WORKING PAPER

Eurofound

Quality of life and public services

Local area aspects of quality of life: An illustrated framework

European Quality of Life Survey 2016

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Contents

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Overview of policy and data illustrations included in the paper

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Executive summary

Introduction

Quality of life is influenced by the physical and social characteristics of people's direct surroundings. Previous research by Eurofound on housing acknowledged the importance of such 'local area aspects' beyond the dwelling, and the European Quality of Life Survey (EQLS) includes numerous questions which relate to people's local living conditions.

This working paper offers a conceptual framework to explore the 'local area dimensions of quality of life'. It takes a comprehensive approach, providing a framework applicable to all types of areas in the EU, whether they are rural or urban, affluent or deprived. The paper aims to inform policy makers, researchers, and other stakeholders, including those involved in developing measurement frameworks.

First, the paper discusses the definition and span of the local area. It then highlights challenges in capturing a key general characteristic of the local area – its degree of urbanisation. Following the conceptual discussion, a framework is proposed. The framework is then populated with examples of local area aspects identified by mapping questions in international surveys which concern specific aspects of the local area, complemented with evidence from the literature. The paper finishes by discussing how interlinkages of these aspects are important when designing policies to improve quality of life in the local area. Illustrations are provided of measures aiming to improve quality of life across the different local area dimensions, and the dimensions in the framework are illustrated with data from the EQLS.

Policy context

People's living environment is influenced by local, regional and national policies and initiatives. EU policies also play a role. In particular, the EU's Cohesion Policy, with Structural and Rural development Funds as a key tool, aims to improve regions in the EU and to avoid territorial disparities. The recently proclaimed European Pillar of Social Rights (2017) relates to the local area in particular through its emphasis on access to essential services. Furthermore, with the Digital Single Market Strategy, the EU aims to improve access in all areas to fast internet, e-government and digitalised services. The EU's commitment to the UN's Sustainable Development Goals (SDGs), includes striving for inclusive, safe, resilient and sustainable local areas.

There are initiatives at the EU level which bring together stakeholders to exchange knowledge on how to improve quality of life at the local level, for instance through the Urban Agenda promoting partnerships on key issues such as poverty, mobility (transport) and air quality. Other examples include the Action Group on age friendly buildings, cities and environments, and platforms which aim to reduce health inequalities. The EU also has specific legal tools, such as Directives which set limits to air pollution or noise, and the 'European Accessibility Act' which aims to make services (transport, banking) more accessible for instance through rules concerning public procurement.

Findings

This exploratory paper presents an illustrated framework (see Figure below), defining aspects of the local area which contribute to quality of life, applicable all across the EU. It distinguishes 1) social and economic, 2) physical, and 3) services and government aspects of the local area. The framework also introduces a spatial dimension: broadly dividing local area aspects into those that need to be in people's immediate, intermediate or more distant surroundings in order for them to contribute to improving quality of life. The importance of access and quality are highlighted.

People's needs and preferences, influenced by characteristics of the household and the broader context, determine the relevance of various aspects for their quality of life. Country differences in the role of specific services, digitalisation, demographics and level of

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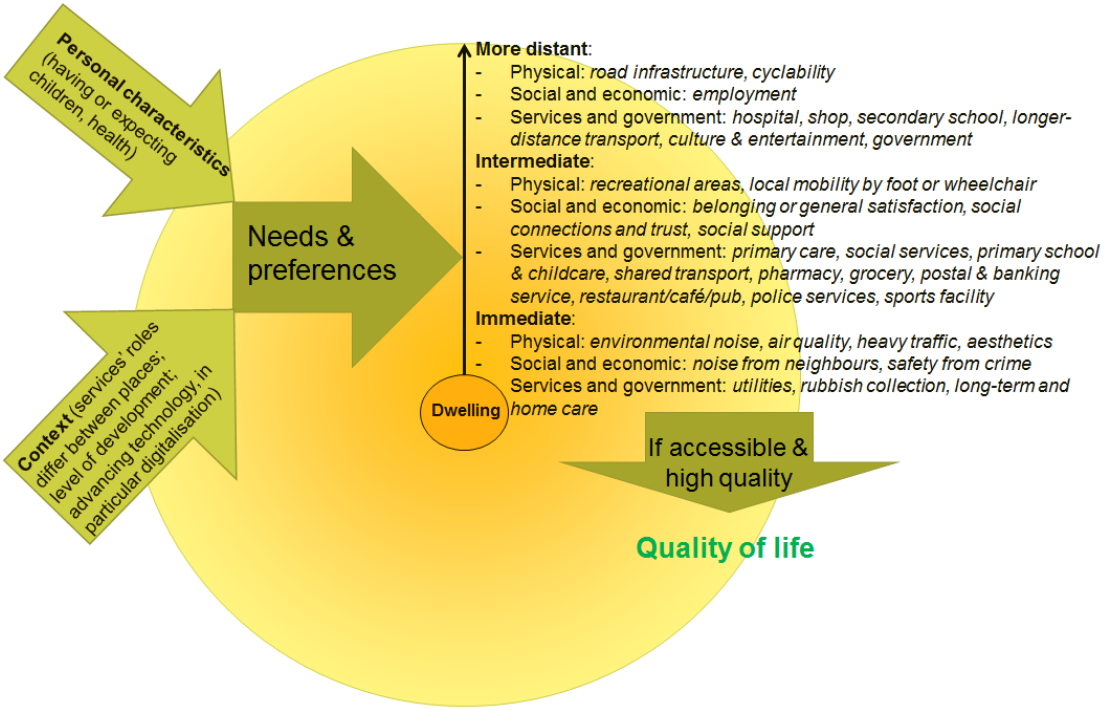
development are highlighted as contextual factors which affect needs and preferences in particular. The paper focuses on aspects of the local area around where people live, but acknowledges that, for instance, the characteristics of areas where people work also matter for quality of life.

Figure *Local area aspects contributing to quality of life: an illustrated framework*



Source: Eurofound (2018), *Local area aspects of quality of life*.

The quality of accommodation can mitigate certain problems in the neighbourhood and vice versa. For instance, a private garden can reduce the impact of limited access to parks, and public areas can to some extent compensate for absence of space to sit in a private garden or on a balcony. People may also have the option to move to areas that better fit their needs and preferences, but often face restrictions in this regard. Transport options which are accessible (affordable, physically accessible) and of high quality can also ease problems of physical access to certain amenities and services. Facilitating local mobility by foot or wheelchair by ensuring convenient sidewalks and crossings can improve well-being and social integration.

Policy pointers

Although this is an exploratory paper some messages for policy makers, researchers and other stakeholders have emerged:

- The local social, service and physical environments play an important role in quality of life. Improving the quality of the local area along various dimensions can also prevent social and health problems.
- Policies that improve quality of life at the local level can be national, regional or local. The EU also has an impact. Attention to the local area can enhance the effectiveness of national or regional policies. As these policies interact, better communication between local actors and EU, national and regional policy actors can contribute to improved quality of life.
- Indicators of urbanisation based on population density of a broader area are important, but may fail to capture rural pockets within broadly urban areas, or vice

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versa. This can be a problem for instance if policies are designed for sparsely populated areas, but are also implemented in densely populated areas within them.

- The local area which matters for an individual's quality of life differs between individuals and often goes beyond administrative borders. Cooperation among adjacent jurisdictions is particularly important.
- Policy objectives may be more readily achieved by addressing multiple dimensions in the framework simultaneously, rather than focusing on one aspect. Such an approach can not only make policies more effective, but also improve resilience. Multiple paths to improve robustness and resilience should be taken into account when investments in the local area are considered.
- Single aspects of the local area can impact on several elements of quality of life. Addressing one issue may lead to various quality of life improvements. For instance, addressing vandalism can have a positive impact on well-being by improving feelings of safety, aesthetics and perceived quality of amenities or services. Such improvements should be taken into account when investments are considered.
- Particular attention should be paid to digitalisation, increasing the importance of certain aspects of the local area (access to fast internet), while decreasing that of others (access to certain banking services).
- With an increasingly older population it is likely that more people will spend more time in the area where they live, so local area aspects are likely to increase in importance for quality of life. A wide range of measures can contribute to facilitate longer and healthier lives in the community.
- Measures to improve local area aspects are particularly important for people who lack the resources to mitigate local area problems, for instance by living in high quality housing. Such measures can particularly improve life in the community for groups in vulnerable situations, and improve inclusiveness.
- 'Objective' mapping of the presence of certain amenities and services in the local area is useful, but not enough. Amenities and services contribute to quality of life only if they are accessible in all respects and of high-enough quality.
- Some data gaps have emerged which appear relevant for evidence based measures to improve quality of life, in particular: comparable EU-wide survey data on the source of noise perceived problematic (whether it comes from neighbours or the street), aesthetics, social or community services beyond primary healthcare, aspects of the local area which facilitate mobility by foot or wheelchair, and public spaces beyond green areas.

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Introduction

Quality of life in the European Union (EU) –as elsewhere– depends in part on the physical and social characteristics of people's direct surroundings. This working paper offers a framework to identify aspects of the local area influencing quality of life. It does so by mapping relevant characteristics of the local area asked for in major surveys in Europe, and by drawing from the research literature. The paper further discusses the challenges of rural-urban typologies. Finally, the paper discusses how it is important to be aware of interlinkage of these aspects when designing policies to improve quality of life in the local area. The paper provides illustrations of policies which aim to improve various dimensions of the local area and thus well-being of residents, and data on different aspects of the local area which matter for quality of life.

EU policy relevance

People's living environment is influenced by local, regional and national policies and initiatives. Many EU policies interrelate with this living environment, including by facilitating free movement of people and capital between nations, regulating state funding of services and rules for public procurement. Some EU policies or broad strategies relate relatively specifically to quality of life in the local area:

- **Regional policy**, also referred as Cohesion Policy, aims to improve the economic well-being of regions in the EU and to avoid regional disparities. This is closely related to quality of life at the local level. The EU's Structural and Rural development Funds are important instruments in achieving this, contributing to the development of urban and rural areas throughout the EU.
- **Urban Agenda** aims to promote cooperation between Member States, cities, the European Commission and other stakeholders, to stimulate growth, liveability and innovation in EU cities. This is in line with the UN's 'New Urban Agenda' adopted in October 2016 during its 'UN Habitat III conference'. The Urban Agenda for the EU (European Commission, 2016b), adopted by the Member States in 2016, currently includes partnerships on twelve urban challenges, including for instance poverty, mobility (transport) and air quality. Member States which hold the Presidency of the EU add further partnerships.
- **Sustainable Development Goals** (SDGs) include goals to make local areas inclusive, safe, resilient and sustainable. Specific targets include access to safe, affordable, accessible and sustainable transport systems for all, improving road safety and expanding public transport. It also includes a target on providing universal access to safe and inclusive public spaces. Special attention is paid to needs of people in vulnerable situations, women, children, disabled, and older people. The SDGs were set by the UN and many local governments have started to integrate the SDGs in their own strategies and have set objectives to fulfil them. The European Union encouraged the SDGs' development and committed to mainstreaming them in its policies and initiatives (European Commission, 2016e).
- **European Pillar of Social Rights** in particular links to the local area in relation to its principle on access to essential services, central to quality of life.

There are also specific EU Directives addressing local area problems which EU-level research has linked to reduced quality of life, in particular with regard to noise and air pollution. Together, monetary cost of these two problems in the EU is estimated at nearly €1 trillion (European Commission, 2016d).

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- **2008 Ambient Air Quality Directive** sets limits for the most harmful air pollutants. However, the European Parliament's (2016) study on implementation of the Directive showed that about two thirds of Member States do not respect these values. Limits are often exceeded in large urban areas close to roads with heavy traffic. In the EU, an estimated annual 74,000 premature deaths in 2014 (latest data available) are due to nitrogen dioxide (mainly from diesel vehicles) and 399,000 to particulate matter (from vehicles, heating, industry, agriculture) alone (European Environmental Agency, 2017). This compares to 26,000 deaths in 2015 (latest available) from traffic accidents and over 100,000 permanently disabling injuries (European Commission, 2017e).
- **2002 Environmental Noise Directive** aims to reduce both noise emissions and harm from environmental noise. A 2016 assessment of the Directive argued that effects materialised only partially due to delays in adopting common assessment methodologies (European Commission, 2017d). The EU's 7th Community Environment Action Programme confirms the target of reducing noise pollution closer to the World Health Organisation's (WHO) target levels by 2020 (European Parliament and Council of the EU, 2013). An estimated annual 10,000 premature deaths, 900,000 cases of hypertension, and 43,000 hospitalisations are due to environmental noise (European Environmental Agency, 2014). Its main source is road traffic.

The EU supports several other initiatives which relate to local area, in relation to health. For instance, the EU's European Innovation Partnership on Active and Healthy Ageing is a platform where stakeholders exchange ideas and look for partners for projects. One of its six action groups focuses on '**age friendly buildings, cities and environments**', acknowledging the importance of such environments in promoting active and healthy ageing. The EU also subscribes to the WHO's '**Health 2020**' strategy. Community resilience, supportive and enabling environments and sense of belonging are key to this strategy, but according to the WHO (2015) need better monitoring and measurement. The European Commission also refers to the local environment in the context of its focus on **reducing health inequalities**, and to achieve this, the Committee of the Regions (2017) emphasises the role of local area aspects such as a walkable/cyclable environment, green areas, and access to sport facilities and to healthy food.

Some other initiatives further concern mainly services. The **European Accessibility Act** aims to make services such as transport and banking more accessible, and the **Digital Single Market strategy** to improve local ICT (information and communication technology) infrastructure, enabling access to fast internet, e-government and digitalised services. The EU's Social Protection Committee (2009, p. 5) further set a **voluntary European quality framework for social services** which argues that 'tailor-made solutions taking into account the particularities of the local situation [should be] chosen, guaranteeing proximity between the service provider and the user while ensuring equal access to services across the territory'. The EU also contributes to services and social inclusion by encouraging young people to work with local initiatives in the **European Solidarity Corps**.

Objective

The main objective of this paper is to develop, discuss and illustrate a holistic framework capturing local area aspects of quality of life. First, a conceptual discussion on the 'local area' aims to give a better idea what the local area comprises, informed by an inventory of how international surveys refer to it. Next, key dimensions of the spatial dimension of quality of life are mapped. Evidence of these dimensions' relation to quality of life, and any further policy relevance they may have, are highlighted. Based on this exercise, a framework is

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proposed, detailing aspects of the local area which matter for quality of life. For each dimension, both policy illustrations and data (based on the most recent 2016 EQLS) illustrations are provided. The paper then discusses how the framework contributes to understanding the effectiveness of policy measures. Finally, some modest policy messages are drawn.

Methods

The paper is based on desk research. It first synthesises research literature in proposing a general framework to map local area aspects of quality of life. Then it seeks to populate this framework with examples of such aspects. In doing so, a structural approach was taken to ensure capturing aspects broadly considered important in the EU. In particular, the paper focuses on international surveys (covering EU Member States) about living conditions or quality of life, and makes an inventory of issues relating to local area aspects. As the questions and indicators adopted by these international data-gathering efforts have gone through extensive processes of quality assurance and expert input, they can be expected to comprise a rich, informed source of significant aspects related to quality of life across the EU. These questions are then complemented by evidence from the literature. Short examples of policy initiatives and data analysis are further provided to illustrate the various dimensions of the framework developed in this paper.

With regard to the international data collection efforts, the paper is mainly informed by the European Union Statistics on Income and Living Conditions (EU-SILC) and four major international surveys, which cover multiple EU Member States and include local area aspects of quality of life: the European Social Survey (ESS), European Quality of Life Survey (EQLS), Survey of Health, Ageing and Retirement in Europe (SHARE), and Urban Audit. Unless otherwise stated, for EQLS its 4th wave (2016) questionnaire, for ESS its 8th wave (2016/7), for EU-SILC reference is to the 2014 guidelines, and for the Urban Audit its 2015 questionnaire (or, 'Flash Eurobarometer 419') are used, the latest available when drafting of this paper started. For SHARE the 5th wave (2013) was used, because it included a module with 'local area' questions, not repeated in later waves. Other international (Gallup's World Poll and Eurobarometer) and national surveys are referred to when these can complement the analysis.

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Defining the local area, its span and level of urbanisation

This section discusses how to refer to and define 'the local area'. Second, it looks into a key characteristic of these areas. In the EU, there are wide geographical disparities both in needs and resources, not only between Member States, but sometimes even more so between metropolitan areas and non-metropolitan areas, between areas based on the region where they are located and between areas which are rural and those that are urban. As an example of a key characteristic of a geographic area, the distinction between rural and urban areas is discussed.

Terminology

How to refer to the local 'environment', 'area', 'community' or 'neighbourhood'? These labels have slightly different connotations. The term 'neighbourhood' tends to be used more in urban settings. 'Community' seems to be more often used when referring to social aspects than the geographical ones, and can be understood as 'being together' (Sommerville, 2016). 'Environment' may also have social connotations, but tends to be used mainly when ecological aspects are emphasised, while 'area' seems to somewhat stress physical aspects.

What label is used by international surveys to investigate the 'local' in their standardised English versions? Table 1 presents an overview. The European Commission's Urban Audit uses mostly 'neighbourhood'. It has to be noted that this survey is only conducted in cities. The ESS uses 'area'. Word choice by EQLS varies between questions, with both area and neighbourhood. While EU-SILC has no standardised survey, in its English-language 'suggested question format' it uses the wording 'place'. Member States have implemented this in different ways by using translations somewhat closer to 'area' (*zona* in Spanish), 'surrounding' (*omgeving* in Dutch), or 'environment' (*environnement* in French).

Table 1 Reference to the local area in surveys and data collection tools in the EU

Survey/Data collection	**Word choice when referring to local area**
ESS	'this area'
EQLS	Varies depending on the question, with 'your local area', 'the area in which you live', 'your immediate neighbourhood' and 'the immediate neighbourhood of your home'.
SHARE	'your local area, that is everywhere within a 20 minute walk or a kilometre of your home'.
Urban Audit	Various questions refer to the city as a whole, but when more specific for the local area: 'my neighbourhood' and 'the place where you live'.
EU-SILC	Recommended format: 'the place where you live'. 'Living environment' is also used. For a question about problems with noise, it is required that reference to the dwelling be clearly indicated, while for a question about pollution and one about crime, reference to 'the area (situated close to the place where you live)' is required.

Source: compiled by Eurofound from questionnaires/guides.

Span of the local area

What 'span' of the local area is most relevant where it concerns local area aspects of quality of life?

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One could again take an administrative perspective in demarking a geographical area, and refer to the local government or electoral boundaries. Data at the level of such local units are policy-relevant for example when gathering statistics about local public expenditure. Also, for instance, when a certain service is the responsibility of a local authority, indicators about service quality in that administratively demarked local area are relevant for assessment.

However, if the objective is to measure individuals' quality of life and its components, the administrative catchment area may be inappropriate for demarking someone's living environment. Governmental catchment areas can end the street next to a person's dwelling, while the adjacent catchment area may have a greater impact on a person's quality of life. Or, in contrast, some governmental catchment areas can be large in size, and only subsections are of relevance for its inhabitants. To illustrate: the wide prevalence of playgrounds or easy access to groceries in one neighbourhood in a city may be of little relevance for quality of life of people in a neighbourhood on the other side of that city, even if within the same administrative area.

So, when looking at the local area dimensions of quality of life for an individual or household, one may need to look beyond administrative divisions. Also, in a survey the local administration where it was held can be recorded, but respondents may not recognise administrative boundaries and may well refer to amenities and services in adjacent jurisdictions. The surveys considered in this paper indeed do not refer to the respondent's administrative local area, but rather to the local area or neighbourhood more generally (Table 1). However, some surveys do use the prefix 'local'. This may by some respondents be associated with 'local government' (and thus the administrative demarcation).

There are other differences between the survey questions in relation to its span, in particular in the magnitude of the span around the dwelling. For instance, the prefix 'immediate' and post-fix 'of your home' may be seen as closer than 'where you live'. Some Member State questionnaires that are used to collect data for the SILC indicators include a more detailed definition of their reference to the 'local area'. For example, Finland has defined it as the 'area where the respondent lives, moves about and runs errands and that he/she feels to be an important near-by area'.

Overall, Spittaels and colleagues (2009) note that an 'issue that increases the inconsistency in measurements is the lack of standardisation in neighbourhood definitions. These are ranging from vague formulations as 'neighbourhood' and 'local area' to more specific definitions 'within a 5 to 10 minute walk'.' Spittaels and colleagues build on an analysis of past approaches to improve the way 'the local area' is referred to in European survey questions, proposing the following wording: 'By your neighbourhood we mean the area ALL around your home that you could walk to in 10-15 minutes - approx 1.5 km' (or "1 mile" for UK-context).' This is a notable attempt in improving consistency and specificity. Furthermore, by specifying duration rather than distance alone, it captures to some extent the concept of mobility, which differs per person and among places. It should be taken into account that the analysis was done in a health research context, capturing the importance of local area aspects for health rather than for quality of life more broadly. However, if the objective is to capture what the local area is for an individual, a more subjective measure may be appropriate, for various reasons:

1) Depending on personal characteristics, a larger or smaller area may be relevant. While it is clear from research that some people have larger neighbourhoods than others, research is less unified in identifying consistent patterns. For instance, one study argues that people not in employment tend to regard their neighbourhoods as larger because they spend more time in their local area than other groups, in particular highlighting young and retired people (Mohan and Twigg, 2007); research in five urban regions in the EU suggests that self-defined neighbourhoods are larger for people who are younger, higher educated, who wish to stay in their neighbourhoods, and who have lived for longer in their local area (Charreire et al, 2016).

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2) Even when people have similar personal characteristics and a similar area they could reach in 10–15 minutes, people living close to each other often do not share the same neighbourhood due to varying habits, needs and preferences (Orford and Leigh, 2014).
3) Access to good transport options, beyond walking alone, can increase the area of relevance (Mohan and Twigg, 2007).
4) 'Walking time' further does not take into consideration that some people may not move around by foot but by wheelchairs in particular.
5) Some aspects of the local neighbourhood may need to be at a reachable distance, but it may be somewhat less important for quality of life that they are at a 10-15 minute walk than other aspects. For instance, a grocery may be important to have at closer range than a hospital to contribute to quality of life, and street lighting may concern the more immediate area around the dwelling than broader road infrastructure.

Local area of what?

The surveys investigated in this paper often refer to the area around one's *dwelling*. However, other areas where people spend their time also matter for their quality of life. For example, local areas around people's workplace can matter (Orford and Leigh, 2014). Similarly, areas around schools or around relatives' dwellings also matter for people who spend much of their time in education or caring for relatives respectively.

'Local area' in this paper

Overall, whatever label is used for 'the local area', the essence is that 'distance matters'. This paper mainly uses the term 'local area'. It will be treated subjectively, so not restricted to administrative areas, specific distance or walking time. The focus of this paper further is on the area where people live.

Rural-urban distinction

Over 70% of Europeans live in towns and cities, and 80% are forecast to do so by 2050 (European Commission, 2017a). Urbanisation is a global phenomenon. However, the EU is different from large parts of the world in two respects with regard to the proportion of people living in urban areas. First, already a high proportion of people live in urban areas, and urbanisation has slowed down. Second, the EU is exceptional in that more than half of the population lives in small and medium sized towns with a population of between 5,000 and 100,000. In other parts of the world the population is more concentrated in large metropoles.

Differences within urban areas and within rural areas in aspects quality of life in one country are often larger than those between rural and urban areas (Eurofound, 2014). Where there are differences between rural and urban areas, there are diverse patterns across Member States. In some countries rural areas score worse than urban areas on relatively many domains of quality of life, most notably in Romania, followed by Slovakia, Croatia, Cyprus, Finland and Hungary. In others Member States rural areas generally score better, most notably in Ireland, followed by Germany, Netherlands, United Kingdom, Czech Republic and France.

However, some key policy concerns are more associated with urban environments and others with rural environments. One concern typically associated mainly with urban areas is segregation (Kazepov, 2005; European Union, 2011). In cities in some Member States (Denmark, Netherlands) segregation by income is particularly strong among the lowest income earners (OECD, 2016a). Also, problems for instance with noise and bad quality air are often worse in urban areas (Eurofound, 2014). Some other concerns are more associated with rural environments. This includes depopulation and challenges to sustainability of communities (Westhoek et al, 2006; European Union, 2011). Local services (such as schools, general health services, childcare, sports facilities and shops) take longer to reach in rural and

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suburban areas. The difference is greater for services such as secondary schools, hospitals, theatres, cultural facilities and supermarkets, and greatest for regional specialised education and healthcare centres, large sports and cultural facilities or government offices (European Commission, 2017b).

Policy decisions about allocating resources to target people in rural or urban areas may be based on such differences identified between rural and urban areas. However, the findings are likely to depend on the rural-urban classification system chosen (Berke et al, 2009). And, if policy makers want to targeted resources to rural or urban areas they need a classification system. Rural-urban distinctions in research are usually based either on population density measures or on self-reported survey data. The definitions used within each of these two approaches are discussed below, before contrasting them.

Population-density measure

Classification of the level or urbanisation of a geographical area is usually based on population density measures, drawn from administrative data. The OECD developed a measure, which was then refined by Eurostat. The measure distinguishes between three levels of urbanisation of 'lower-level local administrative units' (or, 'LAU2s'), which broadly coincide with municipalities: 1) densely populated, or 'cities', 2) intermediate density areas, or 'towns and suburbs', and 3) thinly populated, or 'rural areas' (Eurofound, 2014; Eurostat, 2016; Eurostat, 2018a).

Self-reported measure

Survey-based measures do not classify broad geographical areas, but rather the individual or household. Such measures characterise the surroundings by descriptions of different degrees or types of urbanisation. They do not explicitly do so in terms of population density, but respondents may loosely consider population density when providing an answer. Among the surveys reviewed for this paper, EQLS and ESS provide the largest number of answering categories. EQLS distinguishes four types of urbanisation: 1) the open countryside, 2) village/small town, 3) medium to large town, 4) city or city suburb. ESS even distinguishes five levels. They differ somewhat from those of EQLS, and include a breakdown of 'city or city suburb' to have suburbs separately: 1) a big city, 2) the suburbs or outskirts of a big city, 3) a town or a small city, 4) a country village, 5) a farm or home in the countryside.

Contrasting population density and self-reported measures

Does the degree of urbanisation reported by survey respondents coincide with the degree of urbanisation of the LAU2 area where they live according to the population density based categorisation? Analysis of EQLS data provides a rare opportunity to compare these two approaches to measuring urbanisation, as EQLS records the Eurostat classification of the area where the respondent lives along with their self-reported type of urbanisation.

The Eurostat measure and the self-reported measure often broadly coincide (Table 2). For instance, most (78%) people who report to live in a 'city or city suburb' live in a 'densely populated area', and most (56%) who say they live in the 'open countryside' live in a 'thinly populated area'. Overall, the 'less urban' the self-reported category, the lower the proportion living in densely populated areas. People living in intermediately densely populated areas mostly report to live in one of two intermediate categories in EQLS.

Table 2 EQLS self-reported degree of urbanisation versus Eurostat's population-density based measure in the EU, 2016 (%)

	Eurostat degree of urbanisation		
EQLS Self-reported	Densely populated area ('cities')	Intermediate density area ('towns and suburbs')	Thinly populated area ('rural areas')

The open countryside	8	24	56
A village or small town	13	41	37
A medium to large town	44	43	3
A city or city suburb	78	13	1

Source: Eurofound analysis of EQLS 2016 data.

Notes: Spain is excluded because Eurostat categories were not collected.

However, there are some apparent contradictions. While the intermediate categories can be more challenging to compare, the discrepancies at the extremes are striking: 1% say they live in a 'city or city suburb', but are categorised by Eurostat as living in a 'thinly populated area', and 9% say they live in the 'open countryside', but live in a 'densely populated' Eurostat area. Two explanations for these discrepancies between the self-reported and population density based measures could be the following.

1. Characteristics of the local area other than its population density may contribute to whether someone feels to live in a city or city suburb, or in the open countryside.

EQLS analysis suggests this may be an explanation in some cases. For instance, people who live in a thinly populated area may feel they live in a city or city suburb, because they are well connected by transport, and have good access to services. Indeed, for example 97% say they have easy access to public transport and 97% say they have (rather or very) easy access to cultural facilities. Among those who live in a densely populated area but say they live in the open countryside, a majority (61%) says access to public transport is (rather or very) difficult.

2. By generalising for a larger geographical area, population-density based measures (however refined) by definition include both more and less densely populated sub-areas in a wider area. So, the people who live in a thinly populated area but say they live in a city or city suburb, may live in a relatively densely populated pocket within the thinly populated wider area.

This second reason particularly applies when a rural-urban label is attached to a larger geographical area. In 2016, in some countries the largest LAU2 have over 2 million people, such as 3.5 million for the largest LAU2 in Germany, 2.9 million in Italy and 2.1 million in Romania (Eurostat, 2018b). In general, LAU2s have a relatively large average population size for example in the Netherlands (43.5 thousand), Sweden (34.0 thousand) and Finland (17.5 thousand). Indeed, in the Netherlands, Sweden and Finland there are more discrepancies, in particular many people say they live in the open countryside, but live in a densely populated Eurostat area (9%, 36% and 34% respectively). In the three countries listed above with a particularly populous LAU2, there are many people reporting to live in a medium to small town, but categorised as living in a densely populated Eurostat area (54% in Germany, 58% in Italy, 60% in Romania). This may mean that many inhabitants captured in a metropole LAU2 actually live in less urban places surrounding that metropole.

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Conceptual framework of local area aspects contributing to quality of life

Dimensions of local area aspects

There are different ways to categorise local area aspects which matter for quality of life.

One approach focuses on the 'nature' of these aspects. This approach is for instance taken by Bonaiuto and colleagues (2003; 2015) who identify four types of local area aspects: spatial (architectural-planning space, organization and accessibility of space, green space), human (people and social relations), functional (welfare, recreational, commercial, transport services), and contextual (pace of life, environmental health, upkeep). A second example is presented by Jean (2016), who argues 'neighbourhood attachment' can be physical, social or symbolic. Similarly, according to OECD (2013), neighbourhoods can affect people's quality of life through: its physical characteristics (poor air, clean water), its social environment (trust, connectedness, social relationships between neighbours), and availability of services and opportunities (employment, public services). Other research, going somewhat beyond local area aspects, distinguishes general socio-economic, cultural and environmental conditions, social and community networks, and individual life-style factors (Dahlgren and Whitehead, 1991). Or –similarly, but more differentiated–, between aspects of the global ecosystem, natural environment, built environment, activities, local economy, community, lifestyle and people (Barton and Grant, 2006).

An alternative approach to categorise aspects of the local area primarily focuses on the place in space 'where the aspects matter', rather than their nature. Suttles (1972) takes this approach, arguing that the local community is best thought of not as a single, segregated entity, but as a hierarchy of ecological units nested within successively larger communities. In this hierarchy, the neighbourhood exists at three different scales, which have different functions and whose effects operate through different mechanisms: 'home area', 'locality' and 'urban district'. Similarly, Maggino (2006) identifies the 'extensive distribution', containing services that can be reached in a short time, and the 'zonal distribution' containing services that can be reached in a mid-long time. Maggino also adds the 'variable distribution', where services can be reached in variable time depending not on geographical factors but on individual preferences for instance for a specific trusted family doctor or bank.

This paper builds on these two broad approaches, combining them and adjusting them to apply more universally to categorise local area aspects of quality of life in the EU. Here it is important to note that Bonaiuto and colleagues (2003; 2015), Suttles (1972) and Maggino (2006) restrict their analysis to the urban environment, and do not concern the EU as a whole. Suttles furthermore has a focus on administratively demarcated areas. In addition, the topic of interest is not always quality of life, but concerns 'neighbourhood attachment' (Jean, 2016), 'health' (Dahlgren and Whitehead, 1991; Barton and Grant, 2006), or 'perceived residential environment quality and neighbourhood attachment' (Bonaiuto et al, 2003; 2015).

Firstly, local area aspects are grouped on the spatial element, on how near to the dwelling the aspect needs to be to impact quality of life:

- immediate surroundings,
- intermediate surroundings,
- more distant surroundings.

Second, within these broad groups, aspects are categorised by their nature. After gradually adjusting the framework to fit the aspects identified in the questionnaires (see next section), three groups emerged. For instance, government was added to services to include items such as trust in local government, which would not entirely fit in a 'services' (whether private or public) category but appears strongly related and may not justify a category on its own. Govern*ance* as an alternative was considered more an important means to improve the various types of local area aspects, and is referred to in the discussion rather than as a local area aspect in itself. They broadly coincide with groups identified elsewhere in the literature, particularly by OECD (2013), but do not completely overlap.

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- physical aspects of the area,
- social and economic aspects of the area,
- services and government aspects of the area.

To illustrate the framework, in the following sections, local area aspects identified in the surveys and literature are mapped by these two dimensions (Table 3).

Table 3 Dimensions to map local area aspects of quality of life

	Immediate surroundings	Intermediate surroundings	More distant surroundings
physical aspects			
social and economic aspects			
services and government aspects			

Source: Eurofound (2018), Local area aspects of quality of life.

Needs and preferences

There are some challenges with categorisation in terms of the two dimensions outlined above. The decision about whether a local area aspect needs to be in the immediate, intermediate or more distant neighbourhood to contribute to quality of life is somewhat arbitrary. Furthermore, the distance where aspects are important depends on their function. For instance, for social contacts to contribute to quality of life by making people feel more included, contacts may be with people who are located somewhat further away. In contrast, for social contacts to effectively contribute to quality of life by providing short-notice practical help, they may need to be closer. However, a main challenge which the framework in this paper seeks to deal with is the following. The importance of specific aspects of the local area for an individual's quality of life depends on people's needs and preferences, in particular:

i. household characteristics

Household characteristics matter: for instance, access to childcare may not be important for someone without (and not expecting) small children.

ii. broader context

Depending for instance on the national or regional context, the *role of service will differ*. Take the example of pharmacies. In some Member States pharmacies are a key outlet of basic care necessities, while in other countries their role is mainly restricted to selling prescription drugs. Their vicinity is likely to be a larger contributor to quality of life in the former than in the latter case. Another example includes post offices, where in some Member States they continue fulfilling key functions (sometimes fulfilling activities closely related to the government, such as point of cash social security payments), while in other Member States they have more limited roles.

There are also broader trends in time which impact the role of amenities and services in the local area. A key issue here is *advancing technology*, in particular ICT and digitalisation. This has for example increased the importance of access to broadband connection and charging points for electric cars. It has also changed the role of shops, and post and bank offices. With regard to the latter, for several function it has become less important to have a bank nearby. An example includes making financial transfers, which have been done increasingly electronically. Much of the impact is still to be seen. For instance, increased digital payments may reduce the importance of having ATM machines (automated teller machine, or cash

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machine) nearby across the EU. Enhanced telemedicine and self-help technologies may at some point make the distance to certain healthcare services less important (Eurofound, 2014; Committee of the Regions, 2016). Digitalisation further allows many people to spend more time further from work (telework) and may thus decrease the importance of the distance to an employer. Distance may also become less of a barrier to maintaining social networks, due to ICT-facilitated communication.

Some of the aspects of importance for quality of life may also become taken for granted with increased *economic development*, causing differences both in time and between areas. While they still matter for quality of life, certain aspects may not anymore be seen as potential problems and are not included in the EU framework (Figure 1). For example, some items are moving off the radar with increased development, such as access to sewage infrastructure, even if still a problem in particular in some less developed parts in the EU.

Changing *demographics* also matter. These may be very local, such as people with children moving at an accelerated pace out of some larger cities. They may also concern more general trends, such as ageing populations. Such demographic trends have an impact on the importance given to certain amenities and services in the local area. Examples of the impact of ageing populations could include increased importance of wide, even pavements to facilitate moving around with a rollator and preventing falls, as well as increased importance of good community and home care services to facilitate longer lives in the community.

Quality and access

An amenity or service may be present (possibly at close distance), but make little contribution to quality of life if access is poor or perceived quality is low. This can vary not only nationally, but also between services in local areas. Here, access may refer to affordability, but also for instance to opening hours, and architectural design (Eurofound, 2013a). Low quality includes perceived unfairness (unequal treatment, corruption) or low trust.

Surveys reviewed for this working paper indeed tend to focus on quality, access and trust, rather than on just the objective presence of a service or amenity, or characteristic of an area. Maggino (2006, p. 101) notes: ‘each individual is inclined to cover even longer distances to reach ‘his/her’ family doctor and ‘his/her’ bank.’ The importance of access and/or quality does not only apply to services, but also to amenities such as street lighting or parks. Street lighting may be present, but if of bad quality it contributes little to quality of life. Parks contribute little to quality of life if people feel unsafe, have limited opening hours, or are spoiled with litter or badly maintained.

Conceptual framework

Figure 1 presents Eurofound’s conceptual framework of local area aspects of quality of life. It distinguishes between physical, social and economic, and service and government aspects that matter for quality of life, in the immediate vicinity, intermediate vicinity or more distant from where people live, as in Table 3. However, the framework also addresses some of the challenges discussed above in this section. In particular, it acknowledges the influence of needs and preferences, and that these are influenced by the broader context and by personal characteristics. Furthermore, the importance of quality and access is highlighted in the heading of the framework. This serves to emphasise the idea that objective mapping of physical presence of amenities and services is insufficient.

Figure 1 Local area aspects of quality of life in the EU: a conceptual framework

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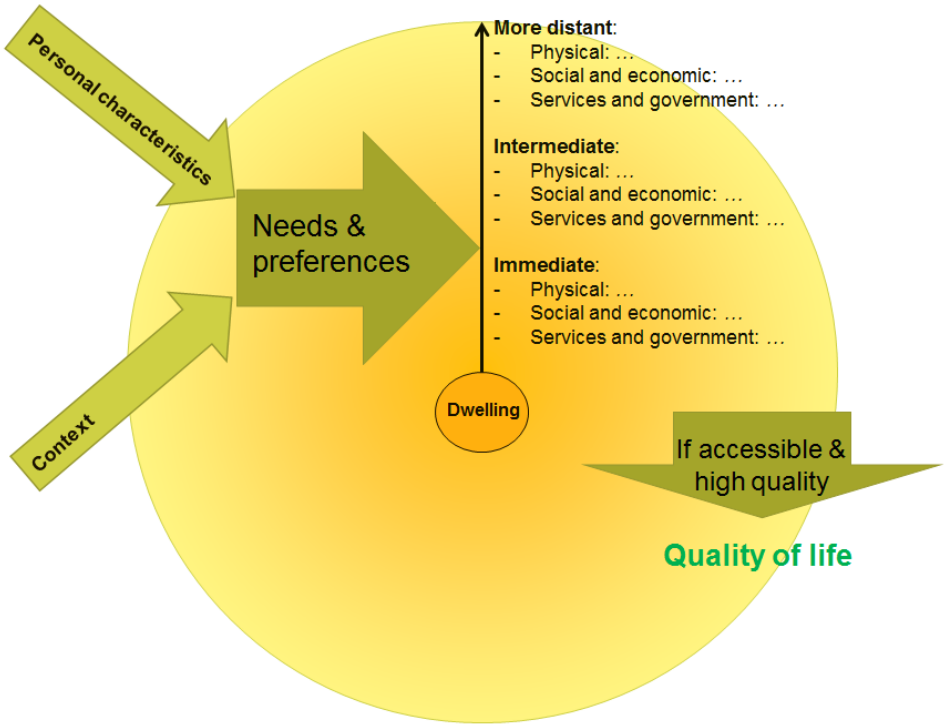

Source: Eurofound (2018), *Local area aspects of quality of life*.

Illustrative mapping of local area aspects

Immediate surrounding area

The quality of someone's dwelling matters for quality of life (Eurofound, 2016). However, the direct surroundings of the dwelling are also important and impact both the living experience inside the home (views, noise) and at close range around the home (safety when outside, rubbish in the streets).

Physical aspects

Air quality: EU-SILC requires EU Member States to collect data on pollution, grime or other environmental problems in the area where respondents live caused by traffic or industry. EQLS and the Urban Audit more generally ask for problems with air quality, without specifying the cause. Air pollution negatively impacts physical health (lung diseases, strokes, cancer) and quality of life (Vineis et al, 2007; World Health Organisation, 2013; Darçın, 2014). Evidence from the UK suggests that air pollution negatively impacts subjective life satisfaction (Knight and Howley, 2017). (See Appendix 2, Data illustration 1)

Environmental noise: Noise can directly impact quality of life, but also indirectly, in particular through damaging health. For example, there is evidence that ambient neighbourhood noise (from a highway, rail, or road) may negatively impact mental health of children in the neighbourhood (Lercher et al, 2002). The European Environmental Agency (2014) demonstrates that road traffic is the most dominant source of environmental noise. It argues that noise exposure can lead to annoyance, sleep disturbance, and related increases in the risk of hypertension and cardiovascular disease. Hypertension and cardiovascular disease are important risk factors for premature mortality, so exposure to noise pollution can indirectly reduce life expectancy. Noise exposure has also been shown to reduce the cognitive performance of schoolchildren (Basner et al, 2014). The WHO has categorised noise from road traffic alone as the second most harmful environmental stressor in Europe, after air pollution. 65% of Europeans living in major urban areas are exposed to daytime noise levels greater than 55dB (decibel), and over 20% to night-time noise levels greater than 50dB, at which adverse health effects occur frequently (Jarosińska et al, 2018).

Heavy traffic: EQLS 2016 asks about problems with 'heavy traffic in your immediate neighbourhood'. In previous waves it asked for problems with 'traffic congestion in your immediate neighbourhood'. The change was made because the latter was seen to mostly reflect the perspective of traffic users (in particular commuters), while the intention was more to capture this aspect in relation to the quality of the area of the home, also for people who do not own a car. Heavy traffic includes traffic congestion as well as nuisances such as noise, pollution and lack of safety of public spaces for pedestrians and cyclists and less positive interaction between neighbours (see also Rogers, 1997). The relation between the local area aspects 'air quality' and 'heavy traffic' is illustrated by EQLS data analysis in Appendix 2 (Data illustration 1). The data illustration demonstrates that the worse problems with air quality, the more likely they come with heavy traffic. With regard to lack of safety, Spittaels and colleagues (2010) include under the heading 'safety from traffic' items such as 'not enough safe places to cross busy streets', 'walking is unsafe because of the traffic', and 'cycling is unsafe because of the traffic'.

Aesthetics: The Urban Audit asks for satisfaction with 'the state of the streets and buildings in your neighbourhood'. Spittaels and colleagues (2010) measure 'how pleasant your neighbourhood is' with four items about aesthetics. They include items which may also relate to walkability, rubbish and safety from crime: a pleasant environment for walking and cycling, generally free from litter or graffiti, trees along the streets, a lot of badly maintained, unoccupied or ugly buildings. Aesthetic is used here as a label, even if it should be acknowledged that it is a complex and subjective concept. It is based on an individual's assessment of elements such as building style, colour, streetscape, house style and environment (Nia and Atun, 2014). The surveys examined do not capture aesthetics directly,

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although some research would cluster issues such as rubbish under 'aesthetic quality' (Mujahid, 2007), along with for example whether buildings and homes are well-maintained, and whether they 'are interesting'. In a study in five Slovenian cities, absence of 'visually irritating objects in the vicinity' was identified as an important factor for quality of life in the local area (Tiran, 2017). Based on Gallup data, Florida (2014) identifies aesthetics (along with a community's openness to newcomers and social offerings) as the main quality which attaches people to place.

Social and economic aspects

Noise from neighbours: In most surveys, noise from neighbours is grouped together with environmental noise. Here, they are distinguished: environmental is seen as a 'physical' aspect (see section below), while noise from neighbours is categorised as a 'social and economic' aspect. EU-SILC requires EU Member States to collect data on 'noise from neighbours or from the street'. EQLS asks people about problems with noise in the immediate neighbourhood of their homes, without specifying the source of the noise. The Urban Audit asks for satisfaction with the noise level. None of the international surveys investigated collects data separately for noise from neighbours and noise from traffic and other sources outside. However, data from France provide some evidence on the importance of these two sources of noise (Ministry of the Environment, Energy, and the Sea, 2015). In 2006, 30% of households were hampered by daytime noise. In apartment blocks, 21% reported problems with noise from traffic (cars, trains, planes) and 17% from neighbours (do-it-yourself, music, children, dogs). Among residents of single-detached houses, 14% complain about traffic-related noise, and 2% about that from neighbours. Regardless of its source, the impact of noise on quality of life is likely to depend also on what parts of the dwelling (in particular dormitories) it affects, as well as its intensity and frequency. In Sweden, the survey which collects the SILC indicator specifies the part of the living area affected. It also asks about the frequency of noise: every day, several times a week, once a week, less often or never.

Safety from crime: ESS asks respondents '[h]ow safe do you -or would you- feel walking alone in this area [Respondent's local area or neighbourhood] after dark?' Sometimes crime is grouped together with vandalism (SHARE). EU-SILC requires EU Member States to collect data on 'crime, violence or vandalism in the area'. In 2003, EQLS asked respondents '[h]ow safe do you think it is to walk around in your area at night?' EQLS 2016 asks respondents not only to what extent they agree with the statements 'I feel safe when I walk alone in this area after dark' but also with 'I feel safe when I am at home alone at night'. For the first indicator, feelings of unsafety are larger in urban areas, while the second differs little by urbanisation (Eurofound, 2017e). It should be noted that these questions in EQLS do not specify crime, and feelings of safety when walking alone outside at night could also for instance be interpreted as feeling safe from traffic or falls. While crime may mostly affect people's quality of life when it is in their local area, it may also negatively affect people's life if it is seen as prevalent in the wider area. This distinction is reflected in the Urban Audit. Most questions in this survey relate to aspects only of the city as a whole, and do include one on feelings of safety in the city as a whole. However, it acknowledges the particular importance of crime in the local area by asking also to what extent people agree with the statement 'I feel safe in my neighbourhood'. Analysis of 2012 data showed that people more often feel safe in their neighbourhood than they do in the city as a whole. The difference is particularly large in Athens, Marseille, Liege, Napoli, Berlin, Paris and Brussels (European Commission, 2013). Analysis of 2015 Urban Audit data confirmed that in 30 cities at least 90% of respondents agree that they feel safe in their neighbourhood, but in only 15 cities with regards to feeling safe in the city as a whole. However, there is a very high correlation between these two variables: the more people feel safe in the city, the more they feel safe in their neighbourhood (European Commission, 2016e).

Analysis of Urban Audit data further reveals a correlation between feelings of safety and satisfaction to live 'in this city' (European Commission, 2016e). The Crime Survey England and Wales asked respondents to rate the effect of fear of crime on quality of life on a scale of

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1–10, with 32% indicating a moderate (4–7) or great (8–10) impact in 2016 (Office for National Statistics, 2016). So, subjective feelings of safety matter for quality of life, and can differ greatly from reported crime data (Centraal Bureau voor de Statistiek, 2017; Eurostat, 2015b).

Services and government aspects

Utilities: Until its 2011 wave, EQLS asked for 'quality of water' as a dimension of neighbourhood quality. The OECD includes 'satisfaction with quality of drinking water' in its 'better life index' as one of two environmental measures, using data from the Gallup World Poll. Objective measures matter for the impact on health and are relatively easy to collect, but perceptions of quality of the water are important for quality of life. To illustrate the framework, water is broadened to 'utilities', including those that 'reach into the dwelling': water, but also for instance sewage, energy and broadband provision. For instance broadband access did not emerge as frequently asked in the surveys reviewed, but there are separate surveys for instance the 2016 Eurostat data collection effort on 'ICT usage in households and by individuals' which does cover it. However, these data are hardly collected along with quality of life indicators, limiting analysis in this regard.

Rubbish collection: EQLS asks about problems with 'litter or rubbish on the street', and the Urban Audit asks for 'cleanliness'. With a lesser focus on the 'outcome', SHARE asks whether the area is kept clean. A more specific element is recycling which is sometimes included separately: 'recycling services including collection of recyclables' (EQLS) or 'recycling facilities' (Eurobarometer 420.1). Refuse collection emerged as important for people's quality of life from qualitative research (Gabriel and Bowling, 2004).

Long-term and home care: EQLS asks for access to and quality (including equal treatment and corruption) of long-term care. Specifically, it asks for 'nursing care services at your home', 'home help or personal care services in your home' and 'residential care or nursing home'.

Intermediate surrounding area

Other aspects of the local area which matter for quality of life do not necessarily relate to the immediate vicinity of one's dwelling, but to a broader area. These include characteristics of the wider area and relations with people living there, as well as services for which people may need some minutes to reach them. There are many aspects which could fall into this category, including for example (local or mobile) libraries and markets as identified by interviewees in a UK study (Gabriel and Bowling, 2004). However, the aspects identified in the surveys are the following.

Physical aspects

Recreational areas: EQLS asks for access to 'recreational or green areas', and the Urban Audit about 'green spaces such as parks and gardens'. The Urban Audit includes 'public spaces such as markets, squares, pedestrian areas'. Accessible public spaces can invite people to play or socialise.

Local mobility by foot or wheelchair: While not a requirement by EU-SILC, in Belgium, a survey that collects data for SILC indicators asks about the quality of the pavements in pedestrian areas. The European questionnaire developed by Spittaels and colleagues (2010) asks for a number of relevant items under eleven broad characteristics of the neighbourhood which are expected to impact physical activity: walking (or cycle) infrastructure, maintenance of infrastructure, (cycling) and walking network. Facilitating mobility by foot or wheelchair, cycling, transport by car or public transport may all impact quality of life. However, in particular walking and cycling come to the fore in the literature as a positive contributor to quality of life, beyond their function of getting somewhere. Facilitating local mobility by foot or wheelchair is considered of particular importance, as cyclability currently is relevant only for a limited area in Europe and car friendliness is not always judged as a positive feature.

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Public transport and cyclability are discussed elsewhere in this paper as they tend to concern the wider area to be able to improve quality of life. Physical activity by foot or wheelchair is relatively easy to incorporate into everyday life. However, it depends on the nature and design of each place (Sallis, 2009). For instance, to know how friendly a neighbourhood is to walking, the concept of walkability has been created. While rarely referred to, items to measure walkability and the positive impact seem to apply also to moving around with aids such as rollators and wheelchairs, or for instance buggies. A common measure of walkability is based on three components of the local area: residential density, land use mix and street connectivity. The latter corresponds to a count of all intersections within 0.4 kilometres of each address, and measures how the design is pedestrian-friendly (Sundquist et al, 2011).

There is a positive association between facilitating such local mobility by foot or wheelchair (or bicycle) and quality of life. Residents' health is one of the factors that can explain the link between these conditions (Smith et al, 2008). Even if there is a complex relationship between built environment and health, areas which facilitate such mobility reduce the risk of obesity, heart and chronic diseases, cancers and diabetes. Neighbourhood walkability also seems to decrease depressive symptoms in particular in older men (Berke et al, 2007).

Social and economic aspects

Belonging or general satisfaction: Various questions in the surveys refer to a sense of belonging to the local area, or a general sense of satisfaction with the area. For example, SHARE asks respondents to what extent they agree with the statement 'I really feel part of this area'. More general satisfaction with the local area may be captured by general questions such as satisfaction with 'your local area as a place to live' (EQLS 2016), or with 'the place where you live' (Urban Audit). A certain area may contribute to quality of life as such, with people identifying themselves with the perceived characteristics of the neighbourhood (Jean, 2016).

Social connections and trust: EQLS and the Urban Audit ask respondents respectively to what extent they agree with the statement 'I feel close to people in the area where I live'. The Urban Audit also asks respondents 'generally speaking, most people in my neighbourhood can be trusted'. It also includes a question referring to the city as a whole, rather than only the neighbourhood. Qualitative evidence shows that having good relationships with neighbours contributes to good quality of life, with some respondents regarding neighbours as friends, spending much time with them (Gabriel and Bowling, 2004). (See Appendix 2, Data illustration 2)

Social support: Several of the surveys acknowledge that neighbours can be a source of support for childcare, elderly care, or for anyone to turn to when in need of psychological or financial support. However, usually, 'neighbours' are mentioned alongside friends, and sometimes relatives. The questionnaires do not ask which of these groups exactly would provide support. For instance, SHARE asks for 'personal care or practical household help' by 'any family member from outside the household, any friend or neighbour?' EU-SILC asks Member States to collect data on 'childcare by grand-parents, other household members (outside parents), other relatives, friends or neighbours' (similarly for EQLS). A question in SHARE specifically about neighbours is more general with regard to the type of support: 'If I were in trouble, there are people in this area who would help me'.

Services and government aspects

Primary care: SHARE asks for access to a 'general practitioner or the nearest health centre' and the EQLS to access to (and quality of –including unequal treatment and corruption) a 'GP/doctor's office / health centre'.

Social service: The Urban Audit lists 'social services' among a range of issues for which it asks respondents to rate which are the most important for their cities.

Primary school and childcare: The Urban Audit asks respondents about 'schools and other educational facilities'. Several surveys (EQLS, ESS) and the EU-SILC ask about the use, cost

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and quality of formal childcare, but do not frame these questions as relating to the local area. However, childcare is included here as distance is an important element in facilitating access to childcare, whether nurseries or pre-schools. For instance, it has been argued that

the transition from inactivity to work for women with children in deprived neighbourhoods is partly caused by the type of jobs (part-time work and low pay) which are available to women, but also by whether there is affordable childcare in the neighbourhood (partly dependent on national policies, such as subsidies for low income groups). 'Therefore, strengthening and improving upon this on the neighbourhood level seems to be an important step in enhancing women's socioeconomic conditions.' (Miltenburg and Van de Werfhorst, 2017, p. 42)

A survey in Florence (Italy) asked respondents how long it took them to walk to certain services and analysed how they contribute to quality of life (Maggino, 2006). Schools were found to be among the services for which it was most important for them to be reasonably near.

Shared transport: The Urban Audit and EQLS ask respondents about 'public transport', including as examples 'bus, tram or metro', and EQLS also 'train'. Spittaels and colleagues (2010) include distance to a bus stop in their survey questionnaire. In a Slovenian study, 'bus stops' emerged 3rd of 14 amenities where people were least likely to want to walk 15 minutes or more for (Tiran, 2017). The research from Florence (Italy) mentioned above also concluded that it was important for bus stops to be near (Maggino, 2006).

Pharmacy: SHARE asks for access to pharmacies. The research from Florence (Italy) mentioned above concluded for chemist's shops being particularly important to be nearby (Maggino, 2006).

Grocery: Several international surveys ask for access to a grocery shop, food store and/or supermarket (SHARE; EQLS; Eurobarometer 420.1). Sometimes local shops are considered in relation to access to healthy food such as fresh fruit and vegetables, rather than to fast-food (Mujahid et al, 2007). Spittaels and colleagues (2010) include 'fast-food restaurant' along with 'local shop' and 'super market'. It has been shown that there can be considerable differences in living costs based on access to cheaper –often larger– groceries or supermarkets, which tends to be worse in rural areas (MacMahon and Moloney, 2016). The research from Italy cited above concluded that it is somewhat less important for supermarkets to be nearby than for chemists or other shops (Maggino, 2006).

Postal and banking service: Several surveys ask respondents about access to banks or cash points (EQLS, SHARE). Post offices have also been included (EQLS 2011 and earlier waves). In EQLS few people reported problems with access to banks or post offices, but problems with both services were strongly correlated. As a consequence, post offices have been dropped from the questionnaire and only access to banks is asked for in 2016, with explicit mention of ATM machines: 'Banking facilities (e.g. bank branch, ATM)'. A survey in Slovenia found that, after a grocery, an ATM was the 2nd least likely of fourteen amenities for which people were willing to walk more than 15 minutes (Tiran, 2017). The research from Florence (Italy) mentioned above also concluded that post offices were particularly important to be nearby (Maggino, 2006).

Restaurant, café, pub: While not included explicitly in the surveys reviewed, Spittaels and colleagues (2010) do include 'restaurant, café, pub' in the European survey they developed.

Police services: the Gallup World Poll asks respondents 'in the city or area where you live, do you have confidence in the local police force?' EQLS asks about trust in the police.

Sport facility: The Urban Audit asks respondents about 'sports facilities such as sport fields and indoor sport halls', and Spittaels and colleagues (2010) include 'sport and leisure facility' in their questionnaire.

More distant surrounding area

For several local aspects which matter for quality of life, the span is larger. Again, a wide range of dimensions can be captured here, including for instance firefighting services. Even

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the weather could be considered, a quality of life factor used in a study comparing quality of life across Italian cities (Colombo et al, 2014) and –in the context of climate change– in the Gallup World Poll: '[o]ver the past 5 years, would you say that the annual average temperatures in your local area have gotten warmer, colder, or stayed about the same?'. However, the focus will be on dimensions which were found relatively frequently in the questionnaires reviewed (not the case for firefighting services), but also on those that can be impacted by local policy relatively easily (not the case for temperature – even if Policy illustration 1b in Appendix 1 suggests it can sometimes be influenced locally by policies).

Physical aspects

Road infrastructure: The Urban Audit asks respondents about 'road infrastructure' in their city.

Cyclability: Even if not explicitly in these major European questionnaires, road infrastructure may also comprise cycle infrastructure in the parts of the EU where that is a relevant factor (Spittaels et al, 2010). Special lanes, routes or paths for cycling and cycle routes separated from traffic are included as measures. See the section above (Intermediate surrounding area – Physical aspects) for a more comprehensive discussion.

Social and economic aspects

Employment: the Urban Audit asks respondents whether '[i]t is easy to find a job in [CITY NAME]' and about the prevalence of the problem of unemployment. However, usually a respondent's employment status is measured as such, not directly in relation to where people live. The EQLS 2016 asks respondents '[a]bout how much time (in minutes) in total per day do you usually spend getting to and from work or study using your usual mode of transportation?' While this does capture the commute, it does not cover people who are unable to find employment at reasonable distance.

Services and government aspects

Hospital: Sometimes hospital or specialist services are grouped together with primary care in one survey question (Urban Audit). EQLS 2016 includes 'hospital or medical specialist services', asking for quality aspects (including corruption and equal treatment).

Shop: The Urban Audit asks more generally about 'availability of retail shops' in respondents' cities.

Secondary school: The Urban Audit asks more generally about satisfaction with 'Schools and other educational facilities' in the respondent's city. EQLS also asks about satisfaction with and detailed aspects of quality (including equal treatment and corruption) of schools to respondents with school-attending children in the households.

Longer-distance transport: access to long-distance trains and busses (or planes), are often not asked for separately. However, trains are included in the description of public transport for example in EQLS, and busses included in other surveys may also include longer distance busses.

Culture and entertainment: The Urban Audit asks for access to 'cultural facilities such as concert halls, theatres, museums and libraries'. EQLS includes 'cinema, theatre or cultural centre' Among respondents in a survey in cities in Slovenia, more people were prepared to walk more than 15 minutes for access to culture than for any of the other 13 amenities.

Government: EQLS asks about trust in 'the local (municipal) authorities' and the 'neighbourhood Eurobarometer 2014' about trust in 'local public authorities' and 'regional public authorities'. (See Appendix 2, Data illustration 3)

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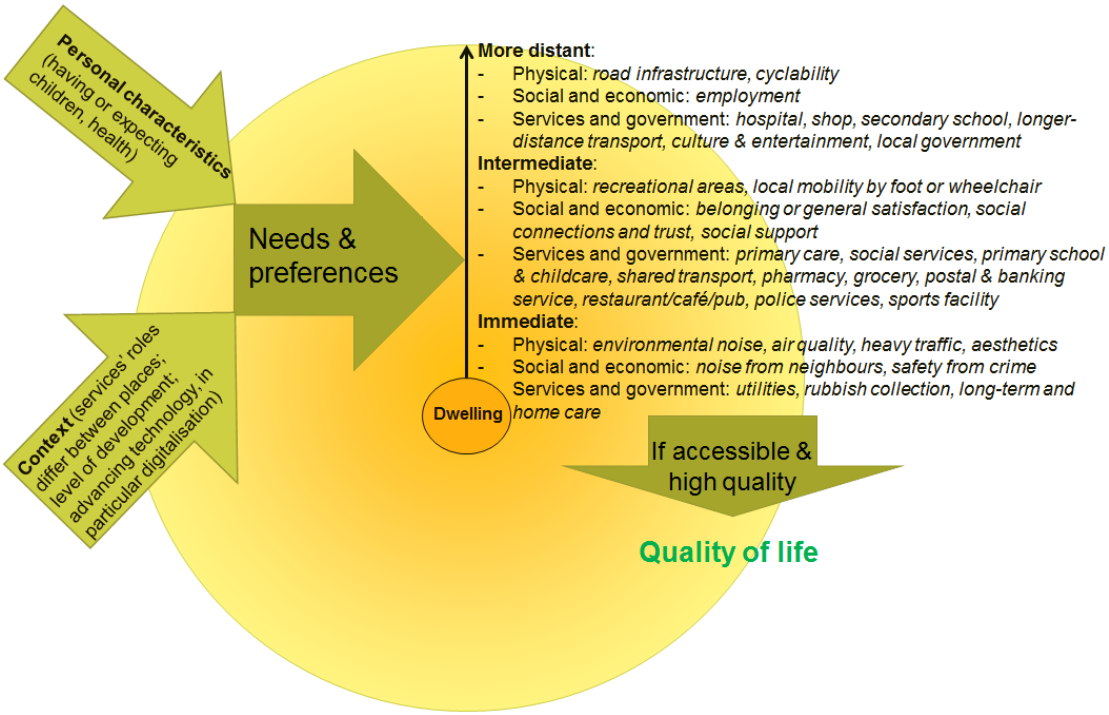
Illustrated conceptual framework

The aspects included are not exhaustive, but are intended to be important illustrations of relevance for quality of life in the EU. Figure 2 presents the conceptual framework presented above (in Figure 1), populated with these examples.

Figure 2 Local area aspects contributing to quality of life: an illustrated framework



Source: Eurofound (2018), *Local area aspects of quality of life*.

Discussion

Policy effectiveness and resilience

Local area aspects influence effectiveness of national and regional policies

EU or national level policies can benefit from paying close attention to the local area. For instance, policy makers may want to improve health by stimulating physical activity (walking, moving around in a wheelchair, cycling, gardening) through information campaigns. However, resources allocated to such campaigns may be wasted if aspects of the local area either reduce the health benefit of such activity (unhealthy air; lack of safety), or inhibit these activities (inconvenient sidewalks; lack of green areas). Similarly, campaigns for healthy eating may fail if local environments do not provide for shops with fresh ingredients (e.g. Smith et al, 2010). Sometimes very local knowledge is needed. This for example has been argued in the case of addressing health problems among low social-economic groups. A literature review mapping the determinants of asthma (DePriest and Butz, 2016) concludes that '[s]chool nurse clinicians, working within children's neighbourhoods, are uniquely positioned to assess modifiable neighbourhood-level determinants of health in caring for children with asthma.' National or regional governments can invest in improving local area aspects, influence them by regulation, facilitating flexibility for institutions to develop solutions for specific local circumstances (see Appendix 1, Policy illustration 3b) and by sharing information or best practices (see Appendix 1, Policy illustration 3a).

Improving effectiveness by addressing multiple local area dimensions

A specific policy objective with regard to quality of life in the local area can often be achieved in multiple ways by improving social and economic, physical, or services and government aspects of the local area. For instance:

- personal safety:
    - cohesive environment, social vigilance and access to employment, contributing to preventing people to get involved in crime,
    - high quality street lighting (see Appendix 1, Policy illustration 1a), and
    - high quality police services;
- no litter on the street:
    - attachment to the area so that people take good care of it,
    - many and well-designed (user-friendly and wind-protected) garbage bins, and
    - high quality waste collection service;
- independent, inclusive living for older and disabled people:
    - social support from people in the area,
    - convenient crossings, and wide and even pavements, and
    - high quality community services.

Policy measures can be effective, if various aspects are addressed simultaneously at least to some extent. For example, even with the best informal social support imaginable, some level of formal care may be needed to ensure independent living. Some links may not be immediately obvious to policy makers. For instance, better pavement and public spaces can lead to increased social capital (including more inclination to participation in society for example through volunteering) and better quality air (Leyden, 2003; Marshall et al, 2009; Rogers et al, 2011).

Fuelling resilience by addressing multiple local area dimensions

Addressing issues by focusing on multiple local area dimensions also reduces the fragility of positive outcomes. If the policy focus is only on one aspect, it is easy to envision a breakdown when this single aspect fails, leading to low 'resilience', or limited ability to cope with and

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react to shocks or persistent structural changes (Rita et al, 2017). For instance, achieving clean streets solely through high quality waste collection services may be effective, but is vulnerable to failure of the service. Resilience to such shocks is increased if quality of the local area is ensured along multiple dimensions simultaneously rather than narrowly through one dimension. The importance of (social) community connections for resilience in the EU context has been acknowledged (Promberger et al, 2014). However, as the framework (Figure 1) suggests, there is an intersection of various local dimensions beyond social connections alone. In this perspective, the framework's contribution is to extend policy thinking and consider that resilience can be enhanced by addressing issues simultaneously through the various local dimensions.

Factors helping people to cope with local area problems

Dwelling

Better quality dwellings can mitigate to some extent for problems in the local area. It has been argued that on the one hand richer households are more likely to live in central areas of cities where it is more common to experience problems such as noise, while on the other hand they are more likely to have the resources to mitigate these impacts in particular by living in better quality dwellings (e.g. better insulated) (European Environmental Agency, 2014). Another example relates to services. Accessible green areas, playgrounds or wide pavements can mitigate to some extent for lack of private gardens, balconies or space inside of the dwelling. As an interviewee in a study by Jean (2016) noted 'the street is an extension of my house, the park is my backyard, my neighbourhood is the whole city'.

Overall, many people with low housing quality still report high satisfaction with their homes if they live in high-quality local areas, and people with high quality homes report low housing satisfaction if they live in low quality areas. Analysis of 2016 EQLS data shows that 71% of people in the EU report none of the six measured problems to their dwelling, such as shortage of space and damp or leaks in walls or roof. Regardless, 7% of them reports to be dissatisfied with their accommodation (rating it at 5 or below, on a 1 to 10 scale). However, almost one-third (31%) of them reports relatively many (at least three out of four) problems related to the area where they live compared to just under one-fifth (19%) among people reporting none of the six problems with their dwelling but who are satisfied with their accommodation. Among people with three or more housing inadequacies, but who are satisfied with their accommodation, three-fourth (75%) have fewer than three neighbourhood problems compared to just under two-thirds (64%) among those who are dissatisfied. It thus seems that housing dissatisfaction can to some extent be explained by problems in the neighbourhood. This is confirmed by analysis of results from a survey in France (Jauneau and Vanovermeir, 2008).

Mobility

As discussed, environments that facilitate mobility can contribute to quality of life directly, in particular mobility by local mobility by foot or wheelchair (see section on 'Intermediate surrounding area – Physical aspects'). However, access to good quality transport can also reduce the barrier posed by distance to amenities or services. Cass and colleagues (2005) note that much of the literature on social exclusion ignores the 'spatial' or 'mobility' related aspects. The spatial element is included in the framework (Figure 1), by means of distinguishing broadly whether an aspect of the local area needs to be in the immediate, intermediate or more distant surrounding of people's dwelling to contribute to their quality of life. However, mobility should also not be ignored as it can mitigate the negative impact of distance. For example, a grocery store at short distance may be amidst busy roads with dangerous or no crossings for pedestrians and wheelchair users, and thus may be harder to reach than a grocery which is further away but in an area where walking and wheelchair use are better facilitated. In this case, mobility mitigates the impact on quality of life of distance of certain services. The mitigating capacity of mobility is captured for example in EU-SILC's

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indicator on whether it is 'too far to travel/no means of transportation' as a reason for unmet medical/dental needs. Analysis of EQLS data revealed that in the EU, people who report no access problems with regard to public transport (and do use it) are less likely to find it difficult to access healthcare services because of distance (Eurofound, 2013a). Opportunities and life chances facilitated by access to education (/life-long learning opportunities) and employment may be within physical reach for people living in a neighbourhood deprived of these opportunities if they have good access to transport, although there may be other barriers. Poor access to public transport puts pressure on low income households to own a car, or otherwise may experience worse employability and access to services (Clark et al, 2016).

Having access to a car can improve mobility. This is particularly effective if there is little congestion, roads are of high quality, and cars can be parked easily and affordably at the point of departure and of destination. However, access to parking may be positive for those who need a space to park their car(s) (Bonaiuto et al, 2003), but it can be seen as a cost imposed to all inhabitants in terms of noise, air pollution, and risk of accidents. There are also costs in terms of space used which could have been for example green areas, wider pavements or more housing in a neighbourhood overall (Shoup, 2014). Furthermore, the negative impact of having traffic and parked cars in the neighbourhood on community feelings, crime, likelihood of children playing outside (and health and developmental impact thereof) and other aspects of quality of life are also well-document (Mullan, 2003) Such considerations have contributed to policy measures shifting the focus of mobility from cars to other types of mobility across the EU (Eurofound 2017a, b, c, d; see also in Appendix 1, Policy illustration 1c). OECD (2016b) notes that a disproportionately large share of road casualties in urban areas consists of vulnerable road users such as pedestrians, cyclists, motorcyclists and particularly the elderly and the young. It highlights the separation of vulnerable users from faster-moving vehicle traffic as an important policy approach to address this. A policy illustration from Copenhagen is interesting in this context. The city found that while 59% of people would choose the bicycle for distances up to 5km, only 20% would do so when distances were longer. In an attempt to improve air quality further and reducing healthcare cost (inspired by London where cycling had been increased, although from a considerably lower starting point), the city teamed-up with 22 neighbouring municipalities and develop a network of cycle super highways, with 206km finished by 2018 (out of 467km planned in total), at a budget of DKK413 million (€55 million as at 21 May 2018), shifting a traffic planning focus on cars towards one were cyclist are at the centre.

Social capital

The concept of 'social capital' is not univocally defined. However, according to one prominent definition social capital refers to features of social organisation such as networks, norms and trust that facilitate co-ordination and co-operation for mutual benefit (Putnam, 1993). Several of the social aspects of the local area identified above in this paper relate to this. It has been argued that social capital is important 'not for its own sake, but for what one does with it, or can attain by it, as with other forms of capital' (Forrest and Kearns, 2001, p. 2141). Social capital is related to contributing actively to improve quality of life in the local area (citizen engagement, participation) and to social cohesion (see also Appendix 1, policy illustrations 2a, b and c).

As mentioned in the section above on 'Fuelling resilience by addressing issues through multiple dimensions', social capital can help to cope with adverse events or for lack of services in the communities by nurturing social support or community action. Its impact can also be less tangible, for example by providing a place where people feel secure. Mohnen and colleagues (2012) measured social capital as (i) whether people in the neighbourhood know each other; (ii) whether neighbours are nice to each other; and (iii) whether there is a friendly and sociable atmosphere in the neighbourhood. They found that intensity (assumed to be higher if having children or being old) and duration of exposure to neighbourhood social capital, a social aspect of the environment, matters for people's health. It has been argued that sense of community is particularly important in relation not only to life satisfaction, but also

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in preventing loneliness (Prezza et al, 2001). Loneliness in turn is associated with health problems, and for instance increased healthcare usage among older people (Gerst-Emerson and Jayawardhana, 2015).

According to Gabriel and Bowling, 2004, neighbours can be a source of security, including reassurance that there is always someone looking out for them and someone who would provide help if it was needed. Relationships with neighbours may also involve the exchange of practical help, such as lifts to the doctor and help with shopping. They identify two social capital constructs: social networks and social cohesion. Mackenbach and colleagues (2017) investigate the impact of social cohesion on the association between neighbourhood income inequality and individual Body Mass Index in neighbourhoods in France, Hungary, the Netherlands and the UK. They find a strong impact especially in France and the Netherlands.

Social capital is not a given. It can be encouraged by policies along the three dimensions of local area aspects identified. For instance, neighbourhood accessibility to services encourages social interaction with neighbours and with service personnel (Stoeckel and Litwin, 2015a). Improving access to services can thus contribute to increasing social capital. Living with busy traffic and car parking has been associated with lower perceptions of friendliness and helpfulness of people in the local area, and with reduced sense of community (Mullan, 2013). Addressing the physical environment, by reducing traffic and parking spaces may thus contribute to increasing social capital. Forrest and Kearns (2001, p. 2140) present an overview of how various domains of social capital can be supported by local policies (and services – see Appendix 1, Policy illustration 3c). Domains included are: empowerment, participation, associational activity and common purpose, supporting networks and reciprocity, collective norms and values, trust, safety, and belonging. Policies include for instance supporting empowerment by 'giving people a role in policy processes', supporting participation by 'publicising local events' and supporting belonging by 'boosting the identity of a place via design, street furnishings, naming'. Again, this entails reinforcing physical, service and government, and social and economic aspects.

Characteristics of the area: changeable?

Re-shaping the local area though user-input

Users of the local area are arguably best placed to know how the local area can be adjusted to improve their quality of life. Initiatives to make improvements can come from users themselves. Such initiatives fall under 'participation' discussed in the 'social capital' section above.

User-input can also be drawn upon in more top-down policies to improve quality of life in the local area. A common way to promote user input consists of open meetings to discuss public plans. An example is the conversion of an urban highway in Lyon into a more liveable area, with a role for neighbourhood consultation, mainly through thematic workshops in 2010 on travel and parking, pollution (air quality, noise) and public spaces (Eurofound, 2017a). Sometimes user-input is drawn upon at an early stage in projects to improve quality of life in the city, to identify where problems lie. An example is Berlin's attempt to reduce noise pollution. A 2013 online platform created by Berlin's local government generated almost five thousand comments and suggestions which were evaluated and summarised, before being incorporated in noise maps and abatement strategies. It was acknowledged that many issues are hard to capture by noise measurement data, and such public input was needed (Eurofound, 2017b). It should be noted that real influence of resident participation in the broader strategic decision-making can sometimes be small, even if it may help to put certain issues on the agenda or have some very local impact. Sometimes participation processes are largely symbolic (Teernstra and Pinkster, 2016).

Input from users in the local area can also take place on a more structural basis, stimulating suggestions from users for general improvement in the local area, or for solving specific problems. This is closely related to the concept of 'co-production of services', which can take

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various forms (Bovaird, 2007). Examples include facilitating online reports of public garbage containers which are full earlier than the usual collection date, citizen report systems for broken street lightning, or continuous receptivity of authorities for suggestions to improve traffic safety (see Appendix 1, Illustration 1c).

The impact of individuals to shape their local area according to their views, needs and preferences is singled-out in this section. However, good governance more broadly is key for local area aspects to contribute to quality of life.

Moving to a different area

People may choose to live in a certain area because of access to employment, or to education for their children (or for themselves). People may also for instance live further from work by choice as they may prefer to live in a place that matches their preferences better. Also, if one's home or local area contributes negatively to a household's quality of life, one can change this by trying to adjust the home or the local area, or by moving to another home or local area. However, choice is limited by a household's resources and availability of affordable accommodation (Manley, 2013). Furthermore, there are non-financial barriers to changing dwelling and area, such as time invested in settling physically and socially. An important factor is also whether people own or rent their dwelling, and whether they rent it privately or live in social housing. Private and social sector renting includes such diverse groups as university students and long-term unemployed. However, it is suggested that people who rent may be less inclined to invest time in their neighbourhood, in particular if they expect to move-out soon (Mohan and Twigg, 2007).

Mohan and Twigg (2007, p. 2035) argue that '[o]ne might think that length of residence might be associated with positive feelings about area, as people develop relationships with others in the community; it would also be reasonable to suggest that if people were dissatisfied they would move'. However, in their study the length of residence was inversely associated with neighbourhood satisfaction. This could partly be explained by cost involved with relocating, and limited choice in particular for public sector tenants in the UK context.

Holistic approach: multiple types of areas and quality of life dimensions

Forrest and Kearns (2001) noted that '[t]he emphasis on what disadvantaged areas may lack rather than what apparently successful neighbourhoods may possess has skewed empirical research, at least in the UK, towards studies focusing on neighbourhoods perceived to have problems. This produces, at best, a partial view of local social relations and, in the absence of studies of a wider range of neighbourhood types, makes it difficult to draw conclusions about the particularities of neighbouring and associational activity in poor areas. Furthermore, such a focus obscures the role that available resources and opportunities have in underpinning social capital in better-off neighbourhoods.'

The literature review conducted for this research reveals that much research on the importance of aspects of the local area for quality of life focuses on specific (deprived) neighbourhoods. This suggests little has changed since Forrest and Kearns' (2001) observation, and that the observation applies to other parts of the EU beyond the UK alone. Furthermore, the review also suggests that research not only often focuses on deprived areas, but also often on those which are highly urban and less on more rural areas. This paper aims to provide a broader perspective, capturing all local areas in the EU, whether rural or urban, rich or poor. Third, much research focuses on a specific topic, such as health. This paper takes a comprehensive approach, covering multiple dimensions of quality of life.

Rural and urban areas

Overall, the distinction between rural and urban areas seems to have decreased in significance. Many areas lay somewhere in-between extremes of high population density cities and the open countryside, and for example could include areas of 'urban sprawl' (European Union, 2011). This argument holds in particular in the context of the EU with its

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relatively large share of people living in small and medium towns, rather than large cities or rural areas. 'Rural' may also be easily mistaken as 'agricultural'. However, the vast majority of people living in areas labelled as 'rural' actually does not work in the agricultural sector (Eurofound, 2014), and the proportion that does has decreased further over recent decades.

Already about three decades ago, there have been calls to drop the urban-rural labels altogether already (Hoggart, 1990). This argument was informed by large observed heterogeneity within rural areas, however defined: 'intra-rural differences can be enormous and rural-urban similarities can be sharp' (p. 250). This also applies to aspects of quality of life, with differences in many of its dimensions within rural or urban areas themselves larger than those between rural and urban areas, along a wide range of dimensions of quality of life (Eurofound, 2014). Hoggart (1990) argued that differences between settlements are not caused by 'rurality' or 'urbanity', but by third factors. The current paper has respected this view by not including 'rurality' as an 'aspect of the local area' in its framework (Figure 1).

However, in the current policy discourse, the distinction between rural and urban areas does still matter. This paper has discussed differences between rural-urban distinctions based on population density measures and on self-reports. These differences are relevant because policy-makers may apply research findings which are based on self-reported data to population-density defined areas, resulting in misguided policies. For example, lack of a certain service may be shown to have a negative impact on people who report to live in rural areas. Policy makers may then act by improving this service in rural areas, based on their population density measure. This may be ineffective if self-reported and population density measures are too far apart.

Whether subjective measures (i.e. the respondent's own interpretation) are more appropriate than more objective measures (typically based on the population density of a larger geographical area) depends on the purpose. Both with regard to measuring the level of urbanisation and the span of the local area which matters for quality of life of an individual or household, subjective information may be most relevant. Administrative boundaries do not necessarily limit the area of importance for quality of life. However, when it concerns for instance the allocation of funds to a specific government entity or geographical area, population density based measures may be more appropriate. An example includes the foreseen investment in broadband for rural areas in the EU (European Commission, 2017c). However if a policy specifically aims to benefit rural or urban areas, it may be misled by population density based measures which concern a broader geographical area. In the case of allocation of funds, this can be of particularly concern if funds end-up in urban pockets within broader rural areas, or vice versa. For instance, in the case of Poland, it has been argued that EU Structural Funds targeted at poorer (often rural) regions, tend to end-up in richer urban areas within these poorer regions as they have more resources to support application processes and to co-fund projects (Dubois and Fattore, 2011). Such impacts can fuel inequalities, not between regions, or between rural or urban LAU2 areas (based on population density), but *within* them.

Poor and rich areas

There are important socio-demographic factors related to the local area, with good quality areas with relatively rich residents, and low quality areas with predominantly poor residents. This is related to the distribution of spatial resources, or 'spatial justice' an important area of research funding by the EU (European Commission, 2016c). A body of research points towards local communities having a potential to act as poverty trap (Chetty and Hendren, 2016). Home buying and rental prices are an important factor. Aspects of the local area that contribute positively to quality of life are reflected in prices of accommodation (Michelangeli and Peluso, 2016). The presence, but also the complexity, of this association can be illustrated with the concept of walkability. Neighbourhoods with better walkability are associated with higher home values. However, the association differs by city and neighbourhood. Furthermore, proximity to the city centre, which influences housing prices in cities, is also linked to walkability. Overall, causal associations are unclear (Boyle et al, 2014). While rich

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areas often have better social cohesion or access to certain amenities or services than deprived areas, this is certainly not always the case – contributing to higher life satisfaction of residents in poorer areas which do relatively well in these respects (Smith et al, 2010; Stoeckel and Litwin, 2015b). For instance, a study suggests that people in deprived urban neighbourhoods with good access to green areas have better mental health (Pope et al, 2018). Furthermore many factors may be worse in poorer areas, but if richer areas share them they have a similarly bad impact on wellbeing. For instance, Mullan (2003) showed how busy traffic and car parking have a negative impact on children's community identity (negative perceptions of safety, friendliness, appearance, play facilities and helpfulness of people in the area), independent of socio-economic circumstances.

Mobility mitigates less against bad quality neighbourhoods for people in lower socio-economic groups. For instance, car-less households have more difficulty in accessing their local hospital, but children from the lowest social class are also more likely to die in road accidents than those from the highest social class – partly because they are more likely to be outside the car than inside it (Cass et al, 2005).

Inequalities within neighbourhoods seem harmful. Having neighbours who are considerably richer can have a negative impact on quality of life. Income inequality in the neighbourhood has been associated with a larger Body Mass Index (Mackenbach et al, 2017). For adolescents, moving to a more affluent neighbourhood has been related to increased levels of depression, social phobia, aggression, and conflict with parents (Nieuwenhuis et al, 2017).

Clusters of people can be identified of people with similar perspectives on their local area. Research from France presents a particularly interesting commentary here. Based on replies to the question 'What, briefly, does your neighbourhood represent for you?', six types of residents were identified. 'The «well-off» are concerned with the leisure activities available in town centres. These are privileged workers living in affluent neighbourhoods. The «locals» are highly sociable and have a very close relationship with where they live without the neighbourhood's characteristics really entering into their judgement. The inhabitants who say that they are «satisfied in general» are in the majority and are not as easy to typify. The «cut-off» have problems with interpersonal contact and complain of relational and spatial isolation and a lack of activity. The «indifferent» express a lack of attachment to the neighbourhood, stay at home most of the time or live outside the neighbourhood. Lastly, the «insecure» complain about noise and feeling unsafe, and live mainly in low rental public housing in poor, urban working-class neighbourhoods. The type of dwelling, amenities and facilities, the quality of the building's surroundings and the problems said to be worrying in the neighbourhood show no systematic correlation with these six different types of residents since a wide range of individual experiences and logics coexist. Moreover, for given local and socio-economic characteristics, the residents' assessments differ in other aspects that cannot all, or at least not as clearly, be interpreted in terms of social hierarchy. Nevertheless, it is definitely the lowest-income inhabitants who accumulate socioprofessional disadvantages with residential disadvantages.' (Pan Ké Shon, 2005)

Perceptions of the neighbourhood can limit the impact of having fewer individual resources (health, functioning, and social embeddedness). For instance, good person-environment fit (composed of perceived neighbourhood social cohesion and satisfaction with place of residence) moderates the relation between personal resources and subjective well-being for older people (Mejía et al, 2017). In other words, if someone feels close to the people in one's local area and is satisfied with living there, having fewer resources has a smaller negative impact on subjective well-being, and vice-versa: if someone does not feel close to people in one's local area, having fewer resources has a larger impact on subjective well-being. This is of concern given the recent decrease in feeling close to people in the local area, in particular in rural parts of the EU (see Appendix 2, Data illustration 2).

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Multiple dimensions of quality of life

Frameworks have been developed for quality of life more broadly (for overviews see Eurofound, 2012; Eurofound, 2013b; Eurofound, 2017e). However, research focusing on the local area has tended to focus only on a limited set of dimensions of quality of life. Some frameworks that have been developed more specifically for the local area are wider in their understanding of local area aspects, for instance including the dwelling and personal characteristics as determinants rather than mitigators (Dahlgren and Whitehead, 1991; Barton and Grant, 2006). However, they have been narrower than the framework presented in this paper –besides for instance paying less attention to the spatial dimension– in terms of outcome variables, in particular the determinants of health.

Furthermore, neighbourhood aspects highlighted by research (including surveys) depend on the outcome variable of interest. For instance, Mujahid and colleagues (2007) focus on seven dimensions of the neighbourhood environment, where there is some evidence that they relate to mental or physical health: aesthetic quality, walking environment, availability of healthy foods, safety, violence, social cohesion, and activities with neighbours. This paper has aimed to take a more holistic approach to quality of life outcomes.

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Conclusions

This paper has presented a framework for examining and assessing aspects of the local area which matter for quality of life. It thus focused only on a specific subset of aspects of importance for quality of life, those related to the local area. However, it took a holistic approach in covering these local area aspects. Previous research has often focused on deprived urban areas, and frameworks on specific elements of quality of life (notably health). The framework presented in this paper, in contrast, is intended to be applicable to all local areas in the EU, whether rural or urban, poor or rich. It further covers various domains of quality of life.

Local area aspects that contribute to quality of life were grouped in multiple dimensions: social and economic, physical, and service and government. The importance of the various aspects for an individual depends on needs (varying with household characteristics and broader context) and preferences. Some neighbourhood problems can be mitigated by the quality of the dwelling, but options therefore are larger for the better-off. Similarly, mobility and social capital can contribute to quality of life in themselves, but can also mitigate problems in the local area for instance in access to services and distance.

The broader context matters. In the EU context of relatively developed nations, improvements may be largely sought to services and amenities which are beyond the reach of the local area context in the world's least developed countries, while other local area aspects may be taken for granted by the vast majority of people in the EU. In some countries certain amenities or services may further be more important than in other countries. The broader context also concerns trends such as digitalisation. This is reducing the importance of certain services or amenities in the local area (some banking services), while increasing the need for others (broadband connection).

Local area aspects can enhance the effectiveness of national or regional policies, also within the context of EU policy. However, they can also make these policies futile and resources spent on them wasted. An example of the latter includes national awareness raising policies of healthier life styles in local areas with noise problems, air pollution, bad access to recreational areas (because of the time it takes to reach them, or people do not feel safe enough to use them for physical exercise), and no access to shops with healthy food.

The paper underlines the need to address issues through various local area dimensions simultaneously when seeking to achieve quality of life in the local area, rather than focusing only on one dimension. Such an approach also improves resilience, as there are structures to fall-back on when a problem emerges in one of the dimensions. Existing literature on resilience does highlight the role of local area aspects, but mainly on how people's social connections can help making people more resilient. This paper adds to this by arguing for the importance of other local dimensions (physical, and service and government) as well in stimulating resilience.

The paper highlights mobility as a facilitating factor, with specific potential for facilitating 'active local mobility' by foot or wheelchair and cyclability, not only as a goal in themselves, but also to contribute to improved access to services and amenities. Facilitating 'active local mobility' also has a role in preventing poor health and improving social capital, which was identified as a key factor in mitigating local area problems.

In ageing societies across the EU, the local area is likely to increase in importance as older people on average spend more time in the area where they live. The local area can also facilitate longer lives in the community, a generally acknowledged policy aim across the EU. Policy-makers risk overlooking local area factors in this respect. For instance, during the crisis, deinstitutionalisation was sometimes accelerated without having appropriate community care structures in place (Eurofound, 2014). Also, while the focus of policy makers may be on improving formal services, the social aspects of the community –noted by disabled people themselves as a key area for needed change (European Union Agency for Fundamental Rights, 2017)– may be ignored. Besides these service and social aspects of the local area, physical aspects are easily ignored. For instance, even and wide pavements can not only

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contribute to quality of life by themselves, but also by their positive impact on mobility and social cohesion. This paper highlights the importance of multiple local area aspects for quality of life, and emphasises the need to take into account the physical, social and economic, and service and government aspects of the local area for policies to be effective.

Along with measures of financial hardship, trust in institutions was the indicator which suffered most over the crisis (Eurofound, 2012). Local factors (trust in people and in local government, satisfaction with local area) however have been relatively favourable, and generally have been consistently so. The local context may thus be relevant to re-build trust in institutions. Local area factors have been argued to be among the most important determinants of trust in government overall (OECD, 2018).

Objective mapping of presence of certain amenities or services in local areas is not enough. Doctors, banks, street lighting and recreational areas may be present physically, but if they are seen as unsafe, untrustworthy, corrupt, badly maintained, if they are not open or functional at relevant times, or of bad quality in any other respect, they contribute little to quality of life. Similarly, objective measurement of noise levels or air quality may show favourable measurement, but it depends on timing, type and location to what extent they are a problem for quality of life.

While not the principal aim of the paper, it does highlight some data gaps. For instance, the paper identified lack of EU-wide comparable survey data on the source of noise perceived problematic (whether it comes from neighbours or the street), aesthetics, social or community services beyond primary healthcare, aspects of the local area which facilitate mobility by foot or wheelchair, and public spaces beyond green areas. Also, some local area indicators are collected, but in surveys which do not ask respondents more generally about quality of life. An example includes broadband access. This limits analysis, for instance on the importance of broadband access for quality of life among different population groups.

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Policy pointers

Although this is an exploratory paper some messages for policy makers, researchers and other stakeholders have emerged:

- The local social, service and physical environments play an important role in quality of life. Improving the quality of the local area along various dimensions can also prevent social and health problems.
- Policies that improve quality of life at the local level can be national, regional or local. The EU also has an impact. Attention to the local area can enhance the effectiveness of national or regional policies. As these policies interact, better communication between local actors and EU, national and regional policy actors can contribute to improved quality of life.
- Indicators of urbanisation based on population density of a broader area are important, but may fail to capture rural pockets within broadly urban areas, or vice versa. This can be a problem for instance if policies are designed for sparsely populated areas, but are also implemented in densely populated areas within them.
- The local area which matters for an individual's quality of life differs between individuals and often goes beyond administrative borders. Cooperation among adjacent jurisdictions is particularly important.
- Policy objectives may be more readily achieved by addressing multiple dimensions in the framework simultaneously, rather than focusing on one aspect. Such an approach can not only make policies more effective, but also improve resilience. Multiple paths to improve robustness and resilience should be taken into account when investments in the local area are considered.
- Single aspects of the local area can impact on several elements of quality of life. Addressing one issue may lead to various quality of life improvements. For instance, addressing vandalism can have a positive impact on well-being by improving feelings of safety, aesthetics and perceived quality of amenities or services. Such improvements should be taken into account when investments are considered.
- Particular attention should be paid to digitalisation, increasing the importance of certain aspects of the local area (access to fast internet), while decreasing that of others (access to certain banking services).
- With an increasingly older population it is likely that more people will spend more time in the area where they live, so local area aspects are likely to increase in importance for quality of life. A wide range of measures can contribute to facilitate longer and healthier lives in the community.
- Measures to improve local area aspects are particularly important for people who lack the resources to mitigate local area problems, for instance by living in high quality housing. Such measures can particularly improve life in the community for groups in vulnerable situations, and improve inclusiveness.
- 'Objective' mapping of the presence of certain amenities and services in the local area is useful, but not enough. Amenities and services contribute to quality of life only if they are accessible in all respects and of high-enough quality.
  Some data gaps have emerged which appear relevant for evidence based measures to improve quality of life, in particular: comparable EU-wide survey data on the source of noise perceived problematic (whether it comes from neighbours or the street), aesthetics, social or community services beyond primary healthcare, aspects of the

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local area which facilitate mobility by foot or wheelchair, and public spaces beyond green areas.

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Appendix 1: Policy illustrations

1) Physical aspects of the local area

1a) Multi-purpose lamppost (Burgas, Bulgaria)

There are about 60-90 million streetlights in the EU. The city of Burgas (about 200,000 inhabitants, 20,000 lampposts) is replacing its ageing and energy consuming infrastructure. As part of the EU project 'Sharing Cities', it benefits from experiences in other cities that have added ICT features to existing lampposts. The city is also part of the 'European innovation partnership on smart cities and communities' (EIP-SCC), seeking to apply successful initiatives at EU scale. Replacing conventional bulbs with LED on existing lampposts improves energy efficiency and reduces light pollution. It can also improve public safety, traffic safety, and quality of life more generally. Specific ICT features can be added to lampposts, such as:

- public Wi-Fi routers;
- charging points for electric vehicles (car, bike, wheel chair);
- security cameras;
- monitoring sensors:
    - 'Open Internet of Things Mesh network sensors' (piloted in Bristol; not implemented, but reportedly with potential to penetrate walls, monitoring movements in homes to spot loneliness or health deterioration);
    - helping drivers find a parking place, emergency services get quickly to accidents, and garbage collectors to identify areas where most waste is accumulated;
    - traffic (including pedestrian) flow monitoring to adjust intensity and direction of lighting, for security and energy efficiency;
    - how vehicles could move streamlined and safely (including automated vehicles in the future);
    - helping direct visually disabled;
    - environmental monitoring including air quality, noise, and flooding.

A first steps to start the modernisation of street lightning involved Burgas' youngest and largest neighbourhood: Meden Rudnik. The modernisation was funded by the Kozloduy International Decommissioning Support Fund (partially and indirectly funded by the EU - compensating Bulgaria for closing partly a nuclear plant with funds for energy efficiency measures): 983 conventional light bulbs have been replaced by 1,038 LED light bulbs in 2015. Other projects, financed under the EU's Regional Development Fund (with up to 15% national co-funding), aim at integrated renovation of key urban spaces and sustainable development of the urban environment and include multiple measures in this field. These projects are part of a larger investment programme for the development of the city for the period 2014-2020, which has been subject to public discussions with local stakeholders. Some 549 energy efficiency bulbs had been installed by 2017 (target: 1,236 by 2018), 88 lampposts (target: 1,004 by early 2018) were replaced and 328 new smart lampposts were located all over the city, of which 25 lamppost have solar panels, and 12 (of 78 lamppost in one specific street) include video surveillance.

For lampposts still to be replaced, the city explores adding ICT features. In 2018, Burgas Municipality will carry out a pilot within the 'Sharing cities' EU project introducing three lampposts within the city central area with Wi-Fi, air quality sensors and charging points for mobile devices (in particular wheel chairs). Sixty lampposts will have dimming and adjustment of the lighting according to the flow of pedestrians via movement sensors to improve energy saving and security. Those lampposts take inspiration of what has already been done in Lisbon, London and Milan. However, adjustments are made to Burgas' needs, taking into consideration national and municipal legislation and local technical possibilities negotiated with utility companies and providers. The main challenge for the city of Burgas as far as ICT features are concerned, relates to the difficulty to identify which features could be added to selected lampposts as each pole has different technical specifications. Also, city and societal needs must be taken into account and evaluated. Features which go further (such as the Mesh network applications mentioned above) would require critical assessment on aspects such as privacy.

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1b) Greening facades and roofs (Vienna, Austria)

Dense urban areas in Vienna heat up intensely during summer. Since 2010, the city runs a pilot project to 'green' urban facades, mitigating extreme temperatures inside and outdoors, due to shading and evaporation. Harmful air particles and dust are trapped by facade vegetation. Homeowners can apply for a grant of €2,200 for both facade ('living wall systems'), soil (climbers grow from the soil or from containers on the ground) and roof greening. Similar greening schemes exist in some other cities, even if objectives may relate more to aesthetics and quality of the air than to temperature regulation. An example is Amsterdam, which (besides facade and roof greening) also subsidises schools' requests for green on their grounds, and initiatives by inhabitants to green streets and create small-scale 'city agriculture'.

The project was informed by research projects carried out by Vienna Technical University and Vienna University of Natural Resources and Life Sciences from 2010-2016. These gave evidence of the positive impact of greening facades and roofs, both in summer and winter. In summer, evaporation by plants is equivalent to 75 air conditioning units at 3,000 watts running for eight hours. In winter, the building's heat loss was reduced by up to 22%. Greening also created more habitats for songbirds and insects. Green facades further were argued to make the public street space more attractive, increase the quality of life and living in city districts, and stimulating mobility by foot.

Leading by example, eight years ago the city greened facades of the department for waste management in central Vienna, and the roof of the Vienna Environmental Protection Department. Since 2003, the city has accepted around 20 applications for roof greening per year. Applications for funding for façade greening are lagging behind. To improve take-up, procedures for applications are being simplified, and information provision is being improved. Information about greening roofs and facades and the application procedure is available on websites (https://www.wien.gv.at/umweltschutz/raum/gruene-waende.html & https://www.wien.gv.at/umweltschutz/raum/gruendaecher.html). Legal prerequisites for greening facades can be complex. To help citizens better understand the requirements, EcoBuy Vienna (an instrument for sustainable procurement) has published guidelines together with Vienna's environmental protection department. They offer best practice examples and advice to citizens, planners, stakeholders, policy makers and other decision makers on the different systems available, advantages, technical, ecological and economic criteria. The environmental advice service (*umweltberatung Wien*) is available to answer citizens' questions on facade greening. Meanwhile, the environmental protection department provides information through excursions, university courses, lectures, council meetings and cooperates in various scientific projects and programmes. Together these provide an information network to improve take up of greening.

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1c) User-input App for children to stimulate cycling, walking and public transport use to school (Oslo, Norway)

The Norwegian national transport plan states that increases in transport should come from pedestrian movement, cycling or public transport use, not from cars use. In this context, to facilitate such non-care traffic by children to schools, the Agency of Urban Environment (AUE) was given the task to map the need for traffic security measures along Oslo's school cycling and pedestrian routes. The AUE found that to do this for the 64,000 pupils in 164 schools in Oslo may require assessment of all roads. It thus coined a bottom-up approach, where children themselves report areas for improvement through an App. The Norwegian Centre for Transport Research advised which questions were needed to get useful information. The Norwegian Research Council and Cap Gemini helped developing the App.

The 'Traffic Agent' App was launched in February 2015. It has the appeal of a game, giving school children the role of 'secret agents'. It pins children's advices for improvements on an electronic map. According to the makers, all data are transferred anonymously and the App starts working only 100 meters away from the child's house to improve anonymity. The App cannot be used while the phone is in motion for security reasons, to prevent children from using it while cycling or walking. If the child starts with walking and then takes public transport, the App will react on the change of speed and ask to insert the travel mode, to map the chain of transport. If in public transport, the App can then be used again. User-friendliness was considered high priority, also for use by children who cannot read, have visual challenges or reduced mobility. The App also asks for positive feedback, to assess what already works and may be implemented elsewhere as well. Feedback is further used for planning future location and needs of new schools, and for determining catchment areas of schools.

Children's advices are checked every morning, and measures which do not require heavy processing are sent to operations to handle immediately (slippery roads, dense vegetation, incorrectly parked cars). Examples of action include when several students reported they felt safer walking through privately owned land on part of their journey to school, the municipality agreed with its owner to maintain the area in exchange for being permitted to create a crossing, path and handrail; and, on a narrow hill, where cars speeded up and walking and cycling were difficult the municipality built a temporary pavement. When action is taken, this is posted on a Facebook page, so children may take pride in their achievements and see their advice can have a real impact.

The App is available mainly for children in schools which participate, but individual pupils of non-participating schools in Oslo can also fill out a web-request to participate (parents will receive a user code). In some schools where the management not is interested, there was cooperation with the parents committee. Participation by schools stimulated take-up by the children, as these schools actively promoted it. In February 2018, 75 schools had subscribed. The total number of received advices went up from 1,529 in December 2015, to 5,742 in December 2016, to 9,124 in December 2017. Usage of the App is for free, also for other municipalities and countries; three other municipalities in Norway have implemented it (Fjell, Tysvaer and Stavanger).

It is a challenge to meet expectations by parents and schools concerning their children's school routes. While reports are valuable and relevant for longer term planning policies, users may see limited value in their reports when in particular physical changes to roads are not implemented immediately. The AUE tries to address this by communicating regarding realistic expectations. Furthermore, many of the reports from the children concern motorist's attitude when driving (speed and lack of respect for pedestrian crossings). Sometimes physical measures can decrease the speed, but overall it is hard to address drivers' attitude and beyond the competences of the AUE.

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2) Social and economic aspects of the local area

2a) Enhancing social connections and support of older people (Lisbon, Portugal)

Portugal's population is among the fastest ageing in the EU. In 1996, 15.1% of the population was aged 65 or over, while in 2016 the figure was 20.7%. From 1997 to 1999, Fundação LIGA (an NGO for families) conducted a study to investigate the needs, expectations and aspirations of people in the area where it operates, west Lisbon. The study was funded by the European Social Fund. It resulted in the creation of a Resource Centre for Local Development, with a Senior Club, a Youth Club and Home Support Services. This illustration focuses on the Senior Club. It was sustained after EU Funding ceased two years after its establishment, being taken-over by social security funding.

The Senior Club is for residents aged 65 and over of west Lisbon, and activities include visits to museums, arts workshops, and gymnastics sessions. An 'SOS friendly neighbourhood' initiative emerged from the club, supporting people who call for help for instance with shopping for basic supplies, preparing a meal, or cleaning the house. At any time over the past years, the club had about 40-50 users, from varying socio-economic backgrounds. Members are partly recruited from GP and Physiotherapy waiting rooms. People who want to be a member first have an interview to assess their competences, needs and expectations.

To maintain funding, the Senior Club is required to self-organise at least four events per month. Monthly individual meetings are held with members for the club to make informed decisions about activities. The club operates in a building which is open every weekday between 14:00 and 17:00, and longer if activities require so. The building is open to everybody, stimulating inter-generational contact. The club has two part-time employees: a social worker and a psychologist. Fridays are reserved for individual psychosocial support by the psychologist and/or the social worker, by appointment.

Costs are about €14,000 per year, mainly to pay for staff. The organisation argues that success depends on the space (open for everybody), qualified staff (such as a social worker), and ability to activate resources in the community. In an internal evaluation held in 2017, 94% of 50 enquired users said the Senior Club contributed to the improvement of their quality of life, with 62% saying it did so 'very much'. Most reported it has made them 'feel less alone' (64%), helped them get out of the house when they found they spent there too much time, feeling to have come to a standstill (36%), and feeling busier and more entertained, doing things they did not do before (32%). Many found the club to have helped them getting to know things they did not know before (28%) and to take better care of themselves (24%). Some also mentioned it made them feel more energised (12%) or reduced conflict at home (8%). Those responsible furthermore argue the initiative has saved the healthcare system resources.

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2b) Growing organic food together (villages, Hungary)

The Pro Ratatouille project is an organic agricultural programme bringing together disadvantaged Roma and non-Roma people from the community to work together towards a common goal: the creation of local organic food for own consumption and local sale. It includes education in gardening, personal (for instance on healthy life style) and community (organisational) skills. The programme aims to spread sustainable development models among small villages in Hungary to fight unemployment, introduce a healthy and sustainable lifestyle, fight malnourishment, counter stigmatisation and raise awareness by showing communities concrete ways local development can help fight rural poverty; thus aiming to contribute to various Sustainable Development Goals. Mayors and community representatives of the villages are included in the design and implementation of the gardening project, thereby contributing to community empowerment, fighting stigmatisation and tensions among different social and ethnic groups in the same community, and enabling the development of different skills required for carrying out the work - all in the spirit of team work and taking responsibility, thereby creating solidarity and a sense of belonging.

The project is implemented in nine villages in rural Hungary. It started in 2012 in Hejőszalonta, and since expanded to Bükkaranyos, Hejőkeresztúr, Sajókeresztúr, Ároktő and Edelény. The concept of using local development and community involvement to fight rural poverty and improve people's health and livelihood is common to all villages, while other aspects of the implementation (such as the type of crops) are adjusted to the context. Depending on the size of the community garden, costs are €10,000–15,000/year, for organisation, education, gardening equipment, travel and events. In the past funding was obtained from various government funds, and a Norwegian fund. Currently, funding comes from private donations.

People typically spend 15-30 hours a week working together in the community gardens, depending on the needs and events. According to organisers, the projects lead to increased recognition of the possibilities and opportunities of local development to improve the quality of life in the community, meaningful activities create a sense of solidarity, awareness of healthy eating increased, and food is provided for people with little means. They also suggest misconceptions and prejudices against Roma people decrease by working together. In 2017, the six community gardens together (12,075m^2) produced almost 10 tons of vegetables. Currently, sale is organized locally. Those involved argue that a more organised sale may make the project self-sufficient, but it would require investment in marketing.

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2c) Satisfying neighbourhood needs of older people in deprived area (Düsseldorf, Germany)

In 2016, a diaconal organisation (*Diakonie Düsseldorf*) launched the 'city centre neighbourhood project' (*Quartiersprojekt Stadtmitte*) to improve quality of life of older people living in a less developed part of the city centre of Düsseldorf. The project is financed by the regional Ministry of Health, Equalities, Care and Ageing.

In a first step in the 'city centre neighbourhood project', the University of Düsseldorf asked older people already living in the neighbourhood to assess their quality of life. Out of 211 valid answers collected, 80% of the respondents report to feel a strong bond with their neighbourhood and have no plans to move-out. They however also raised the need for more green areas, more leisure activities, and infrastructure to better take into account pedestrians' needs. The project then aimed at responding to these demands by creating networks that meet for social activities and to concretely plan how to be involved in upgrading the area. Older people are for example empowered to actively participate in the municipalities' urban development planning to ensure their wishes and concerns are taken into account. The project also aims at extending older persons' social networks. For example, in 'neighbourhood meetings' they have the opportunity to interact, play games and eat together (usually 20-25 people join per meeting). In so-called 'neighbourhood cafes' they can learn more about the area they are living in, about its history or demographic makeup (usually 10-25 people join). Guided tours through the neighbourhood are organised to highlight positive aspects of the area and to overcome fears of the unknown (usually 20-25 people join). Such fears relate to the area being home to people of diverse backgrounds and living conditions, such as people belonging ethnic and racial minorities, living in poverty or struggling with addiction. During these tours people are confronted with different perspectives, talk to each other, aiming to increase mutual understanding for differences within the neighbourhood. Evaluation of the impact of the project is not foreseen before 2019.

The project is running in close cooperation with the 'railway station neighbourhood project' (*Quartiersprojekt Bahnhof*), which started in 2015. It focuses specifically on increasing the quality of life around the immediate surroundings of the train station; also based in the city centre. The project aims at improving the quality of life of all residents in the area, with no specific focus on older people, but since the target area and population of both projects is partly overlapping, common events, activities and campaigns are taking place.

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3) Service and government aspects of the local area

3a) National assessment of municipal and regional health promotion (Finland)

In Finland, in 2001, a government resolution argued that financial transfers from the national to the local government should take into account municipal activities for health promotion. However, comparable data was lacking. A process of benchmarking health promotion capacity started in 2006. Indicators on six dimensions were developed, following the 'Health Promotion Capacity Building Framework'. An example of one indicator per dimension is given to illustrate:

1. primary healthcare (e.g. proportion of maternity and child care clinics and school and student healthcare providers that record the use of tobacco products in the pupil's family?),
2. physical activity (e.g. swimming pool fees for adults, children and pensioners),
3. municipal management (e.g. whether the reduction of welfare and health inequalities been included as a target in the annual operating and financial plan)
4. vocational education (e.g. proportion of schools where students were involved in planning of school facilities and grounds),
5. upper secondary education (e.g. proportion of schools that comply with nutrition recommendations for school meals),
6. basic education (e.g. proportion of schools in the municipality that have a common practice or guideline for preventing bullying).

An online database called 'TEAviisari' was launched in 2008. It is free for users and financed by the Ministry of Social Affairs and Health, the Ministry of Education and Culture, the National Board of Education and the National Institute for Health and Welfare (THL). THL sends a data collection form to all municipalities, and gathers data from other sources, such as Statistics Finland. THL rates (bi-annual) indicators on a scale from 0 (poor quality) to 100 (good quality). In July 2018, Parliament decides whether around 2.5% of the national budget for the municipalities (€60 million) will be allocated based on the 'health promotion initiative'. The incentive for municipalities is based on process indicators (29 from TEAviisari) and impact indicators (9 indicators measuring changes in health, healthy behaviour and well-being). With current results, funds allocated would vary from about €6 per inhabitant for the worst performing municipality, to €12 for the best performing. The reform would come together with a package of reforms including on moving social and healthcare responsibilities from municipalities to regions.

If the tool is used to allocate funds, all municipalities are expected to provide all requested data, but participation is already high and has increased. For instance, in 2008, 83% of municipalities entered data on primary care centres, up to 96% in 2016. In 2009, 63% inserted comprehensive data on schools, up to 88% in 2017. However, not every municipality provided all data and participation sometimes decreased. For high participation rates it was considered important that Ministries are involved and for municipalities to get something out of it. Municipalities can compare themselves with other municipalities and national averages, to see where they can improve upon. A 2015 revision of TEAviisari implemented improved data presentation technology, as well as requests from municipalities: maps with scores for all variables both at the municipal and regional level (to compare with nearby places as well as see the overall regional performance) and top and bottom 10 indicators (to see what goes well, and what does not). A potential issue could further be that municipalities which are performing worse have fewer opportunities to improve, as they will receive fewer funds. However, funds allocated in this way only constitute part of the total grant from the national government. Furthermore, improvements on indicators does not always need to require much funds, including for instance 'nominating a person responsible for health and welfare promotion' and 'monitoring hours of absence of students overall per term' (the data of the latter is anyways collected, but not always compiled in this way). A second issue may be that data provided by municipalities may be overly positive. To control, there is regular auditing. A 2014 audit of 5 indicators in physical activity investigated 584 positive reports. It found 40 errors, but at most 2 per municipality and most seemed to concern typos or misunderstandings. User-friendliness and openness of the website, and the objective nature of the data, are argued to contribute to accuracy of reported data. Municipalities know that inhabitants and other stakeholders can check the website comparing their municipality with others along all indicators. Initially THL received some emails challenging data, but this decreased in time (while usage of the site has increased). Most disagreements concerned civil servants who then in conjunction with the data providers agreed on corrections if needed. The website is open to the public, but in practice mostly used by civil servants, with for instance 1,483 individual users (2,219 sessions) in February 2018, on average spending 6.5 minutes on the website. A third challenge is to maintain the number of variables workable, but also to satisfy multiple stakeholder demands for variables.

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3b) Solidarity transportation initiatives (rural areas, France)

In France, localities have social cultural centres (*Centres sociaux et socioculturels*, SNC). They are organised and funded -mainly- through the 'family allowance found' (*Caisses d'allocations familiales*) and municipalities. In 2016 there were 2,237 SNCs in France, 21% of which in rural areas. About one-third is directly managed by a municipality (31%), while the others have various forms of associative management.

SNCs develop action based on a social and territorial diagnostic that relies on inhabitant's needs and participation. Aging population is a key development in many SNCs. One of the issues addressed by SNCs in this respect is transportation for elderly, in particular in rural areas which lack public transportation. While young retirees are generally able drive, lack of transportation became a more and more imminent problem with the area's population ageing. Widowhood, health issues or reduced driving apprehension make personal transportation difficult. Based on this, and given that elder transportation is specific in the way assistance is needed (reinsuring presence, help to get out a low car, open a door etc.), SNCs have started to develop 'solidarity transportation' initiatives. The details of implementation vary between SNCs, but the general goal is to offer affordable transportation for elderly who would otherwise give up on 'primodial rides' (important health issues), but often also on 'comfort rides' (grocery, family reunions, doctor check-ups), thus risking social isolation and unmet needs.

To illustrate, solidarity transportation was implemented in 2009 by a SNC covering 5 rural towns in western France. The role of the SNC is to have a list of volunteer drivers, create a schedule listing availability of drivers, and distribute the schedule and driver contacts to the registered passengers. Contacts between passengers and drivers are made by phone, directly or with the mediation of the SNC, within 48 hours prior to the ride. This choice was based on the need to provide elderly with a system that matches their practices. Given the potential difficulty of smartphone use and the fact that those rural areas may lack quality internet connection, no App or internet interphase were developed. Passengers pay 0.4€/km to the driver, plus an annual SNC fee (10€). The drivers would pick up their passengers at their home, and drive them where they need. If required for the purpose of the trip, drivers wait for the passenger and drive them back, not charging waiting time. Passengers directly pay drivers (by checks or in cash) and they both fill out three versions of a transportation form, one for the passenger, one for the driver, and one that the driver will return to the SNC. The cost of the ride is meant to cover fuel expenses. Parking fees are also charged. However, the driving is voluntary work. In 2017, there were 436 rides for a total of 5,958 km within this specific SNC. There were 130 registered users for 25 volunteer drivers. Users are mainly people over 75 years old, and almost all drivers are young retirees. Interviews with people involved, suggest there tends to be fidelity that builds up as passengers would ask to have the same driver each time. Rides have mainly one of three purposes: 60% are doctor rides (which reflect the lack of proximity doctor is this area), 34% grocery rides and 3% are visits rides, to a friend or cemetery mainly widows); remaining rides are for other purposes.

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3c) Supporting 'natural support' for disabled people (rural areas, Mayo region, Ireland)

'Western Care Association' is an example of an organisation providing community services for disabled people in Ireland. It has just over 800 staff and provides services to around 750 children and adults with learning disabilities in the rural region Mayo, the 3rd largest Irish county in size, yet 17th in population. Western Care Association provides social care and support services to about 900 people throughout the region. Services provided by Western Care are funded by the Health Service Executive, the Irish health ministry. The association started as an initiative by parents who came to work together to ensure that their children live full and satisfied lives as equal citizens. Western Care Association provides a wide range of services across the region to ensure that children and adults with intellectual disability and/or autism in the are supported to full citizenship in their own communities.

The availability of services in rural areas is lower in general due to various factors. Provision of services in remote rural areas comes at additional cost. When a support worker travels to a remote area to provide 1.5 hours of support per day, transportation can cost more than the service itself. Delivering such services requires more resources while covering fewer service users. At the same time, the demand for social services in rural settings can be higher than in the cities. For instance, persons with support needs living in scattered and isolated rural areas may have limited 'natural support', i.e. support from families, friends, neighbours who could, for instance, go with the person to a match or cinema. In urban areas with more vibrant and enthusiastic communities, there are more possibilities to get natural support and to participate in social life more actively.

The services provided by Western Care are intended to complement and support the support of families, friends, neighbours and communities. The range of services provided includes: therapy and discipline support, support for a variety and range of living options, day service support, respite support, homes haring, transport services, and in-home advice, personal assistance and family support services. The organisation seeks to re-create 'natural support' through volunteering programmes, recruiting volunteers to engage in social activities together with the persons with disabilities. Overall, the organisation seeks to harness community involvement through volunteers, community partnerships and coalitions to realise its mission.

Those involved argue that the initiative not only encouraged people to stay in their local communities, but also attracted some people from urban settings to move to rural areas. They also argue it has improved the development of community spirit in such rural areas, is a leading job creator and contributes to the rural economy, besides contributing to increased quality of life for disabled people and their supporters.

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Appendix 2: Data illustrations

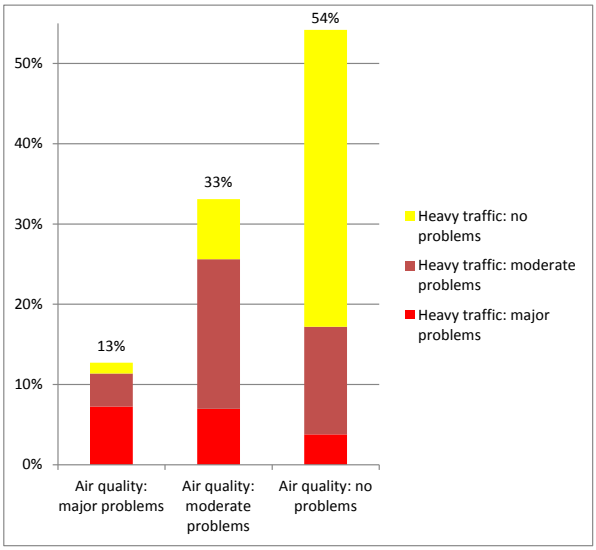
1) Immediate area & physical aspects

Worse problems with air quality more often come with problems with heavy traffic

Earlier analysis of EQLS data has shown that there has been a 6%-point increase in the proportion of people who see quality of the air as a problem from 2011 to 2016 in cities or city suburbs. Furthermore, people who report problems with air quality also more often report problems with heavy traffic in 2016. (Eurofound, 2017) Data about real quality of the air are discussed elsewhere (European Environmental Agency, 2017). However, it is relevant for quality of life that subjectively experienced problems with air quality are on the increase in cities and city suburbs.

A closer look at the data reveals that there are people who report no problems with quality of the air, but do report problems with heavy traffic, apparently for reasons beyond air quality (Figure 2). There are also people who report problems with air quality, but not with heavy traffic. However, this group is larger among people who report *moderate* problems with air quality (23%) than among those who report major problems (11%). Overall, the more intense air quality problems are perceived, the more likely they coincide with major traffic problems.

Figure 2 Proportion of people in cities or city suburbs reporting problems with air quality, and the share of them who also report problems with heavy traffic, EU, 2016



Source: EQLS 2016 analysis for Eurofound (2018), *Local area aspects of quality of life*.
Notes: Q54: 'Please think about the area where you live now – I mean the immediate neighbourhood of your home. Do you have major, moderate or no problems with the following? a. Noise; b. Air quality; c. Litter or rubbish on the street; d. Heavy traffic in your immediate neighbourhood'. Answer categories are: Major problems, Moderate problems, No problems, (Don't know), (Refusal).

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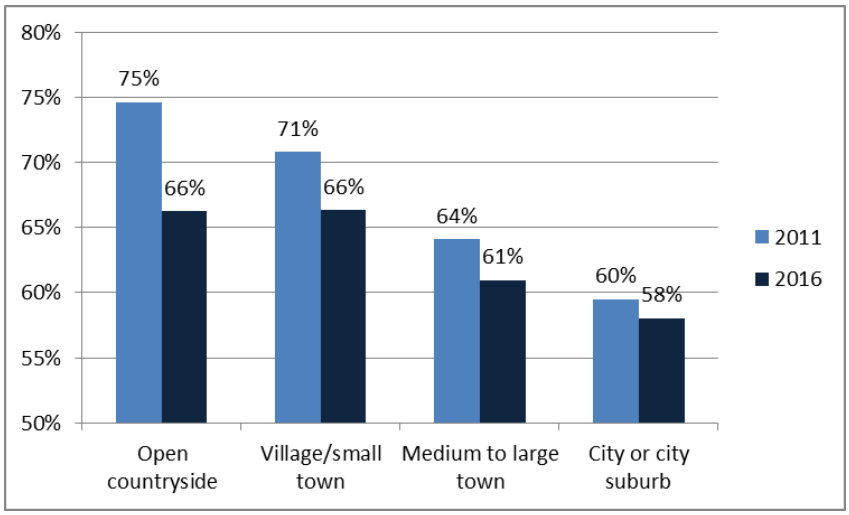
2) Intermediate area & social and economic aspects

Feeling close to people in the local area has decreased most in rural areas, where it matters most for social inclusion

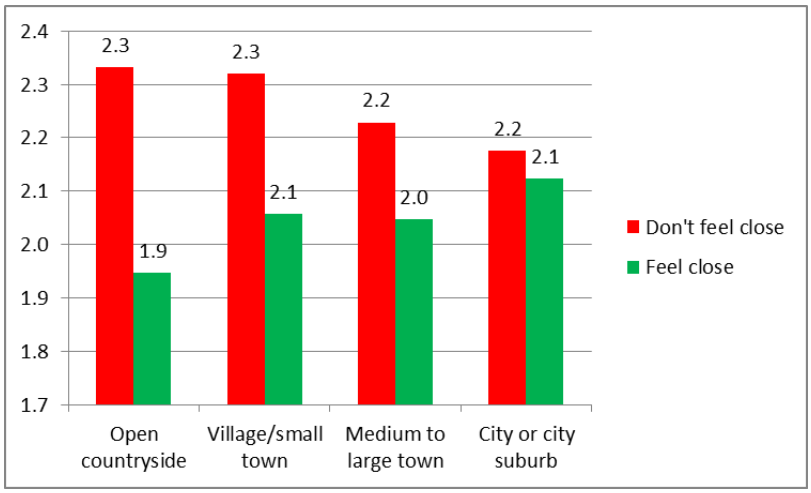
From 2011 to 2016, there has been a drop in the proportion of people who report to feel close to people in the area where they live across the EU, regardless of level of urbanisation (Figure 3). However, the drop was largest in people who report to live in the open countryside, and smallest among those who live in cities or city suburbs. This is of concern, in particular because feeling close to other people in the local area seems to matter more for people who live in more rural areas in terms of their perceived social exclusion than in urban areas (Figure 4). Arguably, people who live in more urban areas depend less on their feelings of closeness to people in their local area to feel included in society, finding other means to feel included in the urban setting.

Figure 3 Feeling close to people in the area, by level of urbanisation, 2011 and 2016, EU



Source: EQLS 2016 analysis for Eurofound (2018), *Local area aspects of quality of life*.
Notes: Q36 To what extent do you agree or disagree with the following statements? e. I feel close to people in the area where I live. Q53 Would you consider the area in which you live to be...? 1. The open countryside 2. A village/small town 3. A medium to large town 4. A city or city suburb 98. (Don't know) 99. (Refusal)

Figure 4 Social exclusion index for people who feel close and who do not to people in their local area, by level of urbanisation, 2016, EU



Source: EQLS 2016 analysis for Eurofound (2018), *Local area aspects of quality of life*.
Notes: The SEI refers to the overall average score from responses to four statements in Q29: 'I feel left out of society', 'Life has become so complicated today that I almost can't find my way', 'I don't feel that the value of what I do is

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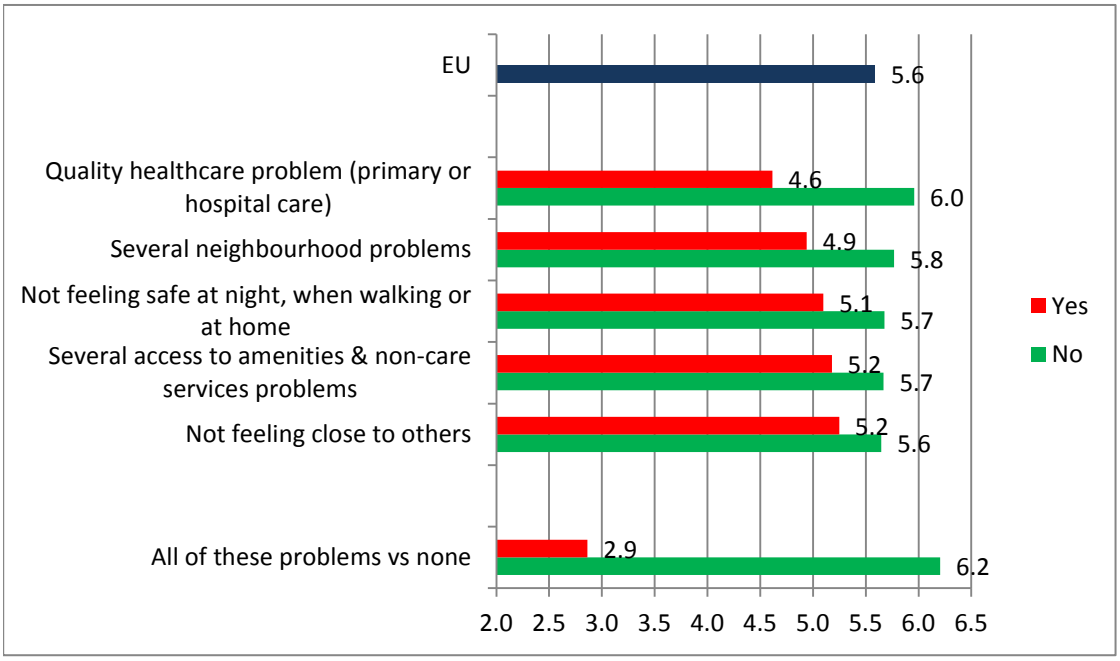
3) More distant area & service and government aspects

Trust in local government is higher in areas with few local area problems

Trust in institutions was among the indicators in EQLS which deteriorated most and across the EU during the crisis (Eurofound, 2012). Trust in intuitions, though, has been improving recently (Eurofound, 2017e). Trust in local (municipal) authorities has consistently been higher than trust in other institutions, up from 5.2 in 2011 to 5.6 in 2016 on a scale from 1 to 10 (compared to an improvement from 4.0 to 4.5 in the government). 'Trust in local authorities' is included in the framework in this paper as something which matters to quality of life even if more distant, but it can also be viewed as an outcome of a wide set of immediate, intermediate and more distant aspects quality of life in the local area.

Indeed, people in high quality local areas trust the local authorities more than others. Those who trust local authorities most are people reporting few neighbourhood problems, feel safe in their area and at home, report few difficulties in accessing neighbourhood services, rate quality of GP and hospital services high, and feel close to others in their local area (Figure 4). For instance, people experiencing major problems with litter on the street rate local government at 4.4 and those who report no problems at 5.8, and 4.6 for those who report major problems with air quality compared to 5.8 for those who report no problems. 'Several neighbourhood problems' in Figure 4 comprises a broader measure of such problems, including more moderate problems. While this concerns trust in local authorities the pattern is similar for trust in government, albeit at a lower level of trust overall: 5.0 among people with none of the problems in the figure, and 2.0 for those with all of them (compared to 6.2 and 2.9 for trust in local authorities).

Figure 4 Trust in local government by groups with and without various local area problems, EU, 2016



Source: EQLS 2016 analysis for Eurofound (2018) *Local area aspects of quality of life.*
Notes: 'quality healthcare problem' = rating of either primary or hospital care at 5 or lower, on a scale from 1 to 10; 'several neighbourhood problems' = at least three of four problems (noise, litter, air quality, heavy traffic); 'not feeling safe at night' = disagree or strongly disagree with 'I feel safe when I walk alone in this area after dark' or/and with 'I feel safe when I am at home alone at night'; 'not feeling close to others' = disagree or strongly disagree with

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