

NMIS

National Manufacturing
Institute Scotland



EUROPE & SCOTLAND
European Regional Development Fund
Investing in a Smart, Sustainable and Inclusive Future

Welcome to the Launch of EXTEND: Supply Chain Development for Lifetime Extension and Reuse

Paul Cantwell – Knowledge Exchange
Fellow (NMIS)

nmis.scot

Agenda

Time	Title	Speaker
10:00 -10:15	Welcome and Introduction to the Low Carbon Challenge Fund	David Butler, Paul Cantwell
10:15-10:45	SME Experience Guest Speakers	James Barry, Renewable Parts Ltd Mark Atherton, , TN International Super Glass Insulation Ltd
10:45 -11:00	Panel Questions & Answer Session with Guest Speakers	Chair: David Butler & Paul Cantwell
11:00-11:15	Service Offering: Future SME	Colin Andrews, Strathclyde
11:15-11:30	Service Offering: Life Cycle Analysis and sustainable design	Aineias Karkasinas, NMIS/Strathclyde
11:30 -11:40	Interaction: What do you want as a company?	Paul Cantwell
11:40 -12:20	Discussion/Networking Sessions	Chair: David Butler & Paul Cantwell
12:20 -12:30	Future events	David Butler



NMIS

National Manufacturing
Institute Scotland



EUROPE & SCOTLAND
European Regional Development Fund
Investing in a Smart, Sustainable and Inclusive Future

What is EXTEND: Supply Chain Development for Lifetime Extension and Reuse

21st June 2021

David Butler

nmis.scot



Soft Launch Objectives

- ▶ To introduce you to the programme
- ▶ Highlight SMEs which have/are benefiting from the circular economy
- ▶ Showcase some of the tools available to support you
- ▶ Get your feedback/opinions on what you want from this programme

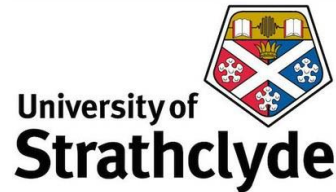


Overview

- ▶ This proposal targets three key sectors; aerospace, rail and renewables and addresses the challenges around life extension and repurposing of assets.
- ▶ It will focus primarily on **engaging SMEs** who traditionally have had some or little involvement in the identified sectors and supporting their journey from opportunity identification to technical capability demonstration.
- ▶ Objectives
 1. To establish opportunities for SMEs to engage in the sector supply chains.
 2. To identify enablers for market adoption.
 3. To support SMEs to unlock opportunities of the Climate Change emergency through the development of SME technology demonstrators, technical support and workforce reskilling

Project Partners

Duration: now to March 2023



EUROPE & SCOTLAND
European Regional Development Fund
Investing in a Smart, Sustainable and Inclusive Future



Overview – Aircraft Decommissioning

► Background

- One average : 1000 aircraft removed from service
- 2020: **5000** to **7000** additional aircraft

► Challenges

- Capacity bottlenecks
- Current operations act as scrap yards
- Towards 100% reuse the constituent parts

► Opportunities

- Demand for a more sustainable reuse of aircraft
- The creation of a new supply chain





Overview – Rail Sector

▸ Background

- Target: to decarbonize the rail industry by 2040
- Removal of over 4000 diesel driven rolling stock

▸ Challenges

- Cost effective ways to reduce emissions
- Capacity bottlenecks – Dependent on global supply chain for spares

▸ Opportunities

- Economic Benefits
 - Lower COO
 - Reliability of rolling stock
 - Supply chain development
- Environmental Benefits
 - Lower CO₂ footprint of assets
 - Reaching our net zero targets through asset management



Overview – Wind Sector

► Background

- Wind energy generates 14.8% of all UK electricity

► Challenges

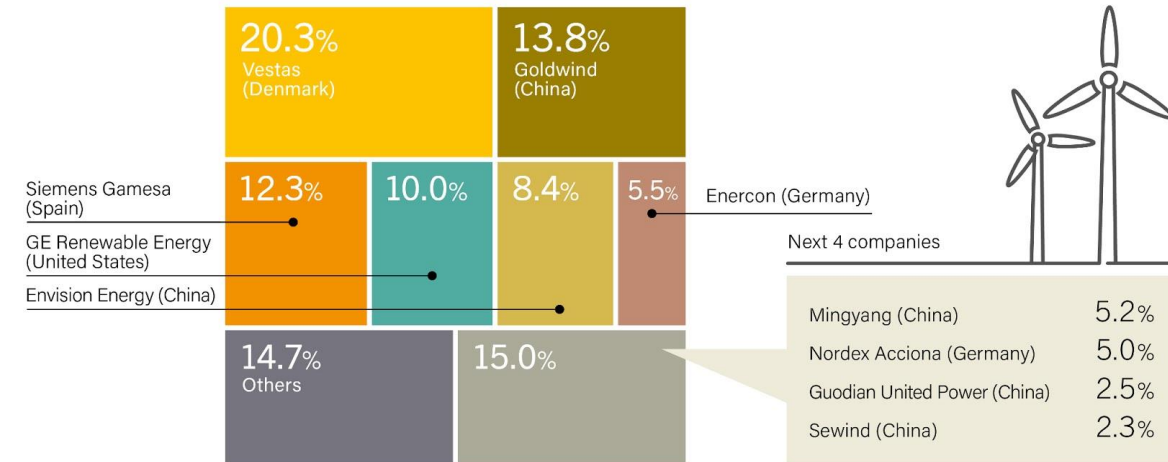
- 770 Wind turbines to be ‘decommissioned’ over the next 4 years
- 17% gap in energy production vs consumption by 2035

► Opportunities

- Economic Benefits
 - Lower COO
 - Reliability
 - Supply chain development
- Environmental Benefits
 - Lower CO₂ footprint
 - Reaching our net zero targets



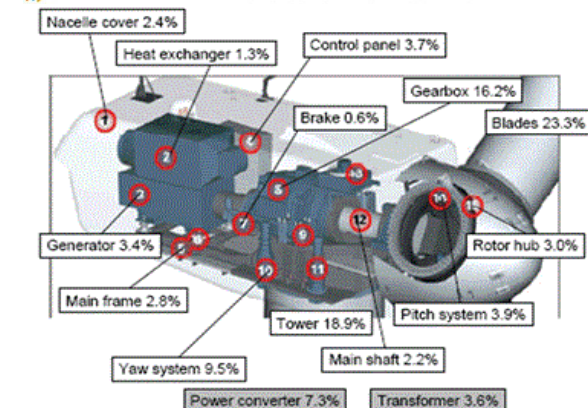
Market Shares of Top 10 Wind Turbine Manufacturers, 2018



Note: Based on total sales of approximately 50.6 GW.

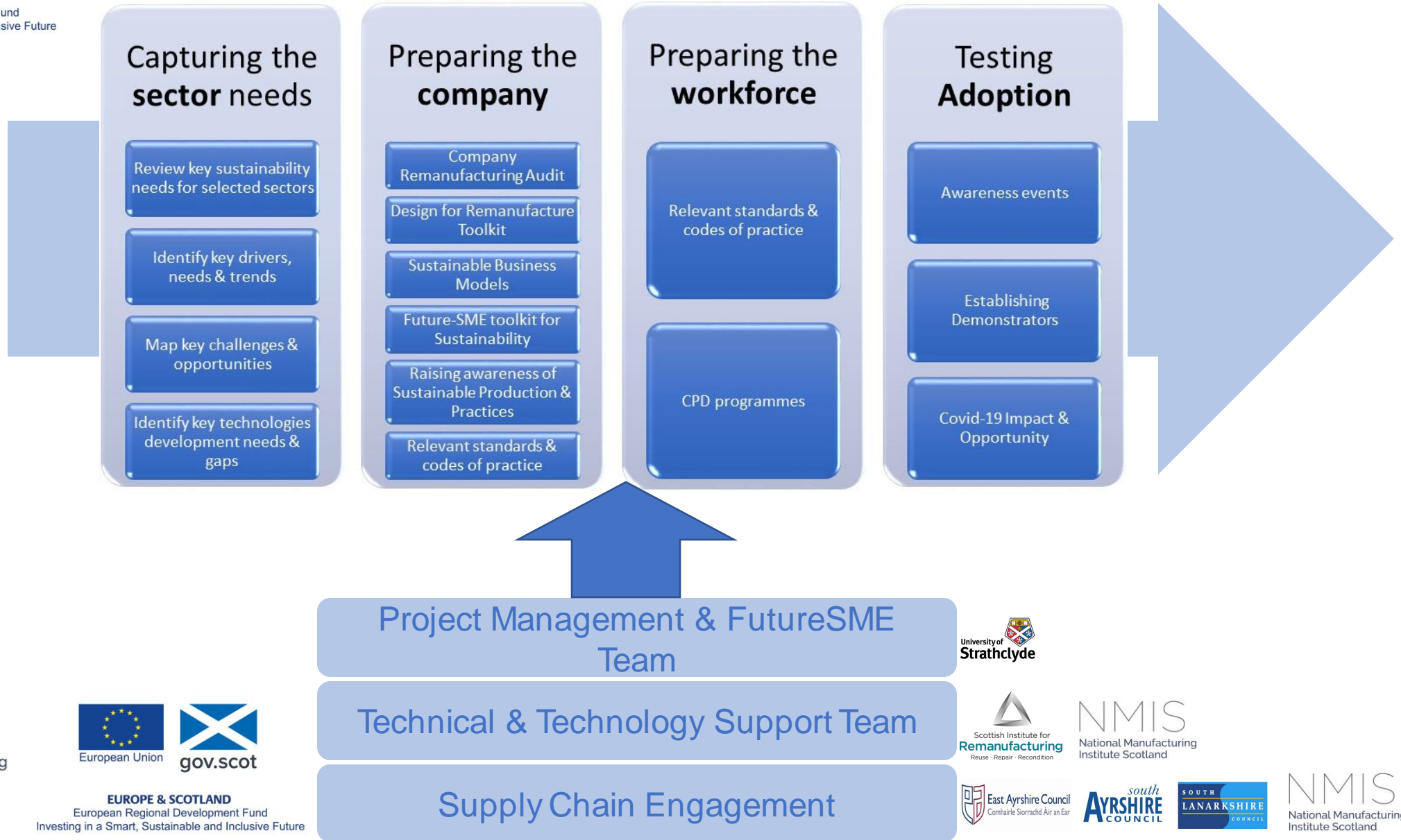
Source: GWEC.

REN21 RENEWABLES 2019 GLOBAL STATUS REPORT



The Approach

EUROPE & SCOTLAND
European Regional Development Fund
Investing in a Smart, Sustainable and Inclusive Future



Thank you

NMIS
National Manufacturing
Institute Scotland



European Union



gov.scot

EUROPE & SCOTLAND

European Regional Development Fund
Investing in a Smart, Sustainable and Inclusive Future

SME Experience



James Barry
Chief Executive
Renewable
Parts Ltd



Mark Atherton
Chief Production
Officer & Head of
Ops TN
Superglass

Service Offerings



Dr Colin Andrews
Technology Fellow
of DMEM

University of
Strathclyde



Aineias
Karkasinas

DMEM

University of
Strathclyde