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Non-Road Mobile Machinery Hybridization Methods by Virtual Design and Electric Drive Models



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Original loader



Traditional model



- Fuel consumption
- Productivity
- Maneuvrability

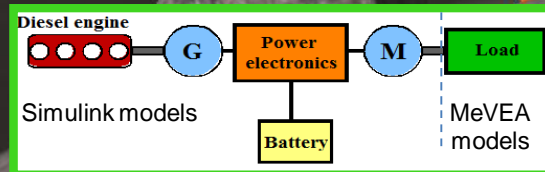
Tubridi hybrid test platform



Series hybrid model(s)

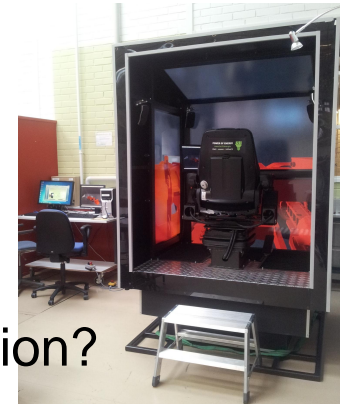


- Fuel consumption
- Productivity
- Maneuvrability
- Component sizing



Virtual simulation test bench answers to the needs:

- What is the drive cycle like of this machine?
- What size of battery or electric motor should I choose?
- How much does the productivity increase by hybridisation?
 - How many kg or m³ more is moved in an hour?
 - How much fuel is saved by the hybridisation?
- How does it feel to drive the hybrid machine?
 - ...that is not yet even manufactured as a prototype.
 - Is the usability improved by hybridisation?



Energy efficiency – Productivity – Usability – Control systems



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