

ENVIRONMENT AND RESOURCE LOGISTICS





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One of the most important challenges of this century is to design our economy sustainable and environmentally sound. This will change our way to produce and trade goods. The success of a company therefore matches increasingly the sustainable handling of our environment. Besides, the production of goods won't be only dependent on the available technologies in the future, but rather on the availability of resources. Against this background we offer an advanced ecological and economic prospect with efficient logistical concepts, solutions and processes. Our services won't end with the design of concepts; Fraunhofer IML assists you until the successful realization of our project.

Environment and Resources

Climate change, resource shortage, increasing energy prices are global topics enterprises have to face. The thus resulting change of political frame conditions and the growing environmental consciousness of society cause resource and energy efficiency to become an economic success factor.

Against this background Fraunhofer IML successfully applies methods, concepts and techniques in industrial practice which allow to dissolve the tense atmosphere between economy and ecology. Additionally, we work on the further closing of material cycles and on ensuring their profitability by an efficient logistics.

In the business field »Environment and Resources« we provide customized solutions for the following key topics:

- Ecological and economic assessment (e.g. life cycle analysis, carbon footprint, cleaner production)
- Material flow management
- Resource management
- Supply chain management for secondary raw materials

- Logistics for renewable energy carriers, e.g. biomass logistics
- Conception of material and product take-back systems
- Re-use and recycling strategies

Disposal and Recycling Management

The change from waste management towards resource and recycling management as well as the increasing cost pressure lead to higher demands on the quality and efficiency of business processes and logistics. This equally applies to enterprises of industrial and municipal waste management and for industry and trade with internal waste management tasks. In our planning and consulting projects we combine logistic expertise with know-how in legislation and our long-term branch competence. Our portfolio is completed by the »WICI laboratory«: There we examine for our clients new technologies, e.g. for their economic efficiency and practical suitability, and promote standardization efforts.

We develop the following key topics for you:

- Planning and optimization of internal and external logistics for the municipal and industrial waste management



- Internal waste management
- Planning of plants and facilities
- Mathematical optimization, e.g. district and tour planning
- Development of specification sheets, system and software selection, development of software prototypes
- WICI - Laboratory for Waste Management, Information and Communication Technologies

Construction Logistics

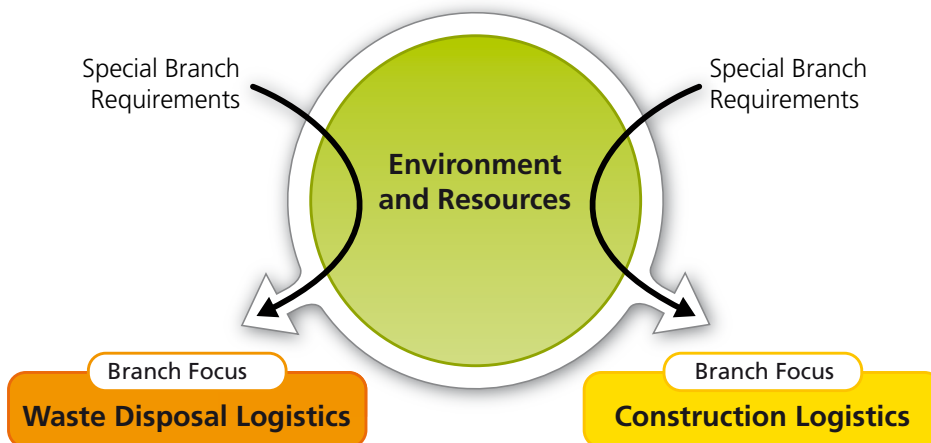
For an industry facing rather exhausted rationalization potentials in construction technology and construction processes logistics becomes more and more important as a competitive advantage. However, developers are in view of difficult surrounding conditions requested to take influence on construction logistics for their objects. For years Fraunhofer IML has been successfully working in the field of construction logistics and actively supports you in the realization of the

necessary measures for large construction sites. To this mainly count the

- Development of supply and disposal concepts
- Conception of control stations for construction logistics
- Request for proposal guidance and support of implementation

Furthermore, we provide the suppliers of the construction industry consultancy for matching their logistic processes with the needs of the construction branch:

- Optimization of enterprise logistic processes
- Design of supply chain management concepts
- Integration of information and communication technologies in construction logistics, prototype development and implementation support



The main field of our research activity and services is »Environment and Resources«. For the branch specific requirements of disposal and construction logistics we provide customized methods and specific solutions.

Fraunhofer Institute for Material Flow and Logistics IML

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