Enabling digital transformation (DX) with AI – Lessons Learned from Digitalizing Expert Know-How for Inspections

Contact: Adrian@Hacarus.com

CBINSIGHTS TOP 100 AI 2020

inVISION TOP INNOVATION 2020

HACARUS

FOUNDED: 2014
STAGE: Series B (13M USD)
TEAM: 70+

KYOTO JAPAN

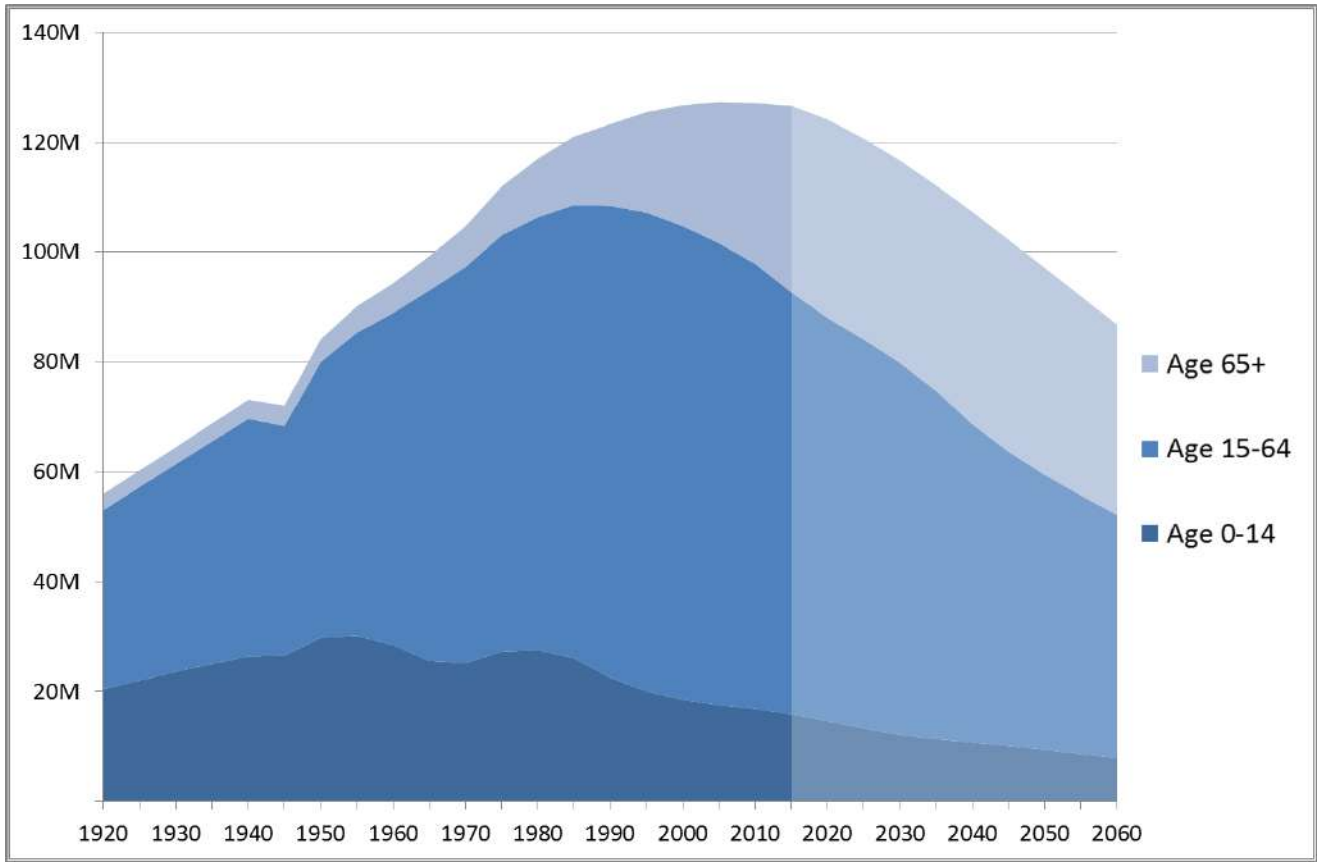
DIGITAL TRANSFORMATION ENABLER:

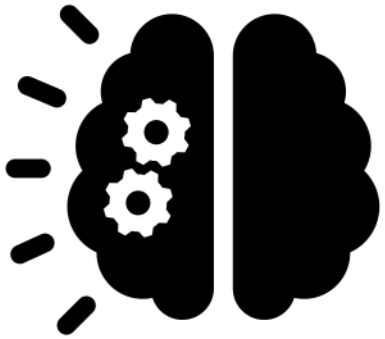
Sparse Modeling based AI

REFERENCE CLIENTS:

OSAKA GAS Hitachi Zosen Corporation MITSUBISHI ELECTRIC YANMAR

Population & Aging in Japan (and soon beyond)

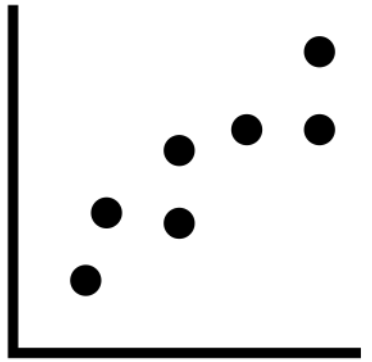




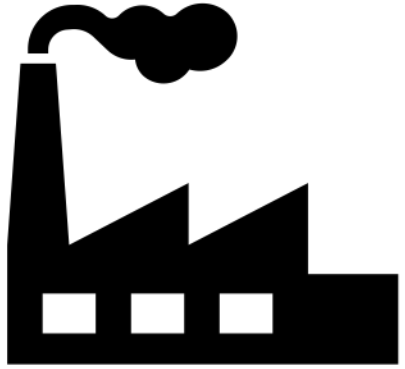
Digital Transformation (DX) for Specialist Expertise

Scaling Specialist Expertise with AI using:

IMAGE DATA

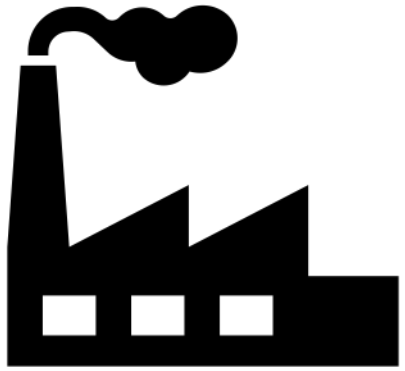


TIME-SERIES DATA



MANUFACTURING

CONSTRUCTION

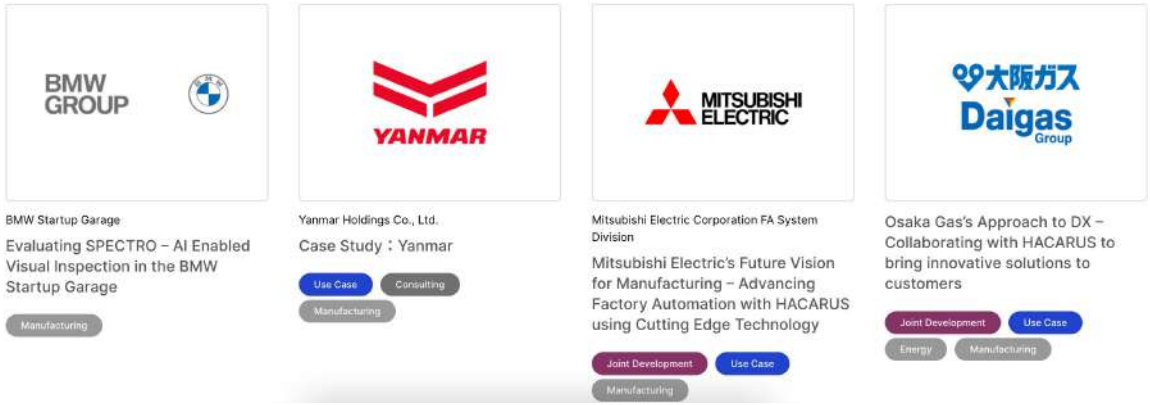


MANUFACTURING

PROBLEM: Shortage of quality control specilists able to detect complex and infrequent anomalies in factory output and machinery.

SOLUTION: SPECTRO - Small data centric AI, with training only with good samples

REFRENCE CLIENTS:



https://hacarus.com/case-studies/

PRECISION MANFACTURING

- Sped up CMC quality inspections by 600%
- Near-infrared cameras and artificial intelligence (AI) HW/SW bundle
- The new approach is expected to reduce inspection labor and training costs by about 50% over the next 2-3 years.

CONSTRUCTION

PROBLEM: Lack of specialists available to analyse Ground Penetrating Radar (GPR) Data ahead of construction, creating bottle necks for construction.

SOLUTION: Two-layered algorithm replicating the analysis performed by human inspectors – taught from expert insights.

REFRENCE CLIENTS:

Daigas Group

DB

mindbox
STARTUPS :: HACKS :: NETWORKING

CONSTRUCTION

Daigas Group

- The newly-developed AI software enables highly accurate detection of underground objects using ground-penetrating radar (GPR).
- With HACARUS AI, it has now become possible for anyone to run underground object analysis with a detection rate of 89% – 10% higher than human-run detection methods.

ACADEMIC PARTNERS

Kyoto University Founded 1897 · Tohoku University · Shiga University

CORE TECHNOLOGY

SPARSE MODELING

$$E(x) = ||y - Ax||^2 + \lambda \sum_i |x|$$

SUPPLIER TO FIRMS SUCH AS

Mitsubishi Electric · Yanmar · Hitachi Zosen Corporation · Osaka Gas · DB mindbox STARTUPS :: HACKS :: NETWORKING · Bayer · #G4A

TECHNOLOGY PARTNERS:

intel AI · NVIDIA INCEPTION PROGRAM · orange Fab Asia

- **HACARUS** delivers superior AI inspections capabilities for a wide range of industries and inspections targets
- Our key finding is that to provide tangible value, digital transformation efforts need to replicate human expertise – even for the most challenging use cases.
- Currently actively looking for partners & customers in Germany - with a focus on NRW
- Contact Adrian@Hacarus.com to learn more about these modules, projects and our capabilities