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Productive4.0: next level of robotics, interoperability and supply chains using IOT for European leadership in the producing industry

109 partners / 19 countries
Budget: 106 Mio €
more than 560 persons involved
1017 person years
8 industrial domains

Productive4.0:
• Electronics and ICT as enabler for the digital industry
• Optimized supply chain management covering the entire product lifecycle

Holistic approach of Productive 4.0

- thin wafer handling
- generic data model

From the single process step to the network of productions
Holistic approach of productive4.0

Working on the code

Chemistry use case

From the basic code to the fully realized application
Use cases of Productive4.0

OEM use cases (4x)
Tier1 use cases (5x)
Tier2 use cases (16x)
Use cases along the supply chain (8x)

Collaboration in the project leading to:
- enhanced quality control
- more output in production
- effective collaboration of competitors

33 use cases working together as one universal supply chain approach
Digitalisation enhances quality control

Sensor package from ruuvi
- Humidity
- Atmospheric pressure
- Temperature
- Acceleration (3 axis)

- Battery
  - 6 months
  - 10 sec transmit interval
- Six sensors packed in Big Bag (800 kg)
Digitalisation enables safe handling, more output

Thinner wafer reduces electrical losses (static and dynamic) for IGBT → need for thinning

Front and backside electrical active handling

Demonstrator equipment for safe multi-substrate handling contact free
Bosch use case: collaboration of competitors

Generic Data Model

Data that can be used as a digital twin of a production side

15th Silicon Saxony day
More results and acknowledgement

only 3 examples of 33 use cases were presented
more results can be found here:

Publications: 164
Conference/Workshop Contributions: 139

Thank you partners of Productive4.0
Thanks to the European and national funding authorities

Thank you Berta

More results:

105 videos published
The participating countries are Austria, Belgium, Finland, France, Czech Republic, Denmark, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Spain, Sweden and Turkey.

Thank you for your attention