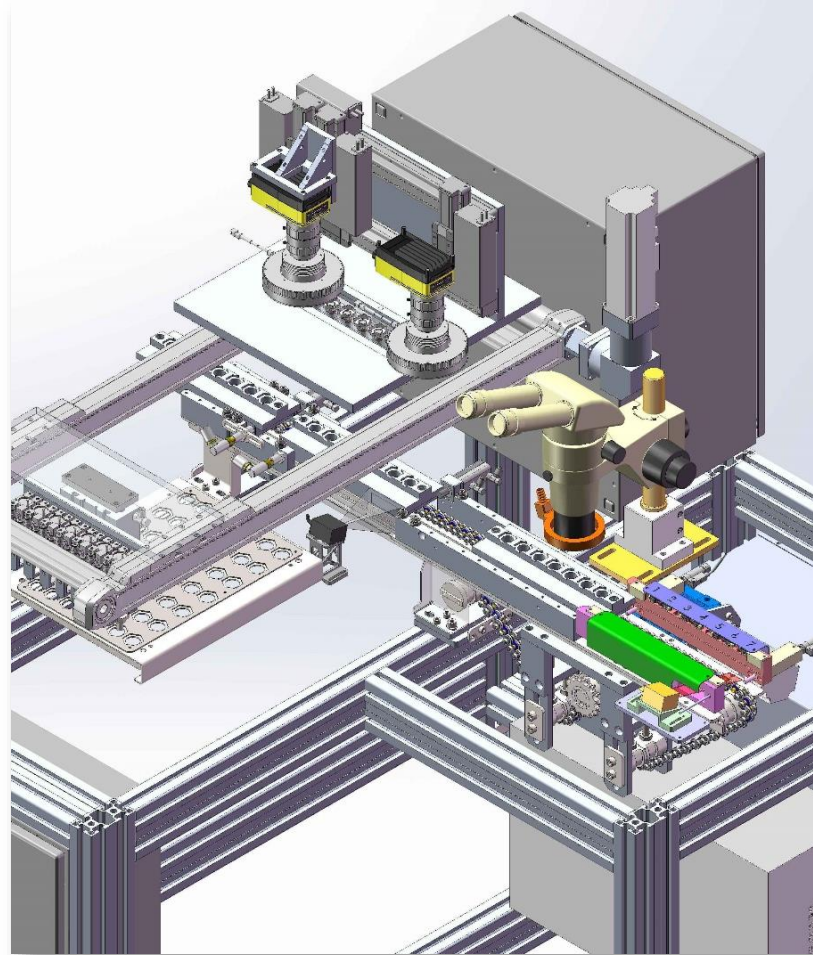# Lentis is Computer Vision SME in Automation



We turn manual inspection stations into **fully autonomous visual quality inspection machines using AI and Machine Learning**

- Usually, the visual inspection process is 100% manual

- Automating this process requires both mechanical and software engineering expertise

- **Lentis Technologies develops fully customized solution to help serial manufacturing gain efficiency through automation**

Computer vision application in automation is complex

Achieving of **high analysis accuracy** even for very complex tasks: When we need to search for **>5 defect types in 1 image**
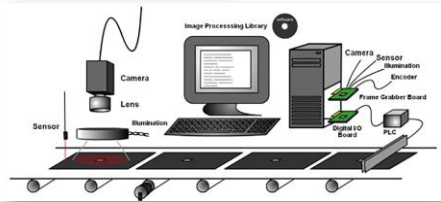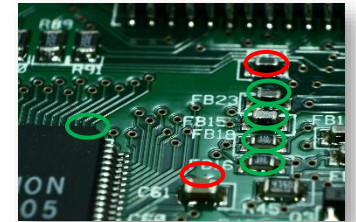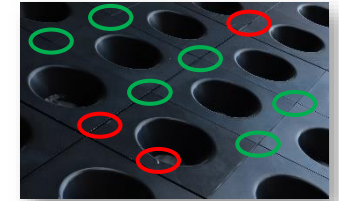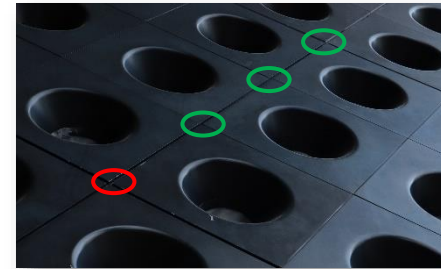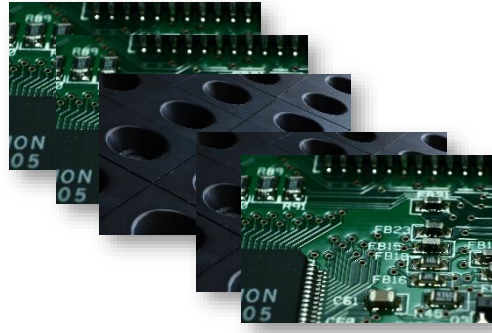
Hardware strategy

- Defect review
- **Smart Camera** vs. **PC based solutions**
- Standard vs. AI algorithms
- Discussion and decision **Supervised/ Unsupervised** machine learning

Image gathering and annotating

- Gathering of **OK/NOK images**
- **Annotation of files**, in order to allow for **supervised** machine learning
- Evaluation of the amount of gathered images

Training and algorithm testing

- Defect recognition **requires between 50 and 1.000+ annotated NOK images**, against 1.000 - 10.000 OK images
- Even for very complex problems, **>99.5% accuracy is achievable**

Final implementation

- Combination **of all trained algorithms** for **final inspection workflow** into custom control software
- Factory acceptance test requirements definition and **integration of the solution in the serial process**