Sustainable Data Platform

draft

specification

and data use

Version PT V 1 (2020)

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Imprint

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DOCUMENT INFORMATION

Status: Version 1.1 raw draft (needs revision)

Open activities to finish this document:

- qualified review of content
- Insert a glossary (blue letters) UN sustainable development goals
- Graphics
- Text editing (EN, Translate into DE)

Additional documents in German language are (selection):

- Grobskizze-sdp_2019-10-07 (DE)
- Plattformcodex (DE) https://sustainable-data-platform.org/compliance/ (EN)
- Selbstverständnis der Plattformteilnehmer (DE)
- sdp-RAWDRAFT_2012-07-21.pptx (DE)
- sdp_02A2_CO2-COMPASS_Methodik_Textbausteine_2020-05-15 (DE)

After finishing and incorporating corrections this set of documents is to become the basis of the database structure for the sustainable-data-platform (2020 Prototyping starts with drafts).

REVISION / RELEASE OF DOCUMENT

document check Date	Status	Comment	Name	State*
1				
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DIRECTORY OF CHANGES

Change Date	Chapter	Description	Author	State*
1 2019-12-14	App. II-3	Building output	jo	
2 2020-09-04	V 1.1	Adaption to status quo	jo	u.W.
3 2021-09-22	VIII.	Consultation Frank Bartels	jo	
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* State / u.W.: under work / r: release

I. Motivation

There is a lack of reliable data for daily decisions on the way to personal decarbonisation. On the building level data-driven climate action is far from implementation. [Stiftung Energieeffizienz 2018] identifies misguiding indicators, which prevent a zero emission control of the building stock. Also for municipal decabonization data are missing. And if monitoring is carried out, it is often under pressure to produce positive results. The UN states that on the national level many Statistical Institutes are "*vulnerable to the influence of policy and interest groups*" [UN 2014].

"Mobilizing the data revolution for sustainable development: Data are the lifeblood of decision-making and the raw material for accountability. Without high-quality data providing the right information on the right things at the right time; designing, monitoring and evaluating effective policies becomes almost impossible." [UN 2014]

As long as "Climate protection" is not based on these principles "green action" is often only understood as public relation or greenwashing [Stiftung Energieeffizienz 2015]. The continuing lack of feedback mechanisms makes climate action on all levels impossible and threatens next to the climate the economic competitiveness soon. Transparency and independent monitoring has to be introduced or improved according to basic principles, defined by the United Nations (see Appendix I).

Reliable feedback mechanisms have the potential to act as a positive tipping element to halt the climate change catastrophe that has already begun for many people and creatures.

Problem-solving requires a drastic change in thinking and business models. A change can perhaps be initiated by actors who already started to integrate climate protection in their core business and who have a genuine interest in climate protection, transparency and democracy.

The necessary rapid change also requires an awareness of the respective areas of competence and agile and effective cooperation to jointly master the complexity and size of the task.

This is where the Sustainable Data Platform (sdp) comes in. sdp is an open data warehouse for feedback control of GHG emissions at the personal, building and municipal level and for the promotion of national and international climate protection.

A central feature is the recording and economic adjustment of deviations from climate protection targets. This is done with measurable indicators for personal and municipal climate protection, taking into account the planetary boundaries, SDGs and national climate protection targets.

II. Platform short description

The open sustainable data platform employs open data methods to collect, clean, and publish sustainability-related datasets for open use. It helps to accelerate the energy-transition, to improve investment and performance and supports politics bottom-up. It provides data to reach the UN sustainable development goals about e.g. affordable, reliable and sustainable energy and sustainable cities and communities (see App. III).

Information is used to monitor and control key performance indicators and to provide modular services for climate action.

The platform is a common project of civil society organizations, municipalities and sustainability driven companies who want to enable better decision-making.

Participants subscribe a compliance agreement and process data in accordance with the data quality criteria and make valid sustainable data available to the platform in accordance with the data protection guidelines or enable end users to do so (release by user). The platform offers a non-profit administration, maintanance and protection of valid sustainable data. sdp-participants provide modules free of charge for end users.

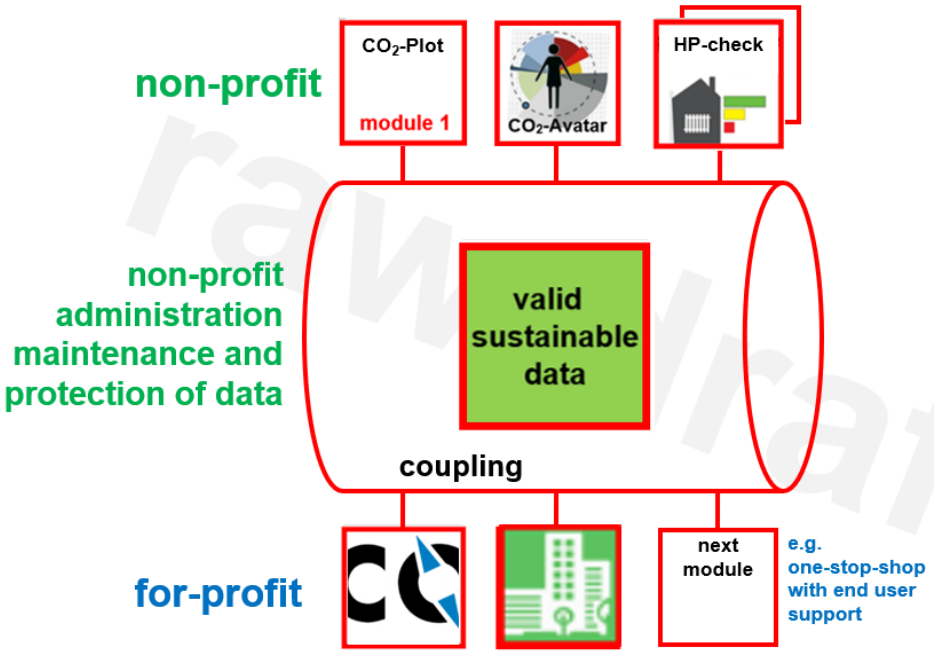

Fig. 1: sdp "engine" sketch with coupled modules for private users, companies, and municipalities

Participants furnish information e.g. of buildings, efficiency, renewable energy generation and compensation.

They may also offer energy statistics, methodology to estimate emissions, certificate prices and information on compensation, energy efficiency costs and benefits.

The platform is open to individuals, corporations and foundations internationally. It must be trusted and secure for all users of civil society and companies.

III. Platform values

The platform is a joint initiative of various network partners, some of whom have been active in the field of energy system transformation and climate protection for decades.

In our eyes, the climate crisis is an expression of a misguided development, which is also reflected in crises such as species extinction or regional and global increase in social injustice.

To overcome this misguided development it needs rapid climate action exchanging best available tools and frontrunner know-how from the profit and non-profit sector.

commitment of the sdp-participants (DE)

Controlled by non-profit civil society

In the hybrid Sustainable Data Platform, non-profit and for-profit participants from different areas work together. The participants agreed on a platform compliance as the basis of the public welfare-oriented work, which demonstrably promotes sustainable business models.

The compliance prohibits the commercial use of data against punishment and defines the orientation towards sustainability, climate protection and the independent and democratic handling of data.

On this base the sdp as an open data warehouse offers participating companies the development of business models that demonstrably contribute to climate protection.

The sdp claims to expand as a comprehensive tool with IoT, big-data, AI and social networks.

For the data-warehouse creation and e.g. programming work, technical requirements, the compliance, and ethical principles like the Principles for the UN Data Revolution (Appendix I) must be implemented in database architecture, algorithms and security concepts. This draft of a specification is used for this purpose.

A Civil Society Inspectorate (CSI) monitors the compliance with the binding regulations for the participants.

Open source and open data and tools

Participants provide existing copyright-protected software for the economic optimization of e.g. sustainable buildings and settlements as open software. The algorithms will be made available for free open source use and integrated into the sdp. Licensees commit themselves to handle algorithms and data in the same way.

E.g. in the case of the buildings the data processed in the algorithms is usually provided by building owners. Personal data "belong" to the building owners or users and can be completely deleted by them at any time with the additional information they contain (including master data). Not deletable are building referred data used in aggregated form as a basis for decisions without reference to persons.

Non-personal data (e.g. anonymised "valid sustainable data") is stored permanently and anonymously as "open data" and made available to the community in compliance with data protection regulations.

For these data it must be ensured that no traceability to the data supplier is possible.

Never again should it be possible to say "we didn't know". No one should be invisible. This is the world we want - a world that counts [UN 2014]

If the sdp value kernel and/or the algorithms are used on another platform, an licensed interface must be used to ensure that the data from this platform can be exchanged.

Democratic handling of data

European cities such as Amsterdam and Barcelona have begun the digital transformation of their processes. Their experiences illustrate the possible high benefits of digital systems, but also possible misuse (Bass 2018).

Data enable digital participation and transparency[1] "but if we adopt a naive approach, the data soon threatens to no longer belong to citizens and communities [Bass 2018]".

"Cities want to be 'smart', connected, and data-driven, but in doing this many are unwittingly engaging in large-scale surveillance of citizens.

Without greater transparency or accountability around these operations, cities risk a collapse in public trust" [Bass 2018]

It is to ensure that the handling of data at sdp is solely in the interest of the common good and in accordance with the best available democratic standards following the forementioned Principles for the UN Data Revolution.

The goal is therefore to use existing standards for open software and responsible handling of data and to participate in their further development.

[1] TADA Manifesto, Amsterdam; City of Barcelona's Digital City Roadmap (Sentilo, Decidim); New York's Algorithmic Transparency Bill

IV. Sustainable Data

The platform starts with bottom up building and efficiency data. Input data are e.g. energy metering data. Output is in the form of monitoring for building owners, comparisons e.g. in a commune and maps and outline graphics in support of politics.

The platform uses only qualified data from calibrated metering and best transparently documented methodology. Data is sourced from e.g. private persons, metering companies, regional agencies, real estate and energy delivering companies, wikis and public upload facilities.

Definition of valid sustainable data[2]

Empirical evidence in the German building sector (ReConGeb study) shows that even small amounts of valid sustainable data (vsd) enable sustainable action, provided that they are collected in a representative manner and are provided with the necessary context information [Stiftung Energieeffizienz 2018].

valid sustainable data are data suitable for use in a data warehouse with a high data quality with regard to errors in recording or processing, which are equipped with context information in such a way that they enable sustainable action. vsd refer to KPI (key performance indicators) that enable the control of relevant processes.

The collection and presentation of vsd serves the public information and development of sustainable structures and business models.

vsd is endangered, for example, by contamination, manipulation, suppression of holistic representations or withholding of essential contextual information.

Where sustainability serves verification or advertising purposes, the data collection and presentation is oriented, for example, to particular interests. This data is delimited as non-valid and representative data outside of a quality classification.

In the German building sector, for example, the Energy Efficiency Foundation assumes that > 95 % of the data can be assigned to this category ("EnEV problem").

This results in a lack of valid data as well as the possibility of misleading, especially through manipulation in the sense of particular interests.

[Stiftung Energieeffizienz 2018] and [Stiftung Energieeffizienz 2019] show the high economic benefit of a valid database, which is a prerequisite for the implementation of cost-effective GHG reduction paths.

The data provided by applications must correspond to a data model to be defined by the platform consortium. The platform provides a raw data pool for data collection. The applications that generate or collect valid sustainable data access this raw data pool. In the data model, quality-assured data necessarily follows the rules of semantization specified by the platform consortium. This ensures a value generation and data exchange within the data warehouse concept.

[2] sdp_02A2_CO2-COMPASS_Methodik_Textbausteine

V. Platform organization and financing

The platform brings together existing projects and data from different servers. To achieve first MVPs participants work together in a prototypical and module-oriented way and partly support the development of the platform structrure.

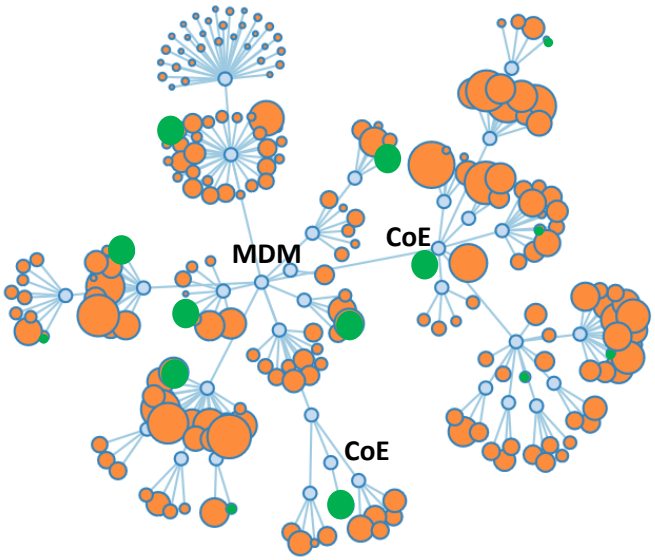

Fig. 2.: Platform structure with participants (orange), Master Data Management (MDM), Centres of Expertise (CoE) and Civil Society Inspectorate (CSI, green)

To fulfill the data quality criteria participants deliver data after cleansing by a centre of Expertise (CoE).

A CoE exists out of companies and at minimum one Civil Society Inspectorate that monitors compliance. The CoE controls data quality for completeness, content quality, timeliness, and consistency in the 6 (4) eyes principle. When the CoE confirms the data quality the Master Data Management (MDM) checks data for plausibility and supervises e.g. unauthorized changes in the database by internal and external users without tracking and other security risks for the database system.

The platform pursues the best possible data protection standard and a minimal ecological footprint by e.g. the operation of the servers. It is limited to minimal amounts of valid sustainable data. Values are collected per month or year. The platform is constructed for international hosting esp. by Foundations (block chain?).

The extension of the data-warehouse, which is built in the Version 1 prototype in 2020, pays particular attention:

- Time and budget plan
- List of resources for the introduction
- Determination of costs and time expenditure for maintenance and operation.

The launch of the platform is financed by voluntary work, donations and contribution of the platform members.

The 2020 goal is the agile development of platform modules to create first climate and social benefits through services and improved data.

In the initial phase, the Energy Efficiency Foundation will provisionally support sdp as a legal body and, in parallel, as a Civil Society Inspectorate (CSI), will monitor compliance with the binding regulations for participants.

The perspective aim is to bind the participants to, for example, an association of foundations whose statutes pursue the goals of compliance.

A value-based cooperation between sustainability entrepreneurs and civil society makes climate protection countable and helps politics and administration to do so.

VI. Platform modules and indicators

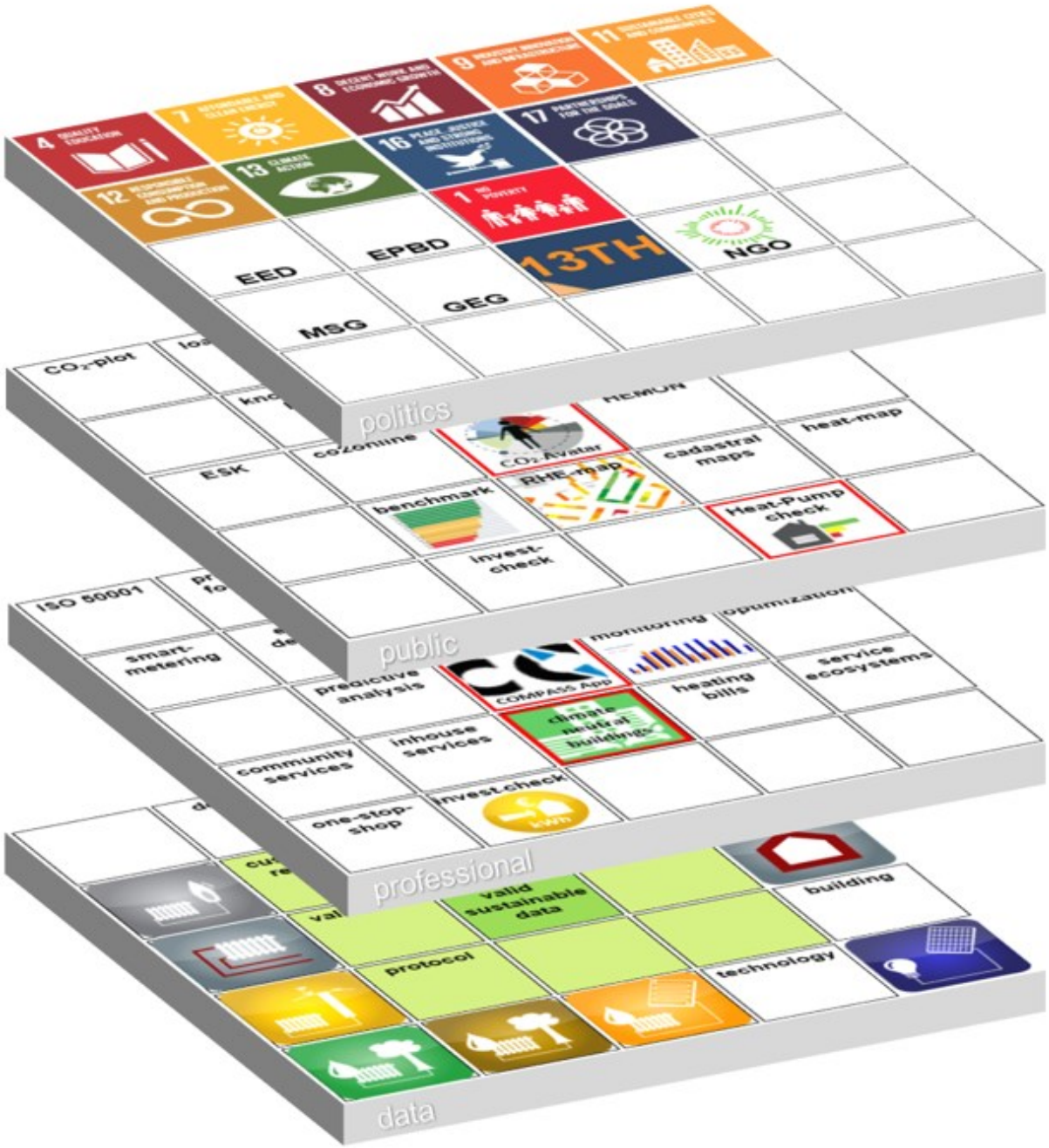

Fig. 4.: modular structure of the data warehouse highlightening (red frame) the first modules on the public and professional level. The CO_2 Avatar module for personal GHG reduction, the climate-neutral buildings module for buildings and settlements, the Heat Pump Check efficiency module and the CO2COMPASS (jointly developed municipal program). *Fig. 1* shows the coupling of the modules to the sdp.

The sdp allows the generation of a high amount of valid sustainable data, which is necessary for the profound and comprehensive control tasks and value capture. Target is the development of robust feedback standards and key performance indicators for economic target achievement and the data revolution.

CO_2-Avatar for sustainable Living (personal CO2-Footprint)

The CO2-Avatar aims to integrate sustainability and CO2 reduction into everyday life with the help of new communication media. In a matter of seconds, users get transparency about their current personal carbon footprint.

Conscious consumption and ecological effectiveness are also made possible for the masses. The CO2-Avatar serves as the CO2-COMPASS App to reach cliamte neutrality on a municipal level in 2035.

CO_2-Avatar method and indicators

Climate-Neutral Buildings

Continuous monitoring in the building sector includes standards and a basic set of energy efficiency indicators. The master data includes basic data on the building. The transaction data include e.g. measured energy consumption.

Measured data are used with a transparent methodology in accordance to estimate and compare the GHG footprint of a building or household. The sectoral key performance indicators start with a default set and are permanently updates to include e.g. grey energy and grid quality coefficients.

Climate-neutral buildings method and indicators

CO2COMPASS: Sustainable Cities and Communities

In the past, municipal GHG accounting was often inaccurate and slow, but this has been sufficient for representation purposes. The spd transfers the existing methodology into a data warehouse with services for economic decarbonization and for prompt control. The coupling with a GHG contribution survey strengthens the control effect.

1,5C target emissions are determined for the municipality and assigned to the individual households and companies. This results in a roadmap for the necessary CO_2 reduction, against which all climate protection measures in the municipality must be measured.

E.g. building owners are obliged by statute to communicate the annual energy consumption values. The CO_2-Avatar serves as a monitoring app that allows citizens and companies to read off their individual GHG footprint, including their mobility and consumption behaviour.

A municipal climate contribution is linked to the emissions of the respective buildings. The lower the current GHG emissions, the lower the contribution. This encourages citizens and companies to reduce their energy consumption. And the proceeds from the climate contribution can be used to finance local climate protection measures. In this way, everyone benefits.

CO2COMPASS website (German)

VII. Platform services and use of data

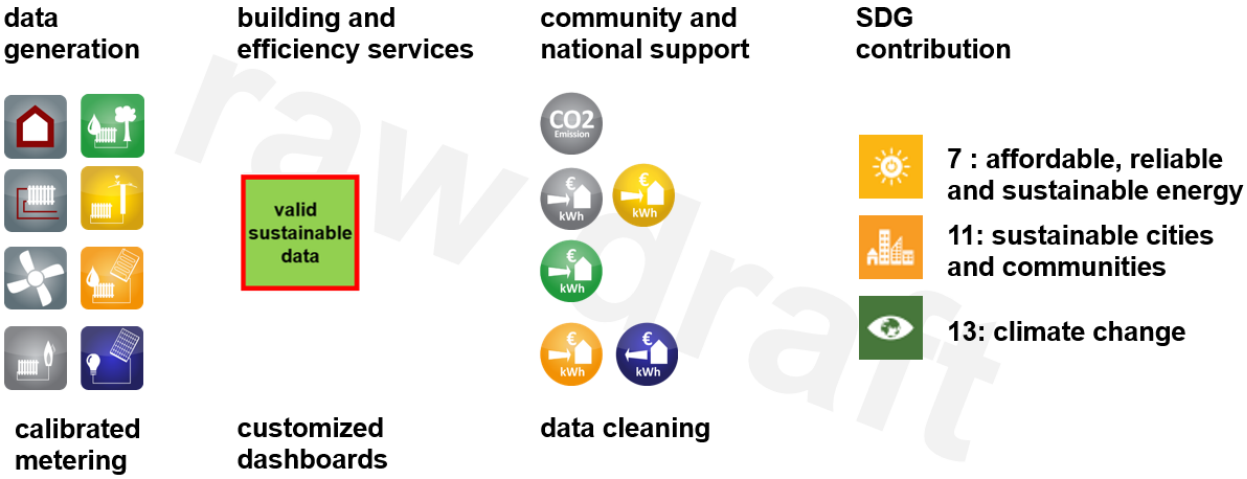

Fig. 5: Value generation and capture: Generation and multiple use of valid sustainable data

The sdp modules increasingly cover a wide range of services for private and professional users. From the user's point of view, the modules allow improved services for economic CO2 and cost savings. They also provide all participants with the necessary data for fact-based trading.

Next to the direct platform user the Sustainable Data Platform claims community support e.g.:

- Educational programs and exchange
- The strategic development of building portfolios and municipal action
- Funding and research programs
- The national efficiency strategies, statistics and evaluation of climate action
- The collection and averaging of SDG indicators (in particular SDG 7, SDG 11, SDG 13)

Customized dashboards support strategic development

For the strategic development and energy management of sustainable communities, inventories and buildings on different levels, the platform uses user-specific interactive visualizations and adapts dashboards.

VIII. Copyright and database rights

The platform uses qualified copyright like CC BY-NC-SA or ODC-ODbL permissive licenses.

Uploaded and active software applications of contributing participants and enterprises, e.g. applications developed by software developers, must be published under this defined open source license. The specification is defined by the platform consortium.

In addition, the terms of use of the company / developer can be provided with extended restrictions.

The framework for these restrictions is defined with a list of restrictions by the platform consortium.

[UN 2014]: Open data increase the transparency of public and private bodies. They also provide a basis for innovation and are the foundation for new business models. Published data can be used in apps and visualizations and combined with other data, creating new knowledge.

Part of the data is from e.g. official or semi-official sources or is copyright protected material. National and international law has to be considered, to lawfully circulate, modify and republish data.

Addition 2021-05-26 after consultation with Frank Bartels, Kiel.

Regarding methodology licensing, a simple labelling of the sustainable data platform (sdp) methods is carried out firstly. The aim is to ensure that the sdp methodology is used as intended. The platform code is initially authoritative for software licences with sdp participants.

While expanding the platform, an orderly entry route for third parties is necessary. Here, in addition to methodology licences, the licensing of software and databases must be clarified. In the course of this, e.g. CC or OKF licences should be discussed.

Change management is important to ensure that the methodology can be further developed cooperatively. It is necessary to establish a consensus among the actors and scientists involved to further develop the practice-oriented methodology and make it available under the sdp label.

IX. Literature

[BAFA 2019] Bundesamt für Wirtschaft und Ausfuhrkontrolle, Merkblatt Datenschutz und IT-Sicherheit Bundesförderung für das Pilotprogramm Einsparzähler, Eschborn, July 2019

[Bass 2018] *Theo Bass*, *Emma Sutherland, and Tom Symons*, DECODE, Reclaiming the Smart City: Personal Data, Trust and the New Commons, Why and how city governments are taking a more responsible approach to the collection and use of personal data

[Difu 2018] Deutsches Institut für Urbanistik (Hrsg.), Klimaschutz in Kommunen, Praxisleitfaden, 3., aktualisierte und erweiterte Auflage, Berlin 2018

[European Data Portal 2018] Open Data Goldbook for Data Managers and Data Holders, Practical guidebook for organisations wanting to publish Open Data, Last update: January 2018, http://www.europeandataportal.eu, Licence: CC-BY

[Free Software Foundation Europe 2018]: Interview mit Francesca Bria, Chief Technology and Digital Innovation Officer von Barcelona https://blog.3rik.cc/2018/09/wie-barcelona-eine-offene-smart-city-im-dienste-des-gemeinwohls-plant/#more-2658

[IBP 2017] Messleitfaden EnOB / EnEff:Stadt Neuer gemeinsamer Messleitfaden für Demonstrationsvorhaben im Bereich „Energie in Gebäuden und Quartieren“ Version: 06.01.2017, Verantwortlich: Fraunhofer-Institut für Bauphysik

[ICLEI 2016] ICLEI’s GreenClimateCities Handbook for Local Governments, Measuring, Reporting, Verifi cation (MRV) of Urban Low Emission Development, From strategy to delivery

[Klimabündnis 2020] Bilanzierungsmethoden für Kommunen (Abruf unter http://www.klimabuendnis.org/aktivitaeten/instrumente-und-methoden/klimaschutz-planer.html?page=62)

[Land Berlin 2019] Land Berlin, Senatsverwaltung für Wirtschaft, Energie und Betriebe, Das Berliner Open-Data-Handbuch (Version 1.0.1) , November 2019

[OKF Wikimedia 2019] Open Knowledge Foundation, Wikmedia; ABC der Offenheit; Abruf unter: https://upload.wikimedia.org/wikipedia/commons/a/a9/ABC_der_Offenheit_-_Brosch%C3%BCre_%282019%29.pdf

[OKF 2019] Open Knowledge Foundation. „Datenformate“ in “Das Open Data Handbuch”. Webseite. https://opendatahandbook.org/guide/de/appendices/file-formats/.

[Pfenninger 2017] Pfenninger, S. et al, The importance of open data and software: Is energy research lagging behind?, Energy Policy 101 (2017), online December 2016

[Stiftung Energieeffizienz 2019] “Comments on the EffStra draft” within the 10th plenary session of the Energy Transition Platform "Energy Efficiency" (Federal Ministry for Economic Affairs and Energy), https://stiftung-energieeffizienz.org/wp-content/uploads/2019/12/E-Effstra_Appell-Stellungnahme_Stiftung-Energieeffizienz_2019-12-09.pdf

[UN 2014] A World that Counts, Mobilising the Data Revolution for Sustainable Development, UN Secretary-General’s Independent Expert Advisory Group on the Data Revolution for Sustainable Development, November 2014, www.undatarevolution.org

[Xing Shi 2018] Xing Shi et al, Key Laboratory of Urban and Architectural Heritage Conservation, Ministry of Education, Nanjing 210096, China; Magnitude, Causes, and Solutions of the Performance Gap of Buildings: A Review, Nanjing December 2018

Appendix I - Principles for the UN Data Revolution

Basic Principles for the Data Revolution for Sustainable Development
Source: [UN 2014]

The data revolution will need to be harnessed for sustainable and inclusive development through proactive measures and guided by the following Key principles:

Data quality and integrity

Poor quality data can mislead. The entire process of data design, collection, analysis and dissemination needs to be demonstrably of high quality and integrity. Clear standards need to be developed to safeguard quality, drawing on the UN Fundamental Principles of Official Statistics and the work of independent third parties. A robust framework for quality assurance is required, particularly for official data. This includes internal systems as well as periodic audits by professional and independent third parties. Existing tools for improving the quality of statistical data should be used and strengthened, and data should be classified using commonly agreed criteria and quality benchmarks.

Data disaggregation

No one should be invisible. To the extent possible and with due safeguards for individual privacy and data quality, data should be disaggregated across many dimensions, such as geography, wealth, disability, sex and age. Disaggregated data should be collected on other dimensions based on their relevance to the program, policy or other matter under consideration, for example, ethnicity, migrant status, marital status, HIV status, sexual orientation and gender identity, with due protections for privacy and human rights. Disaggregated data can provide a better comparative picture of what works, and help inform and promote evidence based policy making at every level.

Data timeliness

Data delayed is data denied. Standards should be tightened and technology leveraged to reduce the time between the design of data collection and the publication of data. The value of data produced can be enhanced by ensuring there is a steady flow of high-quality and timely data from national, international, private big data sources, and digital data generated by people. The data cycle must match the decision cycle.

Data transparency and openness

Many publicly-funded datasets, as well as data on public spending and budgets, are not available to other ministries or to the general public. All data on public matters and/ or funded by public funds, including those data produced by the private sector, should be made public and “open by default”, with narrow exemptions for genuine security or privacy concerns. It needs to be both technically open (i.e., available in a machine-readable standard format so that it can be retrieved and meaningfully processed by a computer application) and legally open (i.e., explicitly licensed in a way that permits commercial and non-commercial use and re-use without restrictions). The underlying data design and sampling, methods, tools and datasets should be explained and published alongside findings to enable greater scrutiny, understanding and independent analysis.

Data usability and curation

Too often data is presented in ways that cannot be understood by most people. The data architecture should therefore place great emphasis on user-centred design and user friendly interfaces. Communities of "information intermediaries" should be fostered to develop new tools that can translate raw data into information for a broader constituency of non-technical potential users and enable citizens and other data users to provide feedback.

Data protection and privacy

As more data becomes available in disaggregated forms and data-silos become more integrated, privacy issues are increasingly a concern about what data is collected and how it is used. Further risk arises where collectors of big data do not have sufficient protection from demands from State bodies or interference from hackers. Clear international norms and robust national policy and legal frameworks need to be developed that regulate opt-in and opt-out, data mining, use, re-use for other purpose, transfer and dissemination. They should enable citizens to better understand and control their own data, and protect data producers from demands of governments and attacks by hackers, while still allowing for rich innovation in re-use of data for the public good. Within the agreed privacy constraints, people's rights to freedom of expression using data should be protected. People who correctly provide, collect, curate and analyse data need freedom to operate and protection from recrimination.

Data governance and independence

Many national statistical offices lack sufficient capacity and funding, and remain vulnerable to political and interest group influence (including by donors). Data quality should be protected and improved by strengthening NSOs, and ensuring they are functionally autonomous, independent of sector ministries and political influence. Their transparency and accountability should be improved, including their direct communication with the public they serve. This can include independent monitoring of the same public services, for example, or monitoring of related indicators such as public satisfaction with services.

Data resources and capacity

There is a global responsibility to ensure that all countries have an effective national statistical system, capable of producing high-quality statistics in line with global standards and expectations. This requires investments in human capital, new technology, infrastructure, geospatial data and management systems in both governmental and independent systems, as well as information intermediaries.
At the same time, national capacity for data science must be developed to leverage opportunities in big data, to complement high-quality official statistics. Increased domestic resources and international support for developing countries are needed to have the data revolution contribute to sustainable development. Applications of big data for the public good must be developed and scaled up transparently, demonstrating full compliance with applicable laws.

Data rights

Human rights cut across many issues related to the data revolution. These rights include but are not limited to the right to be counted, the right to an identity, the right to privacy and to ownership of personal data, the right to due process (for example when data is used as evidence in proceedings, or in administrative decisions), freedom of expression, the right to participation, the right to non-discrimination and equality, and principles of consent. Any legal or regulatory mechanisms, or networks or partnerships, set up to mobilise the data revolution for sustainable development should have the protection of human rights as a core part of their activities, specify who is responsible for upholding those rights, and should support the protection, respect and fulfilment of human rights.

Appendix II - Contribution to SDG Monitoring

The platform supports the acceleration of the SDG implementation according to the thoughts of the UN data revolution and SDG data labs https://www.sdgdatalabs.org/blogs/: “The lab should mobilise key public, private and civil society data providers, academics and stakeholders to identify available and missing data and indicators, as well as opportunities for benefitting from new methods, analytical tools and technologies to improve the coverage, timeliness and availability of indicators in each of the SDG areas” (2016)

The platform claims to support i.e. the following indicator-monitoring:

SDG 7: Access to affordable, reliable and sustainable energy

Metering the share of renewable energy

SDG 11: Sustainable Cities and Communities

SDG 13: Climate Action

SDG 16: Strong Institutions