



Farming Technology. Since 1927.

NARROW TRACTOR DEVELOPMENT

EMISSIONS, MOTHER REGULATION, COMFORT AND
PRECISION FARMING. ALL IN THE SAME SPACE

Villepinte, 25/2/2017



Farming Technology. Since 1927.

A photograph of a vast agricultural field at sunset or sunrise. The field is filled with golden-brown crops, and several large, cylindrical hay bales are scattered across the landscape. The sky is filled with soft, colorful clouds in shades of orange, yellow, and blue. The overall scene conveys a sense of rural tranquility and agricultural productivity.

Massimo Ribaldone
Executive Vice President, R&D

Summary

Nowadays the tractors for orchard and vineyard need several requirements in terms of:

▣ homologation

- emissions
- mother regulation

▣ technical issue

- comfort
- handling
- safety
- traction
- precision farming & connectivity

SDF is designing a new category of tractors for orchard and vineyard in order to fulfil all the requirements

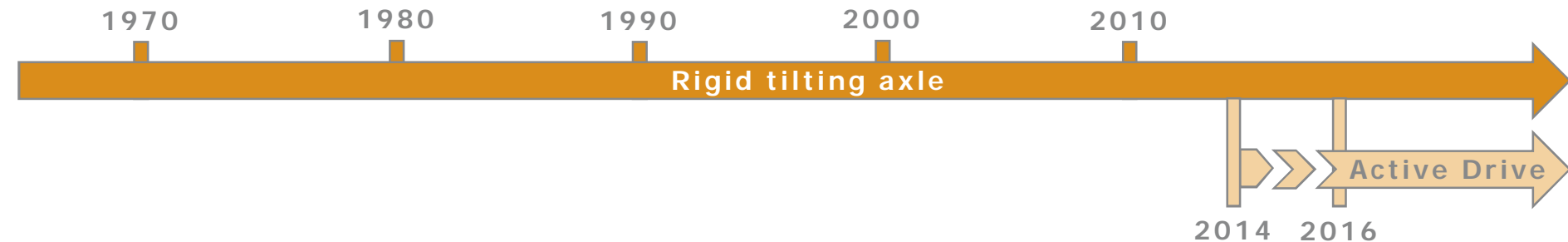
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- Tractor development
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- Active Drive & DTC
- Precision farming and connectivity
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- **History and main features**
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History and main features



Atlanta
Atlanta 45

Vigneron
35/45/60/70

Frutteto
60/75

Frutteto II
60/75/85

Frutteto³
80/90/100/110

Frutteto³ Active Drive
80/90/100/110



- compact dimensions
- narrow wheel – track
- short wheelbase
- high steering angle
- stability

- increase engine power
- increase flow rate
- cab

- comfort
- road holding
- traction
- operative speed
- safety

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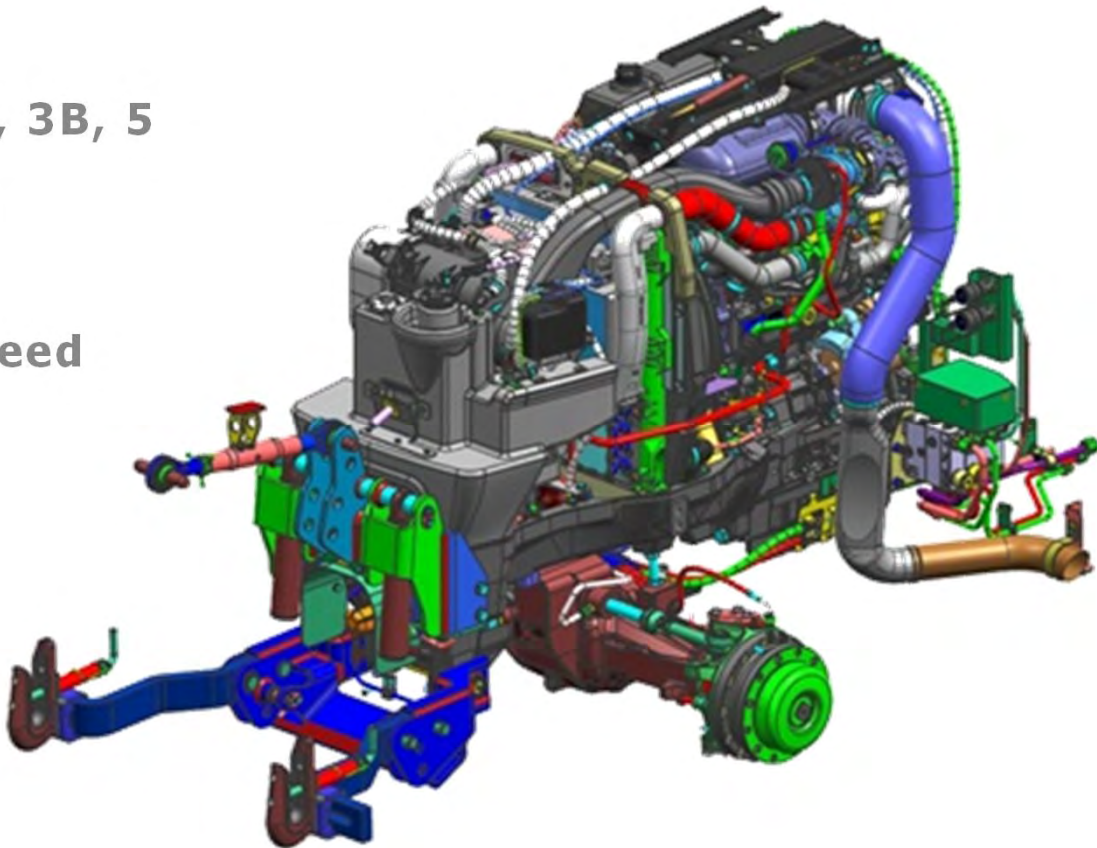
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Tractor development

POWERTRAIN

engine and transmission will be an only one entity, exchanging information each other and optimizing all the functionalities

- ▣ engine power
- ▣ emissions: stage 3A, 3B, 5
- ▣ fuel consumption
- ▣ cooling system
- ▣ increase working speed
- ▣ efficiency



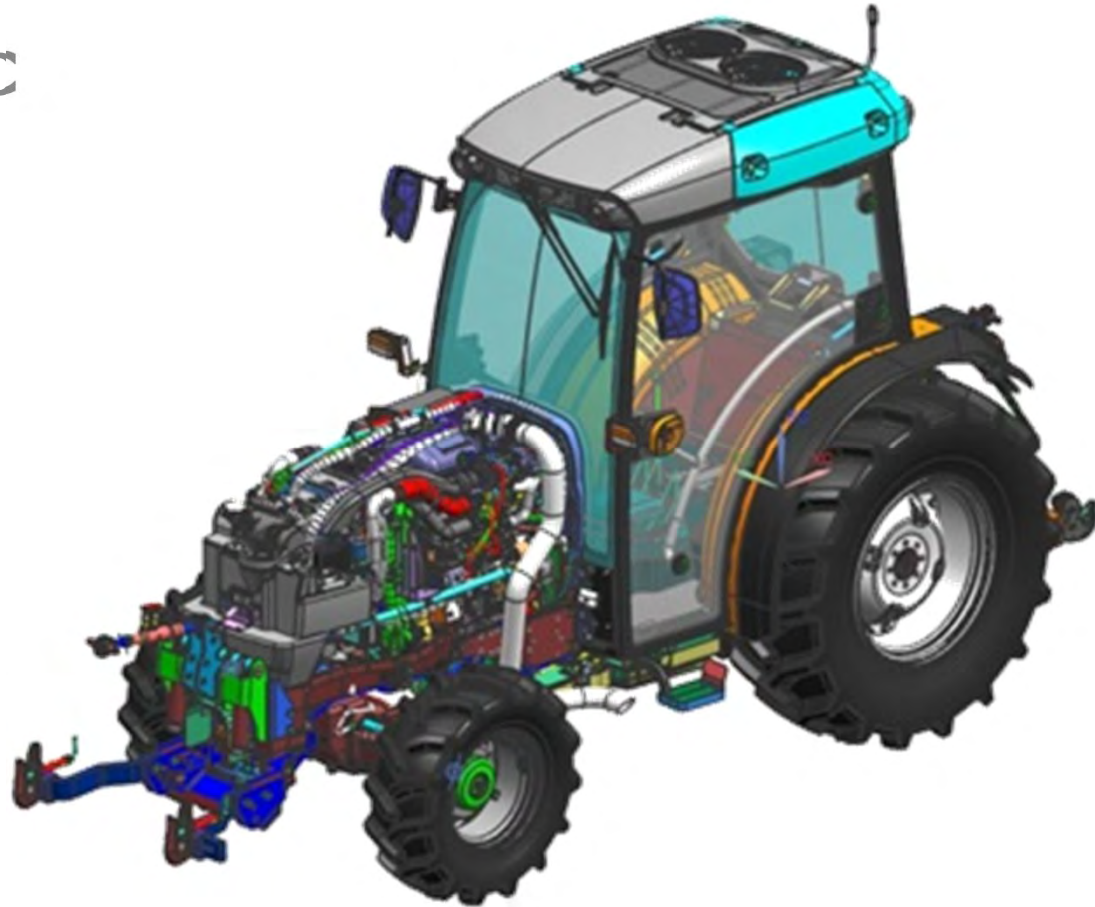
Tractor development

HYDRAULIC

- ▣ High Flow
- ▣ more coupler ways
- ▣ smart flow rate management

CAB

- ▣ noise
- ▣ vibration
- ▣ visibility
- ▣ safety (ROPS)
- ▣ air healthiness (CAB 4)

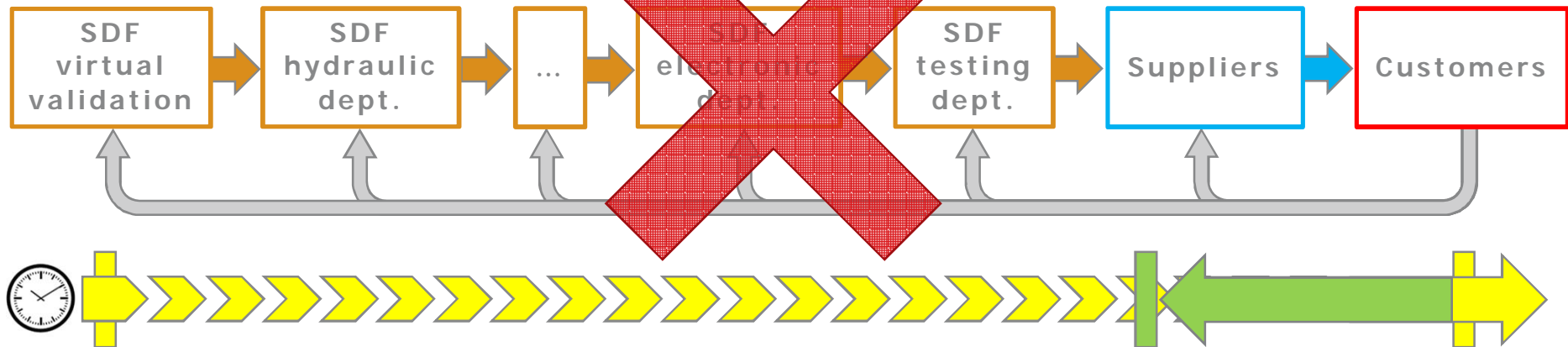


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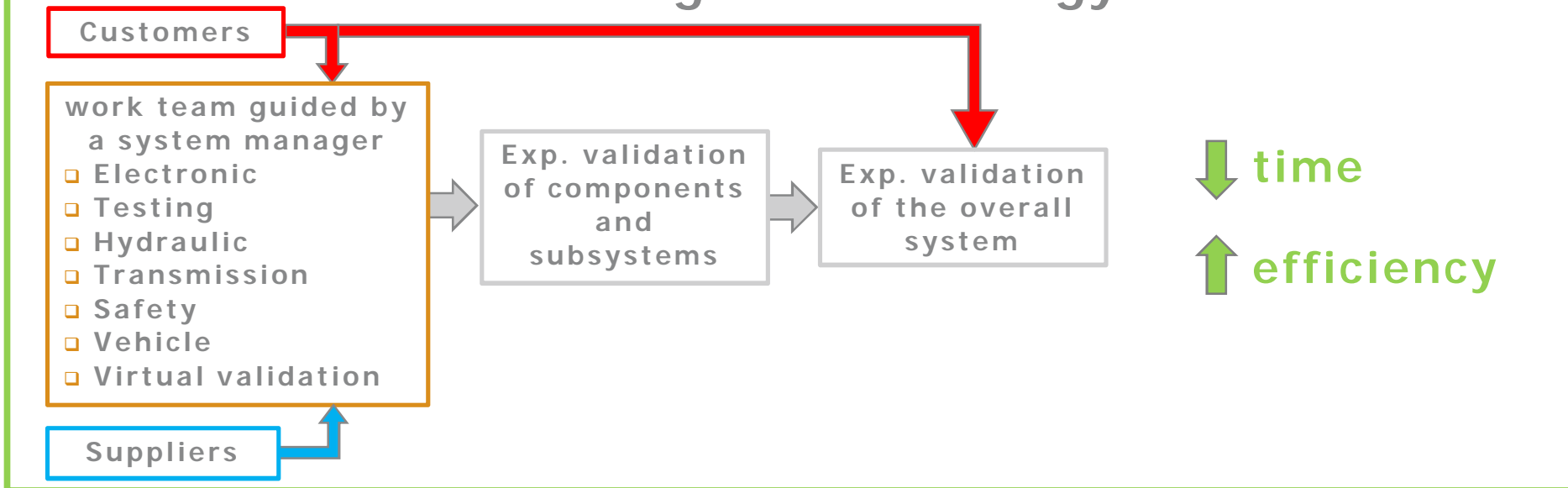
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New design methodology

Old design methodology

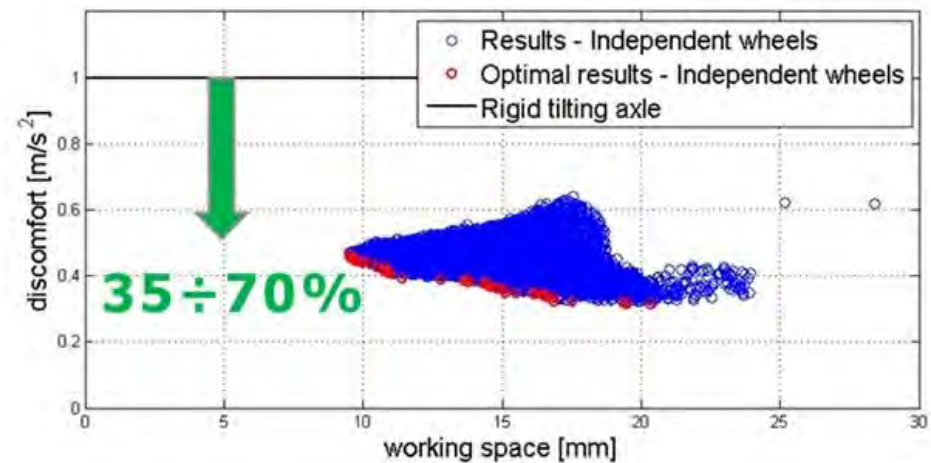


New design methodology

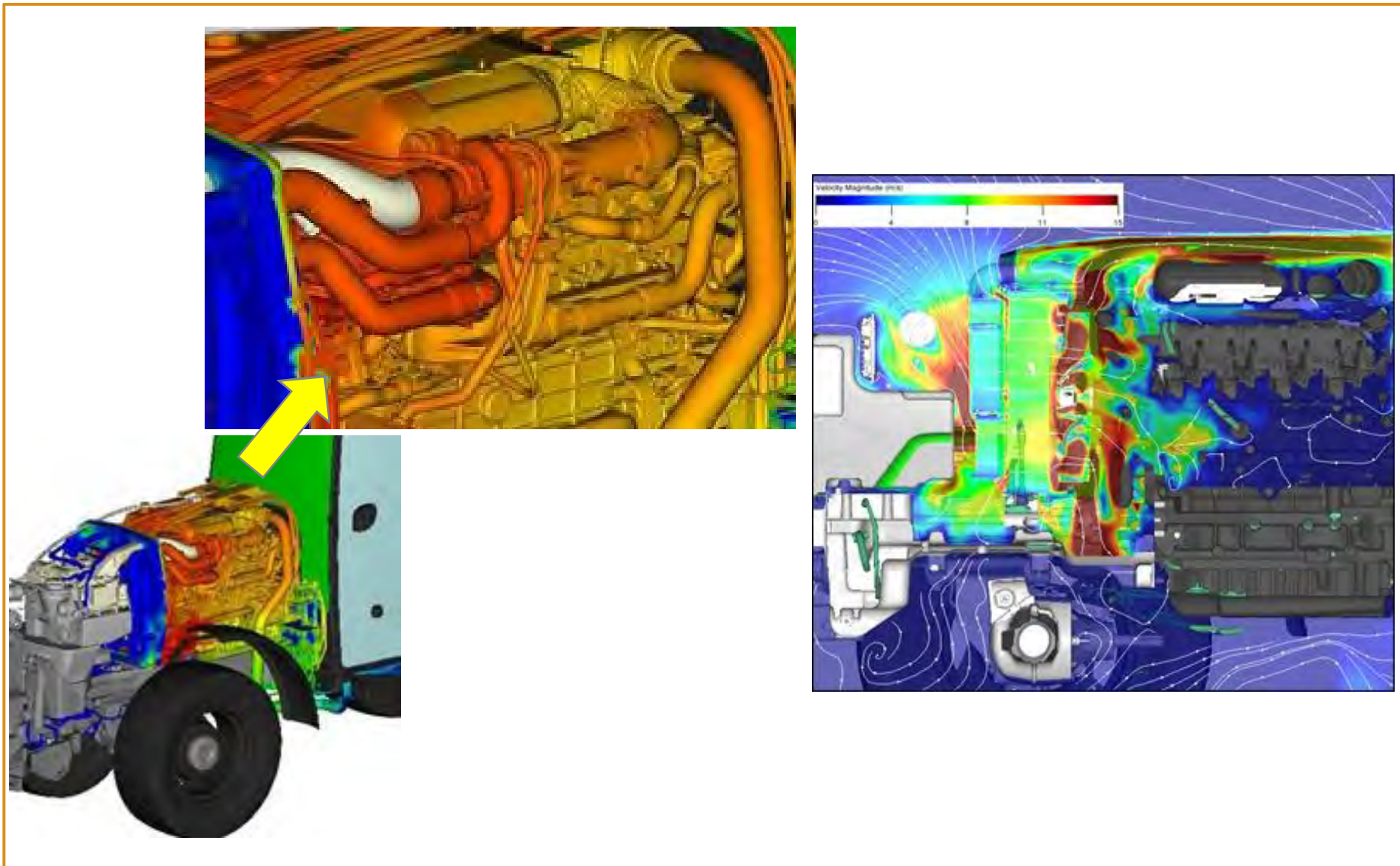


New design methodology

The new design methodology allow to have, since the beginning, an overall point of view of the tractor, in such a way to optimize the tractor subsystems by means of DOE and/or advanced FEA and CFD analysis. On the top there is a detailed risk assessment.



New design methodology



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Active Drive & DTC

Cluster



Activation
Button

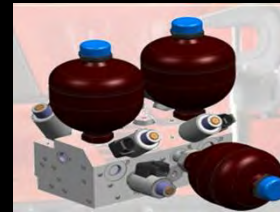


ECU



Hydraulic Block Control

- Stiffness
- Damping control



Brake
Sensor



Steering
Angle Sensor



Wheel Speed
Sensor



Stroke
Sensors

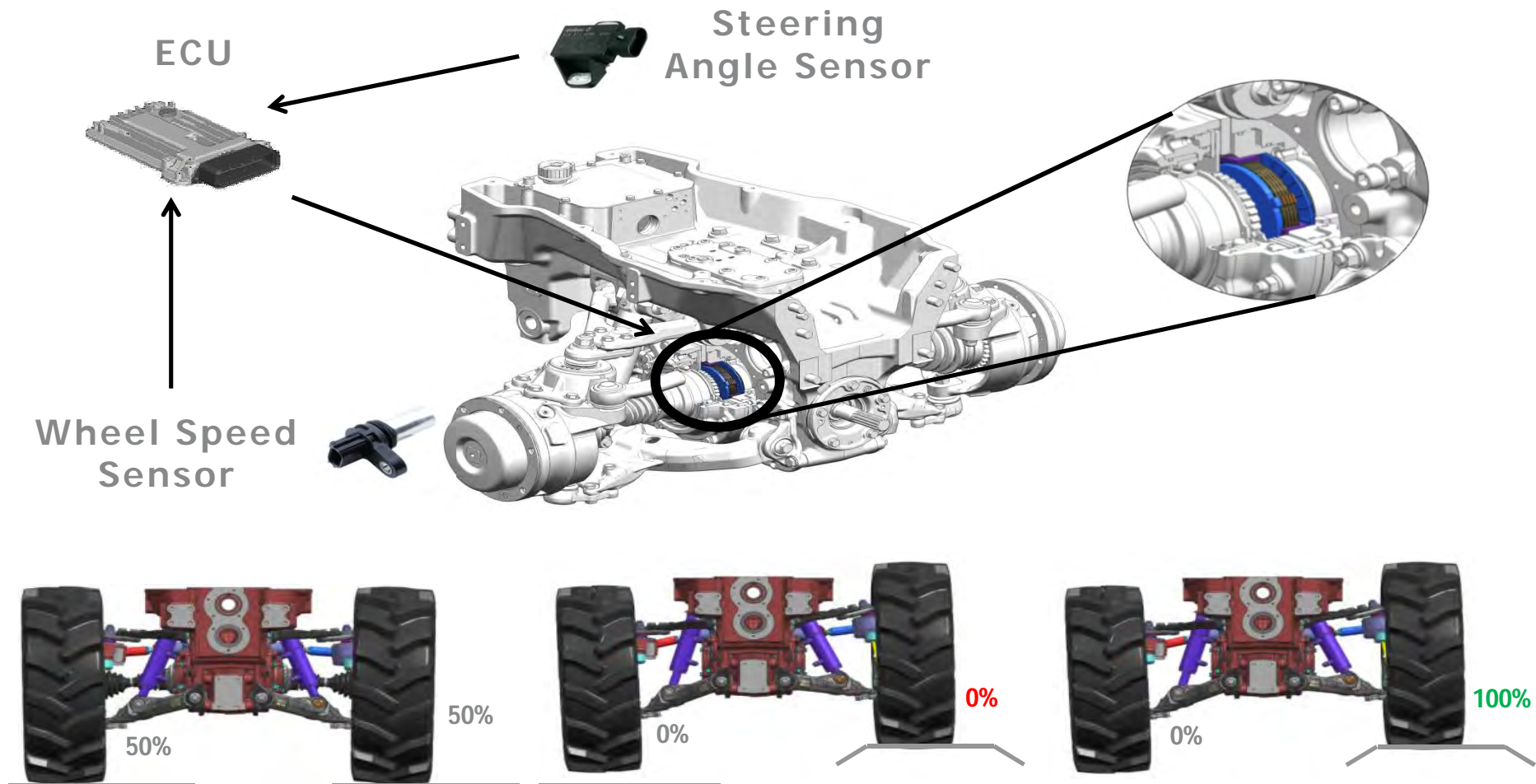
Active Drive & DTC

Rigid tilting axle

Active Drive

Active Drive & DTC

DTC = differential traction control

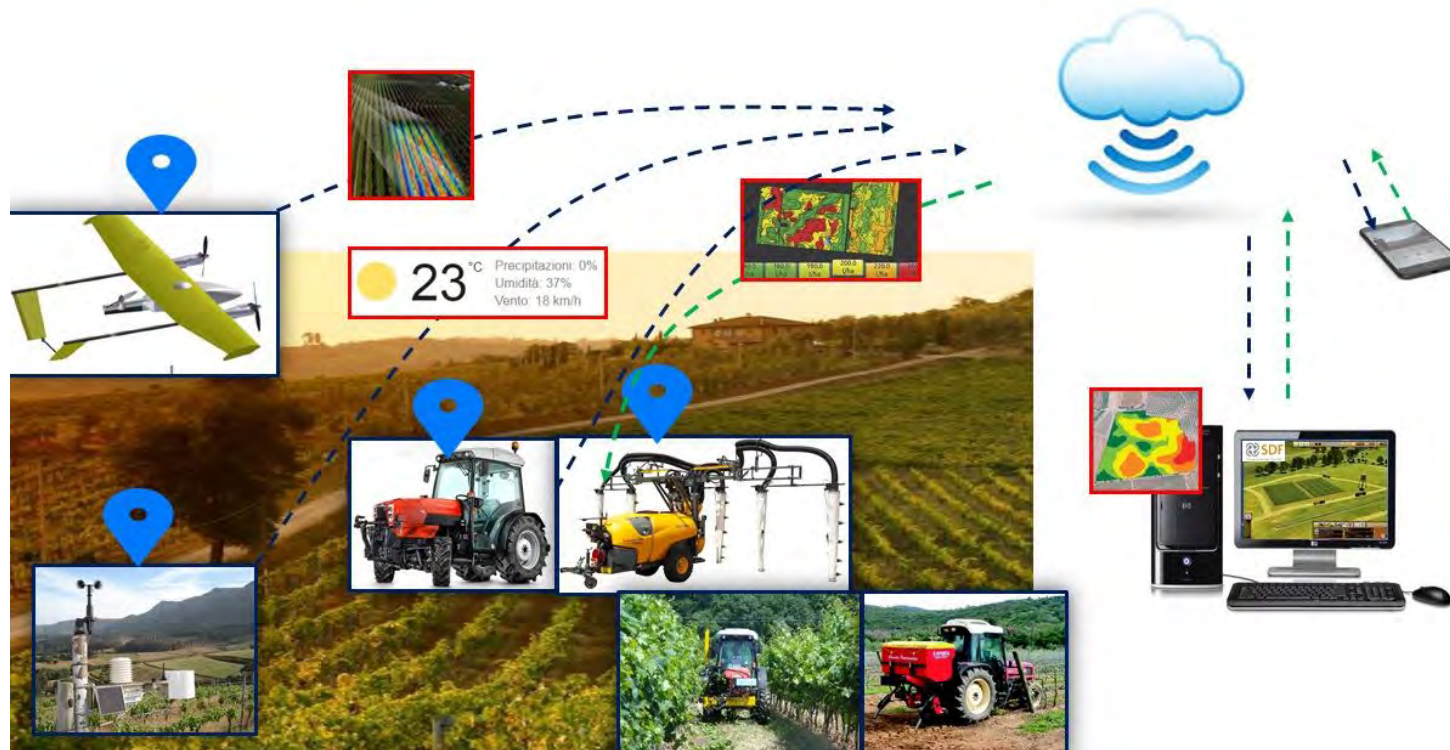


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Precision farming and connectivity

Connected Vineyard is a system cloud based, which offer to the farmer the possibility to manage all the process, including the planning of the drone fly, the mapping of the vineyard, the monitoring of the cultivation and the delivery of the final report after work. Connected Vineyard objectively support all the decisions that the agronomist have to take in his vineyard management



Precision farming and connectivity

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Conclusion





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A wide-angle photograph of a vast agricultural field at sunset or sunrise. The field is filled with golden-brown crops, and numerous large, cylindrical hay bales are scattered across the landscape. The sky is filled with soft, colorful clouds in shades of orange, yellow, and blue. The text "Thank you for your kind attention" is overlaid in a dark grey, sans-serif font in the lower right portion of the image.

Thank you for your kind
attention