The Hazardous Material Life-Cycle Cost (HMLCC) Model was developed to estimate the total life-cycle costs of using hazardous materials in their various applications. The model estimates costs derived from the need to transport and store hazardous materials, perform operations that involve handling hazardous materials, and the repair and maintenance of U.S. Naval systems and facilities. The five phases of the Hazardous Materials (HazMat) life cycle include:

1. Development: This phase includes the design and production of hazardous materials.
2. Operation: This phase encompasses the use of hazardous materials.
3. Storage: This phase involves the storage of hazardous materials.
4. Transportation: This phase covers the transport of hazardous materials.
5. Disposal: This phase includes the disposal of hazardous materials.

The model is designed to help decision-makers understand the economic implications of their choices regarding hazardous materials. It is particularly useful for those responsible for the management and safety of hazardous materials, as it provides a comprehensive view of the costs associated with each phase of the life cycle.

One of the most effective waste minimization programs that can be established is the active life-cycle management of hazardous materials. This approach allows material users the option to extend the life of certain hazardous materials after their shelf life term has expired.

The HAZARDOUS MATERIAL LIFE-CYCLE COST MODEL is a valuable tool for predicting the total life-cycle costs of using hazardous materials in various applications. It can help in making informed decisions about the use of hazardous materials, ensuring that the costs are efficiently and effectively managed.