How Low Code Application Platforms Are Improving WMS

The transformative force of Low Code Application Platforms (LCAPs) in warehouse management systems.

Low code application platforms, a recent innovation in supply chain technology are being used to develop more flexible, adaptable, cost-effective warehouse management systems (WMS). This white paper provides a generalized overview of LCAP solutions for warehouse management solutions.

Supply chain operations have changed over the years. Warehousing has become more intricate, fast-paced, high volume, and complex. Traditional warehouse management systems were developed using the technologies used at the time and have proven to be rigid, challenging to customize, scale, and adapt.

Low Code Application Platforms (LCAPs) represent a significant shift in software development. LCAPs provide a visual, drag-and-drop interface, minimizing the need for hand-coding and programming. This empowers software users to create and deploy applications by assembling pre-built components, templates, and integrations. This facilitates rapid prototyping, iteration, and deployment. By using LCAPs, application development is now accessible to a wider audience of software users, including those in the non-technical realm.

How Low Code Application Platforms Work

LCAPs include a visual editor, a graphical interface for designing user interfaces, data models, and workflows using drag-and-drop elements. It is rather like a system of building blocks, with libraries of reusable user interface elements such as buttons, charts and forms that can be combined to adapt the user interface. In addition, pre-configured templates are available to make the process user friendly.

LCAPs include tools to help create and manage business process workflows. These workflow designer tools use visual process diagrams to make the effort easier to understand and follow. By adding business rules and logic without code to the workflows, users can be sure that the applications they are building follow the predefined rules and processes accordingly.

To make data integration and management easier, pre-built connectors are available as components of LCAPs. These connectors integrate with databases, cloud services and third-party APIs. Visual data modeling tools are also provided to design and manage data models and relationships.

LCAP uses Role-Based-Access-Control to manage user permissions, so that unauthorized users cannot access certain data or features. In addition, LCAPs have features that can be helpful in ensuring compliance with regulatory requirements such as audit trails for actions taken within the warehouse management system. Integrating with version control systems can enable change management as well as facilitating collaboration on application development.

Organizations using LCAPs can meet the challenges of security, compliance, and governance by implementing robust security measures, adhering to regulatory requirements, and establishing governance frameworks.

Automating the building, testing, and deployment can be accomplished using continuous integration and continuous deployment tools. LCAPs provide robust integration frameworks and connectors. This facilitates the exchange of data and workflows between systems so that visibility and operational efficiency are maximized.

The robust integration capabilities of LCAPs are critical when integrations involve emerging technologies including artificial intelligence (AI), Internet of Things (IoT) and machine learning (ML). This is also critical in enhancing the capabilities of WMS solutions, facilitating features such as predictive analytics, real-time decision making and intelligent automation in warehouse operations.

Reporting engines can produce detailed reports and dashboards from application data. Using user friendly visual tools, users can create dashboards to display performance indicators and key metrics.

Why Use LCAP Solutions for Warehouse Management Systems?

As supply chain and warehousing operations have become more complex, dynamic, and fast-paced, warehouse management systems need to have the flexibility, scalability, and adaptability to get the job done. Easy-to-use visual tools, pre-built components and seamless integration capabilities make LCAPs ideal for creating pro-active, flexible, cost-effective warehouse management systems.

Here are some of the benefits of using LCAP solutions for WMS:

Provides a Competitive Edge and Reduces Costs

Time and Cost Savings: LCAPs streamline software development processes and reduce reliance on traditional software development resources. This provides a cost-effective alternative to warehouse management software that is customized by the vendor. Because LCAPs do not require highly trained software developers, creation, changes, and tailoring of LCAP-based warehouse management solutions can be done by users producing significant time and labor savings.

Enables You to Make Changes

Flexible and Customizable: Business users, including those who are knowledgeable about warehousing operations, can be trained to adapt the LCAP-based WMS. This enables the organization to respond more rapidly when changes are needed to business requirements. LCAP facilitates iterative development and deployment of the WMS, enabling organizations to make changes and adapt faster to meet customer needs and expectations. This responsiveness can provide organizations, such as 3PLs with a competitive edge.

Easy Integration Saves Time, Labor, and Frustration

Seamless Integration: LCAPs facilitate integration not only with supply chain systems and solutions but also with emerging technologies, making organizations more competitive to those customers valuing technology, customer service, data visibility, and innovation.

Empowers Business Users, Encouraging Participation, and Information Sharing

Increases Business User Involvement: By leveraging business users to participate in the creation and tailoring of the warehouse management system, team members are encouraged to bring their experience and knowledge to enhance operational processes and improve performance. Inclusion in the development process fosters a spirit of teamwork, collaboration, and innovation in the organization.

5 Ways to Improve Performance

LCAP-Based WMS can be adapted to

1. Trigger re-orders for automated replenishment based on predefined rules such as minimum stock levels, lead times, and demand forecasts.

2. Automate communication with suppliers to replenish orders to prevent out-of-stocks, and maintain optimal inventory levels without manual intervention.

3. Dynamically allocate inventory across multiple locations for efficiency.

4. Analyze space patterns and generate suggestions for better space strategies to optimize warehouse space.

5. Create applications to schedule and track cycle counts to ensure regular verification of the accuracy of your inventory.

Low Code Application Platforms streamline processes, reduce costs, and labor and provide the ability to exchange data seamlessly with other systems and solutions. While still new to the supply chain industry, LCAPs are being used in warehouse management, logistics and transportation, demand forecasting, compliance and reporting and are expected to play a pivotal role in the future.

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Get in touch.

marketing@datexcorp.com

https://www.datexcorp.com