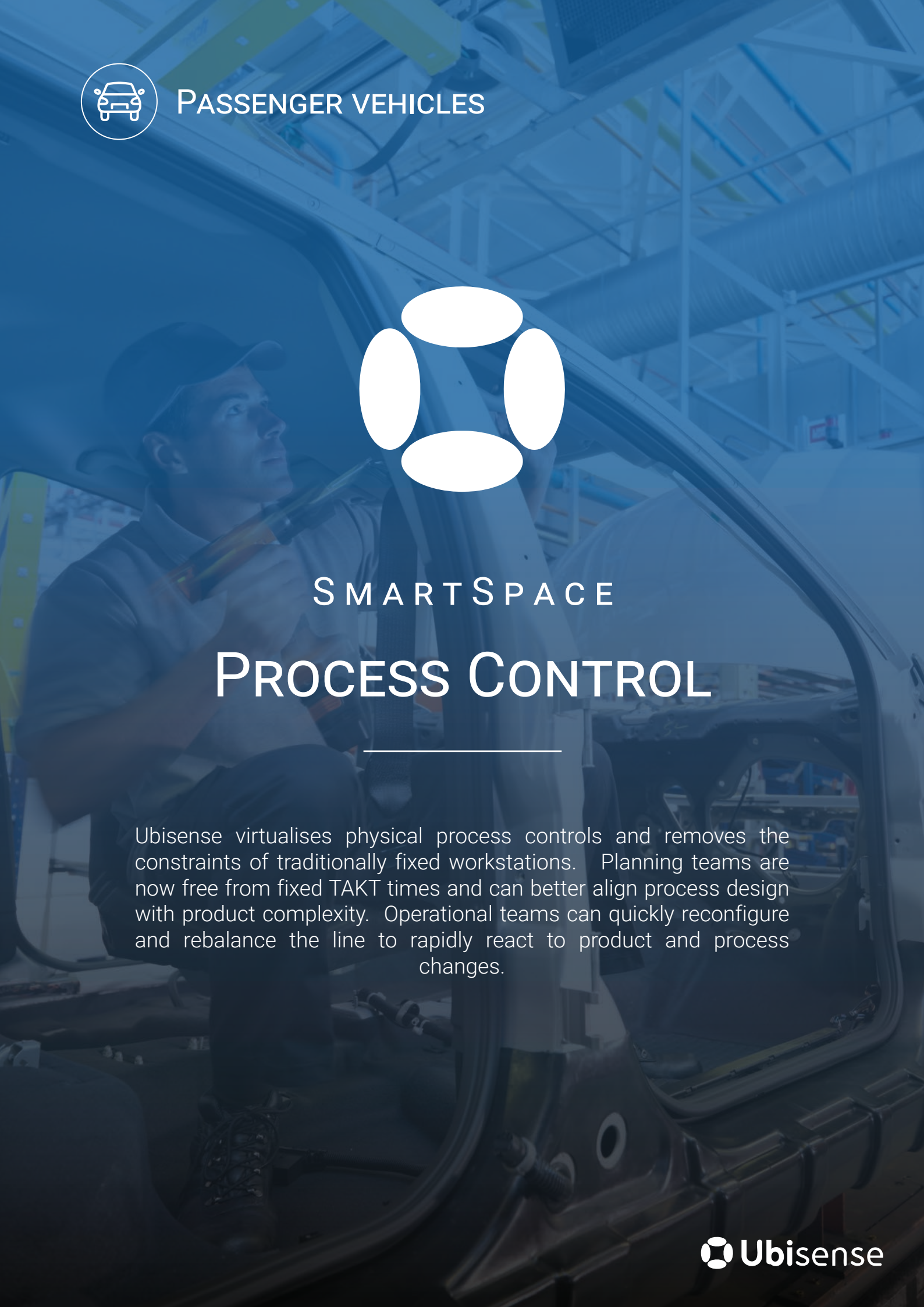


PASSENGER VEHICLES

SMARTSPACE

PROCESS CONTROL

Ubisense virtualises physical process controls and removes the constraints of traditionally fixed workstations. Planning teams are now free from fixed TAKT times and can better align process design with product complexity. Operational teams can quickly reconfigure and rebalance the line to rapidly react to product and process changes.

Ubisense

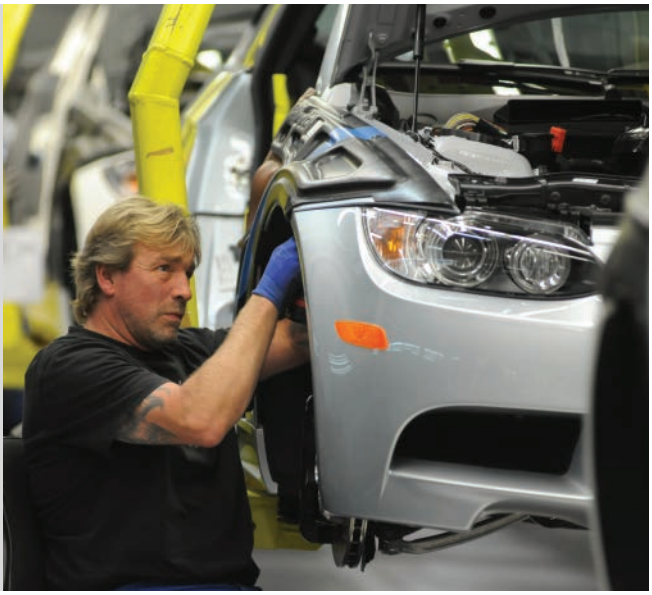
Problem

Planning Challenges

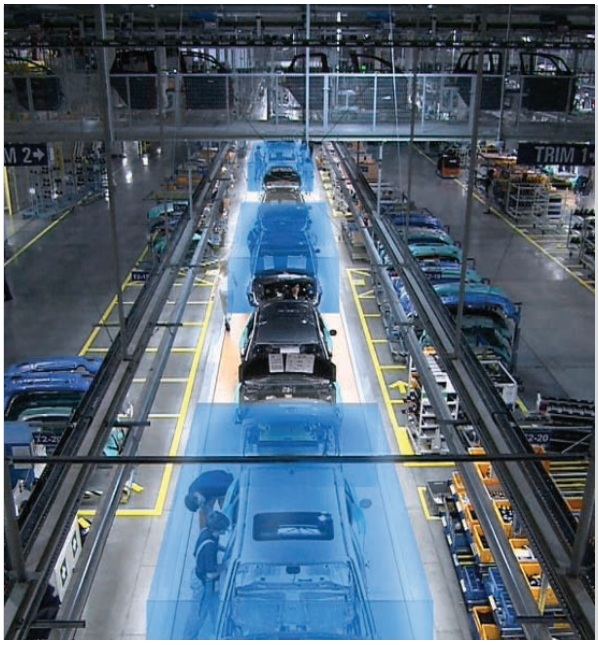
- Reduced productivity from unavoidable waiting time
- Inability to incorporate long takt-time workstations
- Inability to interleave variable length processes into the same physical space
- Wasted time due to manual product identification
- Inability to incorporate mobile processes including online rework and digital inspection

Operational Challenges

- Line stops caused by overrunning stressed processes
- Cost and inconvenience of relocating fixed tooling
- Cost and inconvenience of relocating fixed process control infrastructure



Solution



Planning Challenges

- Automatically reconfigure work zone length to match model and type
- Seamlessly integrate extended-length work zones
- Allow work zone overlap to eliminate waiting time
- Eliminate manual product identification time required to trigger processes
- Create virtual work zones that follow the product to control mobile device behaviour

Operational Challenges

- Allocate temporary work zone extensions to complete overrunning tasks
- Drag and drop digital tethers to rapidly relocate tools to different work zones
- Drag and drop digital identification points to rapidly relocate process controls

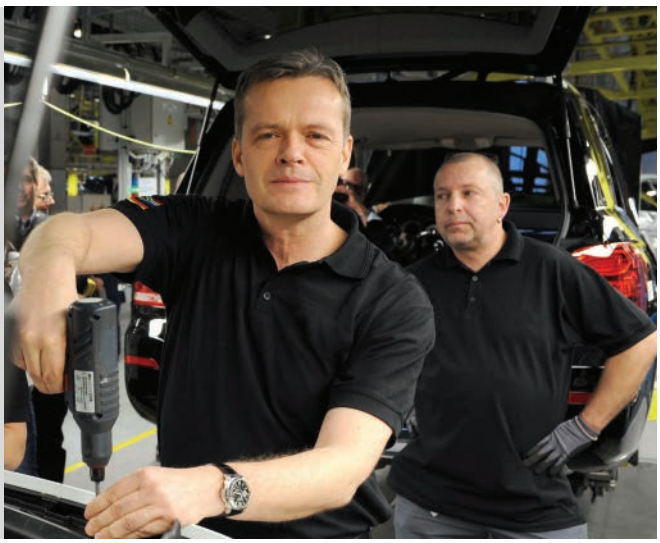
Value

Planning Challenges

- Increase Productivity by:
  - Eliminating waste from waiting time and line stops
  - Removing waste from manual identification processes
- Reduce time-to-market through more rapid and flexible line rebalancing
- Increase quality by making error-proofing cheap and widespread

Operational Challenges

- Reduce Capital expense by:
  - Build highly variable products in the same physical space
  - Increase process density with partially overlapping workstations



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