CASE STUDY

UK department store plans new distribution center with CLASS

John Lewis: Plans for the future with CLASS

Snapshot

Company
John Lewis

Industry
Retail

Number of stores
51

Distribution center
2.4 million sq. ft.

Solution
CLASS

Scope

- Enable fast replication of architect's blueprints to 2D/3D models
- Fit floor area with storage zones to ensure planned throughput achieved
- Replicate warehouse product processing to optimize resource levels and MHE requirements
- Identify the most operationally efficient warehouse design, with ideas from John Lewis Partners

John Lewis is the UK's largest department store retailer, providing a wide range of consumer products and services from home furniture to apparel. They serve customers through 51 stores and a highly successful online business offering over 200,000 items.

John Lewis' omni-channel strategy identified the need for a new distribution center (DC) in Milton Keynes to operate alongside two existing DCs, Magna Park 1 and 2. The new facility was required to support the retailer's commitment to continually improve customer service, productivity and product availability.

Dino Rocos, operations director at John Lewis, said: "The new DC will enable us to better respond and fulfill omni-channel shopping experiences via phone, tablet, desktop or shop visits."

John Lewis chose Infios to create a warehouse design using its consultancy expertise and its CLASS Warehouse Design and Simulation application.

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JOHN LEWIS & PARTNERS

> "We wanted to move at speed so it was imperative that we quickly create a visual plan for the new build. Having previously worked with the Infios team, I knew they'd be able to deliver."
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> **Rob Flint**
> Strategy & Network Planning Manager at John Lewis

The John Lewis challenge
The new 600,000 sq. ft. warehouse, with a mezzanine floor of over 250,000 sq ft., mainly holds large goods requiring 2-man delivery. The John Lewis need was to ensure the highest level of warehouse space efficiency, and effective communication of the design to John Lewis Partners.

Challenges summary:

- Verify design layout ensuring internal space sufficient for holding volumes previously held in 4 other warehouses
- Identify resources (labor and MHE) required to run the operation and mitigate any possible problems
- Validate that operations meet John Lewis' service level requirements
- Create a 3D visualization to ensure effective communication with John Lewis Partners
- Evaluate impact of sending trailers with mixed large products, previously shipped separately

John Lewis in a CLASS of its own
It was vital that Infios was able to speedily ensure warehouse efficiency KPIs would be tested and met before building work started. John Lewis wanted to ensure that their predictions of labor requirements, equipment needed and the throughput capacity of the DC were accurate.

The Infios team used a combination of warehouse consultancy and its unique warehouse design and simulation software application, CLASS, to meet John Lewis' requirements. Using CLASS' layout design program, existing blueprints were quickly imported to develop and refine the warehouse design.

A computer simulation modeled a live warehouse environment and ran numerous operational scenarios to identify the optimum layout. In addition, CLASS movie creator was used to make a 3D movie to aid communication with John Lewis Partners and provide visual insight into the design and operational features of the warehouse.

Simon Shore, managing director at Infios, said: "Our consultancy team worked closely with the John Lewis planning team and Partners to create a base case model from data across multiple existing operations. We created around 4-5 scenarios for the warehouse; ultimately delivering a detailed model and a 3D video that offered both management and the Partners a professional and accurate representation of the final proposition."

Richard Ife, Admin and Systems Manager at John Lewis, added: "Crucially our Partners were able to play a key role in the development of the design. They have decades of experience and were able to share their ideas with the Infios team. The simulation models showed real productivity improvements and lower congestion across parts of the warehouse."

> "Using CLASS we have been able to provide a visual model of the new DC which allowed communication with stakeholders, provided capacity and performance analysis to support the business case, gave insight into future performance and offered a valuable means to fine-tune our design."
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> **Richard Ife**
> Admin and Systems Manager at John Lewis

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