HSSMI

KEY SERVICE:

WAREHOUSE LAYOUT & DESIGN

WHY CONSIDER WAREHOUSE LAYOUT & DESIGN?

HSSMI has extensive expertise in warehouse layout and design. HSSMI can take charge on projects at all stages of building design, whether we are fitting out an existing area or involved early enough to collaborate with the architect and owner to define building requirements and influence building design. As the warehouse design develops, HSSMI iterate options for layouts, racking dimensions, and automation requirements; often working directly with equipment vendors from tender through to final installation, commissioning, and acceptance testing.

WHY HSSMI?

HSSMI is a leading provider of logistics planning services. We have a team of experienced logistics professionals who have worked with some of the world's leading manufacturers. Much of our work has been with the newest technologies, including battery manufacture and hydrogen propulsion systems.

At HSSMI we use the latest methodologies and tools to provide our clients with the most efficient and effective support. We have a proven track record of delivering successful logistics solutions that help our clients optimize their operations and achieve their business goals.
Our approach is based on a deep understanding of our clients' operations, which allows us to design tailored logistics solutions that meet their specific needs. We are on a never-ending mission to reduce waste, increase productivity, and improve the bottom line.

HOW HSSMI CAN HELP

Stakeholder Engagement

There is a real benefit from knowing that operational stakeholders are engaged and invested at all stages. HSSMI identified and engages stakeholders early to ensure their needs are met and their desires understood. The team use these connections to gather data, understand key performance indicators and build confidence that deliverables will exceed expectations.

Data Analysis

The data gathered must be analysed and interpreted to identify key project requirements; pallet sizes, pallet spaces, pallet complexity, pallet throughput, receiving shift patterns, supply chain locations and HGV volumes are quantified. Where there are gaps in customer data, HSSMI will use assumptions based on previous experience. Typically, this data is collated into a plan for every part (PFEP), a centrally controlled excel document that holds all the part information. The PFEP is continuously updated when new data is available, these changes are version controlled.

Warehouse Strategy

Based on all data inputs, safety and operational efficiency, an initial warehouse strategy is developed; storage medium and dock types are defined. A manual vs automated storage assessment is completed. High throughput, high storage location projects often drive automated solutions due to shorter payback periods. Highly controlled freight networks typically result in rear access docks, whereas supplier owned freight may result in a higher percentage of side access bays.

Design Initial Warehouse Layout

A first iteration of the warehouse is designed in 2D CAD based on key requirements and the warehouse strategy. The warehouse facility layout includes storage racking, optimal material flows and ancillary areas, examples of ancillary areas can include an MHE charging area, MHE repair and parking, set down area for MHE and quarantine/obsolete stock store. The Flow around the facility is a key input at this stage of the process, ensuring that operational demands are met. Expected costs are developed at this stage alongside the bill of equipment to understand the capital and operating cost of the warehouse solution, this is to ensure it is aligned with the customer budget expectations.

Design Peer Reviews

The warehouse design must be validated against the owner's project requirements. HSSMI present the design, detailing the bill of equipment, delivery vehicle demands, goods flow patterns and overall operation of the area. A feedback loop typically follows where the design is developed until a final iteration is agreed.

Simulation

HSSMI has specialist in-house capability to design, create and implement a comprehensive discrete event simulation model of the warehouse and material flows. The objective of the simulation is to validate the planned layout of a process, to ensure it is capable of meeting volume demands, highlight unforeseen bottlenecks and assist with further optimisation of process design. The model will provide validation and stress-testing of proposed process, layout and throughput of all material handling activities.

Building Requirements

The impact of the warehouse layout on the building must be identified and clearly communicated, typically through rooms data sheets. Key requirements include; area, clear height, floor specification, door specification, utilities, lighting, IT and Data, heating and ventilation and occupancy.

Equipment Specification

HSSMI have extensive experience in creating RFI and RFQ/RFP documentation to facilitate a competitive tender process for all warehouse equipment.

Procurement

Starting with vendor engagement, HSSMI can work closely with client procurement teams, using in-house tools to analyse and interrogate proposals, ultimately leading to selection and nomination of vendors.

Installation, Commissioning and Testing

HSSMI offer on-site support to oversee these activities; working closely with vendors and clients to ensure required space, utilities and equipment is available to enable solution implementation.