



**Rolls-Royce**

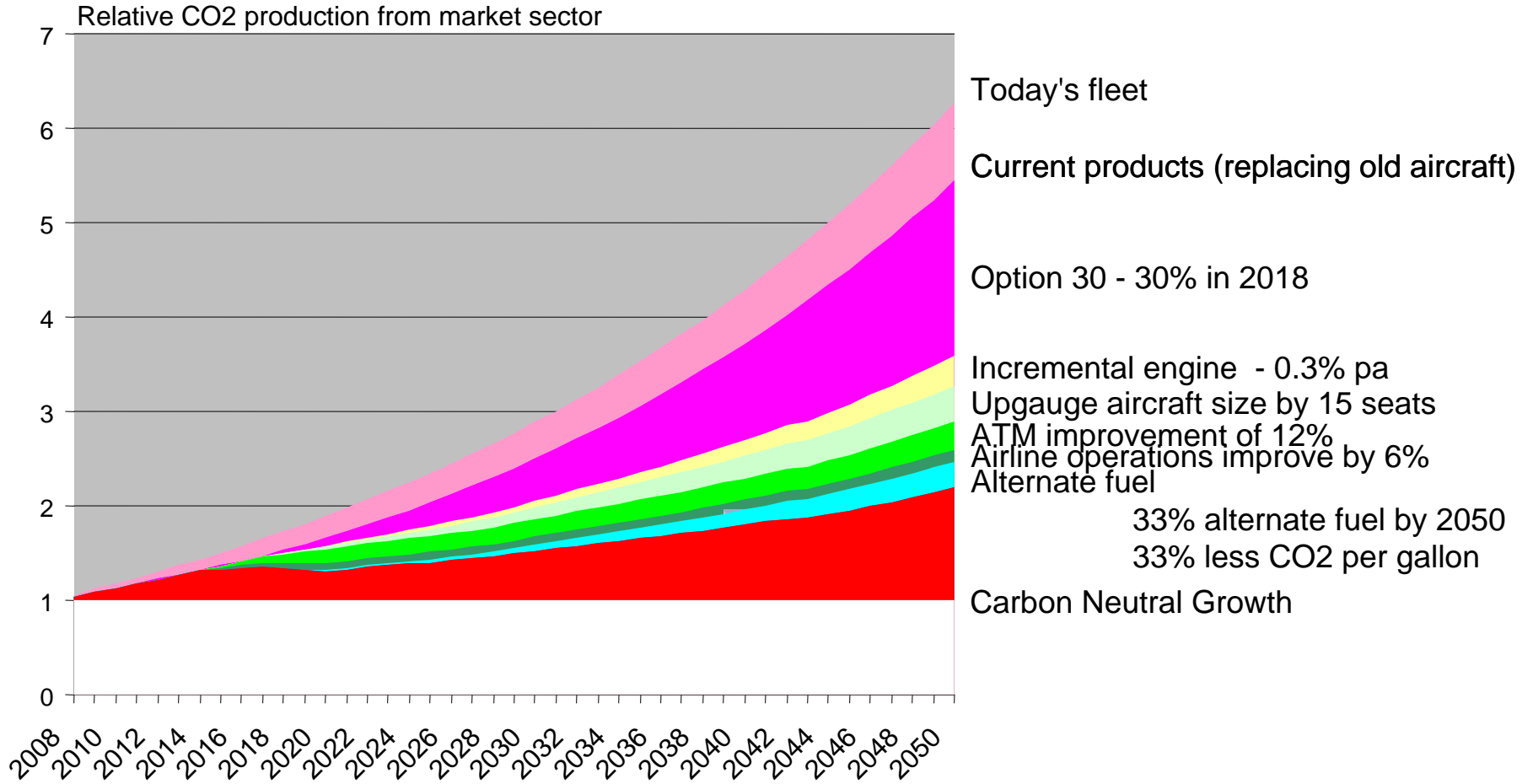
**Options for a changing world**  
Robert Nuttall  
VP Strategic Marketing



**Rolls-Royce**

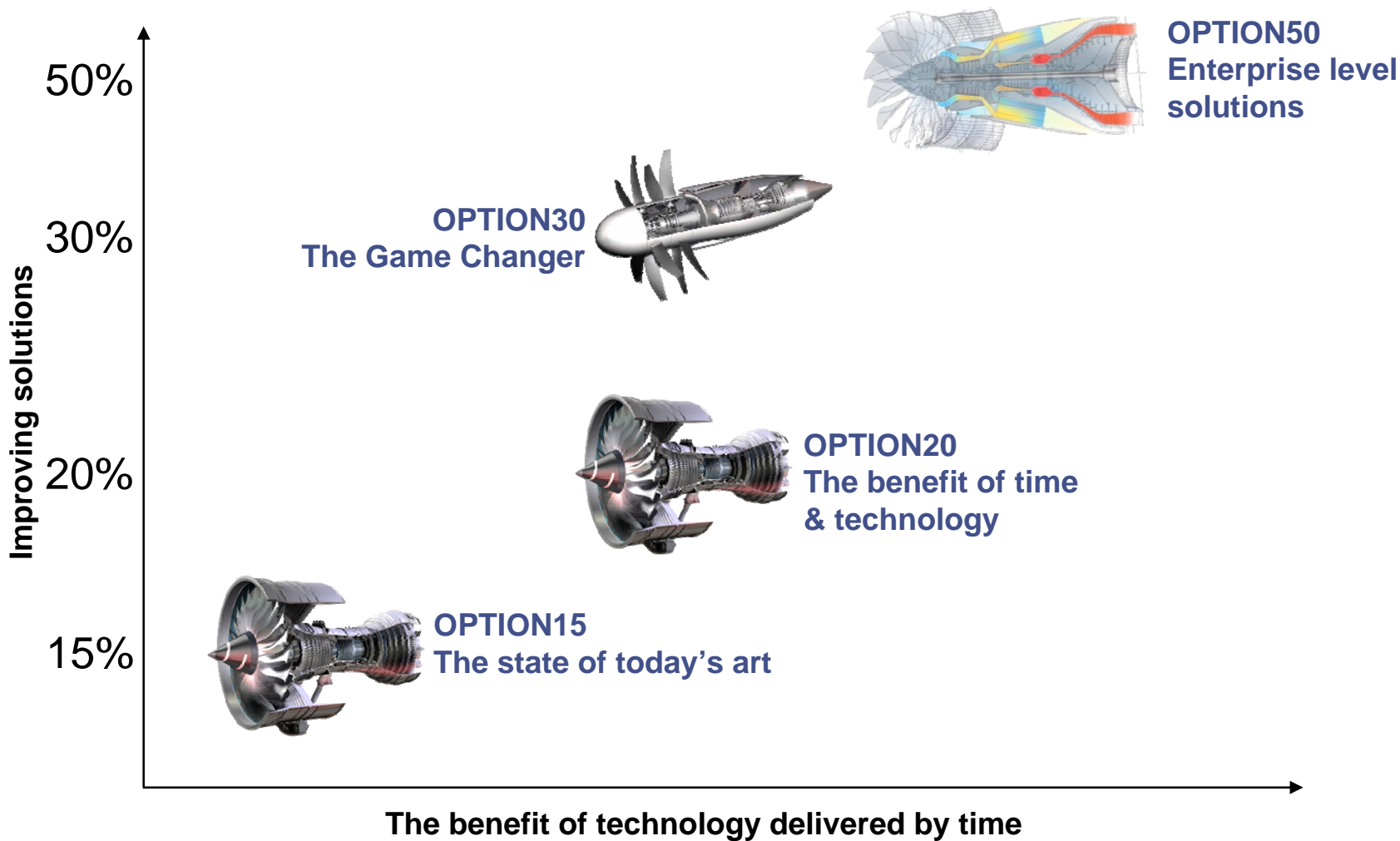
# CO<sub>2</sub> - short term solution is technology

## 100 to 200 seat market



# Option15-50 Roadmap

OPTION  
15 50



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# Operations in 100-200 seat market

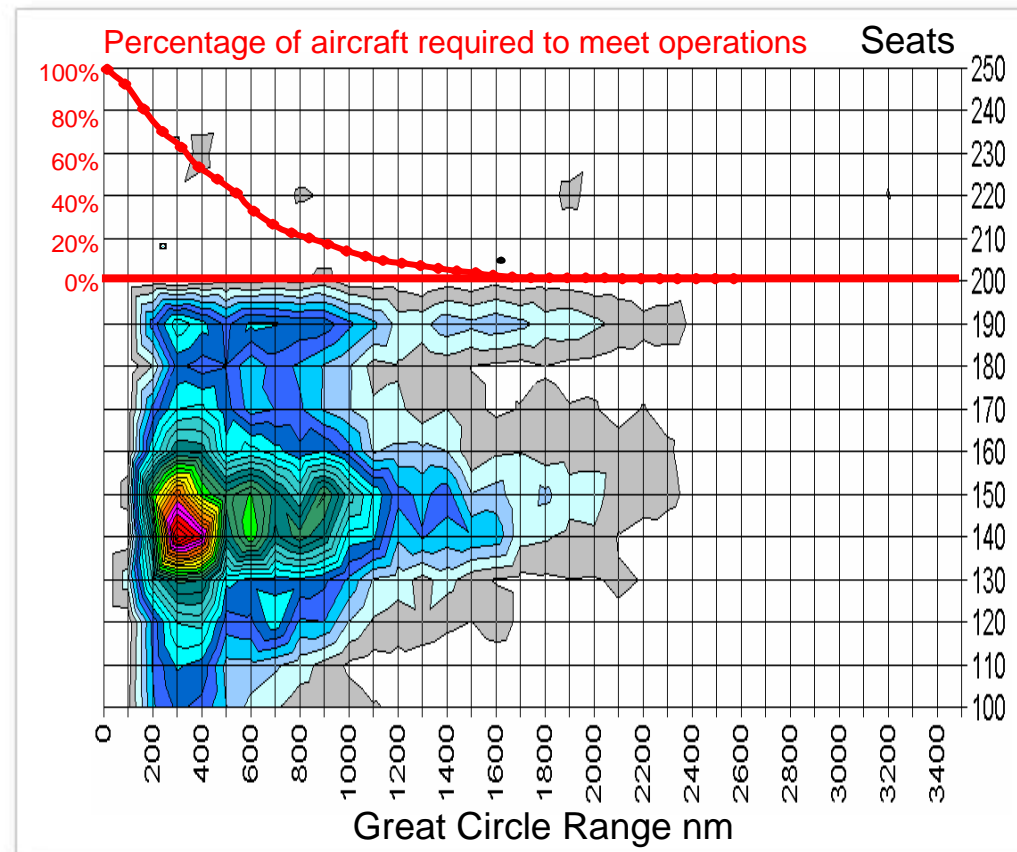
Distribution of 100-200 seat operation requirement in 2008

Of '150-seat' missions:

- Less than 1% have ranges >2500nm
- Only 3% have ranges >2000nm

Compared to 3500nm designed aircraft:

- 2500nm design saves 6% fuel per trip
- 2000nm design saves 7.5% fuel per trip



# Rolls-Royce alternative fuel programme

Significant programmes

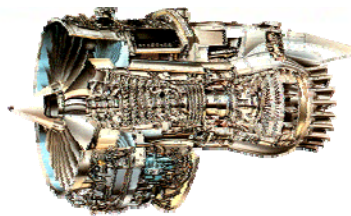
1<sup>st</sup> February 2008



December 2008



2009



## First GTL demo flight

- GTL capabilities evaluation
- Industry report issued in Q2 08
- Ongoing work committed



## First 2<sup>nd</sup> gen biofuel demo flight

- Biofuels' capabilities evaluation
- Engine to return to service after test



## The alternative fuel consortium

- In-depth scientific test programme
- Back-to-back fuel testing
- An industry report will be issued





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