VDA | Verband der Automobilindustrie

Data Collection Format for Life Cycle Assessment of the German Association of the Automotive Industry

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Introduction

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- The German Association of the Automotive Industry (VDA) consists of automobile manufacturers and their development partners, the suppliers, and of the manufacturers of trailers, body superstructures and containers.
- Members: > 510 companies with a total of 710,000 employees.
- The VDA subcommittee for Life Cycle Assessment has been constituted in 1999 and reports to the Environmental Management Committee.
- One of the recent projects of the subcommittee was the development of a common VDA LCA Data Collection Format.
- This project was motivated by both data suppliers and data users. Data suppliers (e.g. part suppliers) suffered from the situation, that different data users asked for LCA data in different formats, in cases even for the same part. The data users had to introduce their company specific data formats to all their data suppliers.
- Therefore, it appeared that a common data collection format would benefit both data suppliers and data users by increasing efficiency and a more consistent data quality.

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Goals (I of III)

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- The VDA LCA Data Collection Format serves as a means for collection, processing and documentation of environmentally relevant process data along the life cycle of a product, specifically for the LCA-component "Life Cycle Inventory Analysis (LCI)" in accordance with the ISO 14040 series.
- There is fairly large experience of LCA data collection in the German automotive industry. Based on this real life experience, a data collection format that is intended to be actually used has to be:
  - as lean as possible and as big as necessary
  - with a clear focus on "need to have" rather than "nice to have".
- Minimum target is to get above 80% of the necessary data in more than 80% of the data requests in days or weeks, rather than 100% of the academically desired data in less than 5% of the requests in months.
- In order to supply a data collection format that is acceptable for all parts of the automotive industry, the VDA subcommittee Life Cycle Assessment has taken into consideration the following basic principles in working out this format or has adjusted them to the specific conditions (-> next slide):

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Goals (II of III)

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- It is intended that filling in the VDA LCA Data Collection Format requires no expert knowledge of the environmental management tool LCA.
- All regulations, guidelines and agreements (i.e. ISO 14040ff, BDI Code of Condcut) are taken into account.
- In general, data necessary for filling in the VDA LCA Data Collection Format could be taken from operational information and documentary systems.

  e.g. Process control systems, ERP-Systems, VDA-"initial sample test reports", IMDS, Licenses, Emissions statements and surveillance of emissions for plants requiring official approval, Waste balances and proof of disposal, Information given to fulfil the laws and/or regulations on environmental statistics, Classification of materials and preparations according to the Hazardous Material Ordinance, Internal quality and environmental management systems, Environmental reports and statements, Maintenance of occupational safety and health standards)

- Simplifying the procedure of collection, processing and documentation of data for the Life Cycle Inventory Analysis, both for data suppliers as well as users, is of utmost priority.

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Goals (III of III)

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- By standardisation of the data collection procedures, definitions and the minimum requirements, additional efforts for data suppliers as well as users can be avoided and at the same time a high degree of transparency is guaranteed.
- With regard to the trade-off between completeness and practicability, the data collection format should reflect the present state of the art of LCA in the automotive industry.
- At the same time reducing the processing times for LCA requests of various member companies will occur.
- It is definitely not the goal of the VDA LCA Data Collection Format to exceed the present state of standardised collection of life cycle inventory data by member companies or among the member companies. The respective company-specific requirements and agreements remain valid.
- It is the LCA subcommittee's common position that the present VDA LCA Data Collection Format shall be applied to all external projects in which individual or all VDA member companies participate.

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Applications

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- The VDA LCA Data Collection Format can generally be applied to the following cases:
  - ➔ Production of automotive components and sub-systems
  - ➔ Production of operating materials for automobiles
  - ➔ Production processes
  - ➔ Recovery and disposal processes.
- Additionally, for further processing the information in the life cycle inventory analysis existing data sets (e.g. for energy supply, production of basic materials, etc.) are taken into consideration by the data user.
- These data sets as well as the agreements on the use phase are vehicle-specific and producer-specific and for this reason highly variable and complex. Therefore it is not possible to compare the results of the LCA / LCI for similar components of different producers, even if they are based on the same information taken from the VDA LCA Data Collection Format.

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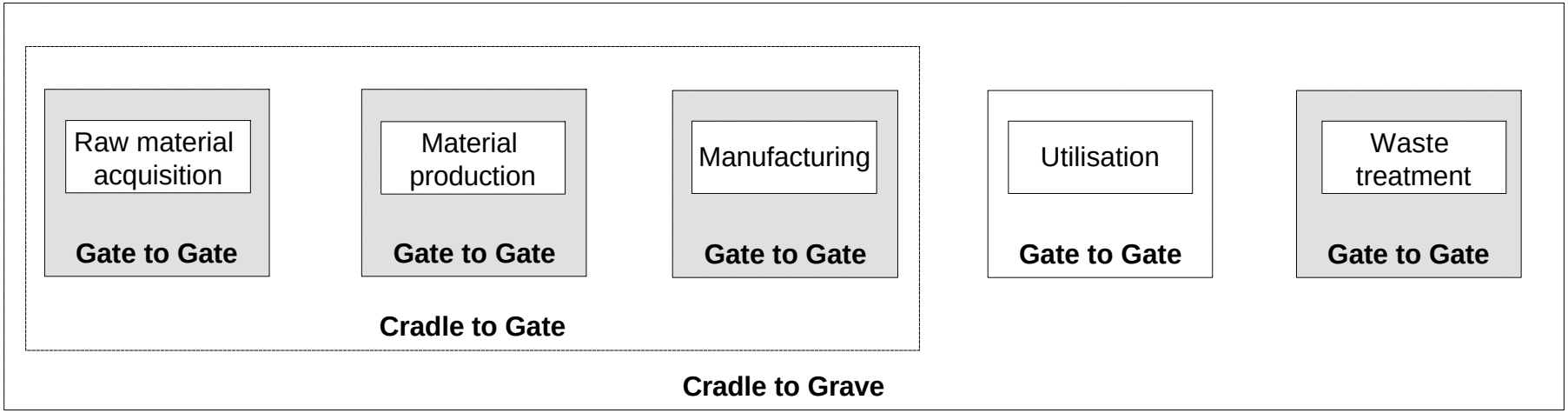
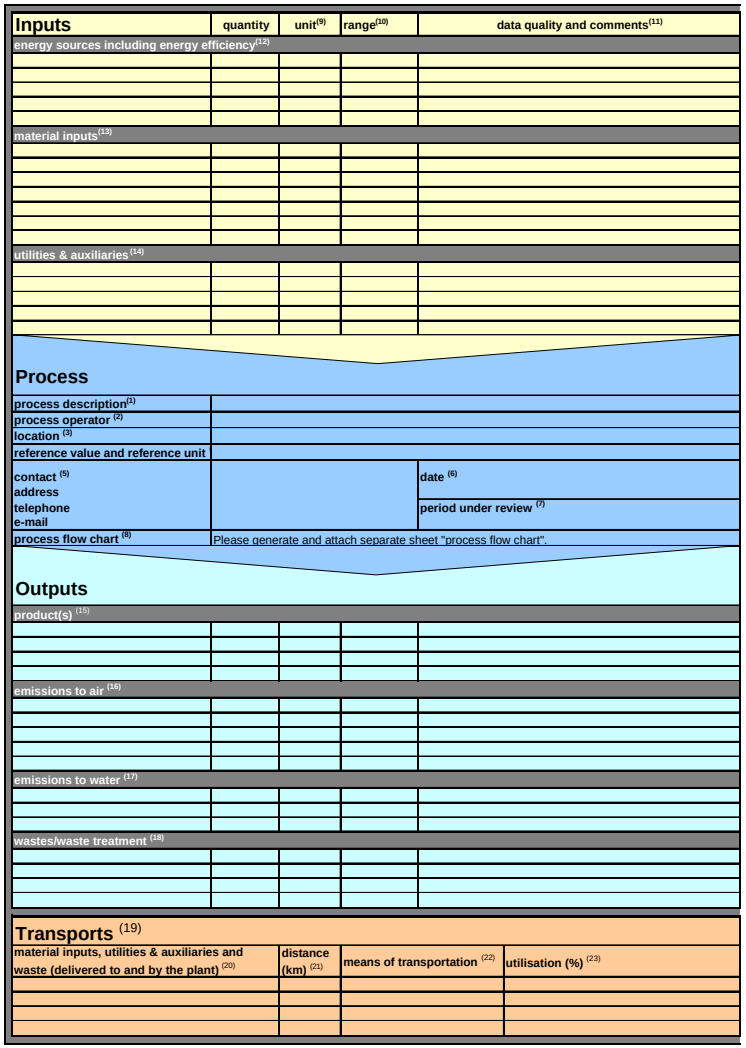
System boundary



Legend: **Gate to Gate** = **System boundary and Life Cycle Stages of the VDA-Data format**

- It allows the data user to connect the process data with background data in a consistent way.
- It does not force the data suppliers to have LCA knowledge, to compile a LCI, to purchase and use a (specific) LCA software.
- It supports transparency and provides the opportunity to make data quality checks based on technical knowledge of the processes.

Data Collection Format and Documents



Inputs	quantity	unit[9]	range[10]	data quality and comments[11]
energy sources including energy efficiency[12]				
material inputs[13]				
utilities & auxiliaries[14]				
Process				
process description[1]				
process operator [2]				
location [3]				
reference value and reference unit				
contact [5] address telephone e-mail				date [6] period under review [7]
process flow chart [8]	Please generate and attach separate sheet "process flow chart".			
Outputs				
product(s) [15]				
emissions to air [16]				
emissions to water [17]				
wastes/waste treatment [18]				

Transports [19]			
material inputs, utilities & auxiliaries and waste (delivered to and by the plant) [20]	distance (km) [21]	means of transportation [22]	utilisation (%) [23]

Manual:

1. Background and Goals of the VDA LCA Data Collection Format
2. VDA LCA Data Collection Format Spreadsheet
3. VDA LCA Data Collection Format Manual
4. Checklist for Filling in the VDA LCA Data Collection Format
5. Example of Use

Checklist:

(--> Nr. 4 above)

VDA LCA Data Collection Format Spreadsheet

(--> Nr. 2 above)

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Finally...

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- Welcome to get all available information and documents concerning the VDA LCA Data Collection Format at:

  http://www.vda.de/en/vda/intern/organisation/abteilungen/umwelt_04.html
  (English version)

  http://www.vda.de/de/vda/intern/organisation/abteilungen/umwelt_04.html
  (German version)

- Feedback is appreciated.