

**PE INTERNATIONAL**  
EXPERTS IN SUSTAINABILITY

1. Pillars
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**Set-up of national and international Databases**

- Experiences from various projects -

International Open Workshop : Worldwide efforts on LCA Databases Tokyo in 8-9 February

**PE INTERNATIONAL**  
Europe-America-Africa-Asia-Australasia

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**Pillars**  
of consistent national/international Databases set-up

- Approach that supports Requirements (goal and scope) (*pre-existing background data and know-how is helpful*)
- Consistency with technical reality (*data should reflect the supply and technology of your region*)
- Compatibility to Internationally Harmonized Reference System (*first ensure quality and consistency, than may try out conversions to any format*)
- Maintenance and continuity of updates (*ask about the plans after the database setup, responsible person/organisation*)
- Technical and methodological support (*ask about the planned support system, responsible person/organisation*)
- Critical mass to ensure technical quality of various life-cycle aspects (*a team of minimum 20 LCA experienced engineers should be constantly available*)
- A local support team is a must have (*foreign knowhow alone is not enough*)

**Basic requirements**  
Some "must haves" for successful database set-up

- Persons with know-how about national industry structure / access to **local industry experts**.
- **Industry driven data** with different existing technologies and LCA foreground and background data for efficient preparation on data collection, review and reference checks.
- **Tools for** (cost-) efficient and **consistent primary data collection** in the country (sector specific approach)
- **Persons with technological know-how** on industrial processes to validate collected/delivered information and to lead technical discussion of appropriate modification and to follow process and technological development in target region (to ensure long term representativeness)
- **Practical methods** to adapt existing process data and upstream data efficiently to desired national boundaries
- **No two database projects are the same.**  
*Some specific requirements depending on specific boundaries of database project ...*

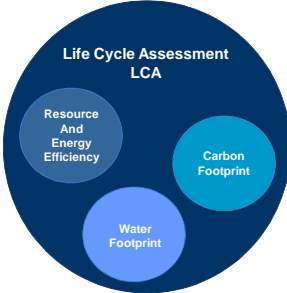
**Approach**  
Some general issues that are indeed always the same

- For LCA related issues see "ISO" and relevant branch specific pragmatic-methodological guidance (like e.g. PlasticsEurope methodology protocol) as well as harmonized **comprehensive methodological guidance** (International Reference Life Cycle Data System Handbook)
  - *The tool "LCA" is sharp enough.*
  - *No new methodological inventions needed to make it well, just practical guidance*
- Relevance screening to rank and **prioritize key sectors** and foreground technologies
- Decision on **principle pathway**: Primary data set-up, various adaption possibilities on basis of existing data or a combination (*ask for possible strategies to support your needs*)
- Decision on **degree of national specification**:
  - Background processes
  - and/or main up-stream processes
  - and/or foreground processes

→ *Stay consistent and comprehensive within your goal and scope and document it*

**LCA as know-how basis for different methodologies**  
providing data for many answers

Life Cycle Assessment as a basis for different concepts and methodologies



**Data requests are exploding !**  
LCA as part of different programs, systems and legislation:

- Integrated Product Policy (IPP)
- International Reference Life Cycle Data System (ILCD)
- Environmental Management System (EMS)
- "Fashion approaches" like footprints

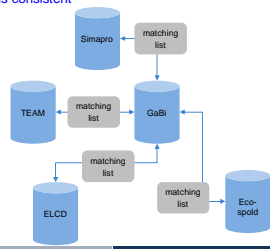
Providing quantitative answers to:

- Industries, associations, legislators, politicians
- Consultants, academics
- Consumers

→ Do once an LCA comprehensively and consistently and answer many questions !

**Topic "formats"**  
Often discussed – seldom a real problem

- **Format translation** (sometimes called conversion) is done on daily basis
- Translation via so-called "matching lists"
- Conversion does **not automatically make models consistent**
- Consistent **harmonized modeling** is core basis
- **Goal and scope definition** is most important



## Examples of Database set-ups

Theory is important – practice is essential



- **Brazil:** training and methodology report on how to set up a national database + pilot project
  - **Malaysia:** set up of a starter database based on own databases by adapting unit process data to national boundaries (emissions, technologies, mixes etc.), building national/local capability, assist in setting up infrastructure (hard- and software)
  - **Europe:** ELCD reference database based on PE data, intensive work with associations for gathering data
  - **USA:** Provision of US LCI database within professional software package
  - **Own international data bases:** 20 years experience from largest LCA group worldwide working on establishing, documenting and maintaining representative professional databases respecting confidentiality issues.
- vast experience to provide advice on "what's necessary and what not"

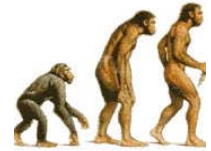
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**No worldwide database  
revolution needed....**



**... evolution towards a harmonized  
quality and format is the way to go!**



**The demand for LCA is growing fast:**

**So let's pull together and contribute that the application of quality LCAs  
can save the planet.**

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