

# COMPOSITES TECHNICIAN TRAILBLAZER APPRENTICESHIP

**Brian Thornton**

**TB Coordinator**

# COMPOSITES TECHNICIAN TRAILBLAZER APPRENTICESHIP

**Steering Group Chairman  
Dean Jones**

**Lead Company  
Rolls Royce**



# STEERING GROUP MEMBERS

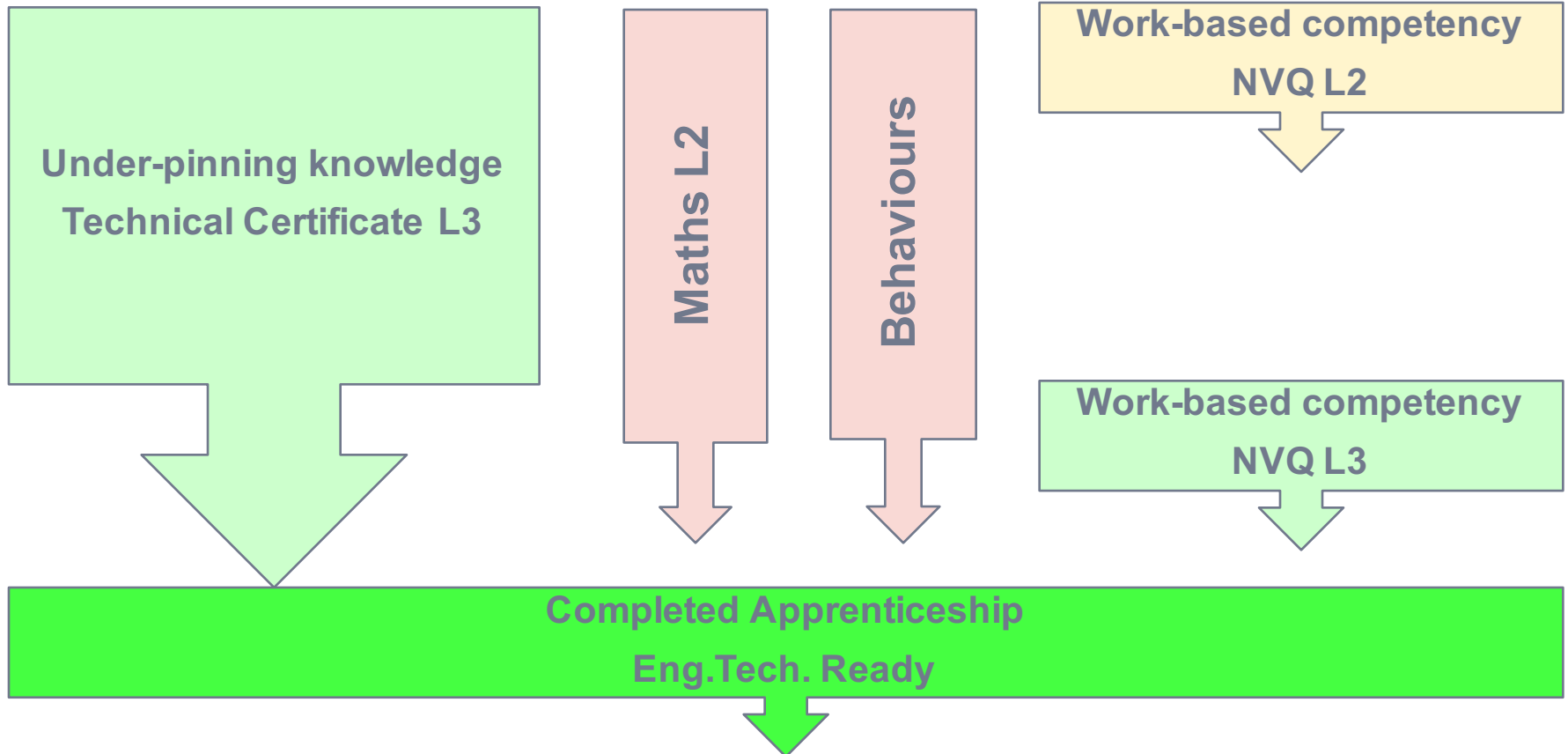


# COMPOSITES TECHNICIAN TRAILBLAZER APPRENTICESHIP

Supported by



# 36-48 Month Program



# Mandatory Units (Agreed)

1. Understand employer H & S Policy (Inc.Statutory Regs)
2. Interpret Eng.Data and Work instructions
3. Work Effectively and Efficiently – (inc. intro. to BIT)
4. Awareness of Materials
5. Awareness of Processes –(inc.Tooling)
6. Awareness of Product Design and Applications
7. Awareness of Defects and Detection in Composites
8. Production of a Part using a Hand-lay up Technique

## Optional Units – Foundation Level ( Minimum 2 required)

- An understanding of Prepregs
- An understanding of Wet layup
- An understanding of RI/RTM
- An understanding of Automated Processes
- An understanding of Assemblies, Jointing, Bonding
- An understanding of Repair Techniques
- An understanding of Spray Layup
- An understanding of Curing Techniques
- An understanding of Manufacture of Materials
- An understanding of Tooling and Tool Prep.

# Awarding Body preference

Pearsons

- B-TEC- L3

+

•EAL NVQs




- Composites Engineer Level 2
- Composites Engineer Level 3)

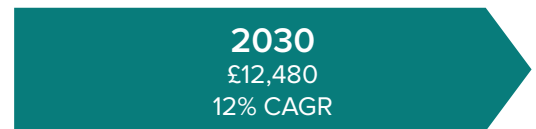
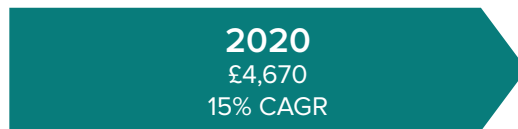
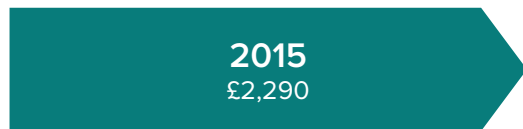


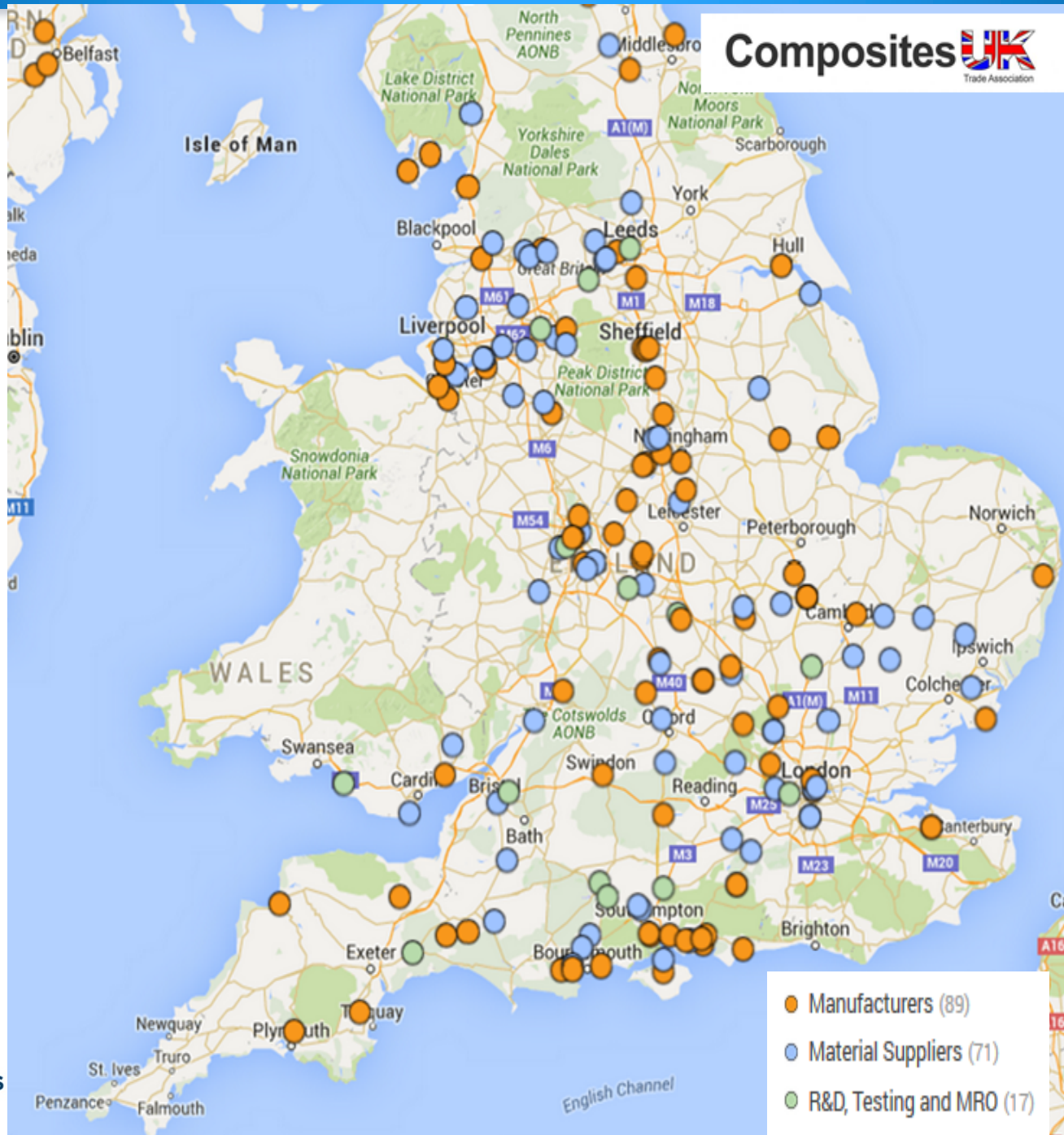
# Training Provision

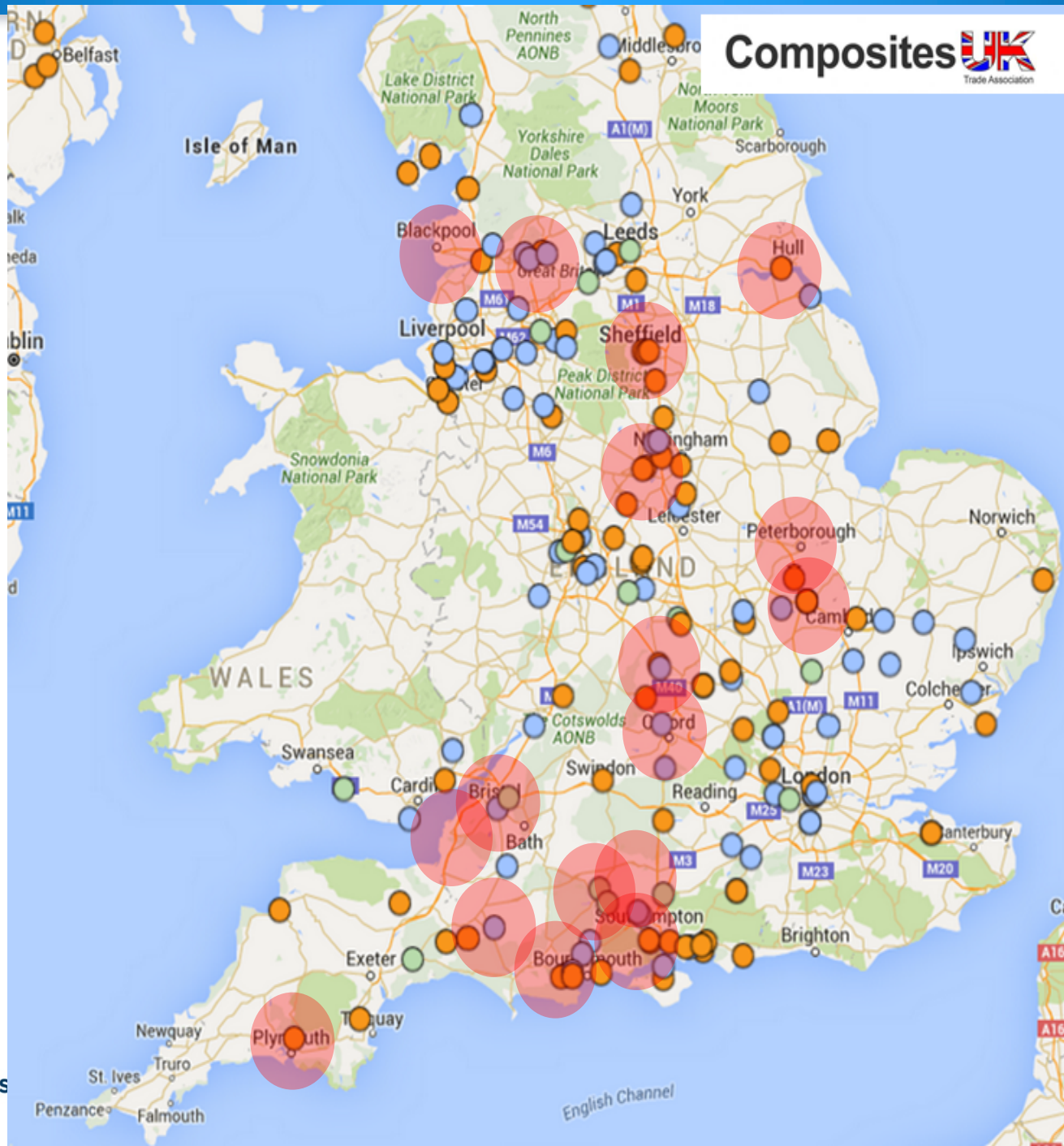
**An Opportunity for FE**

# CLF – Market opportunity

2030 OPPORTUNITY	2030 OPPORTUNITY	2030 OPPORTUNITY	2030 OPPORTUNITY	2030 OPPORTUNITY	2030 OPPORTUNITY	2030 OPPORTUNITY	2030 OPPORTUNITY
UPPER £3,590m 19%	UPPER £1,150m 8%	UPPER £3,490m 16%	UPPER £160m 7%	UPPER £1520m 10%	UPPER £370m 4%	UPPER £1,100m 33%	UPPER £1,100m 4%
LOWER £1,250m	LOWER £910m	LOWER £1,430m	LOWER £130m	LOWER £1240m	LOWER £320m	LOWER £320m	LOWER £880m
2020 FORECAST	2020 FORECAST	2020 FORECAST	2020 FORECAST	2020 FORECAST	2020 FORECAST	2020 FORECAST	2020 FORECAST
UPPER £1,160m 33%	UPPER £950m 20%	UPPER £530m 7%	UPPER £100m 12%	UPPER £640m 12%	UPPER £270m 4%	UPPER £340m 86%	UPPER £690m 3%
LOWER £1,040m	LOWER £920m	LOWER £480m	LOWER £80m	LOWER £510m	LOWER £240m	LOWER £80m	LOWER £650m
							
2015 BASELINE	2015 BASELINE	2015 BASELINE	2015 BASELINE	2015 BASELINE	2015 BASELINE	2015 BASELINE	2015 BASELINE
AEROSPACE	DEFENCE	AUTOMOTIVE	RAIL	CONSTRUCTION	MARINE	OIL & GAS	RENEWABLES
£270m	£380m	£380m	£60m	£360m	£220m	£20m	£600m









# UK Advanced Manufacturing Skills – Probable Market Failure

## CURRENT AND FUTURE SHORTAGE OF SKILLED PEOPLE

UKCES Working Futures 2014-2024 - Evidence Report 100 April 2016

.... manufacturing growth will be driven by advanced (high-technology)

**The availability of skilled labour will be an essential determinant of growth, and that skill shortages are a sizeable concern, and will be an important constraint on growth.**

EEF Skills Report 2016 – An Up-skill Battle

**73% of manufacturers experience highly skilled staff recruitment problems, particularly in engineering and manufacturing skills.**

59% expect to need more management, leadership and production-related skills in the next three years.

## CURRENT AND FUTURE SHORTFALL OF THE MEANS TO GENERATE SKILLED PEOPLE

Engineering UK 2016 - The State of Engineering

....supply data shows an annual shortfall of 29,000 people with level 3 skills and **40,000 with level 4+ skills.**

**.....the UK at all levels of education does not have the current capacity or the required rate of growth needed to meet the forecast demand for skilled engineers and technicians by 2022.**

**More than 80% of the workforce of 10 year's time is already in work. Apprenticeships / Graduates are essential, Up / Re – skilling is critical.**

**“WE HAVE A SKILLS CHALLENGE IN GERMANY, YOU HAVE A SKILLS CRISIS IN THE UK”  
(Wright Report 2014)**

# INCREASING THE PROVISION

## NCC-Train the Trainer Program

# INCREASING THE PROVISION

**Modular 8 Day Program  
Delivered at NCC or other centres**

**Turn-Key Solution  
(Inc. Training Moulds)**

# Flexible Delivery ?

8 x 1 day

4 x 2 day

2 x 4 day



# Supported Delivery

Facilitate & Support

Coordinate & Aggregate Demand

# Summary

**Identified Skills shortage**

**Supported Delivery**

**Deliver from 2017**

**Applying for Level 5 Funding (£24k)**



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