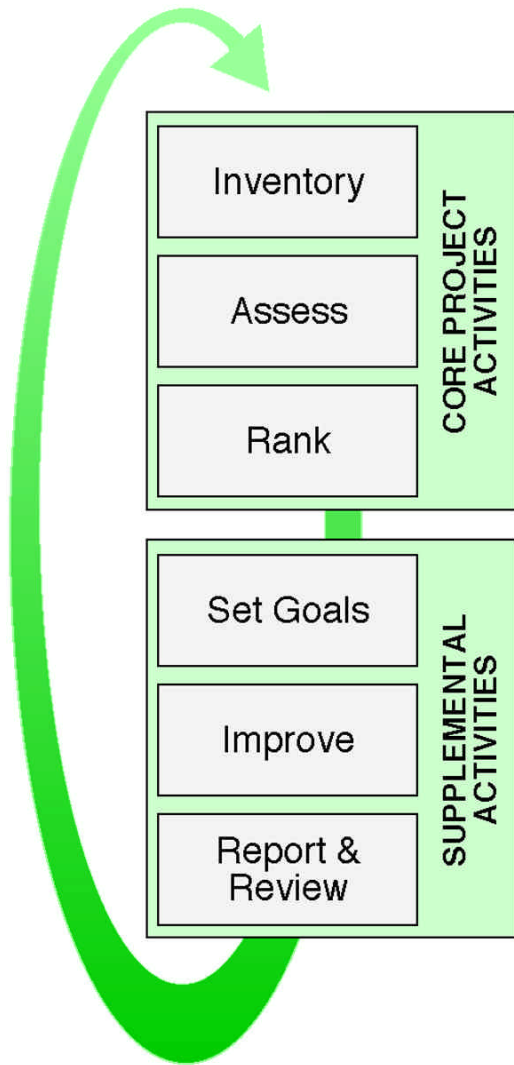


Comprehensive Chemical Improvement Process



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Zero Waste Alliance

**Working for the elimination
of waste and toxics**

Chemical Assessment & Ranking System (CARS)

Need and Overview

Chemical use is often one of the most challenging aspects for organizations to address in an environmental, health and safety improvement program. Organizations need an efficient method to understand which chemicals are of concern and why.

CARS is a decision support tool developed by the Zero Waste Alliance (ZWA) that provides a process for inventorying, assessing and ranking chemicals.

Once chemicals of concern are targeted for replacement, the CARS database can be used to support selection of chemicals with properties that are in line with the organization's priorities.



CARS Process - Core Project Activities

1. Inventory

All chemical products to be assessed are identified and Material Safety Data Sheets (MSDS) are collected. Chemical components are identified by CAS (Chemical Abstracts Service) number. The product information is then submitted into the CARS database to prepare for screening.



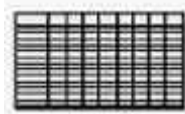
2. Assess

The chemical inventory is screened against the CARS database of chemicals of concern. The database includes:

- Carcinogens
- Endocrin disruptors
- Teratogens
- Climate change gases
- Ozone depleting substances
- Chemicals toxic to aquatic life
- Persistent, bioaccumulative and toxic chemicals (PBTs)
- State and federal regulatory chemical lists
- And more

3. Rank

The output from the database search is used as the basis for ranking. Products are ranked based on the organization's priorities and concerns; and additional inventory information such as the amount or frequency of use, different human health and safety impacts, ecological and global impacts, as well as costs.



CARS Process - Supplemental Activities

1. Set Goals

The results of the ranking are discussed and a strategy is developed based on the organization's priorities. Products or processes are then selected for improvement and goals and targets set.

2. Improve

Once products or processes are targeted for improvement, the organization identifies an individual or team to research and find alternatives. CARS can be used to evaluate the potential alternatives.



3. Report and Review

Reports on progress of the improvement projects are submitted for review. At this point, improvements and cost savings are identified, new goals can be set, and the results can be transferred to other departments, if feasible.

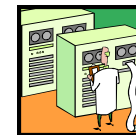
Additional CARS Services

ZWA offers support for the Core Project and Supplemental Activities at left. Additional support services include:

- MSDS information gathering support
- Assistance in setting specific targets
- Developing tracking systems
- Researching alternatives for specific products
- Purchasing support
- CARS Subscription Services

Benefits of CARS

- A safer workplace for employees
- Reduction of real and potential environmental and human health impacts
- More clear understanding of hazards related to the products and chemicals in use
- Methodology and information to reduce the number and toxicity of chemicals used
- Improved chemical and product purchasing



CARS Success Stories

- State of Oregon Dept of Admin. Services, Printing and Distribution used CARS to help identify and eliminate hazardous solvents and aerosols as part of their environmental management system implementation
- CARS enabled the City of Portland Bureau of Environmental Services Wastewater Treatment Plant to identify their "Big Five" and "Dirty Dozen" chemicals of concern as a starting point for improvements — this resulted in safer operations and cost savings
- Coastwide Laboratories used CARS to identify hazards associated with traditional cleaning product ingredients—CARS demonstrated the health and environmental benefits of Coastwide's SustainableEarth™ formulations compared to conventional cleaning products
- Lake Oswego Elementary School had "greened" their janitorial products line, making a statement to the community that health matters — CARS validated that the products were indeed free of CARS database chemicals of concern

For More Information

Contact the Zero Waste Alliance at 503-279-9383, email us at info@zerowaste.org, or check out our website at www.zerowaste.org/cars.