



# Rolls-Royce

## Industry / Academia Engagement



**Dean Jones**  
**Rolls-Royce Partnership Manager**  
**National Composites Centre**

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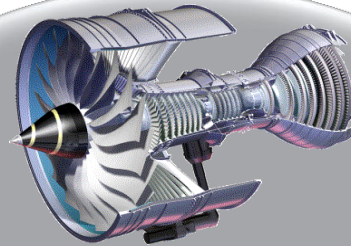
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# Manufacturing Technology Challenges



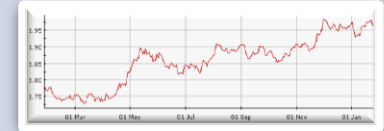
## Market

- Fuel efficiency - up
- Weight – down
- Emissions - down
- Ownership Cost – down
- Reliability - up
- Time to market – down



## New Product

- Advanced affordable materials
- Novel low part count geometry
- Fit for purpose specifications
- High performance durable products



## Business

- Cost base – down
- Safety - up
- Stability / Capability - up
- Responsiveness – up
- Capital exposure - down
- Globalisation - up

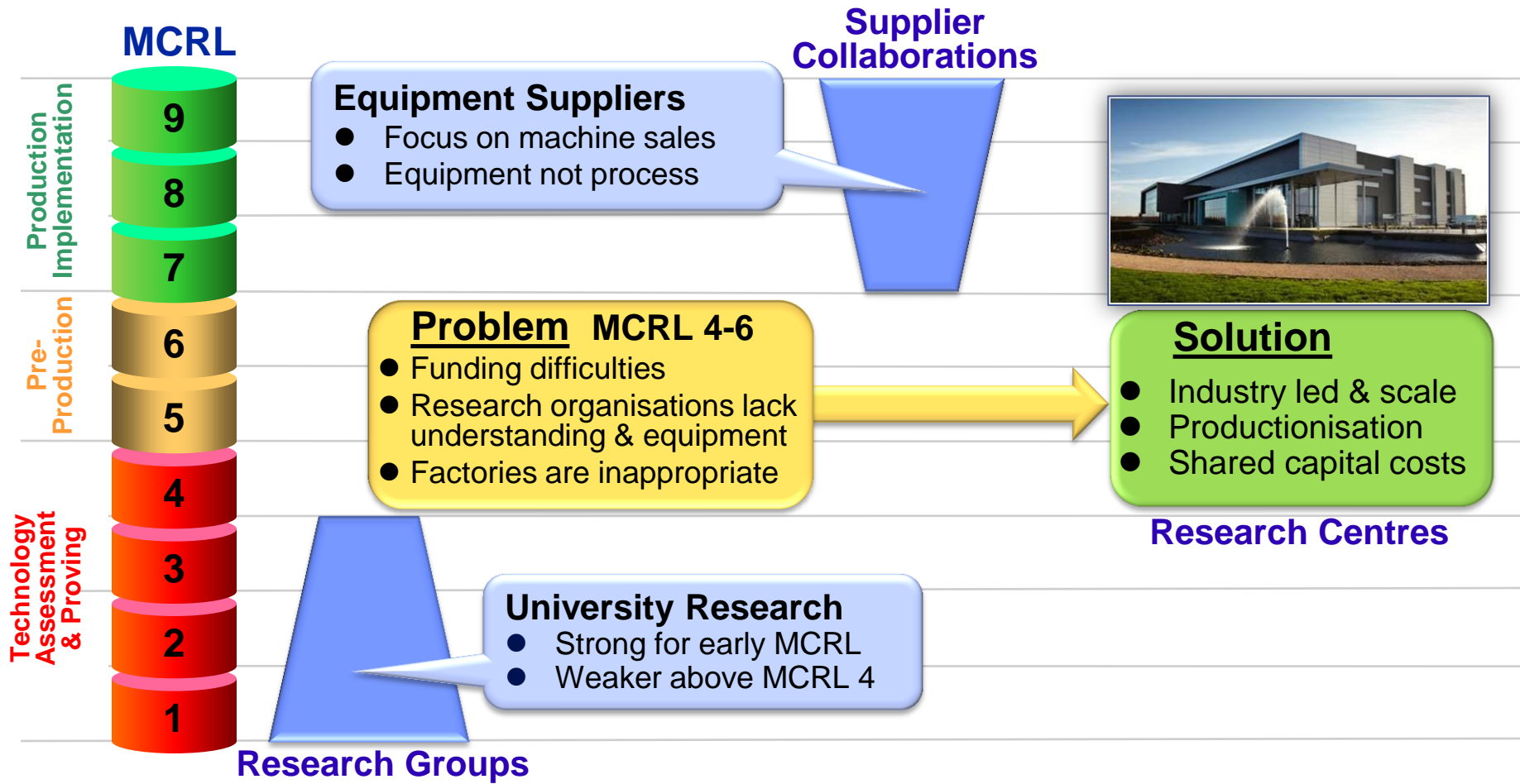


## Manufacturing Technology

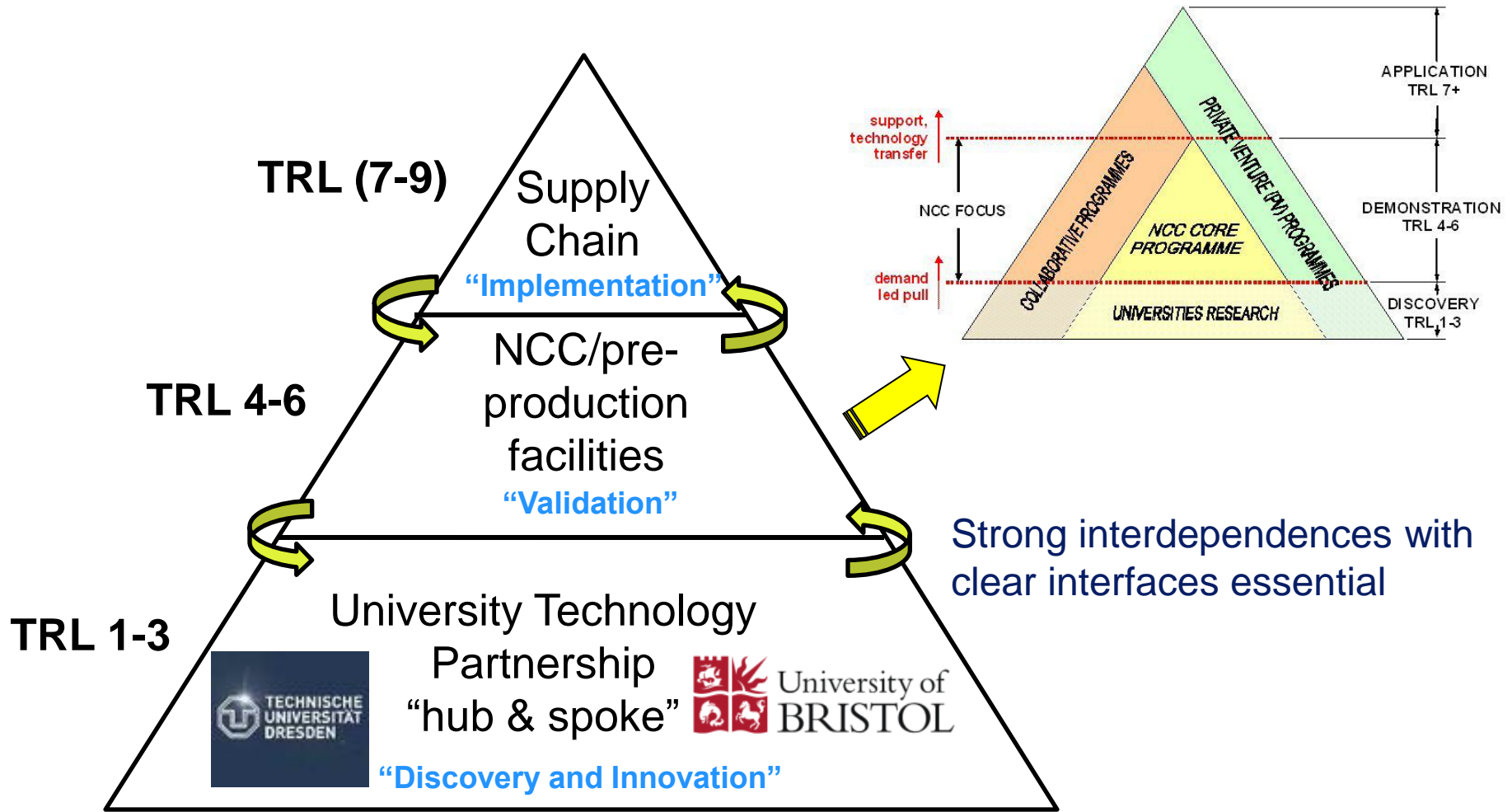
- Best in class Process Capability
- Cost effective innovative equipment & processes
- In depth process knowledge, controls & standards

# Government and Industry have invested significantly to overcome the historic constraint of implementation of new ideas

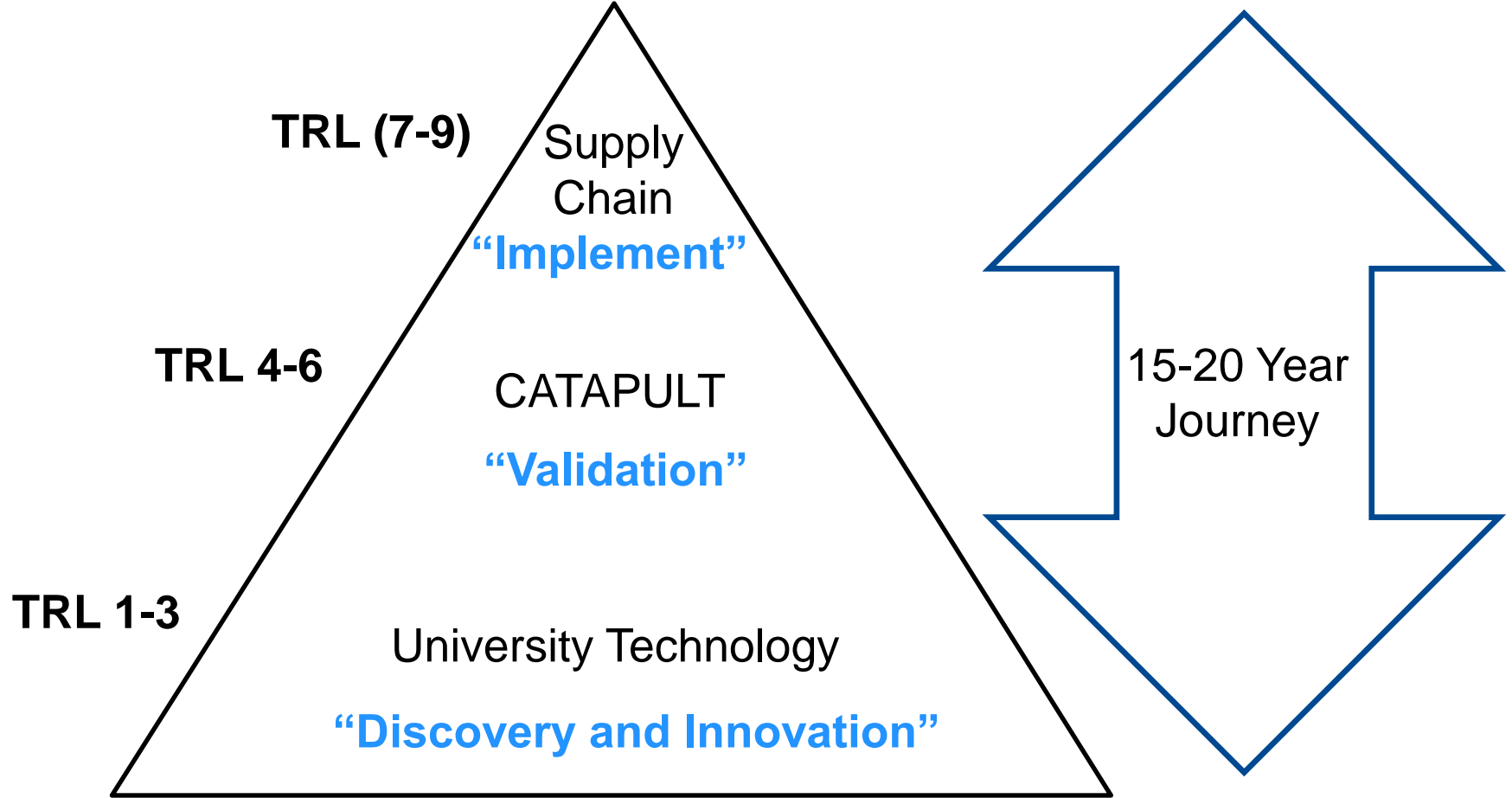
*The MCRL Gap is too complex for any individual organisation to tackle on its own*



# Development of Supply Chain for Composites



# Development of Supply Chain – Where could academia be involved?





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