The Boeing Company

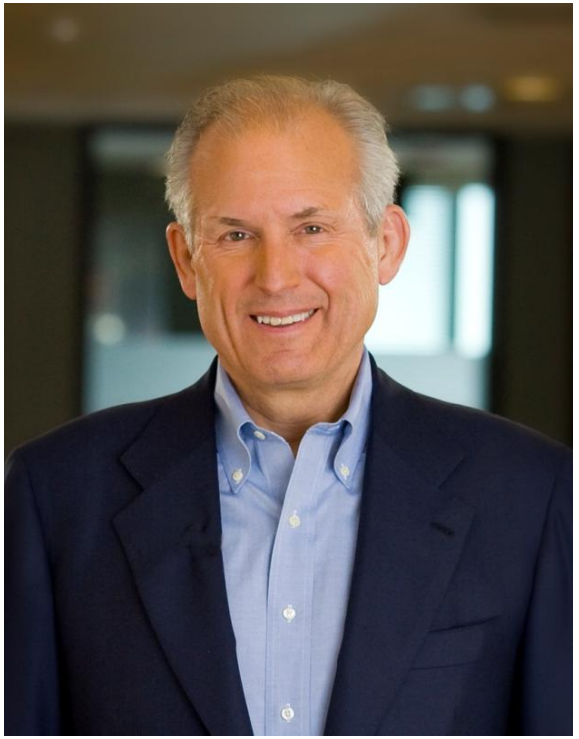
James D. Kinder, Ph.D.
Technical Fellow
Boeing Commercial Airplanes

Commercial Aviation and the Environment

Opportunities, Challenges, Industry Commitment
Focus on Sustainable Aviation Biofuel

Developing Innovative Solutions

We recognize the importance of protecting our ecosystem. That is why we are unleashing the expertise of Boeing employees to design environmentally progressive products, research cleaner fuels, [and] enhance the global air traffic system to reduce the carbon footprint of air travel.



Jim McNerney
Chairman, President and CEO
The Boeing Company

Our Plan and Commitments

Relentlessly pursue manufacturing and life cycle improvements

100%

100% of Boeing major manufacturing sites will maintain ISO 14001 certification.

Improve performance of worldwide fleet operations

25%

Focus on 25% efficiency improvements in worldwide fleet fuel use and CO_2 emissions by 2020.

Deliver progressive new products and services

15%

Improve CO_2 emissions and fuel efficiency by at least 15%

Pioneer new technology

75%

Devote more than 75% of R&D toward benefiting environmental performance

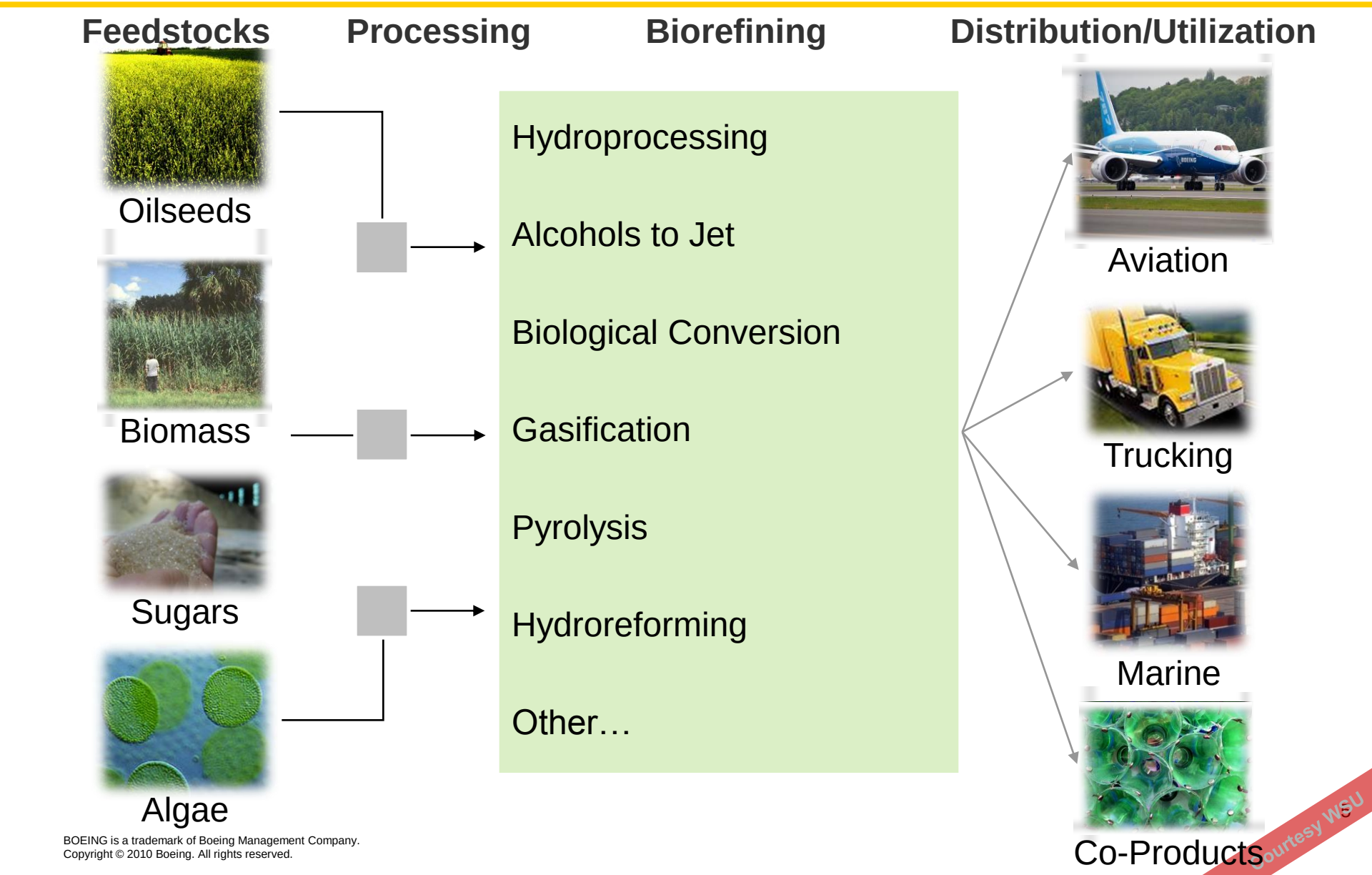
Addressing the Commercial Aviation Challenge

Environmentally Progressive Products

Improved Air Traffic Systems / Operational Efficiency

Alternative Energy Sources

Advanced Biofuel Production



Sustainable Biofuel Works in Existing Infrastructure

- **Meets fuel performance requirements**
- **Requires NO change to airplanes or engines**
- **Requires NO change to infrastructure**
- **Can be mixed or alternated with today's Jet-A fuel**

Boeing is Pursuing Sustainable Aviation Biofuel

2015 Target ➡

- 600+ million gallons/yr of bio content
- 5-10 feedstock/fuel production projects

Focus Areas

Fuels Approval

Successful flight tests

Initial pathway approval 2011

Feedstock Pathways

Feedstock and sustainability assessments underway

Airport Infrastructure

"Drop-in Fuel"

Commercial Production

Initial projects announced

Support and Advocacy

Aviation-prioritized biofuel supply chain

Act in catalyst role to accelerate commercialization

Sustainable Aviation Biofuel Projects Around the World

SAFUG-Europe Member Projects

Working Together MOUs with CAAC, Air China, PetroChina

Sustainable Aviation Fuels Northwest

Project Flight Path

Life Cycle Analysis

Masdar Research Project

Aviation Biofuel Road Map

Aviation Biofuel Assessment Project

Sustainable Aviation Biofuel Progress Report







Progress

- Flight tests – met / exceeded expectations
- Comprehensive regional assessments underway – Australia, China, Mexico, US
- Global sustainability standards consortium

Next Steps

- ASTM approval, next pathway 3Q 2011
- Continued emphasis on sustainability and regional commercialization
- Encourage expanded feedstock and processing pathway development
- Stretch goal: market viability by 2015

Great progress. Superior fuel. Early in the journey.

We Are Committed to a Better Future

For more info: www.boeing.com/commercial/environment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