



Integrated Intra-logistics in Plant and Warehouse

Current adoption in India

Intra logistics in plants and warehouses today in India has travelled quite a distance with organisations focussing on delivering its product to the end customer with the utilisation of latest ERP and demand planning tools coupled with mechanisation in material handling although our over dependence on labour and wheeled machinery is commonplace. Markets have changed over time and with advent of online e- markets the demand for transporting, storing and traceability could not be overstressed. The current material flow in a warehouse or within various processes in a plant remains majorly disjointed with various stakeholders, often with conflicting KPIs and various levels of automation.

Intralogistics is the art of optimizing, integrating, automating, and managing the logistical flow of information and material goods within the walls of a plant, warehouse, fulfilment or distribution centre.

The current landscape of Intra logistics in India may be categorised into majorly four categories

- Organizations with own equipment, manpower, supervision and IT systems
- Organisations with hired equipment and with own manpower, supervision and IT systems
- Organisations with multiple vendors supplying equipment, manpower with own IT systems and supervision,
- Organisation with complete outsourcing of end-to-end process of material movement for each segment / department.

These routes have multiple challenges in execution which involves significant management time in overseeing smooth operations with multiple stakeholders.

Missing parts

As India Inc. moves towards achieving its ambitious growth plans over the next decade coupled with customer demand fulfilment time reduced to “NOW or NEVER” many missing links in Intra logistics would have to be addressed and suitably enabled.

- ✓ **Lack of integration:** Currently plants / warehouses are structured on a standalone basis and struggle with other stakeholders for dissemination and integration of information and visibility. They often struggle with other supply chain stakeholders for integration of information and **visibility and single point ownership**.
- ✓ **Skill shortage:** Lack of training, poor work conditions and benefits coupled with attractive alternative opportunities in the gig economy ensure that operations, manufacturing and supply chain functions are perennially under manpower availability pressures.
- ✓ **Poor adoption of IT and warehousing technologies:** The sector is characterized by low or disjointed IT adoption levels. Majority of players have inefficient methods of storing, handling and monitoring of goods on account of lack of expertise in warehousing technologies
- ✓ **Process inefficiencies:** Absence of common goal SOPs across processes & departments leads to activities being carried out in an ad-hoc and many a times in a duplicating fashion. This builds in inefficiency, subsequently impacting costs and all targeted SAFE operations.

Macroeconomics impacting Supply Chain

The inherently challenging external environment of demand fulfilment is further exaggerated with macro-economic factors like **high fuel cost, lower labour participation rate** in Indian scenario & ever **increasing labour wage rate** coupled with growth in gig economy distracting full time workforce, **rising cost of capital** and capex further bloated through inflationary effects putting the Supply Chain function at a disadvantageous position.

With logistics costs in India ranging from 12 to 26 % of product P&L, this function would demand further attention to ensure that this cost element becomes a contributor toward profitability rather than being counteractive.

Need for Integrated Intralogistics

The requirement for an all-encompassing, agile and responsive intra logistic is driven by few corner stones like

- 1) Across processes **Real-Time information** flow
- 2) **Lower Footfall** in plant and warehouses
- 3) **Single Point Ownership** of material flow across processes
- 4) **Cost Efficient, Scalable and Modular**

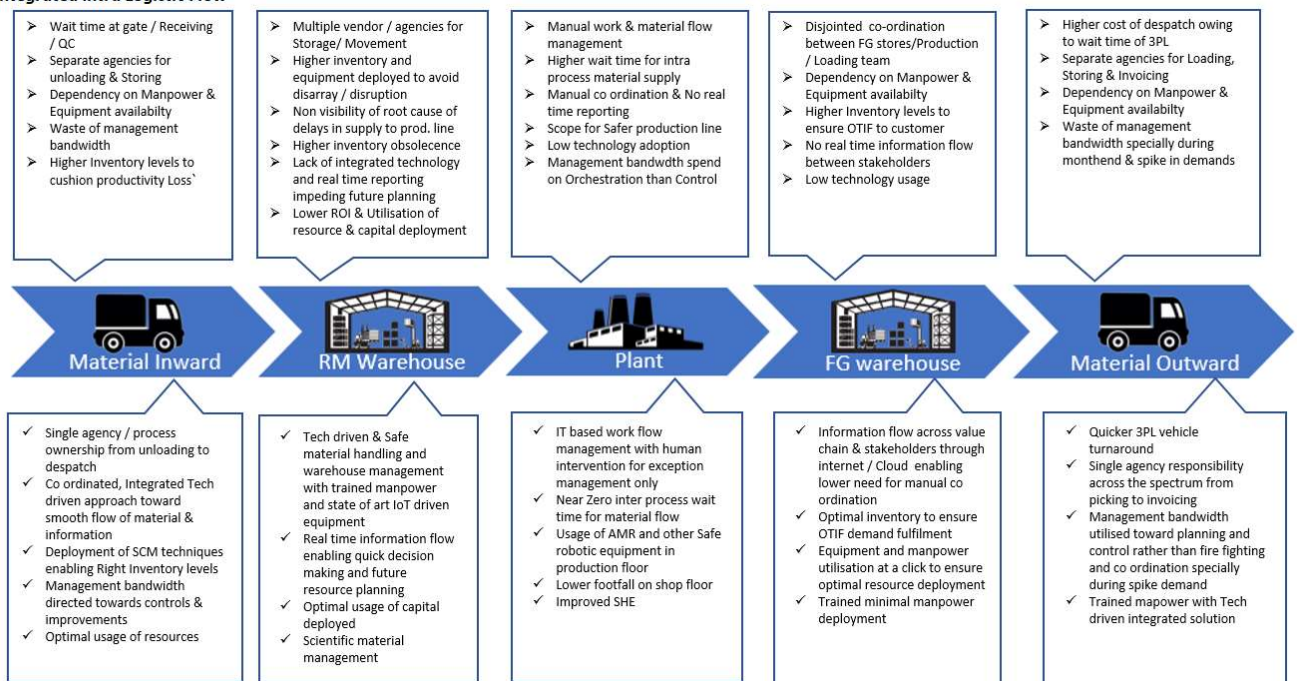
Globally and in a limited way in India, on account of the technological innovation, reduced cost of adoption and the digital revolution, intra plant logistics has changed significantly for the better.

Understanding the aforesaid business requirement and ever changing external and internal environment, an Integrated Intra-logistic tech enabled solution which encompasses all processes starting from receiving the inward material to storing, internal material movement inside the warehouse and across manufacturing processes to final product storage & delivery to 3PL including all through documentation would add value to the organisation's total value proposition to the end customer. This is achieved through single point ownership of the material handling and movement process under the flagship of a single process owner and the same is enabled by

- 1) Fully integrated WMS package which is in sync with the prevalent accounting and material management software
- 2) Usage of IoT (Internet on Things) across material and material handling machinery
- 3) Usage of Robotics like AMR (Autonomous Mobile Robot) along with traditional equipment
- 4) Trained manpower with focus on managing than doing

The main parameter defining a successful integrated intra logistic solution is creating a sustainable platform with the right mix of equipment, software, processes & manpower which is cost efficient, modular and scalable.

Non Integrated Intra Logistic Flow



Integrated Intra Logistic Flow

Key Benefits of Integrated Intra Logistics

Direct Benefits

- ✓ Higher OTIF & Customer satisfaction
- ✓ Reduced Footfall, Cost & related Overheads
- ✓ Lower overall cost of logistic operations
- ✓ Improved space efficiency
- ✓ Improved Safety across premise and EHS
- ✓ Lower material holding cost & wastage

Indirect Benefits

- ✓ Flexibility, Scalability & Predictability
- ✓ Quicker access to information & Response
- ✓ Track and trace
- ✓ Standardised procedures
- ✓ Improved ergonomics
- ✓ Release of Management Bandwidth

Conclusion

As organisations enter the phase of "on the spot" demand fulfilment, it becomes more pertinent for it to look toward leaner, cost efficient, scalable and safe logistic operations which would have minimum response time with maximum OTIF. With this overall objective and with the current technological development in robotics, AI and IoT it is impertinent to create a platform & ecosystem through integrated intralogistics which would enhance the profitability in a sustainable and safe environment.

Thank you for your time. Please feel free to contact us

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