



**ICAO AVIATION AND SUSTAINABLE
ALTERNATIVE FUELS
WORKSHOP**

ICAO Headquarters, Montréal, Canada

18 to 20 October 2011



Building the Value Chain to Build the Business

Honeywell

Uop

A Honeywell Company

Dr. Jim Rekoske

VP/GM

Honeywell's UOP



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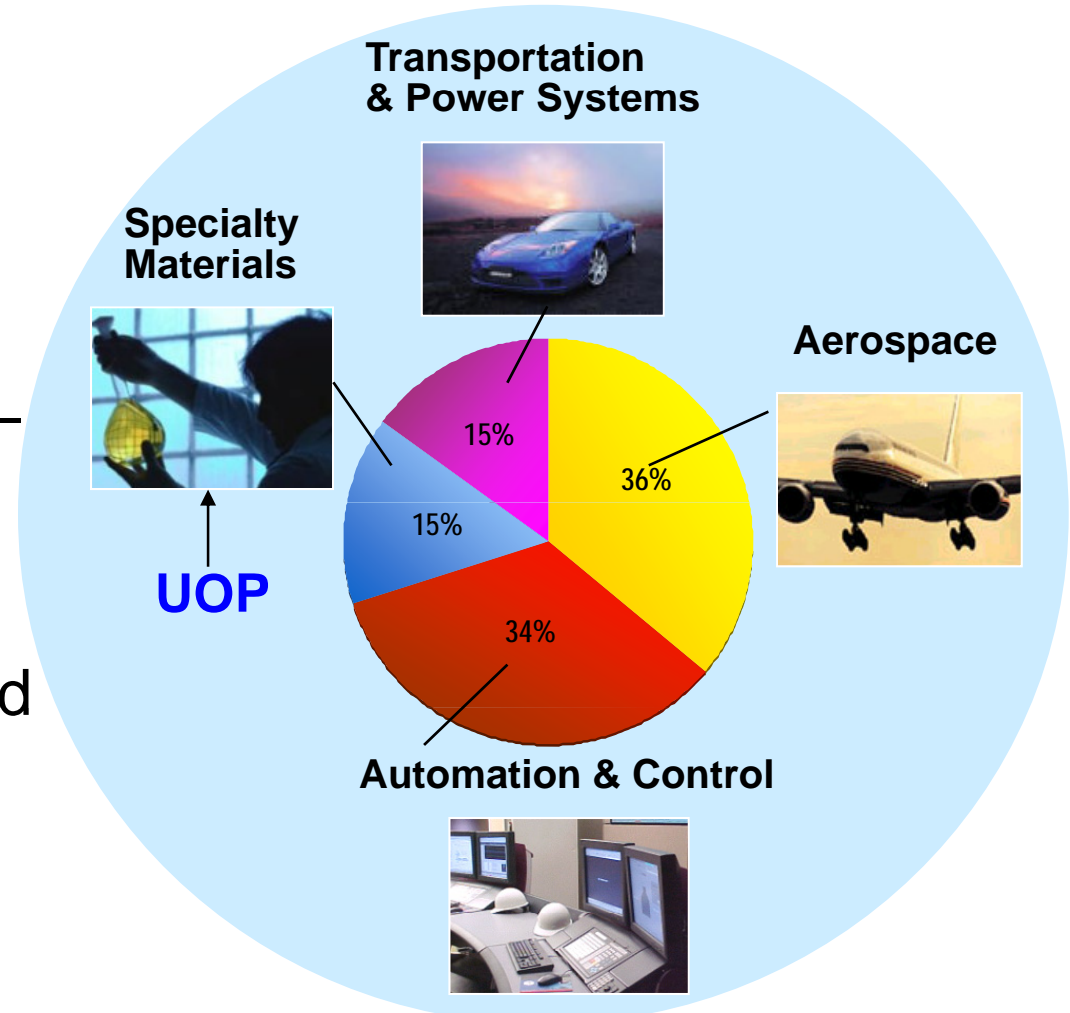
WORKSHOP

Wednesday, 19 October 2011



Honeywell

- 125,000 employees in more than 100 countries
- A Fortune 100 company – sales of \$33.4 billion in 2010
- Global leader in advanced technology products, services and solutions



A Global Technology Company, with Breadth and Depth in Energy Systems



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- **Since 2005, a Honeywell Company**
 - Part of \$5B+ Specialty Materials Business Unit
- **Leading supplier and licensor in chemical process industries**
 - Technology, Catalysts, Adsorbents, Technical Services
- **UOP Technology Furnishes:**
 - 60% of the world's gasoline
 - 85% of the world's biodegradable detergents
 - 60% of the world's para-xylene (for PET resin, polyester).

Uop

A Honeywell Company

Petroleum



Petrochemicals



Natural Gas



Renewables



We Know Fuels – Nearly 100 Years of Energy Experience



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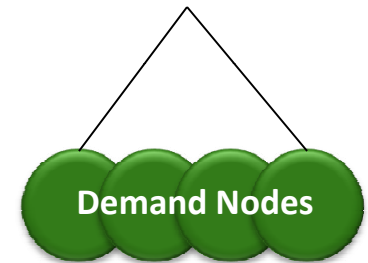
Our Position in Sustainable Aviation Fuels

- UOP has developed a technology for the product of HEFA – Renewable Jet Fuel
- Used in more than eight (8) commercial / demonstration flights
- Supplied fuel used by DoD (Army, Navy and Air Force) HEFA certification
 - Traditional airplanes, helicopters, UAVs, tanks and ships







Value Chain Feature	Positive / Negative?
Long Value Chain	↑ ↓
Diffuse	↑ ↓
Crosses conventional industries	↑ ↓
Concentrated demand / use	↑ ↓



**Constructing Value Chains
To Mitigate Risks**

Diamond Green Diesel, St. Charles. LA



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- **This is a complex business – whole value chains need to be constructed from scratch**
- **Momentum has never been stronger – and appetite to “put pieces together” is growing**
- **Ignoring any part of the value chain in any project – or the industry as a whole – will mean certain failure**
- **Partnerships welcomed (needed) here!**



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The New Age of Sustainable Aviation Biofuels has Landed

**First Transatlantic Flight on HEFA Biofuels
New Jersey to Paris, 17 June 2011
Honeywell Gulfstream G450**

