



THE VALUE OF THE IDEAS



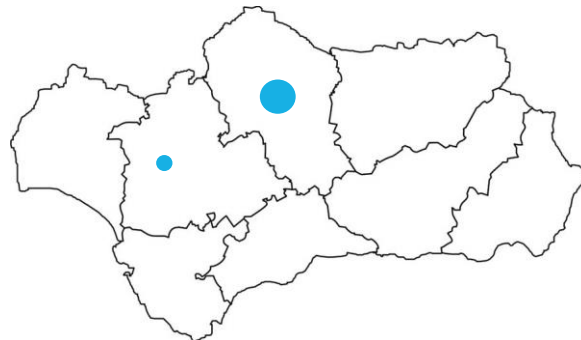
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<http://www.rovimatica.com>

ROVIMÁTICA AS A COMPANY:

- A technological SME. Capabilities:
 - Robotics (standard, collaborative, mobile, sensitive)
 - Process/Machinery automation. Mechatronic
 - Computer vision(2D, 3D, hyperspectral, thermal, artificial intelligence)
 - Automation and robotization in customised vehicles
 - R&D&I Projects

- Location:

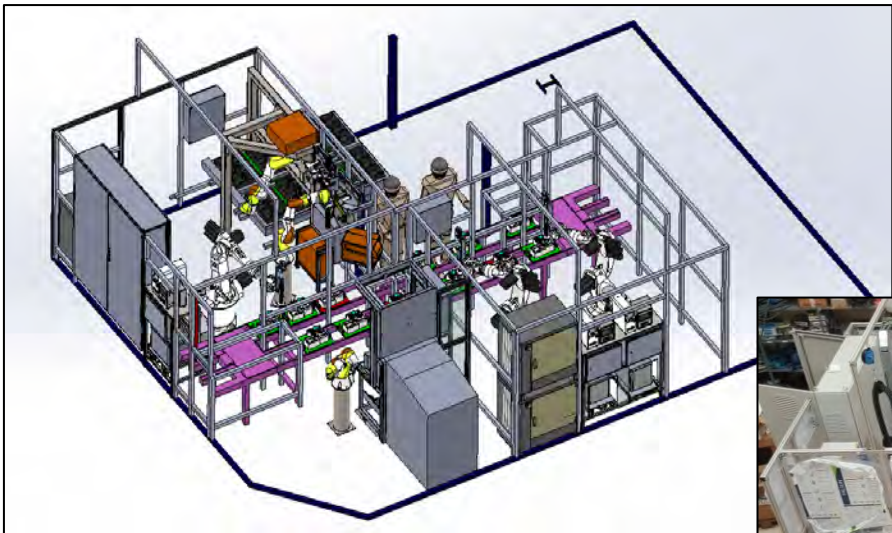


INDUSTRIAL ROBOTICS:



- Design and implementation of robotics systems (manufacturing and assembling lines or isolated cells)
- Collaborative, mobile and sensitive robots solutions
- Robotic repair and maintenance services.

CUSTOMISED INDUSTRIAL SOLUTIONS:



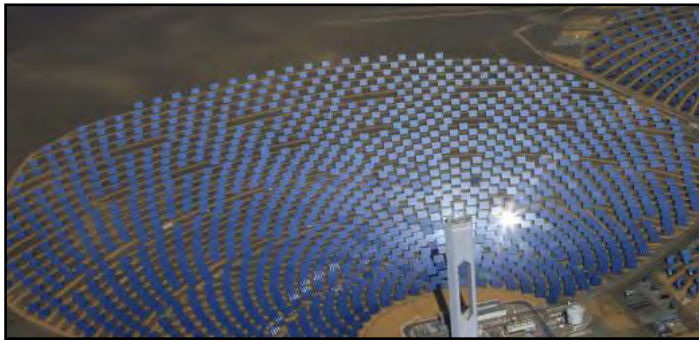
- Design, development, manufacturing and commissioning (turnkey projects)
- Revamping of manufacturing lines and machinery
- Repair of industrial machinery
- Design and manufacturing of robotic accessories



INDUSTRIAL VEHICLE AUTOMATION:



- Design, development and implementation of automated systems for industrial vehicles
- Pumping pressure and valve PWN control
- Communication to vehicle central control, POCLAIN, radio frequency control of cranes by Bus CanOpen



COMPUTER VISION:

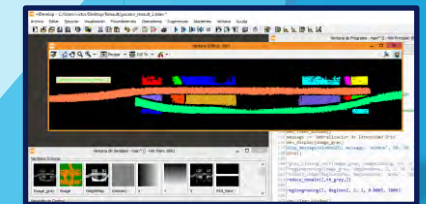
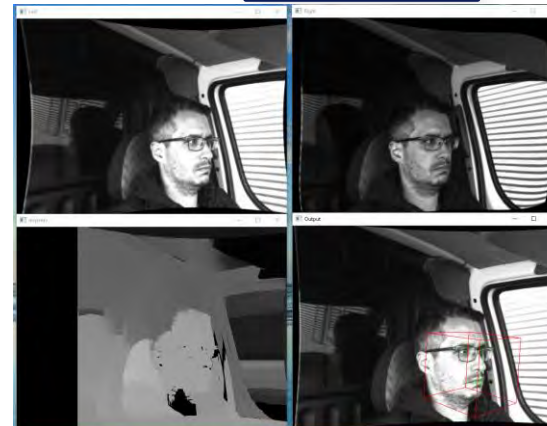
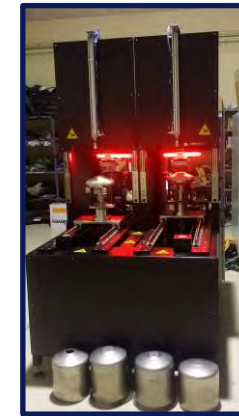
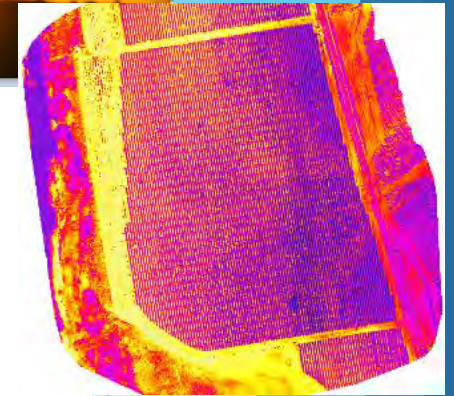
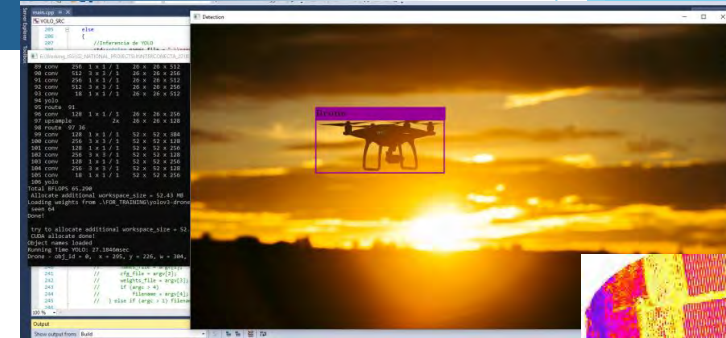
- ROVIMÁTICA computer vision department has a large experience (+15 years) developing customised solutions based on computer vision systems.
- Artificial Intelligence based image processing (+5 year experience in solutions for final clients).
- Embarked Edge Computing for AI.
- Technological SME.
- ROVIMÁTICA has more than 50 engineers and technicians.

COMPUTER VISION:



We use computer vision including AI based image processing for:

- Defect detection
- Assembly assistance
- Vision-guided robotics
- Precision farming (drones and satellites)
- Drone detection
- Driver monitoring system
- People and obstacles detection
- Status monitoring of PV modules
- Water characterisation
- Vehicles and trucks
- Water leakage detection

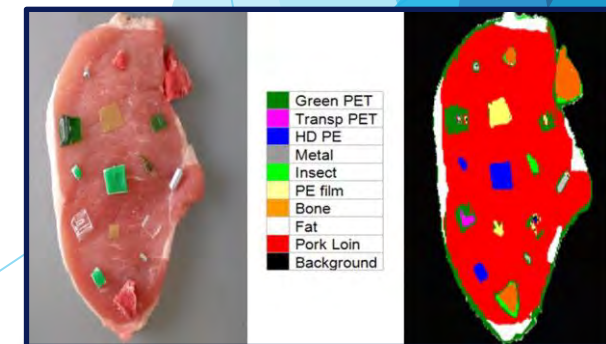
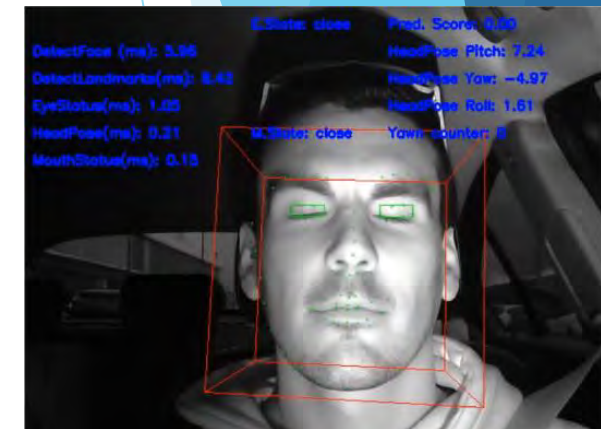
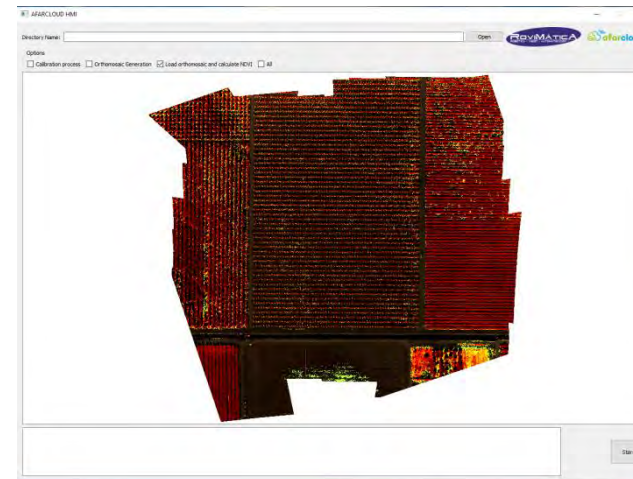
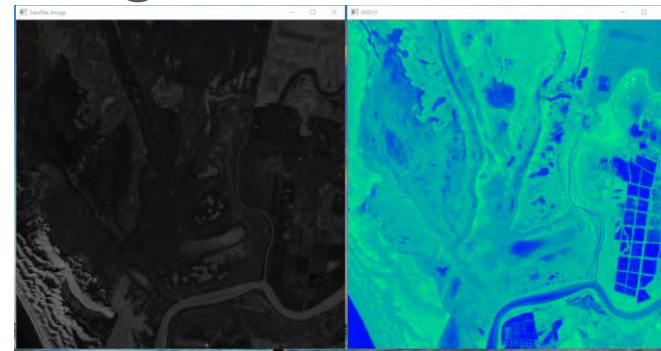


COMPUTER VISION:



Image processing including AI based image processing:

- 2D images
- 3D images
- IR images
- Thermal images
- Multispectral images
- Hyperspectral images

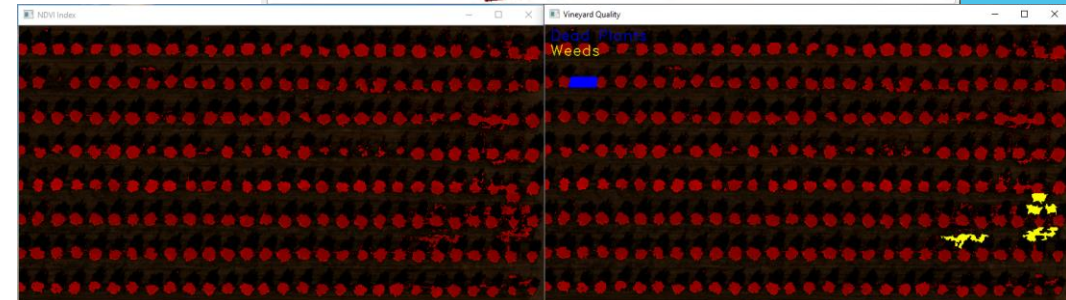
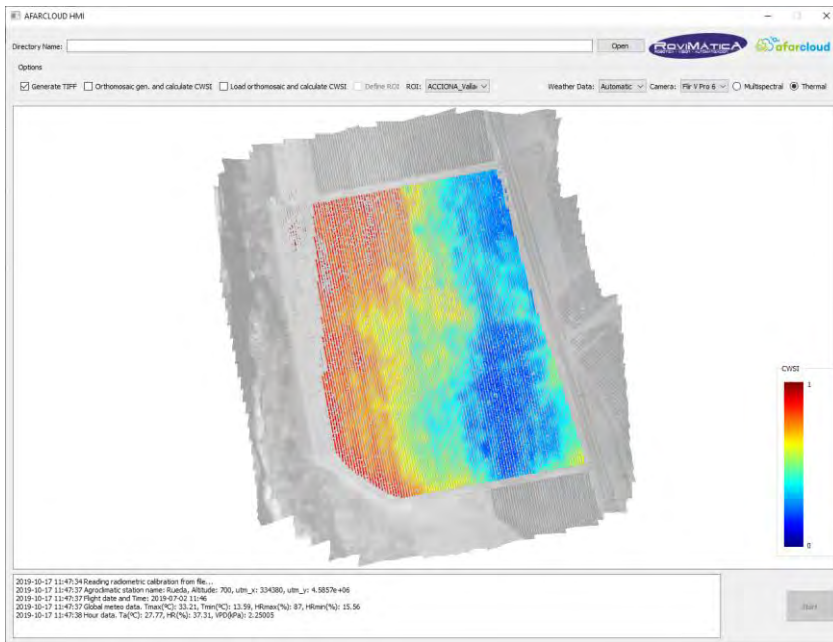


COMPUTER VISION. USE CASE PRECISION FARMING



Use case based in AI: Precision farming (Drones and Satellite)

- NDVI Index Calculation
- Weeds and dead plants detection using Artificial Intelligence
- Water Stress Index CWSI



COMPUTER VISION. USE CASE DRIVER MONITORING

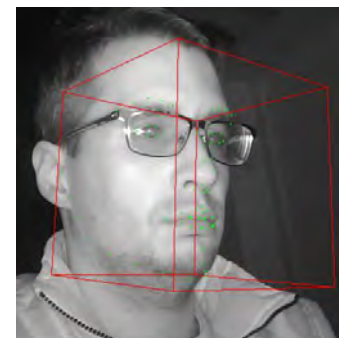
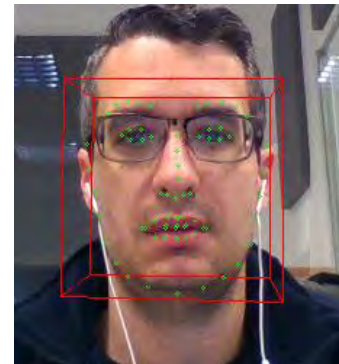


Use case **Driver Monitoring System** based in AI:

- Face tracking and landmark detection
- Driver drowsiness and distraction detection using Artificial Intelligent (Tensorflow)
- Edge Computing



FACE AND LANDMARKS DETECTION



COMPUTER VISION. USE CASE DRIVER MONITORING

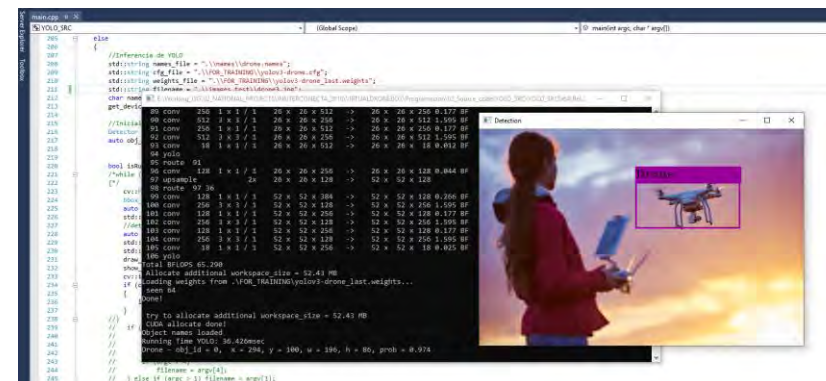
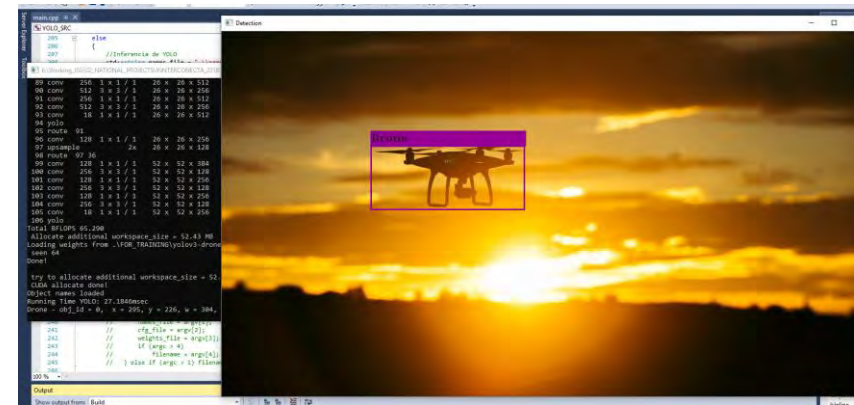


COMPUTER VISION. USE CASE DRON DETECTION AND TRACKING



Use case Drone detection based in AI:

- Drone detection and tracking



COMPUTER VISION. USE CASE AUTOMATED DETECTION WITH DRONES

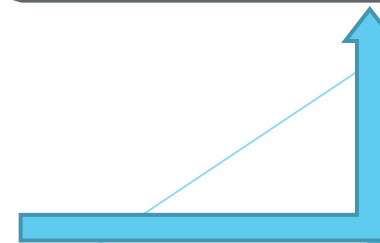
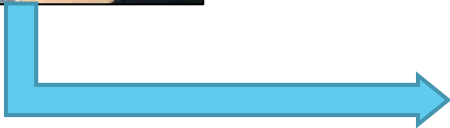
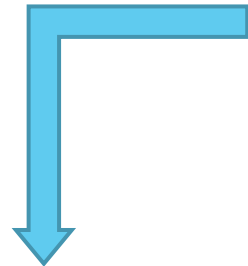
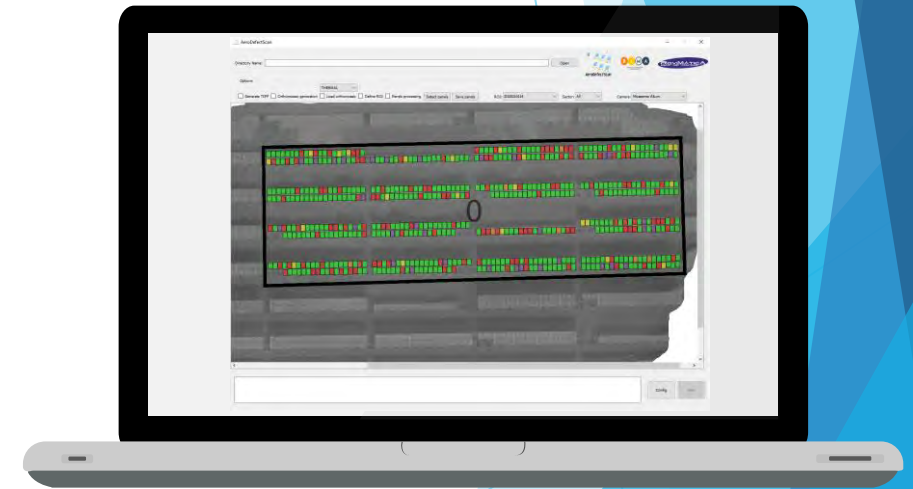


Use case Automated detection based in AI:

- Detection of PV panels and their defects



Sending ...



COMPUTER VISION. USE CASE COCKPIT



Use case Cockpit:

- Cockpit testing by cobots and AI:

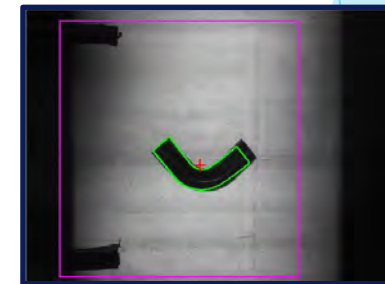
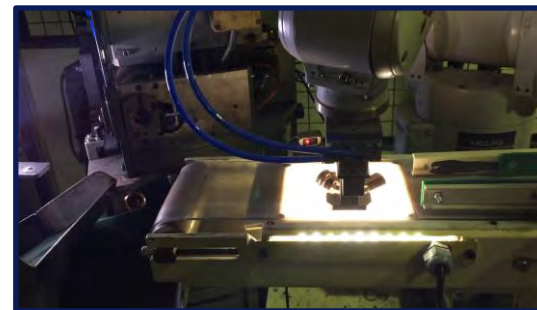
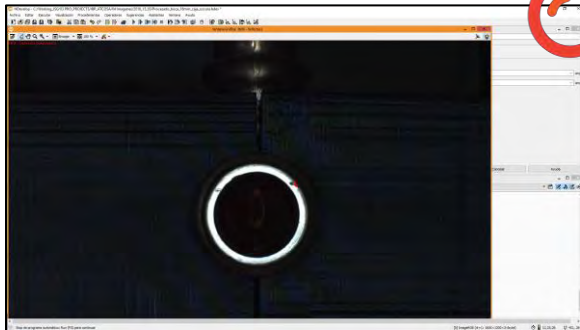
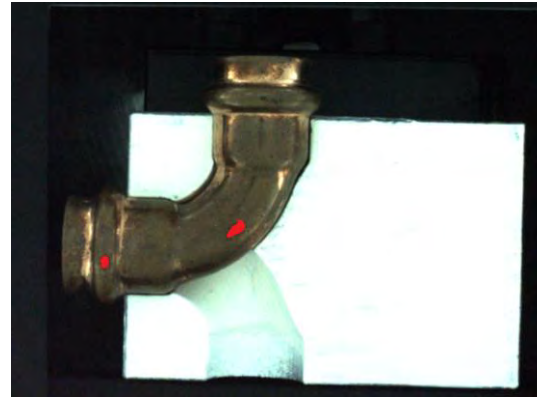
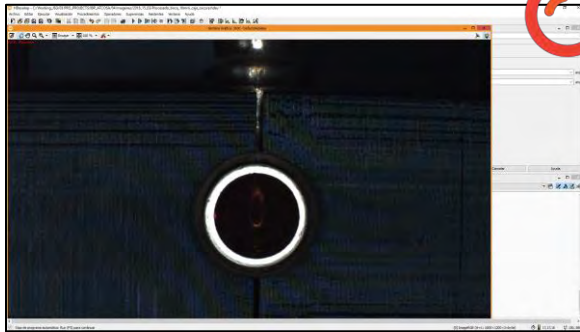


COMPUTER VISION. USE CASE QUALITY CONTROL



Use case industrial quality control:

- Defects in metal parts
- Robot picking

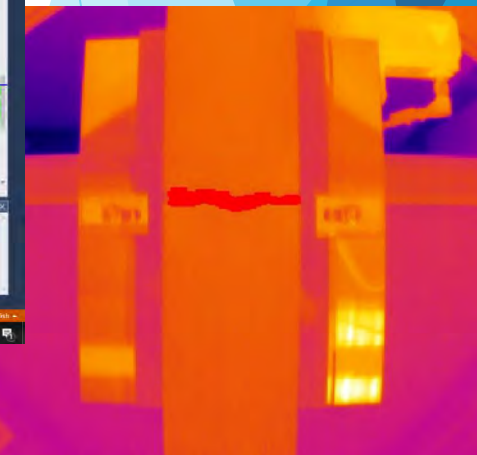
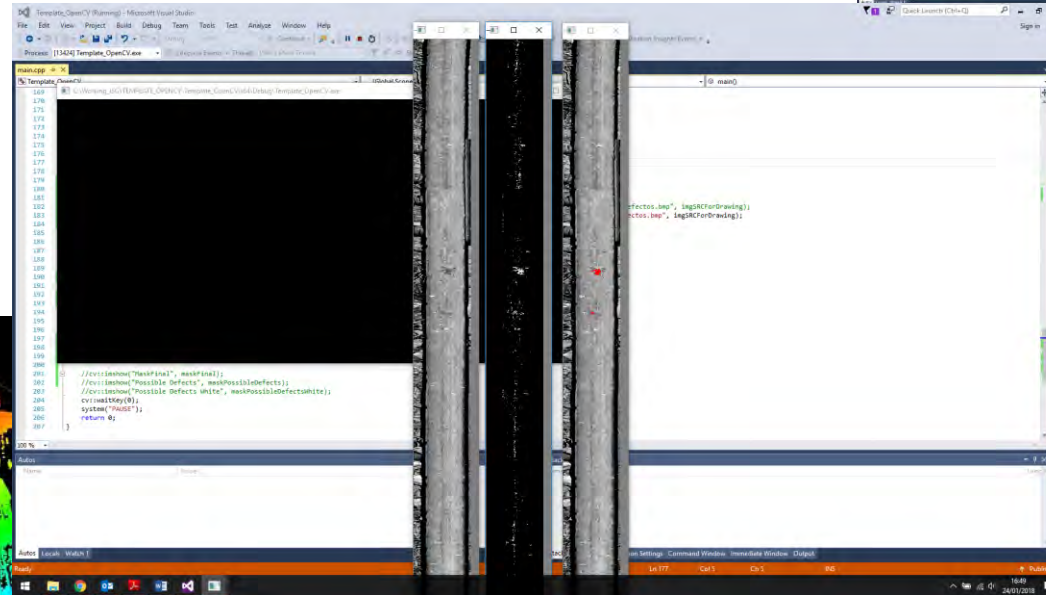
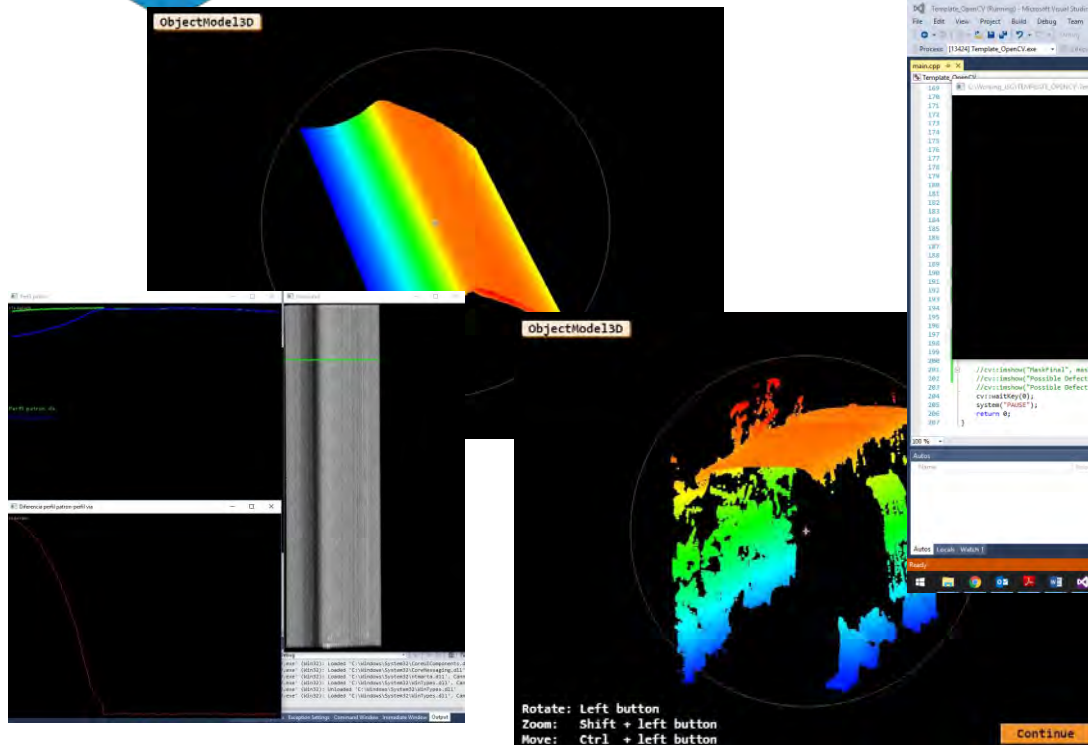
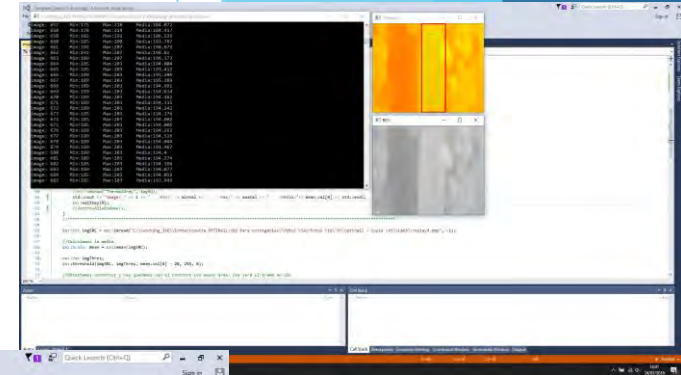


COMPUTER VISION. USE CASE RAILWAY



Use case railway infrastructure:

- Defect detection (cracks, missing bolts, rail wear, etc)



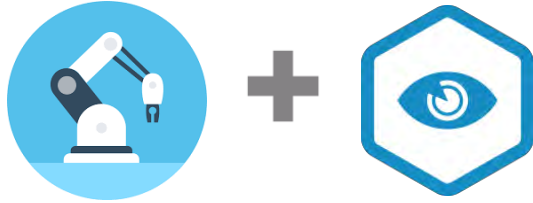
COMPUTER VISION. HIGH VOLTAGE.

Use case energy transportation infrastructure:

- Defect detection at the isolation system
- Automatic RTV application procedure

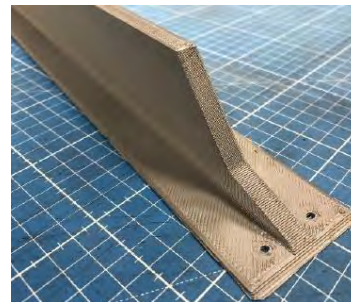
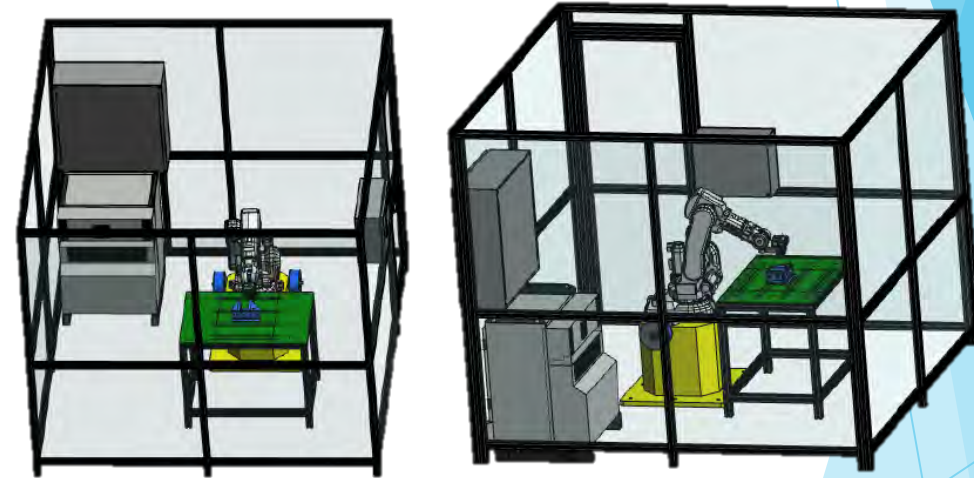
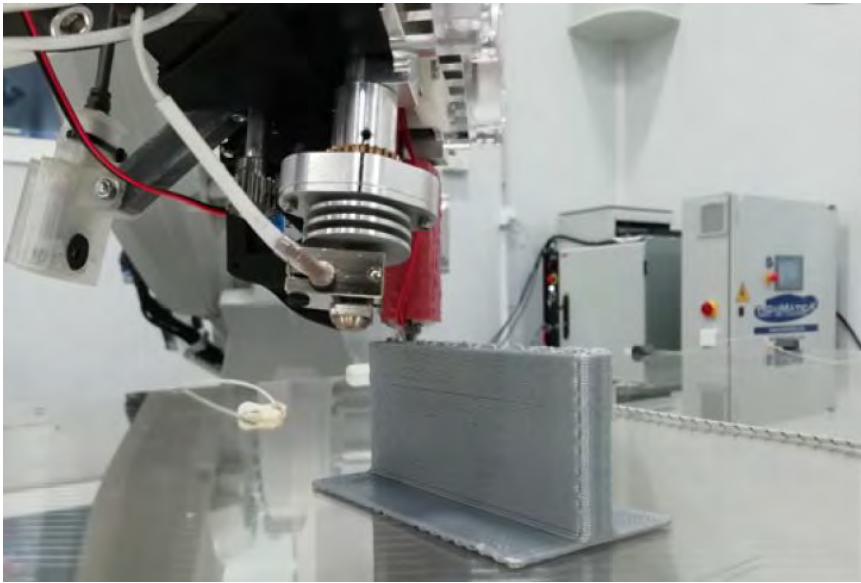


COMPUTER VISION. USE CASE COMPOSITE AM



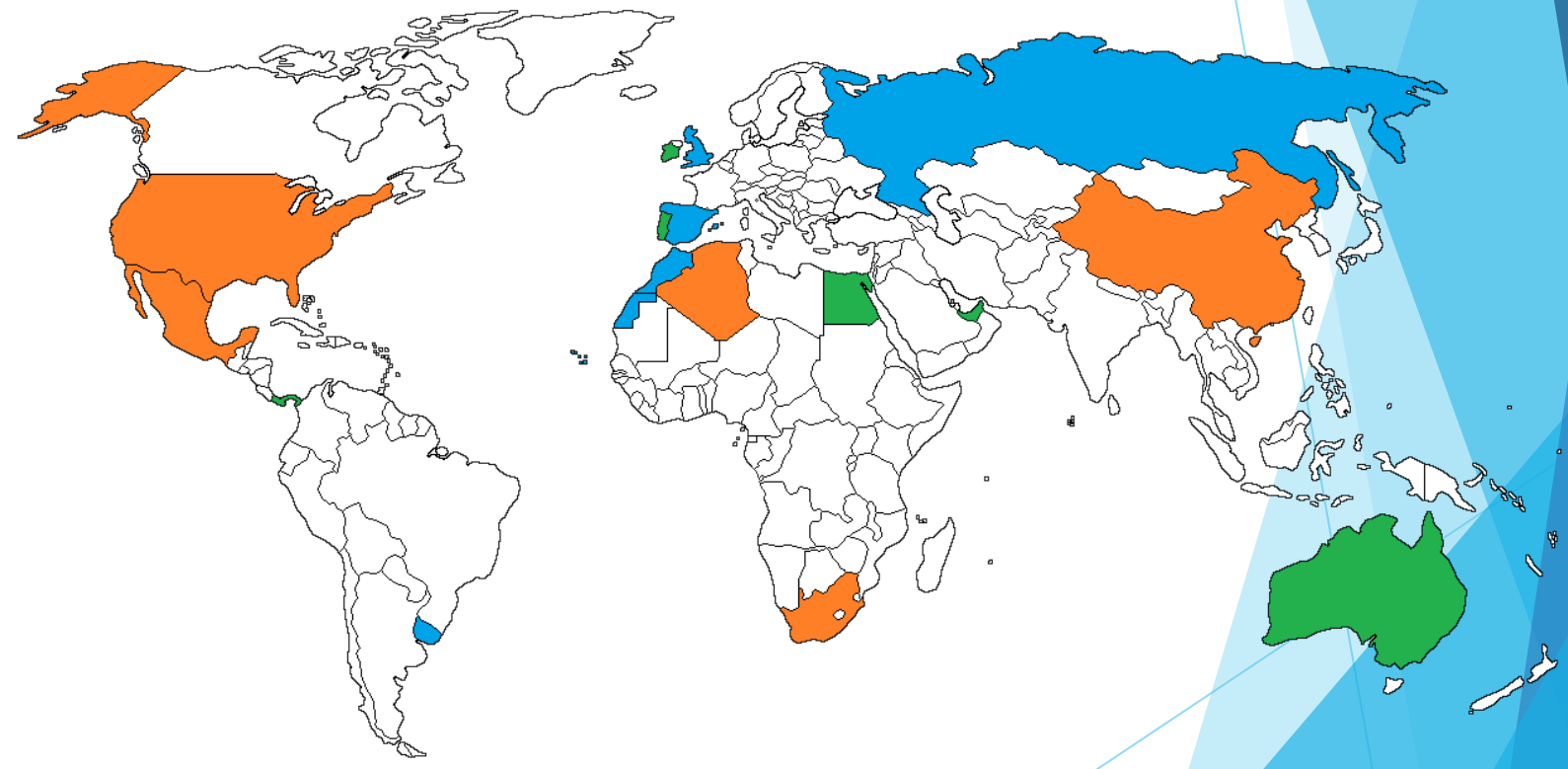
Use case Additive Manufacturing of TP Continuous fiber Composites:

- Development of the robotic cell
- Inspection system



ROVIMÁTICA IN THE WORLD:

- GROUPE RENAULT
- AIRBUS
- altran
- Valeo
- ABENGOA SOLAR
- syngenta
- ABB
- Ford
- REPSOL
- NISSAN
- FUJITSU
- acciona Agua
- ferrovial
- Schneider Electric
- gmv INNOVATING SOLUTIONS
- VERDE FRESH
- aqualia
- GRUPO HOJIBLANCA
- DON SIMON
- PORTINOX
- Calidad Pascual
- Beam SUNTORY
- Putzmeister
- TECNOVE



INDUSTRIAL VEHICLES CONT. PROCESS

CONTACT

THANK YOU



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