

# The EMIT Consortium

- Participate in a unique collaboration that helps to minimize the environmental impact of products and respond to restricted substance and other regulations
- Gain competitive advantage with early access to a comprehensive suite of eco design tools
- Increase the quality, integrity, and traceability of the materials information required to make critical decisions on environmental impact
- Enable data mining and provide engineers, designers, and others the information that they need, when they need it, in the format they need

## Members

EADS Astrium  
Emerson Electric  
Eurocopter  
Granta Design  
Honeywell  
NASA  
NPL  
Rolls-Royce  
US Army Research Labs

The Environmental Materials Information Technology (EMIT) Consortium is a new collaborative project that brings together leading engineering and manufacturing enterprises and agencies. Its focus is on developing data, systems, and software tools to address vital materials and process-related issues that control the environmental impact of engineering product lifecycles. The project has relevance across sectors including aerospace, defense, automotive, consumer products, and industrial equipment.



## Why is the EMIT Consortium important?

Controlling the environmental impact of products and meeting environmental, health, and safety regulations are becoming critical success factors for engineering enterprises. This trend is set to continue. Indeed, an effective response to these issues may become a pre-requisite for business survival in many sectors. Materials information is central to this effective response, which demands:

- Accurate data on materials and processes – specifically, on their ‘eco-properties’ and on the impact of restricted substance and other regulations
- Materials decision support tools and systems to apply this information during design, where changes are most effective and cost least
- ‘Product stewardship’ methodologies, i.e., approaches that model and minimize environmental impact throughout product lifecycle

Few engineering enterprises have begun to develop such a portfolio. We invite companies and government agencies to join us in accelerating this development process. We aim to deliver competitive advantage by creating valuable ‘point solutions’ within a framework that enables an integrated approach to environmental issues across the product lifecycle, in concert with other enterprise engineering tools.

## EMIT Consortium objectives

The Consortium will develop, implement, and apply software, database systems, and data. Its overall objective is to enable materials and process decisions that minimize the environmental impact of engineering products.

To this end the Consortium will:

- Develop software and systems to implement and integrate the best eco design and product stewardship methods in engineering enterprises and supply chains
- Develop eco materials datasets to enable decisions on environmental impact throughout the lifecycle
- Combine the expertise and resources of members to share the costs, effort, and benefits of developing in environmental materials information technology





## The Consortium: a proven approach

**The Environmental Materials Information Technology (EMIT) Consortium is based on the successful Material Data Management Consortium (MDMC - [www.mdmc.net](http://www.mdmc.net)), which pioneered materials data management for aerospace, defense, and energy.**

EMIT will be a three-year project managed by the UK's National Physical Laboratory with a Steering Committee (chaired, in the first year, by Eurocopter). EMIT is expected to grow to 10-15 members from materials-using sectors including aerospace, automotive, and consumer goods. Granta Design will be the software contractor. Each member will be represented on the Steering Committee, which will set directions for the project, define software requirements, prioritize development, and set delivery milestones.

## Further information

For the latest information and to receive a copy of the full Consortium proposal document, visit:

[www.emitconsortium.com](http://www.emitconsortium.com)

## Consortium software, systems, and data

The project will create tools and data for engineers, designers, procurement staff, managers, and executives in areas including:

- Reducing risks due to restricted substance or similar regulations - such risks include materials obsolescence, undocumented change in materials or processes, and the need for expensive modifications to late stage designs or existing products
- Assessing and optimizing the carbon footprint and energy efficiency of products
- Quantifying energy, hazardous gases, waste water, solid wastes from manufacture, maintenance, and disposal; making decisions to reduce these emissions

The first software tools designed to achieve these goals are now available:

- Restricted substances tools, e.g., for REACH reporting and design
- Environmental lifecycle tools: e.g., for Eco audit, EuP compliance, End-of-Life policy

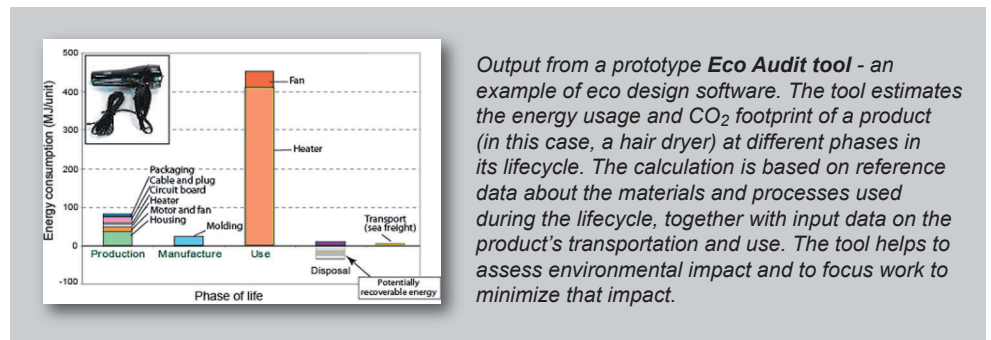
The Consortium is also driving the eco-specific capabilities of software tools for:

- Materials selection, substitution, and optimization
- Materials data management and process traceability
- Integrating with product life cycle tools and data, e.g., Bill of Materials information

The first releases of comprehensive datasets are now available for

- The environmental performance of materials and manufacturing processes
- Restricted substances: legislation and the substances and materials it impacts

Software is based on the GRANTA MI materials information system. GRANTA MI allows organizations to consolidate all materials data in one system, and to integrate tools to inspect, analyze, and apply this data.



*Output from a prototype Eco Audit tool - an example of eco design software. The tool estimates the energy usage and CO<sub>2</sub> footprint of a product (in this case, a hair dryer) at different phases in its lifecycle. The calculation is based on reference data about the materials and processes used during the lifecycle, together with input data on the product's transportation and use. The tool helps to assess environmental impact and to focus work to minimize that impact.*

## Joining & benefits

Organizations become eligible for EMIT Consortium membership by purchasing a qualifying package of software. Members receive new software and data as it is developed and share the benefits of a program budgeted at 2.4m€. The Consortium model delivers lower cost and risk than alternative approaches, particularly in-house development. Members use the Consortium to generate solutions to their own problems. At the same time, they benefit from the ideas and expertise of other members in solving common issues. The project:

- Provides early access to a comprehensive suite of tools to manage all environmental aspects of the materials lifecycle, delivering competitive advantage
- Increases the quality, integrity, and traceability of the materials and process information required to make critical decisions on environmental impact
- Enables data mining and provide engineers, designers, and other staff with the eco data that they need, when they need it, in the format they need

Such benefits offer multi-million dollar return on investment – for example, by increased efficiency in responding to regulation, reduced risk in the market, and lowering of emissions covered by carbon trading schemes.