Michelle Raven
Business Development Manager

Stirling Dynamics

Partnering for Innovation
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Stirling Business Units

**Mechatronic Systems**
- Active Control Systems
- G Seats
- Electro-Mechanical Test Rigs
- Test Services

**Aircraft Systems**
- Landing Gear
- Fuel Systems
- Actuator Design
- Control Systems
- Dynamic Simulation

**Aerospace Engineering**
- Loads
- Aerodynamics
- Weight
- Performance
- Stability, Control
- Handling Qualities
- Structures & Materials

**Marine and Industrial Systems**
- Submarine Autopilots
- Hover Systems
- FASC Systems
- Engineering
- Trials Support
Growth in Turnover

• Profit reinvestment cycle is key
25 Years of Innovation
Why Partnering?

• No one company knows everything!
• Difficult to see outside your own experiences
• We develop tech knowledge and learning from other companies expertise
• SMEs - Stronger together
• Share the financial / resource burden
• Motivation to keep going
• Access to new networks
Partnering Examples

- **Collaborative R&D Projects**
  - Framework 7 – ALICIA / ACROSS (Multiple partners)
  - Clean Sky – CLAReT (Bristol Uni and ARA)
  - TSB – SAWoF (Airbus/Innovation Works/QinetiQ)

- **Supporting University EPSRC projects**
  - E.g. Engineering Nonlinearities – Bristol, Southampton, Sheffield and Cambridge universities. Stirling, Airbus, Rolls Royce, EDF, Garrad Hassan, Agusta Westland, Romax industrial partners

- **DiPaRT – supporting the Airbus Flight Physics R&T activities**
  - Gives us access to academic research and recruitment of staff
  - Industrial contacts

- **G-Cueing & Active Control**
- **Waste Recycling & Energy Technologies**
Partnering Examples

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How do we do it?

• **Networking** – building relationships
  • Be part of the scene
• **Bidding together**
• **Looking above and below**
  • Small player – Access data and infrastructure
  • Big player – offer tech support and access to innovation
• **Funding**
  • TSB, Clean Sky, Framework7, etc.
  • Waiting for Aerospace Technology Institute
    - Get interested parties together ready for the funding calls
Ingredients for Success

- **Company culture and vision – passion for innovation**
  - Bob Stirling, Stephen Judd – take a risk, see the value

- **Strategic Plan**
  - R&D Strategy - % commitment, patent targets
  - Increase our R&D spend year on year
  - Measuring Innovation

- **Work closely with universities**
  - Transfer knowledge both ways and don’t treat universities as suppliers

- **TRMs – how does it all fit together??**

- **Sponsor / Champion – the go-to**
  - Drives it, finds the funding, finds the partners, writes the bids, sells internally
Ingredients for Success (2)

- **Partnership Dynamics**
  - Trust
  - Genuine belief in the idea
  - Mutual long-term interest in the outcome
  - Clearly different capabilities
    - Reliance – can’t back out
    - Sum is greater than the parts
    - No confusion or conflict over workshare
  - Clearly defined scope / roles & responsibilities / working practices
  - Clearly understood aspirations – be very honest

- **Commercials**
  - MoU
  - The business case / fit with Strategic objectives
  - Consider different commercial models – transaction, profit sharing, exclusive licence agreements, owning a share of the business

- **IPR**
  - Be savvy – upskill on copyright/trademarks/patents, etc
Doomed to Failure

- Partners who want an instant £ return
- Partners who only are only looking out for their own benefit
- Who’s leading this?
- Mixed (or hidden) agendas and messages
- Loss of trust – no way back
Future Plans

• Putting something back
• We are all part of the same ecosystem
  • Larger companies should support and encourage the development of their supply chain
  • We should all be looking to help smaller businesses succeed
What would we like to see?

• Putting something back

• **We are all part of the same ecosystem**
  • Larger companies should support and encourage the development of their supply chain
  • We should all be looking to help smaller businesses succeed

• **More companies, big and small, opening up to collaborate**

• **More government funding**
  • Support the development of smaller companies, rather than just the interests of the major players
Thank you for listening

Questions?