CAISR

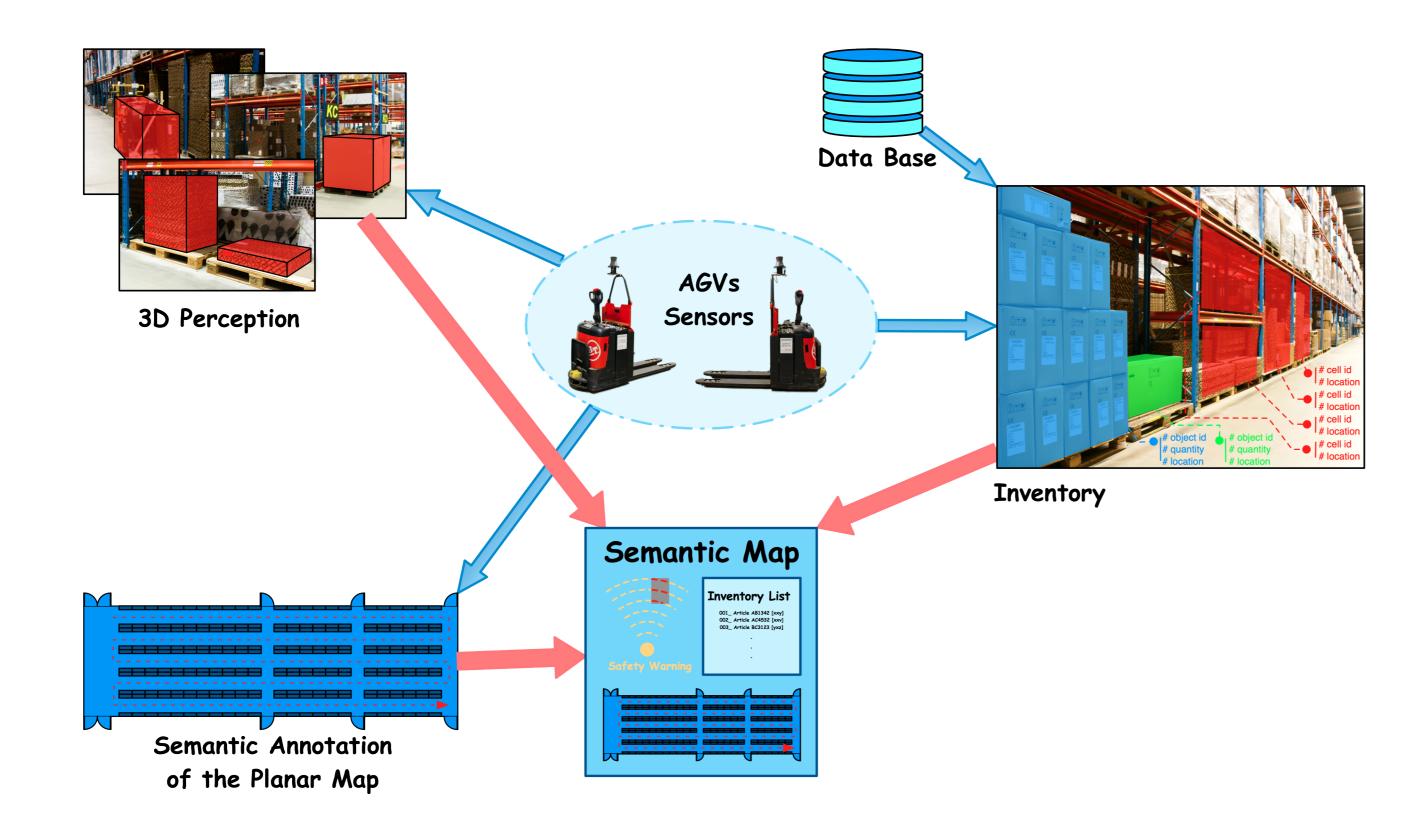
Centre for Applied Intelligent Systems Research

Knowledge Foundation

AIMS

Automatic Inventory and Mapping of Stock

Overal Goal - An intelligent warehouse environment that autonomously builds a map of stock articles, and relates article identity from the database of the management system with the article's position (metric) and visual appearance in the environment



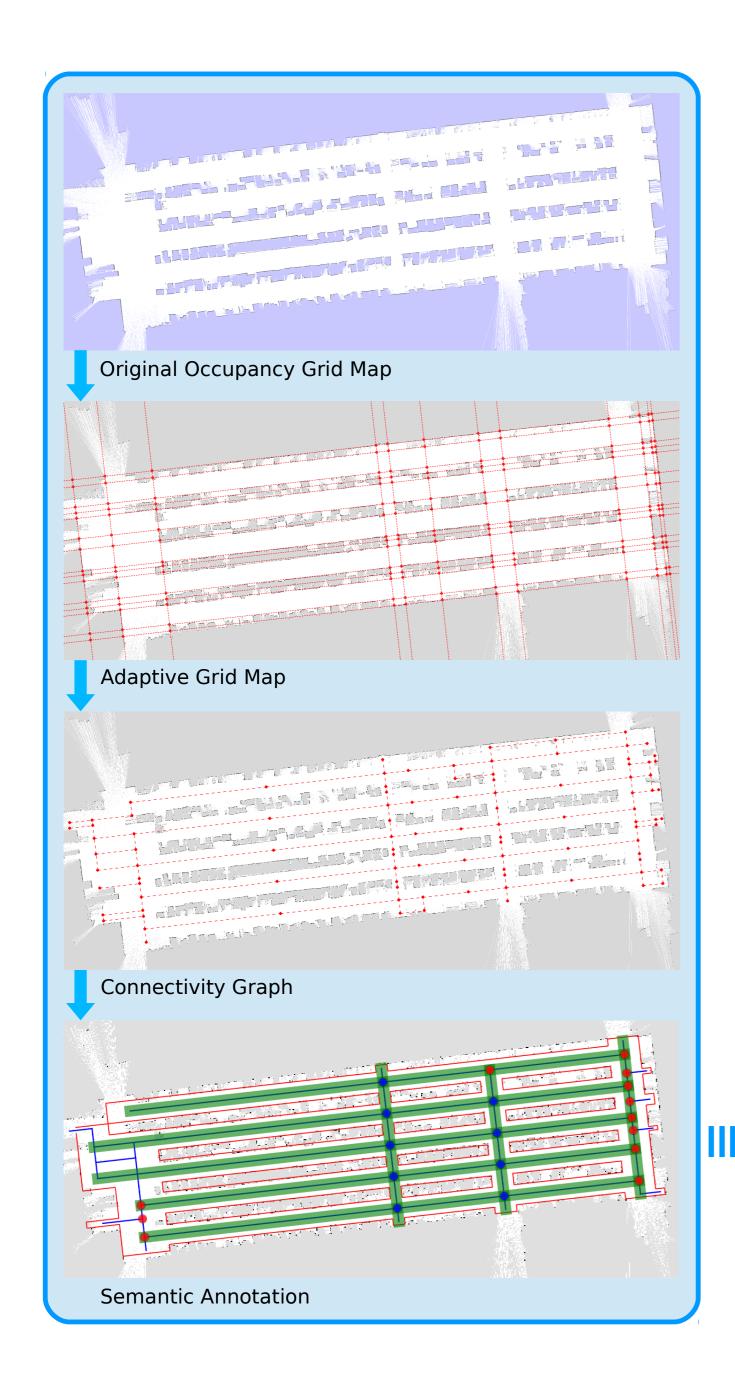
Motivation - Important skills for future robots and automated guided vehicles (AGV's) are:

✓ The ability to recognize and describe objects that the robot shall handle and the environment in which it operates (situation awareness).

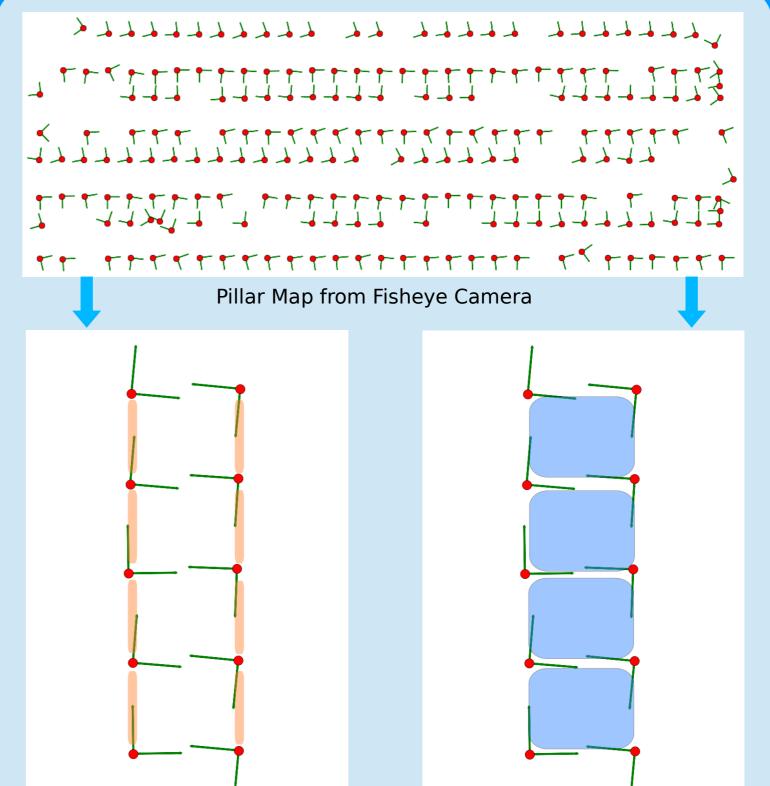
✓ The ability to structure and sort information provided by sensors (flexibility and adaptability).

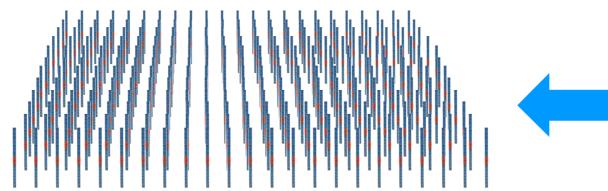
Objective:

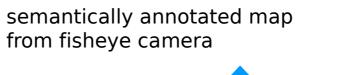
- Mapping and semantic anonnation.
- Inventory list maintainance.
- ✓ 3D perception.



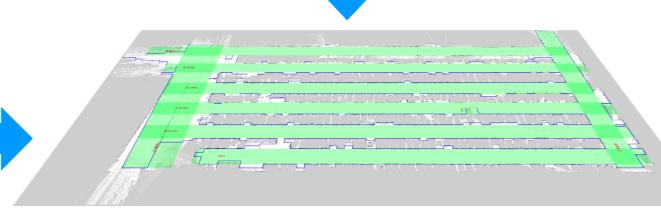
Results so far – An abstract and semantic interpretation of Occupancy Grid Map (OGM) is overlaid with the map of pillars, to speed up the process of AGV installation in the warehouse, and as a foundation for addressing the articles in the warehouse.











semantically annotated map from range data

Semantic Annotation: pick up [in progress]

1
Semantic Annotation: Cells [in progress]



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Partners

Contacts



