



Press Release

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Rare earth metals scarcity: A ‘ticking time bomb’ for the world, asks PwC?

- **Chemical, energy and auto industry in ‘red alert’ over disruption of supply**
- **Manufacturers will struggle to keep up with demand**
- **14 raw materials named as ‘critical’**

London, 7 Dec 2011 -- Seven core manufacturing industries could be seriously affected by a shortage of minerals and metals, which could disrupt entire supply chains and economies, according to new PwC research.

PwC surveyed some of the largest manufacturing businesses across manufacturing, chemicals, automotive, energy/renewable energy, aviation, metals, infrastructure and high-tech hardware to see what impact such a scarcity would have, and where, over the next five years.

Of these, business leaders in automotive, chemicals, and energy sectors fear they will be hit hardest according to PwC’s **Minerals and metals scarcity in manufacturing: A ‘ticking time bomb’**, report.

PwC’s global sustainability leader, Malcolm Preston, said:

“Put simply, many businesses now recognise that we are living beyond the planet’s means. New business models will be fundamental to the ability to respond appropriately to the risks and opportunities posed by the scarcity of minerals and metals.”

The report’s main author, Hans Schoolderman of PwC Netherlands, added:

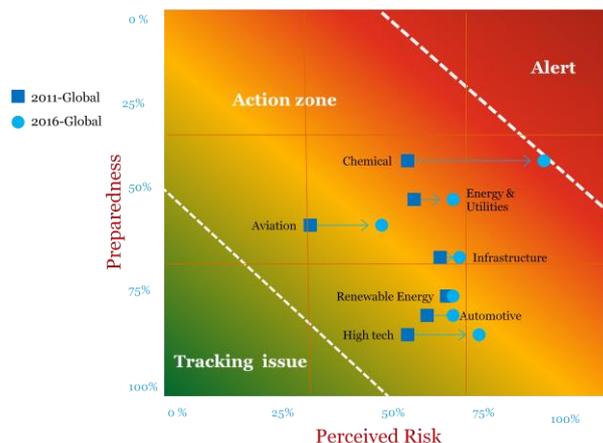
“The world’s growing population, an increase in GDP levels and changing lifestyles are causing consumption levels to rise globally - creating a higher and higher demand for resources. Governments and companies should all be aware of the scope, importance and urgency of the scarcity of both renewable and non-renewable natural resources: energy, water, land and minerals.”

Among the minerals & metals on the ‘critical’ list are:

- **Beryllium:** used as a lightweight component in military equipment and in the aerospace industry. it is used in high-speed aircraft, missiles, space vehicles and communication satellites.

- Cobalt: a material used in industrial manufacturing. Used in jet turbine engines and automotive rechargeable batteries.
- Tantalum: used in mobile phones, computers and automotive electronics
- Fluorspar: used in construction, cement, glass, iron and steel castings.
- Lithium: used in wind turbines and lithium-ion batteries in hybrid cars

Figure 1: Perceived risks compared to preparedness of manufacturing industries



Elsewhere in the survey, 77% of major manufacturing companies consider minerals and metals scarcity as an important issue for their business, but are concerned that only 39% of their customers do. Chemicals and energy and utilities sectors believe they will be severely impacted until 2016 with the percentage of chemical businesses that expect to be affected by this scarcity will **TRIPLE** over the next five years.

Instability of supply

The risk of scarcity across all sectors is expected to rise significantly, leading to supply instability and potential disruptions in the next five years, but this will also create opportunities for competitive advantage, the report says. The survey shows that whilst 80% of automotive respondents are currently worried about reserves running out, only 33% in aviation are, for example.

Renewable energy (78%), automotive (64%) and energy & utilities (57%) are all currently experiencing instability of supply. Aviation, high tech and infrastructure sectors are also expecting to experience high rises in supply disruption from now to 2016.

When asked about other primary concerns around scarcity overall, 84% cited an increase in demand, 78% said it was geopolitics, and 72% said extraction shortage. The report also indicated that European companies were better prepared with policies and programmes in place to mitigate risks.

PwC's global sustainability leader, Malcolm Preston, said:

"With the need for new business models, a key challenge for business is how to draw the line between collaboration and competitive advantage. This is where strategic decision making meets sustainability. Getting this right will define the winners and losers of the future."



A 'top 10' checklist for businesses on how to identify and prevent resource scarcity is in the report which also includes advice around creating risk assessments for three main areas, geopolitical, economic and physical.

Ends

Notes to Editor

1. 69 executives from seven different industries, across three continents, Asia Pacific, the Americas and Europe were surveyed. The majority of companies are key players globally, with revenues of over \$10 billion.
2. For a copy of the report please visit www.pwc.com/sustainability or download the attachment on the right.

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