

The Surface Engineering Group (SEG)

Dr Wavell Coulson – SEG Manager



SEG Consortium Partners



The
University
Of
Sheffield.



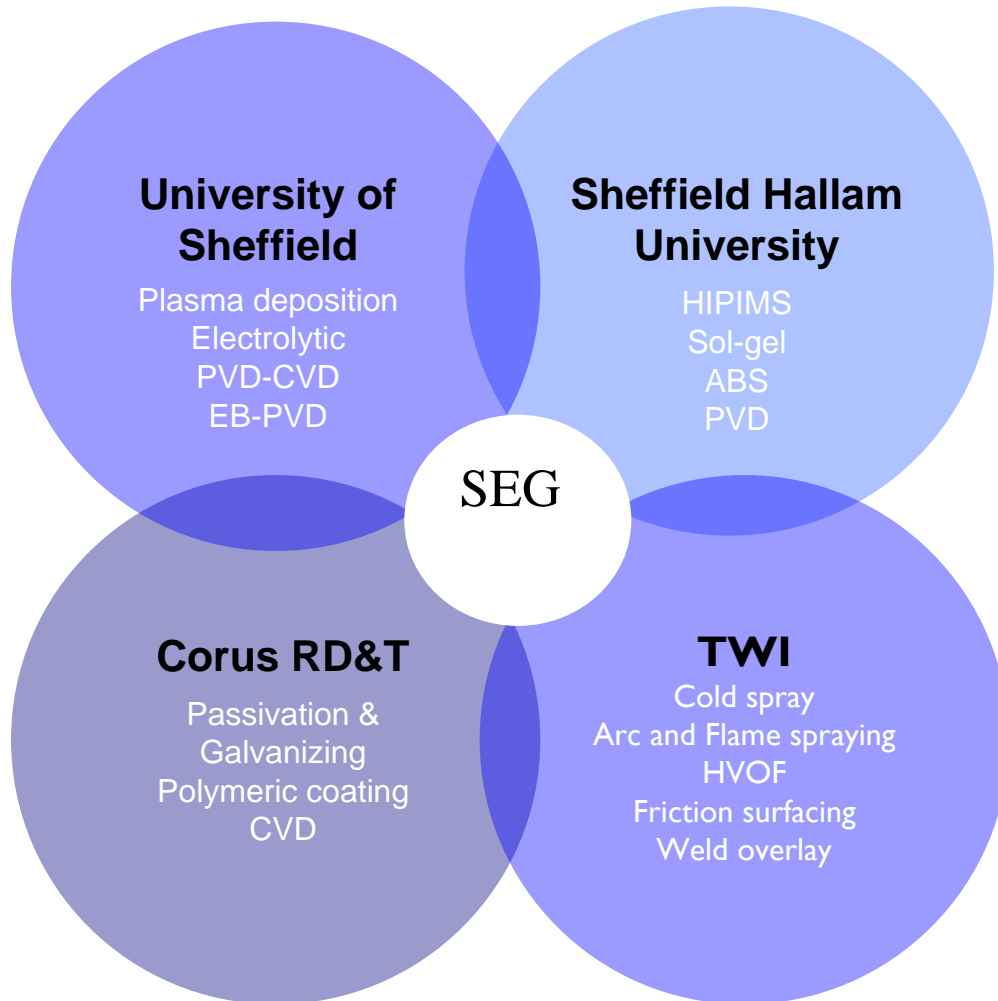
*Sheffield
Hallam University*



Supported by



SEG partner coating capabilities



Solutions to problems in:

- Abrasive wear
- Erosion
- Corrosion
- Bioactivity
- Process/coating related environmental issues

Coatings

- Nano-particulates
- Metals
- DLC (diamond like Carbon)
- Polymers
- Ceramics / Cermets

Strategic aims

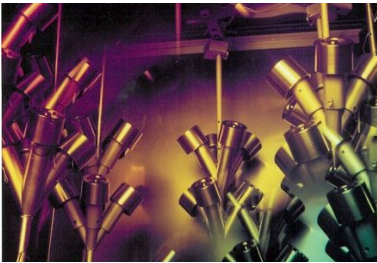
The centre has the following strategic aims:

- establish an internationally-leading technology centre in region
- enhance the region's surface engineering capabilities

SEG ACTIVITY

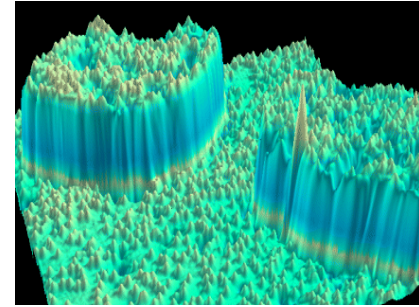
The Group activity will comprise five strands:

- Research and Development (WP1)
- Information Services (WP2)
- Outreach (WP3)
- Supply Chain Development (WP4)
- Dissemination and Training (WP5)



Research and development

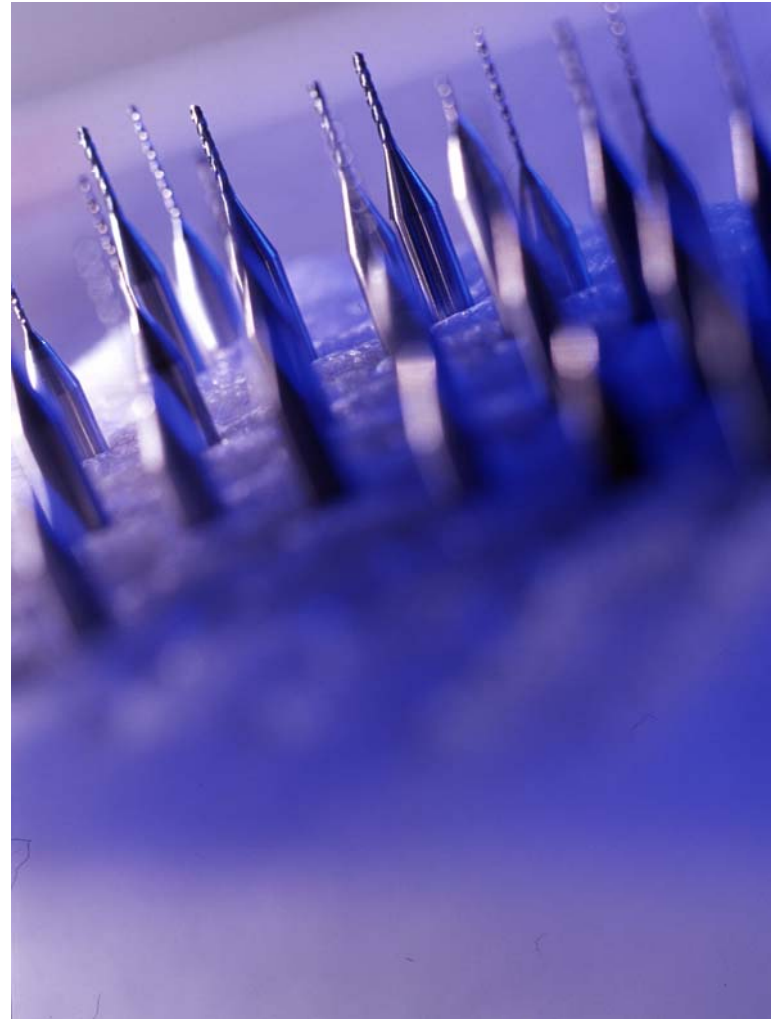
Support the development, introduction and exploitation of new technologies in industry.



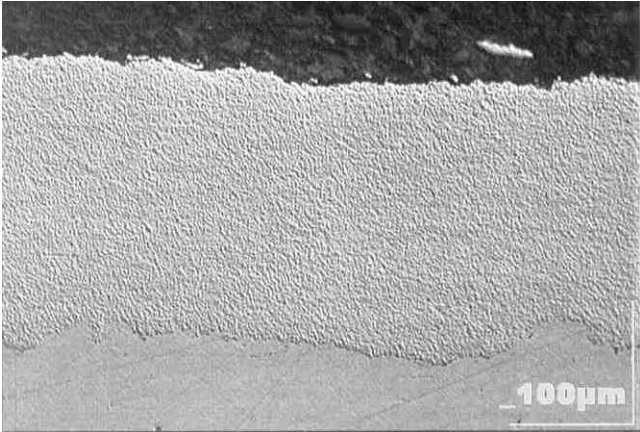
Project partners engage with industry to improve products and processes to boost company profits and jobs.

PVD coating of ultra hard ceramics on to drill bits to machine Ti medical implants.

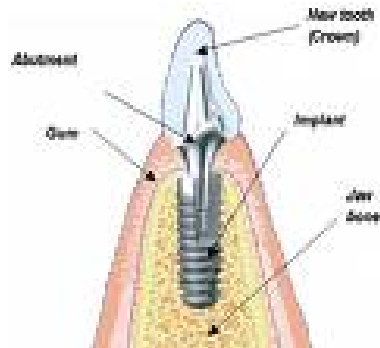
Improved life of drills, quality and process times.



HVOF and Plasma deposition of hard coatings for abrasion resistance in steel industry



Surfacing of dental implants for improved bone compatibility and growth



Information services

Provision of technical information and support to regional companies



- Technical helpline provision
- Technology briefings and industry awareness (newsletter and e-bulletins)
- Legislative briefings (in website) and advice
- Web based information and support

Supply chain development

Target high value added market sectors to increase regional capacity



Targeted regional supply chains

- Aerospace/energy
- Biomedical - Roadmapping day on 19.9.06
- Increase integration of supply chain companies (network)
- Identify R&D and training requirements (road-mapping)

Dissemination and training

Increase awareness of market drivers and emergent technologies across all market sectors



- Identify training needs within each market sector.
- Develop additional or bespoke training where required.

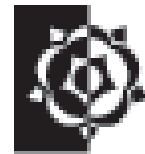
Training/seminar events held:

- Surface Metrology Workshop
- Training at a local SME on surface treatments
- SEG launch seminar day – talks by Depuy, Rolls Royce and SEG Partners.

Thankyou for your attention



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