Renewable Parts Ltd

Decarbonising our supply chain

Some initial thoughts

1. The commitment to NET ZERO changes everything, however…
2. Our going to the moon moment – we set a vision, we're now figuring out how to achieve it
3. Supply chain decarbonisation is intrinsic to meeting this goal, but where to start
4. This requires an entire rethink of parts design, and operational / procurement practices
5. At its heart is culture change and a more rounded view of value and best practice
6. Good precedents exist and we must resist re-inventing the wheel

The uncomfortable truth

The wind industry is a green energy source, but the aftermarket remains largely non-green

Linear procurement practices remain deeply ingrained for minor parts

The opportunity to embed greater sustainability within the aftermarket has substantial benefits

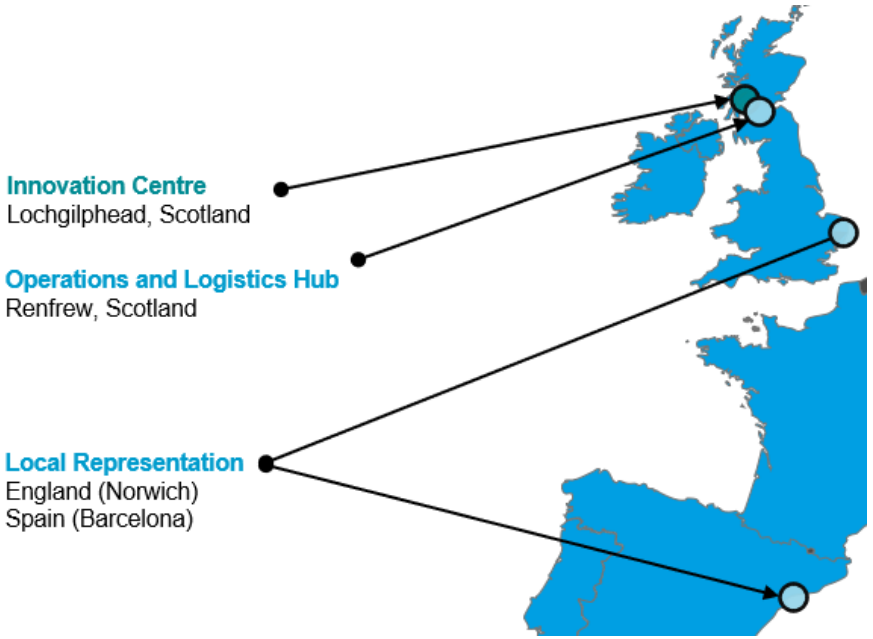
But this requires a complete change of culture and a willingness to invest in circular economy technology

Renewable Parts' value proposition

1. Renewable Parts' model is centred on delivering high value add services to its customers
2. This is achieved through investment in technology, enabled by data and technical / operational expertise
3. Reuse of parts through refurbishment and remanufacture is a primary, strategic driver of the business to reduce carbon intensity and waste

- Our core values of INNOVATION, DEPENDABILITY and RESPONSIVENESS underpin all we do

Measuring the impact of what we do



- **Parts supply & inventory management** - to minimise lead time and maximise turbine availability
- **Development and production of sustainable solutions** – refurbishment, remanufacture, reuse and redesign of parts to provide a more sustainable alternative to new

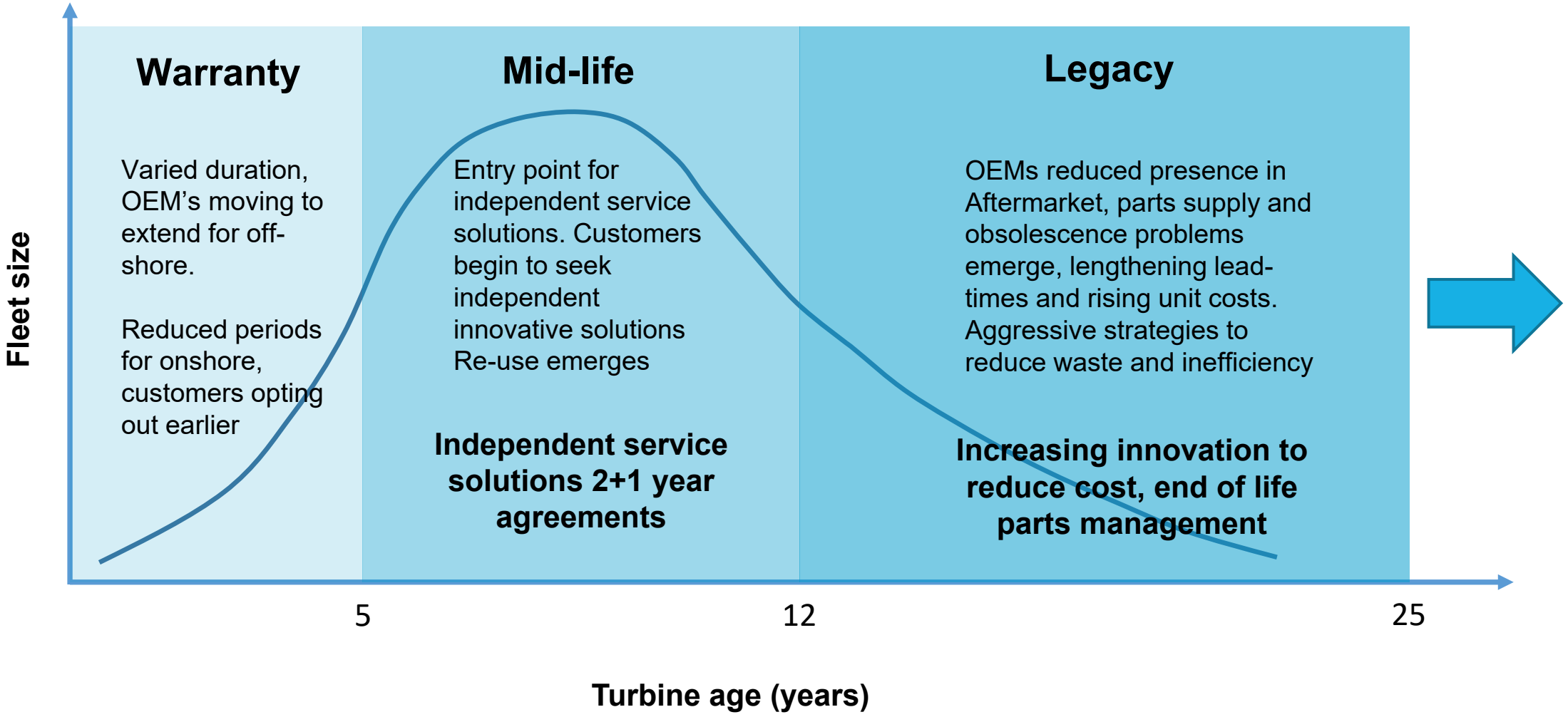
136,000
ITEMS MOVE THROUGH OUR SUPPLY CHAIN ANNUALLY

250t
OF MATERIAL DIVERTED FROM LANDFILL AND SCRAP

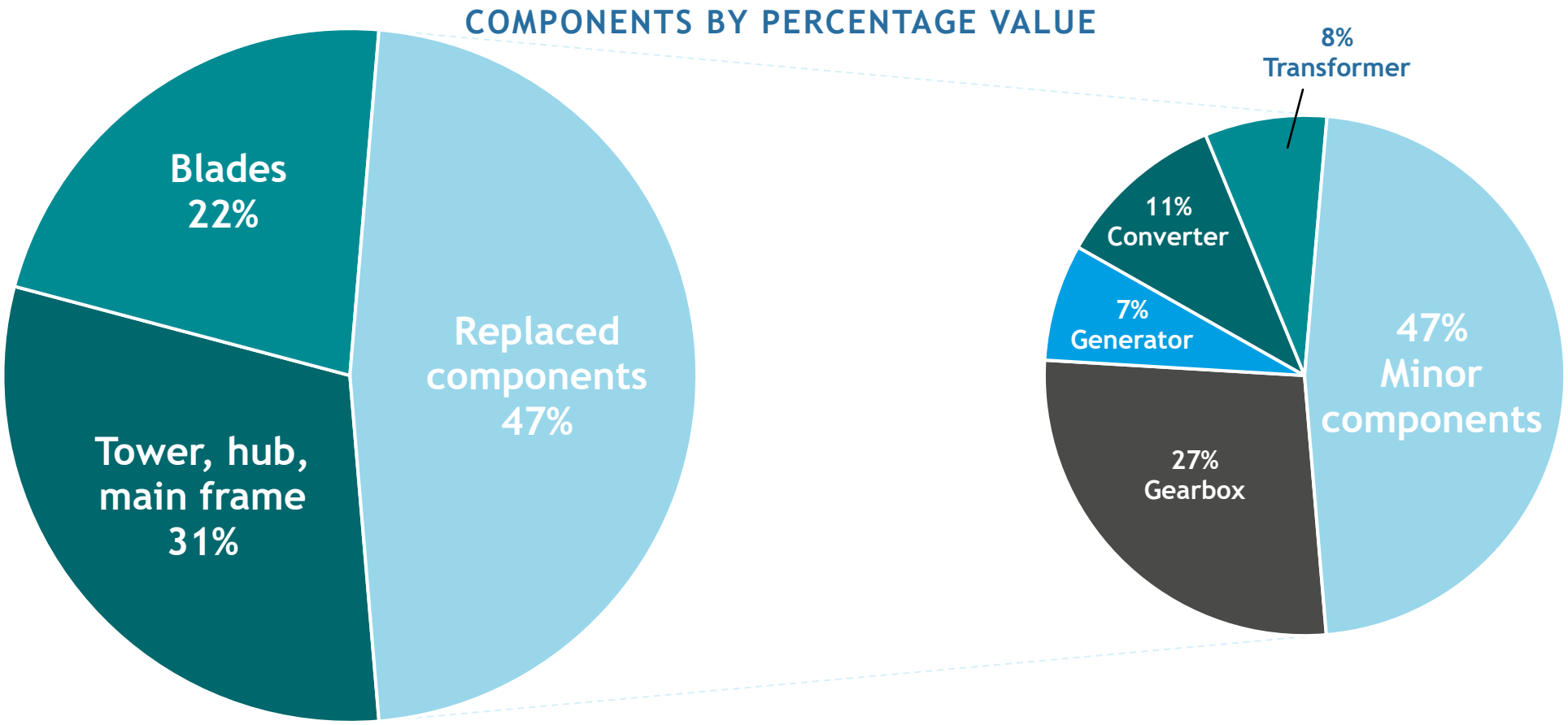
2600
WIND TURBINES ARE CURRENTLY SUPPORTED ACROSS OUR CHAIN

450t
OF CARBON EMISSIONS REDUCED SINCE 2019

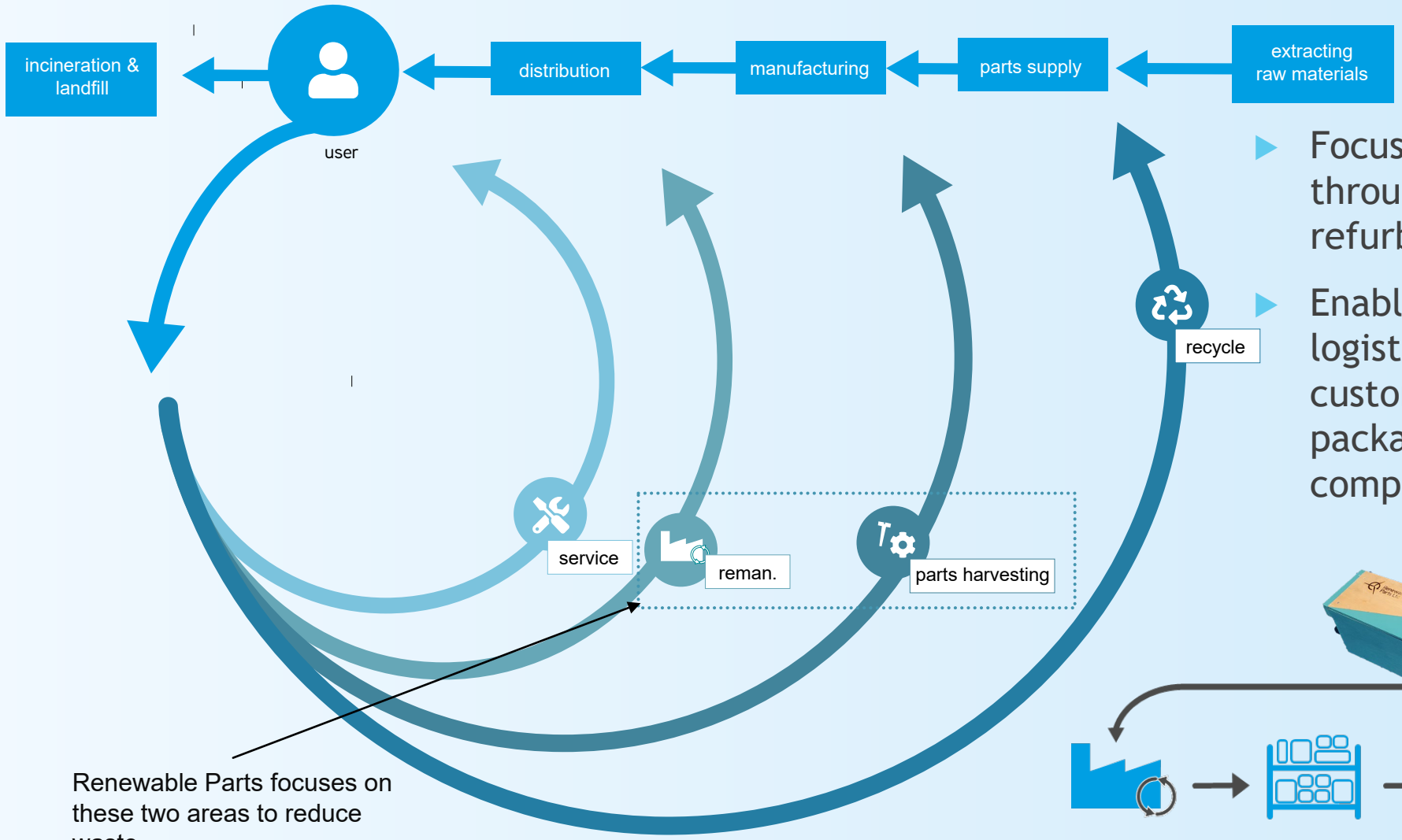
Business model – phases of the lifecycle



Minor Components – 50% of recurring cost



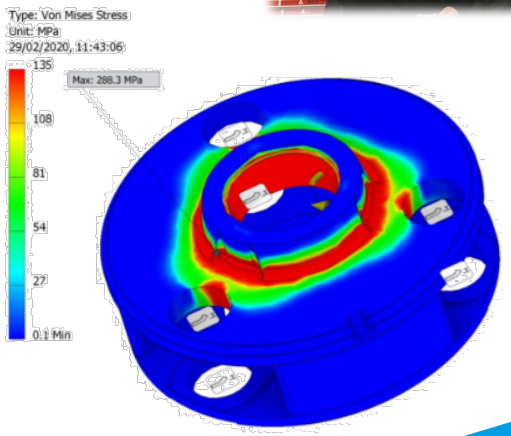
Creating a circular economy



- Focus on value retention through remanufacture and refurbishment
- Enabled through reverse logistics process with custom frames and packaging for many components

Innovation Centre – Services

- Our in-house technical capability is supported by academic and industrial partners to provide the following services:
  - Failure investigations and root cause analysis
  - Refurbishment & remanufacture to high quality standards
  - Reverse engineering and manufacture
  - Re-design of existing products to offer improvements in performance or reliability
  - Custom packaging and frame design and manufacture
  - Complex kitting solutions involving refurbishment and partial assembly



Reducing our carbon footprint

- For illustration we take a Siemens 2.3MW yaw system:
  - Turbine has 8 yaw gears with an average life of 5-7 years
  - Each yaw gear weights ~250kg with a CO_2 footprint of 700kg to fabricate new
  - Lifecycle footprint is 17t CO_2
- Yaw gear remanufacture now becoming the preferred procurement option

Assumptions:
1000 miles trip to OEM
9 mile/ gallon
2.62kg CO_2 / litre

Carbon equivalent to a flying a 747 for 20 minutes

Conclusions

1. NET ZERO commits us to decarbonising the supply chain
2. Parts remanufacture is the only way to reducing carbon footprint while maintaining performance
3. The transition to circular economy procurement practices requires a culture change
4. We have made a good start but the potential to do more and faster is enormous
5. Remanufacture presents the opportunity to build a new, high skilled economy here in Scotland