

Objectives:

Capture a sizeable portion of the factory intralogistics market, specifically in the niche of high benefit and low weight payload, starting from the pharmaceutical business.

Achieve it through improvements, over the state of the art, of

- 1) Quantitative nature: easier installation, better scalability, higher performance;
- 2) Qualitative nature: payload tracking for fine-grained traceability.

Mission Statement:

We will build an intralogistics platform using aerial pods (also known as drones) to connect machines at different processing stages while offering 100% inter-station payload traceability, ease of installation and scalability.

Keys to success:

- The intralogistics market does not offer anything similar especially in the packaging lines: this is the intralogistics “batch of one” answer.
- We can provide a “validated solution” for our first target market, with integrated IQ/OQ for the pharmaceutical segment with ease of installation (especially for existing facilities) and scalability.
- We have a significant competitive advantage: a patent covering the application of the key enabling technology in the broad application scenario.
- Our technology pillars are well understood and available from multiple sources: drone technology and control software accessible through consumer and open source platforms, and highly scalable through cloud technology.
- The main critical factors are de-risked through mitigation strategies:
 - Technical: functional safety compliance, possibly achieved through the use of enclosures or safety nets (cost effective and possible due to the indoor nature of the application)
 - Business: market acceptance, possibly eased by proving the value proposition through in-house pilots (“dogfooding”), and by showcasing it in the pharmaceutical value chain.

Description of business:

On the market we cannot find AGVs that carry less than 50 kg.

For payload under 50 kg we can find on the market only shuttle solutions based on rail applications.

These solutions have a heavy installation, flexibility constraints and high costs especially in existing buildings. In the near future the “batch of one” approach, especially in pharmaceutical segment, will redefine the intralogistics rules for both packaging and raw materials supplies.

Companies will need to upgrade facilities in order to reach a flexible logistic approach before and after automated lines with many changeovers per day: our solution could perfectly satisfy this need.

Market potential:

If we consider in the near future an incidence for drones applications of 0.1% on Continuous Handling Equipment market only in Europe (this incidence was €14.6mn in 2017) we can consider a market of around **€15 mn** per year starting from 2022 (end of present BP).

Intellectual Property:

EU Patent Z.117.10 “A PRODUCT TRANSFER SYSTEM IN A CLOSED INDUSTRIAL ENVIRONMENT” confirmed in Italy, Germany, Denmark, Netherlands and Switzerland in March 2019.

The aim of the invention is to provide a new product transfer system usable in a closed industrial environment simply and effectively enabling the transfer of products from the outlets of the relative production lines to the inlets of the packing lines, and which at the same time has a modest overall cost especially in pharma segment, with an integrated human pass and 100% traceability.

**FROM MACHINE CENTRIC TO
PRODUCT CENTRIC MATERIAL FLOW
FOR PACKAGING LINES**

