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Profile & Company

- Mission to revolutionize screwdriving and assembly with cobots
- We are bringing you the first all-in-one screwdriving tool for collaborative assembly. With our product we will remove manual and repetitive tasks in industrial assembly with screws, bolts and nuts.
- Spin Robotics was founded in 2019, by two committed and ambitious robotic entrepreneurs, Thomas and Teit. They both had the mission to enable flexible assembly using cobots. Together they have more than 15 years of experience in the robotic industry. The office is placed in Odense, the robotic capital of Denmark.





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Trinity project Digi-SAAP:

Digitalization of collaborative Screwdriver Applications in Agile Productions

Consortium of 3 companies

- Two SME's
- One Mid-cap

Consortium

- Spin Robotics End-of-arm technology supplier for assembly with cobots
- Trendlog Experts in datalogging and Industry 4.0 technologies
- Elvez d.o.o Tier 2 automotive manufactory End-user

Benefit as beneficiary

- Proof of concept of digital services for quality control
- Collaboration with Industry 4.0 experts
- Reduce risks

Objective:

Develop and demonstration Industry 4.0 technologies in collaborative screwdriving applications. During the project we have a focus on developing an easy to use cobot platfom for collaborative screwdriving

trinity ENGAGE WITH AGILE MANUFACTURING



trendlog.io

EEVEZ

Trinity project Digi-SAAP: Use case – Car light production









Assembly Challenge

Daily, millions of screws are still mounted manually with hand held screwdrivers. Challenges manufacturers face in the assembly process using handheld screwdrivers:

- Inefficiency of manual labour
 - Limited production hours
 - Quality issues from inconsistencies
 - Creating a lower output than automated solutions
 - A raised risk of injuries from repetitive tasks
 - Excessive time spent on screwdriving in assembly
- Automation barriers caused by a lack of plug'n'produce tools and inflexible solutions
- Existing cobot screwdriving tools are less safe, complicated and expensive

We recognised the opportunity to develop a safer, more affordable, and easier to use end-of-arm-tool (EOAT) for screwdriving tasks in the collaborative robotic market.





Product functions

Light Signalling Multi colour status____ indicator + audible signalling

Configurable Push button

Safety Shield With build-in bit and screw detector ENGAGE WITH AGILE MANUFACTURING

Quick Change Coupling Tool free twist'n'lock coupling

Freedrive Button Push and move for easy route programming

Magnetic Screw holder Secure and precise "screw holding bit adaptors"

The all-in-one solution





URCap



SPIN Bridge

SPIN Dashboard

Plug'n'Produce Screwdriving Tool

- Lower price compared to competitors
- Short ROI compared to traditional solutions
- Safe alongside humans
- Quick and direct integration through the URcap

- Easy to install, program, and operate
- Reduced assembly time
- Fits every URarm
- Increased assembly quality -torque data stored in the device

Examples of application areas

- Electronic assembly e.g., medical, home, and industrial appliances
- Automotive assembly e.g., car seat, car consoles, and car doors



First project demonstrator







Digitalization of Assembly process control

Daily, millions of screws are still mounted manually with hand held screwdrivers. Many without any integrated quality control. Trinity will show a proof of concept.

- Runtime data from the screwdriver
- Training ML models at Google Compute Engine
- Deploy inference models to the device





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Business potential

Exports of home appliances where screws are inserted

Questions

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