

Select Safer Alternatives



Step 5

Select a Safer Alternative

Safer Alternatives Goal

**Select safest alternative
compatible with
business success.**

Select a Safer Alternative

Key Steps:

- Identify tradeoffs presented by the potential alternatives.
- Compare tradeoffs presented by the potential alternatives.
- Develop a business case for management.

Key Questions

- Advantages/disadvantages of each alternative for hazard reduction, performance, cost?
- Tradeoffs between reduced hazard, performance, cost?
- Criteria for selecting safer alternative?
- Specific business sector considerations such as competition, customer concerns, company image?

Tools for Comparing Options

	Option 1	Option 2	Option 3	Option 4
Hazards				
Acute				
Chronic				
Physical				
Performance				
Quality				
Complexity/ training				
Cost				
Capital \$s				
Operation \$s				



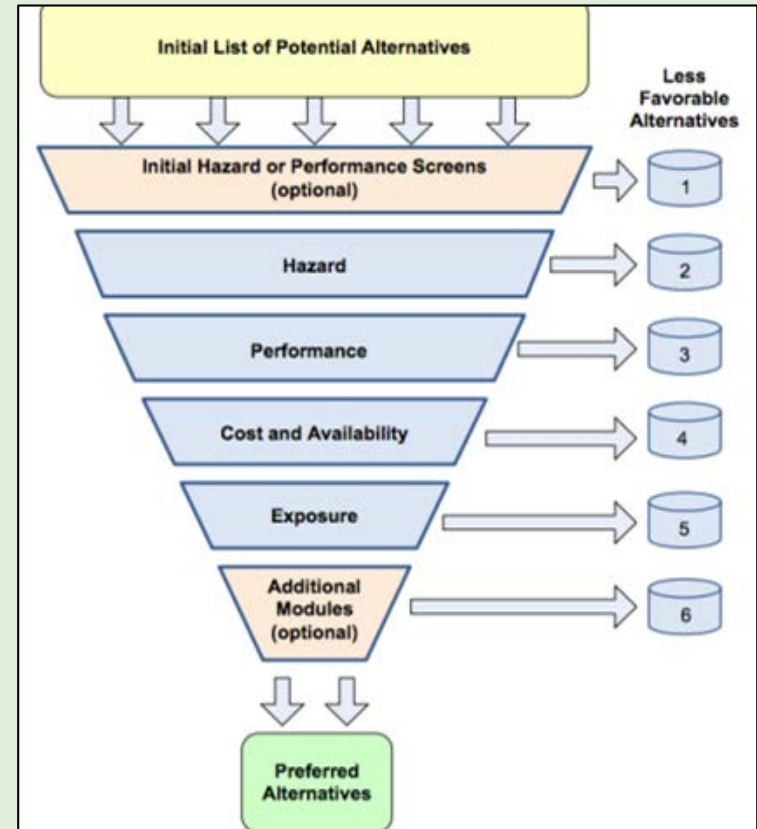
Tradeoffs

- **Most potential alternatives have tradeoffs.**
- **When weighing tradeoffs, try to establish criteria at outset for relative importance. For example:**
 - Reducing hazard most important, but can't ignore performance, cost.
 - Long-term operational cost vs. up-front capital cost.
 - Company image vs. cost.
 - Others?

Establishing a Decision-Making Process

Options include:

- **Assign weights** for factors to consider in selecting safer alternative.
- **Order consideration** of the evaluation criteria so that the most important factors are considered first.



Examples of Decision Making Guidance:

- IC2 Alternative Assessment Guide http://theic2.org/article/download-pdf/file_name/IC2_AA_Guide_Version_1.1.pdf
- A Framework to Guide Selection of Chemical Alternatives - National Academy of Science <https://www.nap.edu/catalog/18872/a-framework-to-guide-selection-of-chemical-alternatives>

Making a Business Case

Stakeholder pressures
(NGOs, investors)

Consumer health concerns

Growing customer pressures on
manufacturers/
brands/retailers

Increasing requirements
/incentives
for use of
safer
chemicals

Health and
Productivity
of workers

Federal/global/
state regulations

Company
brand image

Worker Health and the Business Case

- Important to demonstrate to owners/managers that workers' health improvements benefit business.
- Health and safety factors can be important in making that case, but **best in context of business benefits such as:**
 - Reduced costs of equipment and/or materials.
 - Increased operational efficiency.
 - Increased productivity.
 - Lower worker turnover.
 - Reduced lost worker time due to injury/illness.
 - Avoidance of anticipated regulatory requirements.
 - Improved brand image with customers/consumers.

OSHA's \$afety Pays Program

Helps employers assess their economic impacts of occupational injuries and illnesses.

Program projects amount of sales a company would need to cover those costs.

Program is a tool to raise awareness of how occupational injuries and illnesses can impact a company's profitability.

<https://www.osha.gov/dcsp/smallbusiness/safetypays/index.html>

<https://www.osha.gov/safetypays/estimator.html>

Small Group Exercise:

Selecting Safer Alternative and Making Business Case

Read through scenario:

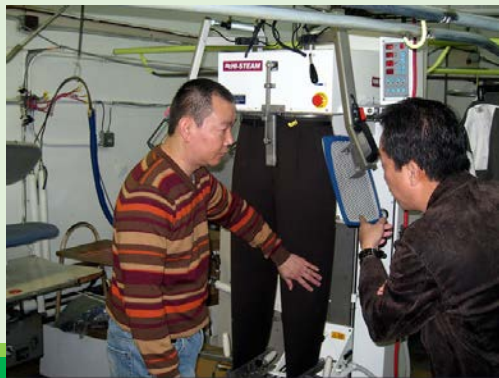
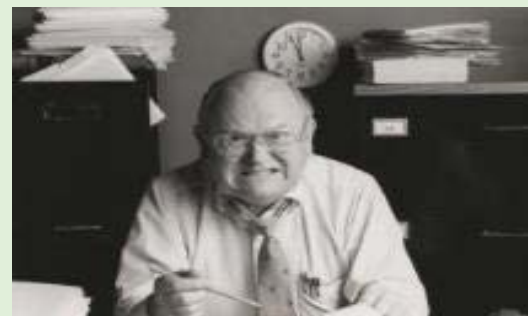
- Review materials on hazards, performance and cost.
- Rank options.
- Assess tradeoffs, pros, cons.
- Develop business case.

- Present your case to company owners concerned about:

– Cost

– Risk

– Impact on long term business





Key Lessons:

Selecting Safer Alternatives and Making Business Case

- Focus first on reducing hazard.
- Review performance/cost information.
- Making the business case.
- What are some major challenges/opportunities at each step?

Methylene Chloride

<https://www.youtube.com/watch?v=8IG6dAZE52k&list=PL43A44D61109073BC&index=1>

Summary and Review

- In this lesson we learned how to select a safer alternative, which includes:
 - **Screening** potential alternatives to avoid regrettable substitutions.
 - **Evaluating performance** characteristics of potential alternatives.
 - **Assessing costs** associated with potential alternatives.