

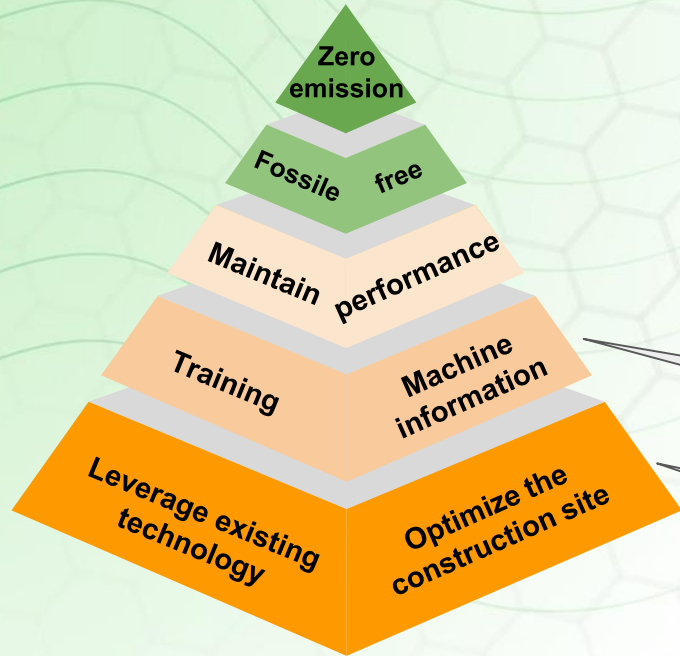
Sustainable construction in Scandinavia

We make it possible - Introduces Z-line
Pon Equipment - a solution provider

Z LINE



Sustainable Construction – powered by Knowledge & Technology



- Insights in fuel consumption drivers
- Converting data to decision making information
- Leveraging new integrated technology

- Move as little as possible - as short as possible
- Machine fleet composition
- Latest available engine technology

Z LINE



SMART MACHINE - Easy to use technology

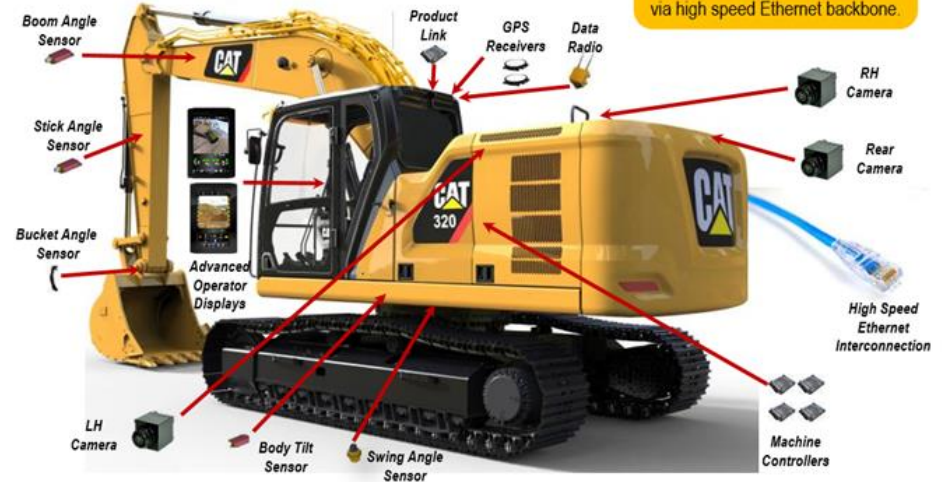
45% - increased productivity
25% - reduced fuel consumption
15% - lower maintenance cost

- Smart machines with assist functions improve everyday productivity
- Real-time production measurement enable site optimization

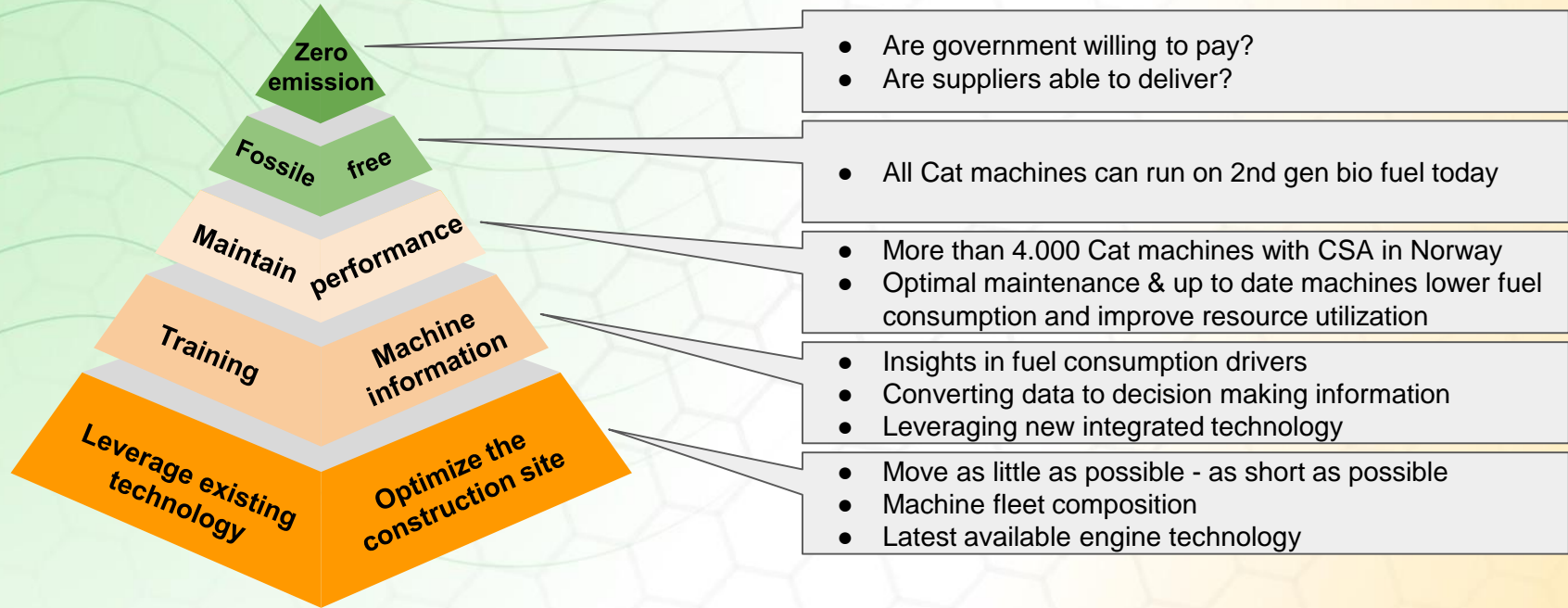


NEXT GENERATION EXCAVATOR IS INNOVATING ON TECHNOLOGY

Onboarding a Digital Product Architecture



Sustainable Construction – powered by Knowledge & Technology



Z-Line make **Zero Emissions** a reality

- 25 ton Size class with largest global impact
- Allround machine for small & large sites, Multi-purpose machine for efficient loading of trucks, digging and leveling on small and large construction sites.
- Identical performance as diesel powered
- Fully electric, 5 - 7 hrs of operation
- Close cooperation with Cat on integration
- Standardized heavy duty components
- Integrated 400V charger (CCS standard)
- New source of energy demand new ways of working and distributing energy to construction site



New sources of energy - new ways of working

- 63A 400V similar to 13 litres pr hour - 1 hour of charging = 1 hour of operation
- 150 kW high speed charger require 220A 400V, similar to 1000 litres pr day (100% utilization)
 - 2600kg CO₂ impact pr day
- 75% utilization similar to 750 litres of diesel pr day.
 - 750 litres of diesel = 7.2 x 25 ton excavators for 8t
 - 9750 kg CO₂ impact pr week
- Who should own the charging infrastructure?
- Who should pay for energy?
- What governmental incentives are needed to speed up transition?

Next steps

2018:

- 5-10 units to be produced 2018
- Governmental support for up to 40% of incremental cost
- Exploring possibilities of mobile high speed charging stations

2019:

- 25 ton machine production according to demand, cost level a limiting factor
- Incremental models under consideration





Z LINE

