

**LISBOA 2010**  
MAY 25/28  
**16th World Meeting**

# Ecodesign and Ecoconcepts



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# Contractors Face Increasing Pressures

- Economic
  - Fuel and material costs
  - Waste disposal costs
  - Cost of regulatory compliance
- Environmental
  - Air quality and greenhouse gas emissions
  - Waste
  - Land use/job site impacts
- Social
  - Job site safety
  - Shortage of skilled labor
  - Reputational impact (e.g. ability to hire)

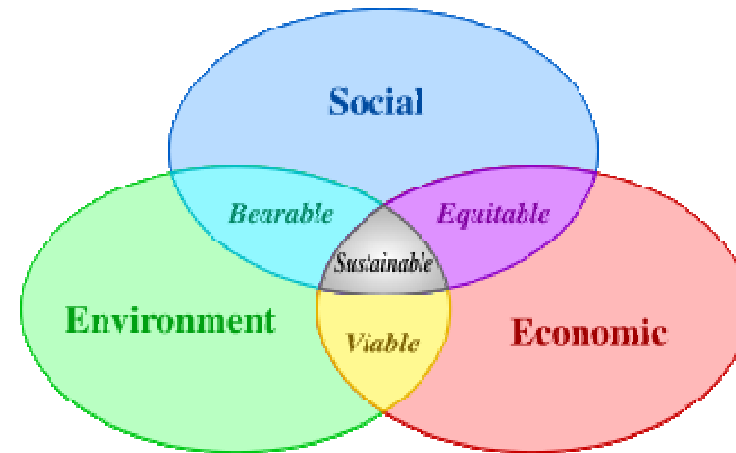


**Voice of Contractors:  
“How will you help me  
respond to the pressures?”**

# Sustainability In New Product Development

- Economic
  - Life Cycle Cost
- Environmental
  - Fuel/Energy Efficiency
  - Air Quality Emissions
  - Greenhouse Gas Emissions
  - Materials Efficiency
  - Manufacturing Impacts
  - Supply Chain Impacts
- Social
  - Safety
  - Sound

When a Product/ Practice/  
Initiative satisfies all 3  
criteria, it is considered  
sustainable



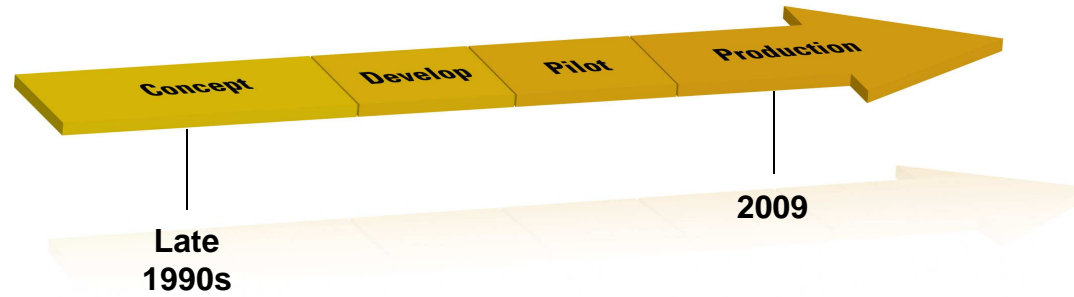
# Sustainability In New Product Development : More than “Environmentally Friendly”



- Helping customers get more done with less
- More productivity and efficiency
- Lower owning and operating costs
- Less waste
- A safer jobsite



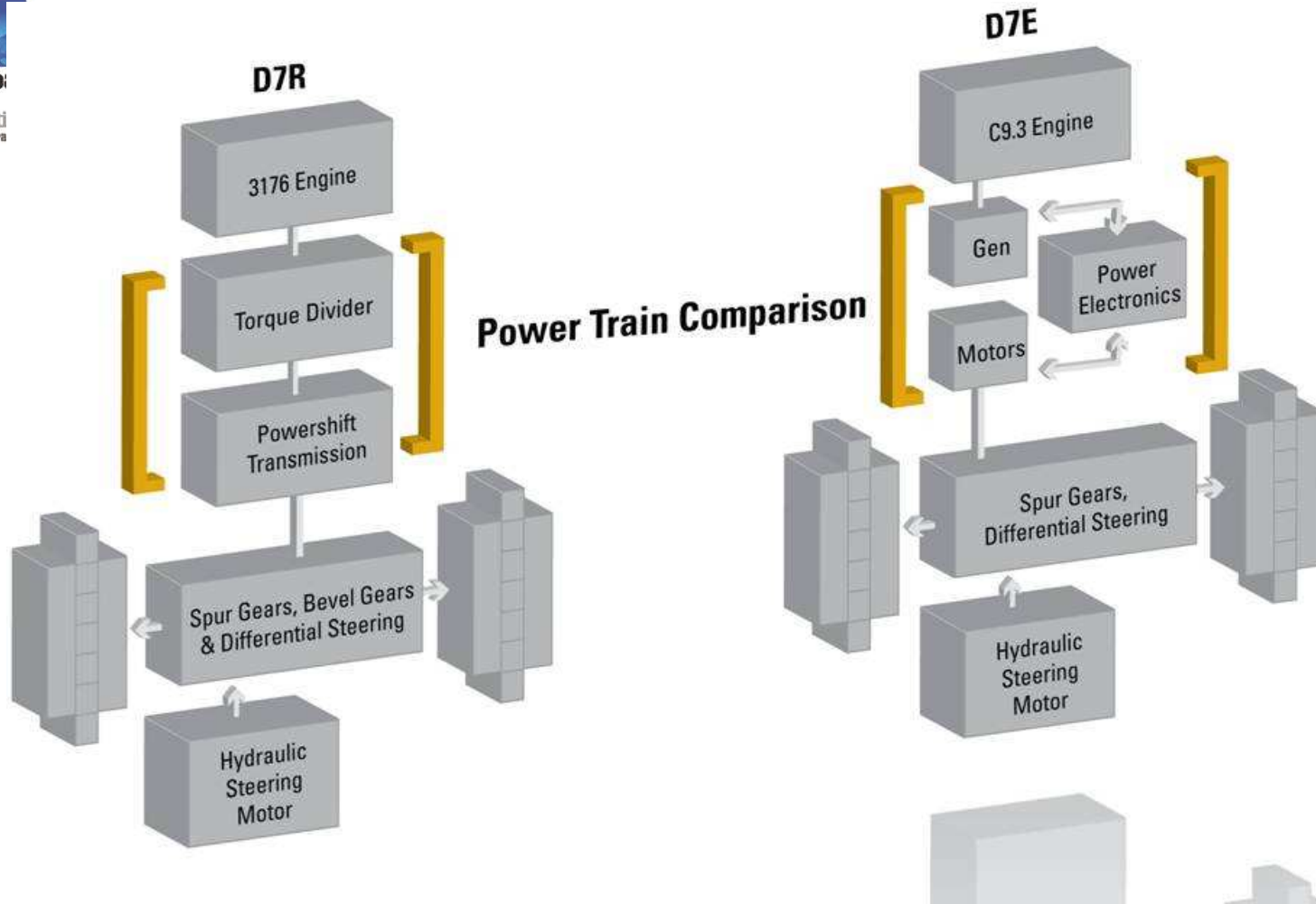
# Example: D7E Product Development Timeline




# New releases are RESOURCEFUL. In more ways than one.



# 60% Fewer Moving Parts



## Less Fuel Used per Hour



- 10% to 30% less fuel per hour
- Lower lifetime greenhouse gas (CO<sub>2</sub>) emissions
- A 25% reduction in fuel use would mean 25% less CO<sub>2</sub>
- Bio-diesel compatible

# Life Cycle Management - Facts



- **>95%** of mobile construction equipments are **recyclable** due to the nature of the components used (mostly iron and steel)
- In average **80-85%** of mobile construction equipments **weight is made of steel** or iron
- Currently between **30-40% of the steel used** on new produced equipment **is recycled**
- Availability of recycled steel requires use of virgin material

# Cat 2020 Sustainability Goals For Products, Services and Solutions



- Provide leadership in the safety of people in, on and around our products
- Reduce customer greenhouse gas emissions by 20%
- Increase customer energy efficiency by 20%
- Increase customer material efficiency by 20%



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Thank You



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## Questions for Round Table

Which method are you using to Find % of Steel/ iron Recycled Content?

- 2 Methods of Finding % Steel Recycled Content
  - **Method 1** – Caterpillar Experts
    - Mini Mill = 100% recycled content
    - Integrated Mill = 15% recycled content
  - **Method 2** – Steel Recycling Institute
    - Mini Mill = 82.8% Recycled Content
    - Integrated Mill = 28.9% Recycled Content



## Questions for Round Table

How do you currently supply machines worldwide?

- Multiple Sourcing/ production for each selling region
- Supply chain developed to limit transportation. Both Components and raw material + finished goods
- Using Total cost logic rather than material cost only.
- Containerization (where possible) to reduce shipment cost and improve transportability