Healthy and sustainable diets for children:

Opportunities for local authorities

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About this report

This report analyses the role that local authorities can play in achieving healthy and sustainable diets for children. We provide a short overview of some key trends in children's diets in the UK and introduce UNICEF's Innocenti Framework to examine the influence of the 'food system' on children's dietary choices. Using this framework, we review current local authorities' interventions for influencing children's diets in the UK, with a focus on England. This review is complemented by the results of a workshop with local authorities in which preliminary findings were discussed vis-à-vis their own local experiences. Finally, the report provides directions for local authorities in five areas of action to improve children's diets.
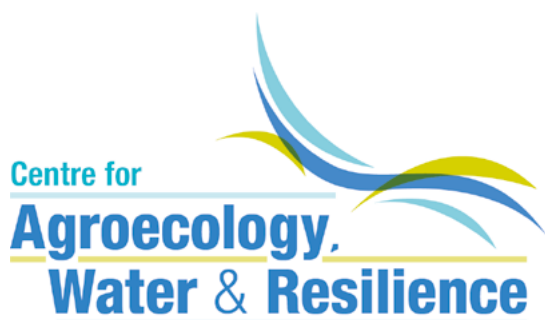
This research was commissioned by the Soil Association to inform their strategies for scaling up their work towards achieving healthy and sustainable diets for children and for identifying new areas for collaboration with local authorities to bring about changes using a place-based approach.

We hope our research findings will be useful for the work of the Soil Association, for local authorities in England and elsewhere in the UK as well as for other community organisations, groups, practitioners, and policy makers who are actively engaged in promoting children's diets. In the context of the ongoing environmental and the cost-of-living crises, a focus on how we can achieve a sustainable food system that promotes, protects, and improves children's diets while protecting the environment is vital for our children's future acquires added significance.

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Contents

Executive summary

Why do we need to focus on healthy and sustainable diets for children and adolescents in the UK?

The food that children and adolescents eat (both its nutritional quantity and quality) plays a major role for their ability to learn, be active and thrive. However, observed changes in children's diets - with increasing food insecurity on the one hand, and excessive consumption of food and beverages high in fat, salt and sugar (frequently in the form of ultra-processed foods) and an inadequate consumption of fresh fruits and vegetables on the other - have led to poor nutritional outcomes.

Poor nutrition leads to negative health consequences for children, including worsening levels of tooth decay, anxiety, stunted growth, low energy levels, and mental health problems (SAPHNA, 2023). Given the link between diets and weight, poor nutrition has not only major implications for children's current but also future disease burden, with childhood overweight and obesity linked to an increased risk of diabetes, cardiovascular diseases and mental health issues in adult life, with major negative consequences for individuals, the NHS and care sector. Consequently, there has been some increase in public and policy attention towards improving children's diets, not only as a public health challenge but also from a rights perspective where every child has the right to food and nutrition (see UNICEF, 2020).

Besides these concerns for public health, our current diets (and the underlying agricultural, food producing and food retailing practices) are also major contributors to the environmental challenges (including on biodiversity and climate) which are threatening the basis for children's and adolescents' futures, including their health. Thus, a focus on healthier and more sustainable diets for children and adolescents supports working towards a solution for the described food system challenges not only for the most vulnerable but also for the future of all of us.

Given this context, we aim to answer two research questions (RQ) in this report:

What actions are needed to improve children's food environment for healthier and more sustainable dietary patterns amongst children and adolescents?

How can local authorities best support children's diets to be healthy and sustainable?

Why local authorities should and can get involved?

Local authorities are key for the implementation of many national strategies and for finding local pathways for addressing issues affecting children and adolescents, for example, around education, public health, climate change, and urban planning. Through their responsibility for the provision of public services (e.g., around schools, housing and planning, and business support) and through their regulatory functions such as in planning, licensing and food safety, local authorities are shaping the local contexts in which children's and adolescents' healthy and sustainable dietary practices can occur.

In the context of health, the National Planning Policy Framework 2023 (NPPF) and the Health and Social Care Act establish legal responsibility of local authorities for promoting and improving health and safety of communities, including for children. In the context of sustainability, e.g., the Environment Act 2021 and the NPPF make references to local authorities' role regarding the reduction of greenhouse gas emissions, sustainable land use (including for food production purposes), food waste collection and other aspects linked to a sustainable food system. Thus, local authorities can take on community leadership roles and can be pro-active agents of change towards healthy and sustainable diets for children.

How is this research framing the way forward?

Attempts to change the diets of people have frequently focused on individuals' knowledge, attitudes and behaviours. However, increasingly research and successful initiatives are based on the realisation that dietary behaviours do not take place in a vacuum but are shaped by the whole food system. This also applies to the diets of children.

The Innocenti Framework on Food Systems for Children and Adolescents (UNICEF, 2018) offers a useful lens to consider what is a) influencing the diets of children and adolescents, and what are hence b) useful areas in which local authorities can be active to support healthy and sustainable diets for children and adolescents.

The Innocenti Framework reflects on five drivers of the food system (demographic; social and cultural; political and economic; innovation and technological; biophysical and environmental), and on four immediate determinants of children's diets within a local food system. These determinants include the behaviour of caregivers, children and adolescents; the personal food environment; the external food environment; and the food supply chain. Each of these determinants is further shaped by more immediate and individual-level influencers. Local authorities are able to address these determinants through focusing on related influencers but are also increasingly recognising the need for broader food system change based on strategic, place-based interventions.

However, these initiatives focused on individuals' knowledge, skills and behaviours are often only one part of broader place-based food strategies, and thus are reflective of the need to achieve change across the whole food system.

Which current interventions by local authorities are focusing on the dietary behaviour of caregivers, children and adolescents?

Frequently, interventions by local authorities centre on investing in (food) literacy and skills around healthy and sustainable eating and focus on caregivers, professional staff (e.g., in schools, nurseries, community family hubs) as well as directly on children and adolescents. Such interventions are often implemented in childcare, school or community settings. Examples of initiatives implemented by/with some local authorities include 'A Better Start' programme; Health Exercise Nutrition for the Really Young (HENRY); Healthy Early Years (HEY) award scheme; Holiday Activity and Food (HAF) programme; and the Eat Better, Start Better programme.

How are local authorities currently improving personal food environments?

Personal food environments are shaped by personal factors that influence food choices, such as levels of income and education, attitudes, cultural values, and skills. Equally important are factors like accessibility of healthy and sustainable food, convenience, and availability of food preparation equipment in households. In our review of initiatives taken by local authorities, we found only a limited number of interventions focusing on personal food environments. However, evidence shows that, for example in the context of low- and middle-income countries, direct financial support has proven effective in reducing food insecurity.

Food subsidy programmes do exist in the UK (e.g., Healthy Start programme), with some positive evidence of their success of improving food insecurity. Examples also exist of programmes aiming to move beyond addressing food insecurity to also improving quality and choice,, e.g., Rose voucher scheme; local procurement of recipe boxes as part of a Healthy Start voucher scheme.

What is being done by local authorities to address children's external food environments?

External food environments are those physical and online places in which children and adolescents engage with food, in which they make - or can try to influence - decisions about what to grow, buy, prepare, and eat, and perhaps even about what to find desirable, or aspirational about food. Local authorities have influence on children's external food environments including schools; other child-specific settings like nurseries, childminders, family hubs, indoor- and soft-play centres; and external community food settings like supermarkets, take-aways, leisure and sport facilities, and advertisement billboards.

Current school-centred interventions focus on enabling changes in pupils' dietary behaviour by improving what food is available, affordable, appealing and aspirational. Efforts include, for example, the creation of a welcoming atmosphere in food spaces, including positive messaging and cultural considerations, the engagement with local Healthy School schemes, or the adoption of whole-school approaches around healthy and sustainable food (e.g., SA Food for Life School Award scheme).

Interventions in other child-specific settings remain still limited but include action focused on improved food standards and improved knowledge and practices for staff and families (e.g., Big Cook Little Cook scheme, Children's Healthy Weight strategy, Food Routes programme, Food for Life Early Years accreditation scheme). Community food setting interventions range from collaborative projects to improve food offers (e.g., Healthier Catering Committee, salt-and-fat reduction initiatives, the "Box Chicken" project, Sugar Smart commitments); pledges to enable access to free tap water; fast-food outlet restriction zones around schools, youth-based facilities, parks, etc.; restrictions on public advertisement of HFSS foods; to the creation of positive food system spaces (e.g., for growing food, for alternative forms of food retail; see below).

How are local authorities in the UK currently working towards a healthier and more sustainable food supply chain for children's diets?

Addressing behaviours and local (personal and external) food environments is important but there is growing evidence that more structural changes are also needed across the whole food supply chain, including a stronger focus on sustainable food production, improvements in the affordability and availability of healthier and sustainable food options, reformulation of products, reduction of package sizes and other portion control measures. While certain aspects of this fall outside local authorities' area of responsibility, the adoption of healthy and sustainable food procurement strategies, provisioning of food growing spaces, and supporting sustainable local businesses and food markets are all strategies that have been adopted by some local governments.

Through public food procurement decisions (for example, for schools, nurseries, community family hubs, children centres, or Healthy Start vouchers), local authorities can shape both the production and consumption of healthy and sustainable foods. Local authorities have, for example, adopted recommendation by a local Good Food Procurement Group or are working with healthy and sustainable food procurement policies/strategies like Soil Association's Food for Life Served Here standards.

Enabling local (community) food growing through the application of specific planning instruments (e.g., Local Plans, Supplementary Planning Documents, strategic planning in co-developed local Food Plans), financial support, the creation of growing cooperatives, community champions and other social support structures, can shape healthier and more sustainable food supply chains as well as contribute to a local food culture benefitting children and adolescents.

Support for sustainable local food businesses and markets can happen through the adoption of a Good Food Retail Plan, the creation of regular local farmers markets and other food events, a reduction in business rates or rents for market stalls for specific businesses producing/offering healthy and sustainable food products, and through public procurement decisions that support local, healthy and sustainable food producers.

How are local authorities currently adopting a strategic, place-based perspective?

A place-based perspective joins holistically actors (including local authorities) and actions for change in the four determinants and influencers of children's and adolescents' diets. It allows the consideration of the interactions between the four different determinants and the local context, culture, traditions, infrastructure, existing barriers, and available strengths and resources.

Through a 'whole systems' approach, it can also link food system-centred actions to other local policy agendas, enabling cross-matrix working and the mainstreaming of food, for example through Joint Strategic Needs Assessment topics. Here, spatial planning offers local authorities important tools to implement food strategies.

Local food strategies (sometimes as part of broader local strategies) have already been (co-)developed by over 50 cities, boroughs, and counties. For many, the Sustainable Food Places programme is providing a framework and support structure in developing them. Strategic development has sometimes been led and sometimes been supported by local authorities (e.g., from within public health units). Co-creation, including engagement with local citizens, is a key and frequently applied approach; though currently, there is a lack of children's and adolescents' voices in the development of local food strategies.

1. Introduction

There is a growing concern over children's diets in the UK as studies from various official and third-sector organisations show (e.g., National Diet & Nutrition Surveys, Health Surveys, publications from Public Health England, UNICEF, The Food Foundation, Sustain). The most frequently used indicators to drive this concern are the significant rises in overweight and obesity in children and in the associated health risks across the life course (such as diabetes, cardiovascular diseases, and mental health issues). This currently places childhood obesity amongst the most serious public health challenges of our times (National Audit Office, 2020). Although obesity has also been linked to underlying biological and other social factors (including the level and pattern of physical activity and changing lifestyles more broadly), there is an increasing consensus over the link between obesity and the prevalence of poor diets (Cetateanu & Jones, 2014; Goisis et al., 2015).

At the same time as there are concerns over the quality of the food children eat, there is also an increasing concern over food insecurity and a recognition of the prevalence of child food poverty (UNGCN UK, 2022). Consequently, there has been increasing public and policy attention on improving children's diets not only as a public health challenge but also from a rights perspective where every child has the right to food and a healthy and nutritious diet (see UNICEF, 2020).[1]

It is well established that food choices are not simply reflective of an individual behaviour but are a practice that is influenced by socio-economic-cultural and physical environments (see Schubert et al., 2012). Since these environments vary greatly, these social determinants of health are contributing to increasing nutritional health inequalities (Engler-Stringler et al., 2014). There is growing evidence that the diets of children and adolescents[2] not only remain deficient in foods optimal for a healthy diet, such as fruits and vegetables, whole grains, fibres, nuts and seeds, but that they are also high in sugars, sugary snacks and beverages, processed meat and salt (WHO, 2018). Besides these specific concerns for children's health, our current diets (and underlying agricultural and food

producing practices) are also major contributors to the biodiversity- and climate challenges we are facing (Benton et al., 2021; Ortiz et al., 2021). These impacts directly question our ability to feed future generations. More broadly, biodiversity loss, climate change and environmental pollution also threaten the health and well-being of our children. Therefore, globally, an increasing number of initiatives and countries are considering the importance of healthy AND sustainable diets.

In order to bring some clarity to what is meant when considering 'sustainable healthy diets', FAO and WHO (2019) have together co-developed some guiding principles that highlight the need to consider healthiness, environmental impact and socio-cultural implications holistically (see Figure 1). Although it is not possible to say that all healthy diets are sustainable, nor that sustainable diets are automatically the healthiest, there is strong evidence that, for example, a move away from over-consumption and reliance on "environmentally expensive foods (Aleksandrowicz et al., 2016; Clark and Tilman, 2017), including ultraprocessed foods" (Hollis et al., 2020, p.43) can support "the attainment of both human and environmental health" (ibid.). Therefore, guiding principles for sustainable healthy diets (see e.g., FAO and WHO, 2019) are relevant for all, but perhaps even more so for the most vulnerable, including children (e.g., Hollis et al., 2020).

Achieving healthy and sustainable diets is closely linked to the children's food environment and the food system as a whole (see Sections 2.2 and 2.3). Hence, the need for promoting a healthy and sustainable 'food environment' for children as a priority and, more broadly, the need for a transformation of the whole food system [across production, distribution, transport and trade, retail, consumption, waste and disposal practices and external influences] is a critical area of research, policy and practice. The UK's official government target - although not explicitly focused on children's diets but on childhood obesity - aims to halve childhood obesity by 2030. However, in England "we are nowhere near achieving this" (Davies 2019, p.2). Therefore, it is paramount to intensify our efforts in this regard and think about what different actors and stakeholders can do to achieve the necessary change. As we will show in this report, local authorities do have the capacity to shape some aspects of the food system to move towards healthy and sustainable diets for children in the UK.

In consultation with, and as commissioned by Food for Life and the Soil Association, the aim of the research presented in this report was an investigation of the specific role that local authorities currently play - and could play going forward – in promoting children's diets in England. The main research questions we aimed to answer are:

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1 See UNICEF 2020; also Food Foundation's campaign at https://foodfoundation.org.uk/initiatives/childrens-right2food
2 Unless otherwise specified, we mean both 'children and adolescents' together whenever we refer to 'children' in this report.

Figure 1:
Guiding Principles for Sustainable Healthy Diets *(FAO and WHO, 2019, p.10f, modified graphic design)*

SUSTAINABLE Healthy DIETS...

REGARDING THE HEALTH ASPECT

1
...start early in life with early initiation of breast feeding, exclusive breast feeding until six months of age, and continued breast feeding until two years and beyond, combined with appropriate complementary feeding.

2
... are based on a great variety of unprocessed or minimally processed foods, balanced across food groups, while restricting highly processed food and drink products.

3
... include wholegrains, legumes, nuts and an abundance and variety of fruits and vegetables.

4
... can include moderate amounts of eggs, dairy, poultry and fish; and small amounts of red meat.

REGARDING ENVIRONMENTAL IMPACT

8
... contain minimal levels, or none if possible, of pathogens, toxins and other agents that can cause foodborne disease.

7
... are consistent with WHO guidelines to reduce the risk of diet-related non-communicable diseases, and ensure health and wellbeing for the general population.

6
... are adequate (i.e. reaching but not exceeding needs) in energy and nutrients for growth and development, and to meet the needs for an active and healthy life across the lifecycle.

5
... include safe and clean drinking water as the fluid of choice.

9
... maintain greenhouse gas emissions, water and land use, nitrogen and phosphorus application and chemical pollution within set targets.

10
... preserve biodiversity, including that of crops, livestock, forest-derived foods and aquatic genetic resources, and avoid overfishing and overhunting.

11
...minimize the use of antibiotics and hormones in food production.

12
... minimize the use of plastics and derivatives in food packaging.

REGARDING SOCIOCULTURAL ASPECTS

16
... avoid adverse gender-related impacts, especially with regard to time allocation (e.g. for buying and preparing food, water and fuel acquisition).

15
... are accessible and desirable.

14
... are built on and respect local culture, culinary practices, knowledge and consumption patterns, and values on the way food is sourced, produced and consumed.

13
...reduce food loss and waste.

RQ1

What actions are needed to improve children's food environment for healthier and more sustainable dietary patterns?

RQ2

How can local authorities best support children's diets which are healthy and sustainable?[3]

The research was carried out through a broad review of relevant literature. This included grey literature, academic publications, reports and documents available on the websites of local authorities in England and elsewhere in the UK, and other third sector organisations working with and/or on behalf of local authorities. It is also complemented by workshop reflections from members of local authorities who have had the opportunity to learn about our research findings before sharing their own local authorities' activities, challenges and opportunities. These reflections are incorporated into Chapter 3 and 4 (ongoing activities by local authorities), and Sections 4.1 (challenges faced) and 4.2 (opportunities).

This report is structured as follows: Following the Executive Summary and this introduction, we present the context for healthy and sustainable diets for children in a review chapter, including an overview of the current situation in children's diets in the UK (Section 2.1), an introduction of the key concepts of 'food environment' and the 'food system' approach (Section 2.2), followed by an overview of the Innocenti Framework that specifically focuses on children's diets (Section 2.3). We then discuss the key role of local authorities in influencing children's food systems (Section 2.4).

In Chapter 3, we present findings from our review of interventions by local authorities using the lens of the Innocenti framework, and findings from available published evidence about the impact/effectiveness of implemented interventions. This chapter introduces current interventions on behaviours (Section 3.1), personal and external food environments (Sections 3.2 and 3.3, respectively), the food supply chain (Section 3.4) and those of a strategic, place-based nature (Section 3.5). Given the large number of local authorities and diversity of their activities, we do not attempt comprehensiveness but provide illustrative examples of the types of interventions that have been or are delivered by some local authorities.

In Chapter 4, we summarise the results of a stakeholder workshop, including co-identified challenges and enablers for interventions. In Chapter 5, we synthesise our research findings to describe the action areas which local authorities can engage in across children's food systems. The identified action areas offer some directions to local authorities that support children's diets.

3 *For an exploration of what is understood as 'healthy and sustainable diets', an overview of the complexity, challenges, and trade-offs in practice, and of the variety of metrics used to measure 'healthy and sustainable' characteristics of diets, see the Interim Report by Saxena et al. (2022).*

2. Review of context for healthy and sustainable diets for children

In this chapter, we are first introducing the current situation of children's diets in the UK (Section 2.1), then introduce the role of the food environment for shaping children's diets (Section 2.2) and the helpful Innocenti framework promoted by UNICEF for identifying action areas for children-centred food system interventions (Section 2.3) before we focus in Section 2.4 on the specific role and responsibilities of local authorities for shaping children's diets.

2.1 Current situation: Children's diets in the UK

Although the term 'diets' can be interpreted in many ways (see Hollis et al., 2020), here we use it to refer to the quantity, quality, frequency, and mix of different foods that children consume. When considering 'diets' in this report, we also include the sources of the food (how and where it is produced, processed, etc.) and consider both the impact on human health (or nutrition) and on the environment (*i.e.*, environmental 'health' or sustainability).

In the UK, diets of children living in the most deprived areas or living in food insecure households are disproportionately poorer, putting these children at greater risk of being overweight and food insecure (UNICEF 2019, p.53). It is estimated that nearly 4 million children in the country are living in households affected by food insecurity. This has many consequences, some of which are immediate: in a survey conducted in England with children aged 7 to 17 years old, nearly one in ten said that sometimes they were hungry but did not eat to avoid using up their families' food (The Food Foundation 2022 a, b). In 2019, the House of Commons Environmental Audit Committee concluded that the UK's food insecurity levels were among the highest in Europe, particularly for children under 15.

There is also a strong support for a focus on underlying issues, with the Children's Commissioner for England (2021) stating that "Child 'food poverty' is just one symptom of a wider injustice: poverty". This highlights the prevalence of poverty and inequality in the UK as one of the underlying reasons for the increasing percentage of children affected by malnutrition in the country. Although poverty is clearly a fundamentally important factor as it undermines the ability to afford healthy and sustainable food, the reasons for food

poverty and malnutrition are even more complex than that. As the UN Global Compact Network UK reports, "Hunger is directly linked to poverty 60% of the time and an inability to physically access food 40% of the time" (UNGCN UK, 2022, p.21).

Importantly, children's diets are not only affected by how much they eat (*i.e.*, their calorie intake) but also by what they eat. Over the last few decades, children's diets have changed substantially, with excessive consumption of food and drinks/beverages high in fat, salt and sugar (described as HFSS food); and inadequate consumption of fresh fruits and vegetables. For example, less than one-in-five children (18%) "aged between 5 and 15 ate the recommended five or more portions of fruit and vegetables a day" (NHS Digital, 2019). Furthermore, about half of all calories consumed by children (and by adults) in the UK are derived from ultra-processed foods (UPFs) (Rauber et al., 2018), which "are typically calorie dense and high in sugars, refined starches, unhealthy fats, and sodium" (Popkin & Ng, 2022, p.8). They are also foods modified to heighten their appeal with low-cost ingredients, with their hyper palatability identified as being unhealthy but also appealing and even having addictive qualities. For example, it is reported that only 7% of breakfast cereals and 8% of yogurts marketed specifically to children are low in sugar (Food Foundation report, 2023).

On the one hand, these types of diets (that are neither nutritious nor healthy) can have significant negative public health consequences: recent research (a survey of school nurses in June 2023[4]) has shown that children across Britain face a significant increase in the scale and severity of health issues resulting from poor nutrition, as reflected in worsening levels of tooth decay, anxiety, stunted growth, low energy levels, and mental health problems. This survey found a strong correlation between these increases with the rising costs of food. On the other hand, diets that are not environmentally sustainable can also have negative health consequences, e.g., due to high red meat consumption or the higher levels of pesticide use (Fanzo and Mattei, 2010; Lindgren et al., 2018).

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4 *https://www.localgov.co.uk/LGA-Extend-food-support-to-stop-harm-to-childrens-health-/56445;*
  https://www.theguardian.com/society/2023/jun/28/cost-of-living-worsening-health-children-uk-school-nurses;

This duality emphasises the need to consider both the healthiness and sustainability of children's diets together. Broadly speaking, unsustainable food systems often have negative impacts both for human health as well as for the health of our environment, including climate change. This, in turn, has impacts for children's well-being and future food security since unsustainable food systems have been shown to significantly contribute to climate-gas emissions and biodiversity loss (Benton et al., 2021; Ortiz et al., 2021). However, while the UK's Sustainable Development Commission's "sustainable diet study suggested that human and eco-systems goals broadly match" (Sustainable Development Commission, 2009, cited in Lang 2010, p.22), it is important to note that not all healthier diets are always more environmentally sustainable, nor are all environmentally sustainable diets automatically healthier. However, there are many dietary choices available that offer "win-win" situations, where outcomes are improved both for environmental and for human health (Clark et al., 2020, p.S38). There is broad acknowledgement that a shift from current dietary patterns towards healthier and more sustainable diets (including for children) is paramount. However, what such "win-win" diets would look like is context dependent and needs to be adapted to what is locally feasible and appropriate, and to the requirements and preferences of specific population groups, including children (van Dooren et al., 2018).

Thinking about some of the underlying causes and pathways for the necessary shifts in children's diets, there is growing evidence (see UNICEF 2019, p. 53) of how strongly children's diets are shaped by their local food environment (see Section 2.2 below), including by the existence of 'food deserts', high concentrations of fast-food restaurants, the unavailability of fresh fruit and vegetables, as well as their exposure to advertisement campaigns. For example, a recent study found that approximately 1 in 2 adverts on bus shelters in a deprived area of Northern England were promoting food and non-alcoholic drinks, and over a third were for less healthy products, which "would not be permitted to be advertised around television programming for children" (Finlay et al., 2022). There has also been increasing consumption of out-of-home meals. In 2017, it was estimated that one fifth of children eat food from out-of-home food outlets at least once a week, with meals and snacks often high in calories, salt, and fat (PHE & LGA, 2017, p. 10). Furthermore, healthy/nutritious food is over twice as expensive per calorie as less healthy foods (Food Foundation, 2023; Darmon and Drewnowski, 2015).

The above highlights that the driving forces and determinants for children's diets are complex (see Sections 2.2 and 2.3). Nonetheless, it is well accepted that there need to be actions in parallel on two fronts – cutting down on unhealthy and unsustainable food, and increasing consumption of healthier and sustainable food, as critical to improving the food

choices for children. To achieve this, changes need to take place across food environments and the whole of the food system. The key challenge is therefore clear: how do we change children's food environments and all aspects of the food system to support healthy and sustainable diets for all children and adolescents? And - for this report we also ask – what role can local authorities play in achieving this change?

2.2 The role of the food environment in shaping children's diets

The 'food environment', broadly conceptualised, is multidimensional (see Engler-Stringler et al., 2014) and includes multiple components -- "the physical, economic, political and socio-cultural contexts through which consumers interact with food systems to purchase, prepare and consume food" (HLPE, 2017). Many conceptual frameworks exist that aim to operationalise the 'food environment' to find potential pathways for influencing dietary patterns.
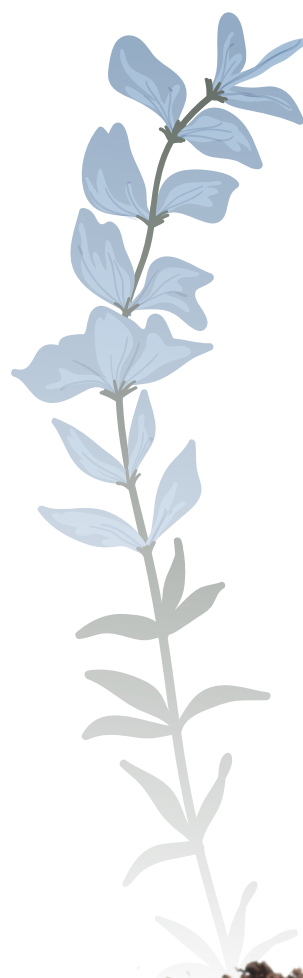
Glanz et al. (2005), for example, included four aspects: (1) community nutrition environment (e.g., location and accessibility of food outlets), (2) consumer nutrition environment (e.g., price, promotion, and placement of food choices), (3) organisational nutrition environment (access to food in other settings such as workplaces and schools), and (4) information environment (marketing, media, advertising). Building on Glanz et al. (2005)'s framework but focusing specifically on children, Engler-Stringler et al. (2014) found in their systematic review of 26 studies on the relationship between the food environment and dietary intake in children "moderately strong" evidence in support of the hypothesis that community and consumer nutrition environments may influence diet. In particular, they found that *availability* of food stores (*i.e.*, their presence, density) had a stronger association with multiple dietary outcomes as compared to *accessibility* (*i.e.*, distance to nearest food outlet).

Recently, a focus on food systems as drivers of diets and nutrition has gained ground. This perspective emphasises that it is only by transforming food systems that food environments can be improved and that nutritious, safe, affordable, and sustainable diets can be assured for all, including for children (Dimbleby, 2021; Global Panel, 2014; Global Panel, 2016; HLPE, 2017; ICN2, 2014; Melesse et al., 2020; Willet et al., 2019;). It is well acknowledged that the shift from traditional varied and localised diets to more uniform diets rich in sugar, salt, and high saturated fats has been in parallel with the spread of global and industrial food systems (Global Panel, 2018; Willet et al., 2019).

However, it has also been observed that most efforts to transform food systems have not prioritised children as key stakeholders (Carducci et al., 2021; Engler-Stringler et al., 2014). This is despite the "need to explicitly focus on children and adolescents given their unique nutritional and dietary needs and their susceptibility to actions across the food system that adversely impact their diets such as through advertising and marketing" (Raza et al., 2020, p.1). As is the case for adults, food for children not only needs to be healthy, easily available, and affordable, but also appealing, aspirational (Hawkes et al., 2020), and, we add, sustainable.

A specific framework for children's diets is the Innocenti Framework – a powerful framework co-developed by UNICEF and subject experts which offers a systematic way of understanding the links between the food system as a whole, food environments and children's diets and for identifying where interventions could make a difference. We have examined our empirical research findings using the lens of this Framework (Chapter 3). which we are introducing in Section 2.3.

2.3 Innocenti Framework on food systems for children & adolescents

UNICEF's Innocenti "framework puts children's diets at the heart of food-system analysis for two reasons: first, because children's nutritional requirements are unique and critical; and second, because there are no 'magic bullet' solutions to improving children's nutrition over the long term, other than having food systems that deliver nutritious, safe, affordable and sustainable diets for all children" (UNICEF, 2019, p. 54). It acknowledges the need for action across the whole food system, in close coordination with action in other aligned areas including health, education and social protection (UNICEF, 2019). The Innocenti Framework is presented in Figure 2. It distinguishes between drivers, determinants and influencers of the food system. We draw mainly on UNICEF (2019), and for more details, see also Raza et al. (2020) and UNICEF (2018).

At its core, the framework includes a set of **four determinants** which include actors, processes and conditions in the food system, from production to consumption, that are necessary to improve the diets of children and adolescents. These are the food supply chains, external food environments, personal food environments, and behaviours of caregivers, children and adolescents) which *together* influence children and adolescents' diets. For each of the determinants, the framework identifies a list of influencers. **Influencers** are the key components that provide more immediate entry points into improving access and availability, affordability, and consumption of nutritious and healthy food for children and adolescents (see Figure 2).

Personal food environments include the individual- and household-specific factors that shape dietary choices (or the lack thereof) for families and children. Key components include accessibility, affordability and convenience of food in relation to individual children's and their family's circumstances. Personal food environments might, for example, be shaped by access to food shops, individual purchasing power or factors like time poverty.

Behaviours of caregivers, children and adolescents relate to the *how* of food purchasing, preparing and eating, and of feeding and supervising children and young people. Key influencers of these behaviours are socio-economic characteristics, intra-household dynamics, acceptability and desirability of food, food preparation and nutritional knowledge, as well as eating patterns and taste preference. While some of these are linked to individuals, others are shaped by socio-economic norms and expectations (including amongst children and young people themselves).

In addition to determinants and influencers, the framework includes **five drivers**. These refer to the broader societal context and include the processes and structural factors that affect the functioning of food systems in their capacity to deliver nutritious, safe, affordable, and sustainable diets. These drivers include demographic change, the political and economic environment, technological advances, natural resource management, and socio-cultural norms. The framework also focuses on **the dynamic interactions and feedback loops** between its various elements, which hint at the complexity of how the different determinants positively and negatively reinforce one another and influence ultimately the outcome of children's diets.

Food supply chains comprise all actors and activities that play a role in taking food from production to consumption, and eventually to the disposal of its waste. Its key components (influencers) include all the different stages of the supply chain – production of food, storage and distribution, processing and packaging, retail and markets.

External food environments are physical spaces in which consumers interact with the food system by purchasing or consuming food. They reflect aspects related to availability, price, quality and safety, and the marketing and regulation of food. In the case of children and adolescents, they include but are not limited to nurseries and schools, sport facilities, shopping malls, supermarkets, retail markets and street food carts, and other places where children, adolescents, and their caregivers interface with food.
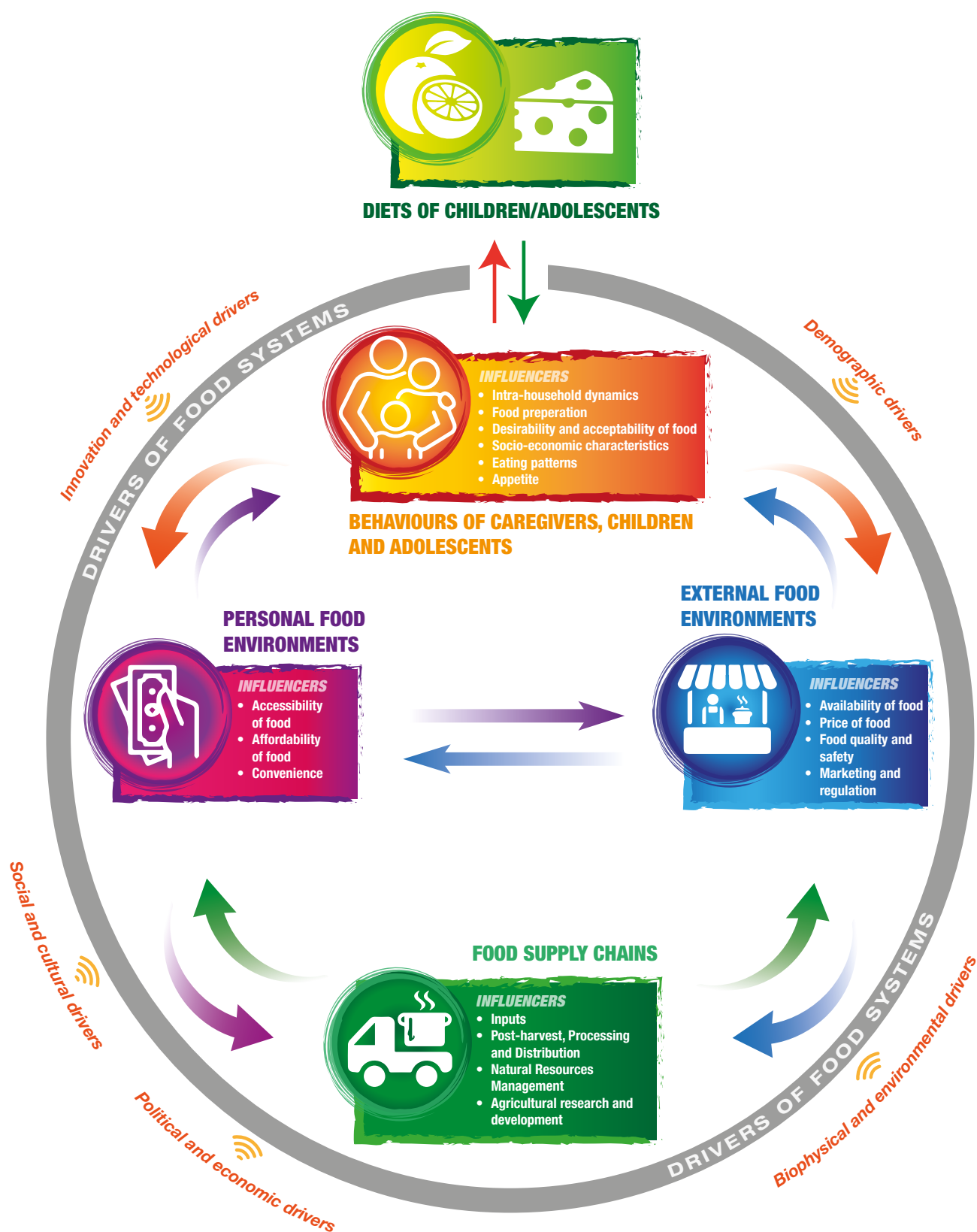
Figure 2:

The Innocenti Framework on Food Systems for Children and Adolescents *(UNICEF, 2018, p.3, graphic design modified)*

DIETS OF CHILDREN/ADOLESCENTS

DRIVERS OF FOOD SYSTEMS

Innovation and technological drivers

Demographic drivers

INFLUENCERS
- **Intra-household dynamics**
- **Food preperation**
- **Desirability and acceptability of food**
- **Socio-economic characteristics**
- **Eating patterns**
- **Appetite**

BEHAVIOURS OF CAREGIVERS, CHILDREN AND ADOLESCENTS

PERSONAL FOOD ENVIRONMENTS

INFLUENCERS
- **Accessibility of food**
- **Affordability of food**
- **Convenience**

EXTERNAL FOOD ENVIRONMENTS

INFLUENCERS
- **Availability of food**
- **Price of food**
- **Food quality and safety**
- **Marketing and regulation**

FOOD SUPPLY CHAINS

INFLUENCERS
- **Inputs**
- **Post-harvest, Processing and Distribution**
- **Natural Resources Management**
- **Agricultural research and development**

Social and cultural drivers

Political and economic drivers

DRIVERS OF FOOD SYSTEMS

Biophysical and environmental drivers

The Innocenti Framework is thus a suitable tool when thinking about areas of actions for shaping children's diets since it focuses on the totality of the food system and the need for concerted action by actors in *all* four determinants. It includes food supply chain actors like growers, processors, retailers, food advertisers; actors shaping the personal and external food environments; and adult caregivers as well as children themselves. Although not made explicit in this framework, we consider it important to include civil society organisations amongst the actors that shape the food system through their work, for example, the Soil Association, Sustain, the Food Ethics Council, Food Foundation, Incredible Edible and many others. We also include academic and other research institutions (that work on transforming food systems) and government organisations at local, regional, and national levels. Although most often the focus is on national governments and their legal powers to regulate food systems nationally and through international trade agreements, there has been increasing attention (see for example PHE and LGA, 2017) on understanding and amplifying the role that local authorities are already playing in influencing the food choices available to and made by children (and their families).

2.4 Role of local authorities in influencing children's diets

As the level of government in which decisions around local service provisioning and around spatial planning are being made and implemented, local authorities are in a key position to shape local food systems. Internationally, based on the Innocenti Framework (see Figure 2), UNICEF (2020) has developed a 'Roadmap for Action' in urban settings. This roadmap highlights the variety of action areas in which (urban) local authorities can pro-actively shape children's environments and diets. It emphasises the importance of "placing children's lived experience and child rights at the center of the urban food agenda", of "shaping urban food systems fit for children" and of "coordinating multiple sectors for the needs of urban children" (UNICEF 2020, p.9f). Examples of possible action areas that fall within the responsibilities of local authorities and that are tied to the four determinants of children's diets are listed in Figure 3 adjacent. It is worth noting, however, that this Roadmap focuses primarily on the healthiness of diets while resulting benefits for sustainability are rather coincidental. Given the urgency of the climate- and environmental crisis – and the role the food system can play in our dealing with it – it is important that any food system transformation and any actions by local authorities take into account both their impacts on the health of children and on the health of the environment.

A modified Innocenti Framework on Food Systems for Children and Adolescents applied to an urban context.

DIETS AND PHYSICAL ACTIVITY IN CHILDREN

DRIVERS OF FOOD SYSTEMS

Political and economic drivers

Social and cultural drivers

Biophysical and environmental drivers

Urbanisation drivers

Demographic drivers

Innovation and technological drivers

DRIVERS OF FOOD SYSTEMS

BEHAVIOURS OF CAREGIVERS, CHILDREN AND ADOLESCENTS

Caregivers Children and adolescents

ACTIONS FOR URBAN CONTEXTS
- Invest in literacy and skills around healthy food preparation and nutrition;
- Promote food hygiene and food waste reduction;
- Encourage children and young people to move, play sport, meet for recreation and eat and drink healthily.

PERSONAL ENVIRONMENTS

Individuals and households

ACTIONS FOR URBAN CONTEXTS
- Ensure vulnerable urban families with young children have access to nutrition-sensitive social protection schemes;
- Investigate and act on factors in day-to-day life that influence household decisions around food and nutrition (i.e. time poverty; convenience; lack of attractive alternatives);
- Use physical design interventions within local communities to make physical activity convenient and accessible for all.

EXTERNAL ENVIRONMENTS

Retail and commercial markets, schools, informal food vendors

ACTIONS FOR URBAN CONTEXTS
- Support retailers of multiple forms to provide healthy food that is affordable for all in all parts of the city (e.g.supermarkets, fresh markets, corner stores,informal vendors);
- Scale up healthy food procurement and food environments in schools;
- Shift incentives for the purchase of unhealthy food and beverages through use of zoning restrictions, taxes and bans on marketing of unhealthy foods;
- Invest in urban design of streets and public spaces to improve physical activity, walkability, bikeability, road safety and social safety.

SUPPLY SIDE

ACTIONS FOR URBAN CONTEXTS
- Improve the connection between production and consumption of nutritious foods, investing in short-chain food systems;
- Provide space and infrastructure for urban agriculture and fresh food markets in all neighbourhoods;
- Provide space and infrastructure for active transport, play, sports and other forms of physical activity.

The proposed actions (see Figure 3) do also fall within the areas of local authorities' responsibility in the UK. In England, for example, the National Planning Policy Framework (NPPF)[5] recognises the role of planning by local authorities to promote 'healthy and safe communities'[6] through the design and use of both the built and natural environments (including green infrastructure) as major determinants of health and wellbeing. In this context, access to healthy food is part of local authorities' responsibilities for promoting healthy lifestyles. For example, in an urban planning context, this includes organising urban spaces in ways that promote healthy eating habits and access to sustainable and nutritious food options. This can encompass a variety of strategies, including the layout of neighbourhoods, availability of food outlets, the production, processing and growing of food, public transportation, and community engagement.

In addition to their important role within the local planning system, local authorities can influence the food environment in other ways, including through procurement decisions, and prioritisation of specific child-centred or food system interventions. For example, the Local Government and Public Involvement in Health Act 2007[7], the Health and Social Care Act of 2012[8], and the more recent Health and Care Act 2022[9] made local authorities responsible for improving the health of local populations. Important tools in this regard are the local Health and Wellbeing Boards and joint local health and wellbeing strategies. Consequently, local authorities have increasingly focused on developing their own systems for health protection, promotion and improvement (PHE 2020, p.6). Overall, through their role in urban planning, service provisioning (including social services), responsibilities around education and public health, local authorities have access to a wide range of tools to shape the food system.

When considering what they could or are already doing (see Chapter 3), the publicly more well-known efforts of local authorities have focused on external food environments, especially through influencing food provision and food education in schools and, to some extent, the retail food environment outside of schools. For schools in the UK, the focus of policy and legislation over the last couple of decades has centred on improving nutrition standards of meals served in schools (e.g., Tang et al., 2014; Carter and Swinburn, 2004; Fox et al., 2009; Story et al., 2009). These measures include guidelines for nutrient content,

portion sizes, and the availability of fruits, vegetables, whole grains, and lean proteins. Each UK nation has food-based standards implemented, however, only Scotland and Wales have also nutrient-based standards (McIntyre et al., 2022).

Outside school environments, the focus has been on changing the food retail environment (in most cases by restricting the concentration and proliferation of hot food takeaways) in close proximity to schools. Echoing the Innocenti Framework, a growing body of research has established the impact of the food environments around schools on children's diets – especially for children in secondary schools who regularly purchase their lunch from outside food outlets (e.g., Fox and Timmer; 2020, Clark et al., 2014; Simon et al., 2008).

However, the relationship and association between exposure and consumption is poorly understood (Griffith et al., 2014). It is acknowledged that the effect of the food environment outside schools on children and young people's diet is complex (see Clark et al., 2014, Shephard et al., 2006). Nonetheless, a close association is observed between proximity to healthy food outlets and supermarkets that offer healthy options near schools and students' healthier weight status (see Tang et al., 2014). Within research, there is a broad agreement that the range of foods available, their affordability, their nutritional quality, convenience and desirability can have a big influence on dietary choices.

A strategic place-based approach includes working in partnership with key stakeholders to improve these different aspects through promoting a healthy and sustainable food action plan, which is embedded in the general functioning of local decision-making processes. We examine such place-based approaches further in Section 3.5. In our research, we found a wide range of initiatives that are ongoing or being implemented by local authorities, with some of them testing innovative approaches (especially for tackling childhood obesity). We have mapped them to the four key action areas of the Innocenti Framework and added a fifth area that addresses the overarching strategic planning of action, as described next.

5   *National Planning Policy Framework - GOV.UK (www.gov.uk)*
6   *Healthy and safe communities - GOV.UK (www.gov.uk)*
7   *Local Government and Public Involvement in Health Act 2007 (legislation.gov.uk)*
8   *Health and Social Care Act 2012 (legislation.gov.uk)*
9   *Health and Care Act 2022 (legislation.gov.uk)*

3. Intervention areas for local authorities in England

We looked at the four determinants of children's food systems as proposed by the Innocenti Framework (see Section 2.3) and used these as a lens to identify action areas of interventions initiated, supported or implemented by local authorities. It is important to note that these four areas are not mutually exclusive. Instead, some interventions cut across several and perhaps even all four areas. For this analysis, we set out interventions focused on behaviours (Section 3.1), personal food environments (Section 3.2), external food environments (Section 3.3) and the food supply chain (Section 3.4) before looking at more strategic, overarching place-based approaches by local authorities (Section 3.5).

We used internet searches to find local authorities that have specific programmes aimed at promoting healthy (and sustainable) diets for children. Once we identified such local authorities, we followed up on specific interventions, related policy documents, programmes and initiatives for these local authority areas. This helped create a more comprehensive understanding of local authorities' place-based responses around children's diet and the local food system. We analysed these results according to the specific determinants of children's diet and action areas an intervention was focusing on, noting that many aimed to also address different interactions between behaviours, personal and external food environments, and the food supply chain. As a result, we created a snapshot of some of the interventions that are taking place in England and sometimes elsewhere in the UK.

Although this report is not a fully comprehensive overview – there are over 400 local authorities in the UK (over 300 in England alone) – we aimed to illustrate the various types of interventions, and to identify areas of action. This approach to identify ongoing or planned, 'real-world' initiatives was supplemented by additional relevant academic literature as well as international, national and local policy documents. We complemented these online searches with topic-specific reports and analyses by third sector and governmental organisations. Furthermore, we also incorporated additional results of an online workshop co-organised with the Soil Association, where preliminary results of this research were shared and discussed with local authorities in November 2023. Participants then also identified their own ongoing initiatives (partially incorporated into Chapter 3), existing challenges as well as enablers (see Chapter 4).

3.1 Behaviours (of caregivers, children and adolescents)

Dietary behaviours (*i.e.*, the procurement or buying, preparation, guidance and supervision, and eating practices) of caregivers, children and adolescents are influenced by intra-household dynamics, food preparation knowledge, skills and practices, the desirability and acceptability of food, socio-economic characteristics, eating patterns and individual appetite (UNICEF and GAIN, 2019). Considering these influencers, local authorities have opportunities to provide or support interventions that focus on individuals in their role as professional care providers, as adult family members as well as on children themselves to influence their food-related behaviours.

Local authorities can implement this through training interventions that share knowledge and/or focus on the development of skills related to food, or they can focus on specific interventions that make healthy and sustainable food-related behaviours easier. Such an approach is in line with UNICEF's 'Roadmap for action to support nutritious diets and healthy environments for all children in urban settings' (see Figure 3). It proposes investing in (food) literacy and skills around healthy food preparation and nutrition; promoting food hygiene and food waste reduction; and encouraging children and young people to move, play sport, meet for recreation and eat and drink healthily (UNICEF, 2020).

Local authorities in England are frequently using childcare, school, or community settings to offer such interventions. They do so as part of plans that focus specifically on obesity (e.g., the Cross-Government Strategy for England, Healthy Weight, Healthy Lives 2008), on broader health and wellbeing concerns, on the implementation of a place-based food strategy, or as part of specific child-centred responsibilities, e.g., the implementation of government-funded Holiday Activity and Food (HAF) programmes. Local authorities are opting to either implement such interventions themselves, e.g., through their Public Health departments, to outsource their implementation through commissioning (e.g., to local community or other third sector, or private sector organisations), or through existing broader or purpose-specific local networks and collaborations. Behaviour-centred interventions are often part of broader programmes that are also considering food environments and/or food supply chains. Below, we provide some illustrative examples from local authorities across the country.

Focusing on primary school settings, Public Health at **Harrow** Council (Borough of London) and London's Community Kitchen, are piloting a 'Plant to Plate' programme to educate primary school children around healthy food and nutrition (Ahmad, 2023). Acknowledging the importance of a 'healthy start' even earlier on, some interventions by local authorities are focusing specifically on babies and very young children, and their parents and carers. For example, the National Lottery funded 'A Better Start' programme has provided five areas across England with funding to develop and implement new approaches to ensure 'children can have the best start in life'. One of the involved local authorities, **Blackpool Council**, has been partnering since 2015 within the 'Blackpool Better Start Partnership' with (community) organisations (including police, fire and rescue, and health services, child-focused service delivery organisations and national and international research institutions) to focus on early child development. One of their selected focus areas has been the improvement of children's diet and nutrition of pre-school children. For this aim, they are collaborating with HENRY (Health Exercise Nutrition for the Really Young[10]), a charity which provides training for practitioners that engage with parents of babies, toddlers and pre-school children around nutrition, breastfeeding and eating-behaviour (as well as other well-being) topics. Two years into this particular programme, a noticeable increase in breastfeeding levels has been observed (4 -5%), despite remaining at overall low levels (Better Start Blackpool, 2022)[11].

Better Start **Bradford**, also a member of the 'A Better Start' programme, also offers HENRY services to families with children aged 0-4, including topic-specific healthy family workshops and a group parenting programme (or 1:1 options) over an 8-week-period. All these activities are focusing on eating and broader family and child well-being topics, taking "a strength-based and solution-focused approach" (Willis et al., 2012, p.461). In addition, training is also offered for all those working or volunteering with families, either specifically on nutrition and on obesity related topics, or working in childcare settings or as childminders (Better Start Bradford, 2023).

As described on their website, the charity HENRY is active in over 40 local authority areas across England. This includes **Leeds**, where all Sure Start Children Centres[12] were delivering the HENRY program. Willis et al. (2012) conducted a qualitative analysis of this intervention implemented across 12 Centres and found a positive change in professional practice of staff teams, upon practices within the Centres, and on staff's personal lives. This mirrors the findings of a report by Public Health England and the Local Government Association (PHE & LGA, 2017) that providing nutritional training and guidelines for healthier meals to staff at Early Years settings can improve their knowledge, skills, and confidence. This,

in turn, leads to better outcomes for children's diets. However, it is worth noting that the Food and Drink Guidelines for Early Years Settings in England are currently voluntary, and act only as advice on how to provide age-appropriate meals, snacks, drinks, and food environments for children (Action for Children, 2017).

In order to encourage the uptake of changes in Early Years Settings, several local authorities across England have developed Healthy Early Years (HEY) award schemes that incorporate food, and nutrition elements, among others. For example, **North Somerset** Council's Public Health Team piloted its newly developed award scheme in 2022, with further rollout to follow. Similar award schemes have been launched, for example, by **Darlington** Borough Council, the Mayor of **London**, **Southampton** City Council, and **Medway** Council.

Frequently, award programs are designed by local authorities to mirror national standards and are sometimes co-designed with local partners, allowing for place-specific adaptations. An evaluation after one year of launching HEY London found that there was a lack of quantitative evidence but there had been many anecdotal examples of positive changes, including children trying new foods and parents and nursery staff changing their practices (Cavill et al., 2019).

Not linked to an awards scheme, but similarly focusing on the improvement of food and drink in Early Years settings and children under the age of 5, The Children's Food Trust and Action for Children had developed the 'Eat Better, Start Better' programme based on their own Voluntary Food and Drink Guidelines for this sector in 2012 (Action for Children, 2017; Royal Society for Public Health, 2013). By 2013, the programme had trained over 800 Early Years and health professionals across 25 local authorities in implementing these guidelines. One example has been Medway Council, whose local Eat Better, Start Better programme offered training and support to staff, resulting in better food offers across childcare settings (PHE & LGA 2017). While the Children's Food Trust closed its operation in 2017, the Eat Better, Start Better guide continues to influence local authority programmes, including through its updated version from 2017 (Action for Children, 2017; Foundation Years, 2021; Nursery World, 2017).

Many of the behaviour- and practice-focused programmes run, commissioned or planned by local authorities are linked to wider strategic approaches (see Section 3.5). For example, as part of the comprehensive Oldham Obesity Improvement Strategy (2017-2019), Oldham Council has implemented a number of behaviour change interventions. These include a cooking skills project, distribution of a

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locally-developed healthy cookbook, an oral health book for early years for parents of 2-2.5 year old children, and a road show promoting healthy cooking and awareness of the health impacts of too much salt, saturated fat and sugar. These were focused on the general public and caregivers for children with the aim to reduce obesity gaps, and also among schoolchildren in Oldham (Holt, 2017). Oldham Council (2023) encourages schoolteachers in its 'Healthy eating – School Zone' to access online resources provided by Public Health England which are meant to enable teachers "to help children learn about the effects of eating too much sugar and to start build healthier habits".

As part of its comprehensive Newcastle Good Food Plan, the Food Newcastle Partnership with **Newcastle** City Council (2018) took also stock of some of the manifold activities going on in the city aiming to improve children's diet. Some behaviour interventions focused on healthy eating are taking place across Community Family Hubs, children's centres and nurseries in Newcastle. This includes a weaning programme, work around portion sizes, accredited nutrition training for front line workers; and practical cooking skills courses offered through Change4Life. **Leicester** City Council offers help for families, children's centres, nurseries and schools around healthy diets for children, including training opportunities on healthy nutrition and cooking skills sessions.

A government-funded programme implemented by the Local Government Association has selected five local authorities to tackle childhood obesity. Two of these 'Trailblazer Authorities' are using innovative approaches that are focusing on training and behaviour change. **Pennine Lancashire** consortium of local authorities focuses on empowering local elected council members "Engaging and empowering system leaders to influence health and wellbeing in their communities". **Birmingham** City Council has opted to focus on providing apprenticeships for 15–19-year-olds in the most deprived areas of Birmingham, and to develop an 'innovative alternative local metrics' that can be used to monitor the impact of any interventions on consumer retail habits. (Local Government Association, 2023).

Many of the above-described interventions are linked to a national cross-government strategy for England 'Healthy weight, healthy lives' launched in 2008, which - by 2020 - aimed to reduce childhood obesity and overweight levels back to those in 2000. They are also linked to the new Government Obesity Strategy (2020) which now supports national, local authority and private action under the 'Better Health' brand, which will continue to influence local action (including some of the Change4Life activities) (NHS 2023).

Another government strategy – one set up in the context of growing public concern over children affected by holiday hunger – is the Holiday Activities and Food (HAF) programme. It has been set up to address food insecurity among children normally accessing free school meals during school holiday periods. This programme has been implemented since 2022 across all local authorities in England. The actual delivery of the HAF programme varies and often involves a variety of voluntary and third sector organisations; however, overseeing of the programme remains with local authorities.

For example, in **Liverpool** the Merseyside Play Action Council has been tasked by the city council with implementing the local implementation of HAF. According to Liverpool's impact report of its Good Food Plan (Feeding Liverpool, 2022a), the implementation of the HAF programme has enabled the holiday provision of good quality food by local organisations (rather than food based on donations or snacks), feeding 247,000 meals to 12,707 children in the city. In order to achieve this, 112 community leaders attended training to use a Good Food for the Holidays toolkit, 18 completed food hygiene certificates and many staff and volunteers received additional training (about School Food Standards, about healthy and nutritious foods, recipes and tips on how to encourage fussy eaters) (Feeding Liverpool, 2022b). This training will be of benefit beyond the delivery of the HAF training itself and has resulted in anecdotal evidence of some benefits to the local community:

> **"Families have reported feeling less stressed about feeding their children, children have tried food they would not normally eat, and the providers have seen changes in behaviour with children being calmer, able to concentrate for longer and asking for fruit and water rather than fizzy drinks and crisps."**
>
> *Sally Dobbing,*
> *Holiday Activities and Food Project Manager*
> *(Feeding Liverpool, 2022b, p. 6)*

Focusing on achieving holistic change, **Somerset** Council have developed 'Zing Somerset' to support healthy eating and physical activity (Somerset Council, 2023). To encourage "families to eat good, healthy and sustainable food that is good for people and the planet" and to engage with the local food system, Food for Life and Zing Somerset have developed a comprehensive suite of approaches. These include "practical cooking skills training, easy to follow recipes and a co-designed Quality Assurance check list, as well as workshops to create a shared vision of what good food in Somerset should look like." These activities are now expanded through a Train the Trainer programme to reach even more people. This process involves the identification of Community Food Champions, which will be supported by a network of Food Champions "to share knowledge, skills and assets and to jointly overcome challenges (Food for Life, 2023)."

3.2 Personal food environments

Personal food environments, as described earlier, are shaped by personal factors that influence food choices, such as levels of income and education, attitudes, cultural values, and skills. Equally important for personal food environments are factors like accessibility of healthy and sustainable food, and convenience, as well as the availability of food preparation equipment (e.g., to cook and properly store food). Downs and Demmler (2020), in a recent international scoping review of food environment interventions relevant for children and adolescents, found only very limited studies that evaluated personal food environment interventions and most of those were based in low- and middle-income countries. What they found in those contexts hinted that direct financial support (e.g., conditional cash transfers), particularly to low-income households, are an effective way to reduce food insecurity. However, they also emphasised that such interventions, in isolation, are likely to only achieve small improvements for diets and nutrition (Downs and Demmler, 2020). These findings appear to be also mirrored in the context of local authorities in England.

Even when considering behavioural interventions focusing on diet-related knowledge and skills (e.g., cooking skills classes, breastfeeding - and weaning advice) as influencing the personal food environments of children (through e.g., changes in skills and knowledge), there were relatively few local authority-initiated interventions that we were able to identify as specifically addressing personal food environments.

One programme relevant for personal food environments is the NHS' Healthy Start programme, which has been running since 2006. An in-depth multi-method evaluation reiterates the findings by Downs and Demmler (2020) that a food subsidy programme like the Healthy Start programme can provide "an important nutritional safety net" and might contribute to better diets for pregnant women and children under 4-years-old (McFadden et al., 2014, p.1). However, implementation details of this food voucher scheme are critical since many possible beneficiaries (only those on specific benefits or pregnant persons under the age of 18 years) are unaware of their entitlement, have challenges registering or are missing out for other reasons.

Here, local authorities are playing an important role in promoting the scheme to families and supporting its uptake. For example, **Liverpool** City Council's Public Health department are leading a 'Healthy Start' Steering Group that works to implement "recommendations from the 'How can we improve the uptake of healthy start scheme in Liverpool' report launched in September 2022" (Feeding Liverpool, 2022, p.10).). As part of this process, 117 Healthy Start Community Champions were trained that support "awareness of the scheme in foodbanks, community food spaces, children's centres, and

housing associations" (Feeding Liverpool, 2022, p.10).

In other local authorities across England and Wales, a similar process to increase uptake is followed, often in collaboration with other local food organisations and networks. This is important since in some areas nearly half of entitled pregnant mothers and children (about 2 million people) were not benefiting from the Healthy Start scheme (Guerlain, 2022).

Another voucher scheme implemented by several local authorities (e.g., **Devon County** Council, **Liverpool** City Council) during school holidays provides families normally eligible for free school meals with a supermarket voucher (Devon County Council 2023, Feeding Liverpool 2022). While such vouchers support families over the school meal free period, their link to supermarkets does limit families' food related choices. Attempting a different approach, **Nottinghamshire** County Council, as part of their award of a Childhood Obesity Trailblazer status (Local Government Association 2023), aims to "explore the potential of using Healthy Start Vouchers innovatively such as through recipe boxes procured" through their existing food supply chain (e.g., for school meals) to reduce food costs, increase quality, and increase local uptake.

Other initiatives like the Rose Voucher scheme offer a novel alternative by distributing vouchers that can only be used "to purchase fruit and vegetables from local street markets, independent greengrocers and community food projects" (Feeding Liverpool, 2023). This particular scheme is run by a charity partnering with local children centres, often without but sometimes with direct financial city council support, e.g., by **Glasgow** City Council, **Lambeth** Council and the Mayor of London (Alexandra Rose Charity, 2023). The charity had piloted their scheme in **Hackney** in 2014 and has now spread it to a total of eight locations (Alexandra Rose Charity, 2023). In Liverpool, in order to overcome the lack of local greengrocers and food markets in some areas, the Rose Voucher scheme also collaborates with a mobile fruit and veg van that can bring fresh produce to such areas. This can clearly benefit children's fruit and veg intake, can support the diversification of the local food system - offering opportunities for more sustainable diets (Feeding Liverpool, 2023), and could perhaps be an alternative pathway for local authorities' more common supermarket voucher schemes. In November 2023, in an attempt to achieve not only healthier but also more sustainable diets, the Bridging the Gap programme was launched as a collaboration between Alexandra Rose Charity, Sustain and Growing Communities, which is piloting an initiative in Tower Hamlets, where families qualifying ... for the Rose Vouchers (same criteria as Healthy Start food vouchers) can gain access to organic fruit and vegetables at the same price as non-organic produce (Wilton, 2023). While this is currently not run or directly supported by local authorities, it might offer an alternative way forward that considers both healthy and sustainable diets.

3.3 External food environments

External food environments for children are those places (physical as well as online) in which they engage with food, in which they make, or can try to influence decisions about what to grow, what to buy, what to prepare, what to eat, and perhaps even what to find desirable, or aspirational about food (see also Hawkes et al., 2020). Such decisions are clearly shaped by food environment factors (both tangible and intangible), including the availability and affordability of different types of food, the type of marketing that takes place for different food products, and the physical environments in which food can be produced, accessed and consumed. As indicated in Section 2.4, local authorities have different roles and action areas in which they can aim to influence children's diets to be healthy and sustainable. This can range from their role in shaping school food environments, food retail and food service environments and food marketing environments, to their role in regulating and/or planning for food growing spaces.

Public Health England and the Local Government Association (2017) have prepared a toolkit for local councils working with small food businesses entitled "Strategies for Encouraging Healthier 'Out of Home' Food Provision". Sustainable Food Places have developed a toolbox for local authorities to identify and support their ambitions to make good food policy (Marceau, 2023). Though not specifically developed for the context of children's food environments, these two documents have nonetheless been particularly useful for this analysis and contain further relevant information that has not been replicated here.

3.3.1 Schools as external food environments

Considering schools as the environments in which most children and adolescents spend most of their time when outside the home, and in which food is consumed, it is naturally also an important place in which food behaviours are being influenced by what is available, affordable, appealing and aspirational (PHE & LGA, 2027, Hawkes et al., 2020). Hence, improving these four 'As' in regard to healthy and sustainable diets in schools promises to positively shape children's food consumption patterns within these settings. Furthermore, it is assumed that good food culture and practices within school settings can have benefits beyond.

An international review of food environments by Downs and Demmler (2020) looked at school -, community- and personal food environments. While there was little data on the effectiveness of most interventions, school-based interventions were most studied, and some interventions appear to be effective. The authors found that many school-based interventions could not necessarily demonstrate an improvement in pupils' BMI or weight status, but interventions improving offers of fruit and vegetable and/or school meals did lead to improvements in school-based food choices and diets:

"We found that simple low-cost interventions such as changing the school break time, using nudging and choice architecture in the cafeteria as well as the use of labelling in schools can improve food choice and dietary intake, which may be more feasible to adopt in low-resource settings (Downs and Demmler, 2020, p.9)."

However, reviewing external food environments including those of schools, Garnett et al. (2015) emphasised the effectiveness of using multiple-component interventions, "especially when some price incentive (in the form of coupons, differential pricing and so forth) is included in the mix and combined with some educational and awareness raising approaches" (Garnett et al., 2015, p.80). Similarly pointing to the importance of a systemic approach and of the multiple parallel factors enabling healthy and sustainable school meal provision and consumption, Graca et al. (2022) identify as effective, for example, education on environmental benefits of healthy and sustainable diets while improving and increasing the offer of plant-based meals and working together with and mobilising local communities. Their graphical depiction of a school meal system within its environment is useful to acknowledge the diversity of relevant actors (including municipalities and other local authorities, see Figure 4), *albeit* the importance of the community environment

directly around schools might be underemphasised (PHE & LGA, 2017).

In England, local authorities maintain responsibility for many of the schools in their area and take on responsibility for adhering to government-regulated school food standards. School food standards were introduced in 2006-2008, which have been updated occasionally since then (Nelson et al., 2010). Many local authorities, however, are going beyond this and are actively working towards improving school catering services towards the provision of healthy and sustainable diets, by running local Healthy Schools schemes and by implementing whole school approaches (PHE 2020). Below, we will provide some examples of activities undertaken by local authorities in England to create improved school food environments.

In order to address one important aspect linked to obesity, **West Sussex** County Council has been running The Sugar reduction project. This involved working together with local school communities and the local Youth Council to identify and map the availability of sources and the consumption of sugar within schools and on journeys to and from schools, and to find ways to reduce high-sugar content within school meals, drinks offered in school as well as on school journeys (PHE & LGA 2017). This project has led to a reduction of more than 2 kg sugar in their school meals per child across the school year (PHE 2020).

Figure 4:

Stakeholders at proximal, intermediate, and distal levels in the school meal system, embedded in environment
(Graca et al. 2022, p.324, graphic design modified)
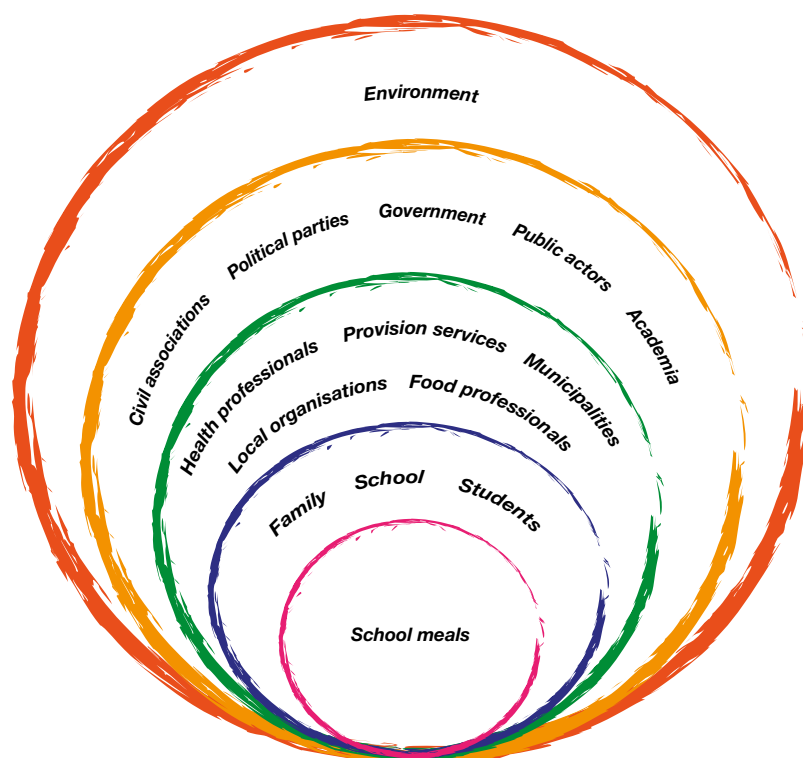
Linked to the **Bradford** District Food Strategy (2012) and its follow-on Bradford Good Food Strategy (2023) (see also 3.5), Bradford Council has recognised the need for a 'positive food culture' and the important role schools can play in achieving such culture for children. This council's and its schools' long-standing, strong commitment to this is reflected in 99% of all schools having joined the National Healthy Schools programme by 2011, and their close work with the Food for Life to implement a whole-school approach across schools, and their focus on using local suppliers and seasonal fresh food for their school catering services (Bradford District Food Strategy 2012). Recent efforts around local school meals have focused on maintaining a welcoming atmosphere in dining rooms, on ongoing catering staff training (including on customer service, craft skills, halal awareness, food preparation and nutritional training), on cultural consideration in menu design, on the promotion of positive messages (through posters, promotional events and the introduction of a school meals app) that helps caregivers and children to learn more about their meals and menu. The success of their holistic approach to school meal provisioning is perhaps reflected in the higher-than-average uptake of school meals across Bradford Council district (Bradford Council, 2023). Thus, Bradford Council is engaging with two important approaches that are being employed by local authorities, the Healthy Schools Programme and a whole-school approach.

The Healthy Schools programme was national government-run until 2011 but continues operating under local authority management across many local authority areas. In Public Health England's review of local authority areas with falling obesity rates, 11 districts were identified that engaged with their schools around health and wellbeing (including nutrition) through a locally adapted Healthy Schools scheme (PHE, 2020). For example, **Essex** County Council launched its new Essex Healthy School programme in September 2021, which includes the provision of a dedicated Healthy Schools Engagement Worker for each school for support and advice around the programme's six key expectations, which include a focus on food and nutrition (Essex County Council, 2023). This was a follow-up on a previous local Healthy Schools scheme, which the council credited as one reason for its falling childhood obesity rates (PHE, 2020). Interestingly, at the national level, the Department of Education (2022) has recently (re) launched Healthy Schools as a voluntary Healthy Schools rating scheme that might further motivate the participation of local authorities in this programme focused on improving holistically school children's health and wellbeing.

In the Sustainable Food Places toolbox for local authority food policy levers, Marceau (2023) also identified whole-school food policies as a possible policy lever to be employed by local authorities. While there are different definitions of what a whole-school food policy involves (compare e.g., PHE 2020, PHE 2023, and Marceau, 2023), implementing local authorities aim to go beyond a focus on school food quality and incorporate approaches that develop a

good school food culture. Within their study for PHE (2020) of local authorities with decreasing rates of obesity, the authors found a third of local authorities in their sample as self-describing the implementation of a whole school approach within their local areas. In Scotland, **Glasgow** City Council's school food policy recommends the establishment of School Food and Nutrition Action Groups, a greater proportion of fresh and local produce in school meals, and the uptake of food growing and cooking skills within school activities (Marceau, 2023).

Some councils have also opted to work in partnership with a national third sector organisation, for example with Soil Association's Food for Life programme, to implement whole-school approaches around healthy and sustainable food. Food for Life seeks to improve both the nutritional and environmental quality of school meals and to improve the school food culture beyond the class- and dining room, including gardening activities, outreach to food growers, food leadership and community engagement (Food for Life, 2023). It does so, among other things, through its award scheme that considers four themes: (a) food quality and where food comes from; (b) food leadership and food culture; (c) food education; and (d) community partnerships and parent engagement (Newcastle Good Food plan, 2018).

A small-scale qualitative evaluation of its impact showed that Food for Life helped schools transform their food culture (i.e., school mealtimes were made more attractive and children were more knowledgeable of and engaged in food issues); take up of school meals in participating schools increased as did fruit and vegetable consumption; educational attainment improved while parental engagement in the scheme was strong; and the schools' interaction with the local community increased (Orme et al., 2011). In an evaluation of the impact of this programme on the fruit and vegetable consumption among primary school children, Jones et al. (2017) found that pupils in FFL schools were twice as likely to eat the recommended five or more portions of fruit and vegetables per day then those attending similar schools without this initiative.

An increasing number of local authorities are partnering with Soil Association to co- develop and implement their Food for Life programme, tailored to place-specific needs. These include **Cambridgeshire and Peterborough** Council, **Derbyshire** County Council, **Hull** City Council, Leicester City Council, **Medway** Council, **Sheffield** City Council, **North Yorkshire** and Public Health **Walsall** (PHE, 2020, Food for Life, 2023). For example, **Leicester** City Council's Public Health Department started its commission with Food for Life in 2015 and has now 84 schools enrolled across the city. In neighbouring Leicestershire County, the Council's Public Health has offered free training for school staff, 1-to-1 support and resources, and is "now building community hubs around schools bringing together farmers, producers and families to strengthen wider community's connection to good, local food".

Overall, 850 schools in the country have already received a Food for Life School award (Food for Life, 2023).

Food for Life is one of the relatively few programmes that are explicitly focusing on both healthy and sustainable food when collaborating with local authorities. However, there are growing trends to also consider environmental aspects when local councils are implementing school food policies which, in turn, are increasingly also linked to local, place-based and often co-produced Food Plans or Strategies. Additional resources on sustainable healthy food are available for schools and local councils, e.g., from resource site 'Food – a fact of life' which is managed by the British Nutrition Foundation together with the Agriculture & Horticulture Development Board (2023).

3.3.2 Other children-specific food environments

Schools are the focal point of many local authorities, however, increasing attention is also given to Early Years facilities like nurseries and childminders, or through the work of health visitors. Other relevant facilities that are being used to address food-related interventions for children and their families are community family hubs and children centres. However, we have not come across any evidence of targeted engagement by local authorities with private sector run facilities like indoor- or soft-play centres, cinemas or sports centres. Nonetheless, broader food strategies (see 3.5) or planning regulations (see 3.3.3 below) might be having an engagement or a regulatory impact on these types of facilities. It is also worth highlighting that several behaviour and knowledge focused interventions described in 3.1 are frequently being delivered and utilised in children-centred settings, highlighting the interactions between behaviours and (personal and external) food environments.

Local councils aim to improve the food environments of nurseries through the introduction of trainingand or accreditation schemes. For example, **Newcastle** City Council (2023) has offered frontline staff accredited nutrition training as well as practical cooking skills courses run by Change4Life.

Leicester City Council aims to focus on good nutrition in early years. The children's healthy weight strategy is helping to provide healthier food to young children through the adoption of improved food standards, including by nurseries. In the same city, Leicester's Big Cook Little Cook scheme has now been expanded to nursery - and children centre staff as well as to childminders. Leicestershire Nutrition and Dietetic Service (2023) has trained 25 of these staff

across 11 nurseries and charities who can now expand the Food Routes programme to more children and families across their settings. These activities are all part of Leicester City Council's (2021) focus on good nutrition in early years and their Children's Healthy Weight strategy.

Nottinghamshire County Council have commissioned Soil Association's Food for Life (FfL) award scheme to work with seven nurseries across the county to implement their whole-setting approach to increase fresh and local produce in menus, to implement growing into the nursery settings, to help shape young food citizens (Food for Life, 2023). These activities are supported by local Food for Life staff and can be assessed through the FfL Early Years accreditation scheme (Soil Association, 2019). Receiving FfL Early Years award "requires that settings demonstrate compliance with best practice nutrition guidelines and that 75% of meals are freshly prepared, with specialist training and resources provided to help early years settings become beacons of good practice with regards to healthy food and a good food culture" (PHE & LGA 2017, p.42).

This commission is in line with Nottinghamshire's exploration of an innovative, whole system approach around community food system for benefits to families with young children. This links to Nottinghamshire County Council being one of the five authorities that have been selected by the Local Government Association (2023) for its Childhood Obesity Trailblazer programme in which these local authorities can test innovative approaches to tackle this challenge.

The work with the Soil Association fits into this agenda, which includes support for staff in the early years and childcare sector to develop food preparation and menu planning skills and promote consistent messages to families around food and healthy eating. A related strategy is the expansion of school catering services to early years setting, offering healthy food that will help familiarise children and families with school meals in the hope to increase their later uptake in schools (Local Government Association, 2023).

In addition, Nottinghamshire City Council aims to utilise Children's Centres as community food assets, utilising existing expertise and food supply chains to expand the offer of low cost, healthier and local foods and recipes that will support local families through skills and knowledge development.

Another selected Trailblazer programme member (a partnership between Bradford Council, Born in Bradford and the **Bradford** Council for Mosques) is exploring the opportunities of a religious setting, specifically Islamic Madrassas, "to tackle childhood obesity by supporting healthier behaviours and influencing positive social and structural change for better health in the local environment" (Local Government Association, 2023).

3.3.3 External community food settings

In their review of evidence related to the effectiveness of interventions that intend to improve food environments for children, Downs and Demmler (2020, p. 9) identified only a limited number of studies that focused specifically on "improving the availability, affordability, acceptability or appeal of foods within community settings" (such as restaurants or local corner stores). Where these studies existed, there was only limited evidence of the effect of such interventions on food and nutrition outcomes (Downs and Demmler, 2020). Nonetheless, there are several ways in which local authorities can use their strategic, planning, policy-making, financial and engagement roles in which they can influence external food environments to contribute to children's healthy and sustainable diets.

Public Health England & Local Government Association (2017) have collaborated to prepare a toolkit that can guide local authorities when working with small food businesses. PHE & LGA (2017, p.49) showcase two interesting examples of local authorities collaboratively working with small food retailers to improve the food environment around schools. A Healthier Catering Commitment was developed by London Borough of **Islington**, which a significant number of food outlets within 500m of secondary schools voluntarily have signed up to. Using the Youth Health Forum, the outlets' adherence to this commitment was announced to young people and to school food technology teachers.

Stoke-on-Trent City Council focused on hot food takeaway shops, including fish-and-chips sellers with a salt and fat reduction initiative which encouraged outlets to switch to healthier oil (rapeseed), to use healthier frying techniques and to generally use less salt (PHE & LGA, 2017, p.38).

In London, the selling of a particular (affordable and appealing) dish by a smaller food store was tested in the boroughs of **Camden**, **Hackney**, **Newham**, and **Tower Hamlets**. This "Box Chicken" project involved a mobile food outlet serving take-out healthy chicken stew in close proximity to schools. Part of the attempt was not only to develop a particular tasty dish but to develop "a menu, brand, and price (just £2.50 for a meal) (which) was appealing to young people" (PHE & LGA, 2017, p.49).

A similar collaborative approach is linked with the Local Government Declaration on Sugar Reduction and Healthier Food which has been signed by several local authorities, though mainly within London. **Oxford** City Council, a signatory, consulted on the declaration and made several pledges for which they proactively change certain practices or encourage others to voluntarily do so. They pledged to increase access to free tap water; to display sugar content information next to leisure centre vending machines and for drinks sold in Council cafes; to reduce advertising of sugary drinks at Council facilities; and to encourage businesses to sign up to Sugar Smart commitments (Marceau, 2023).

> Overall, according to PHE & LGA (2017, p.39), "interventions have proven more successful where some infrastructure changes such as refrigeration and shelving have been offered and where these have been linked to other initiatives such as the provision of food vouchers to encourage the purchase of fruit and vegetables".

Besides approaches to make fast food menus healthier (see also Bagwell, 2014), restricting the presence of fast-food outlets near primary and secondary schools has been identified by many local authorities as an important instrument to limit children's exposure. Examples of local authorities using Supplementary Planning Documents for such restrictions come from **Bradford** City Council, **Lancashire** County Council, **Manchester** City Council and **Sandwell** Council (see list of planning instruments below). Bradford City Council included such restriction zones not only for schools but also youth-based facilities, any recreation ground and parks. Similar to other councils, a 400m restriction buffer was selected within which planning permissions for hot food takeaways would usually not be granted (City of Bradford, 2014, p.5). **Birmingham** City Council has adopted a more generic 10% restriction on hot food takeaways in 2012. First as part of the Shopping & Local Centres Supplementary Planning Document, it then became modified part of the 2017 Birmingham Development Plan. By 2020, there was evidence of "significant reduction in planning permissions for hot food takeaways since the policy has been in place" (Birmingham City Council, 2022, p.24).

Other strategies which are available to local authorities are described in 'The Takeaways Toolkit which intends to enable public health staff "working to encourage healthier catering amongst fast food outlets" (Bagwell, 2014) and the much more recent Sustainable Food places 'Toolbox of local authority food policy levers' (Marceau, 2023). These guides – though not specifically developed with children's food environments in mind – provide useful examples of possible approaches, including strategic, planning/regulatory and financial ones.

Different local planning instruments (like Core Strategies, Supplementary Planning Documents and Health Impact Assessments, Planning Licenses, Street Trading Policies, Section 106 Agreements and Use-type clauses in Local Plans) have all been used by various local authorities to either limit the presence of less-desirable (fast) food retail premises or to support the presence of more diverse and healthy food retail and catering business (for further examples, see Marceau, 2023).

Another area of interventions implemented by local authorities focuses on the restriction of advertisement in public spaces, particularly in outdoor and public transport settings. This is considered one avenue to shape (children's) food culture by restricting such promotional opportunities. In response to the Mayor of **London**'s initiative to ban the advertisement of junk food (*i.e.*, foods High in Fat, Salt or Sugar (HFSS)) on the entire Transport for London network, and a recent publication by the London School of Health and Tropical Medicine showing the ban's effectiveness, over 70 local authorities have implemented or are considering implementing a similar policy in their own areas of jurisdiction (Quinn, 2022). The LSHTM publication found that the ban has resulted in households consuming fewer calories from HFSS, dropping by 1,000 calories a week, with chocolate and confectionary purchases dropping by 20%. According to Sustain's Fran Bernhardt (cited in Quinn, 2022), a lot of local authorities were considering expanding such bans to broader 'healthy lifestyles' considerations including banning adverts for breastmilk substitutes and removing options for appeal. **Bristol** City Council as well as London Boroughs **Greenwich, Harringey, Merton** and **Southwark** already had such bans in place in 2022. Another London Borough – one that is part of the above-mentioned Childhood Obesity Trailblazer Programme, the London Borough of **Lewisham** – plans to not only implement bans on HFSS advertising but to also use unsold advertising space for positive health messages (Local Government Association, 2023).

Apart from interventions that (through restrictive or collaborative approaches) aim to restrict the prevalence and visibility (and hence availability, acceptability and aspirational quality) of HFSS, local authorities can also positively influence other food system spaces, including opportunities to garden and grow food, or to encourage independent, local or alternative forms of retail. It is important to again emphasise the interactions between the different determinants of children's diets, with below discussed approaches to food supply chain change often also being linked to personal and/or external food environments.

3.4 Food supply chain

Although increasing levels of awareness, knowledge, and education around healthy food and healthy eating are important to influence dietary patterns, there is growing evidence that more structural changes are needed in order to achieve sustained behavioural change. Such structural changes within the food supply chain include, for example, reductions in the price of healthier foods, improvements to the availability of healthier options, the reformulation of products, reduction of pack sizes, and portion control (PHE & LGA 2017, p.10). Such changes are likely to have a far greater impact than public health campaigns alone (Brambila-Macias et al., 2011; Griffith et al., 2014).

In considering food supply chains, we highlight here three key areas: food procurement, food growing spaces, and local food markets.

3.4.1 Procurement strategies

Local authorities can shape the food supply chain through their public food procurement activities. Relevant public food procurement here refers to food purchased by local councils specifically for settings such as schools, nurseries, community family hubs, or children centres. Procurement lies at the intersection between production and consumption.

Innovative examples – as tested for example in **Nottinghamshire** County Council (see 3.2) - of using public procurement approaches can also involve programmes like Healthy Start vouchers, where bulk purchases for recipe boxes offer cheaper, healthier and more convenient options. Local authorities can also shape food procurement of privately-run children's settings through voluntary or binding guidelines, through training and education, or through contractual obligations.

Public procurement for children's food has the potential to be a major driver for shifts in food systems, to make food supply chains more sustainable, healthy and just. According to De Laurentiis (2018, cit. in Sabet, 2022), schools have the largest financial share of all public food procurement in England. This offers local authorities an important opportunity which some have taken up, with varying degrees of focus on healthy and sustainable aspects for their food procurement standards.

In 2017, **Birmingham** Council required specific "minimum health and hygiene standards and provision of healthy options" from contractual service providers. At that time, **Brighton and Hove** Council's Good Food Procurement Group promoted that all major public sector food purchasers focused on the procurement of sustainable and healthy food, while

"minimum buying standards for all public sector food purchases are set to be the equivalent of the Bronze Food for Life Catering Mark standards" (PHE & LGA, 2017, p.53). **Bath and Northeast Somerset** Council piloted an innovative school procurement scheme for 7,000 school meals that focused on innovation, simplification and creativity to source fresh meat, fruit and vegetables locally (Howroyd, 2016, cit. In Sabet, 2022).

Other councils with healthy and sustainable food procurement policies include **Aberdeen** City Council, **Aberdeenshire** Council and the **Highland** Council (Joint Procurement Strategy), **Bristol** City Council, **Carmarthenshire** County Council, **Durham** County Council, the **Greater London** Authority, and London Borough of **Lambeth** (Marceau, 2023).

In **Newcastle**, another creative way to influence the local food industry and encourage connections with local producers has been tested: the Newcastle EAT festival was started in the early 2000s, which also aimed to raise awareness of the farm-to-fork journey and to develop "enthusiasm for the enjoyment of good healthy food in local children and their families" (Newcastle City Council, 2023).

Local authorities can set procurement standards for food in different public settings where children frequent; in terms of consumption, it will have direct impact on children's diets - and hence on health - as ultimately food supply is important. Meeting nutrition criteria for food is somewhat straightforward since nutrient standards and indicators are already included in school food standards. However, achieving diets that are not 'only' healthy but also sustainable requires the incorporation (and application) of additional standards that are currently less prominent in national guidelines. Here, one option is the use of already existing award schemes that consider healthy and sustainable procurement (like Food for Life Served Here). However, there are a multitude of available metrics (see Saxena et al., 2022) - processes to prioritise these can become part of a 'Healthy and Sustainable Food Procurement' strategy (see for example, **Bristol**'s Healthy and Sustainable Procurement Policy). When procuring food, local authorities could consider taking a place-based and participatory approach which could collaboratively consider procurement criteria and could involve cross-sector collaboration; this approach could also seek to prioritise sourcing food from local and sustainable food supply chains.

3.4.2 Provisioning of food growing spaces (allotments and others)

The support for access to land for food growing is one of the fundamental ways in which local authorities can shape not only healthy and sustainable local food supply chains, but also contribute to local food culture, and promote awareness of 'where our food comes from' among children as well as adults. Local authorities have several pathways to support the availability of sufficient food growing spaces, for example through some of their planning instruments, including Supplementary Planning Documents (e.g., **Blackburn with Darwen** Borough Council), Local Plans (**Hull** City Council, Royal Borough of **Kensington and Chelsea**, **Croydon** Council) or Planning Advice Notes (**Brighton & Hove** City Council) (Marceau, 2023).

Increasingly, local authorities prioritise (urban) food growing in their strategic planning, including in their Food Plans. For example, **Leicester** sets out in its Food Plan to transform itself into "a healthy and sustainable food city - where the availability and production of good food supports better health, stronger communities and a successful economy – whilst reducing the environmental impact" (Leicester City Council, 2021). They plan to set aside 3,900m^2 for new allotments and want to support an additional nine community food and horticultural projects.

Leicester city council is supporting community food and horticulture projects and the creation of new allotments. Available support includes training opportunities and resources on food growing, assistance to community groups for grant writing, funding to develop their projects, and the development of a network of food growing champions to inspire other to start growing food.

In **Birmingham**'s food system strategy, community growing also takes on a prominent role. Ambitions are to lead growing campaigns through community champions and to increase the diversity of food growing spaces, including in parks, other community spaces, window boxes, and schools. There are also ambitions to support temporary growing cooperatives and to establish a city-wide network of growers (Birmingham City Council, 2023).

3.4.3 Supporting sustainable local food businesses and food markets

Another policy realm local authorities can become active in relates to the shaping of their local food retail structure, where councils can offer specific support for healthy and sustainable food businesses. Such support can take place through the adoption of specific strategies or policies with a relevant focus area (e.g., retail, tourism, economic development) that can encourage/favour healthy and sustainable food business development. Similarly, preferential business rate reliefs can also encourage the establishment and survival of such local healthy and sustainable food businesses (Marceau, 2023). The existence of sustainable food businesses producing healthy food can positively shape children's diets.

For example, **Leicester**'s Food Plan 2021-2026 highlights the Leicester Food Park as a purpose-built business site that enables start-ups and small food manufacturers to produce compliant products and achieve high level certification. The Leicester Food Plan board also encouraged engagement and participation with and by Leicester's food businesses around the local Good Food Charter and local community food projects, which resulted in the establishment of peer networks to encourage and support their activities around sustainability and zero carbon. Leicester City Council can also use the opportunities offered by Leicester Market and local food events to make sustainable food relevant and tangible (and tastable) to local citizens. The existence of regular local farmers' market has also been identified as an opportunity for engaging school children with their local food system (Leicester Council, 2021).

Two **London-based** initiatives are aiming to improve access to healthy and sustainable food by nudging food retails to make changes. On the one hand, local boroughs are being supported to develop and implement the Good Food Retail Plans, while on the other, the Healthier Catering Commitment sets out to support improvements to the food local caterers serve (Greater London Authority, 2019).

For **Sandwell** Council, the mapping of Sandwell's food system enabled the development of possible support strategies for local food businesses to enable them to focus not only on economic but also on "health, anti-poverty and sustainability priorities. Proposals included reduced rents for market stalls offering fruit and vegetables to increase access for low-income residents" (Sustain, 2014).

3.5 Strategic, place-based interventions

Local authorities have responsibilities (see Section 2.4) and opportunities (see all of Chapter 3, also Section 4.2) to support dietary change for children, families and all people in their cities, towns and regions. While some determinants and influencers can be shaped easier outside their jurisdictions (e.g., national policies, international trade agreements), local authorities are in the unique position to enable, coordinate, support and implement local change. Therefore, while the previous sections individually showcased various action areas in which local authorities can get involved, thinking about these interventions from a coordinated, strategic and place-based perspective is paramount. Such a perspective will enable influencing all the different determinants of children's diets holistically and offers the greatest potential for success. For this reason, many places across England and the UK have developed local food strategies, sometimes under the leadership of local authorities, and sometimes through collaboration. We will introduce some of these briefly below.

Local food strategies offer the opportunity for a concerted, place-based approach for healthy and sustainable diets for children. A place-based approach to children's diets implies considering the local context, culture, and available resources to promote healthy and sustainable eating habits among children. This approach recognises that different regions have unique food systems, traditions, and environments that influence dietary choices. Since these can vary between regions, place-based interventions are necessarily context-specific.

A vital first step towards developing a strategic approach with viable interventions therefore requires the identification and understanding of opportunities for change, but also of existing local barriers to change (see Section 4.1). The Innocenti Framework provides a systematic approach for doing this across the four determinants. Among recent studies, the Broken Plate report by Food Foundation (2023), used eight key metrics to demonstrate the barriers to eating healthy and nutritious food, and stated that the "affordability, availability and appeal of unhealthy and unsustainable foods point us in the opposite direction" (p. 3). While two metrics (nutritious food consumption; ultra-processed foods consumption) assess the quality of diets, the other five metrics (children's dental decay, children's growth, children's weight, healthy life expectancy, diabetes-related amputations) assess the subsequent impact on health, and together the metrics "paint a picture of where we are now and critical next steps for ensuring we can all eat well" (Food Foundation 2023, p. 3).

Aligned with the Innocenti Framework, a strategic place-based approach entails interventions to be part of a coherent, joined-up approach that considers the range of influencers for the four determinants of children's food systems. This requires thinking beyond a narrow definition of a food system. As Public Health England (PHE & LGA 2017) found in their study on healthier 'out of home' food provision, some of the local authorities had "developed links between policies about food outlets and other agendas such as anti-poverty, economic development, regeneration and sustainability" (p. 21). This is, for example, the case for **Bristol** where its Bristol Good Food 2030 action framework (Bristol Food Network et al., 2023) links closely to Bristol's overarching One City Plan which has developed a vision and annual plan of action for Bristol 2050 (Bristol One City, 2023).

A place-based approach also emphasises the importance of engaging communities (diverse groups of stakeholders and citizens) to promote healthy and sustainable food environments. Collaboration with third sector organisations, charities and food alliances (like Feeding Britain, the Food Ethics Council, the Food Foundation, the Soil Association, Sustain, Sustainable Food Places) and engagement with the Local Government Association (LGA) is important to mainstream the urgency for food system change, for example, by collaborating with LGA and other organisations in providing guidance and exchanging experiences on:

- how to develop a food system strategy,

- why the focus on transforming the food system is so important,

- and how food system change ties in with other policy agendas local authorities have (such as on Children and Young people; Communities; Economic Growth; Climate, environment and waste; Housing and planning; Licenses, regulations and trading standards; Social care, health and integration).

Given the central role of children and young people when considering food systems for children, engaging with children and young people in a systematic and meaningful fashion is important. Approaches for such engagement, and for the focus on children as food citizens, could, for example, be promoted through Areas of Support the LGA is already engaging with (like its Equalities hub; Climate change hub; Children's services; Partners in Care and Health; Safer and more sustainable communities[13]) or a more recent one that is focusing specifically on Food Systems (or Urban Food Systems; or Child-centred food systems). This could also be developed alongside a grant programme similar to the currently ongoing 'Shaping Places for Healthier Lives'[14] and the above-described Childhood Obesity Trailblazer Programme[15].

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13 *Health inequalities hub | Local Government Association*
14 *Shaping Places for Healthier Lives | Local Government Association*
15 *Childhood Obesity Trailblazer Programme | Local Government Association*

Furthermore, the development of local food strategies was also highlighted as "essential for the success of the National Food Strategy" (Dimbleby et al., 2021, p.262). The authors highlighted that local food plans can help contextualise national strategies, can respond to local needs and priorities, and can create local action and benefits. There is already evidence that such strategies have had benefits for local citizens during Covid-19, and that "they can increase food security in the long as well as short term, support improvements in public health and wellbeing, and generate significant investment and innovation" (Dimbleby et al., 2021, p.262).

Across local authorities, there is already an increasing wealth of knowledge and experience in developing local food system strategies, with over 50 cities, boroughs and counties having one in place (Dimbleby et al., 2021). Who is leading the development of these is place-dependent, with local authorities sometimes driving the process, and sometimes joining ongoing initiatives kick-started by other societal actors, including local food networks.

For example, **Liverpool**'s Good Food Plan (2022) development has been an across-city co-creation, kick-started by Feeding Liverpool, with Liverpool City Council's involvement being closely tied to its Public Health department. "Public Health are co-chairing the new Good Food Plan Taskforce to support the implementation of the five goals of the Good Food Plan with strategic leads across a range of organisations. Public Health have also employed a new Senior Public Health Practitioner who will also support the development and co-ordination of the Good Food Plan." (Feeding Liverpool, 2022a, p.10)

Perhaps in slight contrast, **Birmingham**'s Food System Strategy (2022 - 2030) emerged through leadership by the Food System Team of Birmingham City Council, in close consultation with a wide variety of (over 500) citizens and stakeholders including the 'Creating a Healthy Food City Forum', participants of the Birmingham Food System Strategy Action Plan workshops, and from the Food Foundation. The strategy acknowledges the importance of 'embedding cross-matrix working' via the Creating a Healthy Food City Forum which will help avoid siloed working given the often complex and multifaceted issues. It also acknowledges the need for alignment with other city priorities and for adaptation to changes in those. It is noteworthy that the strategy's Food Action Decision-Making and Prioritisation tool emphasises

'Citizen-first' at the top of its 12 points that require consideration (Birmingham City Council, 2023). This puts citizens and food citizenship central to local food system decision-making and emphasises the need for coproduction and enabling food citizenship. Within the strategy (Birmingham City Council, 2023), young people have been acknowledged as contributing via the 'Birmingham Youth Board of Bite Back' to the strategy's development; however, in the strategy itself, children and young people are mainly mentioned explicitly in the context of food poverty, obesity and dental decay rather than as active food citizens.

Local authorities working in partnership with citizens and key stakeholders to embed their food strategy within a broader place-based vision is an approach that has been growing in significance. **Bradford** Council had previously developed the Bradford Council Food Strategy, which was adopted in 2012, and which subsequently shaped Bradford's food system, for example, through its role in the development of specific planning approaches for Hot Food Takeaway outlets. However, in summer 2022, the City of Bradford Metropolitan District Council consulted with Bradford's citizens on the development of a new 'Good Food Strategy', using online mapping, face-to-face as well as online survey-based consultation methods (Bradford District, 2022). This resulted in Bradford's Good Food Strategy in 2023. Bradford's Good Food Strategy is led by a new Sustainable Food Partnership for Bradford District which owns and leads this Strategy. This Partnership is linked – via a Living Well Steering Group – to the District's Wellbeing Board, which is the lead organisation for the district.

After passing the Right to Food motion in 2022, **Cumberland** Council developed and adopted its Food Cumberland Strategic Framework, building it around six key themes: Food Governance and Strategy, Good Food Movement, Catering and Procurement, Food and the Environment, Sustainable Food Economy, Healthy Food for All. This framework highlights that the Right to Food is embedded in each area of responsibility across the council and includes a number of specific strategies which explicitly consider children's diets, e.g., around free school meals, 4 O'Clock Clubs, access to food growing spaces for schools (Cumberland Council and Food Cumberland, 2023).

In **Bristol**, the achievement of the Gold Sustainable Food City award in 2021 was the result of a collective effort from coordinating and delivery partners. These partners included Bristol Food Network, Bristol Green Capital Partnership, Bristol City Council and Resource Futures, along with Feeding Bristol, Bristol Food Producers, Incredible Edible Bristol, and Grow Wilder (which is a part of Avon Wildlife Trust). It resulted in Bristol being awarded Gold Sustainable Food City status in 2021. This has been followed by the development of food action plans, including the Bristol Good Food action plan 2030 mentioned above. Bristol's food strategy aligns well with its One City Plan which, for example, includes the following goal:

> **"All children have access to healthy food at school, with school meals meeting high nutritional standards, considering their carbon and nature impacts and with improved access to growing food opportunities for children working with the Good Food 2030 partnership" (Bristol 2023, p.3)."**

The selective examples above showcase local authorities' involvement with food strategies or plans that are the basis to shape and guide place-based approaches and action plans. They often offer an overarching vision with more detailed action areas that intend to contribute to its achievement. They are promising strategies for truly powerful transformations towards more sustainable and healthy food system. They are often co-developed and place-based, supporting the future buy-in from a cross-range of important actors and stakeholders. However, based on our review, it appears children are mainly referred to in the context of food poverty and obesity, their role as actors, as food citizens is considered rarely (or implicitly). Hence, we argue that it is important that local food strategies consider not only the dietary needs but also the role of children and adolescents as food citizens more explicitly.

More broadly, in the context of local authorities' role in shaping external food environments for obesity reduction in children, it is relevant to note that PHE's (2020) study had also identified the importance of establishing broader partnerships within the community, a factor that had been identified by over two-thirds of participating local authorities. These interdepartmental and wider partnerships included collaborations in areas such as sports and environmental health teams working together towards healthier food options. Good relationships, networking and/or support from other local authorities were also identified as important for successful interventions. In this study, nearly half (12/25) of the local authorities[16] saw themselves as taking a "whole systems" approach (p. 21) to addressing childhood obesity, wherein they recognised the importance of examining not only the changes they could make directly to services within their control, but also to exploring how and where that links to other organisations and services to leverage better outcomes and disseminate healthy messages more widely (Public Health England, 2020, p. 21).

Several local authorities (e.g., **Hertfordshire, Nottinghamshire, Shropshire, Somerset, Yorkshire East Riding**) reported that they linked other Joint Strategic Needs Assessment (JSNA) topics such as mental health, obesity, physical activity and nutrition in their whole systems approach. Local authorities found it useful "to conceptualise connections between seemingly disparate work on (for instance) improving breastfeeding rates, with work to increase use of active transport, with removing sugary drinks from vending machines at leisure centres, and

then consider how other existing assets could be utilised" (PHE 2020, p.21).

As illustrated in Section 3.4, spatial planning is a key element of place-based approaches, especially when considering change for external food environments and the food supply chain. Many local authorities[17] in the PHE (2020) study, for example, worked with their Environmental Health Teams to restrict the number of takeaway food businesses near schools and/or limit their opening hours, while also encouraging those businesses already existing to improve the food they offered.

As mentioned above, a recent document by the Soil Association's Alizee Marceau (2023) offers a set of 29 planning and policy recommendations that local authorities can use within their realm to influence local food policies. While Marceau (2023) does not focus on children's diets specifically, the document identifies a number of levers that have a direct influence on shaping children's food environments across the four determinants (particularly for external food environment and food supply chains). Some of these levers address, at a strategic level, place-based interventions that local authorities can adopt. They include, among many others, some of the above-described existing initiatives in some local authorities:

- To develop a 'whole-school food policy' that promotes holistic food education (including on growing and cooking), improvements to school catering and school food culture.

- to 'develop a whole system approach to obesity' that supports other local priorities;

- to form collaborative partnerships for 'developing food poverty action plans';

- to mainstream food challenges, *i.e.*, 'including food poverty and healthy food access in strategic plans' beyond food specific policies;

- to adopt 'healthy and sustainable food policies (Declaration on Healthy Weight, UNICEF UK Baby Friendly Initiative, Workplace Wellbeing Charter)' (Marceau, 2023).

Importantly, interventions that aim to achieve healthy and sustainable diets for children need to be multi-pronged to cut across adjacent determinants within the Innocenti Framework. For example, interventions at schools need to consider the community environment just outside of schools as well as their food supply chain in order to be effective; however, effective support for personal food environments is also crucial, especially for low-income households with children (see also Downs and Demmler, 2020). This does re-emphasise the importance for local authorities to engage with a wide range of actors and stakeholders, including children and adolescents themselves.

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16 *Central Bedfordshire, Coventry, Hounslow, Lewisham, Oxfordshire, Peterborough, Portsmouth, Redbridge, Somerset, St Helens, Surrey, West Sussex*
17 *Cambridgeshire, Central Bedfordshire, Coventry, Derbyshire, Lewisham, Nottinghamshire, Oxfordshire, Peterborough, Portsmouth, Redbridge, Surrey, West Sussex*

In summary, some of the strategic, place-based interventions that local authorities have already implemented, are currently working on, or should be working towards, include but are not limited to:

- development of a **city-wide food strategy** that looks at the food system holistically and within broader contexts, but that also considers the needs of children and adolescents explicitly.

- support initiatives which meet the needs of cultural food preferences to promote **diversity and inclusivity** in diets amongst children from different socio-cultural backgrounds.

- support for **local food policies promoting access** to healthy and sustainably produced foods (e.g., through farmers' markets, local food procurement in schools and community centres, urban growing spaces including allotments)

- promotion of **food literacy and food citizenship** of children (and adults) through building awareness and capacity for making healthier food choices, supporting a shift away from consumerism towards considering the role of everyone in society as 'food citizens' rather than simply 'consumers' at the end of the food chain.[18] Although the move towards food citizenship has been driven mainly by civil-society organisations in the UK food and farming sector, there is a key role for local authorities to support this #FoodCitizenship mindset through their strategies and engagement with stakeholders and members of their communities, which considers everyone as active 'participants in the food system'.

- development of and support for a **local food system** that enables consumption of **locally grown and produced foods**, that supports local farmers and other food providers and hence the local economy, that reduces transportation-related emissions (and other positive environmental impacts when, for example, agroecological practices are being implemented) and that promotes fresher and more nutritious diets.

18 https://www.foodethicscouncil.org/programme/food-citizenship/; https://foodcitizenship.info/2019/10/29/harnessing-the-poer-of-food-citizenship/

4. Local authorities' self-identified challenges and opportunities for implementing action areas

In this chapter, we present findings from discussions that took place during an online workshop held on November 16th, 2023, with more than forty participants including representatives from fourteen different local authorities across England. In eight breakout groups, participants first described interventions for healthy and sustainable diets that are taking place in their respective local areas. They captured these initiatives on online whiteboards (_Jamboard_s) which are presented in Figures 5.1 to 5.8.[19, 20]

Figure 5.1:

Current interventions as described by Breakout Group 1, with participants from Cumberland Council, Derby County Community Trust and Harrow Council

Derby

- early years healthy living programme delivered in all early years, nurseries, childminders etc includes healthy weight, physical activity and mental wellbeing

- Healthy weight. Early Years programme, looking at Fundamental movements and eat your 5 a day, eat a rainbow. Allotment project, growing programme.

- Healthy Lifestyle Programme- Liveit, child weight Management programme for 5-17 years old. Community based and School activities. Looking at reduction/maintaining

- Consider holistically what is influencing obesity; in Derby, obesity strategy being put in place

Cumberland

- Incredible Edible and community growing projects across different areas.in Cumberland.

- Healthy Habits 4 Life - healthy living programme for children in Cumberland.

- Cooking on a budget for families in Cumberland.

- Food Cumberland Strategic Framework just launched last month

Harrow

- Plant to Plate - Food Education Programme in schools

- HENRY RCT - happening next year

- Healthy Schools and Healthy Early Years

- Cooking sessions in Early Support Hubs

19 _Some of the initiatives discussed at the November workshop have been incorporated into Sections 3.1 to 3.5 in this report._
20 _Please note that we did not have two breakout groups (BG 4 and BG 8) during the workshop for admin reasons, hence there are no references to these two breakout groups in this chapter._

Figure 5.2:

Current interventions as described by Breakout Group 2, with participants from Leicestershire County Council and Sheffield

Leicestershire County Council

- early years prog
- eat smart in primary+ sec schools
- advertising campaigns - reduce sugar
- weight management prog - focus on families
- catering policies in council - for leisure centres & other public facilities
- advertising policy - restrictions of HFSS
- policies on hot food takeaways, spatial planning; 800 m restrictions, no new licences
- work with food partnerships - local food
- looking for land for growing

Sheffield

- Healthy Weight
- Healthy schools
- Healthy toddlers
- FFL for schools
- children & family wellbeing centres - link to healthy diets & food poverty
- food banks, community fridges
- wider food system activities - linking borough & city council
- private sector activities - plan forward recipe boxes - programs for mothers

- Making everybody count - frontline services + wider determinants
- Wider determinants of health - e.g. why reliance on fast food?

Figure 5.3:

Current interventions as described by Breakout Group 3, with participants from Cumberland, Derbyshire, Hereford and Hertfordshire

- Derbyshire CC have been running FFL. Created a network meeting for children's weight. 6 times per year, wide range of stakeholders

- Community Support Team engaging with schools and set up gardening clubs and cooking groups (only small team of 2 people). Have trained up cooks in school and get them to help

- Fit Fed and Read (Hertfordshire) – scheme during holidays run with Fire Service

- 1 in 10 eligible for FSM not taking up the offer

- Food Cumberland Partnership. School Food sub-group. Auto enrolment for FSM. HAF and working with FFL – reviewing Food Offer for HAF and working with local suppliers.

Figure 5.4:

Current interventions as described by Breakout Group 5, with participants from Derby, Derbyshire, Hounslow and Telford & Wrekin

- HENRY – delivering 5-12 programme – one off sessions to stand beside – healthy on a budget – delivering directly for parents and signposting – looking to develop working more schools

- Grow for the future project – under utilised plots of land for food growing – partnering each one with a local school – children growing – emphasis on education

- Community Grocers – pay £5 and get a set amount of shopping – eg veg, cleaning stuff etc – parish councils have own growing programmes – HAF, community , schools –

- Public health – schools on board with pro-veg – low engagement from schools as not much influence

- Live It – 10 years – increased offer to work in community hub with children and family to link in schools – health education – what's a healthy meal – sugar etc

- Different elements – little live it – 3-4 yr children and families – 6 week programme Healthy Eating with resources – allotment working with food alliance to look at food going into city

- Oral Health – looking after smile

- Run between health protection and PHEat well project – looking at 5 a day, sugar, eat well plate – delivering in primary – taster family cooking session with food taking home – great feedback from parents

- Cooking on a budget course –hard to get volunteers to deliver – funding from family hubs to employ resource for taster sessions in the community

- Procurement commitment signed in May – not to 2030 – slash GHGE – cut food waste – improve provenance with various parameters

- Pilot for DofEd school food standards – FSA inspections taking place through local team – ran webinar to gov's and head teachers around mandatory requirement – resources
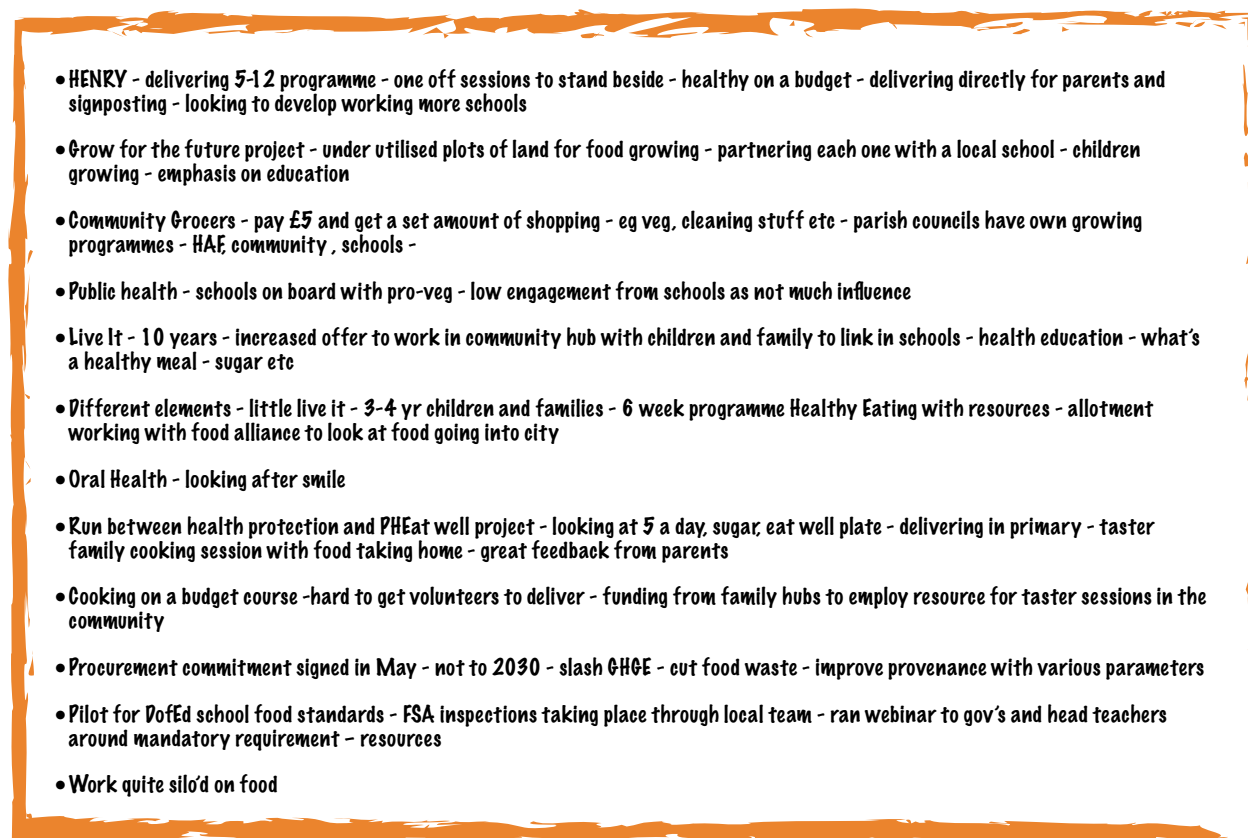
- Work quite silo'd on food

Figure 5.5:

Current interventions as described by Breakout Group 6, with participants from Bradford, Redcar and Cleveland, Shropshire and West Northamptonshire

West Northamptonshire (WNH)

- WNH Love food hate waste - school involvement.

- Grow cook eat: PH funded (communities and children), training community champions. WNH

- Settings in most deprived areas funding to sign up to FFL Award programme. (WNH)

- WNH: children's healthy weight strategy (building on NNH)

- Healthy schools programme: nutrition workshops for school heads/ teachers (complete), team now setting up a healthy eating partnership (multi stakeholder)

Redcar and Cleveland

- Redcar - Middlesbor-ough in house catering, all staff had SFS training, bringing menus up to standards, better understanding.

- Redcar & Cleveland - Eat Well Prog. standards training, whole school approach, wider school staff included (online/in person). Levelled (B/S/G)

- Food larders over Food Banks - include recipe cards (part of food waste reduction)

Bradford

- Bradford - Children's Living Well Service, health gains service, weight neutral, reducing stigma.

- Bradford - food strategy inc. increasing plant based/planet friendly diets in schools. Plane-tary pledge; alignment with SFS.

- New SFP in WNH - PH very involved as a major stakeholder (focus on families and children's diets)

Figure 5.6:

Current interventions as described by Breakout Group 7, with participants from Bassetlaw/North Nottinghamshire and Lancashire
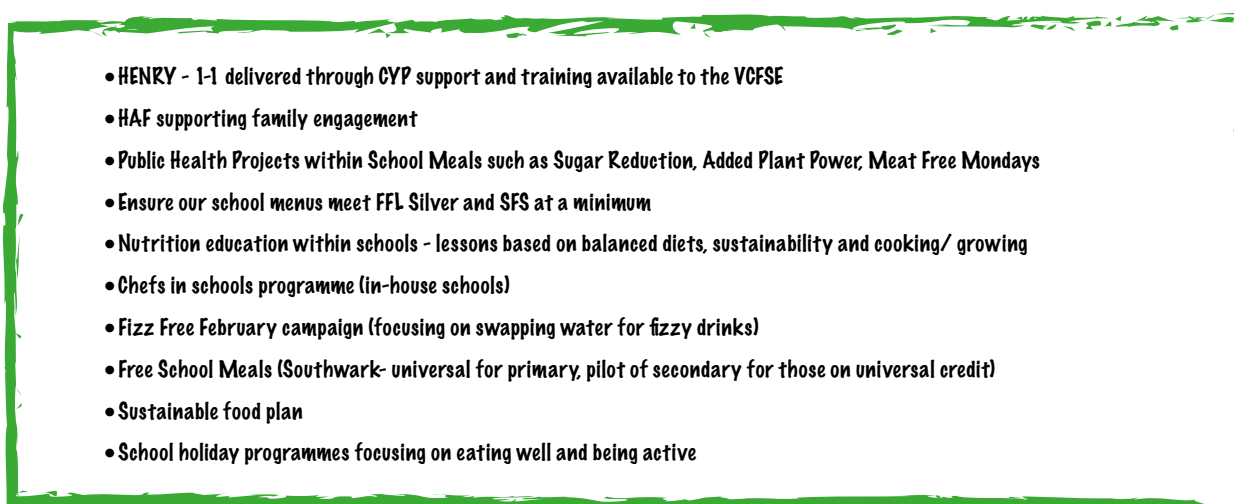
- Looking into how to improve sustainability of food banks, looking at dignity/pantries

- Starting a project on social movement, children and YP getting involved in a food/healthy weight environ projects

- Pasta (play and skills at teatime activities) - Lancashire wide prog, targeted areas. Cooking skills, family based with parents involved, sit down and eat at the end, after school. Various setting

- Best Food Forward charitable project - aims to improve diets, focussed on secondary schools, particularly hard to reach cohort. Working within our country and neighbouring

- FFL - targeted service, 5 districts in Lancashire, also free enrolment for other schools

- Lancashire Healthier Places - around healthy weight environments, commissioned Food Active. Working on Healthy Weight Declaration,

- Recipes for Health, encouraging takeaways to improve menus, led by trading standards team

- Working on Food Plan

- Training programmes for professionals working with children, improving their healthier food offer

- One Pot at a Time - Slow Cooker Project, provides slow cookers and starter kits for families

- Focus on Healthy Start locally

- Childrens Weight Management Service - Jumps 4 Life, 10 week course, food nutrition/moving more, family based

- FFL Schools Award, and FFL Cared for Children Award

- Awards Scheme - e.g. nutrition and oral health

- Basset Law Food Insecurity Network, range of initiatives incl third sector orgs, cvs, food hubs, slow cooker courses, great network of orgs

Figure 5.7:

Current interventions as described by Breakout Group 9, with participants from Caterlink, City & Hackney Council, and Shropshire Council

- As a Mum - we have the holiday active food programme in our area - advertised in local schools

- School Meals / Shire Services - FFL accreditation, hoping to bring more schools onto FFLSH. Locally sourced foods where possible. Budgets and time is a big barrier

- In City & Hackney - healthy start voucher. Not just for people with limited affordability - for everyone

- In Hackney - most familiar with Rose Vouchers. Very successful. Some people complain as they aren't able to use them everywhere. Not only provides healthy food, but also local

- Rose voucher. lunch clubs. planning with food environments - climate action plan

- National (as how caterlink works) - we engage with peas please, food foundation, veg power, FFLSH

- Rose vouchers - if people qualify they can apply, once they have the scheme they recieve vouchers for fruits, vegetables, milk.....

Figure 5.8:

Current interventions as described by Breakout Group 10, with participants from Caterlink, Southwark Council and Suffolk Council

- HENRY - 1-1 delivered through CYP support and training available to the VCFSE

- HAF supporting family engagement

- Public Health Projects within School Meals such as Sugar Reduction, Added Plant Power, Meat Free Mondays

- Ensure our school menus meet FFL Silver and SFS at a minimum

- Nutrition education within schools - lessons based on balanced diets, sustainability and cooking/ growing

- Chefs in schools programme (in-house schools)

- Fizz Free February campaign (focusing on swapping water for fizzy drinks)

- Free School Meals (Southwark- universal for primary, pilot of secondary for those on universal credit)

- Sustainable food plan

- School holiday programmes focusing on eating well and being active

The range of initiatives identified by workshop participants highlights the promising number and diversity of actions already taking place across local communities in the country. However, they also indicate that many of the self-identified interventions are those that are specifically focusing on dietary behaviours (see Section 3.1), on schools (3.3.1) and other child-centred food environments (3.3.2). These are very important determinants for children's diets and hence attention in these areas can contribute to achieving important change. However, considering more holistically the whole of the Innocenti framework indicates that there might currently be areas that are not yet receiving enough explicit attention from organisations and other actors concerned about healthier and more sustainable food systems and diets for children.

After sharing their experiences of current actions, workshop participants then discussed two questions about barriers to and drivers of current action:

"What is currently making some of these activities difficult to implement/ sustain/expand? Please think specifically about the barriers & challenges your area is facing."

"What is enabling, encouraging or driving activities for achieving healthy and sustainable diets for children and adolescents in your area?"

We analysed workshop notes, especially participants' Jamboard notes, to thematically analyse and summarise the main themes discussed, with Section 4.1 focusing on the barriers and challenges, and Section 4.2 focusing on enablers.

4.1 Barriers and challenges for implementing actions

The diversity of interventions implemented indicate two key points: one, local authorities can choose from a wide range of interventions/initiatives that already exist and that can be creatively adapted to meet the needs of their local context; second, the extent to which they are customised to fit the local context (such as being co-designed) or supported by resources (both financial and human) to overcome local barriers to change will determine their effectiveness. Understanding local barriers[20] to changing the food environment is the first vital step towards creating a strategy and developing viable interventions. Workshop participants identified a number of factors that impacted on local authorities' and other local actors' ability to implement effective actions for healthy and sustainable diets for children.

These factors range from a perceived lack of capability of responsible actors within local authorities to achieve change (arising from insufficient resources, insufficient political support, etc.) to the increased vulnerability and need amongst children and families, a perceived inadequacy of some interventions and the challenges linked to the food system itself.

Mentioned by several workshop participants, one of the identified key challenges is the urgent requirement to respond to an **increase in vulnerability and needs** while lacking political leadership, facing conflicting demands and priorities and lacking resources and capacity. Increased vulnerability and needs were being linked, on the one hand, to systemic issues causing people not having enough money ("economic pressures on families across the board, e.g. transport costs" (Breakout Group (BG) 5), the related ongoing cost of living crisis (BG 2), and the still growing number of people in food poverty (BG 10). On the other hand, sometimes causally connected, participants also identified more health challenges linked to increasing rates of overweight and obesity and to mental health issues ("complex cases with SEND and mental health" BG 5) which require "having to be agile to respond to need quickly" (BG 5). All these create an increase in demand for impact-specific responses which hence might distract from a more fundamental focus on transforming the food system for healthier and more sustainable diets for children and adolescents.

Such interventions for more systemic changes were made more challenging by a **lack of political leadership** and/or political will and by an often-unattainable requirement for "achieving long term sustainability for politicians to engage with" (BG 2). Similarly, in BG 7, participants highlighted that "LA/ Government budget prioritisation during difficult times means longer-term thinking doesn't happen, it's immediate need" which is being prioritised. Linked to this is the reality that the topic of healthy

and sustainable diets is competing with other priority issues for attention and resources ("Scale of the challenge against other priorities" BG 10), e.g., "land use – for food or housing?" (BG 2) or availability of "time, especially schools' time" (BG 6) where "pressure on schools is a challenge – flurry of OFSTED inspections take focus" (BG 5). This can also extend to local policy decision-making where a "prioritisation during difficult times" might mean that **conflicting priorities** emerge around "e.g., takeaways that bring in revenue vs longer-term health consequences" (BG 7).

Linked to the above challenges around political leadership and conflicting priorities is the issue of '**siloed working**' that is a characteristic of many larger organisations, including local authorities. Here, BG 5 for example identified the following challenges: "Working in silos - not joined up enough – Budgets stretched and making things difficult - strategy not holistic – outdated" and "No one knows what anyone else is doing - difficult with no dedicated role pulling together (5)". Related to this but looking beyond a single local authority, BG 1 participants wished for **more opportunities for shared learning**, for breaking out of local and organisational silos and to "visit each other's projects and learn from each other" (BG 1). However, such opportunities are limited, partly due to the lack of resources.

The **lack of funding** and resources, and the short-term nature of funding was the single most-mentioned issue and was identified in all eight breakout groups (e.g. "Funding!" (BGs 1, 5 and 6), "Lack of Budget" (BG2), "Budget/s" (BGs 3 and 6), "Short term funding" (BG 7) and "Resource" (BG 9). Thinking specifically about school food interventions and free school meals (FSM), BG 10 saw the "Cost of school meals / FSM price" as a challenge whereas BG 2 pinned the "underfunding of school food" to "3 places: council budget; school budget; cost of running services".

Related to the lack of resources was a widely perceived **lack of capacity** which was discussed in five of the eight breakout groups. These concerns around "capacity" (BG 3) were frequently linked to a "limited capacity within teams" (BG 1), to lack of "time - there's not enough time to impact and influence every school" (BG 9) and more generally to the area of "capacity, time, personnel – teams and resources are stretched" (BG 5). Another aspect was linked to the lack of opportunities for long-term planning and thinking when interventions are grant dependent: "Short term grant funding, 1yr contracts so temp staff, staff get trained up and you lose them, makes it logistically difficult" (BG 7); the short-term nature of some interventions can affect the "sustainability of services for families" (BG 5), affecting the effectiveness of interventions.

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20 For guidance on how local authorities could overcome barriers to change, see PHE & LGA 2017.

The lack of sufficient capacity is also potentially linked to the **lack of data** which in turn is affecting the delivery of specific interventions, e.g., the Healthy Start voucher programme (described in Section 3.2). In BG 1, it was discussed that having insufficient information is undermining "access e.g., to Healthy Start vouchers ... we don't know who the people are who we are missing." Furthermore, the "very narrow definition for eligible criteria" (BG 1) excludes some people who are nonetheless in need of benefitting from these specific programmes like the Healthy Start voucher scheme. A similar shortcoming, also related to the **narrow focus of interventions**, was identified in the context of programmes having "a lot of focus on early years, but this drops off in older years" (BG 9). For example, "Veg Power" was seen as "targeting a small age range; would be good if it targeted older children, too" (BG 9) since there is too little focus on "Teenagers - we need to talk their language. Work with influencers, give healthy messages" (BG 9). Linked to this, there is also a challenge around the **current framing of food and health messaging** which has frequently a strong "focus on negative messaging - better to avoid always telling people what they can't do, more focus on what is helpful to improve" (BG 1). Such changed messaging could also help overcome the current lack of engagement, knowledge and understanding that was discussed in five breakout groups.

A **lack of engagement** around healthy and sustainable diets was perceived as a challenge especially in regard to parents as it was acknowledged that there was a "barrier for engagement with parents", while there was "interest but not engagement" when "going into schools" (BG 5). Considering solutions to this problem, participants in BG 5 proposed having "to look at how events in schools can be used" and BG 6 proposed that for "getting people to participate", there is a need for "convincing people", e.g., through "high profile coverage (e.g., BBC) for wider coverage and better credibility" (BG 6). This could help overcome the challenge of "parents push back" (BG6) or parents being "angry about Meat Free days" (BG 3). The (seeming) **lack of public knowledge and understanding** needs to be overcome, including through a "wider understanding of food system - to appreciate partnerships" (BG 2) and by dealing with the "Challenge of getting the word out" (BG 6). BG 6 also considered a possible solution to lie in a "focussed campaign (supported by Public Health), encouraging children to be the agents of change - child-focused" which could use "PESTER POWER!" (BG 6) to positively influence children's diets.

In the conversation in BG 9, the perceived problematic lack of knowledge and awareness regarding food and dietary issues was linked to "**misleading food labelling**: Food labelling - we could have something more clear about how healthy it is. Traffic light system doesn't work!" and "Products like Nature Valley - marketed as healthy but it isn't!" (BG 9). Providing a further, similar example – "Ingredients in a pasta dish - appear on the outset to be healthy (hidden

veg) but have added sugar .... a lot of people don't realise. Make people more aware of what's in their food" (BG9) – highlighted the challenge around public knowledge but also links to challenges in the wider food system, including food supply chains and current food environments.

Current **food environments** were highlighted by three breakout groups as challenging areas for local actions, including in the context of external community food environments (see Section 3.3.3), where "Food deserts" (BG 7) and "Things that are outside a school's control - supermarkets, corner shops etc." (BG 9), including "American sweet shops - bright, neon!" (BG 9) needed local authorities' actions. However, "local authorities giving planning permission to businesses which don't align with their public health goals" (BG 9) was perceived as part of the existing reality – which clearly links to the point mentioned also by BG 7 around conflicting priorities. Furthermore, in regard to "Licencing - LAs don't have power to give sanctions to businesses not following guidelines / rules" (BG 9) was seen as a further barrier to achieving local change. In the context of school-based food environments, BG 10 saw a challenge and opportunity in the way school dining rooms are designed: "Big factor- dining room environment, need cafe style, "more adult" style vibes" (BG10) to attract also older pupils to utilise offered (healthy and sustainable) school meals. In the context of school food environments, a final challenge identified by workshop participants were the "Food waste challenges in school meals" (BG 10).

4.2 Enabling factors for implementing actions

During the workshop with local authorities and other stakeholders, participants were asked in their respective breakout groups to describe and discuss what is enabling, encouraging or driving activities for achieving healthy and sustainable diets for children and adolescents in their local area. While Chapter 3 in this report showcased some of the action areas for local authorities ('What to do?'), the identified enablers speak to the different ways in which the interventions for improving food systems for children can become more effective ('How to do it?'). Identified enablers include, amongst others, having clear leadership and strategies that can adapt over time; working collaboratively and with local communities; having sufficient resources and capacity; and utilising appropriate approaches and methodologies.

A key point mentioned across five breakout groups was the need to have in place **clear goals and strategies**, for actions to be based on a shared long-term approach, a "common ground" (BG 2). For example, BG 1 focused on the need for a "Clear strategy ... to be in place" and the need for "a driving force, e.g., the Health and Wellbeing Strategy (BG 1). With "Food fitting into local plans" (BG 3), this can "translate to wider systems/place-based approach going into different areas" (BG 2). Examples for such broader and clear strategies can be seen in the "Right to Food motion in Cumberland" (BG 3) being adopted in the local council, and in the "long term commitment in Leicester – for FFL [Food for Life] for 10 years" which makes "benefits visible" (BG 2).

Participants also emphasised the importance of "doing things that are achievable" (BG 3) and that **link to existing (political) drivers of activities and adaptation**. For example, it is frequently the case that "Childhood obesity [is] a priority in local plans" (BG 7) with "All planning applications now come through health department" (BG 7). Elsewhere it was observed that the "original focus has been on the Right to Food and food insecurity; then, more focus on healthy food and sustainable food; trying to get rid of food banks" (BG 1). It was noted that policies relevant to children's diets are not static but are "evolving policies" (BG 2). Hence, when developing or adapting local goals and strategies, it was identified as useful to apply "Lateral thinking!" for "Spotting what's gone wrong in the system" (BG 6). As a practical approach which is further expanded on below, engaging with various stakeholders proved, for example, useful in Telford, where "Focus groups and analysis showed Food Environments as being really important" (BG 3).

Apart from the need to embed food policies within local policy goals and agendas, four of the breakout groups also emphasised the "importance of local political **leadership**" (BG 2). It is seen as particularly relevant to have a "High level of senior leadership buy-in" (BG 7), for example, in the role of a "Spearhead 'character' to push things forward, e.g.,

a local councillor" (BG 6) or other "Political drivers" (BG 7). In one instance, it was highlighted how the fact that a specific "cabinet member takes particular interest in childhood obesity, makes a difference" (BG 7). Capacity for political leadership, however, was also seen in the local councils themselves, for example, in the development of a "strategic, whole systems approach" for which a "good lead in council bringing invested bodies together to enable focus and rebuilding partnerships after COVID" (both BG 5) was perceived as beneficial. Interestingly, here the pandemic was discussed as having triggered "part of the solution" since it "brought focus on health" (BG 5).

However, the importance of people taking on leadership roles was also emphasised outside of the context of political decision making, with BG 10 appreciating the existing "Strong leadership from school staff/members." Regarding specific behaviour change interventions, BG 9 emphasised that "People in key roles should change their own diets!" to be "Better role models for children". Therefore, it was suggested that "Local authorities should target the populations that could have the most influence. Target teachers - if they change their diet, they can encourage children to change" (BG 9).

The enabling factors that were mentioned by each and every breakout group were the benefits of "**partnership**" (BG 2) **and** "**collaborating**" (BG 7). Described as relevant, for example, in the form of "collaboration with stakeholders" (BG 10) and as "collaboration, cross sector working, linking with education" (BG 7), it was emphasised that "collaborative working is the most important thing; it's about spreading the message; it's a support network" (BG 1). When talking about the power of networking, collaboration and partnership building, participants referred to the "relationship between Council & other institutions" (BG 2), to "bringing in different actors, like Food and Farming network, big businesses being involved in the partnership" (BG 1), to work together with "local partners - passionate about local health, e.g. local nutrition charity" (BG 6) or with the local "two universities" (BG 2). It was seen as important to "join together to make a big difference" by building on the "drip, drip factor" (BG 5), on the "passion & activism by local community" (BG 2) and, for example, on the "power of the football club" (BG 5).

A strategy that was seen as useful for achieving greater collaboration was to "Identify benefits for different stakeholder groups that should be on board (e.g. going through chamber of trade [with supply chain network])" (BG 1) and by "Encouraging; research third parties [to better understand their interests]; showing importance of joined up action on food" (BG 5). "Partnership events, e.g. arranged by PH [Public Health]" were also seen as useful since this "gives people a chance to see what others are doing" (BG 6). Equally, partnership working is key when trying to find solutions for the increase in vulnerability and needs (see Section 4.1), where building on "Creativity in challenge – Home Start supporting families re Cost of Living" (BG 10) is one of the collaborative interventions that has had positive outcomes.

Networking benefits were also perceived as not stopping at the local level since "**links with wider networks** - help with lobbying, amplifying voices at national level; voices heard more" (BG 2). "National campaigns" enabled participants to be "feeling part of a movement" (BG 3), while the "SFP partnership" was seen "as a way of bringing people together for collaborative working" (BG 6). Networking was also useful when focusing on awareness raising and the "culture change needed" (BG 9) which was considered important for drawing community as well as wider political attention to the topic, including around the sustainability and healthiness of specific kinds of food. This was alluded to in BG 5 when discussing the need for "**greater awareness**" and the role of "social media" which could act like a "pebble in the pond", helping achieve "more conversations about sustainability", "more knowledge, UPF awareness" and shape "public perception, e.g. fashionable/cool" (all BG 5). Furthermore, it was beneficial to build on pre-existing "pupil interest, especially around sustainability" (BG 10).

Furthermore, such networking, both locally and nationally, allowed local interventions to build on pre-existing standards, on experiences and best practices elsewhere and to **benefit from shared learning**. Working within broader networks allows having access to programmes that "come with toolkits so council don't have to find own way", so that they are "not in dark trying to figure things" (BG 5). Specific examples of programmes that were mentioned amongst others were, "Food for Life" seen as having "good measure for planning menus", "School Food Standards" considered "outdated but does provide a framework", "School Plates - Pro Veg are useful, if not always realistic! Campaigns such as Eat Them to Defeat Them" and "Best Food Forward, artisan cookery school, provide ingredients, recipes and teaching. Also covers budgeting and life skills" (BG 3).

Another key enabling factor for the effective implementation of identified actions was seen as "Funding!" (BG 6). "Funding" was considered particularly relevant since "projects require all sorts of resources" (BG 7). Achieving that "money being put into provision - e.g., cook and eat" allowed that it "can be accessed free" (BG 5). While it was considered, for example, a "challenge for the FFL programme" in terms of "budget, staff resource" (BG 6), improving the "understanding of **availability of funding**" (BG 6) was seen as an important enabling factor. Equally, having **sufficient staff capacity**, especially dedicated personnel, was described as beneficial, for example, when having an "internal team of nutritionists" (BG 3), having "employed someone specifically on this work" (BG 3) or employing a "full-time TA that leads on horticulture, (achieving) loads of growing activities" (BG 3).

During their discussions on what is driving activities in their respective local area, some participants pointed to the need to **focus on changing the external food environment** for children. Descriptions of "things that need to change" included

the facts that "lots of sugar and unhealthy food is readily available", that even in the context of the "cost of living crisis, it is cheaper to go and buy convenience foods" and that "food education isn't as big a thing in schools - home economics is more of an add-on" (all BG 9). Hence, participants argued that actions should focus on, for example, "improved options in supermarkets etc ...", "no ice cream vans outside schools!!!!" and food offers within schools: "Don't ask children to choose between chocolate and fruit!" (all BG 9). Change in school-specific external food environments (see also Section 3.3.1) was described as achievable through appropriate "contract specifications in school meals" (BG 10).

Throughout the breakout group discussions that centred around current activities and existing or aspirational factors that enable local action on healthy and sustainable diets for children, it was perceived that "**working with schools** is key -- allows an entry point, food is opening up conversation" (BG 1). For example, BG 5 participants highlighted how useful it is that "schools know what they're getting out of it" when "relating it to their priorities, e.g., OFSTED". One can "get more interest" when "explaining why it fits and the impact for the school and area" which allows "giving ownership" to the different stakeholders involved.

In this context, when considering the Innocenti Framework (see Section 2.3), it became apparent that many participants' considerations focused on how to change children's and adolescents' dietary behaviours (see Section 3.1) but also on the behaviours by caregivers through actions within and via schools. In BG 9, it was emphasised that what worked was to "be in schools and education more". It was considered specifically relevant to be focusing on the "immediate school community", on "how food is perceived by people that children look up to", including "staff, teachers, peers" and on "getting the people involved that have influence." "Children might be better informed about HSD" but it is "best to **get parents, teachers involved**" (all BG 9). For school-based interventions to be successful, it is "important to involve parents!" for which it is "crucial that we have more support for parents" (BG 9). This could, for example, involve "being on the ground and talking to people to better understand causes for problems (e.g., around tooth decay; interactive tools, kids can do a demonstration about what they've done)" (BG 1).

A final area of discussion amongst participants centred around specific **enabling approaches and methodologies**, especially in the context of interventions aimed at dietary behaviour change. Discussions considered various empowering methodologies, diversity and accessibility, creativity and hands-on methodologies. For example, it was acknowledged that "Healthy food for everyone is tricky" (BG 1). Hence, "aim not to set up anyone to fail; e.g., through food recipes / boxes" (BG 1) and other approaches that consider the practical reality of many children, adolescents and their families. When interventions are meant to empower people to change their diets, they also need to **consider diversity and accessibility**, including "different cultural backgrounds and preferences (making sure everything is accessible" (BG 1), while "breaking down barriers, e.g. by focusing on timing, place and content of activities" (BG 1). This was, for example, being empathetically alluded to in a "Video of a routine of a Mum - showing the challenge of the routine of a parent. They want to give children healthy foods, but sometime convenience wins" (BG 9).

Participants also emphasised the importance of creative, including hands-on, interventions. "**Being creative**: e.g., health messages during free soft play sessions" (BG 1) referred to the possible location of an intervention but also to its content, e.g. "We offer our children a choice - perhaps we need to offer more interesting, healthier choices" (BG 9) or by "Using popular food concepts/themes in a healthy way" (BG 10). For changing children's diets, it was seen as important to "get kids to prepare their own food" (BG 1), to "use bush-tacker trials: starting with touching foods, breaking down barriers" (BG 1) and to "encourage taster sessions in schools, get parents involved, make sure parents know what's on menus and why - improving diets, expanding palates" (BG 9).

5. Areas of Action for Local Authorities

In this chapter, we summarise some recommendations, some areas of action, for local authorities that aim to work towards healthier and more sustainable diets for children. These recommendations built on previous chapter:

In chapter 3, we have detailed examples of interventions that local authorities are currently already implementing. These interventions range from activities influencing food behaviours of children, adolescents and caregivers, or improving personal as well as external food environments, to those transforming the food supply chain. While we have used the Innocenti Framework (see Figure 2) to structure these ongoing activities that can shape children's food systems for healthy and sustainable diets, we added to this a fifth element, the strategic, place-based actions and ways of working that frame and guide local interventions across the four determinants (see also Section 2.3 and Chapter 4).

In chapter 4, we added practitioners' reflections (by local authorities' staff and others) on what is hindering and what is enabling such important interventions. Building on these two chapters and the review in chapter 2, summarise here **what** local authorities can do, and **how** they can do it. We first summarise this in Figure 6 and then provide an explanatory description.
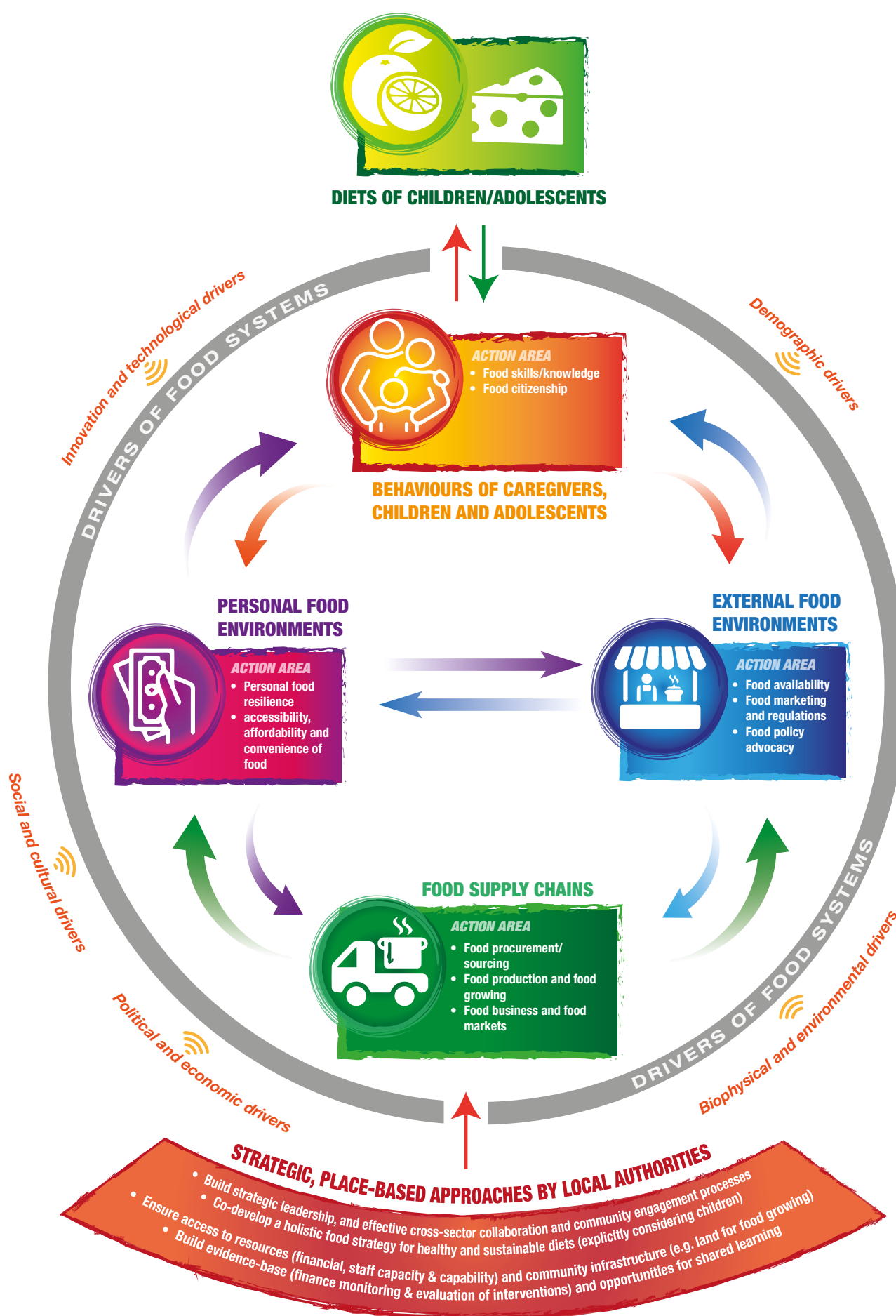
Figure 6 highlights the kind of interventions that can shape behaviours, personal and external food environments, as well as the food supply chain, all relevant for children's diets. It is important to note that we have 'assigned' certain interventions to specific determinants; in reality (as also indicated by the arrows in the graph), interventions often address several determinants at the same time. There are also clear interactions between changes in one area of the food system and others. In addition to the four food system determinants identified by the Innocenti framework, there is also the need for broader place-based approaches which address the strategic foundation of interventions as well as the ways of working together locally on the topic of healthy and sustainable diets for children. We are highlighting this in Figure 6 at the base of the Innocenti framework.

It is important for local authorities to be aware which determinants and intervention areas are currently being addressed, and where there is limited attention or interventions. This needs to be considered using an equity lens, including different spatial, cultural and economic contexts in various neighbourhoods. The 'checklist' below summarises the types of interventions that address specific action areas, based on our adapted Innocenti framework.

Figure 6:

Healthy and sustainable diets for children: areas of action for local authorities *(adapted from UNICEF, 2018)*

DIETS OF CHILDREN/ADOLESCENTS

DRIVERS OF FOOD SYSTEMS

Innovation and technological drivers

Demographic drivers

Social and cultural drivers

Biophysical and environmental drivers

Political and economic drivers

ACTION AREA
- Food skills/knowledge
- Food citizenship

BEHAVIOURS OF CAREGIVERS, CHILDREN AND ADOLESCENTS

PERSONAL FOOD ENVIRONMENTS

ACTION AREA
- Personal food resilience
- accessibility, affordability and convenience of food

EXTERNAL FOOD ENVIRONMENTS

ACTION AREA
- Food availability
- Food marketing and regulations
- Food policy advocacy

FOOD SUPPLY CHAINS

ACTION AREA
- Food procurement/ sourcing
- Food production and food growing
- Food business and food markets

STRATEGIC, PLACE-BASED APPROACHES BY LOCAL AUTHORITIES
- Build strategic leadership, and effective cross-sector collaboration and community engagement processes
- Co-develop a holistic food strategy for healthy and sustainable diets (explicitly considering children)
- Ensure access to resources (financial, staff capacity & capability) and community infrastructure (e.g. land for food growing)
- Build evidence-base (finance monitoring & evaluation of interventions) and opportunities for shared learning

ACTION AREA: Behaviours of caregivers, children and adolescents

Food skills/knowledge:

Training of staff

- Support the training of nursery, teaching, catering & cooking staff (even in the voluntary sector, e.g., HAF programme) on food preparation, storage, cooking, food waste management.

Food and nutrition programmes

- Support food and nutrition programmes in schools and communities (e.g., cooking classes, garden projects, nutrition workshops) that empower children to make informed decisions about their diets.

Food citizenship:

Enable community engagement and participation in decision-making

- Community engagement and participation which enables children (their families and caregivers) and other community members to influence decisions taken which shape their local external food environment in terms of what type of food is in their neighbourhoods, on their highstreets, in their schools and other community/public places they go to eat or shop for food, and to grow food.

- Support/start children-specific food interventions in the most deprived areas by working in and with the community through community-driven interventions and community-led projects in targeted areas.

ACTION AREA: Personal food environments

Increase personal food resilience through improved accessibility, affordability and convenience of healthy and sustainable food:

Reduce inequalities in personal and household food affordability

- Focus on anti-(child)poverty strategies, including those with a nutrition focus (e.g., Healthy Start vouchers)

Improve food accessibility

- Support community- or local business-driven interventions that are making nutritious, culturally appropriate, and sustainable food affordable and easily accessible for families on low incomes (e.g., Rose Voucher scheme) while increasing awareness of healthy and sustainable food choices among children.

Increase convenience of accessing food

- Enable easy public transport facilities (e.g., easier bus routes), mobile food vans or other interventions for more convenient, more accessible and more affordable food options (that help overcome financial and time constraints).

ACTION AREA: External food environments

Food availability:

Incentivise healthy food outlets to underserved neighbourhoods

- Support local food enterprises and children-centred food settings to provide healthy and sustainable food that is diverse and culturally acceptable.

- Facilitate healthier food options, for example through the use of grants and loans, SME support and other economic incentives to attract healthier food providers, including farmers markets.

- Support campaigns for environmentally sustainable food (e.g., Sustainable Fish Cities campaign)[21].

Provide free drinking water fountains.

- Facilitate healthier drink options (e.g., work with water companies to make free drinking water fountains easily available in all public places, such as parks, leisure centres, shopping centres, major sporting events and facilities, public transport stations); support free "Water Refill" schemes in these spaces.

Utilise local planning instruments for shaping local food retail, especially near children-centred spaces

- Use available local planning instruments (like Core Strategies, Supplementary Planning Documents and Health Impact Assessments, Planning Licenses, Street Trading Policies, Section 106 Agreements and Use-type clauses in Local Plans) to either limit the presence of less-desirable (fast) food retail premises or to support the presence of more diverse and healthy food retail and catering business (e.g., zoning regulations supporting healthy food stores in underserved 'food desert' areas; restricting fast food outlets near schools).

Food marketing and regulations:

Restrict unhealthy food marketing in public spaces

- Restrict marketing of unhealthy food with the aim of reducing children's exposure to unhealthy food promotions in public spaces (including public transport[22]) and around facilities for children, including schools, sport and leisure facilities in addition to restrictions on social media.

Remove contradictory messages on healthy eating

- Framing children's (and more broadly communities') healthy and sustainable diets as an access and a health equity issue, not just about personal choices (e.g., through media campaigns like those successfully used in anti-tobacco and anti-alcohol initiatives).

Food standards:

Monitor and enforce rules for maintaining food standards and dietary guidelines for meals served in children-centred spaces

- Consider food safety, child-specific nutritional needs and sustainability of meals served in schools, nurseries and other children-centred spaces, including leisure centres and health care facilities.

Improve the appeal of food places that cater healthy and sustainable food

- Consider the physical set-up and management of canteens and similar catering places (e.g., in secondary schools) to increase their appeal as positive social spaces for children and adolescents.

Support the use of reward schemes by food providers/catering services

- Support schemes which help signpost children (and their families) to healthier food and drinks that meet nutritional standards and dietary recommendations for children's meals (e.g., 'Food for Life Served Here[23]' and 'Good Choice' badge[24]).

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21 https://www.sustainweb.org/sustainablefishcity/
22 *Drawing on the Healthier Food Advertising Policies, launched across the Transport for London network in February 2019 (Quinn, 2022).*
23 https://www.foodforlife.org.uk/catering/food-for-life-served-here
24 https://www.gov.uk/government/news/new-campaign-launched-to-help-parents-improve-childrens-diet#:~:text=The%20
    Good%20Choice'%20badge%20helps,sugar%2C%20saturated%20fat%20and%20salt.

ACTION AREA: Food supply chain

Food procurement/ sourcing:

Use public food procurement/sourcing to transform (local) food supply chains towards sustainable and healthy diets for all

- Support local infrastructure, local producers, local SMEs - through public procurement contracts - to provide fresh, minimally processed food, and food that is diverse, culturally acceptable, and sustainable, not only within schools and institutional settings but also in the wider community environment (including all public spaces frequented by children).

Food production and food growing:

Promote and support food growing initiatives like community allotments

- Promote and support initiatives like community gardens/allotments and farmers markets which provide fresh and locally grown produce – creating a food environment that supports children (along with their families) to consume a greater variety of nutrient-rich, fresh foods while supporting local food systems and minimising food waste.

- Raise awareness that - together with public food procurement - local food production/sourcing hold the potential for transformation of food supply chains towards sustainable and healthy diets for all.

Utilise policies/zoning regulations to protect and make land accessible for urban food growing

- Develop/apply land use policies/zoning regulations to promote, expand and protect potential sites (e.g., vacant public land, unused parking lots, etc.) for urban food growing.

Food business and food markets:

Incentivise healthy and sustainable food chains (e.g., award schemes, economic incentives)

- Create incentives to develop healthy and sustainable food chains (e.g., award schemes, grants and loans, enterprise support, other economic incentives like reduced rental rates, tax credits).

- Support (especially small-scale/artisanal/local) food businesses producing or retailing healthy and sustainable food through business rate reductions and other incentives.

Food policy advocacy/Children's right to food and nutrition:

Advocate for better food policy that explicitly considers the needs of children

- Advocate for (food) policies promoting a food environment with locally accessible and affordable healthy food options.

- Create or support campaigns (e.g., Veg Power[25], Children's right to food and nutrition[26])

Support national initiatives for healthy and sustainable food

- Support food labelling (including provision of info on the provenance of food)

- Reduce the availability of unhealthy foods (e.g., tax, levy on sugary drinks and snacks)

- Collaborate, where possible, with national departments developing nation-wide policy instruments (e.g., Public Health England, Department for Education, Food Standards Agency) and with co-ordinating/supporting organisations (like Local Government Association, Town and Country Planning Association, The Association for Public Service Excellence (APSE)) whose work would benefit from knowledge exchange and feedback regarding interventions for healthy and sustainable diets for all children.

25 https://vegpower.org.uk/
26 See UNICEF 2020; also Food Foundation's campaign at https://foodfoundationorg.uk/initiatives/childrens-right2food

ACTION AREA: Strategic, place-based interventions

Strategic leadership:

Build local strategic leadership

- Create and support high-level senior leadership buy-in (e.g., by mayors, local councils/ local councillors, or other political actors)

Community engagement and cross-sector collaboration:

Strengthen community engagement processes

- Utilise enabling and empowering approaches and methodologies, considering arts- and creativity-based methods where suitable.

- Consider diversity and accessibility when building community engagement processes.

Create effective cross-sector collaboration

- Within local authorities, build strategic partnerships across teams (for example, planning, economic development, and public health)

- Create partnerships with external organisations/ agencies and other community stakeholders (e.g., local authorities, schools, and other children-centred facilities, parents, food providers, food producers, community sector, also non-food businesses)

Engage with children directly

- Work with children to make changes that they would like to see, for example, by supporting children and adolescents to become 'community champions' (e.g., 'Young Food Ambassadors' campaign by the Food Foundation calling for government action to reduce children's food insecurity and inequalities in childhood obesity).

- Support participatory research with children on children's interactions with the food system (consider an intersectional approach -- across different age groups, different levels of independence and mobility, and socio-economic-cultural backgrounds).

Place-based food strategy and vision for local authority area:

Co-develop a holistic food strategy for healthy & sustainable diets

- Take on leadership roles in the co-development of a strategic, whole systems approach for healthy and sustainable diets that explicitly considers the needs of children.

- Develop a comprehensive and strategic approach for a healthy and sustainable local food system, with goals embedded into an aspirational but concrete vision for the future that motivates, inspires, frames and holds accountable all actors that locally influence the food system and the wellbeing and sustainability of their own urban or rural communities.

Resource provisioning:

Ensure access to resources and community infrastructure

- Allocate and ensure sufficient resources (financial, staff capacity with necessary capabilities, access to tools such as for mapping, monitoring, etc.) for developing/supporting a local food strategy including interventions for healthy and sustainable diets for children.

- Ensure necessary community infrastructure (e.g., land for food growing, spaces for farmers markets).

- Lobby nationally for sufficient resources for planning and implementing interventions focused on transforming children's food systems. This is especially pertinent in the context of the current national government's 'levelling up' agenda[27] which seeks to ensure equal opportunity for all across the UK.

Evidence-based decision making and shared learning:

Build evidence-base (finance monitoring & evaluation of interventions)

- Develop evaluation frameworks to monitor the effectiveness of interventions (including their reach and equity considerations) for children's diets.

- Support research on identifying effective measures for the monitoring and evaluation of such interventions on dietary outcomes (instead of being limited to obesity) for children.

- Consider the definition and assessment of impact of local authorities' interventions from the start to enable the collection of baseline data and the establishment of adequate procedures and systems to identify and assess/measure outputs and outcomes.

Create opportunities for shared learning

- Utilise networking and engagement both locally and nationally for shared learning, gathering of evidence and advocacy work (with national organisations like LGA)

- Consider (shared) learning and adaptation within a food strategy and utilise organisations (e.g., Local Government Association, Soil Association) to exchange ideas, experiences and evidence for greater cross-fertilisation amongst organisations that are all – to a large extent – struggling with similar challenges when aiming to improve healthy and sustainable diets for children.

- Collaborate with third sector organisations and food alliances/networks (like the Soil Association, Sustain, Sustainable Food Places), funding bodies (like National Lottery Fund, Nuffield Foundation, Joseph Rowntree Foundation) for support in the development and testing of new approaches and also in the promotion and rollout of innovative and effective new ideas.

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27 https://www.gov.uk/government/publications/levelling-up-the-united-kingdom

Our research has shown that achieving healthy and sustainable diets for all children requires a combination of actions in diverse areas. Local authorities, due to their central and relatively resourced role as governmental bodies, can lead, coordinate and support the response to counter children's unhealthy diets at the local level by working across sectors, and with communities and local partners to make changes in the food system. Such cross-sector collaboration and broader civil participation is vital to mainstreaming the importance of transforming food systems for mitigating the nutritional and environmental challenges children face today. The necessary multi-pronged action is more likely to be delivered by local authorities as part of an overarching and coherent place-based strategy.

This research has highlighted the key role that local authorities can and do play in improving children's diets across a range of areas in terms of their responsibility for delivering specific services for families and children, in formulating local regulations and planning instruments, in allocating place-specific budgets, developing place-based, long-term strategies, and coordinating place-based networks.

We hope that this report, which reviewed the current situation of children's diets, examined existing and potential interventions to improve children's food systems, and proposed action areas for local authorities, will serve as a useful resource and tool to reflect holistically on what is already being achieved and what action areas might need attention. Considering the sustainability and healthiness of children's diets is an important area in which local authorities can work for positive change, for both current and future generations.

In these uncertain times, where numerous crises (e.g., environmental, cost-of-living, housing, energy) manifest themselves at the local level, the new emergent narrative is that of the local authorities/public sector increasingly stepping up as "facilitators and conveners of change...rather than being the overstretched service provider and answer to all our problems".[28] Through their leadership, local authorities can make this possible by applying, enabling and promoting collaborative approaches, effective partnerships and coordinated cross-sectoral action at local levels.

28   https://foodcitizenship.info/2019/11/14/how-local-authorities-can-engage-with-food-citizens/

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Appendix

1. Key studies on local authorities which include aspects of children's food and nutrition

Behavioural Insights Team. EAST Four simple ways to apply behavioural insights [Internet]. London; 2014. Available from: http://www.behaviouralinsights.co.uk/publications/east-four-simpleways-to-apply-behavioural-insights/

Beyond the School Gate, Scottish Govt, 2014 - provides guidance for local authorities, schools, retailers and caterers on how they can positively influence the food environment around schools and encourage and support school-age children to make healthier choices at lunchtime and throughout the school day. Local Government Association - Tipping the Scales' (2016) [shows how a number of councils used their planning powers to limit hot food takeaways around schools and impacts]

NHS London Healthy Urban Development Unit - Good Practice Guide (2013) - "The Good Practice Guide outlines national and London specific policy and guidance and the role of the planning system in controlling fast food outlets in particular, it reviews the policy approaches taken and recommends a coordinated approach using planning policies together with other local authority initiatives."

PHE & LGA 2017: they provide a toolkit which "summarises the evidence base, types of interventions, and emerging local practice, to help those responsible within local councils (councillors, health and wellbeing boards, planners, public health and environmental health), to think about how working in a systems approach, they might bring together a coalition of partners to improve the food environment for children and families." (p. 5)

PHE 2020: In a significant piece of research conducted by PHE with 25 local authorities who had seen very small but significant downward trends in childhood obesity from 2006/07 to 2015/16, they identified key themes in the approaches taken or the interventions implemented by the participating local authorities – some of them are also relevant for improving children's dietary patterns. The latter included: taking a whole systems approach, increasing parental engagement, having a published childhood obesity strategy, spatial planning, taking a whole schools approach, working with schools, broader partnerships, focus on food, active travel, intervention in the early years, increasing physical activity and linking obesity with mental health. Interestingly, only half of the local authorities (13/25) in this study had a focus on food which shows the urgent need to recognise the centrality of food in public health concerns.

PHE 2020: 25 shows the Nuffield Council on Bioethics (2007) intervention ladder which is a useful approach to analysing the different ways that public health policies can affect people's choices and allows comparisons to be made between alternative approaches in terms of their intrusiveness and likely acceptability.

Sustain's Children's Food Campaign publications *(https://www.sustainweb.org/childrens-food-campaign/)*

Healthier Food Advertising Policy Toolkit: A local government guide for restricting unhealthy food advertising. *https://www.sustainweb.org/reports/feb22-advertising-policy-toolkit/*

Sustainable Development Commission (2009). Food Security and Sustainability: the perfect fit. SDC reports & papers, 10th July 2009, *https://www.sd-commission.org.uk/data/files/publications/SDCFoodSecurityPositionPaper.pdf.*

UNICEF (2020). *A roadmap for action to support nutritious diets and healthy environments for all children in urban settings*. UNICEF, New York. Illustrates the application of the Innocenti Framework in the context of urban settings; shows what actions are needed to achieve HSD for children in cities.

2. Online Sources on actions by local authorities addressing children's diets

Birmingham

Birmingham City Council (2022). *Birmingham Food System Strategy*. *https://www.birmingham.gov.uk/ downloads/file/23651/birmingham_food_system_ strategy*

Local Government Association (2023). *Childhood Obesity Trailblazer Programme*. *https://www.local.gov. uk/our-support/partners-care-and-health/childhood-obesity*

Blackpool

https://blackpoolbetterstart.org.uk/timeline-bbs/

https://blackpoolbetterstart.org.uk/reports-and-papers/

Blackpool Better Start (2022). *Annual Dashboard Report. Year 7 2021-2022*. *https://blackpoolbetterstart.org.uk/wp-content/ uploads/Annual-Dashboard-Report.pdf*

Bradford

Better Start Bradford (2022). *https://www.betterstartbradford.org.uk/about-us/*

https://www.betterstartbradford.org.uk/project/ workforce/henry/

Bradford Council (2023) *https://www.bradford.gov.uk/education-and-skills/ school-meals/school-meals/*

https://www.bradford.gov.uk/education-and-skills/ school-meals/primary-school-meals-app/

https://www.bradford.gov.uk/education-and-skills/ school-meals/what-goes-into-school-meals/

https://www.bradford.gov.uk/education-and-skills/ school-meals/primary-schools/

https://www.bradford.gov.uk/education-and-skills/ school-meals/school-meal-standards/

https://www.bradford.gov.uk/media/3039/ hotfoodtakeawaysupplementaryplanningdocument.pdf

Bradford District Food Strategy (2012). *https://www.bradford.gov.uk/media/2118/ bradfordfoodstrategyfinal.pdf*

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Bristol

Bristol One City (2023). *The One City Approach*. *https://www.bristolonecity.com*

Bristol Food Network, Bristol One City & Bristol City Council (2023). *Bristol Good Food 2030 | Framework for Action*. *https://bristolgoodfood.org/action-plans/*

City & Hackney

Henry (2023). *Henry in City & Hackney*. *https://www.henry.org.uk/hackney*

Coventry

https://www.coventry.gov.uk/downloads/file/30880/hot-food-takeaway-spd

Cumberland Council

Cumberland Council and Food Cumberland (2023). *Food Cumberland Strategic Framework*. *https://cumberland.moderngov.co.uk/documents/ s9922/Food%20Cumberland%20Strategic%20 Framework%20-%20Appendix.pdf*

Darlington

Darlington Borough Council (2023). *Darlington Healthy Catering Award Scheme*. *https://www.darlington.gov.uk/health-and-social-care/ public-health/darlington-healthy-catering-award-scheme/apply-for-the-healthy-early-years-catering-award/*

Devon County

Devon County Council (2023). *Free school meals holiday voucher scheme*. *https://www.devon. gov.uk/educationandfamilies/school-information/ school-meals/free-school-meals-holiday-voucher-scheme/#:~:text=Families%20of%20children%20 that%20are%20eligible%20for%20free,they%20 would%20have%20had%20during%20the%20 school%20day.*

Essex

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Harrow

Ahmad, K. (2023). *London Community Kitchen*. *https://www.pimpmycause.org/profile/16238/*

Lancashire

https://www.lancashire.gov.uk/media/937925/hot-food-takeaway-advisory-note.pdf

Leeds

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Leicester

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Liverpool

Feeding Liverpool (2023). *Liverpool's Good Food Plan. Impact Report 2022. Moving the plan into action*. *https://www.feedingliverpool.org/wp-content/ uploads/2023/01/GFP-Impact-Report-2022.pdf*

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London

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