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Cloud-Based Smart Sync Supply Chain Management System for Emergency Response

This cloud-based supply chain management system offers a platform-independent solution with smart sync capability for end-to-end tracking and management of commodities from procurement to distribution, designed to efficiently handle high-volume inflows under limited infrastructure.

The sudden inflow of commodities from different types of sourcing under limited infrastructure in supply chains can be difficult to handle. The efficiency of humanitarian aid supply chains is critical to effective emergency response. There are currently no effective methods for addressing this issue.

Researchers at Purdue University have developed a cloud-based supply chain management system for emergency response. This software system allows the user to create item, warehouse, and distribution site codes and enter the data for review, request, approval, and retrieval from a platform-independent web browser. Data can be entered offline to later be synced to the system via Wi-Fi/network connection. The entire life cycle of items in the system can be traced such as who delivered the item, which warehouse it was stored, which vender purchased the item, and names of people involved in the various processes. The system is designed to handle sudden inflow of commodities from different types of sourcing from procurement, warehouse inventory tracking, to distribution under limited infrastructure and resources.

Advantages:

-Cloud-based

-Smart sync

-Platform-independent

Potential Applications:

-Handle sourcing inflow

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Robotics & Automation/Automation & Control

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View online

-Tracing items

-Emergency response

Related Publications:

64. Wang, D., Yih, Y., Service, J., Lajous, L., and Robbins-Penniman, S., "Web-based, multi-platform, centralized, offline-compatible supply chain management system for emergency responses," 2016 IEEE Global Humanitarian Technology Conference (GHTC), Seattle, WA, USA, October 2016, pp. 248-253. Doi: 10.1109/GHTV.2016.7857288

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