

Chemistry careers in SMEs

The interface between science and business – IP and regulatory issues



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SMEs

'Micro, small and medium-sized enterprises (SMEs) are the engine of the European economy. They are an essential source of jobs, create entrepreneurial spirit and innovation in the EU and are thus crucial for fostering competitiveness and employment. The new SME definition, which entered into force on 1 January 2005, represents a major step towards an improved business environment for SMEs and aims at promoting entrepreneurship, investments and growth. This definition has been elaborated after broad consultations with the stakeholders involved which proves that listening to SMEs is a key towards the successful implementation of the Lisbon goals'.

Günter Verheugen,
Member of the European Commission
Responsible for Enterprise and Industry



Slide outline

- Support programmes for SMEs
- IP and SMEs
- Innovation and SMEs
- REACH implementation for SMEs



Video information

View the presentation full screen to watch the videos contained within the presentation

SME start-up & expansion barriers

Technological capabilities

Limited access to equipment and technology can slow development

Lack expertise to bring product to market

People

Lack of manpower

Main barriers

Face difficulty obtaining capital or credit

IP management of new products and processes is challenging

Finance

Cannot give guarantees which traditional lenders require

Difficulty complying with regulations (e.g. REACH)

Litigation and regulation



Intellectual property management

Considerations for SMEs

- Out-innovating competitors
- Ability to fight IP infringement
- Strength of enforcement



What is a patent? 1

Prior Art – Everything that has been made available to the public by any means of communication (e.g., written, verbal correspondence – unless a secrecy agreement in place)

Novelty – Must be different to anything in the prior art at the date of filing the application



What is a patent? 2

Inventive Step – Must not be “obvious” to anyone “skilled in the art.” (Patent agents advise)

Selection Inventions – Unexpected properties of a material that is described by another patent



What can be patented? 1

Patentable products

- New compounds
- New isomers
- New polymorphs
- New intermediates
- New properties of a known compound



What can be patented? 2

Processes can be patented

- New methods of synthesis
- New purification methods
- New test methods
- New methods of use
- New applications



What can't be patented?

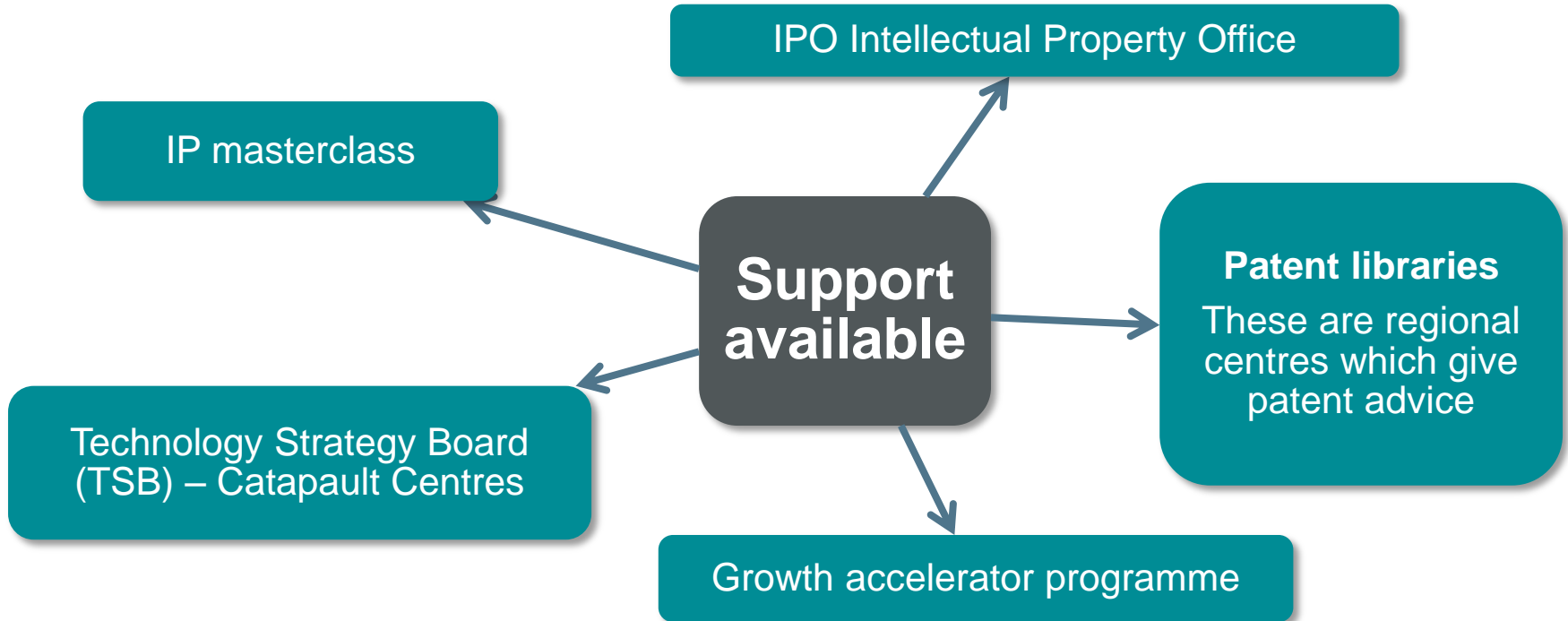
- Previously disclosed in the prior art
- A discovery or theory
- Artistic creations (these may be covered by registered designs or copyright)
- Computer software (covered by copyright)



IP support for SMEs 1

- SMEs can often be ill-informed about managing IP assets

IP support for SMEs 2





IP links

Intellectual Property Office publications

www.ipo.gov.uk

European Patent Office

www.epo.org

World Intellectual Property Organisation (WIPO)

www.wipo.int/portal/index.html.en

Espacenet

[\(http://worldwide.espacenet.com\)](http://worldwide.espacenet.com)



Innovative SMEs 1

SME

- High flexibility
- Can rapidly respond to market changes
- Unhindered by bureaucracy
- Can handle disruptive technology

- Impact of IP litigation can threaten SME with closure



Innovative SMEs 2

MNC (Multinational corporation)

- Resource and experience which has successfully commercialised products and processes
- IP teams manage assets
- Money available for IP litigation
- More extensive R&D spending

- Less flexibility, slower information flows and less creative thinking



REACH

- Registration, evaluation, authorisation and restrictions of chemicals

VIDEO

<http://bit.ly/1UeIZSF> - Safer chemicals within REACH



REACH: The cost to SMEs

- Substances above one tonne or more per year will need to be registered with the European Chemicals Agency (ECHA)
- Applies to all companies manufacturing or importing chemical substances into the EU
- Registration costs are very high
- Deadline is 2018 (not long)



REACH

VIDEO

<http://bit.ly/1sHzE8y> - REACH: Innovation and integrated EU goals



REACH: Facts and figures

- 143,000 chemical substances marketed in the European Union were pre-registered by the 1 December 2008
- The implementation of REACH is being phased in by the ECHA to support companies:
 - 1000 tonnes/annum by 1 December 2010
 - 100 tonnes/annum by 1 June 2013
 - 1 tonne/annum by 1 June 2018



Summary

- SMEs need to ensure that their products and processes are protected from competitors
- Collaborations between SMEs and academia/industry are often necessary to bring ideas to market
- SMEs need to show compliance with REACH which can be an expensive and time consuming process



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