

Materials Strategy

- Apply the latest software solution to implement a systematic and repeatable approach in making better materials business decisions, enterprise-wide
- Address issues such as rising and volatile materials costs, increasing environmental regulations, and global 'design anywhere, build anywhere' manufacturing
- Participate in a collaborative project that offers further competitive advantage by developing software to meet your specific materials strategy needs

Engineering or manufacturing enterprises, and the materials suppliers that support them, need materials strategies to address issues such as:

- Inflationary, volatile, and uncertain raw material prices
- Complying with environmental legislation such as EuP, REACH, or WEEE
- Adopting new or substituted materials or processes
- Rationalizing materials or suppliers
- Decisions about manufacturing location
- Procuring equivalent materials at multi-national locations
- Design bottlenecks due to problems in finding materials data

Such issues also impact materials producers, who must position their materials as the optimal choice for their customers' needs.



Granta, the leader in materials information technology, has developed a new software-based approach that tackles these challenges. We help you to define your materials strategy in a rational and systematic way, and to roll out this strategy so that it can be implemented by your entire enterprise – from design through to manufacturing.

Relevant products

- GRANTA MI
- CES Selector
- Reference data

Industrial relevance

Granta's materials strategy solution applies in any industry that makes or uses materials



Critical issues where Granta helps

Users of materials - scenarios	Examples of answers sought
Materials are a high proportion of our costs and/or markets are volatile/inflationary	What are our material and processing alternatives? Which are most profitable? How do we track trends? When do we switch?
We are experiencing materials failure in our products	How do we find substitutes? Which grades offer similar characteristics? What will their impact be?
We manufacture in different countries	What materials can I buy locally? How do we determine equivalence to existing materials? How will changes impact the product?
A vendor has offered us a new material	How do we evaluate it?
We use many different material suppliers and grades	How can we optimize to a list of preferred materials and suppliers?
Environmental legislation is imposing new requirements on us	How do we comply with regulations like EuP and REACH? How do we minimize the cost?

Producers of materials - scenarios	Examples of answers sought
Our customer is making a new component	How can we help them?
Our customer uses a competitor's material	What is our best alternative?
We need to retain customers	How can we help them to get more value?
Our R&D organization wants to improve a material	How do we position this material relative to existing ones? What are its best uses?
Environmental legislation is imposing new requirements on us	How can we comply? How do we minimize the cost? What new opportunities are there?

Solution Overview

The Materials Strategy Forum

A collaborative project guides development and application of Granta's materials strategy solution. Members get:

- early access to the latest software and an enhanced R&D commitment from Granta
- a formal role in determining Granta development priorities, helping to ensure that the software meets your needs
- networking opportunities to share experience and learn about non-proprietary best practice
- support and consultancy to help you to implement and apply the technology
- greater efficiency in your management and use of key information, resulting in reduced costs and improved product quality

Further information

For full details of Granta's materials strategy solution:

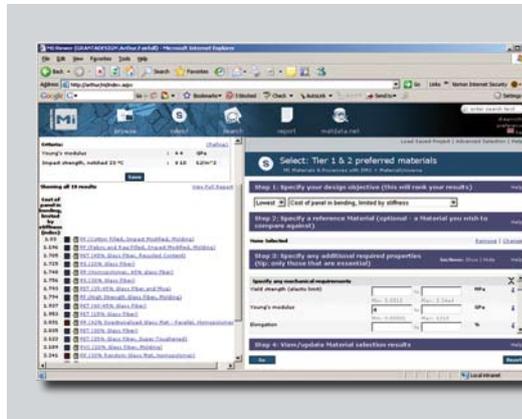
www.grantadesign.com/solutions/strategy/

How Granta helps

In most cases, the information required to optimize materials strategy exists within your company or in external references. But it is a considerable challenge to capture this information, marshal it, analyze it, apply it to make strategic decisions, and then ensure consistent implementation of those decisions. This is particularly true where businesses need to go beyond established technical parameters for selecting materials and to consider instead a combination of technical and economic factors.

Granta has a strong pedigree in such complex analyses, and in helping enterprises to use their results. Granta was founded on the innovative **Cambridge Engineering Selector** (CES) technology. CES Selector helps engineers to rationally select materials for engineering applications based on optimal combinations of properties. Materials producers use it for quantitative analysis and positioning of their materials.

Granta has also developed the industry's leading solution for managing materials information, **GRANTA MI**. This integrated system captures, analyzes, and applies materials data, dealing with the peculiarities of plastics, metals, alloys, composites, ceramics, and their diverse mechanical, physical, processing, environmental, and economic properties. The system manages your test and legacy data, or data from external references, including Granta's extensive library of **materials reference data**.



The new Enterprise Materials Optimizer builds on Granta's expertise in materials selection and enables selection by functional requirements to be combined with an overall objective such as minimizing cost. There is complete flexibility in defining objectives, enabling sophisticated studies while still being user-friendly. One valuable feature is the ability to define an existing material as a benchmark, enabling rapid and straightforward comparisons when searching for substitute materials.

GRANTA MI:EMO - make and implement decisions

Now Granta has combined these elements in a revolutionary new software product. Available within the GRANTA MI environment, the **Enterprise Materials Optimizer (GRANTA MI:EMO)**, is designed to support strategic decision-making. It allows you to apply advanced Granta selection technology to materials information held in your GRANTA MI system. Not only does it allow easy ranking and comparison of materials, it also makes it easy to combine considerations of materials function and 'cost' in performing analyses. 'Cost' could be financial (measured in dollars) or it could be, for example, a measure of environmental impact. MI:EMO is thus a powerful tool enabling materials selection or substitution strategies to address issues such as low cost manufacturing or changing environmental regulation.

MI:EMO also helps to ensure that strategy is implemented enterprise-wide. You can configure its materials analysis tools using your own business rules and then make these available across your company, confident that they will help designers, purchasers, and others to make consistent, repeatable decisions. This an extremely effective means to, for example, implement a preferred materials list.

Service and collaboration

Granta's 'off-the-shelf' software provides the assurance of robust quality and ongoing development and maintenance. **Support** and optional **services** help you to implement and configure the software to your company's specific process, and to integrate your data efficiently. The collaborative approach of the Materials Strategy Forum ensures a comprehensive solution to your materials strategy needs.