What is Materials UK?

WORKSHOP ON ENERGY MATERIALS
Why?

- With a turnover in excess of £200bn, the Materials industry represents well over 15% of GDP
- It employs 1,500,000 people directly and a further 4,000,000 in supporting and related industries
- Although diverse, it shares some “challenges”
  - Globalisation
  - Energy and Resource Constraints
  - Availability of Skills
  - Image
Globalisation

- If per capita income in China grows at 8% per year it will overtake the current per capita U.S. income in just over 25 years.
- China has grown at 9.5% per year since 1978.
- China currently uses:
  - 37% world cement
  - 35% iron ore
  - >20% of a range of commodities from zinc to steel.
- If the Chinese use oil at the same rate as the U.S. does today, by 2031 it would need 99 million barrels of oil a day, or 20 million barrels per day more than the entire world currently produces.
- Chinese use of paper could be double current world production by 2031.
Globalisation

Expected Increase in Automobile Sales by Region up to 2020 (millions)

- Asia: 25
- Eastern Europe: 5
- South and Central America: 5
- Rest of the world: 5
- Nafta: 5
- Western Europe: 5

Asia

Globalisation
The population has risen from 1 billion in 1900 to 6 billion in 2000!
We have used more of the earth's resources since 1950 than we did before
We are burning through the fossil record at a rate of 20 million years per year
From coal to electric light is 3% efficient
The earth is getting warmer – because of CO₂
But 0.01% of the energy that lands on the earth from the sun would provide the energy budget for whole world economy
Chart 3.3: Total demand by occupation, 2004–2020

Source: CERIER employment projections
Skills

Percentage change in numbers of undergraduates between 1995/96 and 2003/04

Values represent the number of undergraduates in 1995/96
Most people have outdated ideas of what a materials career is like.
• The Materials Innovation and Growth Team was set up in January 2005 by the UK Government to review materials industries. It covered:
  – All materials
  – Production and downstream processing
  – Supply chain issues - by engaging end-users
  – Policy stakeholders
  – International/multi-national and global context
• It reported in March 2006 after 15 months work
• One action was to form MaterialsUK (MatUK) to implement its recommendations and to continue to develop a strategy for this important area of industrial activity
Where are we going?

- **Vision**: The UK will continue to be one of the foremost advanced technological societies in which world-class materials expertise underpins sustainable growth.

- **Mission**: The mission of MaterialsUK is to enable the UK to pursue and benefit from opportunities for materials in the global economy, through:
  - Leadership
  - Strategic guidance and direction
  - Engagement of stakeholders
  - Working with Government to make UK the best place in which to do business
  - Gaining recognition of the importance of materials to society’s needs
What is all that?

• The Materials Knowledge Transfer Network (KTN)
  – will deliver improved industrial performance through innovation and new collaborations by driving the flow of people, knowledge and experience between business and the science-base, between businesses and across sectors
  – will drive knowledge transfer between the supply and demand sides of technology-enabled markets through a high quality, easy to use service

• Materials Assets Connect
  – Is a register of all UK R&D assets that are available for use by the community

• Materials Property Validation
  – Will deliver certified/validated data on materials properties covering whole life cycle - enabling more efficient re-use and recycling
What is all that?

• Working Groups
  – time limited groups established to address a clear remit endorsed by the Advisory Council as of importance to the Materials community.
  – made up of experienced practitioners examining issues, making recommendations, publishing their findings and initiating programmes to address the issue
    • Policy and Regulation
    • Education and Skills
    • Science and Technology
    • Materials for Energy
    • Materials in Construction
    • …and more if needed
Although there are many issues facing the Materials industry, the IGT recognised three as paramount.

MaterialsUK will initially concentrate its resources on addressing these.

- Materials for Energy
- Sustainability
- Design

They are, to an extent, inter-related.
The end…or the beginning?

For more information, look at..

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