Rolls-Royce

Michael, Glavicic, Senior Materials Engineer

A truly global company

11000 engineers spread over 8 countries worldwide

Rolls-Royce

Rolls-Royce designs, manufactures and services a wide range of power products

Civil Aerospace | Defence Aerospace | Marine | Energy

Civil aerospace

- our engines are keeping up to 400,000 people in the air at any one time

Defence aerospace

- 160 armed forces depend on our engines

Marine

- 30,000 commercial and naval vessels use our marine equipment

Energy

- powering customers in 120 countries in electricity and oil and gas markets

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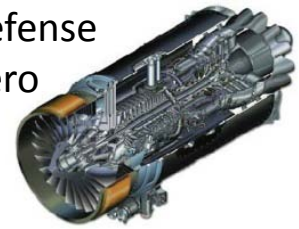
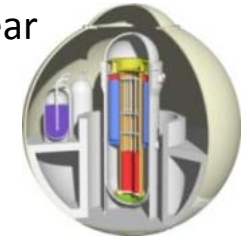
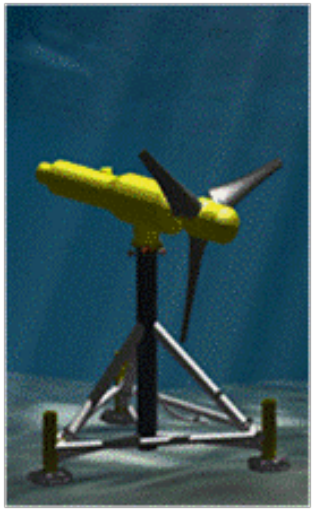
Defense Aero



Nuclear

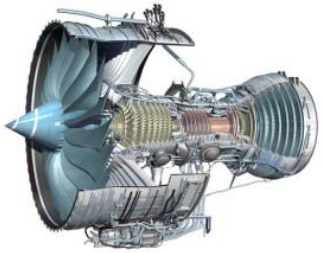




Tidal Power

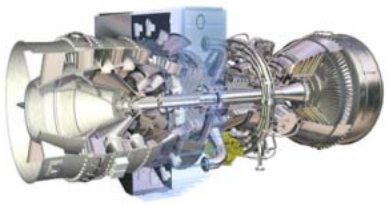
Small / Medium Civil Aero

Large Civil Aero

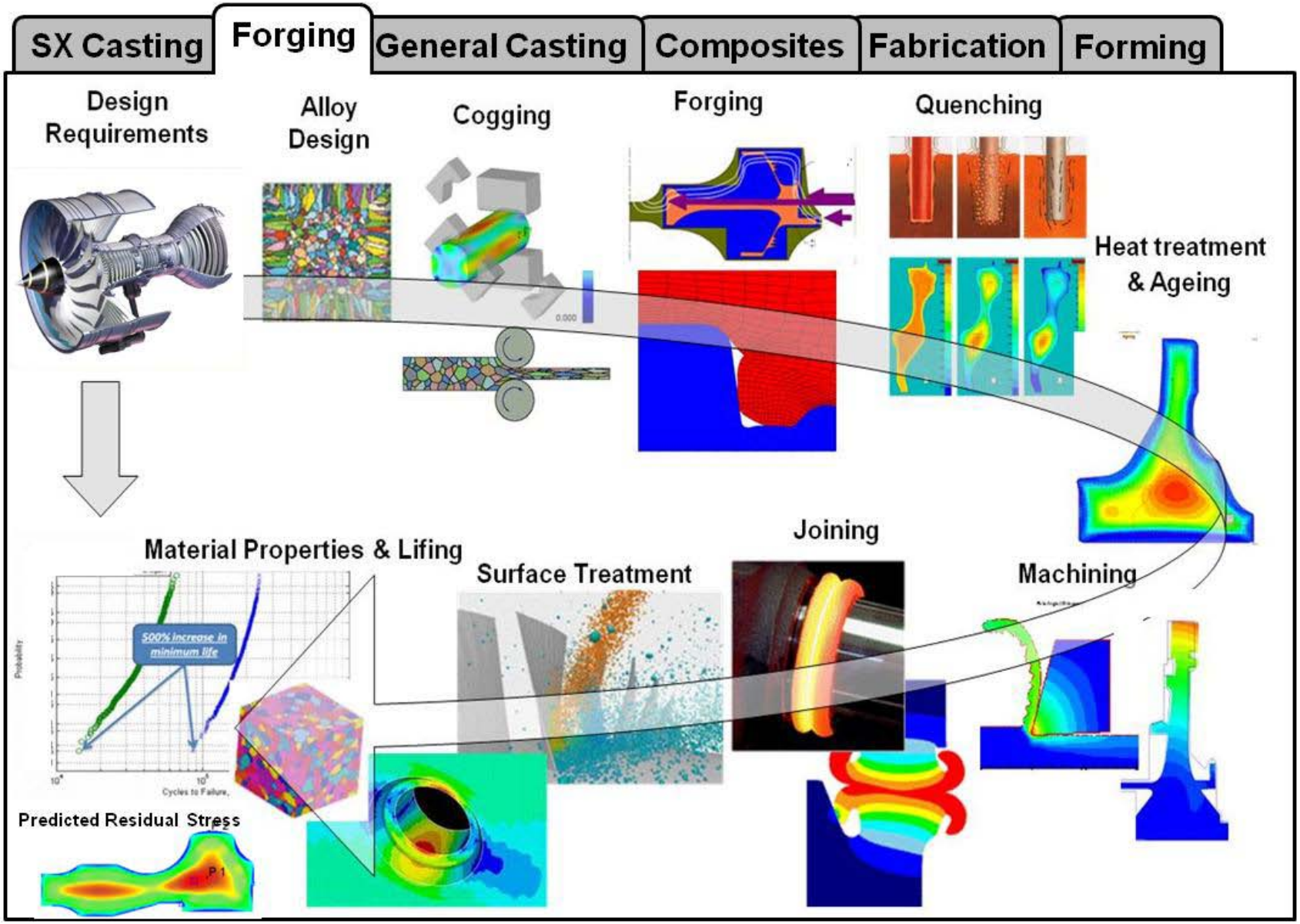


Marine

Energy



ICME Challenge: Islands … to … Integration



Where are the bottlenecks? If any…

- Current challenges to your mission
  - Keeping track of all the capabilities being developed globally.
  - Translating great science into industrial know how.

- Typical problems and bottlenecks
  - Export regulations

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Looking to the Future

- More materials characterization using neutron and x-ray sources
  - Residual stress
  - Strain mapping during loading (CMC's, OMC's, Ti alloys, Ni alloys, Fe alloys..)
  - Tomography (cracks, inclusions,..)
  - …
- Increased use of Integrated Computational Materials Engineering (ICME) requiring the validations of these models using advanced characterization facilities.
- Joint European actions could be used to co-develop the infrastructure needed to develop new industrial relevant experimental capabilities.

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Trusted to deliver excellence