

Vernetzte Produktionssysteme, Autonomie und Informationsmanagement – Prägende Elemente zukünftiger Landmaschinen

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**6G-TakeOff**

 **JOHN DEERE**

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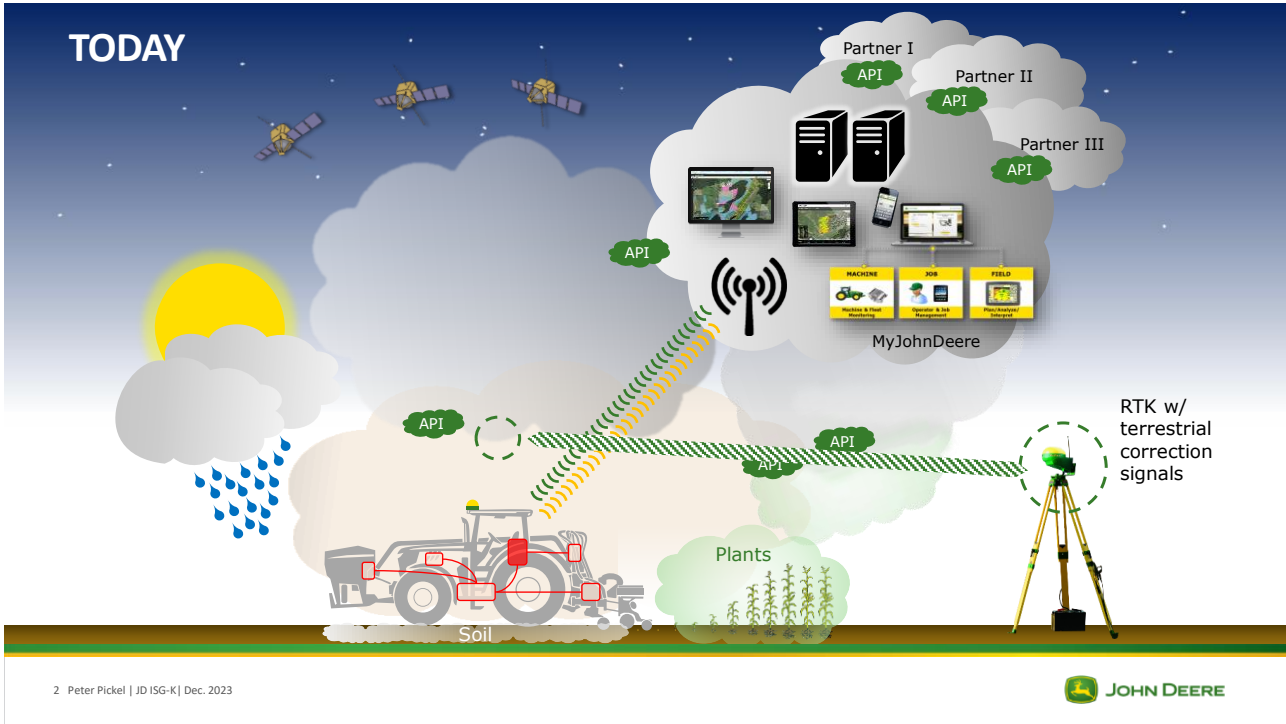
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Networked production systems, autonomy and information management - key elements of future agricultural machinery



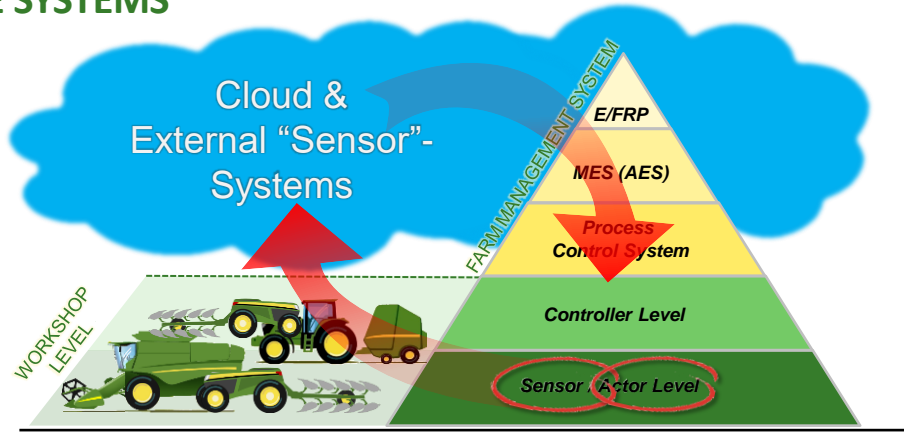
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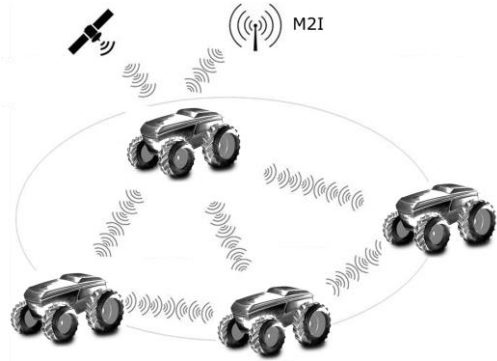
FUTURE SYSTEMS



Adaptive Agricultural Production Systems providing

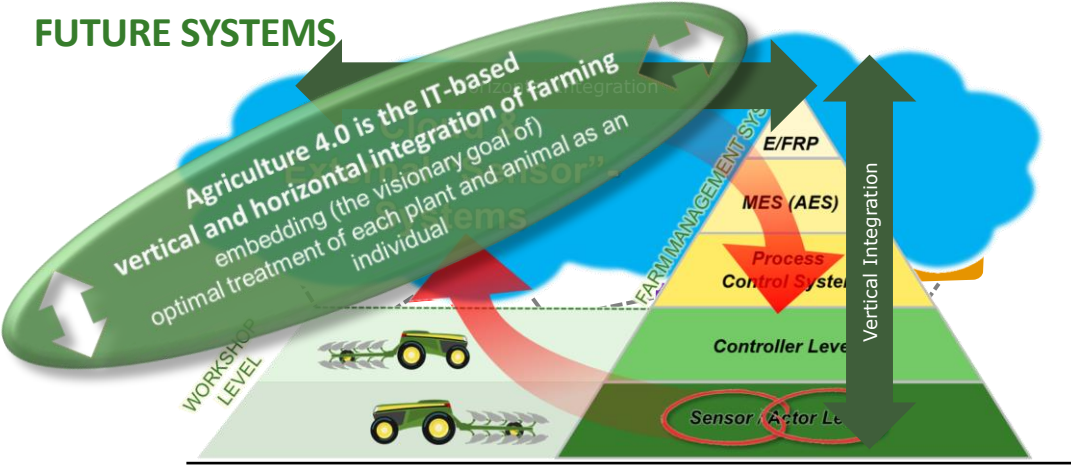
- Technical intelligence (such as self optimization)
- Self reconfiguration in dynamic networks
- Defect compensation / zero defect operation

6G – AUTOMATION / AUTONOMY ENABLER



Connectivity

- Internet of things, communication between everything everywhere



Adaptive Agricultural Production Systems becoming part of

- Technological, intelligent, self-organizing production
- Self-organizing, dynamic networks
- Being connected in a Mesh App and Service Architecture



Farm operation example

Historic vision of agricultural processes
controlling machinery

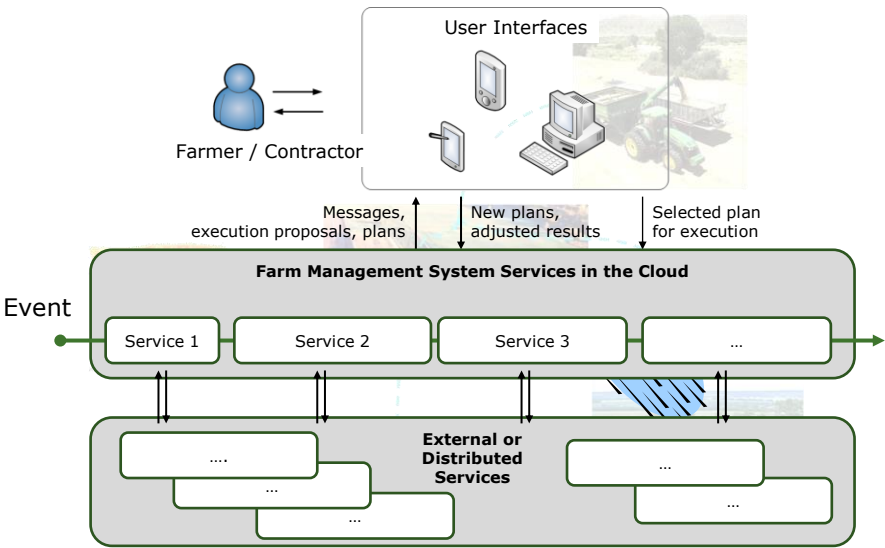


Source: Dr.-Ing. Klaus Hahn (modified)

7 | JDE TIC | Prof. Dr.- Ing. Peter Pickel | Jan. 2014



Farm operation example



8 | Peter Pickel | JD ISG-K | Dec. 2023





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TRENDS AND VISIONS

- AI based and other services on the go
- High precision closed loop control of fleets of autonomous machines
- High speed low latency connectivity
- (eg. by 6G NTN)
- Fleet management with central operator station anywhere
- Platooning on street

