ONE HEALTH FOR CITIES

THE ESSENTIAL GUIDEBOOK FOR CITY MAKERS

ABOUT ONE HEALTH 4 CITIES NETWORK

The One Health 4 Cities Network (2023-2025) is an Action Planning Network of the URBACT IV Programme. The network sheds light on how to implement the One Health approach in urban public policies, strategies, and projects. Comprising cities with varying levels of experience in One Health and local contexts, the network fosters a collaborative environment where the nine partners come together to learn and share experiences: Benissa (Spain), Elefsina (Greece), Kuopio (Finland), Lahti (Finland), Loulé (Portugal), Lyon (France), Munich (Germany), Eurometropolis of Strasbourg (France) and Suceava (Romania). The network's lead partner is the City of Lyon.

One Health 4 Cities is co-funded and supported by the EU through the EU through the URBACT IV programme - 2021-2027.

One Health 4 Cities

PARTNER ORGANISATIONS

Ajuntament de Benissa

Δήμος Ελευσίνας

Kuopio

Lahti

Loulé

Ville de Lyon

Landeshauptstadt München Gesundheitsreferat

Strasbourg.eu eurometropole

CO-FUNDED BY

URBACT

Co-funded by the European Union Interreg

CREDITS

AUTHORS

Sofia Aivalioti
Lead Expert One Health 4 Cities Network,
Green & Healthy Cities Consultant, BAX Innovation

Marlene Dussauge
One Health 4 Cities Coordinator, City of Lyon

Dr. Guillaume Fauvel
Health Director, City of Lyon

Diana Sepulveda
One Health Expert, City of Lyon

Dr. Mary Dellenbaugh-Losse
Urban Researcher, Founder & Director, Urban Policy

Ileana Toscano
Urban Specialist & Participation Expert, Founder, Kallipolis

Marion Chenevas-Paule
Gender & Health Expert, City of Munich

Päivi Sieppi
Environmental Advisor, City of Lahti

Eliabel Seys
Environmental Health and One Health Project Manager,
Eurometropolis of Strasbourg

Dr. Emilia Rönkkö
Senior Researcher, University of Eastern Finland, Faculty of Health Sciences

Marie Macauley
Learning Specialist for Healthy Cities, WHO Academy

Serge Morand
Research Director, French National Centre for Scientific Research

Pierre-Louis Debord
Project Manager Health Observatory, City of Lyon

Alberto Lorente Saiz,
Director of European Projects, Crea360

Antje Kohlrusch
Project Manager Health Policies, City of Munich

Kati Vähäsarja
Head of Civic Services, City of Kuopio

Luis Vicente Correia
External Consultant, Municipality of Loulé

Sonia Papageorgiou
External Consultant, City of Elefsina

DESIGN

Kiblind Agence

CITATION OF THIS PUBLICATION

Aivalioti, Sofia (Lead Expert, One Health 4 Cities Network), Dussauge, Marlene (Coordinator, One Health 4 Cities, City of Lyon), Dr. Fauvel, Guillaume (Health Director, City of Lyon), et al. One Health for Cities: The Essential Guidebook for City Makers. City of Lyon: One Health 4 Cities Network, 2025.

TABLE OF CONTENTS

FORWARD	P.5
INTRODUCTION	P.6-8
SECTION 1: DEVELOPING ONE HEALTH-INTEGRATED STRATEGIES	P.9-23
SECTION 2: DESIGNING GOVERNANCE MODELS FOR MULTI-STAKEHOLDER COLLABORATION	P.24-39
SECTION 3: HANDLING INFORMATION MANAGEMENT IN ONE HEALTH	P.40-55
SECTION 4: ENGAGING AND MOBILISING CITIZENS FOR ONE HEALTH	P.56-68
SECTION 5: INTEGRATING GENDER EQUITY AND SOCIAL INCLUSION IN ONE HEALTH	P.69-82
SECTION 6: IMPLEMENTING ONE HEALTH	P.83-107
TOOLBOX INDEX	P.108-113

FORWARD

Across Europe and beyond, mayors, local officials, and urban practitioners are increasingly confronted with complex realities that cannot be addressed through traditional public health or environmental lenses alone. Faced with this complexity, the One Health approach has become vital for cities where policies directly influence the daily lives of people, the presence of urban biodiversity, and the conditions of shared spaces. Through experimentation, cross-sector dialogue, and community involvement, urban authorities can make the concept mature and practical.

The work of the One Health 4 Cities partnership demonstrates that European cities are ready to take this leap. By sharing methods, tools, and lessons from a wide variety of contexts, this network has shown that there is no universal pathway but there is a shared ambition: to build cities that protect and enhance the health of all forms of life.

This guidebook is an important step in that direction. It provides a foundation from which we can all continue to build city-led innovation, especially through commitment, experimentation, and sustained collaboration.

As local leaders and practitioners, we have the opportunity and the responsibility to shape this evolving field. By embracing an integrated vision today, we are preparing our cities to better navigate the challenges of tomorrow.

One Health in cities will contribute to healthier, more resilient societies at every level.

Dr. Guillaume Fauvel
Health Director, City of Lyon

INTRODUCTION

ONE HEALTH FOR CITIES – A NEW URBAN IMPERATIVE

In the face of accelerating environmental degradation, biodiversity loss, climate change, rising health inequalities, and the growing burden of non-communicable diseases, cities stand at the frontline of both risk and opportunity. While Europe is increasingly urban, our urban systems often remain siloed, reactive, and anthropocentric, prioritising short-term human gains at the expense of the ecosystems that sustain all life.

Yet, it is precisely in urban settings where meaningful change can take root. Cities are not just victims of global health and ecological crises; they are also uniquely positioned to be catalysts of integrated, equitable, and regenerative solutions. This guidebook supports cities in their journey to integrate One Health in their practices.

One Health is a collaborative, transdisciplinary approach that recognises the fundamental interdependence between the health of humans, animals, plants, and the environment. While traditionally applied in rural or global contexts to manage zoonotic diseases and food security, One Health in urban contexts brings a powerful systems-thinking lens to local governance, planning, and development.

Cities hold the power to influence many of the urban determinants of One Health and have an impact on health directly. They also possess the institutional mechanisms and stakeholder proximity needed to coordinate across sectors, including public health, veterinary services, urban planning, climate policy, and environmental protection.

Large metropolitan areas face increasingly complex health–environment dynamics, while smaller cities, often closer to natural systems, may have better conditions for integrated action but fewer resources or governance structures to activate them. Regardless of size, every city can become a healthier city when it becomes conscious of these interdependencies and acts to strengthen them.

Adopting One Health at the city level provides an actionable, preventive, and strategic framework. One Health enables municipalities to align human well-being with ecosystems' health, reducing long-term risks and improving quality of life for all beings. The approach also reinforces cities' roles in achieving national and global commitments related to climate resilience, sustainable development, biodiversity protection, and health equity.

OUR VISION FOR ONE HEALTH FOR CITIES:

- Recognises that the health of humans, animals, plants, and the environment is closely linked and interdependent.
- Emphasises non-anthropocentric values, serving not only humans but all living beings and ecological systems with equity and justice.
- Offers a shared language and framework across traditionally fragmented departments and promotes policy coherence, resilience, and participatory governance.
- Enables cities to move from reactive to regenerative systems, co-creating urban spaces that promote health, inclusivity, and sustainability.

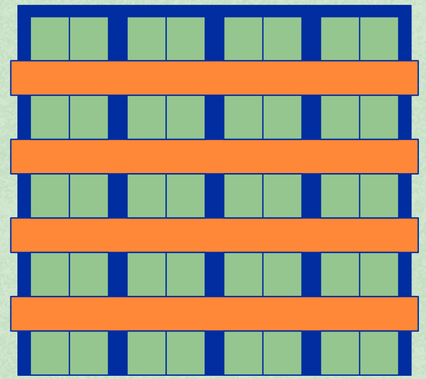
PURPOSE OF THIS GUIDEBOOK

The Essential Guidebook for City Makers is a practical tool designed to help urban leaders, planners, and stakeholders integrate One Health approaches into their practices. The guidebook is packed with tips, tools, and case studies to guide you.

We have built this guide on real-world experience and the collective knowledge of the nine diverse European Cities from the One Health 4 Cities network, all exploring One Health in their own local context. You will not find one-size-fits-all solutions here; instead, it offers a flexible framework to spark adaptation, innovation, and collaboration.

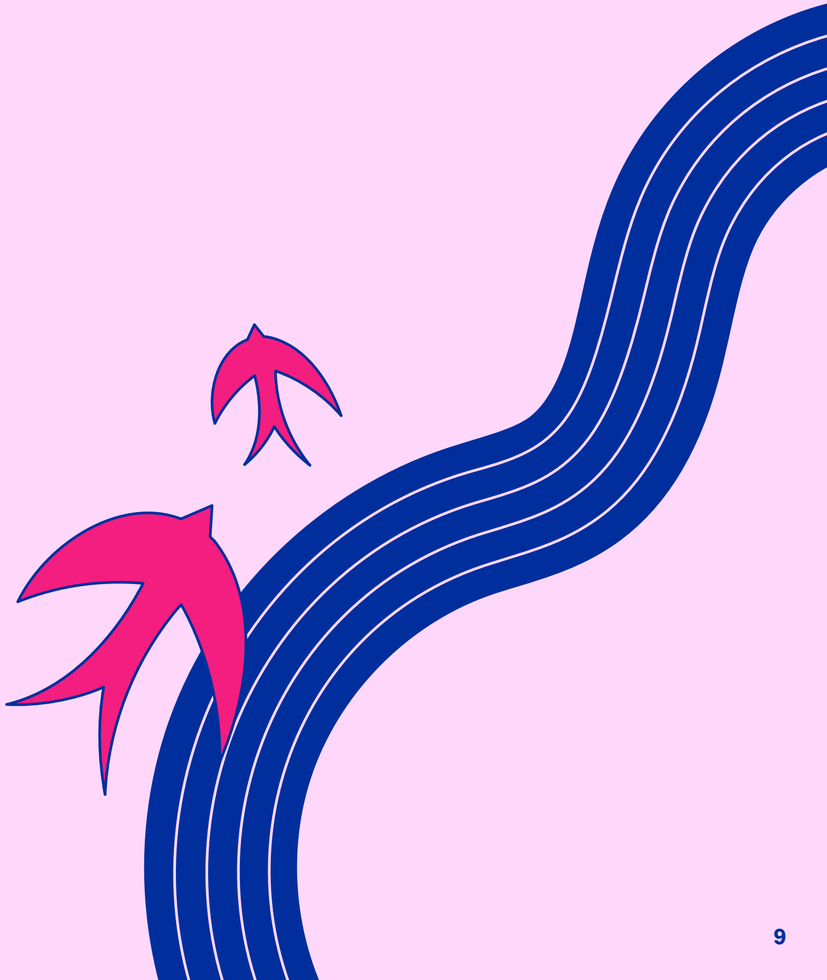
We firmly believe cities are not behind the curve or too limited to act. In fact, they are the best-placed level of governance to implement successful measures that One Health requires. Since One Health is still evolving, there are many ways to deliver it; your approach should be adapted to fit your city's unique context. This guidebook aims to inspire you and help you start your One Health journey.

> *"One Health is not a fixed end goal, but an ever-evolving process of continuous understanding of the interconnectedness and improvement of co-existence of humans, animals, plants and the environment in cities"*
>
> **– Sofia Aivalioti, Lead Expert One Health 4 Cities**



SECTION 1: DEVELOPING ONE HEALTH-INTEGRATED STRATEGIES

AUTHORS: S. Aivalioti, M. Dussauge, Dr. G. Fauvel, D. Sepulveda, M. Chenevas-Paule, P. Sieppi, Dr. M. Dellenbaugh-Losse, Dr. E. Rönkkö, Dr. S. Morand, M. Macauley



INTRODUCTION

WHY DEVELOP A ONE HEALTH-INTEGRATED STRATEGY IN CITIES?

A One Health-integrated strategy can ensure that, through city programmes and projects, the health of all beings and environments will be a priority and seen as a united interactive ecosystem.

Developing a One Health-integrated strategy in cities is a complex but essential task. It requires **cross-sectoral collaboration, shared understanding among departments, clear communication, and coordinated planning and budgeting**. Successful implementation depends on aligning actions and resources across diverse topics, often managed by different deputy mayors or municipal departments, and integrating efforts early through city council planning, discussion, and approval processes.

Despite the complexity, the benefits are significant. Cities that effectively design and implement One Health-integrated strategies can generate lasting improvements in the health of people, animals, plants, and ecosystems. These strategies not only **deliver direct health and environmental benefits** but also **enhance city governance, promoting resource efficiency, strengthening interdepartmental cooperation, and fostering a more cohesive urban vision**.

A well-crafted One Health-integrated strategy provides a strong foundation for guiding policies, coordinating actions, and mobilising funding. Ultimately, it supports **long-term municipal commitment to building inclusive, resilient, and thriving urban environments** where all forms of life can co-exist in balance now and in the future.

BEFORE EMBARKING ON DEVELOPING A ONE HEALTH-INTEGRATED STRATEGY

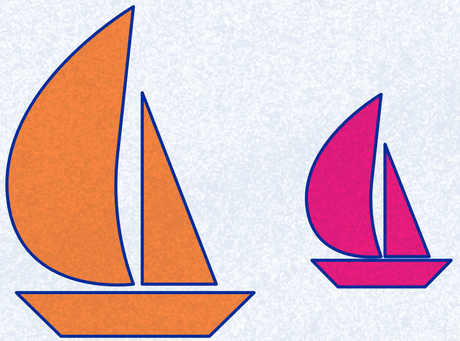
Strong **political commitment and leadership** are essential for success. City leaders and their involved teams must co-define a clear One Health vision that serves as a guiding principle for strategy development, actions, and projects, and provide a clear mandate to the administration to establish a One Health partnership and actions. This commitment is also crucial for securing the necessary human and financial resources and providing the structure to build and sustain a One Health-integrated strategy.

In the absence of political support, a **bottom-up approach** can begin by using the One Health collaborative framework and empower mid-level managers and technical staff within city administrations to form cross-departmental working groups focused on city priorities such as climate change adaptation, sanitation, urban planning, biodiversity, etc. By piloting integrated projects and demonstrating their impact, these internal champions can build strong cases for broader institutional support and eventual leadership buy-in.

Cities can integrate One Health into their strategies in three ways:

- Cross-cutting approach:
  Embed One Health principles into existing strategies such as public health,climate adaptation, or urban planning.
- Targeted approach: Develop a strategy focused on specific challenges, such as zoonotic disease prevention or biodiversity restoration.
- Comprehensive city-wide approach: Make human, animal, plant, and environmental health central to the city strategy, thus to all projects and policies.

The steps below are designed for developing a city-wide approach; however, they can be adapted for different scopes and scales.



KEY STEPS AND ONE HEALTH PRACTICAL TIPS

In this section, we provide **experience-based** guidance on how to develop a One Health-integrated strategy. We drew experience from the One Health 4 Cities Network and identified four essential steps and One Health tips for developing a One Health-integrated strategy:

- **Build One Health Competence and Shared Understanding**
- **Establish a Strategic One Health Partnership**
- **Conduct a One Health Diagnosis**
- **Co-Design the One Health Operational and Evaluation Framework**

STEP 1: BUILD ONE HEALTH COMPETENCE AND SHARED UNDERSTANDING

Developing a robust One Health-integrated strategy begins with ensuring that all stakeholders share a **common understanding** of its principles and significance. One Health is an interdisciplinary approach that recognises the interdependence of human, animal, plant, and environmental health. However, achieving this shared understanding requires dedicated efforts **to bridge knowledge gaps, align perspectives, and foster collaboration** across various sectors and city departments.

— ONE HEALTH TIPS

— MAP KNOWLEDGE, RESOURCES, AND DECISION-MAKING POWER

- **Map existing One Health capacity**—knowledge, expertise, and programs. Do not start from scratch; **many city departments already address these topics, usually in silos**. Existing knowledge can exist in forms of strategies, reports, public health, animal health and environmental databases, staff experience, and it can be collected through research, across the departments, with direct discussions, a survey and interviews with the city staff and key stakeholders involved in relevant projects and programmes.
- **Identify who holds decision-making power on health and related issues**, both **within and outside city structures**, to ensure effective coordination among all relevant stakeholders (including regional and national governments, public health organisations, environmental and wildlife protection and management organisations, animal health organisations and others).

— ONE HEALTH TIPS

— DEVELOP SHARED UNDERSTANDING AND BUILD COMPETENCE

- **Identify** within the team or hire **a One Health coordinator** who will ensure the coordination of key activities, the inclusion of all aspects of One Health in the strategy and the development of a One Health culture in the team. The One Health coordinator should receive training and keep up with One Health advancements and research to guide the strategy development.
- **Build the competence of the team on One Health** principles, based on the knowledge mapping, ensuring they understand the full scope of the approach and establish clear communication channels among them to facilitate communication and integration.
- Establish **continuous training** through expert discussions, workshops and conferences across different disciplines and their intersections.

TOOLBOX

TOOLS FOR KNOWLEDGE MAPPING

- One Health Knowledge Audit
- One Health Stakeholder Map

TOOLS TO DEVELOP SHARED UNDERSTANDING ON ONE HEALTH

- One Health Governance Canvas
- One Health Role Play

STEP 2: ESTABLISH A STRATEGIC ONE HEALTH PARTNERSHIP

Collaboration is the cornerstone of a successful One Health-integrated strategy. Given the complex and interconnected nature of One Health, **no single institution, sector, or expert can address all its dimensions alone**. Establishing a strong, multidisciplinary partnership ensures that expertise from various fields is brought together to co-design, implement, and sustain the strategy.

— ONE HEALTH TIPS

— ORGANISE A MULTIDISCIPLINARY, CROSS-SECTORAL AND INCLUSIVE PARTNERSHIP

- Assemble a **multidisciplinary, cross-departmental, and cross-sectoral team** that includes practitioners, researchers, policymakers, and key representatives from both the public and private sectors, as well as civil society. Involve stakeholders across different levels of governance and implementation to promote inclusive and coordinated action.
- Bring together expertise from public health, clinical medicine (e.g., medical doctors), epidemiology, veterinary medicine, environmental science, ecology, urban planning, human sciences, sociology, gender equity, and community engagement. **This diversity of knowledge ensures a comprehensive understanding of interconnected health** challenges and more effective One Health solutions.
- **Incorporate the creative and cultural sectors** to encourage innovative thinking and develop engaging, innovative approaches – we need out-of-the-box thinking.

— ONE HEALTH TIPS

- Consider the different needs of different groups of stakeholders and **employ an equitable approach** to ensure similar levels of access (not a one-size-fits-all).

— EFFICIENT COOPERATION AND COORDINATION

- Strengthen **cooperation among city departments** - no single department can fully implement One Health alone.
- Coordinate efforts to **secure and share resources across departments and stakeholders**, maximising efficiency and ensuring the strategy's development and implementation are adequately supported.
- Promote collaboration and leverage shared resources to empower all stakeholders and ensure **collective accountability** in the development and implementation of the strategy.

TOOLBOX

TOOLS TO MAP STAKEHOLDERS

- One Health Stakeholder Map

TOOLS TO CO-DEVELOP A SHARED VISION AND ACTIONS

- Action Ideas for One Health

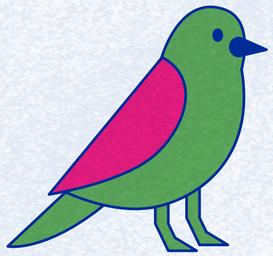
You can use all the tools from step 1 to develop a shared understanding and culture with the partnership!

"Stakeholders come from diverse backgrounds with varying levels of training, knowledge, and needs. They may not share a unified vision or, more critically, a common understanding and language of One Health principles."

– Marlène Dussauge, City of Lyon

STEP 3: CONDUCT A ONE HEALTH DIAGNOSIS

A comprehensive One Health diagnosis is crucial for understanding the current state of human, animal, plant and environmental health in and around the city, as well as identifying gaps, challenges and the state of interactions. This step involves analysing existing data (mapped in Step 1) and **evaluating the city's strengths and weaknesses concerning One Health principles**, ensuring that the diagnosis is evidence-based and reflects the needs of all living beings and environnment. A combined qualitative and quantitative assessment will help tailor the strategy to the city's unique context and needs, while also providing a foundation for setting measurable objectives and indicators to guide implementation and monitoring.



— ONE HEALTH TIPS

— BALANCE INFORMATION ACROSS ALL HEALTH DOMAINS AND THEIR INTERCONNECTEDNESS

- There is already so much evidence and data on the main One Health local challenges and elements (e.g. climate change, biodiversity loss, pollution, epidemiology, etc.). **Collate existing data** and knowledge to develop the diagnosis.
- Ensure that **data from human, animal, plant and environmental health are equally represented and integrated**. Avoid focusing too heavily on one domain at the expense of others, as this can lead to incomplete or fragmented strategies. Seek to uncover knowledge gaps and overlooked areas critical to One Health.
- **Identify the interconnectedness of all living beings and their environments**, analyse behaviours and uses of humans, animals and plants, their interactions and the health and disease patterns of their co-existence.

— ONE HEALTH TIPS

— IDENTIFY AND ADDRESS DATA GAPS

- **Identify areas where data is lacking, incomplete, or inaccessible**. Consider if and how gaps can be filled through new data collection efforts, partnerships, or by improving data-sharing mechanisms across sectors.
- Municipalities with limited internal data capacity should **develop synergies with local universities, external experts or international organisations** to fill in data gaps and establish new data collection and data repositories activities on all aspects of One Health.
- On human health, **pay attention to which demographic categories are included** in this data, as health effects will vary among genders, different socio-economic and age groups. Ideally, your data is disaggregated by these categories to be able to develop a nuanced and tailored **approach that does not amplify inequality**. Consider also qualitative data sources such as focus groups and stakeholder engagement as a source of important information to supplement quantitative data.

— IDENTIFY AND ADDRESS ONE HEALTH BLIND SPOTS AND BIASES

- **One Health is more than zoonotic diseases**, especially in cities—**balance urgent issues** like pandemics with long-term threats such as antimicrobial resistance and endocrine disruptors.
- **Recognise non-communicable diseases, mental health issues as consequences of** environmental degradation, not just individual behaviours.
- Recognise that **One Health issues affect different groups (gender, age, ability) differently**, solutions will have to be nuanced to be effective. Ensure your approaches address diverse populations in tailored ways.
- The same applies to animals and plants, **consider most species** (endangered, indicator species, domesticated and wildlife) to ensure a holistic and inclusive One Health approach.

TOOLBOX

TOOLS TO SUPPORT THE ONE HEALTH DIAGNOSIS

- One Health For Cities Score Tool

STEP 4: CO-DESIGN THE ONE HEALTH OPERATIONAL FRAMEWORK

For a One Health-integrated strategy to be effective and sustainable, it must be built on a well-structured operational framework that ensures **clear objectives, accountability, and long-term adaptability**. This framework should outline specific actions, define roles and responsibilities, establish resource allocation mechanisms, and set up monitoring and evaluation processes (check section 3 on monitoring) to track progress and impact over time.

A strong evaluation component is particularly critical, as One Health is an evolving and interdisciplinary field. **Continuous assessment and learning** will allow cities to refine their approach, integrate new scientific insights, and respond to emerging health challenges. Additionally, fostering transparent communication and stakeholder engagement ensures that the strategy remains inclusive, relevant, and aligned with local, national, and international priorities.

— ONE HEALTH TIPS

— ESTABLISH AN ADAPTIVE AND INCLUSIVE OPERATIONAL FRAMEWORK

- **One Health is an evolving topic and field**, and **continuous monitoring and evaluation mechanisms** are crucial for assessing the strategy's progress and effectiveness as well as incorporating emerging needs. It is key as well for constant learning on a newly applied topic in urban settings that requires learning, reporting and sharing.
- **Recognising the local context** when developing the strategy. Mention how to tailor the One Health approach to the specific needs and challenges of diverse communities within a city, considering things like socio-economic conditions, cultural attitudes, and local health challenges and develop ways to establish bilateral communication.

— ONE HEALTH TIPS

— ENSURE A TRUE ONE HEALTH APPROACH

- **Adopt a non-anthropocentric approach** that recognises human, animal, plant, and environmental health as equally important and intrinsically interconnected.
- Integrate these dimensions holistically to **avoid fragmented or siloed solutions**, and ensure both human and non-human actors are treated equitably in decision-making and implementation.

— ALIGN WITH CITY, NATIONAL, AND EU ACTION

- Ensure that the **One Health-integrated strategy complements existing frameworks, policies and legislation**, fostering synergies and compliance with broader public health, environmental, and sustainable development goals at city, regional, national and EU levels.
- **Attract political support and international cooperation** to pursue continuous learning, advancements, and strengthen the city's position in addressing global health challenges.

TOOLBOX

TOOLS TO DEVELOP THE ONE HEALTH-INTEGRATED STRATEGY

- One Health Governance Canvas
- One Health For Cities Score Tool
- Action Ideas for One Health
- The Wheel of One Health Challenges

“You do not need to know or have this all in the very beginning. More important is to start working towards One Health targets with your colleagues and stakeholders and make it better in the long run.”

– Päivi Sieppi, City of Lahti

CASE STUDY

THE NATURE’S STEP TO HEALTH, CITY OF LAHTI

The city of Lahti has been a great example of transitioning from an industrial city to a greener and healthier city. Back in the 1970s the city's lake, Vesijärvi, was heavily polluted by all surrounding industries and the discharging of wastewater. The lake's restoration brought great environmental expertise to the city and the transformation began. The cleaning of the lake lasted for many years and in the 1990s some positive results started to show already. Since then, the city has been active on various fronts, combating climate change, mobility, waste management, and the circular economy. All this work paid off, with Lahti becoming the European Green Capital in 2021. Today the citizens and visitors of Lahti can enjoy a cleaner, healthier lake and surroundings.

In 2022, the City of Lahti, Well-being Services County of Päijät-Häme, and the Lahti University Campus launched the "Nature Step to Health" strategy, a decade-long initiative aimed at addressing urban environmental and public health challenges.

The program brings together public authorities, educational and research institutions, local communities, and businesses to develop innovative solutions for preventing non-communicable diseases (NCDs), promoting well-being, and combating biodiversity loss and climate change.

Led by the Well-being Services County of Päijät-Häme, a joint authority overseeing health, social, and rescue services, the strategy benefits from a robust intersectoral and interdisciplinary approach. Scientific contributions from the University of Helsinki and Lappeenranta-Lahti University of Technology enhance the program's design, provide effective monitoring through key performance indicators (KPIs), and support the dissemination of science-based knowledge.

The Nature Step to Health has five aims (vertical) and four objectives (horizontal) that promote both health and environmental goals.

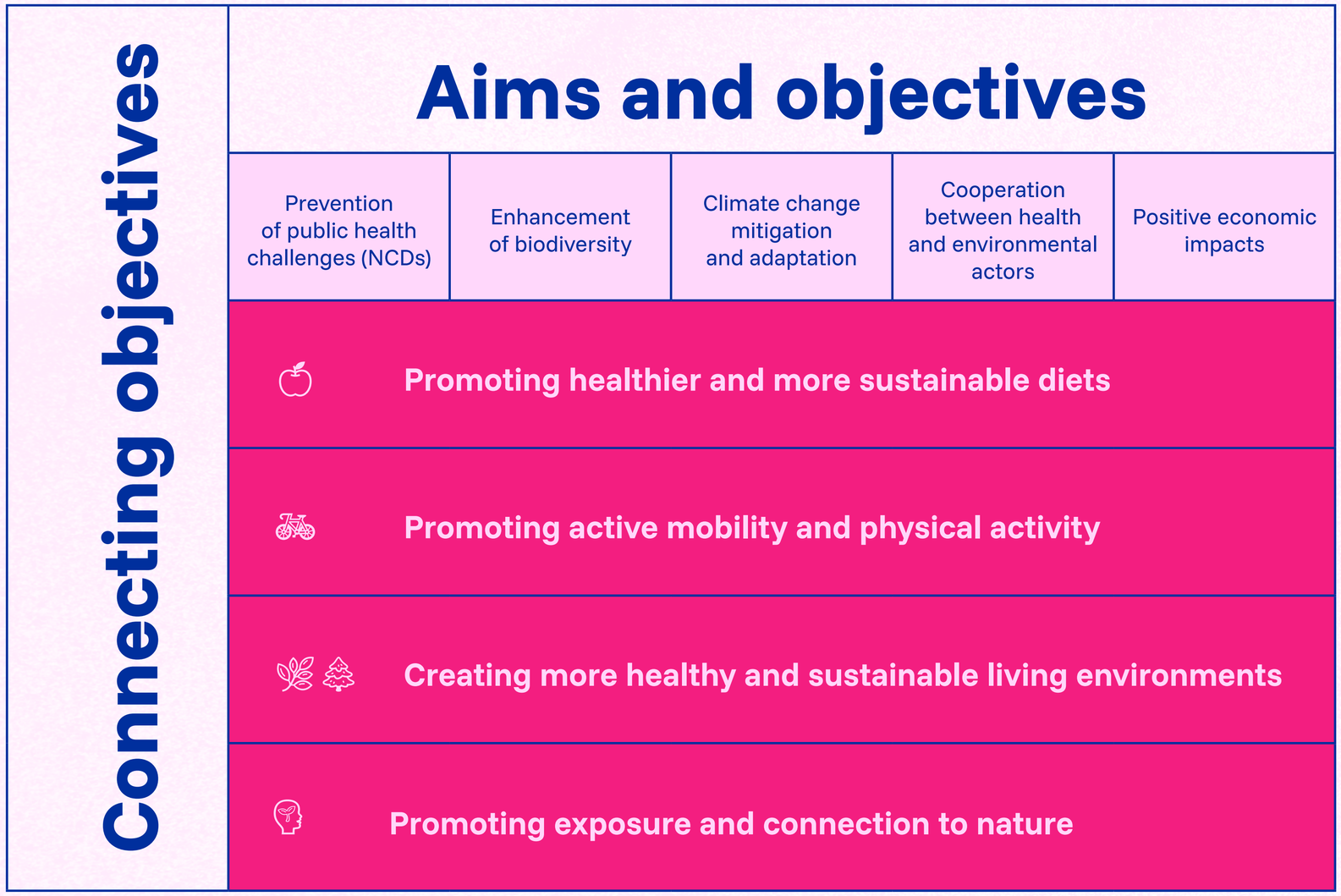
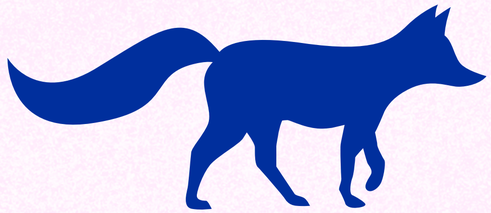


Figure 1: Nature Step to Health Strategy Overview

The Nature Step to Health is already seeing progress with various multidisciplinary projects in progress across the various objectives. For example, there are projects to promote active mobility and sustainable nutrition. Connection to nature is promoted in many national and international projects, ranging from experiments with microbial diversity to supporting well-being by green structures or natural surroundings. The City of Lahti aims to achieve nature positivity by 2030. In this context, a project is underway to plan actions and develop a roadmap.

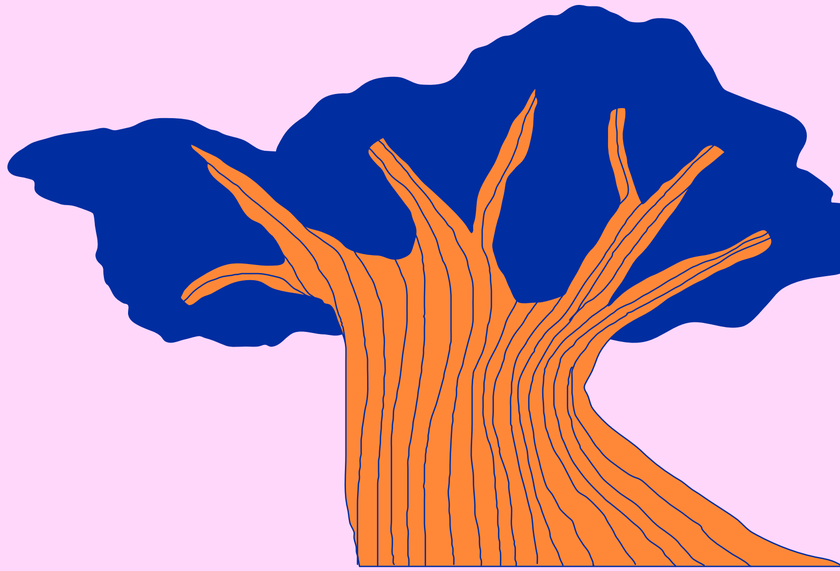


Nature step to health strategy (Link)

SUCCESS FACTORS OF THE NATURE STEP TO HEALTH STRATEGY

- **A clear governance framework,** including weekly core team meetings and regular sessions with the steering and expert boards.
- **Strong political commitment** supported by the city's international recognition as the European Green Capital in 2021.
- **A multidisciplinary partnership** enabling effective coordination and implementation of the strategy.
- **Consistent engagement** that fosters active communication, breaks down siloed thinking and ensures coherence across program activities while aligning them with other local initiatives.
- **Defined KPIs and regular evaluations** to be conducted every 2-4 years to ensure accountability, adaptability, and sustained impact.

SECTION 2: DESIGNING GOVERNANCE MODELS FOR MULTI-STAKEHOLDER COLLABORATION



AUTHORS: S. Aivalioti, M. Dussauge, Dr. G. Fauvel, D. Sepulveda, Dr. M. Dellenbaugh-Losse, M. Macauley, E. Seys, Dr. E. Rönkkö

INTRODUCTION

WHY STRONG GOVERNANCE MATTERS FOR ONE HEALTH

Successfully developing and implementing One Health in cities depends on **strong and transparent governance that fosters inclusive engagement** across public, private, and civil society sectors.
To fully realise the One Health approach, it is key to **connect knowledge-holders** (scientists, practitioners, and communities) with decision-makers. This **connection ensures a holistic, 360-degree view of the interlinked health** of environnement, animals, plants, and humans.

Urban governance must **evolve beyond siloed structures**, embracing collaborative, multi-actor, and multi-level frameworks that can respond to the complex health challenges arising at the human–animal–plant–environment interface.

The essence of One Health governance lies in the four Cs: communication, collaboration, coordination, and capacity building, all working together to unite stakeholders around shared goals.

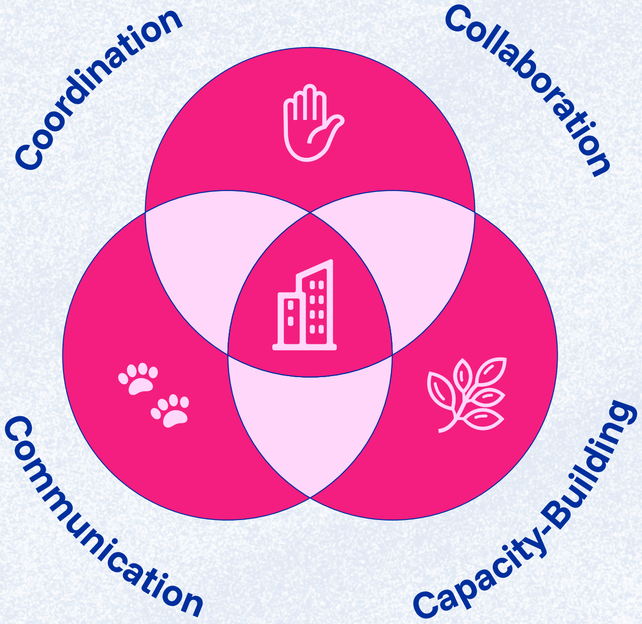


Figure 2: The four Cs of the One Health approach

WHAT IS ONE HEALTH GOVERNANCE IN CITIES?

One Health governance refers to the **structures and processes through which decisions are made, implemented, and monitored** across sectors. It encompasses the interactions among public health, urban planning, environmental management, and animal welfare within city departments, technical and political teams, and non-governmental stakeholders, including civil society, academia, businesses, and citizens.

GOVERNANCE MODELS AND ONE HEALTH PRACTICAL TIPS

Identifying and shaping a workable governance model for a city strategy, policy, or project is key to implementing One Health. Most cities adapt from what already exists, which typically includes legal mandates, institutional maturity, budget authority, and political leadership, and then iterate as capacity grows. The **ideal model is determined by various factors**: the level of One Health integration (policy, programme, project, etc.), the city's institutional capacity and size, the expertise and resources within municipal departments, and the robustness of external expert and stakeholder networks.

One Health is a cross-cutting, interdisciplinary, and holistic topic, meaning its **ownership may not be restricted to a single department**. Effective and successful implementation requires a variety of perspectives and can be managed in various ways.

The departments necessary for this interdisciplinary approach may not immediately recognise their role in the process.

This section presents experience-based guidance on three different governance models observed among the One Health 4 Cities partners. Each model has unique strengths and weaknesses. Cities can choose to utilise, combine, or modify these models to best fit their specific context.

- **Single Department-Led Model**
- **Cross-Departmental Collaborative Model**
- **External Stakeholder Partnership Model**

SINGLE DEPARTMENT-LED MODEL

In a Single Department-Led Model, **a single municipal department**, such as Public Health, Environment, or Urban Planning, formally **takes on the primary role** of coordinating and driving One Health initiatives. This department typically houses a One Health focal point or a small, dedicated unit. The mechanisms for coordination heavily rely on **inter-departmental working groups**, formal and informal requests for input from other departments, and the issuance of internal policy directives.

The strengths of this approach include **clear accountability** for One Health efforts, potentially **faster decision-making** within the lead department due to its concentrated authority, and the **effective leverage** of the lead department's existing expertise.

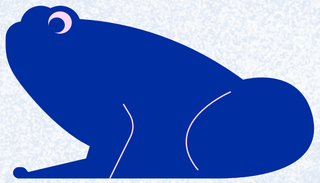
However, this model has limitations, including a significant **risk of fostering siloed thinking** where other departments may not fully integrate One Health into their core operations. **Over-reliance on a single department** creates a vulnerability (loss of personnel, changes in departmental priorities, etc.). There's also often **limited authority** over other departments' budgets and priorities (including political), which can lead to insufficient buy-in or resource allocation from non-lead departments. This model should involve external stakeholders for expert input in decision-making.

CROSS-DEPARTMENTAL COLLABORATIVE MODEL

The Cross-Departmental Collaborative Model involves sharing the coordination and leadership of One Health **responsibility among two or more municipal departments.** These typically include departments like Health and Well-being, Environment, Urban Planning, or Animal Welfare. This model is formalised through mechanisms such as a **cross-departmental steering group or a task force**, which establishes continuous collaboration and **shared decision-making.** It also involves shared strategic planning across departments and joint reporting lines. For specific projects, departments might co-chair initiatives and even share budget lines.

The strengths of this model are its ability to encourage **holistic problem-solving by bringing diverse perspectives, expertise, and networks**, fostering a sense of **shared ownership** across departments, **improving overall resource coordination and allocation**, optimising investments, and increasing impact.

Despite these benefits, **challenges exist**, including the **need for strong facilitation** to manage multiple departmental interests and responsibilities, **robust mechanisms for conflict resolution,** and **sustained high-level political commitment** to overcome departmental challenges such as competing priorities and timelines. Cross-departmental steering groups are often the first casualties of budget cuts; they must, therefore, maintain a strong communication plan that clearly demonstrates their value. This model should also involve external stakeholders for expert input in decision-making.



EXTERNAL STAKEHOLDER PARTNERSHIP MODEL

In the External Stakeholder Partnership Model, while the city maintains its ultimate governance authority (by one or more departments), the planning and implementation of One Health initiatives are significantly shaped by, and frequently **co-executed with, external stakeholders**. This model is formalised through various mechanisms, including the establishment of **formal advisory boards, joint working groups, public-private partnerships, research collaborations** with universities, and memoranda of understanding with civil society organisations.

The strengths of this approach include **access to diverse expertise** from outside the municipal structure, additional resources, **increased community legitimacy and trust** in One Health initiatives, and the **fostering of innovation** through new perspectives.

However, challenges include **managing diverse interests** among various partners, **ensuring accountability of external partners**, navigating **differing organisational cultures, vocabulary, and speeds**, and clearly defining roles and responsibilities to avoid overlaps or gaps. Similar to the Cross-Departmental Collaborative Model, it requires **strong facilitation** to align expectations, interests, and involvement levels across the various actors. This model should **not limit external input** from the leading organisations but involve all additional external stakeholders for expert input in decision-making.

"One Health governance must reflect the complexity of health interconnections in cities; it is not about creating a new silo, but transforming how we work together."

– Dr. Guillaume Fauvel, City of Lyon

— ONE HEALTH TIPS ON GOVERNANCE

— ALIGN WITH EXISTING FRAMEWORKS

- Identify relevant **city, regional, national, and EU policies** that support or regulate One Health principles. **Identify how these frameworks involve cities**. Clarify how projects and teams operate within these frameworks to ensure **coherence, compliance, and legitimacy**.
- Integrate One Health working groups into **existing city structures** while avoiding siloed approaches, to ensure One Health is smoothly integrated into the current work.
- Show how the One Health approach **facilitates the execution of current strategies and programmes** (European biodiversity strategy, local greening or mobility plans, etc.), preventing it from being perceived as an additional burden or requirement.

— BUILD CLEAR AND INCLUSIVE GOVERNANCE STRUCTURES

- As One Health requires, by its nature, the involvement of multiple stakeholders, not used to working together, establish **transparent agreements** on roles, responsibilities, accountability, and conflict-resolution mechanisms. Ensure **inclusive decision-making**, where all relevant departments and stakeholders have a voice.
- Involve **political leaders from more than one political party** to strengthen cross-sectoral support and prevent the initiative's success from depending on a single champion.

— MANAGE RESOURCES FAIRLY AND STRATEGICALLY

- Identify who holds **budgets, expertise, and mandates** to implement relevant projects, and **define clear impacts on all those co-funding solutions.**
- One Health efforts often face financial constraints. Promote **cost-sharing and co-funding mechanisms** across departments and external public and private stakeholders to overcome financial limitations.
- Secure **financial support for coordination roles** (e.g., facilitators and coordinators) to ensure continuity and ownership.
- Ensure that **data from all relevant sectors** are available and used equitably. Avoid allowing any single sector to dominate the analysis, and **refrain from interpreting results through an overly anthropocentric lens.**
- Define clear protocols for how **data is collected, shared, analysed, and used across sectors**. These protocols must safeguard **data privacy and uphold ethical standards** while enabling evidence-based decision-making.

— MONITOR, EVALUATE, AND SUSTAIN THE EFFORTS

- Set up **robust monitoring and evaluation systems** to track progress, outcomes, and impact of governance structures. These frameworks should enable adaptive management, foster accountability, and inform ongoing improvements in governance.
- Design governance mechanisms that support **long-term coordination and engagement** beyond project and political cycles. Plan for **long-term sustainability,** including capacity building, stable funding, and the creation of **permanent One Health working groups or councils.**

— ONE HEALTH TIPS ON MULTI-STAKEHOLDER ENGAGEMENT

— INCLUDE DIVERSE EXPERTISE AND VOICES

- **Identify and involve all key stakeholders**. Engage government agencies, academic institutions, utilities, health professionals, environmental NGOs, private sector leaders, and citizen groups.
- Beyond scientists, **include professionals from culture, education, legal, and ecological transition fields**, for example, museum staff, teachers, legal advisers, or project managers. Their perspectives enrich the process and connect it to daily city life.
- **Value all voices equally, from technical experts to citizens and end users**. Equal participation builds trust and shared ownership, and all must be seen as equal contributors to One Health.
- **Ensure gender balance, youth representation, and inclusion of marginalised voices, and groups that have no voices** (animals, plants, environnement).

— BUILD A SHARED UNDERSTANDING ON ONE HEALTH

- Do not expect shared understanding to happen in one meeting. **Building One Health competence is a long-term, collective learning process**. Grow together as a team by defining priorities and co-developing projects over time
- Use One Health as a **connector between departments (ecology, public health, planning, etc.)**. Their involvement and priorities come in **equal terms for human and non-human concerns** under the One Health approach.
- **Focus on shared goals and impact**, rather than spending excessive time aligning on professional language and concepts, e.g., One Health versus Planetary Health or Global Health, etc.
- A communication plan is needed to **narrate the impact story** (storytelling), **justifying expenditure** on this cross-cutting topic, **which may be perceived as 'extra'**. This plan should be tailored to the diverse stakeholders and actors.
- **Embrace the complexity of One Health**, which reflects the complexity of urban environments, and organise **collaborative problem-solving sessions** that encourage creativity and respond to this complexity.

— CREATE CITYWIDE ENGAGEMENT MOMENTS AND SHARED LEARNING

- **Cultivate internal champions**; ensure multiple team members grasp and advocate for the One Health concept to foster broader departmental support.
- Ensure **regular updates** are provided **to all city directors and senior officials** to bolster their commitment to the One Health approach.
- **Establish continuous training, co-learning opportunities, and educational programmes** for both municipal staff and external partners. This can be achieved through various methods such as mini-conferences, peer-learning workshops, and collaborative games, all aimed at deepening understanding. Foster a culture where teams are encouraged to learn from mistakes, share insights, and continuously explore and adopt new methods.
- **Use participatory and integrated approaches such as the URBACT methodology**, which supports facilitators with engagement and strategic tools (see the URBACT Toolbox for resources).
- **Draw on examples and successful case studies** to demonstrate what other cities have accomplished, serving as inspiration for local teams ("if they can do it, so can we").

TOOLBOX

TOOLS FOR GOVERNANCE

- One Health Governance Canvas

TOOLS FOR MULTI-STAKEHOLDER ENGAGEMENT

- One Health Role Play
- One Health Stakeholder Map
- One Health Quiz
- One Health Video
- Obervation Grid - Explore Life in Schoolyards

CASE STUDY

THE LOCAL HEALTH STRATEGY GOVERNANCE IN THE CITY OF LYON

THE ORIGIN OF THE MULTI-STAKEHOLDER GOVERNANCE

The governance system of the Local Health Strategy (CLS) was strongly influenced by the experience of managing the COVID-19 crisis. During the pandemic, it became clear that many health and non-health actors were not accustomed to working together, despite their complementary roles.

One of the City of Lyon's key strengths was its ability to create networks and meeting spaces, fostering collaboration across sectors. The crisis also underlined the importance of integrating both citizen and scientific perspectives. In Lyon, a Citizens' Advisory Council was created during the crisis, but a scientific perspective was missing. This highlighted the need for a governance model that would be both participatory and evidence-based.

THE VALUES OF THE MULTI-STAKEHOLDER GOVERNANCE

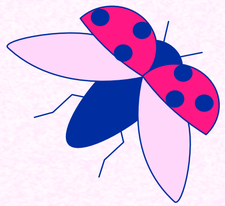
The CLS governance was designed to embody partnership and shared responsibility. The aim was not only to mobilise a wide range of stakeholders but also to make them co-responsible for implementation. This philosophy is based on a few principles:

- Each strategic axis is co-led by the City of Lyon and a signatory partner. This model encourages commitment and ensures shared responsibility.
- Partners use their own networks to involve additional stakeholders, thereby enriching the collective effort.
- The governance structure encourages the pooling of professional, citizen, and scientific expertise.
- Actions are followed up with limited formalism, allowing for adaptation and innovation.

The CLS is signed by 50 local stakeholders and supported by 4 advisory members. Building on the lessons of the COVID crisis, the City also created a Scientific Council, the first of its kind in France, to provide independent, multidisciplinary expertise to decision-makers.

PRESENTATION OF THE GOVERNANCE SYSTEM

The governance of the CLS is designed to combine strategic decision-making, operational follow-up, and independent expertise. It relies on 3 complementary bodies that ensure both inclusiveness and efficiency:



1) The Steering Committee

The Steeering Committee (COPIL) is the central decision-making body of the strategy. Meeting once a year, it brings together all signatories of the CLS and is co-chaired by the Mayor of Lyon and the Director General of the Regional Health Agency.
Two vice-presidents, representing healthcare professionals and user associations, reinforce this shared leadership. To ensure balanced representation, the COPIL is structured into three bodies:

- Institutional actors, such as hospitals and public health agencies
- Associations representing users and citizens
- Representatives from the city's sub-districts

This composition reflects the city's post-COVID ambition to strengthen both citizen participation and territorial representation in health governance.

2) The Technical Committees

Operational responsibility is carried by four Technical Committees (COTECHs), one for each strategic axis of the CLS. Each COTECH monitors around ten actions, which are entrusted to an internal project manager from the City of Lyon, sometimes supported by external partners.

In line with the philosophy of shared responsibility, every COTECH is co-led by the city and a signatory partner. This approach strengthens ownership, mobilises the networks of partner organisations, and ensures that initiatives are both locally relevant and collectively supported. COTECHs are also responsible for showcasing territorial initiatives, giving visibility to partner contributions, and ensuring accountability.

3) The Scientific Council

Finally, the Scientific Council provides an independent, multidisciplinary perspective to support the governance system. Meeting three times a year, it brings together researchers, a representative from France Assos Santé (to represent user expertise), and a general practitioner (to represent field practice).

The Scientific Council operates under its own internal regulations, drafted by its members and validated by the COPIL. Its role is to provide methodological and scientific input, such as in the design of evaluation frameworks. By maintaining independence while remaining closely connected to the governance structure, the Council ensures that decisions are informed by both cutting-edge knowledge and practical realities.

Together, these three bodies ensure that the CLS is both strategically guided, operationally dynamic, and scientifically informed.

SUCCESS FACTORS OF THE LYON'S LOCAL HEALTH STRATEGY GOVERNANCE

- **Shared leadership**, with partners acting as co-pilots of the axes, strengthens commitment and accountability.
- **The strong mobilisation** of a variety of **stakeholders** broadens the reach and enriches the strategy.
- **Minimal formalism** and flexibility allow room for adaptation and innovation.
- **Highlighting partner initiatives**, fostering a sense of ownership, and bringing recognition to partners.
- **The implementation of a Scientific Council** enables reflection on methods and access to high-level expertise to ensure scientific input into the mechanism.

— EXTRA ONE HEALTH TIPS

- **Design governance with attention to reflect the strategy's 'DNA'**: multi-partnership, networking, and innovation.
- Work to **dismantle silos across city departments** to foster integrated solutions; ensure that each department carries its responsibility. For example, the city of Lyon organised a seminar with all department directors to raise awareness of the One Health approach and clarify their direct or indirect involvement.
- Ensure you have a **deep knowledge of the territory** to identify leaders who can mobilise others.
- Dedicate enough resources and staff to **maintain the momentum.**
- **Plan the monitoring and evaluation systems from the outset**, with adequate means.

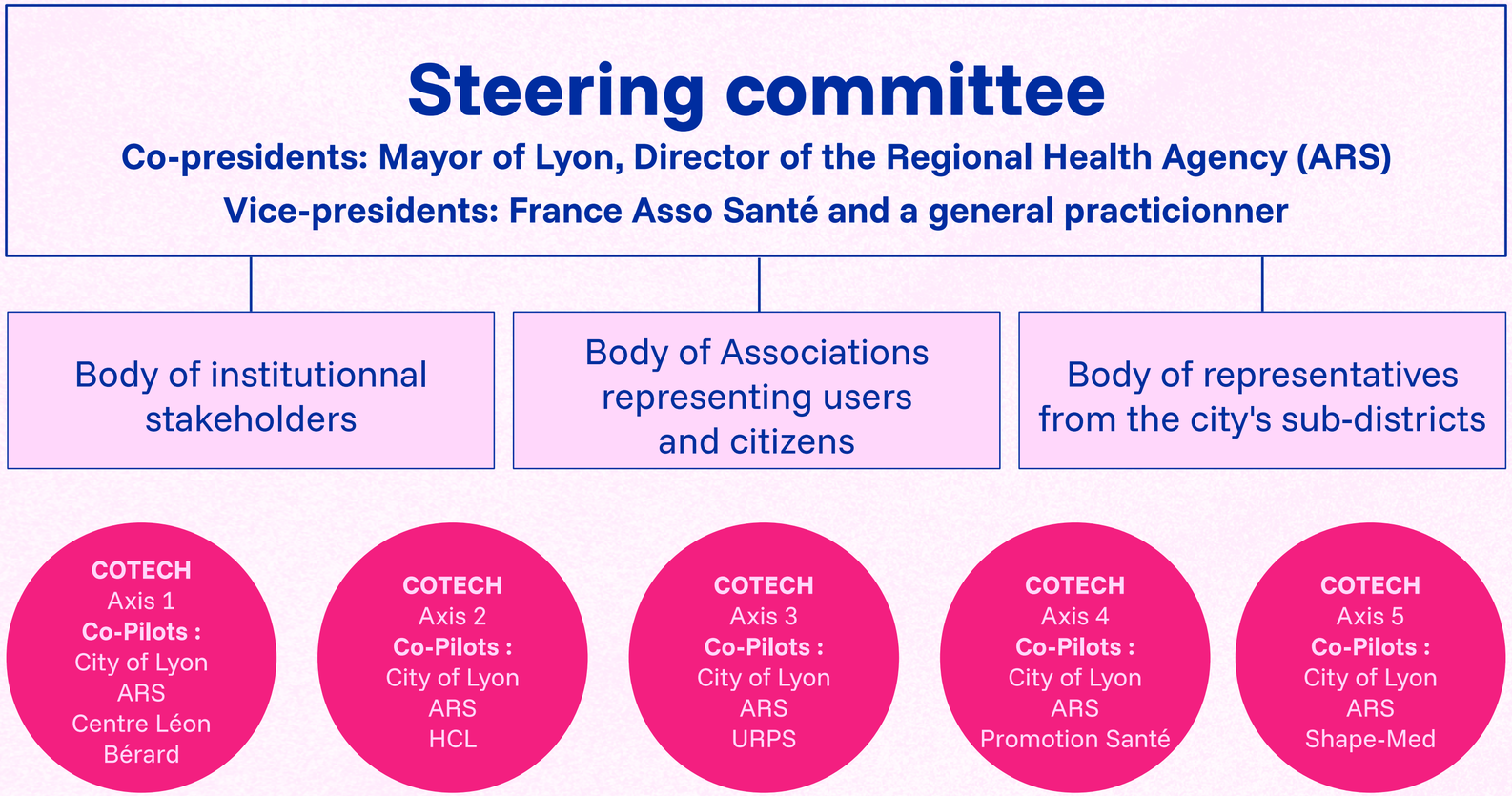
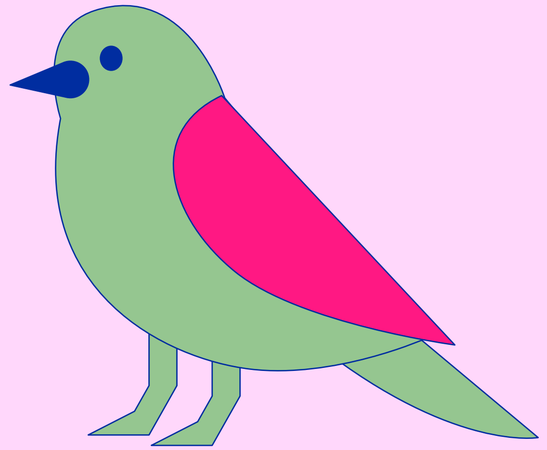


Figure 3: Governance Structure of the Local Health Strategy of the City of Lyon

SECTION 3: HANDLING INFORMATION MANAGEMENT IN ONE HEALTH

AUTHORS: S. Aivalioti, M. Dussauge, G. Fauvel, D. Sepulveda, M. Chenevas-Paule, P. Sieppi, E. Seys, P. Debord



INTRODUCTION

WHY IS INFORMATION MANAGEMENT IMPORTANT IN ONE HEALTH?

Information management in a One Health context involves **collecting, organising, analysing, and sharing high-quality data** on the interactions among humans, animals, plants, and urban ecosystems. In fast-changing cities, it enables **early risk detection, coordinated action, informed planning, and evidence-based policies and interventions**. It also strengthens transparency and accountability by showing whether interventions work and how changes in one domain affect others.

Information management operates at **two complementary levels**. The first focuses on **understanding a territory** by establishing baseline conditions, tracking trends, identifying risks, and interpreting ecosystem dynamics.

This includes data on environmental conditions, climate, biodiversity, and human, animal, and plant health, helping activate early-warning and prevention systems.

The second level focuses on **monitoring and evaluating specific interventions**. Linked to a particular policy or project, it involves selecting indicators, setting baselines, tracking changes, and adjusting actions to improve outcomes. While it covers the full scope of One Health variables, the data collected are specific to the intervention.

These levels combined ensure that One Health approach is comprehensive and evidence-based, serving both a **reactive function** (risk detection) and a **strategic purpose** (intervention evaluation).

TYPES OF MONITORING INDICATORS

Monitoring indicators are grouped into five categories: inputs, processes, outputs, outcomes, and impacts. Together, they ensure that cities can assess both the **quality of implementation and the longer-term effects** of One Health interventions.

While **outcome and impact indicators are particularly valuable** for assessing the transformative potential and One Health impacts of interventions, **input, process, and output indicators** remain essential for **evaluating implementation quality** and methodological soundness, especially in contexts where impact data are still limited. For example, cities might begin by tracking the funding allocated to One Health programmes or the number of awareness campaigns conducted before measuring the impact on animal or human health.

Type of Indicator	Explanation	Example for a One Health project
Input Indicator	Measure the resources invested in implementing activities, including funding, personnel, or infrastructure.	• Amount of budget allocated to the coordination of a local One Health working group. • Number of staff assigned to coordinate a local One Health working group.
Process Indicator	Track whether planned activities are carried out effectively and on schedule. Process indicators can also facilitate the monitoring of the 4 Cs (communication, coordination, collaboration and capacity building).	• Percentage of planned One Health • coordination meetings conducted. • Percentage and diversity of stakeholders remaining engaged throughout the project.
Output Indicator	Capture the immediate, measurable results of implemented activities.	• Number of municipal staff trained in One Health principles. • Total area of new green spaces planted (m^2).
Outcome Indicator	Assess medium-term changes that reflect progress toward strategic objectives.	• Percentage of city departments integrating One Health approaches into their thematic strategies by 2030. • Percentage increase in the ecological quality index of restored habitats (based on vegetation structure, ecological connectivity, and presence of indicator species) by 2030.
Impact Indicator	Reflect long-term, sustained transformations in health, environment, or systems performance.	• Percentage reduction in the prevalence of childhood asthma (specified age group) by 2040. • Percentage increase in the city's house sparrow breeding population (e.g., a 12% rise over five years, from 15,000 to 16,800 breeding pairs).

INFORMATION MANAGEMENT AND ONE HEALTH PRACTICAL TIPS

BROADEN THE SCOPE OF THE INFORMATION MANAGEMENT

THE URBAN DETERMINANTS OF ONE HEALTH

Urban environments shape the health of humans, animals, plants, and ecosystems through a web of interconnected factors. These determinants include housing and habitats' quality, green and blue spaces, food and energy systems, mobility patterns, exposure to pollution, governance structures, social equity, the state of air, water, and soil, etc.

While cities often focus on urban determinants of human health, a One Health perspective requires **expanding the lens** to include how **urban systems influence all living beings and the ecosystems** they depend on.

This means identifying, monitoring, and integrating a broader set of determinants:

- **Urban determinants of animal health**
- **Urban determinants of plant health**
- **Urban determinants of ecosystem health**
- **Urban determinants of the interlinkages of One Health**

By systematically tracking these determinants, cities can better understand how urban environments shape health across all domains.

THE INTERLINKAGES OF ONE HEALTH

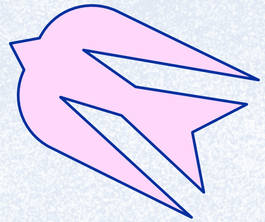
Understanding each domain separately is not enough. **There is no One Health without understanding the interconnections** among human, animal, plant, and environmental health. Effective information management requires analysing how city systems and urban interfaces link these domains together. **Apply a systems thinking approach.**

Interactions occur in places such as parks, rivers, drainage systems, street trees, markets, wastewater networks, industrial zones, community gardens, and shared habitats. **Changes in one area often ripple through others**, sometimes creating co-benefits, sometimes producing unintended impacts.

For example, monitoring antimicrobial resistance (AMR) in wastewater reflects antibiotic use in humans and animals, the performance of sanitation systems, and the health of aquatic ecosystems. When combined with data on biodiversity, air quality, or disease incidence, it reveals hidden patterns and system-wide impacts.

A clear understanding of these interlinkages helps cities anticipate both positive and negative effects of urban actions. A new green space, for instance, may boost mental health and biodiversity while increasing pollen exposure. **Only a holistic view reveals these trade-offs and supports better planning and decision-making.**

By linking data, integrating analyses, and understanding cross-domain interactions, cities can design interventions that are integrated, preventive, and transformative.



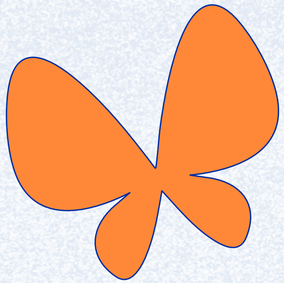
— ONE HEALTH TIPS

— UNDERSTAND THE INTERLINKAGES AND INTERACTIONS

- **Map each indicator across the One Health domains**, human, animal, plant, and environmental health, rather than analysing them in isolation. Use a simple matrix to organise this information and ensure no domain is left out. This approach makes relationships between indicators explicit, highlights gaps in data coverage, and **supports integrated analysis across sectors**.
- **Include indicators that explicitly reflect interlinkages** (ecological connectivity, pathogen circulation, health/environment co-benefits etc.), for example, the number of spillover events per year from wildlife or livestock to humans or the percentage of green corridors (street trees, parks, greenways) that remain physically connected across the city.
- Prioritise indicators that **capture multiple dimensions of health** or serve as key metrics across the One Health domains. Measuring everything is neither necessary nor efficient.
- **Analyse One Health information in context** by integrating health indicators with cross-sectoral datasets, including mobility, heat exposure, biodiversity, socio-economic factors, and water and air quality, etc. (all relevant urban determinants of One Health).
- **Consider the unintended consequences of interventions** or policies that may benefit one domain while harming another. Early identification of trade-offs allows stakeholders to **adjust strategies proactively and minimise risks.**

— INTEGRATE DIVERSE DATA AND SYSTEMS APPROACHES

- **Integrate data from participatory methods**, including citizen science approaches such as community health mapping or participatory sensing. These methods capture lived experiences and support a more democratic understanding of urban health.
- **Integrate spatial data** from multiple sectors and overlay maps to reveal cross-sector patterns and interdependencies.
- **Combine** temporal, behavioural, ecological, sensor-based, and health-system data to build a **multidimensional perspective** and complement with qualitative insights to strengthen the interpretation of patterns and trends.
- Use tools such as systems maps, causal chains, interaction matrices, or co-benefit and trade-off assessments to **structure complex information and make cross-sector relationships visible.**
- **Apply analytical methods** such as network analysis, system dynamics, time-series modelling, and machine learning to uncover feedback loops, hidden pathways, and emerging risks within the One Health system.



STRENGTHEN INFORMATION MANAGEMENT CAPACITY THROUGH COLLABORATION FOR ONE HEALTH

CITIES ARE NOT THE ONLY HOLDERS OF ONE HEALTH DATA

Cities and their departments often **struggle to access data**, especially since much of the information they need comes from outside their own jurisdiction or their department. Access is also limited by licences, privacy rules, security restrictions, and proprietary data controls. **Many municipalities face added challenges**, such as limited resources, competing priorities, siloed departments, and insufficient technical capacity. To build a solid evidence base for decision-making, **cities need to collaborate with universities**, research centres, private companies, utilities, digital platforms, and specialised agencies. These partners offer scientific expertise, complementary datasets, analytical tools, and added credibility.

A COMPLEX, TRANSPARENT INFORMATION SYSTEM REQUIRES ROBUST GOVERNANCE

Given the diversity of data sources and the need to analyse interlinked systems, **strong governance is central to effective One Health information management**. Governance structures should establish clear institutional roles and mandates, protocols for data quality, interoperability, and ethical use, transparent procedures for access, sharing, and **accountability**, and mechanisms for **cross-sector coordination and conflict resolution**. Robust governance ensures that cities and their partners can reliably integrate information, interpret cross-sector connections, and **make decisions that support and improve One Health.**

— ONE HEALTH TIPS

— CREATE AN INFORMATION MANAGEMENT COMMUNITY AND CULTURE

- Identify **where relevant data sits** both inside and outside the municipality. Cities already manage significant datasets (public health, biodiversity, mobility, waste, social surveys). Universities, NGOs, utilities, and private companies hold complementary data on food systems, pollution, mobility, water quality, and more
- **Establish clear partnerships for data-sharing**, define mutual benefits, simplify sharing processes, and agree on protocols for data collection, sharing, analysis, and use. Safeguard privacy and ethical standards while enabling evidence-based decisions.
- **Identify who collects each indicator**, who updates it, who validates it, and who performs cross-sector integration (platforms, workshops, expert review, etc.).
- Ensure that **all sectors have equitable access to shared data** and are fairly represented within the datasets themselves. Prevent any single sector from dominating the information landscape or shaping analyses through an overly anthropocentric lens.
- **Develop interoperable systems** enabling datasets to be shared, overlaid, and compared across institutions. Harmonise formats, scales, and metadata to ensure true integration. **Opt for open data** wherever possible to amplify One Health outcomes and support other projects.

— SET UP ROBUST INFORMATION MANAGEMENT GOVERNANCE

- **Establish an Information Management Committee** to oversee the effective implementation and monitoring of the partnership's results, thereby ensuring accountability and transparency.
- **Introduce governance indicator**s such as: the frequency and quality of information management meetings; the diversity and balance of sector representation; the existence of formal data-sharing agreements, etc.
- **Enhance accountability** by holding regular review meetings to update methodologies, tracking results, and assessing alignment with evolving One Health priorities.

> *"Much of the innovation in One Health information management lies not in collecting new data but in analysing existing datasets in new ways"*
>
> **– Eliabel Seys, Eurometropolis of Strasbourg**

TOOLBOX

TOOLS FOR INFORMATION MANAGEMENT

- One Health Knowledge Audit
- One Health Stakeholder Map
- Urban Determinants of One Health
- How to Design One Health Risk Indicators and do Mapping Analysis

CASE STUDY

UNDERSTANDING THE TERRITORY THROUGH THE ONE HEALTH PERSPECTIVE: STRASBOURG'S WORK ON IDENTIFYING INDICATORS

CONTEXT

As part of the co-creation of the One Health Integrated Action Plan, Strasbourg's local group (ULG) chose an operational approach by defining an experimental sub-area for concrete actions and testing the integration of the One Health approach. This intermediate scale provides a relevant framework for monitoring the various components of human, animal, plant and environmental health. The perimeter encompasses several neighbourhoods in Strasbourg and Illkirch (Meinau, Neuhof, Stockfeld, and the Illkirch Innovation Park). It was first sketched out by hand and then consolidated using IRIS statistical units. This territory features a wide variety of environments, uses, and populations, encompassing natural spaces, dense urban areas, transportation infrastructure, deprived areas and industrial zones. All of these elements make it an ideal testing ground for the One Health approach.

While identifying the actions to be implemented, it became clear that there was a need for in-depth, shared knowledge of the area regarding the interrelated issues of human, animal, plant and environmental health. Strasbourg Eurometropolis therefore, called upon the Regional Health Observatory (ORS) Grand Est to make a One Health diagnosis of the territory (first of its kind), a first at this local level. This initial diagnosis establishes a baseline, which is essential for measuring and monitoring the future project's impact.

The development of the method remains crucial: it must define what constitutes a One Health diagnosis, clarify this inherent complexity, and, most importantly, transform this tool into a practical mechanism for effective monitoring and decision support.

The collaborative effort between the Strasbourg team and the ORS successfully established a preliminary methodology for territorial analysis grounded in the One Health approach. This methodology involved defining the conceptual scope, identifying priority themes, selecting and structuring indicators, and choosing appropriate representation methods. Consequently, it provides the foundation for a comprehensive, holistic understanding of the territory's local issues by integrating social, health, environmental, and ecological data.

METHOD

The results of the work completed by ORS Grand Est are presented below.

- A large amount of data from multiple sources
- Various forms of analysis: key figures, maps, illustrations, photos, etc.
- Presentation in the form of a 16-page summary booklet

The selected indicators are divided into seven thematic groups and associated with issues relevant to the One Health approach. Together, they represent the foundation of shared knowledge about the designated area and a basis for implementing integrated actions within it.

Theme	Data and indicators selected	One Health issues
Territorial features	• Sociodemographic data: number of inhabitants, density, age structure • Social conditions: poverty rate, unemployment, proportion of young people without employment or training, single-parent families • Social disadvantage index (based on the unemployment rate, proportion of manual workers, proportion of high school graduates, and median income) • Type and status of housing: proportion of collective and social housing	• Human health: identifying social and territorial health inequities, identifying areas requiring special attention and targeted prevention needs, raising awareness • Environmental health: influence of living conditions on exposure to risks • Animal health: indirect (urban pressure, proximity to habitats/natural areas)
Living environment	• Housing quality: energy performance rating, greenhouse gas emissions, heating method, proportion of households experiencing energy poverty • Facilities serving vulnerable groups: nurseries, schools, middle schools, high schools, nursing homes, social and medical-social institutions • Access to food: food shops, markets, local producers, family gardens • Mobility: transport networks, cycle paths, pedestrian and sports routes	• Human health: effects of fuel poverty on physical and mental health, role of housing in health, access to healthy and sustainable food, social cohesion, soft mobility • Environmental health: impact of heating systems and infrastructure on emissions and biodiversity • Animal health: waste management
Natural spaces, resources, and biodiversity	• Biophysical land cover (Corine land cover): artificial areas, forests, grasslands, wetlands, water bodies) • Wetlands, water supply, catching areas, and water quality • Eco-geographical entities (defined according to climate, soil, topography, hydrology): coherent natural units for ecological management • Fauna/flora biodiversity inventory, list of protected species and associated issues • Trails and outdoor walking areas	• Human health: benefits of contact with nature, opportunities for outdoor activities, environmental education, risks associated with wetlands (mosquitoes) • Environmental health: role of forests and meadows in carbon storage, heat and water regulation, protection of water resources, preservation of biodiversity • Animal health: preservation of habitats, support for ecological balance, species conservation

Protection tools and measures	• Green network: terrestrial continuities including forests, hedgerows, meadows, bocage, and agricultural areas of high ecological value • Blue network: aquatic continuity including rivers, streams, ponds, wetlands, marshes, and bodies of water • Dark network: management of artificial light at night along ecological corridors, light pollution • Biodiversity reservoirs and ecological corridors	• Human health: managing zoonotic risks, balancing nature in cities with health safety • Environmental health: adapting to climate change • Animal health: tackling habitat fragmentation, biodiversity reservoirs and ecological corridors, maintaining connectivity for species, preserving and restoring biodiversity
Activities and pressures	• Land use: types of agricultural activities, commercial, business, and service areas, industrial areas (proportion of artificial surfaces) • Air pollution: concentrations of the main pollutants NO_2, PM10, ozone • Noise pollution: road and industrial noise maps • Urban heat islands (local climate zone – LCZ): building typology and vegetation cover • Climate projections for 2030, 2050, and 2100	• Human health: exposure to pollution, noise, and heat; increased inequalities; building thermal renovation • Environmental health: preservation of green spaces and tree canopy • Animal health: adaptation of habitats in the face of artificialization; increased zoonotic risk
Proximity to animals	• Presence of species of concern: rodents, mosquitoes, pigeons, and domestic animals • Management and control measures: regulation campaigns, entomological monitoring, and public awareness.	• Human health: well-being, prevention of nuisances and zoonoses • Environmental health: balance between urban wildlife and natural spaces • Animal health: integrated and balanced management of animal populations, co-existence between domestic and wild animals, and consideration of animal welfare
Human health	• Accessibility to healthcare: density of healthcare professionals, distance to a pharmacy • Emerging risks: environmental diseases, zoonoses • Epidemiological data: mortality rates, prevalence of chronic diseases (diabetes, obesity, overweight)	• Human health: comprehensive monitoring of health status, identification of local disparities • Environmental health: integration of environmental exposure into health policies

HOW TO ADVANCE THIS METHODOLOGY

- **Cross data and analyse interlinkages**: Shifting from a data inventory to a systemic and temporal analysis, highlighting the interactions between social, environmental, health, and ecological conditions to identify areas of cumulative vulnerabilities and co-benefits.
- **Integrate social and behavioural dimensions**: Supplement quantitative data with qualitative information on behaviours and lifestyles, residents' perceptions, and community and citizen initiatives to better understand the territorial dynamics.
- **Strengthen the animal health component**: Document the links between domestic animals, wildlife, and livestock farming (livestock populations, veterinary data, antibiotic use, health monitoring).
- **Introduce the concept of exposome**: Analyse data on pesticide contaminants, heavy metals, endocrine disruptors (in water, soil, air), and map multiple exposures to identify cumulative areas.
- **Analyse governance mechanisms**: Identify local actors, programs, and policies and explore synergies and gaps.

— EXTRA ONE HEALTH TIPS

- Quantify human–environment relationships more systematically, as these links, though evident, remain under-measured in many contexts.
- Strengthen the animal health component by going beyond basic biodiversity inventories to capture more meaningful indicators.
- Incorporate qualitative and social dimensions to fully understand territorial dynamics and lived experiences.
- Address social and environmental health inequities to more effectively prioritise actions and interventions.

SECTION 4: ENGAGING AND MOBILISING CITIZENS FOR ONE HEALTH

AUTHORS: I. Toscano, S. Aivalioti, M. Dussauge, Dr. M. Dellenbaugh-Losse, Dr. G. Fauvel, D. Sepulveda

INTRODUCTION

WHY DO WE NEED CITIZENS' ENGAGEMENT IN ONE HEALTH?

One Health succeeds only when citizens are **active participants**, not passive recipients of policies. Engagement ensures that:

- One Health **actions and solutions** are designed to effectively **meet the needs** and reflect the daily lives of local communities.
- Citizens **build long-term commitment and foster necessary cultural change** by actively co-creating solutions.
- Citizens become more mindful of their own health and behaviours and their interconnectedness with animals and the environment, which supports biodiversity, protects ecosystems, and **minimises conflicts of co-existence**

Without citizen engagement, One Health risks being a top-down technical approach that is not understood or sustained in the long term. When citizens are engaged, One Health transforms into a **movement of shared responsibility and conscious living.**

CITIZENS’ ENGAGEMENT CHALLENGES

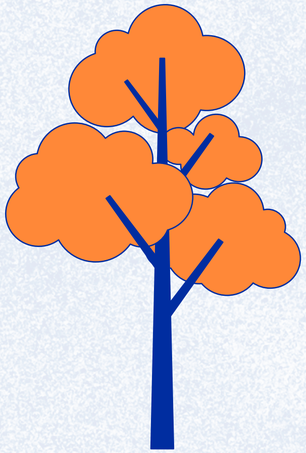
Effective citizen participation requires navigating and overcoming a number of complex challenges:

- The **One Health approach** is novel for urban settings. Cities currently lack successful models for its communication to citizens.
- The concept of One Health is complex and spans many domains. It can be **difficult to explain without jargon.**
- Many municipalities **lack expertise in both One Health and participatory processes** (or the knowledge can be siloed into a department).
- Issues such as zoonotic diseases, eco-anxiety, or biodiversity loss can **trigger fear, guilt, or defensiveness** if not carefully managed.
- **Scepticism towards local authorities** is a challenge to citizens' willingness to engage.
- The increasing number of topics covered by citizens' engagement initiatives risks **saturating participation**, particularly if the **processes are poorly managed.**
- Sustaining effective engagement ultimately requires **ongoing investment in communication**, facilitation, and follow-up, demanding both time and effort.

KEY STEPS AND ONE HEALTH PRACTICAL TIPS

In this section, we explore **positive elements to foster engagement for the One Health approach, drawing on experiences from the One Health 4 Cities partners** and summarising **tips for local authorities willing to implement One Health in a participatory way**. We have identified three main steps necessary to consider in designing and implementing effective participatory processes for One Health promotion.

- **Increase understanding of One Health**
- **Build trust with the citizens and with linked organisations**
- **Design initiatives for long-term participation and engagement**



STEP 1: INCREASE THE UNDERSTANDING OF ONE HEALTH

Empowering lasting behavioural change to sustain healthy human, animal, plant, and environmental systems requires different citizen groups (particularly diverse vulnerable groups) to have a good understanding of the topic. This **understanding is essential for them to become effective change agents** in their neighbourhoods and communities.

— ONE HEALTH TIPS

— DEFINE KEY MESSAGES AND EXPLAIN THEM IN ENGAGING WAYS

- Use **simple, relatable examples** showing how **human well-being depends on animals, plants, and the environment and vice versa**. Not everyone needs the full complexity of One Health.
- **Tailor messages** for children, adults, or professionals; each group has **different motivations** and entry points for engagement.
- Use **creative tools** that build **empathy and curiosity**, such as **storytelling, games, or role-play** linked to **local experiences.**
- Involve **artists, ecologists, and cultural mediators** to **balance science with emotion**. **Cultural events**, film nights, or school projects can help residents **connect emotionally** with One Health ideas.

— ADDRESS SENSITIVE EMOTIONS

- Acknowledge **eco-anxiety and health fears** and offer **constructive actions** instead of blame. Highlight **what communities can do together**, promoting **hopeful, collective narratives** of care and recovery.

— SPOT ANTHROPOCENTRIC VIEWS

- Avoid approaches that **focus only on human benefits. Include non-human perspectives**, such as pollinators, pets, trees, meadows or wildlife, to show **interdependence, not hierarchy**.

— PROVIDE INCLUSIVE MEANS OF COMMUNICATION AND ENGAGEMENT

- Ensure **everyone can take part** in One Health learning. Use **visual, oral, and digital tools** for **diverse audiences**, including those with **disabilities or limited literacy**. **Translate materials**, **use familiar community spaces**, keep language simple and approachable, and **work with local leaders to co-design engagement.**
- Make participation **easy, safe, and rewarding** so **everyone feels part of the One Health story**.

TOOLBOX

TOOLS FOR INCREASING ONE HEALTH UNDERSTANDING

- One Health Role Play
- One Health Quiz
- One Health Video
- One Health Board Game
- Observation Grid - Explore Life in Schoolyards

STEP 2: BUILD TRUST WITH THE CITIZENS AND WITH LINKED ORGANISATIONS

Building **trust and collaboration** is essential for One Health to move from ideas to action. When citizens, local institutions, and professionals trust one another, they can share resources, insights, and responsibility for creating healthier, more resilient communities.

— ONE HEALTH TIPS

— COMBINE EXPERTISE AND SUPPORT

- Collaborate with local organisations that already have established **connections with citizens, projects, and knowledge networks**. Many of these local groups are already engaged in One Health-related activities. By coordinating and combining your efforts, you can increase the impact of existing projects and initiatives.
- **Amplify messages, share resources, and coordinate actions** by pooling your strengths. Collaboration across **health, environmental, educational, and social sectors** is key to building credibility and ensuring consistent communication.

— DEVELOP A REFERENCE PROJECT

- Establish a **tangible, local demonstration** of One Health in action, for example, through urban farming initiatives in schoolyards. These **hands-on reference projects** serve to make the concept accessible and concrete, enabling citizens to **visit, learn, and personally experience the advantages** of improved ecosystems and healthier communities.

— MAKE IT PARTICIPATORY AND BOTTOM-UP

- Citizens are **user experts**, especially concerning their health and immediate environment. They possess unique insights into what works, what is important for them, and what they are capable of doing.
- Use **citizen participation methods** to embed One Health in their daily life. Ensure citizens are seen not just as beneficiaries, but as **partners and co-creators** of One Health solutions.
- **Cities must act as guarantors and mediators**, ensuring engagement processes are balanced, transparent, fair and democratic. They must provide **accessible platforms, consistent communication, and visible follow-up** so citizens feel heard and valued.

TOOLBOX

TOOLS FOR COORDINATING CIVIL SOCIETY

- One Health Governance Canva
- One Health Stakeholder Map

STEP 3: DESIGN INITIATIVES FOR LONG-TERM PARTICIPATION AND ENGAGEMENT

Effective One Health implementation necessitates a paradigm shift: moving away from anthropocentrism, embracing co-existence with other living beings, and actively making space for this change. To evolve One Health from a finite project into a **shared community culture**, long-term public participation is essential. Citizens, schools, and organisations must have **ongoing opportunities** to engage, learn, take action, and observe the positive impact of their involvement. This continuity is key to sustaining motivation, fostering trust, and ensuring collective stewardship of health and the environment.

— ONE HEALTH TIPS

— DEVELOP ONE HEALTH AMBASSADOR PROGRAMMES

- Ambassadors can serve as **One Health credible community connectors** by working through existing structures such as **health centres, social centres, or schools**. They can share information, mobilise neighbours, and support small-scale projects.
- **Identify existing community members** who are already engaged in One Health-related activities. Train and provide them **with adapted resources (tools, networks and knowledge)**.
- Encourage ambassadors to **give a voice to the unspeaking** nature, animals, and future generations.
- Ensure **diversity among ambassadors** can help to reach diverse resident groups.

— ONE HEALTH TIPS

— CREATE CITIZEN SCIENCE PROJECTS

- Design **citizen science programmes** that invite residents to **monitor local health and environmental indicators**, such as air quality, biodiversity, or well-being. This creates a **sense of ownership and shared evidence** about local change.
- Use existing groups or structures such as schools, community gardens, and conservation groups that can serve as **natural hubs** for citizen science projects.

— DEVELOP LONG-TERM PROJECTS AND SPACES

- Support **long-term community projects** that promote **health, nature restoration, and social connection**, such as **urban gardens, conservation sites, or healthy lifestyle programmes**. Encourage citizens to **co-design and implement such activities**
- Ensure there is **funding, space, knowledge and policy support** for these initiatives so they can evolve in the long term.

— CELEBRATE ONE HEALTH

- Create **annual or seasonal One Health Action or Festive Days** to bring citizens, schools, and organisations together in visible, hands-on activities and celebrations. These can include **talks, walks, cultural events, neighbourhood clean-ups, tree planting, health fairs, or biodiversity counts**. The One Health days raise awareness, **celebrate local achievements**, and reinforce a sense of **community ownership and pride**. They also serve as **entry points** for new participants to join long-term One Health efforts.
- Embed One Health events, messages, and activities into existing, well-known public events that naturally align with One Health themes (e.g., park festivals, science fairs, river-celebration events).

TOOLBOX

TOOLS FOR CO-CREATING ONE HEALTH INITIATIVES

- Participatory Citizens Workshop
- Action Ideas for One Health
- The Wheel of One Health Challenges

"It's important to recognise that citizen participation is not part of the natural DNA of public authorities, but it is becoming a new imperative. It is getting harder and harder to make policies without involving citizens, and One Health is no exception."

– Christophe Gouache, Senior policy designer at Strategic Design Scenarios

CASE STUDY

FROM SEED TO FRUIT FROM THE CITY OF ELEFSINA

In Elefsina, a historic but highly urbanised city in Greece, the municipality sought new ways to strengthen awareness of sustainability and the interconnectedness of human, animal, plant and environmental health. Young children and their families had limited exposure to gardening, biodiversity, and healthy nutrition. Environmental pressures from urbanisation created additional challenges. Recognising that early education can build long-term habits, the city launched the project “From Seed to Fruit” in public kindergartens, aiming to introduce One Health concepts at an early age through direct interaction with nature.

The project created small gardens in schoolyards, where children planted seeds, watered and cared for plants, observed insects and pollinators, and harvested fruits and vegetables. Teachers used stories and play-based activities to explain how plants, animals, and people depend on one another, making complex concepts accessible to young learners. Parents were actively involved through gardening days and workshops on healthy eating and sustainable practices, reinforcing habits at home and encouraging family participation. Initial concerns, such as whether children would stay engaged or whether One Health concepts could be understood at such a young age, were overcome through hands-on learning and close collaboration between teachers, municipal staff, and families.

The initiative led to greater environmental awareness among children, healthier nutrition habits at home, and increased family engagement with green spaces. By creating positive early experiences with nature, the project helped children develop care and responsibility for plants and local ecosystems. The approach is simple, low-cost, and highly adaptable, making it easy for other cities and schools to replicate. Elefsina’s experience shows how early education and family participation can nurture future citizens who value biodiversity, sustainability, and the health of all living systems. The programme will continue and expand to all public kindergartens in the city.

SUCCESS FACTORS OF ELEFISINA'S INITIATIVE

- The vegetable gardens are a **low-cost, simple solution** with no need for expensive equipment or infrastructure. This allows scalability and easy replication in other schools and public spaces.
- **Experiential learning helped overcome initial scepticism** about whether young children could grasp such concepts. The approach turned abstract ideas like "One Health" into visible, everyday experiences.
- **Schools were proactive and enthusiastic**, helping ensure smooth implementation.
- Once the gardens and activities were established, **schools can maintain them independently**. This reduces reliance on city resources and allows the programme to continue growing organically.
- The initiative successfully **engaged parents through their children**: pupils brought new habits, knowledge, and enthusiasm home, motivating families to participate in gardening days and adopt healthier eating practices. This **intergenerational influence** amplified the programme's overall impact

SECTION 5: INTEGRATING GENDER EQUITY AND SOCIAL INCLUSION IN ONE HEALTH

AUTHORS: Dr. M. Dellenbaugh-Losse, S. Aivalioti, M. Dussauge, Dr. G. Fauvel, D. Sepulveda, M. Chenevas-Paule

INTRODUCTION

WHY DO GENDER EQUITY AND SOCIAL INCLUSION MATTER IN ONE HEALTH?

One Health in cities aims to improve human, animal, plant, and environmental health together. Yet health impacts, and **the burdens and benefits of city interventions, are not felt equally by all**. Gender, age, income, ethnicity, disability, migration status, and other factors shape **people's exposure to risks**, their access to health-promoting environments, and their ability to participate in shaping urban policies.

If these differences are neglected, One Health strategies risk undermining social determinants of health and being "gender blind" (designed for an assumed "average" citizen who doesn't actually exist) and may unintentionally widen inequalities. **Embedding gender and social inclusion into One Health is therefore both a fairness and an effectiveness issue**: interventions work better when they respond to real, diverse needs and incorporating equity into policy design ensures that new programmes do not unintentionally increase inequality. Equity-based planning ensures interventions reach and benefit those most at risk, thereby **improving overall public health outcomes and reducing social gaps.**

KEY INGREDIENTS: THE HEALTH GAP, INTERSECTIONALITY, AND PARTICIPATION

THE HEALTH GAP

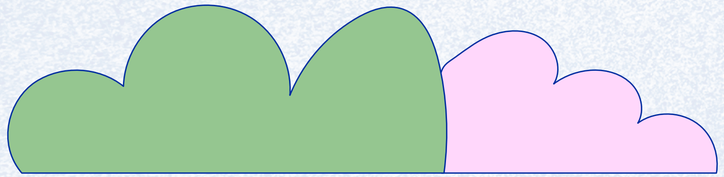
The health gap refers to the **differences in health outcomes between social groups**, for example, in life expectancy, chronic disease rates, or mental well-being. These disparities are not caused only by individual behaviour or biology, but by **structural factors** such as income, housing quality, working conditions, environmental exposure, and access to care.

In cities, **health gaps often reflect patterns of inequality**: people in low-income neighbourhoods or in marginalised groups tend to live shorter, less healthy lives due to poorer environmental quality, limited mobility options, or higher stress. Recognising and **addressing these systemic differences** is central to the One Health approach, which aims to improve health for all living beings and environnement by reducing the social and environmental conditions that **create unequal outcomes.**

INTERSECTIONALITY

Intersectionality is the understanding that people's experiences, needs, and barriers are shaped by the **interaction of multiple social identities** such as gender, age, disability, race or ethnicity, migration status, income, and sexual orientation. These **overlapping factors can create unique patterns of advantage or disadvantage.**

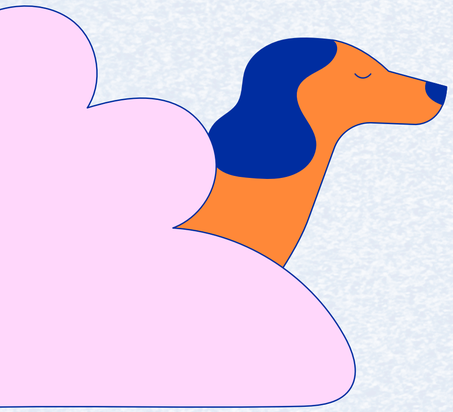
- A woman with a disability may face accessibility barriers and safety concerns in public spaces that are not experienced by women without disabilities or men with disabilities.
- A young migrant man may have different exposure to occupational hazards, environmental risks, and healthcare access than both non-migrant men and migrant women.



In a One Health context, intersectionality helps cities to:

- Identify **who is most exposed** to environmental hazards (e.g., heat islands, polluted air) and **least able to mitigate them.**
- **Avoid "one-size-fits-all" solutions**, for example, cycling infrastructure that works for fit adults but not for older riders, parents with children, or those using cargo bikes.
- **Reach different vulnerable groups and create synergy in designing measures** that address overlapping needs, such as shaded, accessible, and safe walking routes that also serve as biodiversity corridors.

By applying an **intersectional lens**, cities can better ensure that **health improvements reach all groups**, especially those experiencing multiple, compounding disadvantages.



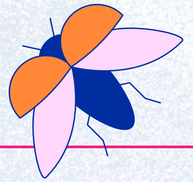
PARTICIPATION

Participation in One Health is more than public consultation; it is about a**ctively involving diverse residents and stakeholders** in shaping the policies and projects that affect them.

- **Who participates matters:** Without intentional outreach, processes often attract participants who are already engaged, have higher education levels, and have more free time, leaving out those with the greatest needs.
- **How participation is designed matters**: Meetings at city hall during working hours may exclude caregivers, shift workers, or people with mobility challenges.
- **What participation influences matters**: Involving people only after decisions are made erodes trust and fails to capture valuable lived experience. By involving people from the beginning in designing measures, participants feel they are being taken seriously, which increases their willingness to use and accept the measures.

In a One Health strategy, participation ensures that **diverse knowledge**, from scientific expertise to **everyday lived experience**, shapes interventions, making them more relevant, more accepted, and more effective.

ONE HEALTH TRADE-OFFS



Cities often encounter situations where desirable goals pull in different directions, forcing planners to balance benefits and risks. **These trade-offs** are not signs of failure; they **are an expected part of implementing One Health in complex, real-world settings**. The key is to **make them visible early**, weigh impacts across all healths (human, animal, plant and environmental), and design responses that minimise harm while maximising equity.

Here are some common trade-offs that cities may encounter:

— SAFETY VS. BIODIVERSITY

- **Example:** Adding lighting to parks and trails can improve women's and girls' sense of safety at night, increasing their access to physical activity and social spaces. However, artificial light can disrupt nocturnal animal species, affect plant growth cycles, and reduce dark-sky quality.
- **Equity lens:** Safety concerns are not equally distributed — women, LGBTQI people, and some migrant groups may experience higher risks or perceptions of danger. Balancing this with biodiversity protection may involve creative solutions like motion-activated lights, "dark zones" away from paths, or seasonal adjustments.

— ACCESS VS. ENVIRONNEMENT PROTECTION

- **Example:** Encouraging visits to rivers, wetlands, or urban forests can improve mental health, social connection, and awareness of nature. However, overuse can damage habitats, compact soils, or disturb wildlife.
- **Equity lens:** Those with less access to private gardens or safe public spaces may rely more heavily on shared natural areas. Management strategies might include timed entry, designated paths, a stilted walkway or rotating access to allow environnement to recover.

— POPULAR SPORTS VS. EQUAL ACCESS

- **Example:** New investments in sports facilities often favour already popular, male-coded activities such as football, leaving women's, girls', and non-mainstream sports under-resourced.
- **Equity lens:** Without targeted measures, funding can reinforce existing gender gaps in active recreation. Cities can promote parity by reserving training times for under-represented groups, adjusting booking rules to prioritise equitable access, diversifying the types of activities supported, and co-designing facilities with women, girls, and other under-represented groups to uncover and meet hidden demand.

— UNIVERSAL VS. TARGETED MEASURES

- **Example:** A city-wide cycling programme may improve infrastructure across the board but might not address the specific barriers faced by women, older adults, or people with disabilities such as fear of traffic, lack of safe bike storage, or need for wider lanes for cargo bikes.
- **Equity lens:** Universal measures create a common baseline, but they rarely reach those who face the highest practical, social, or safety-related barriers. An equity approach therefore, starts by identifying which groups are not benefiting from the universal offer and why. Complementary targeted actions can then close these gaps. In the context of cycling, this might mean tailored cycling lessons for women or older adults, improved lighting and visibility along routes used at off-peak times, adapted bikes for people with disabilities, or co-designed routes with local parents.

— SHORT-TERM VISIBILITY VS. LONG-TERM SUSTAINABILITY

- **Example:** Rapid greening projects with fast-growing, non-native plants can quickly cool urban areas but are often vulnerable to pests, require more water, and can trigger allergies. When these plantings fail to adapt, they waste resources and reduce long-term health and cooling benefits.
- **Equity lens:** Politically visible short-term wins should be weighed against long-term ecological resilience and community health needs, ensuring that urgent climate responses do not compromise future well-being.

— COMFORT VS. CLIMATE RESILIENCE

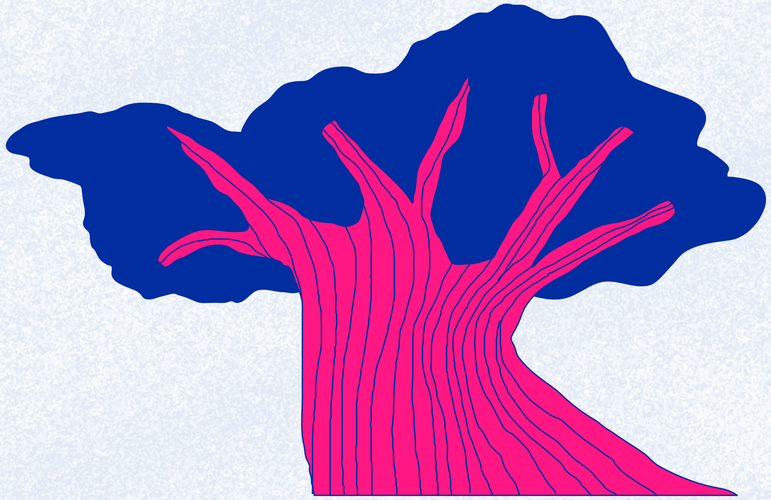
- **Example:** Installing extensive air conditioning in public buildings can protect vulnerable populations during heat waves but may increase greenhouse gas emissions and energy costs. In addition, the heat that these units emit may worsen heat waves in both the short and long runs.
- **Equity lens:** Prioritise passive cooling measures (e.g., shading, ventilation, reflective materials) where possible, while still ensuring immediate protection for at-risk groups like older adults and outdoor workers.

Trade-offs are an inevitable part of urban policy-making, and One Health is no exception. The goal is not to eliminate them entirely, but to **handle them** in ways that are **fair, evidence-based, and clearly explained.**

PRACTICAL TIPS FOR ONE HEALTH

Integrating gender and social inclusion into One Health is most effective when it is built in from the start, not added later as a separate activity. **Embedding equity** in vision, governance, design, implementation and monitoring ensures that all residents can benefit from and **contribute to healthy, resilient environments.**

In this section, we provide tips for One Health on gender equity and social inclusion that link to previous section of this publication, as gender is a cross-cutting topic for One Health.

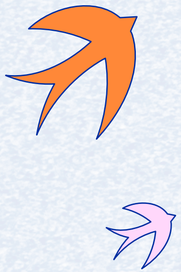


STRATEGY LEVEL (SECTION 1)

— ONE HEALTH TIPS

— INCLUDE EQUITY AND DIVERSITY IN THE ONE HEALTH VISION

- Make equity and inclusion **explicit principles** in the city's One Health vision, alongside commitments to human, animal, plant, and environmental health.
- **Frame inclusion as a core element of resilience:** a healthy city is one where everyone benefits from healthy environments.
- **Use clear, accessible language** so residents can identify with the vision and understand how it affects their daily lives.



— CONDUCT A GENDER AND DIVERSITY ANALYSIS IN THE DIAGNOSIS PHASE

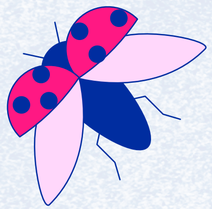
- **Map who benefits, who is left out, and why**, using both quantitative and qualitative data.
- **Analyse access** to health-promoting assets (green spaces, clean air, active mobility), **exposure to risks** (heat, pollution) **and the potential burdens** or unintended effects **of policies** and measures by gender, age, income, migration status, and ability.
- **Include under-represented perspectives** through focus groups, interviews, and participatory mapping.
- **Identify structural barriers** such as opening hours, location, cost, and cultural norms that limit participation.

GOVERNANCE (SECTION 2)

— ONE HEALTH TIPS

— LEAD BY EXAMPLE AS A MUNICIPALITY

- **Integrate gender and diversity criteria into budgeting, procurement and contracting.**
- Ensure staffing and advisory bodies reflect community diversity.
- **Provide training** on inclusion, gender sensitivity, and One Health principles across departments.
- **Encourage** private and non-profit **partners to adopt inclusive design and service** practices through guidance and recognition.



— ENGAGE DIVERSE STAKEHOLDERS IN PARTNERSHIPS

- **Proactive outreach to under-represented groups**. Include members of the community, women's organisations, disability advocates, youth, migrant associations, and community groups alongside traditional One Health stakeholders. **Treat all residents as experts for their own lived experience.**
- Designing processes that allow **community members to influence priorities and co-create** solutions, not just comment on pre-defined plans with symbolic participation.
- **Support engagement with accessible formats**, translation, and fair compensation for time and travel.
- **Removing participation barriers** by offering childcare, translation, stipends for time, or holding meetings in familiar neighbourhood spaces.

— ONE HEALTH TIPS

— MONITOR AND ADJUST USING DISAGGREGATED DATA

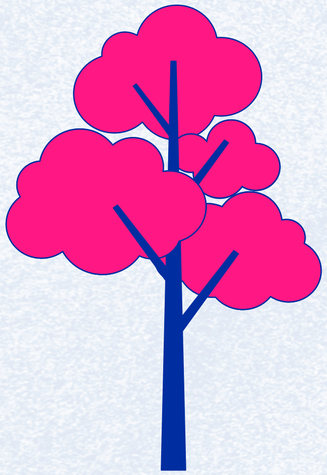
- **Track data disaggregated** by gender, age, income, migration status, and disability to measure progress.
- **Adjust interventions when disparities persist**, for instance, if cycling initiatives benefit men more than women, investigate and respond to barriers.
- Share results publicly to promote **transparency, accountability**, and trust among residents.

IMPLEMENTATION (SECTION 6)

— ONE HEALTH TIPS

— ADVANCE EQUITY IN HEALTH SERVICES

- **Identify service gaps in access and outcomes across groups.**
- Combine **universal measures with targeted outreach**, such as mobile clinics, community mediators, or social prescribing.
- **Address the digital divide** through alternative service channels and assisted digital access.
- **Foster cross-sector collaboration** between health, social, and community services to reach marginalised populations.



— ADDRESS ONE HEALTH TRADE-OFFS

- **Work with the community** to identify which trade-offs are most important to address, ensuring diverse voices are heard.
- **Assess impacts by group**, using data broken down by gender, socio-economic status, neighbourhood, and other relevant factors.
- **Seek “win–win” designs** that meet multiple needs at once for example, choosing low, non-allergenic plants that both improve visibility for safety and support local biodiversity.
- **Be transparent** about decisions: explain why a particular balance was chosen, and outline any measures in place to reduce negative impacts

— ONE HEALTH TIPS

— DESIGN INCLUSIVE AND EQUITABLE URBAN ENVIRONMENTS

- **Sports and recreation**: Audit facility use, identify hidden demand, and diversify offers beyond dominant male-coded sports.
- **Green spaces**: Combine safety, accessibility, and biodiversity in co-designed parks that respond to diverse needs.
- **Active mobility**: Design continuous, safe routes for walkers, cyclists, and users of mobility aids, addressing fear spaces and linking to public transport.
- **Age-friendly planning**: Provide shaded, barrier-free paths, benches, and toilets; promote intergenerational use of public space.

— SET MEASURABLE EQUITY TARGETS

- **Establish specific and trackable objectives**, such as:

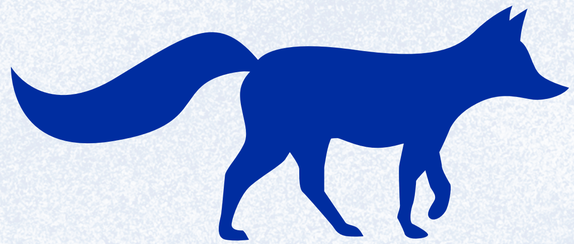
  - **Gender parity** in public sports facility use.
  - **Universal access** to an inclusive green space within a 10-minute walk.
  - **Increased representation of women and youth in One Health advisory boards**

TOOLBOX

TOOLS FOR COORDINATING CIVIL SOCIETY

- Gender and Social Inclusion Checklist for One Healt
- One Health Stakeholder Map

> *“Health policy becomes truly powerful only when it reflects the diversity of the people it serves. Recognising that risks and benefits are not shared equally is the first step toward creating systems that are.”*
>
> **– Dr. Mary Dellenbaugh-Losse**



CASE STUDY

DESIGN OF GENDER-SENSITIVE PLAYING ENVIRONMENTS IN MUNICH

CONTEXT

The City of Munich recognises that girls, boys, trans, non-binary and intersex young people do not enjoy equal access to public recreational spaces. Studies show that play behaviour is strongly shaped by gender stereotypes. Other studies show that variation in play behaviour within a gender group is even greater than between genders. Assertive or self-confident users have greater opportunities to use playgrounds than reserved users. At the same time, sedentary behaviour is increasing—particularly among girls—with negative consequences for physical and mental health, social participation and environmental interaction.

CHALLENGE

Traditional playgrounds privilege the most assertive user groups. This marginalises reserved users, and reduces their opportunity for free movement as well as social and environmental interaction. A missing wide range of playing opportunities, poorly structured spaces and an inadequate footpath network are the main reasons, that not all users can participate equally. Inadequate lighting, poorly visible corners, unsafe routes, and lack of toilets further reduce the use of outdoor spaces by girls and young women.

INTERVENTION

Munich’s planning guidelines, developed under the leadership of the gardening division of the building department, introduce gender-sensitive playing environments. Key components include:

- Gender-sensitive social space analysis in an early planning phase
- Spatial redesign to balance dominance and access
- Health-promoting multifunctionality with a mix of active, quiet, creative and nature zones
- Nature-integrated design and natural features to support environmental literacy
- Ongoing maintenance, safety and inclusive programming

OUTCOMES

Improved safety, increased use by girls and gender-diverse youth, higher levels of physical activity, greater interaction with nature and reduced dominance of single user groups.

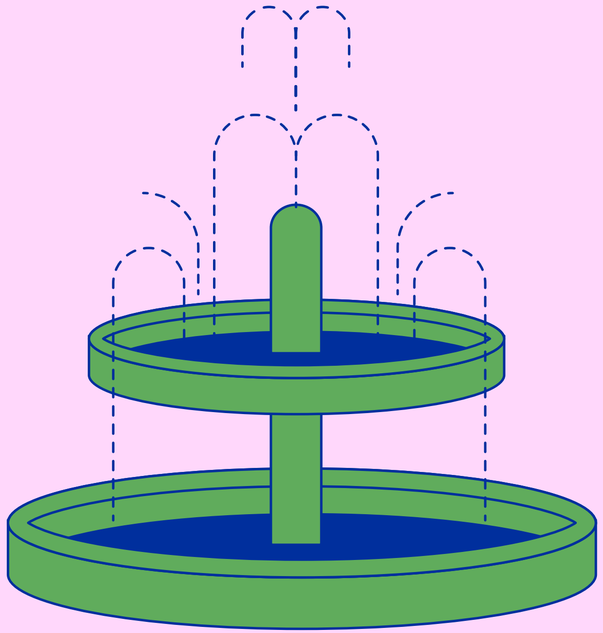
LESSONS LEARNED

- Environment shapes behaviour
- Gender-sensitive data & participation are essential
- Intersectionality matters
- Cross-sector governance is key

SECTION 6:

IMPLEMENTING ONE HEALTH

AUTHORS: S. Aivalioti, M. Dussauge, Dr. G. Fauvel, D. Sepulveda, A. Lorente Saiz, A. Kohlrusch, K. Vähäsarja, E. Seys, L. V. Correia



INTRODUCTION

Implementing a comprehensive One Health approach is an emerging area for cities. Given the complexity, the key is to **initiate the process rather than striving for immediate perfection**. The One Health 4 Cities initiative has adopted a flexible approach, focusing on **short-term small-scale experimentation** while developing action plans and strategies to ensure the One Health approach is sustained in the long term and integrated into future programmes.

This section presents **case studies that bring One Health principles to life**. These examples offer practical inspiration for cities aiming to launch their own initiatives to foster healthier, more resilient, and regenerative urban environments.

CASE STUDIES

URBAN PLANNING

- **City of Lyon:** Applying One Health In Public Space Redevelopment
- **Eurometropolis of Strasbourg:** The One Health Approach to Transform Schoolyards
- **City of Munich:** Animal-aided Design for Cities
- **City of Lahti:** Health in Master Planning

STAKEHOLDER AND CITIZEN ENGAGEMENT

- **City of Kuopio:** The Puijo Summit, a Motivational Event for Adopting the One Health Approach
- **City of Elefsina:** Culture as an Asset for Promoting One Health in Cities

HEALTH AND WELL-BEING

- **City of Lyon:** Risk mitigation of Lyme Disease with the One Health Approach
- **Municipality of Benissa:** A Sustainable Sports Hub
- **City of Lahti:** Promoting a Planetary Diet for People and Nature
- **Municipality of Loulé:** Active Summer for Healthy People and Ecosystems

URBAN PLANNING CASE STUDIES

CITY OF LYON: APPLYING ONE HEALTH IN PUBLIC SPACE REDEVELOPMENT

The city of Lyon aims to promote the health of people, animals, plants and ecosystems through cross-sector collaboration. This ambition has encouraged new ways of working across municipal departments, including health, biodiversity, ecological transition, and urban planning. The redevelopment of public spaces in the Sainte-Blandine neighbourhood became the city's first concrete attempt to apply One Health principles to an urban design project.

The initiative emerged in 2024, when the Health Department and the planning agency (SPL Lyon Confluence) agreed to experiment with integrating One Health into the redesign of Rue Smith and Cours Bayard—two streets selected for their heat-island challenges, limited biodiversity, and relevance to ongoing European projects. Although the project schedule was already advanced, health professionals joined architects and planners to exchange knowledge, share a One Health screening tool, and test new ways of assessing impacts on human, animal, plant, and environmental health.

This collaboration led to the creation of an innovative photo-mapping tool that visualised health-related elements in the streetscape. While promising, the tool and recommendations arrived late in the design process, limiting their influence - taking into account that the project already included strong environmental ambitions such as increased greening, rainwater management, and reduced parking.

Nonetheless, the experiment succeeded in establishing a shared working culture. It familiarised planners, designers, and public health teams with One Health concepts, revealed gaps in existing tools, and highlighted the need for earlier involvement, clearer methods, and stronger interdisciplinary support. Lyon's experience shows that building capacity and shared understanding is a first step toward integrating One Health more effectively into future planning and larger-scale urban projects.

Following this, the City of Lyon and the SPL Confluence are planning to scale this experimentation from street level to neighborhood.

More information → here
Requalification du cours Bayard et de la rue Smith | Lyon Confluence

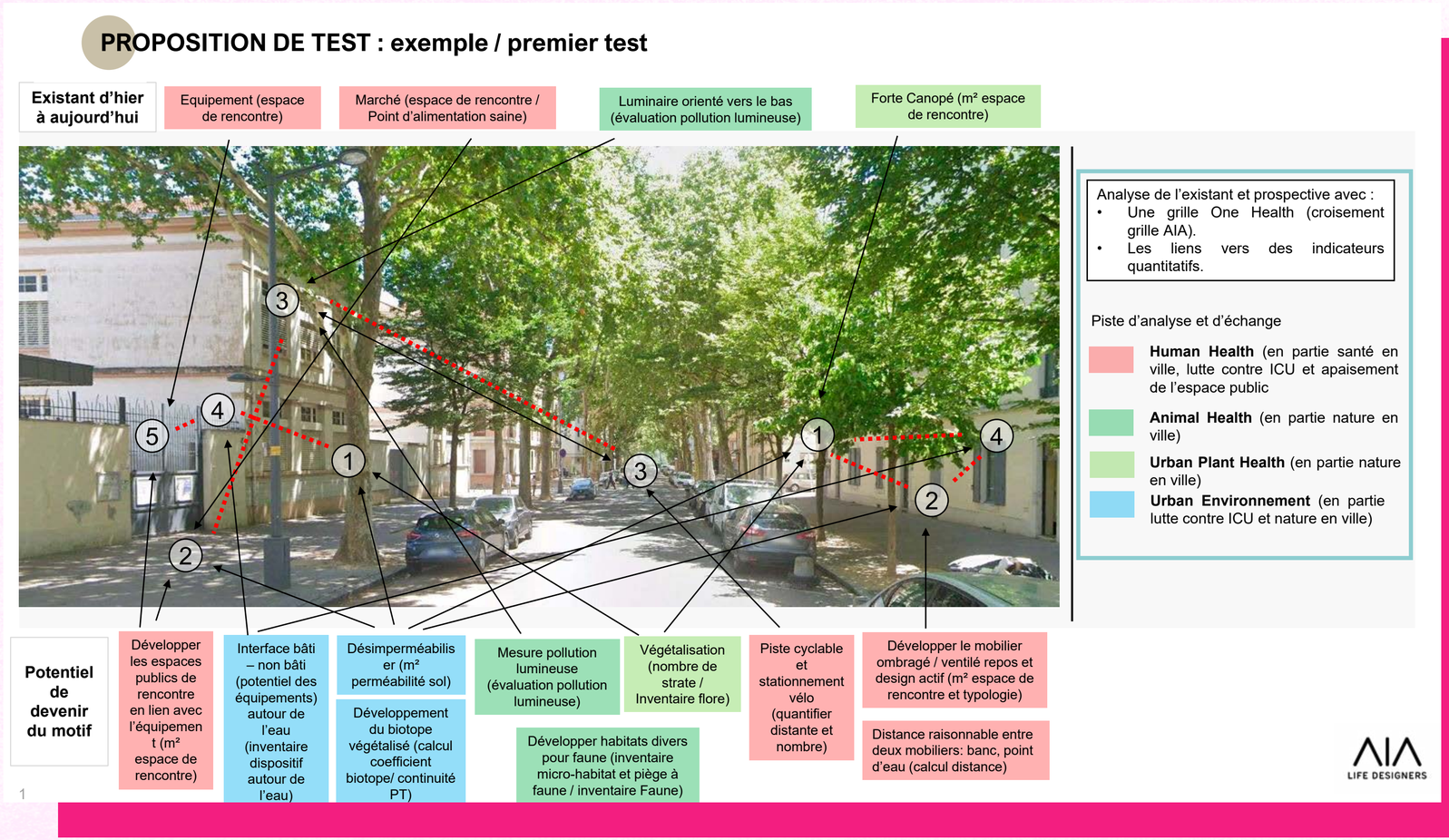


Figure 4: Test of analysing the One Health components on an urban street

EUROMETROPOLIS OF STRASBOURG: THE ONE HEALTH APPROACH TO TRANSFORM SCHOOLYARDS

Strasbourg has been transforming schoolyards since 2020 through the Cours Oasis project, turning paved, heat-intensive playgrounds into cooler, greener spaces that support climate adaptation and offer more gender-equal environments for children. The initiative already promotes physical well-being, reconnects children with nature, and increases biodiversity on school grounds. While advancing knowledge on One Health, the team of Strasbourg Eurometropolis decided to take a step further and bring an explicit focus on the relationships between children, ecosystems, and non-human living beings. Integrating One Health offers the project the opportunity to strengthen its impact and create a shared narrative that could mobilise educators, families, and designers around a common objective “caring for children by caring for their environment”.

One Health principles can be applied at every stage of the schoolyard transformation process. This includes selecting diverse, climate-resilient vegetation, creating microhabitats, managing water and organic matter on-site, and using natural and healthy building materials. The redesign also emphasises inclusiveness, offering multifunctional spaces that support different types of play while reducing heat and noise stress. The project is based on collaboration between a schoolyard committee and designers, being supported by a One Health integration grid for the schoolyard.

By reframing green schoolyards as shared ecosystems, the project shifts mindsets from “installing nature” to “caring for a living environment”. The approach encourages educators to use the schoolyard as a learning resource and strengthens awareness among children, families and staff. Strasbourg’s experience shows that many urban projects already contribute to One Health, and making these contributions explicit, taking into account the interactions between living beings and the ecosystem, increases ambition and impact. The tools are transferable, and implementation can easily be adapted to the available resources and the stakeholders involved.

More information in the Toolbox

Figure 5: One Health Schoolyard

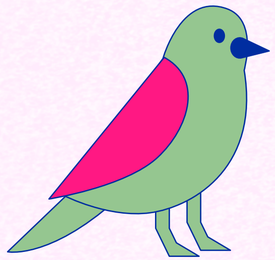
CITY OF MUNICH: ANIMAL-AIDED DESIGN FOR CITIES

In Munich’s Neuperlach neighbourhood, the city explored how wildlife can be intentionally integrated into urban planning rather than displaced by it. Through the initiative Creating NEBourhoods Together, the municipality piloted Animal-Aided Design, a planning method that considers the needs of animals from the earliest design phase of buildings and public spaces. In the initial phase of the action "Animal-Aided Design," the project team established a regional species pool for Neuperlach, encompassing around 400 animal species. Through a participatory workshop involving experts and local representatives, the target species were further refined. Key challenges included determining suitable integration spots for these species, identifying innovative measures to improve their habitats, and exploring potential habitat elements. Ultimately, the team selected 14 target species (including bats, wild bees, butterflies, and common urban birds like the house sparrow), focusing on diverse habitats.

How can urban designs and scenarios facilitate co-existence among humans, animals, and plants? To translate the analysis into habitat elements within the urban space, the city collaborated with the Technical University of Vienna. The researchers and students examined gathering spots for residents in Neuperlach, evaluating their suitability for animals. The students devised various designs, including networks, pedestrian bridges, and biodiversity modules for rooftop gardens. The design features a modular structure that accommodates different species, including nesting aids for wild bees made of sand and clay, the construction of bat habitats in building facades, and the integration of them into an urban rooftop garden planted with edible plants for the neighbourhood and other target species.

Cosy seating and lounging decks are arranged around planters filled with mostly native trees and shrubs, flowering perennials, and edible plants. Lavender not only attracts wild bees and butterflies but also creates a special atmosphere of relaxation and tranquillity for people. The structure is further enhanced by a loosely woven sunshade that provides pleasant shaded spots on hot days, as well as nesting aids for birds. The nesting platform encourages the experience of urban nature by fostering encounters and providing a welcoming space for both people and animals.

Through the "Animal-Aided Design," the project learned the importance of raising awareness among residents in Neuperlach about urban biodiversity and animal habitats. By offering a species trail and facilitating discussions, the project team engaged the community in envisioning a more animal-friendly city and supporting multispecies co-existence creatively and collaboratively. A key aspect of transforming urban spaces using Animal-Aided Design is creating opportunities for nature experiences for residents within their neighbourhoods. The Animal-Aided Design toolbox supports the implementation of wildlife-friendly planning, and it is designed for participatory and co-creative work, making it applicable to housing companies, schools, and community organisations.



More information: here

“Promoting biodiversity doesn't require waiting for major investments or the creation of expansive parks; simple initiatives can make a difference in any area.”

– Antje Kohlrusch, City of Munich

Figure 6: Mapping biodiversity

CITY OF LAHTI: HEALTH IN MASTER PLANNING

In Lahti, Finland, municipal land-use planning plays a central role in shaping how people and nature can thrive together. Because Finnish municipalities hold strong planning authority, Lahti's master plan—updated every city council term—sets the direction for all detailed planning. As the city faces declining biodiversity, challenges in meeting climate goals, and rising lifestyle-related health issues, it recognised that a more integrated approach was essential.

To build this shared understanding, Lahti designed the master plan as a broad, participatory process. Over four years, experts from environmental protection, public health, mobility, and urban development worked alongside residents, businesses, and elected officials to identify priorities and negotiate solutions. Public participation proved crucial: by the time the plan reached the City Council, it was widely understood and accepted. No appeals were filed against the approved plan, a strong indication of trust in the process and a foundation for strengthening One Health principles.

The final master plan now guides all subsequent planning. It identifies key natural assets, secures ecological connections, and outlines routes for sustainable mobility. By embedding these elements at the highest planning level, Lahti has created conditions that support healthier lifestyles, safeguard biodiversity, and improve urban resilience.

The process also revealed areas for growth. While natural values were addressed broadly, discussions about individual plant or animal species tended to arise only when they were seen as constraints on development. Lahti recognises the need to consider other species more holistically to advance the One Health approach fully.

More information: here

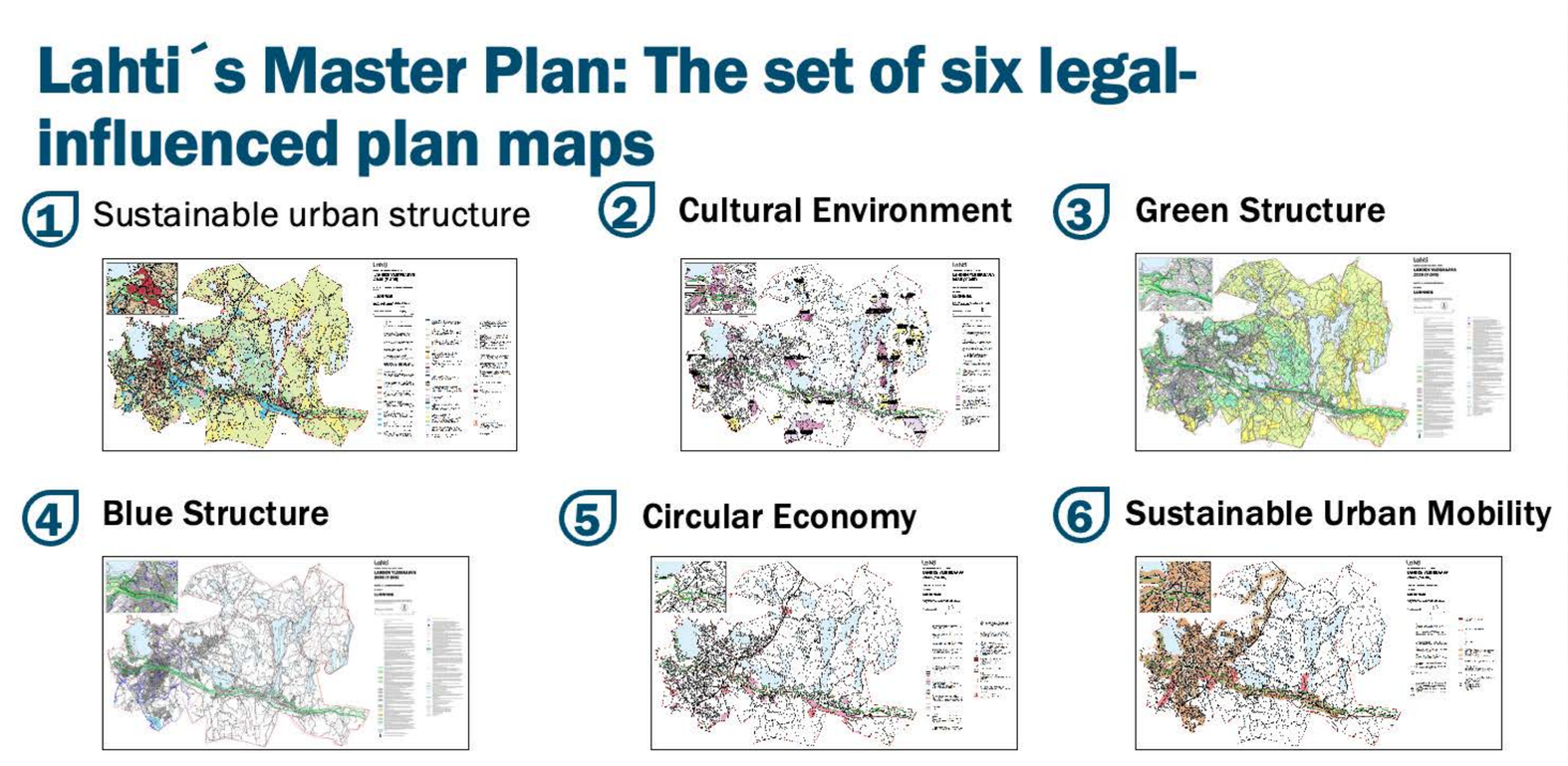


Figure 7: Lahti's Master Plan maps

STAKEHOLDER AND CITIZEN ENGAGEMENT CASE STUDIES

CITY OF KUOPIO: THE PUIJO SUMMIT, A MOTIVATIONAL EVENT FOR ADOPTING THE ONE HEALTH APPROACH

In Kuopio, Finland, professionals working on public health, environmental protection, biodiversity, and urban development realised that although each field was highly active, they were often working in silos. Sector-specific conferences brought together the same people, limiting opportunities for cross-disciplinary collaboration. At the same time, the city faced complex challenges: unhealthy lifestyles affecting residents' well-being, environmental pressures linked to urban development, and threats to local wildlife and ecosystems. To build shared understanding and align goals, Kuopio launched the Puijo Summit, an annual event on the Puijo hilltop, that brings together experts from different disciplines to explore how the One Health approach can guide planning and decision-making.

The summit combines seminars and workshops where professionals from health, urban planning, environmental conservation, academia, and community organisations meet, debate solutions, and develop collaborations. The event encourages a holistic perspective, acknowledging that promoting physical activity, sustainable urban growth, and ecosystem protection are interconnected. The initiative emerged when the city recognised that ambitious development plans and strong environmental commitments could appear contradictory. By applying One Health principles, the summit fosters multisectoral cooperation, reduces conflict in planning processes, and helps participants see how their work contributes to a shared vision for "a capital of good life."

Over time, the Puijo Summit has become a platform for new partnerships and projects that support healthier lifestyles, environmental stewardship, and animal and ecosystem protection. Participants consistently report that the summit creates a unique atmosphere of optimism, motivation, and shared purpose. A yearly “Puijo Summit Statement” publicly reinforces the city’s commitment to One Health. Kuopio’s experience shows that sometimes the most impactful action is creating a space where people can connect, learn from one another, and speak a common language, making complex challenges easier to address collectively and sustainably.

More information: here

Figure 8: One Health walk in Kuopio

CITY OF ELEFSINA: CULTURE AS AN ASSET FOR PROMOTING ONE HEALTH IN CITIES

Elefsina, the European Capital of Culture 2023, offers an inspiring example of how cultural heritage, creativity, and community life can support the promotion of One Health within cities. Rooted in its history as a major ancient Greek site and the birthplace of the Eleusinian Mysteries, the city possesses a rich identity. This distinctive identity, further shaped by its industrial past (with renovated spaces now serving cultural events) and the vibrancy of Mediterranean food, dance, and lifestyle, has been strategically leveraged to foster collective engagement, well-being, and environmental awareness.

A clear illustration of this approach is the Eco-Culture Festival, a four-day celebration of environment, ecology, and sustainability that welcomes participants of all ages. The festival shows how culture can drive environmental protection and embody One Health principles by bringing scientists, academics, artists, community initiatives and citizens together to explore the effects of the climate crisis on ecosystems and daily life, from water and food to agriculture and co-existence. Its activities included a picnic and tour of the Municipal Thermal Springs, which sparked conversations about global water scarcity and sustainable solutions, and a conference at the Municipal Observatory examining the impacts of light and noise pollution on the local ecosystem. Screenings of Greek documentaries drew attention to humanity's environmental footprint through themes of ecology, archaeology, and human geography. Weekly "Collective Kitchen: Edible City Nature – can we eat our city?" gatherings encouraged participants to reflect on sustainable urban food systems and rethink their relationship with local resources.

Elefsina’s experience highlights how cultural events can engage diverse audiences in environmental and health issues by being open, inclusive, and accessible. Culture inspires new perspectives, helps break down stigma around complex topics, and creates meaningful connections between people. Because cultural activities can take place anywhere, on streets, in schools, or with community groups, they can reach everyone and build a sense of belonging, hope, and shared purpose. Art and culture also contribute directly to well-being, helping people feel happier, healthier, and more connected to their environment.

More information: here

“Elefsina shows us that even simple and straight forward cultural initiatives can make a significant impact in linking human health, community vitality, and environmental sustainability.”

– Pascale Rouillard-Neau, Eurometropolis of Strasbourg

Figure 9: Conference on light pollution in Stephanion Observatory, Elefsina Ecoculture festival, 2024

HEALTH AND WELL-BEING CASE STUDIES

CITY OF LYON: RISK MITIGATION OF LYME DISEASE WITH THE ONE HEALTH APPROACH

In Lyon, increasing interactions among people, animals, and green spaces have created new exposure pathways for tick-borne diseases such as Lyme disease. Limited public awareness and fragmented responsibilities for green space management made prevention difficult. Aware that this challenge could not be met by public health or environmental services alone, the city adopted a ‘One Health’ approach and developed the ERATIQ project with the aim of understanding the interactions between humans, wildlife (birds and rodents), disease vectors (ticks) and the environment (urban development).

The ERATIQ project brought together researchers, veterinarians, sociologists, public health experts, municipal officials and citizen groups. Activities included monitoring tick populations and studying conditions conducive to the presence of ticks, such as vegetation type, microclimate, site use, and the presence of pathogens and rodents in urban and peri-urban parks. The 4 years of surveillance showed that tick densities were generally low in urban parks, and the risk of exposure to Borrelia burgdorferi was higher in peri-urban natural areas. These findings helped guide targeted communication and prevention. Workshops allowed stakeholders to co-design with end-users and sociologists recommendations for green space management and the implementation of public awareness campaigns.

Lyon’s experience shows that managing vector-borne diseases in cities requires a systemic, interdisciplinary approach that integrates environmental, health, ecological, and sociological perspectives. Earlier involvement of sociologists would have strengthened understanding of risk perception and behaviour change. The ERATIQ model illustrates how cross-disciplinary collaboration can improve surveillance, communication, and green-space management strategies.

As urban re-greening is increasingly used as a nature-based solution to global change, this integrated model provides a transferable method for preventing tick-borne and other vector-borne diseases while maintaining healthy, biodiverse urban ecosystems.

The project also enabled Lyon and its stakeholders to establish a lasting collaborative network — the city’s first step toward a One Health approach, which later supported deeper OH work and ultimately led to the launch of the OH4C project.

More information: here

Figure 10: Awarness raising on ticks in Lyon's urban park

MUNICIPALITY OF BENISSA: A SUSTAINABLE SPORTS HUB

In Benissa, a municipality on Spain's Costa Blanca, Mediterranean coastline and mountain areas coexist within the same territory, creating ideal conditions for outdoor sport and active tourism. With more than 100 km of marked hiking trails, a safe environment, and excellent accessibility. Benissa has become an attractive destination for both amateur visitors and elite sports teams seeking training conditions in nature. The municipality noted that the rapid growth of sports tourism and the influx of athletes increased pressure on local ecosystems and infrastructure; at the same time, they wanted to encourage healthy lifestyles among residents and protect traditional agricultural landscapes.

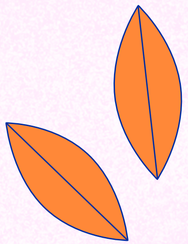
To address this One Health trade-off, Benissa implemented a strategy that links sport, tourism, environmental sustainability, and community well-being. The municipality designed eco-friendly routes for cycling, trail running and hiking that minimise erosion and protect sensitive habitats. Major events, including the international trail race Perimetral de Benissa, are organised with local businesses, volunteers, and associations, reinforcing social cohesion and supporting the local economy. Partnerships with clubs and federations encourage waste reduction and environmental awareness. Benissa is the first town in Spain adopting One Health and demonstrates that investing in nature and responsible sports tourism can generate benefits for all.

Figure 11: Professional biker in Benissa's mountains

CITY OF LAHTI: PROMOTING A PLANETARY DIET FOR PEOPLE AND NATURE

In Finland, new national nutrition recommendations published in 2024 emphasise improving public health through more plant-based eating. They call for significantly increasing vegetables, berries, and fruits, and limiting red and processed meat to 350 grams per week—a target many Finns, especially men, currently exceed. Research shows that Finnish children also consume too much red meat and dairy and too few vegetables and legumes compared to the EAT-Lancet "planetary diet," which aims to safeguard both human and planetary health.

In Lahti and the wider Päijät-Häme region, food is a strategic theme for sustainable development. The region is home to Food Campus Finland, a collaboration between major food companies, farmers, education institutions, the City of Lahti, and the regional development agency. Focusing on plant-based innovation, circular bioeconomy, and research, the platform aims to increase the value and international visibility of Finland's food sector. This work supports the goals of Lahti's Nature Step to Health programme, which highlights healthy and sustainable diets as a key measure.



Municipal public food services play a central role in shaping children's and young people's eating habits. In Lahti, early childhood education and schools serve as everyday settings where children can learn to appreciate new flavours and healthier choices. Päijät-Häme Food Services aims to increase the share of plant-based meals, ensuring that all families—regardless of resources—have access to nutritious, climate-friendly foods.

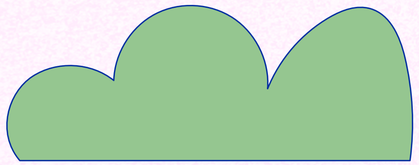
Schools in Lahti have piloted new recipes, tasting panels, and participatory food education, encouraging students to give feedback and even co-create dishes. Successful experiments, such as locally sourced Vesijärvi fish patties, demonstrate how pilots can become long-term practices. Ongoing work includes tasting panels, expanding food education through the Environmental Education Programme, and seeking project funding to scale development. Together, these efforts promote a dietary shift that benefits both human health and the environment.

Figure 12: Farming of organic food for schools

MUNICIPALITY OF LOULÉ: ACTIVE SUMMER FOR HEALTHY PEOPLE AND ECOSYSTEMS

In Loulé, a coastal municipality in Portugal's Algarve region, is challenged by climate change stressors such as heatwaves and water scarcity while there are increased risks of sedentary behaviour and social isolation, particularly among older adults and low-income residents. Tourism places a strain on local ecosystems through waste generation and intense use of beaches and public spaces.

To encourage healthy lifestyles and foster responsible interaction with nature, the municipality created Active Summer ("Verão Ativo"), a programme offering free or low-cost outdoor activities across parks, beaches, and community spaces, accessible to people of all ages. The initiative promotes well-being through physical activity, social connection, and environmental stewardship. Activities include yoga, guided coastal walks, inclusive fitness sessions for seniors, water sports, cultural workshops, and awareness sessions on marine conservation and waste reduction.



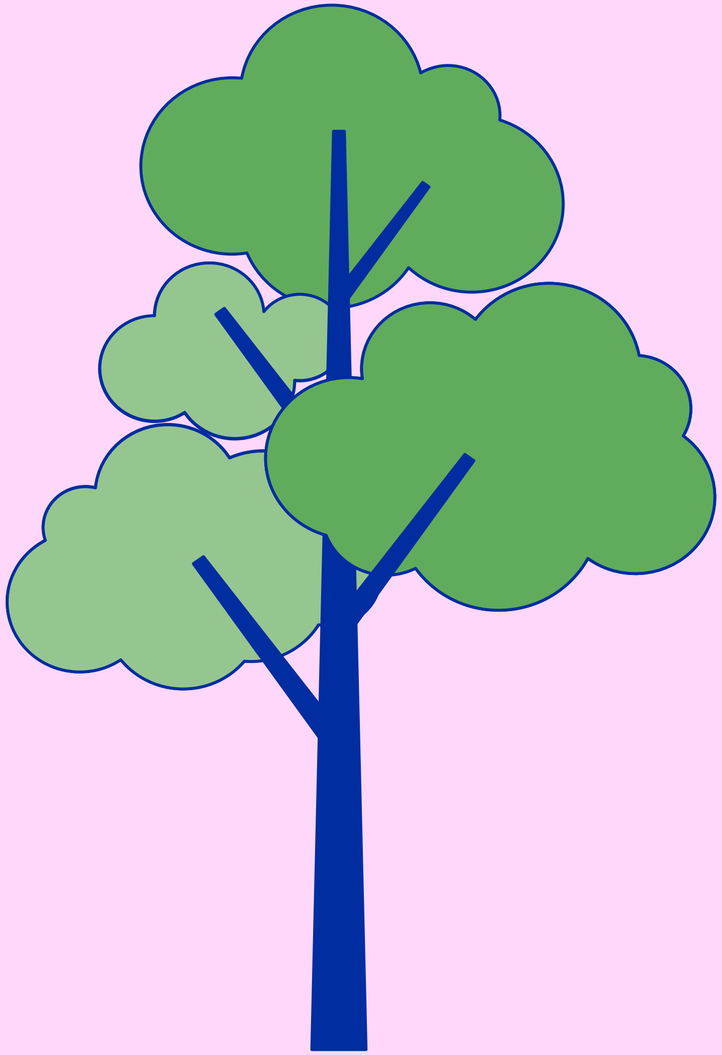
The Active Summer operates through collaboration between public health services, schools, sports clubs, NGOs, and local associations, ensuring that activities are inclusive and adapted to different needs and abilities. The programme shows how closely human well-being is tied to the environment, encouraging both locals and tourists to appreciate and look after the places they enjoy. The next step for Loulé is to consider how people can benefit from nature but without disturbing the habitats and have a harmonious co-existence with animals.

More information: here

Figure 13: Exercice in nature

ONE HEALTH FOR CITIES

TOOLBOX INDEX



THIS SECTION PROVIDES A SUMMARY OF THE AVAILABLE TOOLS

Access the Toolbox: here

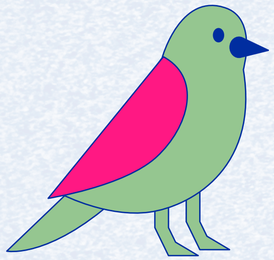
POLICY AND PLANNING

1. ONE HEALTH GOVERNANCE CANVAS

The One Health Governance Canvas is a practical tool to help city makers systematically collect, map out and understand the key components of One Health Governance.

2. ONE HEALTH STAKEHOLDER MAP

The One Health Stakeholder Map helps identify key stakeholders involved in the One Health approach within the city, including those from human, animal, plant and environmental health sectors. It also brings insights into what type of stakeholders are missing.



3. ONE HEALTH KNOWLEDGE AUDIT

The One Health Knowledge Audit supports cities to understand which One Health knowledge already exists, where this knowledge resides, and how it flows across departments. This tool helps in organising existing knowledge, identifying strengths, gaps, and opportunities for better collaboration. It is an easy guide with plenty of ideas for improved organisational capacity.

4. GENDER AND SOCIAL INCLUSION CHECKLIST FOR ONE HEALTH

This checklist is a practical tool for cities developing or implementing a One Health–integrated strategy. It helps local teams ensure that all dimensions of health - human, animal, plant, and environmental - are considered together, and that gender equity and social inclusion are embedded throughout the process.

5. ONE HEALTH BOARD GAME

The One Health Board Game is an engaging, educational and fun way to discover the principles of One Health. Players make decisions that protect their own well-being as well as the health of other humans, animals, and the environment. Working together, they must ensure that everyone can survive and thrive. Can you make the right choices and keep every part of the One Health community healthy and happy?

6. ONE HEALTH QUIZ (FRENCH & ENGLISH)

A fun and surprising quiz that reveals how human, animal, plant and environmental health are connected in everyday life. Designed for everyone (no background needed) this tool uses simple questions with unexpected answers to raise awareness and spark curiosity about the One Health approach. It can be used as an informative energiser in meetings about One Health.

7. ONE HEALTH VIDEO - ONE HEALTH IN CITIES, ONE HEALTH FOR ALL (FRENCH & ENGLISH)

The One Health 4 Cities video provides a simple and visual explanation of what One Health in Cities means and why it is important. This video can serve as introductory content for engaging with a new group on the topic of One Health in cities. Watch the video here.

8. THE WHEEL OF ONE HEALTH CHALLENGES (FRENCH & ENGLISH)

An interactive tool to engage the public with 12 everyday One Health challenges, like light pollution, waste management, and vector-borne diseases. For each topic, participants discover the issue, understand its co-risks and co-benefits across human, animal, plant and environmental health, and are invited to propose concrete actions. A dynamic and participatory way to bring the One Health approach to life in cities and communities.

COMMUNITY ENGAGEMENT

9. OBSERVATION GRID - EXPLORE LIFE IN SCHOOLYARDS

An educational and observational observation grid that transforms the schoolyard into a living micro-ecosystem. Using the One Health lens, participants explore how elements like air, ground, water, biodiversity, and infrastructure interact and impact human, animal, plant and environmental health. Through simple questions and guided reflections, users identify risks, co-benefits, and propose ideas for healthier, more sustainable spaces.

10. ACTION IDEAS FOR ONE HEALTH

The Action Ideas for One Health helps to collect ideas for actions from a large number of stakeholders and especially citizens. It can be at once during a workshop, or on a one-to-one basis, in-person or via an online survey. It helps users to think about One Health aspects not only within their interests and knowledge but across all topics.

11. ONE HEALTH ROLE PLAY

The One Health Role Play is an interactive card game that allows participants to take on the roles of a plant, human, animal, or ecosystem. Through this engaging simulation, players collaborate and negotiate to address challenges and opportunities in urban planning while considering the interconnectedness and co-existence of all components of an urban area. The game fosters creative problem-solving, empathy, and a deeper understanding of the One Health approach in a city context.

12. PARTICIPATORY CITIZENS WORKSHOP

The workshop creates an interactive environment for citizens, stakeholders, and local politicians. Utilising a drop-in format, it encourages community engagement and discussions around health within the One Health framework, which emphasises the connection between human, animal, and environmental health.

MONITORING AND EVALUATION

13. ONE HEALTH FOR CITIES SCORE TOOL

The One Health For Cities Score Tool is an evaluation framework designed to help cities assess the integration of One Health principles across their strategies and actions. This tool provides a structured checklist that covers key areas of the One Health approach, enabling cities to evaluate how effectively they are addressing the different areas of health and their interconnectedness within urban settings.

14. URBAN DETERMINANTS OF ONE HEALTH

The Urban Determinants of One Health were developed through a multidisciplinary effort (part of the local URBACT group in Lyon). They cover human, animal, and plant health, as well as environmental health (air, soil, water, built environment). The tool identifies urban components that may influence these determinants. This tool provides a framework for analysing urban territories from a One Health perspective and supports urban planning and management while taking all dimensions of health into account.

IMPLEMENTATION AND METHODS

15. PLANETARY WELL-BEING TIP CARDS

The planetary well-being tip cards offer easy-to-implement actions for enhancing well-being and making sustainable choices in everyday life. Anyone interested can use these cards. They are specifically designed to support well-being initiatives by guiding people toward the well-being benefits of nature and sustainable daily choices. The cards can be used in contexts such as lifestyle counselling, employment and social services, as well as in the activities of projects and organisations.

16. LEARNING WALK: HEALTH-PROMOTING URBAN PLANNING (ORIGINAL IN FRENCH, AI ENGLISH TRANSLATION)

This resource provides a practical guide for organising a learning walk, outlining the key stages of an environmental and urban-health learning process. It links major environmental determinants, such as noise exposure, air pollution, and active mobility, to real neighbourhood conditions observed at specific stops along the route. Grounded in existing literature on health impacts, the document offers an illustrative example that should be adapted to the context of your own neighbourhood. The learning walk is designed to train city makers, including municipal staff, urban planners, and other local stakeholders.

IMPLEMENTATION AND METHODS

17. ONE HEALTH SCHOOLYARDS (ONLY IN FRENCH)

This booklet provides recommendations to enrich the current approach of schoolyards in line with the ‘One Health’ approach, as spaces that promote interconnection between human, animal and plant health. It aims to encourage sustainable and collaborative practices by actively involving stakeholders (e.g. students and teachers) in the process. The booklet provides practical tools and resources to support implementation.

18. HOW TO DESIGN ONE HEALTH RISK INDICATORS AND DO MAPPING ANALYSIS (ONLY IN FRENCH)

This tool allows for the collection and integration of data on species of concern, their environment, and the interactions between humans, animals, and urban ecosystems. Information is recorded using biotic and abiotic indicator sheets, organised in spreadsheets or databases, and then mapped using GIS software. These maps enable visualisation of species distribution, identification of sensitive areas, and analysis of complex interactions among urban components, biodiversity, and health, following the One Health approach.

19. PLANTING GUIDELINES FOR SCHOOLYARDS (ONLY IN FRENCH)

This list supports the greening of schoolyard spaces by selecting plants adapted to urban constraints while taking into account the well-being of children and the ecological functioning of the site. Each species has been evaluated for its landscape and environmental characteristics, as well as for potential risks related to contact, ingestion, or allergies. A clear status is assigned to each species, either permitted or conditionally permitted, along with practical recommendations to guide planting and maintenance by technical staff and service providers. This document thus serves as an operational tool for creating nature yards that are safe, educational, and beneficial for the health of children, wildlife, and the environment.

For inquiries about this guidebook and the toolbox, contact Marlène Dussauge (marlene.dussauge@mairie-lyon.fr) and Sofia Aivalioti (sof.aivalioti@gmail.com)