


## Products, Sustainability and Technology

Many of Johnson Matthey's products and services have a sustainability benefit for our customers, humanity and the planet.

Our technologies are used in environmental applications that improve air quality (catalytic converters for vehicles, NOx removal technologies for industrial systems), mitigate greenhouse gases (nitrous oxide destruction systems, methane abatement products) or allow industrial processes to operate using less energy (process catalysts such as our revolutionary new methanol synthesis catalyst, APICO™).



**CASE STUDY**  
**APICO™ – A Catalyst Like No Other**

Many of our products are also used to improve human health and enhance quality of life. We manufacture opiates to relieve pain, platinum anticancer compounds for chemotherapy treatments and medical stents used in life saving surgery for maintaining cardiovascular health.

Expanding and improving our portfolio of sustainable products lies at the very core of Johnson Matthey's Sustainability 2017 Vision. The group's longer term planning processes enable us to keep abreast of the developing markets for sustainable technologies and ensure the group is well placed to respond to and benefit from new opportunities.




Image: © Irwin Tan / Dreamstime.com  
**CASE STUDY**  
**From Renewable Feedstocks to Jet Fuel**

Johnson Matthey is committed to using its expertise in research to develop products with a sustainability benefit for others and to ensuring these products are manufactured, used and handled in the most responsible way throughout their life cycle.

The group has always recognised that sustained investment in R&D is essential in underpinning the ongoing development of new technologies. We are in the early stages of developing plans to generate additional funding to specifically support 'clean technology' R&D in the company, building on our existing core science and low carbon R&D programmes. Although still in its conceptual stages, the establishment of this fund will form an integral part of the group's carbon neutrality strategy and ultimately support the development of new sustainable products for our customers.

Read more about how we are developing our carbon neutrality strategy.

Hand in hand with the research and development of sustainable products we are also focused on ensuring that en route to full commercialisation, we are manufacturing our products in the most efficient and responsible way. We are working to systematically improve the sustainability footprint of our manufacturing operations through optimising our existing processes and integrating green chemistry and engineering principles. This work includes examining ways to improve energy, water, steam and other utilities' efficiency, reduce by product formation and maximise recycling and reuse. We are also continuing to invest in step change manufacturing technologies that improve resource efficiency, enhance environmental performance and reduce our capital and operational costs.

If we are to develop and manufacture products in the most sustainable way we must look beyond our own R&D and manufacturing operations. Johnson Matthey is actively developing its understanding of the life cycle of its products by building expertise in this area. Over the last two years we have been trialling a range of tools (such as carbon footprinting techniques, BRITEST methodology and streamlined life cycle assessments) to broaden our knowledge of the resources and processes used to manufacture our products, their impacts and the benefits they bring to our customers and society.

Over the last year we have ramped up efforts to enhance our capability and are developing a 'Life Cycle Experts' group within Johnson Matthey. We have been working with Jim Fava, Chair of the UNEP / SETAC Life Cycle Initiative's Coordinating Committee and managing director for Five Winds International, to provide external advice to this group. Comprising 25 people from business and functional teams across Johnson Matthey, our Life Cycle Experts group will work to develop suitable and consistent tools and metrics and conduct appropriate studies. The group held an initial workshop session in May 2010 which aimed to increase understanding, conduct worked example studies and establish the next steps. The group will



### Q&A

**What does sustainability mean to you?**

To me, sustainability is all about adapting our business ...

now focus on determining milestones, accountability and training methods, selecting appropriate tools (beyond those already in use) and evaluating the products, technologies and business areas to be examined first. Longer term, expertise in life cycle thinking will equip us with a deeper understanding of the economic, environmental and social impacts of what we do.

The value of integrating life cycle thinking into Johnson Matthey's core business practices is clear – the key challenge will be determining how to do it in a way that maximises value to the company in the most cost effective way. The formation of the experts group is a key step in driving life cycle thinking forward within Johnson Matthey to support our aspirations through the continued delivery of sustainable products and technologies.