

HOW TO FILL OUT THE INPUT-OUTPUT INVENTORY





Conducting evaluations of product or material life cycles can be intimidating and confusing for manufacturers due to the complexity involved in gathering the necessary data. An input-output data inventory, also known as life cycle inventory, often requires information that is not collected in day-to-day operations, leaving manufacturers unsure of where to start or what is precisely needed. Additionally, determining the appropriate level of detail can be challenging, as different programs and certifications have varying requirements. This flier is designed to guide manufacturers through this process, providing clarity and support in meeting data inventory requirements, and ultimately to help achieve accurate assessments.



What Information is Included in the Data Inventory?

Creating a comprehensive data inventory requires careful attention to detail and information. Begin by listing all the materials required for the product to function and specifying the material's intended use in the product (e.g., part of the product, used in installation and then discarded, packaging). Document both the quantity in pieces and the weight in kilograms for each item. Then, delve into material composition by identifying the material's makeup, along with any forming or processing methods used, and note

any coatings or finishes applied. Moving on to vendors and detail vendor locations, including information from first- to second-tier suppliers. If known, provide the material's origin and specify the percentage of material provided by each vendor. When addressing transport, list the transport modes utilized and enter in multiple modes if applicable. Include the percentage associated with each transport mode and calculate the total distance traveled, adding up across all modes.

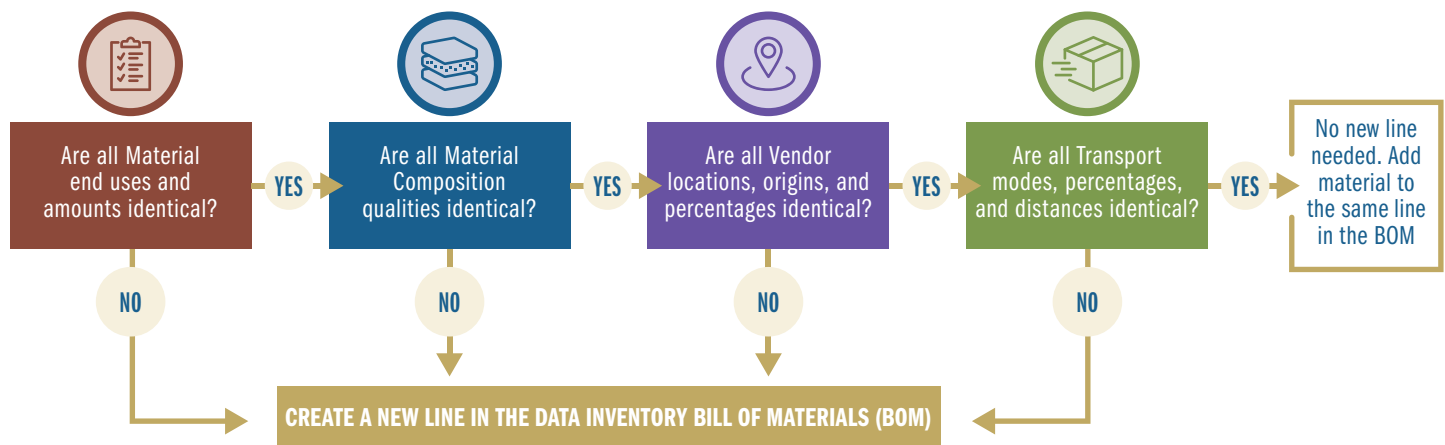
 MATERIAL USAGE <ul style="list-style-type: none">• List of all Materials required for the product to function• End use of Material (in the product)• Amount (# of pieces)• Amount (kg/item)	 MATERIAL COMPOSITION <ul style="list-style-type: none">• Material composition• Forming and processing• Coatings or finishes
 VENDOR <ul style="list-style-type: none">• Vendor Location(s)<ul style="list-style-type: none">▪ First tier, second tier...• Material origin (if known)• % material in this row supplied by vendor	 TRANSPORT <ul style="list-style-type: none">• Mode (can enter multiple modes)• % by each mode• Distance (km)<ul style="list-style-type: none">▪ Adding up all entered modes

What Level of Detail Should be Included in Data Inventory?

When preparing a data inventory, accurate detail is crucial. For each material, item, or sub-component, create a new row whenever differences appear in material usage, composition, vendor, or transport details (i.e., if any of the usage, composition, vendor or transport details are unique, a new data inventory line item will be triggered). As data is gathered, note any distinctions and ensure any differences are documented separately in the data inventory. This organized approach streamlines the assessment process and helps to maintain consistency and accuracy throughout the project.

Streamline Data inventory Data Collection with Templates

Once the required data and its organization are defined, the data collection process can be advanced using Life Cycle Inventory templates, as well as python code to simplify the process of aligning a bill of materials with the data inventory template, developed by Pacific Northwest National Laboratory. These templates and code, along with instructions and guidance on completing a data inventory are available at <https://data.pnnl.gov/group/nodes/project/34302>.



For more information or to get started visit:

<https://data.pnnl.gov/group/nodes/project/34302> or email: LCI-template@pnnl.gov