a business with a profit motive, drawing on the principles of agility and efficiency found in the private sectors (but without compromising sustainability and resilience as discussed above). Such a government will be required to help guide the investments needed towards not only short-term recovery efforts but also long-term transformation and sustainable development long after the COVID-19 crisis has been overcome. COVID-19 thus provides the opportunity to take a fresh look at the interplay between public and private roles in local economic development and re-structure them for greater synergy, complementarity, effectiveness and efficiency. This means that the public sector will not only be reactive to crises but it would be proactive and co-create opportunities through partnerships with the private sector and the larger society

5.3 KEY FEATURES OF THE ECONOMIC RESILIENCE BUILDING PLAN

It is important to clarify from the beginning the scope and content of the ERBP. It is an institutional development plan focusing on the improvement of the public and private institutional arrangements for achieving adequate levels of urban economic resilience. In line with the overall approach discussed in the opening chapters, the ERBP considers economic resilience from the perspective of relevant capacities of key economic actors, first and foremost the city administrations. The ERBP takes the principle of entrepreneurial government to heart, recognizing the critical role of government not only in creating an enabling environment and addressing market imperfections but also in actively shaping and directing local factor markets.

The ERBP is not a capital investment plan and therefore excludes capital investments (except in cases where capital developments are part of institutional development, e.g. a new building for the municipal cadastre office to improve land governance arrangements or new IT equipment for the municipal tax administration office, etc.).

5.3.1 Format

The ERBP can be presented in three formats:

- A standalone plan (also as an annex to a more general city recovery plan). This option ensures a strong focus on economic resilience building but also poses the challenge of linking the plan activities to the other response and recovery measures planned by the city.
- A part (chapter) of the city recovery plan. This format ensures and adequate focus on economic resilience building while also simplifying linkages to the other parts of the plan and other relevant activities.
- A set of activities mainstreamed in the relevant sections of the city recovery plan (depending on the structure). This format ensures the best alignment with the city recovery plan but the consistency and comprehensiveness of resilience building may be a challenge.

It is therefore recommended that the ERBP is originally drafted as a standalone document using the indicative structure described in the following sections and then, if necessary, converted into other formats depending on the local preferences and approaches to economic recovery.

5.3.2 Planning horizon

The latest forecasts set the time required for post-COVID-19 recovery between two and three years. It is recommended that the ERBP covers a period of at least three years (or more if the established medium-term planning horizon is longer) concomitant with the other planning documents developed by the city for recovery and rebuilding.

The suggested ERBP format includes annualised targets. These targets as well as the required resources must be reflected in the annual workplans and budgets (Budget Framework Papers) and efforts should be made to secure adequate resources for its implementation.

5.3.3 Linkages and alignment

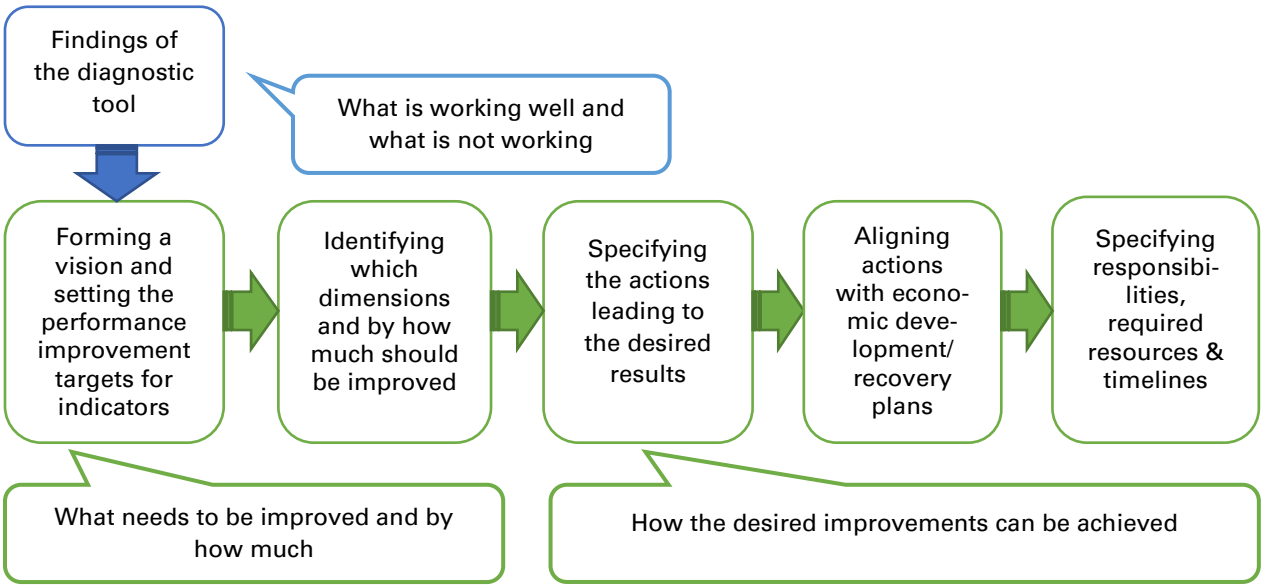
At the highest level, the ERBP should be aligned with the national development objectives and national long- and medium-term development plans. Regardless of the format, the city ERBP should demonstrate clear and traceable links to the following planning frameworks at the city level:

Long term	• City vision • City development strategy and development plan • Strategic sector development plans (housing, transport, energy, ICT, etc.)
Medium-term	• Medium-term development plans • Medium-term expenditure framework (MTEF) • Capital Investment Plan (CIP) • COVID-19 socio-economic recovery plan
Short-term	• Annual work plans and budgets (budget framework paper)

5.4 PLANNING STEPS

There five key steps in the planning process as presented in Figure 11.

Figure 11. Key planning steps for city economic resilience building



5.4.1 Visioning and performance target setting

Visioning and setting the performance targets for improvement imply broad-based consensus around these important and strategic issues. For this, a city should conduct a city-level workshop with the participation of all relevant stakeholders. The city-level workshop will discuss the key findings of the Economic Resilience Performance report and will decide which areas need improvement while also developing a vision for city economic resilience. In addition, this workshop will also identify the extent of improvement across specific indicators (see the next step).

The diagnostic will reveal the resilience areas where the performance is low. This should guide the city in formulating a vision for economic resilience that would summarize the future state of city resilience highlighting the desired improvement in the least performing areas, e.g. “A resilient city

fully benefitting from an enhanced capacity to plan and allocate economic resources effectively and efficiently in a collaborative and participatory manner" (if, for example, economic governance has been identified as the major weakness area that requires an improvement from, say, D to B). Enhanced planning capacity first step is to decide which indicators need improvement to increase city economic resilience and to set the respective performance targets. Then the city should decide on the degree of improvement that is achievable over the planning horizon (3-5 years). Whereas the desired approval may be greater in principle, it should be aligned to what is possible to achieve during the planning period.

5.4.2 Quantifying performance gap

The same city level workshop with the participation of all relevant stakeholders should identify which dimensions and by how much should be improved (performance gap). This step involves a detailed analysis of the underlying dimension to establish the extent of improvement. It is important to keep the track of performance improvements across the dimensions to make sure that collectively they amount to the desired improvement in the indicator.

This is followed by a reality check to adjust, if necessary, the desired performance in the indicator. It may happen that the detailed analysis will reveal that improving certain dimensions is more challenging or impossible over the planning period, requiring a downward revision of the improvement in the indicator (it is also possible that some dimensions will prove to be more easily achievable than originally thought).

5.4.3 Action planning

The next step involves specifying the actions leading to the desired improvement. This is the centerpiece of the planning process performed at the dimension level, which should result in a set of actions designed to achieve the improvements in each dimension, indicator and consequently the performance area. This step will be explained in detail in the following section. But as a general principle, the suggested action should address the underlying cause that results in an unsatisfactory performance leading to the desired outcome.

For example, if labour mobility is constrained by the high cost of rental housing, the city may consider improving the situation through a variety of actions that depend on the local regulatory environment, economic conditions and other factors. Such actions may include development of a city housing strategy (if it doesn't exist) or issuing a housing bond or development of partnerships with the private sector for affordable social housing, etc. Some actions may fall outside the purview of the city (e.g. revision of budget regulations to improve city's budget autonomy) but should be included nevertheless, if relevant to indicate what the city may do in this respect (e.g. prepare a proposal for the Ministry of Finance through a national association of local governments). This step will result in a set of proposed actions each of them corresponding to a particular resilience dimension.

The suggested actions should comply with the SMART criteria, i.e. be specific, measurable, achievable, relevant and timebound. General continuous activities should be avoided. Rather than "promote the engagement of civil society groups in economic governance" (for example), the relevant activity may be "identify civil society organisations with an adequate capacity in economic governance and include two civil society representatives in the City Economic Council".

5.4.4 Strategic alignment

The ERBP is developed in a more general context of COVID-19 recovery and rebuilding. Therefore, it should be aligned and cross-checked against the other long- and medium-term plans. The set of

proposed actions developed during the previous step is reviewed against the other relevant plans with a two-fold purpose (a) to ensure that there is no contradiction between the higher level plans (or more general plans even if they cover the same period) and all plans are mutually complementary (b) to avoid duplication in activities.

Where strategic contradictions are found, they should be discussed and resolved. The higher-level plans (particularly those developed prior to COVID-19) should not be followed blindly and may need a revision. Where similar activities are already envisaged by other plans, they should be reformulated in a complementary manner or removed from the draft ERBP.

This step may also see prioritization and reprioritization of actions in line with the other planning and action frameworks.

5.4.5 Identifying resources

The final step in ERBP planning is to specify responsibilities, required resources and timelines. Once the set of actions is clarified and finalized at the conceptual level, the implementation details should be worked out. The first step is to identify the responsible agency as well as the key stakeholders. Because this is a city plan, the responsible agency should be one of the city departments. A blanket responsibility assigning all tasks to the mayor or the city CEO should be avoided. Even if eventually the action should be enacted by the mayor or the council, the immediate responsibility should be assigned to the department/person who is best placed to initiate and follow up on such an action.

Required resources may include both financial and nonfinancial (capacity) resources. In many cases, capacity support (e.g. access to a project preparation facility to prepare a bankable project) is more important than financial resources. Both types of resources should be kept in mind because their providers differ. This is why it is also important to identify the potential providers of support beyond the central government including development partners, private sector, academia, civil society and others.

Lastly, the timelines for actions should be decided. Some actions may be necessary/feasible immediately or in the very near future; others may require more time. There may be interdependencies between actions that should also be taken into account to define the timelines. The availability of resources and how soon they can be raised will also be a factor that may lead to modification and rescaling of certain actions.

6. STRUCTURE OF THE PLAN

This guideline does not intend to be too prescriptive about the structure of the guide, particularly because as already discussed, it may come in different formats. Below is presented an indicative structure of the plan consisting of five sections, which can be modified and adapted depending on the local conditions.

6.1 INTRODUCTION

Introduction may cover the following issues:

- Summary of the COVID-19 impact on the city economy
- Summary of the key findings of the urban resilience diagnostic

- Vision for urban resilience and major principles for resilience building to which the city is committed
- Explanations about the ERBP linkages and alignment with other planning and action frameworks
- Key assumptions for implementation of the ERBP
- Key stakeholders and their roles
- Any other relevant information of general nature

6.2 PERFORMANCE TARGETS

This section of the plan is associated with step 2 of the planning process described in the previous section. It presents an overview of the set performance goals by each resilience area and resilience performance indicator (RPI) including the present and future desired performance as well as the key improvement areas (Table 2). At this stage, improvement areas are presented in a rather general form, e.g. "more diversified structure of city economy with a larger share of manufacturing" or improved supply of affordable social housing".

Table 2. Overview of performance goals

Resilience area and indicator	Current performance scoring	Desired performance scoring	Required improvements
RA1: Resilience of local business environment			
RPI 1-1: Local economy diversity			
RPI 1-2: Openness and external markets integration			
RPI 1-3: Entrepreneurship and innovation			
RPI 1-4: Productivity, economic and financial capacity			
RA2: Resilience of local labour market			
RPI 2-1: Labour market flexibility			
RPI 2-2: Labour mobility			
RPI 2-3: Social protection of labour			
RA3: Resilience of local financial system			
RPI 3-1: Size and depth of the financial system			
RPI 3-2: Financial performance and soundness			
RPI 3-3: City fiscal space			
RPI 3-4: City financial health and stability			
RA4: Resilience of economic governance			

RPI 4-1: Strength of economic governance structures and leadership			
RPI 4-2: Scope and quality of city planning			
RPI 4-3: Investment readiness			
RA5: Resilience of basic infra-structure and connectivity			
RPI 5-1: Coverage and functionality of basic infrastructure			
RPI 5-2: Connectivity and mobility			

6.3 ACTION PLAN

The action plan embraces stages 3-5 of the planning process described above. It is the centrepiece of the ERBP and lists specific actions, resources requirements and timelines after they have been prioritised, aligned and deconflicted with other planning and action frameworks to ensure maximum synergy and complementarity. It follows the structure of the DTP in terms of the resilience areas and resilience performance indicators (Table 3).

Table 3. Resilience building action plan

Resilience area and indicator	**Actions required**	**Comple-tion date**	**Owner**	**Resources required**			**Budget/ source**
				Person-nel	Equip-ment	Capa-city	
RA1: Resilience of local business environment							
RPI 1-1: Local economy diversity	1. 2. 3.						
RPI 1-2: Openness and external markets integration	1. 2. 3.						
RPI 1-3: Entrepreneurship and innovation	1. 2. 3.						
RPI 1-4: Productivity, economic and financial capacity	1. 2. 3.						
RA2: Resilience of local labour market							
RPI 2-1: Labour market flexibility	1. 2. 3.						
RPI 2-2: Labour mobility	1. 2. 3.						
RPI 2-3: Social protection of labour	1. 2.						

	3.						
RA3: Resilience of local financial system							
RPI 3-1: Size and depth of the financial system	1. 2. 3.						
RPI 3-2: Financial performance and soundness	1. 2. 3.						
RPI 3-3: City fiscal space	1. 2. 3.						
RPI 3-4: City financial health and stability	1. 2. 3.						
RA4: Resilience of economic governance							
RPI 4-1: Strength of economic governance structures and leadership	1. 2. 3.						
RPI 4-2: Scope and quality of city planning	1. 2. 3.						
RPI 4-3: Investment readiness	1. 2. 3.						
RA5: Resilience of basic infra-structure and connectivity							
RPI 5-1: Coverage and functionality of basic infrastructure	1. 2. 3.						
RPI 5-2: Connectivity and mobility	1. 2. 3.						

6.4 RISK ANALYSIS

This section analyses major risks and suggests mitigation measures (Table 4). Some risks can be general, others more specific and relate to specific resilience performance indicators.

Table 4. Risk analysis matrix

Type of risk	**Risks**	**Rating**	**Impact/Mitigation measures**
General risks			
Political	1.	Low-Moderate-High	
Economic	1.	Low-Moderate-High	
Environmental	1.	Low-Moderate-High	
Specific risks			

RA1: Resilience of local business environment	1. 2.	Low-Moderate-High	
RA2: Resilience of local labour market	1. 2.	Low-Moderate-High	
RA3: Resilience of local financial system	1. 2.	Low-Moderate-High	
RA4: Resilience of economic governance	1. 2.	Low-Moderate-High	
RA5: Resilience of basic infra-structure and connectivity	1. 2.	Low-Moderate-High	

6.5 MONITORING AND REVIEW

This section specifies the following:

- Monitoring arrangements: who is responsible for monitoring, how often it will happen, what methods will be used and what resources will be required. It is assumed that monitoring will be performed as part of regular administrative and management responsibilities and no additional resources will be required. At the same time, provisions should be made to ensure substantive participation of other relevant stakeholders outside the city administration, such as civil society, private sector, academia, development partners and others.
- Review arrangements: it is recommended that the ERBP is reviewed every six months or in case of the change of any significant assumption or constraint or legislative/regulatory change. In addition to the city council, other relevant stakeholders should be engaged in the periodic reviews. Reviews may result in re-draft and distribution to all affected stakeholders.

Effort should be made to integrate the ERBP monitoring and review in the existing processes and arrangements to avoid excessive burden on the city departments who have the primary responsibility for implementation of the ERBP.

7. APPLICATION OF THE TOOL

7.1 IMPLEMENTATION APPROACHES AND METHODS

As already pointed out a number of times in this document, there are two major phases of the DPT: diagnostic and planning. In addition, as the DPT is implemented, a third phase focusing on monitoring and review will need to be added. This phase should be integrated as much as possible into the existing implementation and review processes to take place in parallel and use the same mechanisms as the ones applied for other medium-term development plans and frameworks. This will allow the city to maximize the use of resources and avoid unnecessary duplication of efforts.

The key tasks and recommended methods to be employed are presented in Table 5 below.

Table 5. Key approaches and methods

Phase/task	**Approach**	**Methods**
PHASE 1. DIAGNOSTIC		
1.1 Collection of data	Desk review and field research	• Review of administrative data and other existing research

		• Quick surveys where relevant and feasible • Expert panels • Key informant interviews • Focus groups
1.2 Interpretation of data and performance scoring	One or more workshops or a series of engagements with individual experts	• Online or face-to-face Delphi process on urban economic diagnostic
PHASE 2. PLANNING		
2.1 Visioning and performance target setting	Workshop	• Any appropriate combination of participatory tools, including group discussions, brainstorming sessions, etc.
2.2 Designing improvement actions	Combination of a workshop and expert panels and focus groups	• Problem tree analysis
2.3 Identifying resources	Expert panels	• Appropriate costing methodologies
PHASE 3. IMPLEMENTATION, MONITORING AND REVIEW		
3.1 Monitoring	Desk review and field research	• Review of administrative data and documents • Field monitoring visits • Appropriate participatory methods (key informant interviews, focus groups, expert panels, etc.)
3.2 Review	Workshop or an expert panel (or their combination) depending on the extent of the review	• Problem tree analysis

7.2 KEY METHODS

This section focuses on three methods that are used most often during application of the tool: the Delphi method, expert panel, and problem tree analysis.

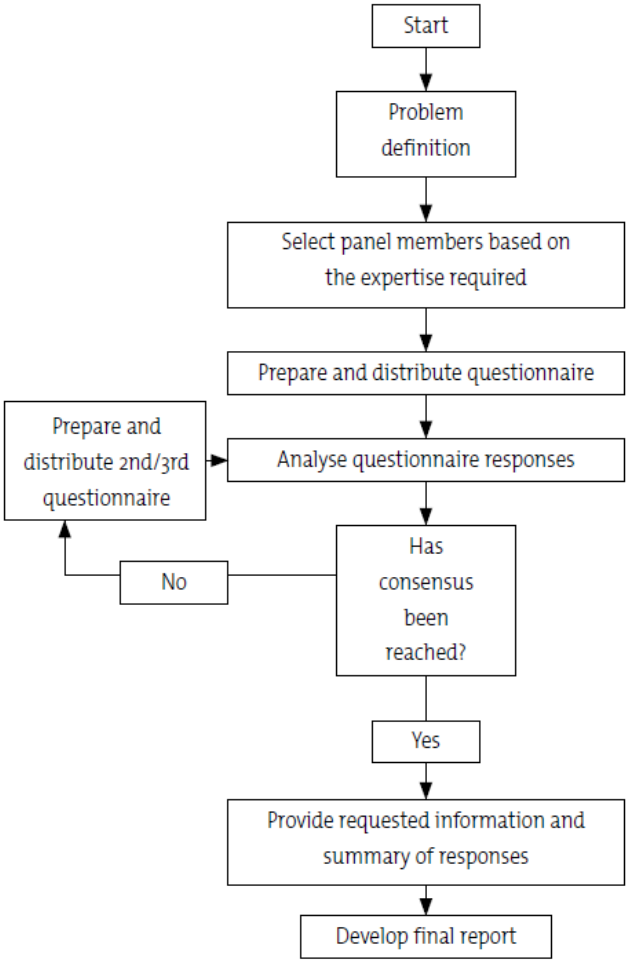
7.2.1 Delphi method

The Delphi method is suggested as an effective methodology for interpretation of resilience diagnostic data and performance scoring. As pointed out before, the Delphi method is particularly effective when there is a need to achieve consensus about issues that do not readily lend themselves to straightforward interpretation and precise analytical techniques but can benefit from subjective judgments on a collective basis. This is the case of performance scoring, which requires qualitative interpretation of the data to situate them in a local/regional context and link them to previous experiences. Some examples have already been discussed, such as industry concentration and share of the informal sector, which may produce a positive or negative effect depending on the local conditions. The iterative nature of the method allows achieving consensus without a social conformity bias. The other advantage of the method is that it can be conducted face-to-face or online.

Each participant completes a questionnaire (in this case the diagnostic section of the tool) and is then given feedback on the whole set of responses. With this information in hand, (s)he then fills in the questionnaire again, this time providing explanations for any views they hold that were significantly divergent from the viewpoints of the other participants. The explanations serve as useful intelligence for others. In addition, (s)he may change his/her opinion, based upon his/her

evaluation of new information provided by other participants. This process is repeated as many times as is useful (Figure 12).

Figure 12. Delphi method flowchart



Source: http://www.ryerson.ca/~mjoppe/ResearchProcess/841TheDelphiMethod.htm

If an online method is used, in the first round the panel members receive the diagnostic section and are requested to give their scores (providing explanations if the scoring is not evident or differs from the one suggested in the scale matrix for the relevant dimension). In the second round, the same tool is distributed but the discrepancies between the participants' views are brought to the fore (but still kept anonymous). Participants are asked to try to explain the differences between their views and others', providing their reasoning and any influential information to which the others may not be privy. In each round such information and reasoning are shared with the other participants (still maintaining anonymity). In most cases, three consecutive rounds suffice.

The face-to-face group version of Delphi allows for more discussion and debate and takes less time than the online version, but the participants forego anonymity. The process is described below (Table 6).

Table 6. Steps of face-to-face Delphi (workshop format)

Step	Description
1. Individual question replies	Working individually and without discussion, each participant completes the scoring matrix.
2. Small groups (by performance area or indicator/group of closely related indicators)	Participants divide into sub-groups of 'similar' people and prepare a list of information, arranged in order of importance. Here 'similar' refers to their views on the topic being addressed. The purpose of having homogenous sub-groups is to help ensure that all information that is important to a particular perspective or interest group will reach the plenary list.
3. Plenary group	Gather the scores from each group and list them where everyone can see them (newsprint, flipcharts, etc.).
4. Plenary vote	A multiple-vote procedure is used to score performance in each dimension.
5. Individual changes	Each individual considers what changes (s)he wishes to make to his/her small-group scoring matrix after having seen the plenary scoring.
6. Small groups	Members compare the scoring of indicators in their small-group matrix to those in the plenary matrix. Where the small group matrix differs from the plenary matrix, the small group has two options. It can either change its scoring to conform more closely to the plenary matrix or it can develop evidence for changing the plenary scoring more in the direction of its scoring.
7. Plenary consensus development	Return to step 4 and repeat the cycle until consensus emerges. Time constraints may require a fixed number of cycles. Consensus can be increased by having two rounds of voting, instead of one, at step 4.

7.2.2 Expert panel

The expert panel is suggested as an appropriate approach for several tasks, such as designing improvement actions and identification of resources, for example. Some elements may be quite technical and time-consuming and better resolved through an expert discussion rather than in a larger and more diversified forum.

Panel members typically include relevant specialists with an expert knowledge of the subject matter and may include representatives of the city departments as well as some external stakeholders as appropriate.

Experience suggests that three to five members can be selected for each of panel corresponding to a specific resilience area (or a set of interconnected indicators). They will bring together a variety of user perspectives and substantive expertise needed to provide meaningful actions and identify resources. For assurance that panel members assess only areas they are familiar with and to prevent overload, the dimensions are distributed among the panels so that first the appropriate improvement actions and then the requisite resources are identified.

In terms of process, to provide the basis for a meaningful discussion, panel members are briefed on the objectives of the exercise, provided with the background material previously assembled (e.g. the Economic Resilience Diagnostic report and the resilience performance targets), and asked to provide any additional information that might be relevant to the topic.

This informal briefing (which often also entails a meeting) is then followed by the panel gathering in a workshop-like setting for a period ranging from a few hours to an entire day (for each panel), depending on the amount of prior preparation. The purpose of this meeting is to jointly discuss and review the material prepared; to add specific cases and experience; and, on this basis, to suggest

the appropriate improvement measures and related resources through debate and aggregation of individual members' proposals.

One advantage of this approach is that, on the basis of their experience in the sector, panel members will in many instances be able to identify reasons leading to good or inadequate performance. In the case of good performance, this approach can hold lessons for other countries.

If performance is unsatisfactory, experts will be able either to point to necessary actions or to identify issues that will need to be studied in more detail to provide a sound basis for such actions. Using the discussion in the various panels, it is possible to identify a prioritized list of actions and gaps in available evidence in selected areas that can serve as a basis for recommendations to improve urban economic resilience.