

# Now is the time to integrate Artificial Intelligence



AILab

## Mastering Artificial Intelligence

Verhaert Masters in Innovation provides **Artificial Intelligence development and consultancy services**. The AILab combines deep knowledge of AI technology with a system engineering approach. A **360° innovative product view** on your project helps you to envision the possibilities of AI for user experience, products and processes. Starting from your AI idea or vision, we bring AI down to Earth with our **concrete ideation** approach by building rapid prototypes and demonstrators. Not quite there yet? No problem, we also **support you** in creating and refining a powerful and realistic AI product vision.

### Let's talk



Jochem Grietens  
T +32 3 250 19 00

### Our AI project approach



### VERSATILE SKILLS & SERVICES

#### Algorithm development

- Artificial neural networks (ANN)
- Convolutional neural networks (CNN)
- Recurrent neural networks (RNN)
- Reinforcement learning (RL)
- Support Vector Machines (SVM)
- Principle component analysis (PCA)
- Random decision tree forest
- Kalman filtering

#### Algorithm categories

- Regressions, classifications, predictions
- Image recognition
- Predictive maintenance
- Anomaly detection
- Natural language processing or understanding (NLP/NLU)

#### Data gathering

- Assessing data quality (multidisciplinary)
- Designing data gathering process
- Pre-processing & cleaning data
- Data augmentation
- Feature engineering (multidisciplinary)

#### Software skills

- Tensorflow, Keras, Scikit-learn ...
- Model serving (google cloud, amazon web services, local serving)
- python, matlab, java, C++ ...

#### Design strategies

- Design for improved user experience
- Learn cheap fail fast by building rapid prototypes and demonstrators
- 360° project view: inverting the learning curve

#### AI vision creation services

- AI readiness assessment
- Road map development
- Structured idea generation & selection
- Use case & interaction analysis

### What sets us apart?



Project management under uncertainty

Inverting the learning curve by tackling uncertainty first, increasing the ROI on your R&D budget.



360° product view

Algorithms don't live in a box. Integrating users and surrounding technologies from the start.



AI technology

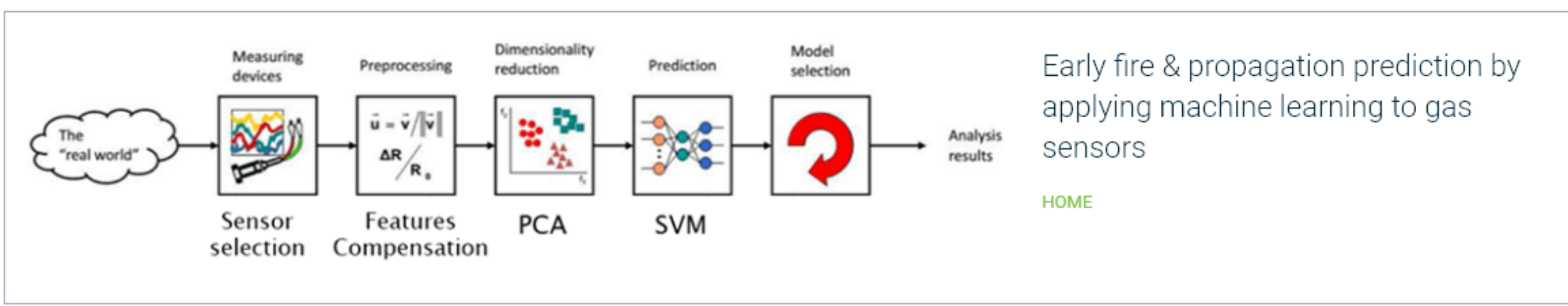
Expertise on Artificial Intelligence technology. Deep understanding of capabilities and constraints.



Beyond the algorithm

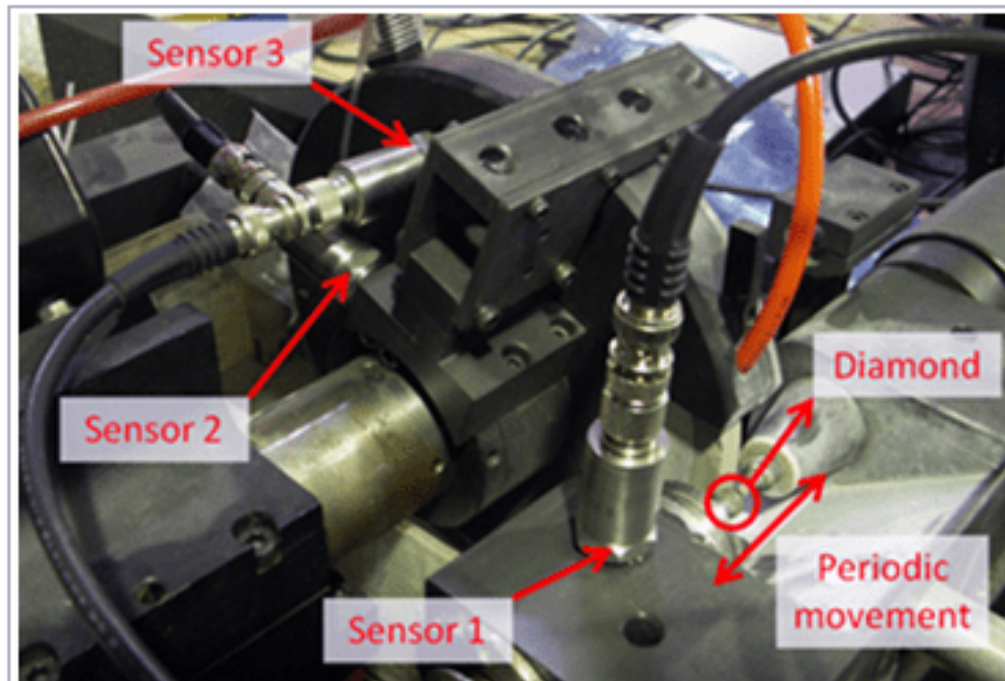
Gathering, understanding data and assessing the quality of data in a multidisciplinary way is required to make your project successful.

### Some of our projects



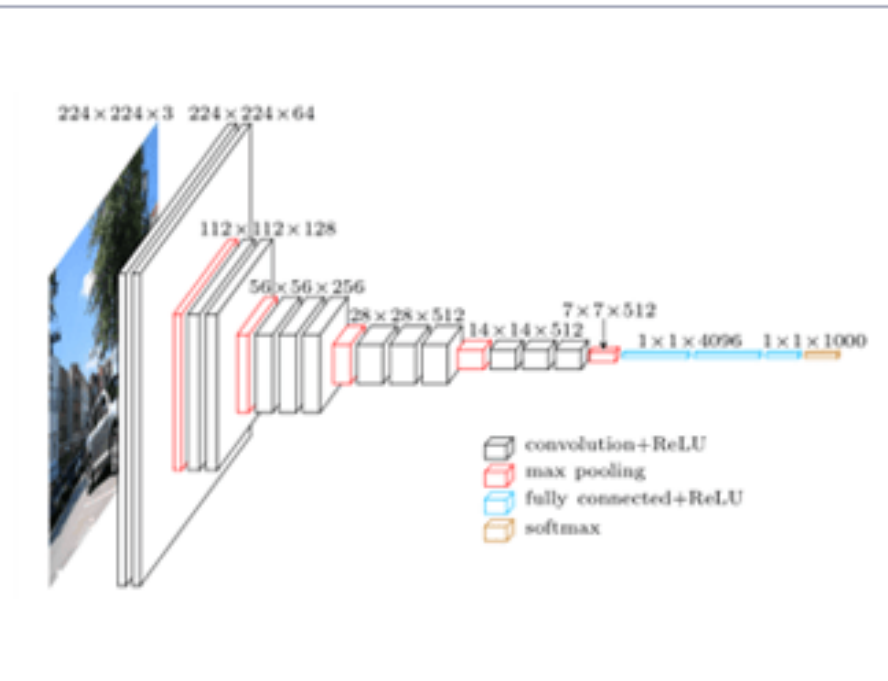
Using advanced deep neural network technologies to estimate blood pressure from blood volume pulse measurement.

MEDICAL & HEALTH



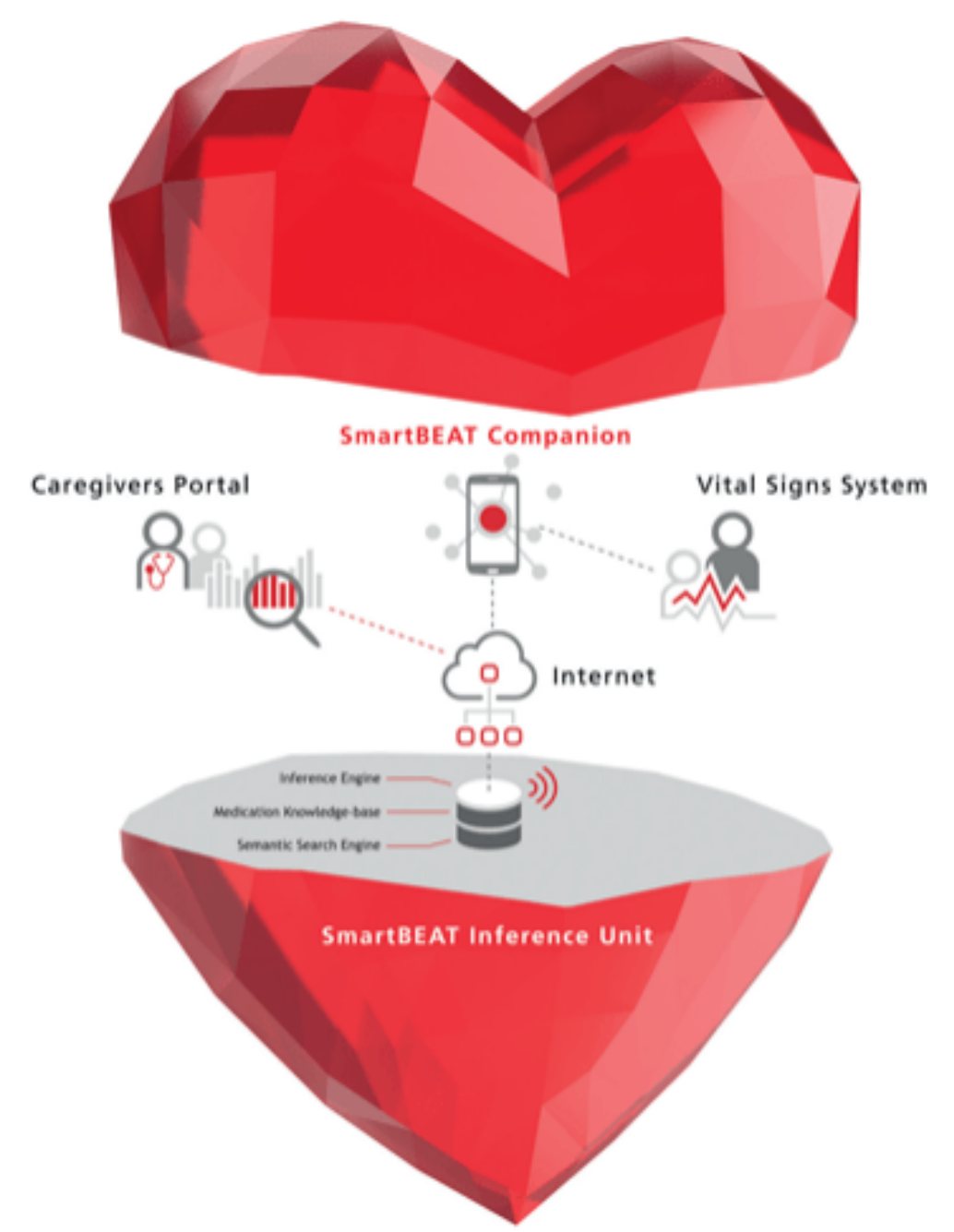
Classify the polishing state of diamonds, used to feed the polishing control loop (force & diamond facet polishing orientation).

INDUSTRY



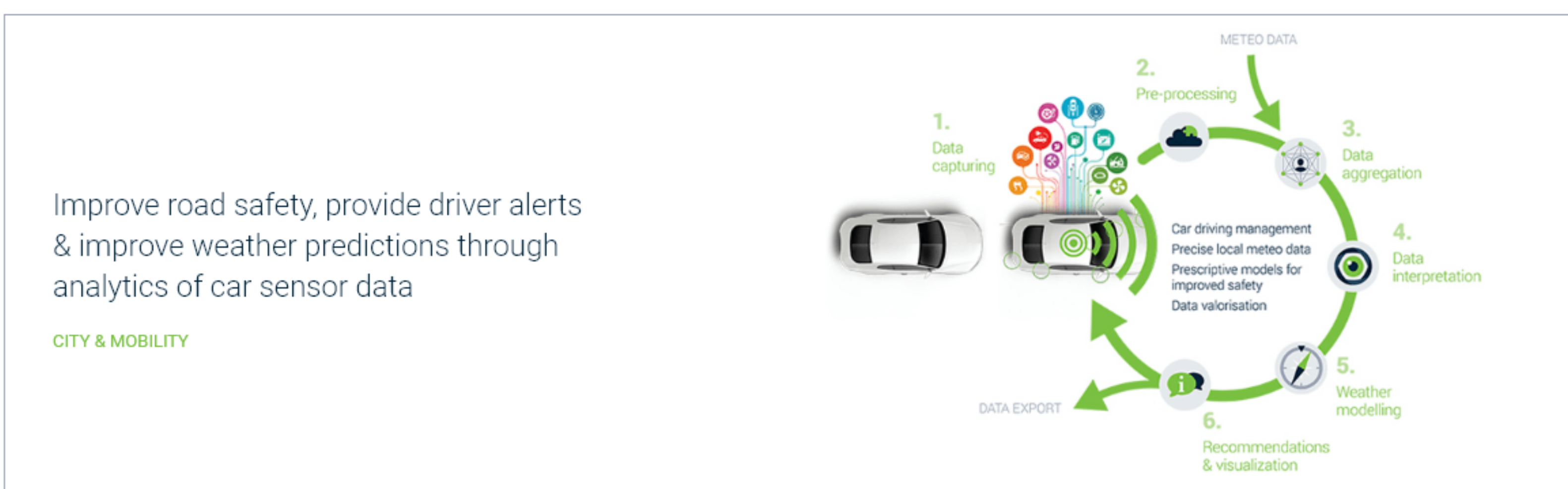
Automated system to monitor car drivers behavior (safe, distracted, fatigue...), achieved by applying a convolutional neural network on webcam images of the driver.

MOBILITY



Using wearable sensor data to monitor and incentivize heart failure patients. Comparative study of machine learning techniques for human activity recognition.

MEDICAL & HEALTH



Improve road safety, provide driver alerts & improve weather predictions through analytics of car sensor data

CITY & MOBILITY

### Perspectives

MORE ARTICLES



#### Workshop on 'AI systems'

Are you having a hard time defining the perfect AI systems for your project or...



#### IoT data for air quality mapping

Using IoT, Big Data & AI to develop an agile system to predict non-safe zones for pregnant and nursing women in production plants.



#### 5G: key for the future

5G is the next generation wireless communication technology, introduced by cellular network providers to make our lives more autonomous.

### Service formats to meet your needs



#### Strategic consultancy

Audits, studies, workshops and master classes throughout the innovation process.



#### Projects

Management and execution of projects at our innovation centers.



#### On-site consultancy

Strengthen your team with on-site experts implementing new technologies and best practices.



#### Incubation & technology transfer

Acceleration programs with expert services, hackathons, coaching and facilities.

Verhaert Masters in Innovation is a leading integrated product innovation company helping companies and entrepreneurs to innovate, creating new products, businesses and services.



SERVICES  
MARKETS  
TECHNOLOGY  
LABS

ABOUT  
NEWS  
JOBS  
CONTACT

MASTERS IN INNOVATION®  
A PIONEERING PRODUCT INNOVATION GROUP

VERHAERT | ADVANCE GROUP | BEACON | LAMMCO | PEGASUS

More about the group on [www.verhaertmasters.com/](https://www.verhaertmasters.com/)