

iLAADR

internal Logistics with Automated Autonomous Delivery and Replenishment



Autonomous Material Transport in Complex Manufacturing Processes

The project iLAADR (internal Logistics with Automated Autonomous Delivery and Replenishment) focusses on inbound logistics and autonomous delivery of material up to the product line within complex manufacturing processes, like car manufacturing. Preparation of material and delivery to the product line is widely a manual task here. Automatizing these processes offers benefits like automatized monitoring of material flow and optimal planning of material transport.

Fleet of Centrally Controlled Automated Guided Vehicles

Complex manufacturing tasks where the compilation and delivery of material happens manually are often subject to material shortage and delays, which may cause losses. In iLAADR, a solution for autonomous delivery and replenishment shall be provided, which includes a fleet of Automated Guided Vehicles (AGV), partially equipped with robot manipulators. These shall perform the selection and compilation of kits, consisting of heterogeneous components and deliver them from the warehouse to the product line. Furthermore, human operators shall be able to move freely and safely within the warehouse in order to do maintenance or to exchange empty material storages. The control of the AGVs shall happen via a centralized framework, which monitors the global material flow using intelligent

sensors and plans the transport processes to utilize all AGVs efficiently.

Within this European joint project, the DFKI Robotics Innovation Center delivers control software for robotic manipulators and supports the integration within a mobile system.

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Partners:



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