Wind Blade Grid

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Engineering the System

1. See the Different Components

2. Integrate the Components

3. Greater than the sum of its parts
Different Components

- Aerodynamic and acoustic design
- Electromechanical design
- Gear, shaft and component design
- Tower design and FSI
- Wind farm configuration for optimal power generation
- Site selection, land and sea
Integrated Environment: Workbench

- Flow analysis
  - Steady
  - Transient
  - Transitional
  - Turbulent
  - ...

- Structural analysis
  - Static
  - Dynamics
  - Modal and Random vibration
  - Fatigue, creep and fracture
  - ...

- Other CAE components
  - Electricals
  - Electronics and control
  - Electromagnetics
  - Chemistry
Simulation is now widely spread in the industrial world, although successful companies are paying more attention to the coupling of different physics.
The biggest difference between best-in-class companies and all others is that they are doing simulation **systematically** during the design process.

Download the full report and get a free assessment of your company performance from [www.ansys.com](http://www.ansys.com).
Takeaways

1. Broad suite of tools

2. Benefits of Simulating Entire Systems

3. Experience to back up the technology
• The first electricity generating wind turbine, was a battery charging machine installed in July 1887 by Scottish academic James Blyth to light his holiday home in Marykirk, Scotland
To Finish...

What do you think we’re missing?

I’ll be back