UNECE

Data and Indicators for VLRs

Matteo Tarantino, Ph.D

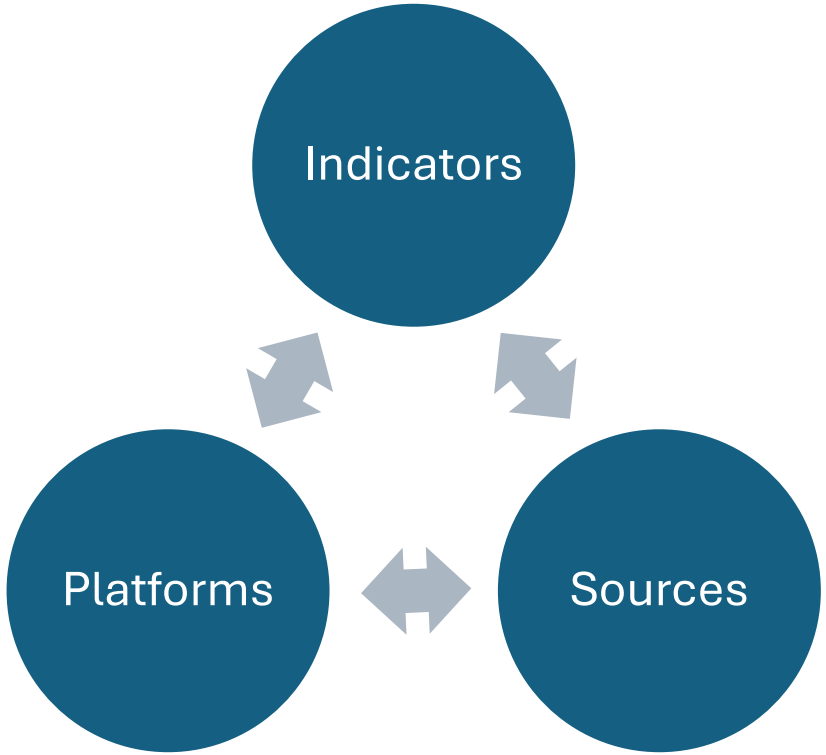
Università Cattolica del Sacro Cuore di Milano

UNIVERSITÀ CATTOLICA del Sacro Cuore

UNECE

VLRs and Data

- Indicators selection
  - A framework (or a combination of frameworks) is adopted to assess the city's situation.
  - Representativeness, Appropriateness
- Sources Assessment:
  - Available and potential qualitative and qualitative sources of information are reviewed and mapped for each required indicator and benchmark.
  - Proxy data can be evaluated here.
  - Criteria: Appropriateness, Cost, Granularity, **Data Quality.**
  - Key question: do we have data for each indicator? Can we establish a baseline and a benchmark for each indicator?
- Platform Assessment:
  - Available infrastructures for data storage are reviewed in terms of availability, scale, ease of use, durability, interoperability, security.
  - Key question: do we have a place to store all data selected which enables easy reuse of the data, now and in the future? Does it have GIS features?

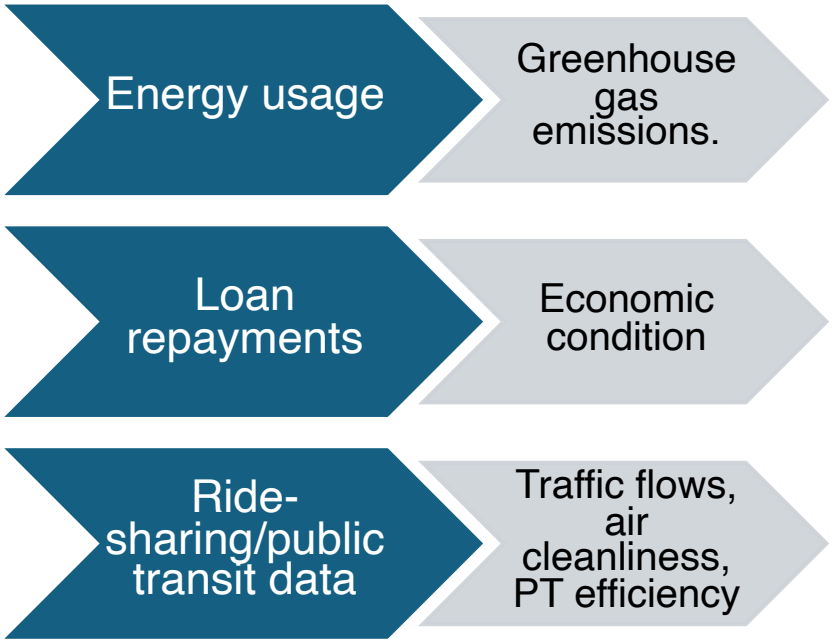


Data Quality Assesments

- Data quality assessments on data sources imply assessing objectively datasets under the dimensions of:
  - Accuracy: How many mistakes?
  - Completeness: Enough variables? How many gaps?
  - Consistency: Is data reliably recorded?
  - Timeliness: Is data up-to-date?
  - Accessibility: How easily is it to access and aggregate data for all entities involved?
- This assessment is very important to ensure long-term usability of data.
- Allocate resources. Low quality data shifts costs from acquisition to processing.

Proxy Data Selection Process

- Substitute or representative data used in place of the actual missing data.
- Stakeholder Scoping.
  - Select stakeholders potentially able to provide substitute data (institutions, private sector, academia, civil society...) and assess cost of relationships, cost of data collection and cost of data adaptation for each.
- Identification.
  - Select potential proxies able to provide insights into whatever the original indicator is meant to measure; readily available; collectable in a consistent way and long-term.
- Quality assurance.
  - Test datasets should be required from the providers in terms of accuracy, completeness, consistency, timeliness, usability and disaggregation. Open data formats should be preferred to proprietary ones.
- Selection.
  - Best results from the previous phase should lead to the selection of a single proxy indicator or an ensemble of indicators.
- Documentation.
  - Selected proxy should be made transparent and verifiable, with clear documentation of rationale, sources, collection methodologies, limitations.



Quantitative / Qualitative

- Qualitative data can integrate or substitute lacking/missing quantitative information.
- Interviews, policy reviews, media materials, reports, social media comments, all offer potential for qualitative analyses.
- Qualitative data is usually not rigidly formatted and rich in meaning: resources must be allocated for its interpretation (e.g. intercoding agreement).
- Cost of acquisition may be lower than quantitative data, but cost of processing and interpretation higher.

Impacts of VLRs on Data Infrastructures

- VLRs offer opportunities to strategically bootstrap or evolve existing assessment systems.
- VLR preparation drives the establishment of relationships, systems and skills to collect the necessary data which should be integrated in the existing infrastructure.
- This can impact the data collection, processing (including aggregation) and dissemination.

Conclusions

- Planning a data strategy for VLRs allows to foresee potential challenges and allocate corresponding resources.
- Trade-offs must be anticipated in data selection, but objective measurements help taking the right decision. Hidden costs can be mapped and reduced with proper assessments.
- When strategically meaningful, LGRs should capitalize VLRs' potential to improve overall data collection, aggregation, processing and storage infrastructures.

Thank you

Copyright © 2024 Matteo Tarantino

All rights reserved

For reproduction permission and all other inquiries, please contact

matteo.tarantino@unicatt.it