K.Sight CLASS Warehouse Design & Simulation

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K.Sight CLASS allows users to design, test and re-design complex warehousing solutions in a virtual computer environment by changing many different parameters and measuring their impact.

K.Sight CLASS is the leading 'off the shelf' software written exclusively for warehouse design and simulation modelling. Used by top logistics companies, CLASS is the 'tool of choice' in identifying cost efficiencies in the warehouse and as a test platform for introducing operational innovation. It is used for new builds, to test designs before the building process begins, and for operational improvement in an existing site.

CLASS allows users to design, test and re-design complex warehousing solutions in a virtual computer environment by changing many different parameters and measuring their impact:

- Assess warehouse layout changes and their effect on productivity
- Identify throughput capacities and bottlenecks
- Review the impact of different pick-face profiling or different picking methods
- Estimate resource requirements, shift patterns and equipment availability
- Quantify costs and service levels by simulating daily receipts and despatch profiles

K.Sight CLASS is pre-loaded with all of the tasks needed in a warehouse – from unloading vehicles, put-away, through to order picking, pallet building, vehicle loading and despatch and all the processes in between. It models both manual and automated warehouses. The unparalleled advantage of K.Sight CLASS is that it puts the power in the hands of logistics professionals, enabling them to investigate any number of scenarios quickly and independently,

without the need to learn a programming language. When businesses experience increased growth or want to improve efficiency, CLASS can be used to identify how to get more volume or throughput out of an existing site and to understand where the 'stress' points are; delaying the need to invest in a larger facility.

K.Sight CLASS: Benefits at a glance

- **Maximise your warehouse performance**

- **Optimise labour and equipment running costs**

- **Identify hidden capacity**

- **Champion best practice process improvements**

- **Measure shift performance against company benchmarks**

- **Safeguard CAPEX by proving concepts before investing**

- **Easy-to-use, no programming needed**

- **Test "What-if?" scenarios quickly and compare results**

- **Reduce warehouse solution design**

Alternatively, where there is a requirement to make operational savings, as demand reduces, CLASS can be used to model how storage can be consolidated and overheads reduced. The graphics and animation within CLASS make it a favourite for 3PL sales teams when responding to tenders; they can assess the potential solution costs as well as create branded promotional videos of the client's operation.

Benefits
Unlock Hidden Capacity
K.Sight CLASS enables users to make the most of their warehouse asset by unlocking hidden capacity through better layout design and utilisation of resources, deferring the need for new investment. Customers have reported increases in their warehouse capacity of between 10 to 30%.

Enhance Performance
Get more from your warehouse by using K.Sight CLASS Warehouse Analytics to identify operating constraints and then use the 'What-if?' tool to compare results of volume increases or decreases on warehouse performance. Efficiency improvements reported by our customers using K.Sight CLASS have averaged around 10%.

Speed up Decision Making
The simplicity of CLASS means solutions designers are not dependent upon architects or computer programmers to revise their designs. This significantly speeds up the design process, enabling more options to be explored and decisions finalised in a matter of hours not days.

Improve Communication
Whether the objective of using CLASS is to support a business case for additional investment, to prepare operators for a new warehouse, to achieve buy-in from key stakeholders or to win a new contract, clear and dynamic 2D and 3D models communicate the change visually and detailed analytics support the change graphically.

K.Sight CLASS Data Analysis covers...

- **Workforce planning**
- **Dock scheduling**
- **Receiving**
- **Put away**
- **Storage**
- **Order planning**
- **Order picking**
- **Staging**
- **Vehicle loading**
- **Yard management**
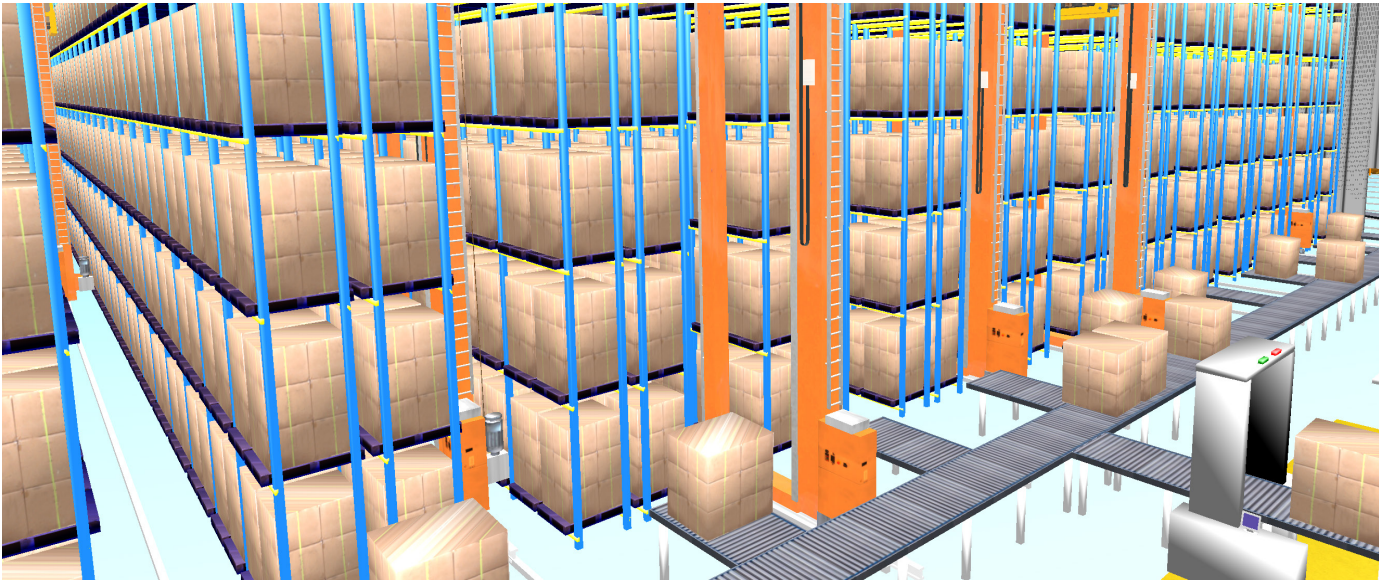
CLASS operational KPI's include...

- Pick rates
- Labour utilisation
- MHE utilisation
- Replenishment activity
- Storage type utilisation

CLASS performance KPI's include...

- Dock utilisation & vehicle wait times
- Service levels
- Asset utilisation
- Volumes
- Trends

CLASS solutions design KPI's include...

- Storage area congestion
- Travel distance analysis
- Work rates
- Inbound & outbound flow analysis
- Zone congestion

CLASS can...

- Identify costs & congestion points
- Allocate customer to optimum depot
- Allocate new customer to best shared facility
- Calculate costs of servicing new customer

Features

CLASS can be used to simulate warehouses of all sizes and complexities. It is easy to

or scripting skills, the familiar Windows environment can be quickly used by anyone. The layout drawing is created through a series of drag and drop objects drawn to scale. The inbuilt warehouse intelligence within CLASS interprets the user's commands and ensures that any layout changes conform to a set of standards, thereby ensuring aisles are large enough for forklift movements, bays can accommodate pallets, and pillars are considered with minimum impact on storage space.

Create your warehouse...

Preconfigured objects can be selected from a full range of storage types including carton flow racking, drive in racking, double deep, narrow aisle etc.

Drag and stretch layout objects to draw the interior of the warehouse. Point, click and drag to draw each warehouse object – dimension lines, snap to grid and measure tool are available

3D image library of MHEs, vehicles, office and other warehouse objects come as standard in order to populate static layout and simulation models. New functionality allows the import of many other 3D objects from Sketchup 3D warehouse

Customise with logos or images of the warehouse and its inventory, vehicles and operators.

CAD interface to import existing drawings and ability to export CAD files of the layout allowing architects' drawings to be easily updated.

The layout can be transformed into a 3D navigable model and brought to life with staff and forklifts moving in time with the defined operations process. Work flows through the warehouse are shown as lines linking different zones of the warehouse, staff can be assigned to different duties to exactly represent the operation you are designing. Models can be built in varying degrees of complexity – define inbound and outbound vehicle types, put-away and picking rules, or you can simply ask CLASS to use its inbuilt warehouse intelligence to automatically generate the necessary flows for simulation.

Run your warehouse simulation...

Animate facility automatically creates simulation flows – inbound and outbound to each storage area.

'What-if?' Wizard allows the effect of forecast volume increases to be quickly modelled, without the need for recalculations of volume data.

Simulation data can be imported from files created by your WMS or developed from product profiles and order types, defining actual pick journeys and true vehicle load sizes based on historic data. Simulation data on numbers of vehicles, arrival times etc.can be edited via dialogues associated with each flow, or via the data editor

Toggle between 2D & 3D drawings to find the best visualisation**.**

Record flythrough movies in 2D or 3D and share as runtime models with colleagues or customers, great for communicating ideas.

Warehouse results

Updates on space occupancy and vehicle fill are reported and the user can see which task each operator is carrying out as the simulation runs

Colour coded KPI reports enable quick identification of problem areas

Drill down function assists the user to navigate detailed hour-by-hour reporting

Statistics are available on utilisation of resources, labour breakdown by task, throughput by hour

Export to clipboard charts and tables for import into Excel or PowerPoint

Project Comparison report enables users to compare key statistics across multiple projects and warehouses

Business cases to bring about change can be supported by quantifiable savings or operating expenditure

Site traffic - yard management

K.Sight CLASS Site Traffic models the dynamic effects of vehicle movements around the site, arrival and departure patterns as well as vehicle queuing and waiting times. Using movement pathway technology, Site Traffic allows users to build an exact copy of their site quickly and then use this in the simulation to model the vehicle movements. Site Traffic can be used to assess the key factors that determine vehicle turnaround times:

'What-if?' Wizard enables vehicle arrival and departure patterns in the yard to be synchronised to best support the in warehouse operations

Traffic Logic Builder models the decision making process of scheduling vehicles onto a dock, based on the products carried and their destination in the warehouse. Vehicle activity can be accurately modelled to parking area sizes, road ways, entry and exit gates, and thereby determine the optimal site traffic plan.

Site Traffic Layout supports physical objects including: road networks, parking positions, refuelling and wash stations. These can be included in the model to understand their position in relation to one another and the effect each component has on the overall flow of traffic in the yard.

Trailers, tractors and shunters can be modelled so the required levels of each can be determined to meet the order profiles.

Sometimes the main warehouse infrastructure is designed well to cope with future demand volumes but not enough consideration is given to the provision of trailer parking, internal roadways etc. CLASS Site Traffic module provides the Warehouse Designer with the supporting yard and trailer analytics to support their vision.