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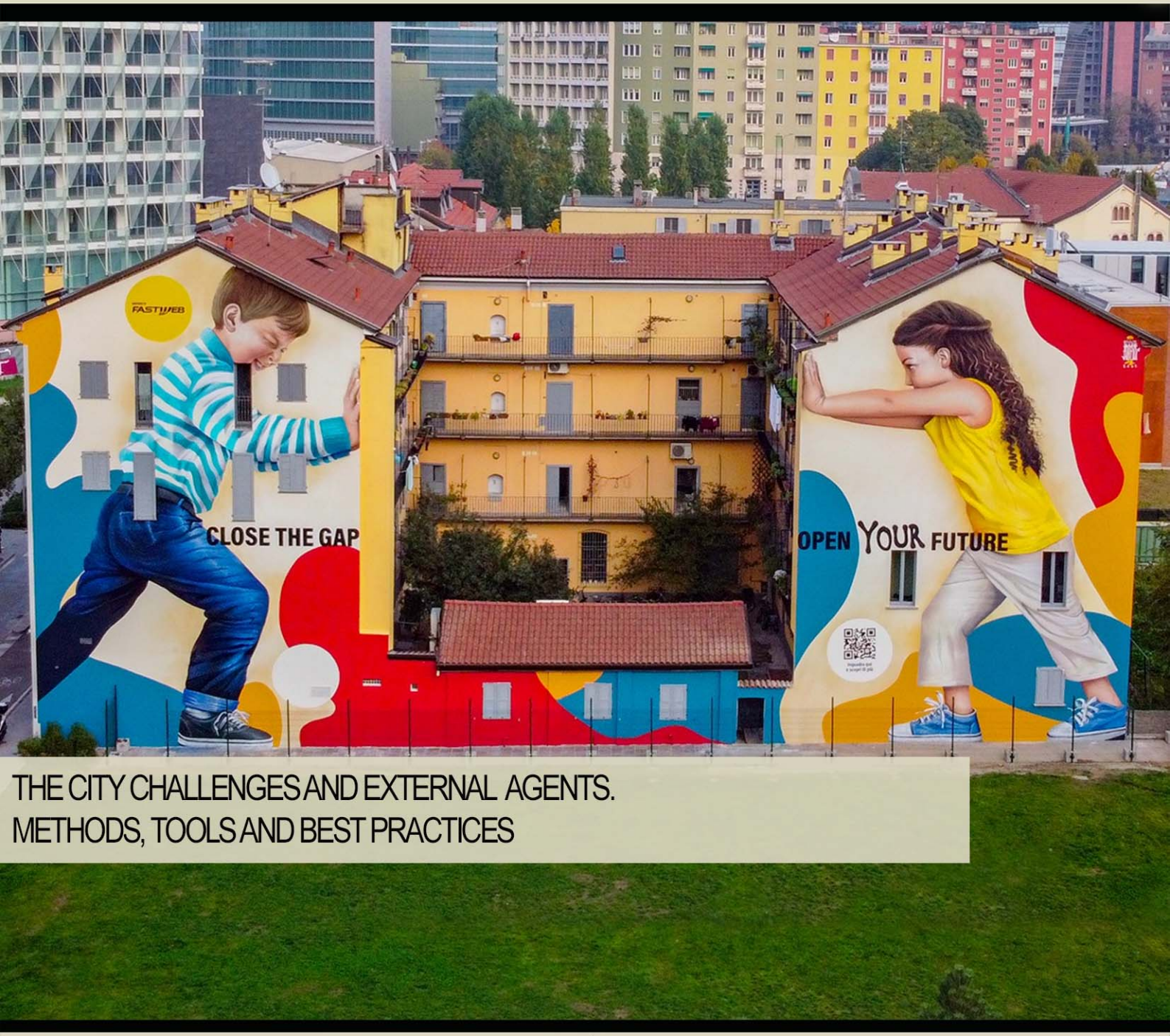

THE CITY CHALLENGES AND EXTERNAL AGENTS. METHODS, TOOLS AND BEST PRACTICES

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The cover image shows redeveloped building in the Garibaldi neighbourhood in the city of Milano (Picture by Fastweb, retrieved from: https://www.facebook.com/Fastweb/photos/10158794132149472).

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REVIEW NOTES – Economy, business and land use

Towards the achievement of SDGs: Evidence from European cities

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Abstract
Starting from the relationship between urban planning and mobility management, TeMA has gradually expanded the view of the covered topics, always following a rigorous scientific in-depth analysis. This section of the Journal, Review Notes, is the expression of a continuous updating of emerging topics concerning relationships among urban planning, mobility and environment, through a collection of short scientific papers. The Review Notes are made of four parts. Each section examines a specific aspect of the broader information storage within the main interests of TeMA Journal. In particular, the Economy, business and land use section aims at presenting recent advancements on relevant topics that underlie socio-economic relationships between firms and territories. The present note deals with the topic of the United Nations Sustainable Development Goals and on how European cities are performing in the achievement of such a differentiated set of targets.

Keywords
Sustainable Development Goals; Cities; Climate change.

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1. Introduction

Sustainable Development Goals (SDGs) represent the most widespread framework to trace the road towards the achievement of sustainable development by the civil society. Developed by the United Nations in 2015, they are a set of 17 goals that push organizations, both public and private, towards sustainability. Each of these goals then group several specific targets, for a total number of 169. Public administrations and cities also have to make their efforts to achieve ambitious goals aimed at reducing carbon emissions and social inequalities, while adapting their environments to the climate change challenges (Kolesnichenko et al., 2021; Tira, 2020). The social and environmental impacts of cities is going to rapidly grow as a consequence of the increased attractiveness of cities as places where people decide to live and where companies decide to locate (United Nations, 2019). For example, cities water footprints account for 41% of the Earth surface, their GHG emissions account for 70% of the global emissions, while there is the possibility that breathable air will decrease as a consequence of such issues (United Nations, 2019). Such challenges present cities with very ambitious commitments and opportunities (Sanchez Rodriguez et al., 2018). In fact, the path to achieve sustainability goals drives the future of cities and, in turn, their future investments that are needed for cities adaptation to their continuous growth and its relative drawbacks both for citizens and environment (Lai et al., 2021). This is true mostly for the developed economies. On the other hand, phenomena like air and water pollution are linked with industrialization that is, especially in emerging economies, the actual path towards economic development. Shifting from an industrialized economy to a sustainable economy – aimed at achieving SDGs – is thus a cost that requires cities reviewing their development models, priorities, and policies. However, it also shows positive economic impact. A recent study (Pisani et al., 2019) investigates if a city's environmental performance is linked to its economic performance. Focusing on a sample of 185 Chinese cities, Pisani and colleagues (2019) find that cities that show positive performance in air pollution and water waste management are more attractive for foreign direct investments (FDIs). The authors state that environmental sustainability has become a location choice factor for multinational companies. Another study based on Italian cities showed that environmental sustainability has a positive impact on their competitiveness, and that this relationship is stronger for larger cities, i.e. those that present higher risks in terms of sustainability issues (Papa et al., 2017). This evidence is important for policymakers, as they show that the investment on environmentally sustainable goals is worth the cost because cities are repaid by economic performance. Literature so far has analyzed issues like cities adaptation to climate change or SDGs (Krayenhoff et al., 2018; Sanchez Rodriguez et al., 2018), but few have devoted the attention towards how cities perform on the different goals set by United Nations. The understanding of this aspect is determinant to understand whether the sustainable transition is proceeding in a linear and coherent manner, or it is an unbalanced path. In this note, I try to show how European cities are proceeding in their path towards the achievement of SDGs. Evidence from the SDG Index shows that while they are performing well in some areas – and even meeting the targets in some cases – they still need to do a lot on other important topics such as climate change adaptation.

2. Cities performance in the achievement of SDGs

The path of European cities towards the achievements of SDGs is very differentiated. Table 1 shows the ranking of some of the most committed European cities in pursuing SDGs (the full report is available at https://euro-cities.sdgindex.org/#/). Indeed, not all the cities are aligned towards reaching the ambitious targets. Moreover, they achieve different performance for different SDGs. Yet, most of them fail in achieving some of the goals that really matter for cities. For example, most of the cities analyzed by the SDG index, a project developed by a team of independent researchers in collaboration with the Sustainable Development Solution Network and the Brabant Center for Sustainable Development, shows that all European cities, even

the more sustainable ones, show unsatisfactory results on SDG 9 (industry, innovation and infrastructure), SDG 11 (sustainable cities and communities), and SDG 13 (climate action).

SDGs Ranking	City
1	Oslo
2	Stockholm
3	Helsinki
4	Copenhagen
5	Zurich
6	Lyon
7	Paris
8	Munich
9	The Hague
10	Eindhoven
11	Amsterdam
12	Rotterdam
13	Luxemburg
14	Hamburg
15	Bordeaux
…	…
34	Milan
35	Turin
…	…
40	Rome

Tab.1 The ranking of European cities in the achievement of Sustainable Development Goals (Source: https://euro-cities.sdgindex.org/#/)

This result is quite worrying considering that: 1. these performances are very poor according to the results shown by the index, and 2. that such goals are supposed to be met by 2030. This suggests deep reflections on government bodies in driving those investments that urban areas need in order to pursue SDGs. Such reflections are even more urgent because the worst performances are met in some of the key areas in which cities should make a difference. Thinking about the importance of dealing with climate change (Pilogallo et al., 2019) by reducing emissions or building infrastructures that adapt cities to its connected risks (SDGs 9 and 13), there is still too much to do considering that also the top performers in Europe shows that most of the challenges still remain to be solved. The same is true for SDG 11 about sustainable cities and communities. On the other hand, better results are achieved when considering SDGs 3, 6 and 7 (good health and well-being; clean water and sanitation; affordable and clean energy). Thus, while in the areas of infrastructures, innovation and climate change major challenges still remain, in the areas of green energy and good health European cities are on the right track, even though some of them are still laggard on several aspects.

Milan, Turin and Rome

This box highlights the situation of the only three Italian cities that perform among the top 50 according to the SDG Index (respectively 34th, 35th, and 40th).
Milan shows fair results in SDG 2 (zero hunger), SDG 3 (good health and well-being), SDG 7 (affordable and clean energy) and SDG 10 (reduced inequalities). However, it still needs major improvements for SDG 13 (climate action) and SDG 15 (life on land). As far as these two SDGs are concerned, Milan shows very low performance on all the single

indicators that measure the performance.

Turin shows a different situation. It has already achieved top performances on SDGs 2 and 6 (zero hunger; clean water and sanitation), while it shows the worst results on SDG 4 (quality education), SDG 13 (climate action), SDG 15 (Life on Land) and SDG 16 (peace, justice and strong institutions).

Finally, Rome shows the worst performance on 6 SDGs (4, 5, 11, 12, 13, 16) with good results only on SDG 2 (zero hunger) and average results on the others. These results are worrying if one looks at the different indicators that show problems both on the social and on the environmental side of sustainability. For example, Rome shows low results in the quality of local government, the perceived safety, and the gender equality, but also on waste treatment and CO2 emissions.

3. Discussion and conclusions

This note has focused on the topic of SDGs and the performance that European cities are achieving in contributing civil society to the achievement of the goals set by United Nations, to be met by 2030. As shown by the SDG index, reported in Table 1, Northern European cities are those that meet SDGs more than others European cities. Overall, results are very much differentiated and, while most of the cities achieve satisfying results about green energy and good health, the greatest difficulties regard innovation and infrastructure issues, mostly related to climate change. This calls for urgent interventions from those institutions that are in charge of driving investments in urban areas. As previously underlined, the issue of sustainability represents great opportunities in terms of economic development because it is connected the attraction of investments. With this note, I suggest that these interventions should now be mostly devoted to the achievement of those SDGs (in particular 9, 11, and 13) that are very important for cities, but in which major challenges still remains.

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