

Case Examples

Supporting the Circular Economy at the Local Level

Module 3: Supporting the Circular Economy
Enhancing VLRs for Sustainable, Green, and
Resilient Recovery & Transitions



UNITED NATIONS
DEPARTMENT OF ECONOMIC
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United Cities
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Circular Cities Action Framework

The Circular City Action Framework consists of four main leverage points:

- **Rethink**
- **Regenerate**
- **Reduce**
- **Reuse**
- **Recover**





Rethink

Redesign systems to lay the foundation for circular activities and enable the transition to a circular economy

Case Example ReThink Water Refill Project in Kyiv, Ukraine



- The Free Water Refill project by ReThink gathers about 50 restaurants, cafes and co-workings in the central (most pedestrian) part of the city of Kyiv (Ukraine), which agreed to refill any cup or bottle with drinking water for free.
- On the website of the project, there's a map in which you can see all the locations in the city where they offer drinking water cost and plastic free.
- Locations have a visible 'Free Water Refill' sticker at the entrance.
- 'Pre-cycling' strategy to reduce the amount of small single use PET bottles that are often bought when people are just thirsty.



Regenerate

Harmonize with nature by promoting infrastructure, production systems and sourcing that allows natural ecosystems to thrive

<https://circulars.iclei.org/action-framework/>



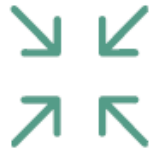
Case Example

Knotweed: Turning an invasive species into a valuable product
Ljubljana , Slovenia

- Volunteers in the Slovenian city of Ljubljana remove invasive Japanese knotweed plants, which are processed into paper on a semi-industrial level.
- The city used the resulting paper for the production of paper bags and notebooks.

<https://knowledge-hub.circle-lab.com/cities>

<https://circulareconomy.europa.eu/platform/en/good-practices/ljubljana-turned-invasive-plants-recycled-paper>



Reduce

Do better with less by using and supporting infrastructure, processes and products that are designed to minimize material, water and energy use and waste generation from production to end of use

<https://circulars.iclei.org/action-framework/>



Case Example Energy Efficiency Plan Zagreb, Croatia

- Energy efficiency is part of circular economy and eco-innovation areas the City of Zagreb is working on.
- The energy Efficiency Plan of the City of Zagreb is a one-year planning document for the implementation of energy efficiency improvement policies. The design and implementation of the annual plan is an obligation under the Energy Efficiency Act (NN 127/2014). T
- The annual plan consists of two main segments, an analysis of the measures implemented for the previous year and the calculation of the savings achieved, and the calculation and the proposed activity for the current year with the aim of achieving the planned savings and realization of the anticipated activities in accordance with the current strategic guidelines and documents of the City of Zagreb.

<https://knowledge-hub.circle-lab.com/cities>



Reuse

Use longer and more often by extending and intensifying use of existing resources, products, spaces and infrastructure

<https://circulars.iclei.org/action-framework/>



Case Example Circularity Roadmap Ljubljana , Slovenia

- Slovenia has adopted a **national circularity roadmap** aiming to use circular economics to improve the life quality of its citizens until 2050.
- The city of Ljubljana has used this national roadmap as the basis for its own circular actions, focused on three main areas:
 - ✓ Urban properties such as old bus seats or traffic signs are being refurbished and reused;
 - ✓ new platforms and infrastructure should lead to more recycling of household waste; and
 - ✓ the public cleaning firm is transitioning towards using recycled water for cleaning city pavements.
- Further steps will be taken to employ more circular initiatives, such as wood-based construction and promoting locally sourced food and goods.
- The Ljubljana roadmap serves as an example of how national strategies can be translated into specific local action.

<https://knowledge-hub.circle-lab.com/cities>

<https://www.ljubljana.si/en/ljubljana-for-you/environmental-protection/towards-circular-economy/examples-of-circular-economy/>



Recover

Eliminate waste by maximizing the recovery of resources at the end of the use phase so that they can be reintroduced into production processes

<https://circulars.iclei.org/action-framework/>



Case Example Recovering Food Waste Prague, Czech Republic

- Prague became the first Czech city to implement household food waste collection.
- To use its food waste as a resource, Prague set the ambitious goal of separating 70% of municipal waste at the source by 2035; current separation rates stand at 31%.
- The collected food waste is converted into biogas and used to power waste management trucks.
- Excess energy will be pumped back into the grid and excess waste transformed into fertilizer for local agricultural projects.
- The city also targets minimizing consumer food waste habits: waste prevention is touted by city billboards, urging residents to “buy only what you eat”, and environmental campaigns are integrated into schools.

<https://knowledge-hub.circle-lab.com/cities>

<https://www.circle-economy.com/resources/circular-prague>

Advancing the 10Rs

Smarter product use and manufacture	R0 Refuse	Make product redundant by abandoning its function or by offering the same function with a radically different product
	R1 Rethink	Make product use more intensive (e.g. through sharing products, or by putting multi-functional products on the market)
	R2 Reduce	Increase efficiency in product manufacture or use by consuming fewer natural resources and materials
Extend lifespan of product and its parts	R3 Re-use	Re-use by another consumer of discarded product which is still in good condition and fulfils its original function
	R4 Repair	Repair and maintenance of defective product so it can be used with its original function
	R5 Refurbish	Restore an old product and bring it up to date
	R6 Remanufacture	Use parts of discarded product in a new product with the same function
	R7 Repurpose	Use discarded product or its parts in a new product with a different function
Useful application of materials	R8 Recycle	Process materials to obtain the same (high grade) or lower (low grade) quality
	R9 Recover	Incineration of materials with energy recovery

Case Example Circularity strategies for plastic bottles

- **Refuse**: No bottles required. Consumer prepares drinks at home from concentrate (e.g. cola from concentrated soft drink flavours and CO2 cartridges)
- **Reuse**: Consumer cleans bottle and refills at the retailer
- **Reuse**: Consumer returns bottle to retailer who sends it to manufacturer for cleaning and refilling
- **Recycle** (high-grade, mechanical): Harmonisation of plastics. Consumer takes bottle to central collection point
- **Recycle** (low-grade, mechanical): Consumer takes bottle to central collection point.
- **Recover**: Energy recovery from incineration.

Case Example

Integrated Solid Waste Management, Maseru Lesotho

Maseru, the capital of the Kingdom of Lesotho, developed its ISWM action plan based on past experience, independent advice, baseline studies, and engagement with relevant stakeholders.

The plan is built on four fundamental pillars and an awareness platform.



- **Pillar 1: Capacity to prevent wasteful use at source.** Addresses what is consumed (sustainable consumption), how it is produced (cleaner production), where resources are routed once used (source separation), and at source value addition (re-use, composting ...)
- **Pillar 2: Strong, diversified and appropriate collection systems.** Actions include establishment of a Ward-specific and material-specific collection systems, systematic infrastructure and route planning, and optimisation of collection services by public and private recyclers.
- **Pillar 3: A healthy recycling industry.** Actions include developing the local recycling economy, establishing a regulatory framework for recycling, coordinating local recycling activities, and capacity building for implementing take-back levies.
- **Pillar 4: An environmentally safe disposal site for real waste.** Actions include integration of planning activities for the sanitary landfill site, amending environmental impact assessment, and developing the thermal capacity for using non-recycled paper.
- **Awareness Platform:** Education, built upon real and up-to-date information.

Source: ([UNEP, 2005](#))