



Johnson Matthey
Inspiring science, enhancing life

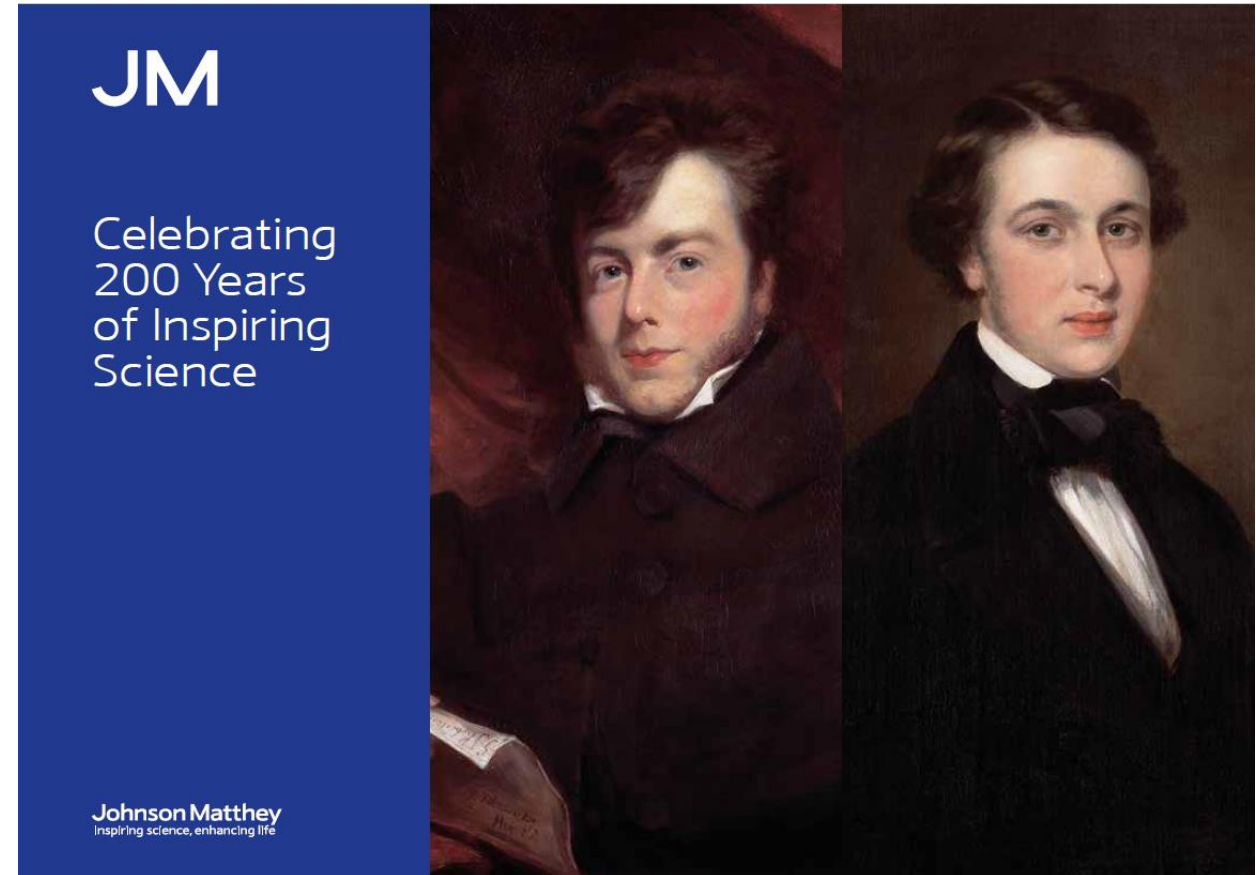
Johnson Matthey in Krasnoyarsk

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JM background

- Global company operating in over 30 countries with around 13000 employees
- 200 years anniversary in 2017
- Expertise in catalysts and material science
- Developing and manufacturing wide range of high technology products, helping to reduce pollution, relieve pain, make the most efficient use of natural resources



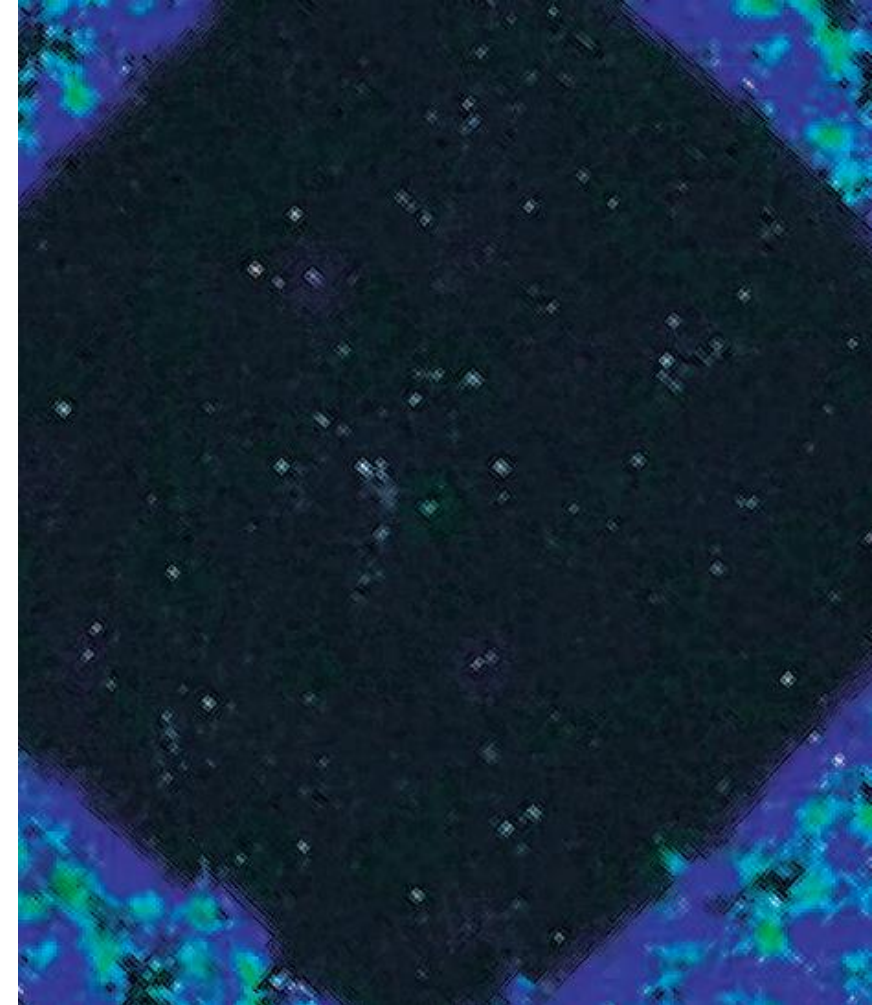
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Core skills in:

- Chemistry and its applications
- Designing and manufacturing advanced functional materials
- Catalysis
- Materials science

Investment of more than 5% of sales in R&D and process technology to maintain world leadership position

Focus on value adding sustainable technologies



Better aligned for stronger performance

**Climate, focus
on emissions**

**Growing population,
fewer resources**

**Ageing and
growing population**

Clean Air

**Efficient
Natural
Resources**

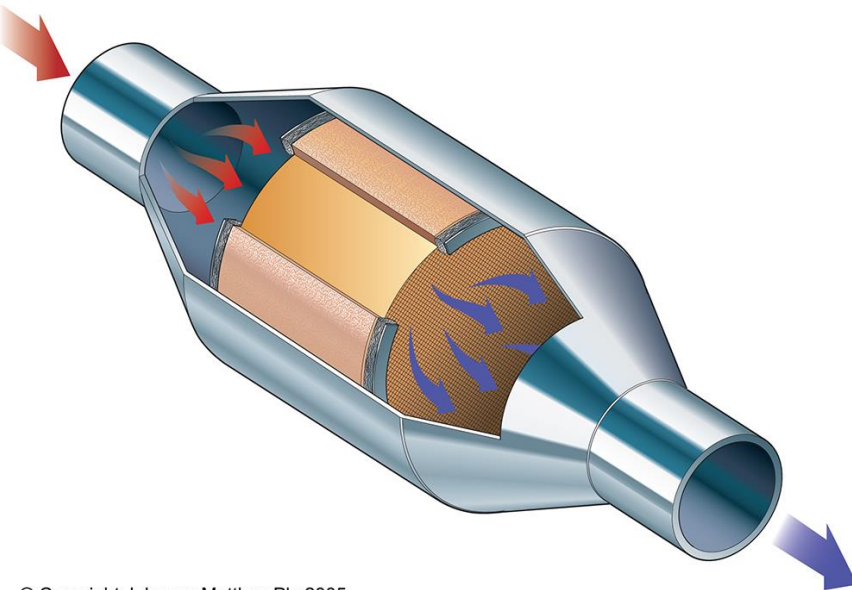
Health

plus New Markets across all these areas

Passenger Car Applications

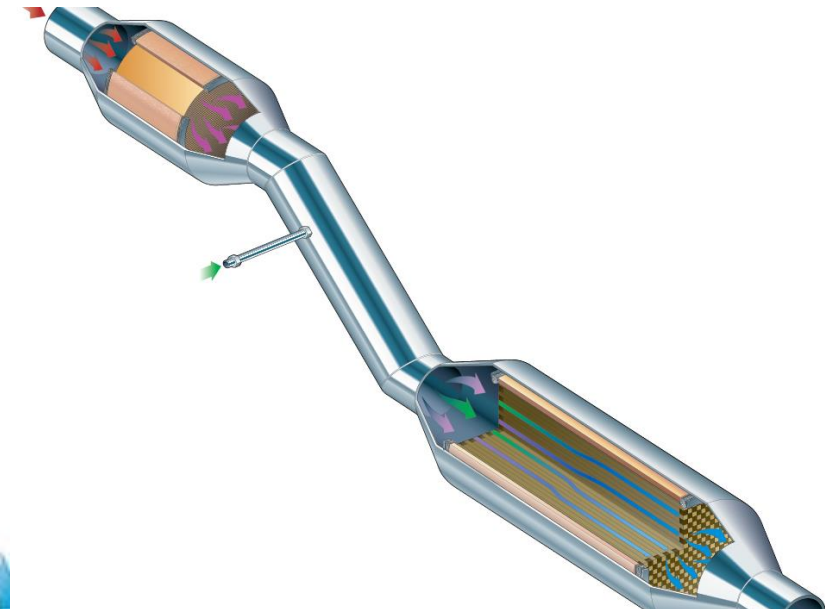
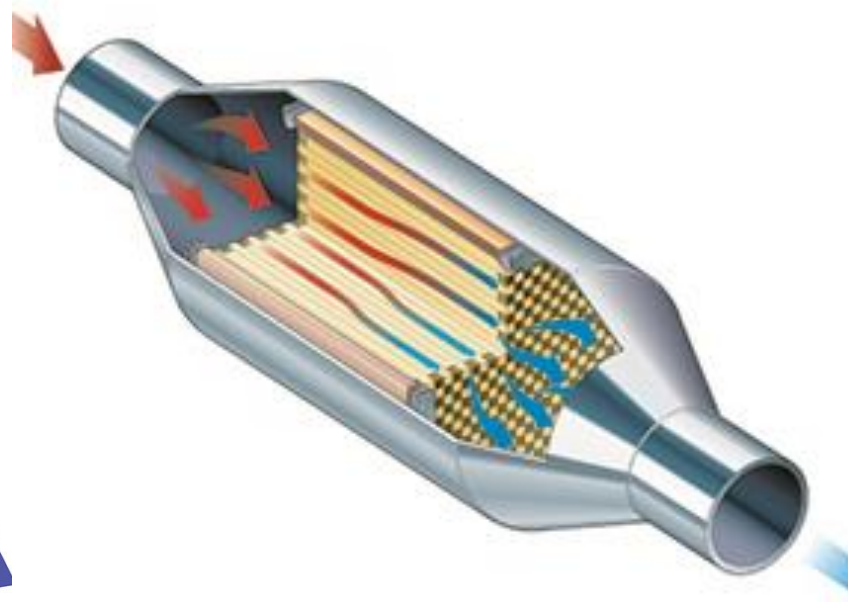
Gasoline

- Three-way catalysts
 - Carbon monoxide (CO), Hydrocarbons (HC), Oxides of nitrogen (NO_x)
- Three-way filters
 - CO, HC, NO_x + PM



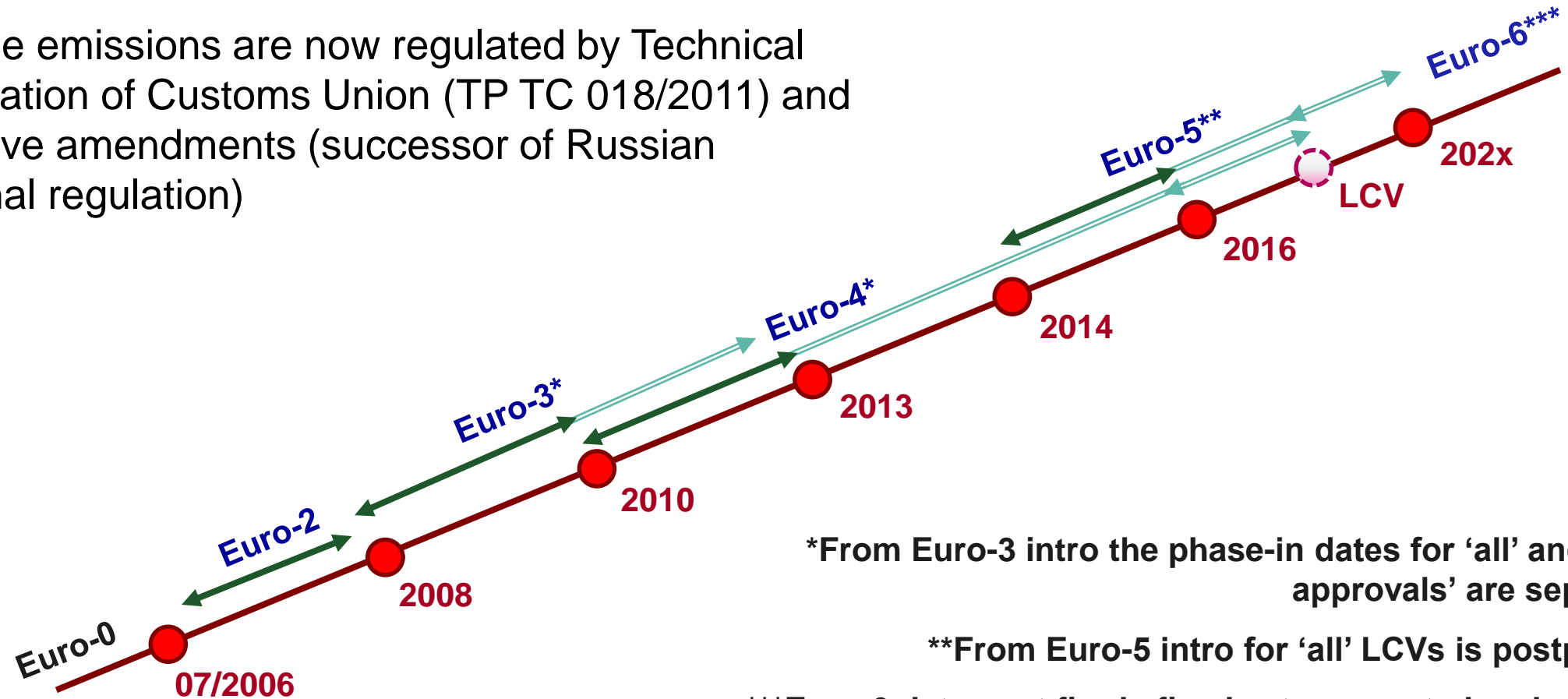
Diesel

- Oxidation catalysts - CO, HC
- Diesel particulate filters - Particulate matter (PM)
- Catalysed soot filters - CO, HC, PM
- SCR[®] technology - CO, HC, PM + NO_x



Emission legislation in Russia

Vehicle emissions are now regulated by Technical Regulation of Customs Union (TP TC 018/2011) and effective amendments (successor of Russian national regulation)



*From Euro-3 into the phase-in dates for 'all' and 'new approvals' are separate.

**From Euro-5 intro for 'all' LCVs is postponed.

***Euro-6 dates not firmly fixed yet – expected early 2020s.

Cars produced or imported before set dates remain legal.

JM in Krasnoyarsk

Overview

- Manufacturing plant producing the autocatalysts for emissions control of the vehicles
- Officially opened on August 28th, 2008 within perimeter of Krastsvetmet, a world leader in palladium refining and Russian leading refiner of all precious metals
- 100% JM owned facility
- Initial investments around 11 mln USD



JM in Krasnoyarsk

Background

Why Krasnoyarsk?

- Long-lasting business relationships with Krastsvetmet
- Secured area of Krastsvetmet allowing secure delivery of key raw materials
- Reliable energy supply system and developed infrastructure
- Governor's office support to foreign investors
- Qualified personnel available in the region

JM in Krasnoyarsk

Business today

- ~ 3 mln catalysts produced since start of production
- Second phase launched in 2012 doubling capacity
- Currently 52 employees
- Established logistics for incoming material and products
- Developing of export



JM in Krasnoyarsk

Experience in the region

- Stable energy supply system, including steam, water, electricity
- Positive business climate, constructive relationships with authorities,
no excessive control requirements to business
- Reliable logistics, determined by geographic location.
Availability of transportation companies, no significant delivery issues on roads
- Qualified personnel on the labour market for all levels of job positions:
 - Industrial history of the region
 - Strong educational base
 - Availability of research facilities
 - Low staff turnover rate
 - Improvement area: foreign languages
- Krasnoyarsk is growing city with good dynamic of life, high cultural level, lots of leisure activities, reasonable security level





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Thank you for your attention!

Questions?

