

Sustainability Report

Linz



L_nz

2023



SUSTAINABILITY
CENTRE NORWAY

Publication prepared by
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The Sustainable Development Goals*



1. End poverty in all its forms everywhere.
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
3. Ensure healthy lives and promote well-being for all at all ages.
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
5. Achieve gender equality and empower all women and girls.
6. Ensure availability and sustainable management of water and sanitation for all.
7. Ensure access to affordable, reliable, sustainable and modern energy for all.
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
10. Reduce inequality within and among countries.
11. Make cities and human settlements inclusive, safe, resilient and sustainable.
12. Ensure sustainable consumption and production patterns.
13. Take urgent action to combat climate change and its impacts.
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development.
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

*[United Nations Department of Social and Economic Affairs](https://www.un.org/sustainabledevelopment/)

Linz at a Glance

- Traits:**
- Austria's Second Largest Business Area (6.200 Businesses)
 - Steel Industry and Machine Construction
 - University City
-

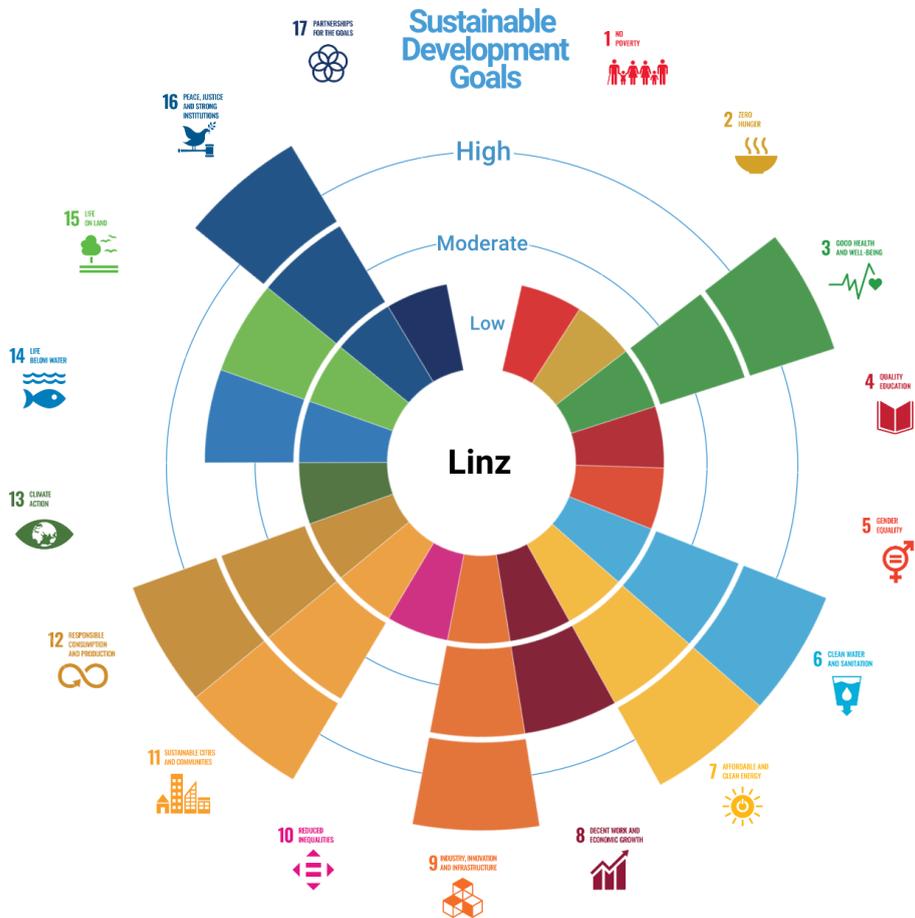
- People:**
- 211.414 Inhabitants (2021)
 - 105.077 Households (2021)
 - Third Largest City in Austria
-

- Economy:**
- 205.000 Jobs
 - 8.6% Inflation Rate
-

- Space:**
- Area 96.05 km²
 - Population Density 2,201.12 People/km²

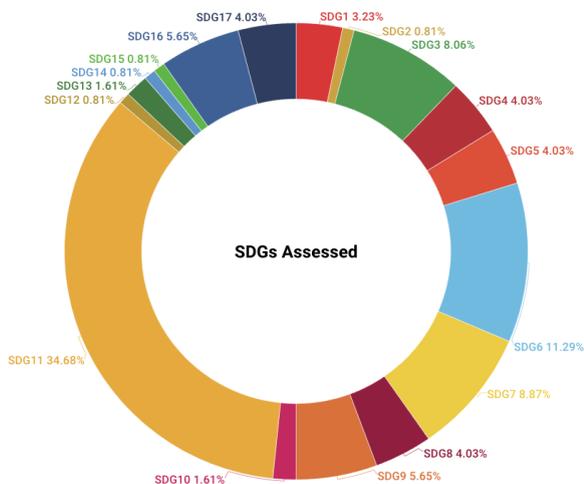


SDG Progress Report



Linz's relative SDG progress overview.

KPI Select



Percentage of data points representing each SDG.

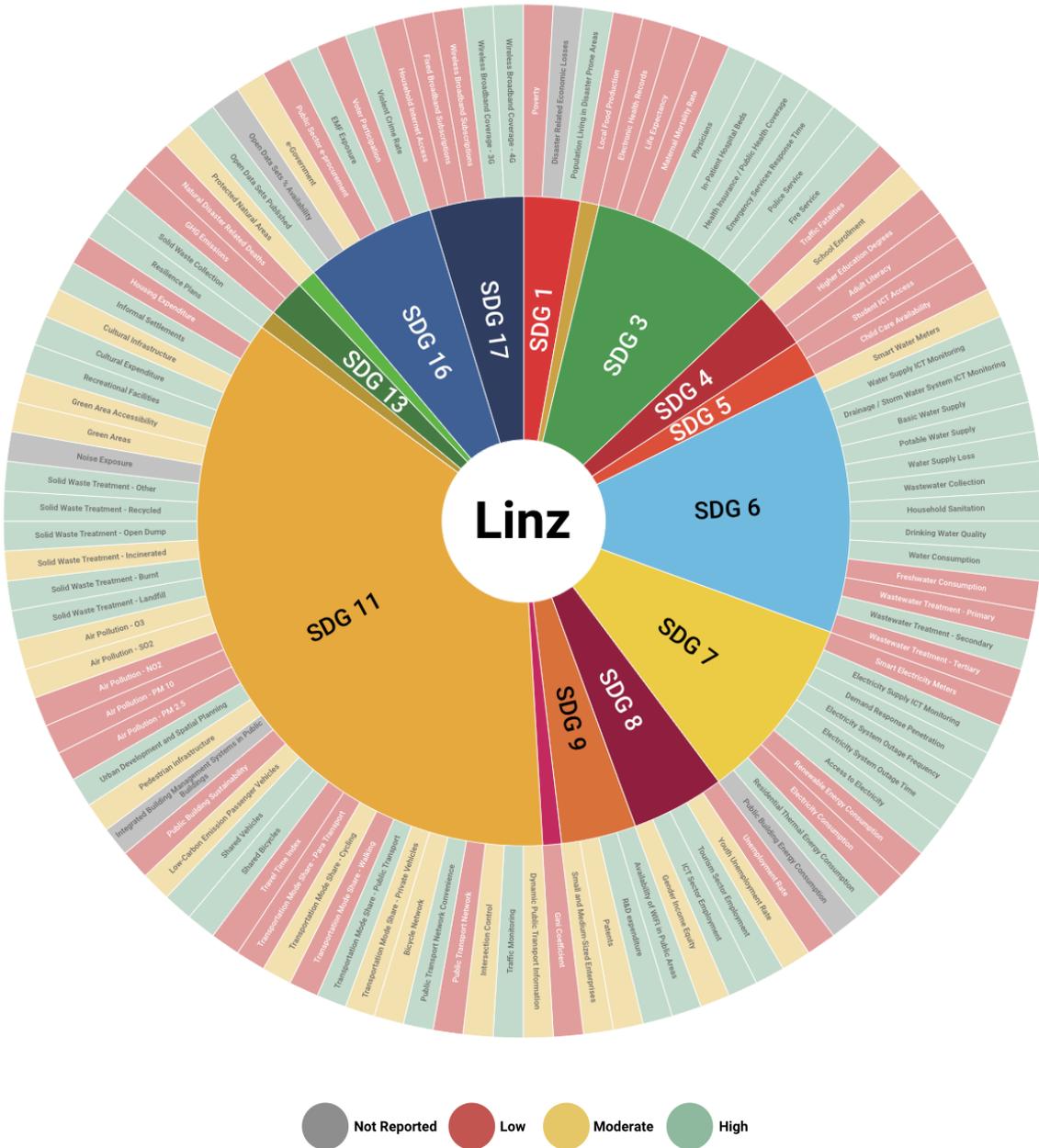
Data Assessed

- Unique KPIs: 91
- Unique Data Points: 108

Progress Scores

- **High:** Results among 25% top-scoring cities
- **Moderate:** Results in the 25-75% range of cities
- **Low:** Results among 25% low-scoring cities

The progress score will depend on the KPIs chosen for the city and the results of other cities.



Linz's relative SDG performance snapshot.

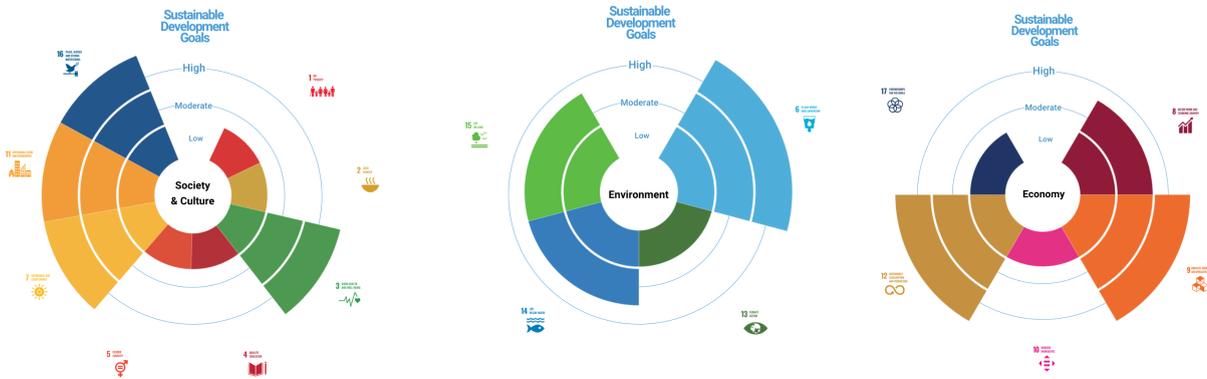
KPI Sets Used:

- U4SSC*: Yes (91)
- UN SDGs: No
- OECD: No
- Other: No

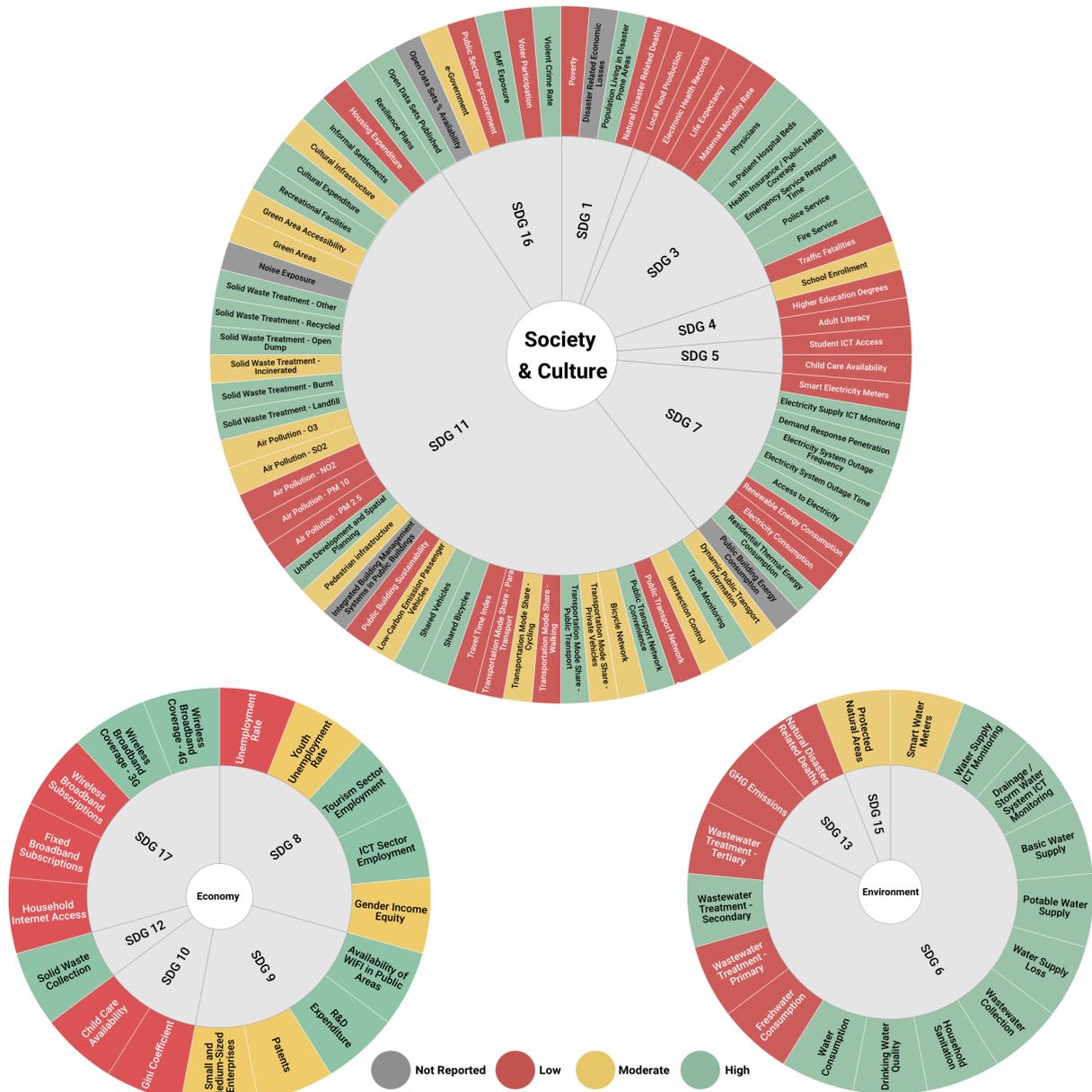
*Description of the KPIs can be found in the "Collection Methodology for Key Performance Indicators for Smart Sustainable Cities": <https://u4ssc.itu.int/u4ssc-methodology/>

Triple-Bottom-Line

Sustainability involves balance and compromise across People (Society and Culture), Planet (Environment) and Prosperity (Economy), or what is now popularly referred to as the Triple-Bottom-Line (TBL). By working in alignment with the TBL, performance is shifted beyond financial measures, and looks to incorporate a more holistic perspective to calculate impacts.



Linz's Triple-Bottom-Line performance (People, Planet & Prosperity).



Triple Bottom Line	SDGs	Data points					Percentage of total data points (124)				
		High	Moderate	Low	Data Not Reported	Data points	High	Moderate	Low	Data Not Reported	Data points
Society & Culture	1, 2, 3, 4, 5, 7, 11, 16	35	15	31	5	86	28.2	12.1	25	4	69.4
Economy	8, 9, 10, 12, 17	9	4	7	0	20	7.3	3.2	5.6	0	16.1
Environment	6, 13, 14, 15	10	3	5	0	18	8.1	2.4	4	0	14.5

Table Summary of Linz’s TBL performance. Note that some KPIs serve as data points for multiple SDGs.

The scoring helps cities assess their performance in relation to their peers and fosters a more systematic knowledge sharing among them. For cities to maintain or improve their relative performance, it is important that they address the data points with low and moderate scores, contextualise the data in their local ecosystem and convene communities of practice that can help bridge performance gaps.

Wherever the city is displaying a higher performance this information can be used both as a baseline for further improvement, as well as a potential to demonstrate how home grown solutions and services can serve a global market.

Sustainable Development in Linz

Stories about what Linz is already doing to make the city more sustainable. The following six examples show how policy objectives are translated into local practice and impact.



Climate Action Days Linz

Linz wants to become climate neutral by 2040. Citizens as well as private organisations are important partners during this journey. With the annual Climate Action Days Linz event the city celebrates climate action success stories and offers inspiring talks, poetry slams, music, art as well as drinks.



H2 Linz initiative

With the H2Linz initiative, the city has set itself the goal of taking on a pioneering role in climate-friendly production technologies - using green hydrogen as a resource and supporting local industry decarbonising their production. This includes also offering attractive education programs for new skilled personnel.



Climate Experience Room

Where exactly in Linz are the hottest and coolest places? Do you know how to spend your perfect climate-friendly day? What does our climate future look like? Answers to these and other questions can be found in the Climate Experience Room Linz.



Klima stadt L_nz

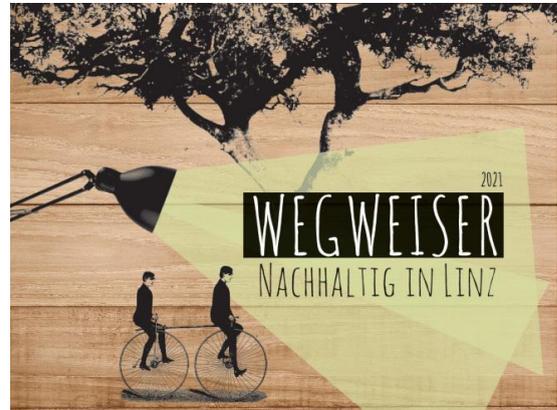
Climate Fund Linz

The local climate fund gives financial support to public and private climate projects. The fund is donated with 1 million Euro per year and is open for innovative ideas and solutions to reduce greenhouse gas emissions, to increase adaptation efforts as well as to accelerate sustainable development in Linz.



Sustainable Shopping Guide

Where can I find fairly produced clothing? Who offers regional delicacies? Where can I get help repairing textiles or appliances? The updated sustainable shopping guide on 80 pages shows a wide range of stories, eateries and initiatives with fair and ecological alternatives throughout the city.



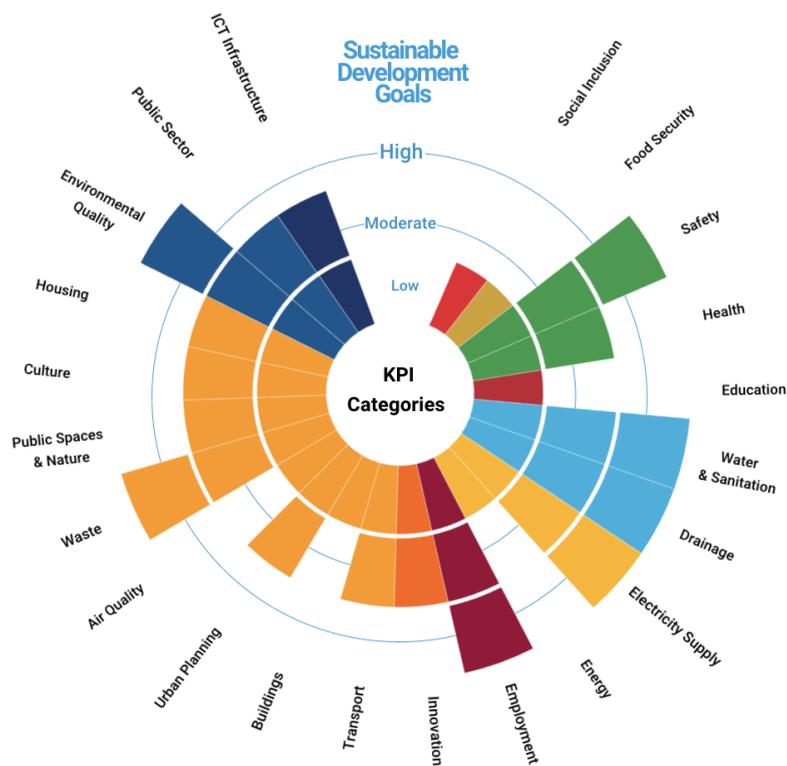
Climate Campaigners App

The Climate Campaigners app was developed under the direction of the Energy Institute at Johannes Kepler University Linz. Citizens have the opportunity to calculate their own carbon footprints and receive many different tips and fun challenges for a truly sustainable life.

Opportunities

This SDG Progress Report presented earlier offers a snapshot and starting point for an ongoing effort to ground SDGs related actions and investments in a deeper understanding of the local potential to improve returns on investments.

The KPIs for Smart and Sustainable Cities (U4SSC) forming the backbone of this report is reflective of a need to make the SDGs actionable and connect policy objectives and targets to proven solutions. It is this matching of local needs to solutions that can both deliver impact and create opportunities for Sustainable Value Creation through public-private partnerships (PPPs).



Linz's relative performance in terms of public services and infrastructure offerings.

SDG Deep Dive

	<p>End poverty in all its forms everywhere</p>	 <p>Low</p>
<p>U4SSC</p>	<p>SC: SH: SI: 3C Poverty* SC: SH: SA: 1C Natural Disaster Related Deaths* SC: SH: SA: 2C Disaster Related Economic Losses** SC: SH: SA: 4A Population Living in Disaster Prone Areas</p>	<p>4 KPIs 4 Data Points</p>

* Data for Upper Austria.

** No data currently available.

	<p>End hunger, achieve food security and improved nutrition and promote sustainable agriculture</p>	 <p>Low</p>
<p>U4SSC</p>	<p>SC: SH: FS: 1A Local Food Production*</p>	<p>1 KPI 1 Data Point</p>

* Incomplete data.

	<p>Ensure healthy lives and promote well-being for all at all ages</p>	 <p>High</p>
<p>U4SSC</p>	<p>SC: EH: ED: 5A Electronic Health Records* SC: EH: H: 1C Life Expectancy SC: EH: H: 2C Maternal Mortality Rate** SC: EH: H: 3C Physicians SC: EH: H: 4A In-Patient Hospital Beds** SA: EH: H: 5A Health Insurance / Public Health Coverage SC: SH: SA: 5A Emergency Service Response Time SC: SH: SA: 6C Police Service SC: SH: SA: 7C Fire Service SC: SH: SA: 9C Traffic Fatalities</p>	<p>10 KPIs 10 Data Points</p>

* National level data - 281000 persons in Austria unsubscribed from the electronic health record.

** Data for Upper Austria.

<p>4 QUALITY EDUCATION</p> 	<p>Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</p>	 <p>Low</p>
U4SSC	SC: EH: ED: 2C School Enrollment SC: EH: ED: 3C Higher Education Degrees SC: EH: ED: 4C Adult Literacy* SC: EH: ED: 1C Student ICT Access SC: SH: SI: 5A Child Care Availability**	5 KPIs 5 Data Points

* National level data - all persons with a literacy level of 1 or lower (including literacy-related non-respondents) according to the PIAAC-survey were counted as illiterate.

** Authorised day-care spots according to Kindertagesheimstatistik; population aged 0 to 5 years.

<p>5 GENDER EQUALITY</p> 	<p>Achieve gender equality and empower all women and girls</p>	 <p>Low</p>
U4SSC	SC: EH: ED: 1C Student ICT Access SC: SH: SI: 5A Child Care Availability* EC: ICT: ICT: 3C Wireless Broadband Subscriptions EC: ICT: ICT: 4C Wireless Broadband Coverage - 3G EC: ICT: ICT: 4C Wireless Broadband Coverage - 4G	4 KPIs 5 Data Points

* Authorised day-care spots according to Kindertagesheimstatistik; population aged 0 to 5 years.

<p>6 CLEAN WATER AND SANITATION</p> 	<p>Ensure availability and sustainable management of water and sanitation for all</p>	 <p>High</p>
U4SSC	EC: ICT: WS: 1C Smart Water Meters EC: ICT: WS: 2A Water Supply ICT Monitoring EC: ICT: D: 1A Drainage / Storm Water System ICT Monitoring EC: I: WS: 1C Basic Water Supply EC: I: WS: 2C Potable Water Supply EC: I: WS: 3C Water Supply Loss EC: I: WS: 4C Wastewater Collection EC: I: WS: 5C Household Sanitation EN: EN: WS: 1C Drinking Water Quality EN: EN: WS: 2C Water Consumption	12 KPIs 14 Data Points

EN: EN: WS: 3C Freshwater Consumption EN: EN: WS: 4C Wastewater Treatment - Primary EN: EN: WS: 4C Wastewater Treatment - Secondary EN: EN: WS: 4C Wastewater Treatment - Tertiary

7 AFFORDABLE AND CLEAN ENERGY


Ensure access to affordable, reliable, sustainable and modern energy for all



High

U4SSC	EC: ICT: ES: 1C Smart Electricity Meters EC: ICT: ES: 2A Electricity Supply ICT Monitoring EC: ICT: ES: 3A Demand Response Penetration EC: I: ES: 1C Electricity System Outage Frequency EC: I: ES: 2C Electricity System Outage Time EC: I: ES: 3C Access to Electricity EN: E: E: 1C Renewable Energy Consumption* EN: E: E: 2C Electricity Consumption EN: E: E: 3C Residential Thermal Energy Consumption EN: E: E: 4A Public Building Energy Consumption** EC: I: B: 1A Public Building Sustainability	11 KPIs 11 Data Points
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* Data for Upper Austria.

** No sufficient data on floor area available.

8 DECENT WORK AND ECONOMIC GROWTH


Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all



Moderate

U4SSC	EC: P: EM: 1C Unemployment Rate EC: P: EM: 2C Youth Unemployment Rate EC: P: EM: 3A Tourism Sector Employment EC: P: EM: 4A ICT Sector Employment SC: SH: SI: 1C Gender Income Equity*	5 KPIs 5 Data Points
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* Data for Upper Austria.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE


Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation



High

U4SSC	EC: ICT: ICT: 5A Availability of WIFI in Public Areas EC: P: IN: 1C R&D expenditure* EC: P: IN: 2C Patents EC: P: IN: 3A Small and Medium-Sized Enterprises** EC: ICT: ICT: 3C Wireless Broadband Subscriptions EC: ICT: ICT: 4C Wireless Broadband Coverage - 3G EC: ICT: ICT: 4C Wireless Broadband Coverage - 4G	6 KPIs 7 Data Points
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* Data for Upper Austria.

** Small and Medium-Sized = less than 250 employees.

10 REDUCED INEQUALITIES



Reduce inequality within and among countries



Low

U4SSC	SC: SH: SI: 2C Gini Coefficient* SC: SH: SI: 5A Child Care Availability**	2 KPIs 2 Data Points
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* National level data.

** Authorised day-care spots according to Kindertagesheimstatistik; population aged 0 to 5 years.

11 SUSTAINABLE CITIES AND COMMUNITIES



Make cities and human settlements inclusive, safe, resilient and sustainable



High

U4SSC	EC: ICT: T: 1C Dynamic Public Transport Information* EC: ICT: T: 2C Traffic Monitoring EC: ICT: T: 3A Intersection Control EC: I: T: 1C Public Transport Network EC: I: T: 2A Public Transport Network Convenience EC: I: T: 3C Bicycle Network EC: I: T: 4A Transportation Mode Share - Private Vehicles EC: I: T: 4A Transportation Mode Share - Public Transport EC: I: T: 4A Transportation Mode Share - Walking EC: I: T: 4A Transportation Mode Share - Cycling EC: I: T: 4A Transportation Mode Share - Para Transport EC: I: T: 5A Travel Time Index EC: I: T: 6A Shared Bicycles EC: I: T: 7A Shared Vehicles EC: I: T: 8A Low-Carbon Emission Passenger Vehicles EC: I: B: 1A Public Building Sustainability EC: I: B: 2A Integrated Building Management Systems in Public Buildings**	30 KPIs 43 Data Points
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<p>EC: I: UP: 1A Pedestrian infrastructure EC: I: UP: 2A Urban Development and Spatial Planning EN: EN: AQ: 1C Air Pollution - PM 2.5 EN: EN: AQ: 1C Air Pollution - PM 10 EN: EN: AQ: 1C Air Pollution - NO2 EN: EN: AQ: 1C Air Pollution - SO2 EN: EN: AQ: 1C Air Pollution - O3 EN: EN: AQ: 2C GHG Emissions EC: I: WA: 1C Solid Waste Collection EN: EN: WA: 1C Solid Waste Treatment - Landfill EN: EN: WA: 1C Solid Waste Treatment - Burnt EN: EN: WA: 1C Solid Waste Treatment - Incinerated EN: EN: WA: 1C Solid Waste Treatment - Open Dump EN: EN: WA: 1C Solid Waste Treatment - Recycled EN: EN: WA: 1C Solid Waste Treatment - Other EN: EN: EQ: 2A Noise Exposure EN: EN: PSN: 1C Green Areas EN: EN: PSN: 2A Green Area Accessibility EN: EN: PSN: 4A Recreational Facilities SA: EH: C: 1C Cultural Expenditure SC: EH: C: 2A Cultural Infrastructure SC: SH: HO: 1C Informal Settlements SC: SH: HO: 2A Housing Expenditure*** SC: SH: SA: 3A Resilience Plans SC: SH: SI: 4C Voter Participation SC: SH: SA: 4A Population Living in Disaster Prone Areas</p>

* Only data from Linz AG was included, OÖVV is considered a regional transport service opposed to a city service.

** No sufficient data on floor area available.

*** Value for all Austrian cities with population > 100.000 (excluding Vienna).

	<p>Ensure sustainable consumption and production patterns</p>	 <p>High</p>
<p>U4SSC</p>	<p>EC: I: WA: 1C Solid Waste Collection</p>	<p>1 KPI 1 Data Point</p>

	<p>Take urgent action to combat climate change and its impacts</p>	 Low
<p>U4SSC</p>	<p>EN: EN: AQ: 2C GHG Emissions SC: SH: SA: 1C Natural Disaster Related Deaths*</p>	<p>2 KPIs 2 Data Points</p>

* Data for Upper Austria.

	<p>Conserve and sustainably use the oceans, seas and marine resources for sustainable development</p>	 Moderate
<p>U4SSC</p>	<p>EN: EN: PSN: 3A Protected Natural Areas</p>	<p>1 KPI 1 Data Point</p>

	<p>Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</p>	 Moderate
<p>U4SSC</p>	<p>EN: EN: PSN: 3A Protected Natural Areas</p>	<p>1 KPI 1 Data Point</p>

	<p>Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</p>	 High
<p>U4SSC</p>	<p>EC: ICT: PS: 1A Open Data Sets Published</p>	<p>6 KPIs</p>

	EC: ICT: PS: 1A Open Data Sets % Availability* EC: ICT: PS: 2A e-Government EC: ICT: PS: 3A Public Sector e-procurement** EN: EN: EQ: 1C EMF Exposure SC: SH: SI: 4C Voter Participation SC: SH: SA: 8C Violent Crime Rate	7 Data Points
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* Total number of open data sets not available.

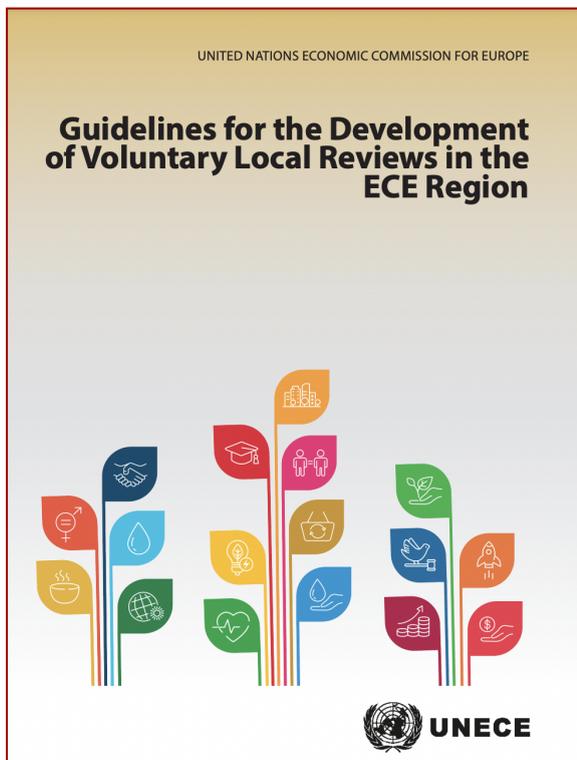
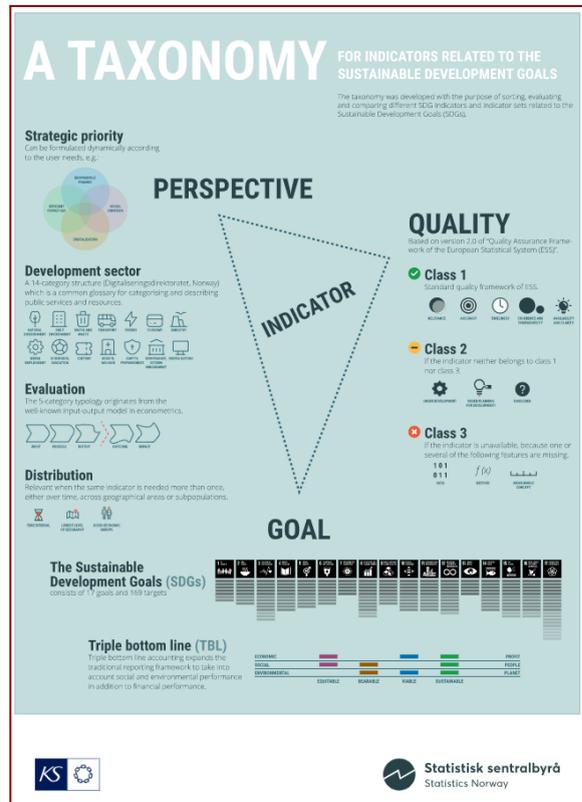
** Only tenders over € 1.000 were considered.

	<p>Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development</p>	 <p>Low</p>
U4SSC	EC: ICT: ICT: 1C Household Internet Access EC: ICT: ICT: 2C Fixed Broadband Subscriptions EC: ICT: ICT: 3C Wireless Broadband Subscriptions EC: ICT: ICT: 4C Wireless Broadband Coverage - 3G EC: ICT: ICT: 4C Wireless Broadband Coverage - 4G	4 KPIs 5 Data Points

Methodology

Data Collection

The SDG Progress Report offers a snapshot of the city's progress towards the UN Sustainable Development Goals. Depending on the overall ambitions and readiness of the city, goals and targets for sustainable development need to be carefully selected. Key Performance Indicators (KPIs) should reflect emerging goals and targets. Over the last decade, a number of standardised measurement frameworks, such as the U4SSC, have been developed. These frameworks span 100+ of indicators, and the sum total can become overwhelming. To reduce complexity and guide the optimal subset of indicators and data points, a Taxonomy (see. References) has been developed to guide cities. The Taxonomy is also a useful tool when building on the initial Progress Report.



Data Analysis

As the practical challenges linked to taking global goals and localising them using carefully selected KPIs and local data are solved, impact is best served by integrating the process as part of the city's existing operating system, all the while preparing for a reporting to corresponds to globally recognised formats such as the UNECE Voluntary Local Review (VLR) Guidelines. Making sustainable development just another part of the annual cycle and the city's governance systems and schemes for organisational development. In order to accommodate the SVC-led approach to Sustainable Development, the city can draw on tools like the SDG City Transition Framework, recognised by the EU-Commission Innovation Radar as a breakthrough Innovation (2020). UNECE VLR Guidelines is fully compatible with the SVC approach.

Knowledge Sharing and Participation

Depending on local policy objectives and priorities, the way data are analysed can differ, and so can the findings and recommendations. It is therefore useful to find some common ground on which to engage local stakeholders in a way that encompasses a multiplicity of perspectives and interests. This can be done by emphasising on the SDGs as a way of accounting for Sustainable Value Creation (SVC). Linking Sustainable Development to SVC is in line with the notion of a triple bottom line (People, Planet and Prosperity - PPP). If PPP represents a mindset, SVC is reflective of a set of distinct methods and tools to account for and link different modes of value creation, translating them into practical ways of organising stakeholder involvement, and reviewing / revising local policy objectives and action plans. Also, this approach paves the way for identifying and realising potential for creating investment ready projects (see Reference 2 on Sustainable Value Creation below).

D3.1 Framework for Bold City Vision, Guidelines, and Incentive Schemes
(SDG City Transition Framework)

+CityxChange | Work Package 3, Task 3.1
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References

1. [Taxonomy for SDG Indicators](#)
2. [Sustainable Value Creation](#)
3. [SDG City Transition Framework](#)
4. [UNECE VLR Guidelines](#)
5. [U4SSC Collection Methodology Handbook](#)