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Depot Darpan: Digitizing India's Food Security Backbone

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Introduction

India’s Public Distribution System (PDS) is one of the most extensive food security programs in the world, reaching over **80 crore beneficiaries**. Yet, despite being self-sufficient in food grain production, the nation continues to grapple with post-harvest losses stemming from outdated storage and logistics practices. According to estimates from the UNDP and the Food Corporation of India (FCI), nearly 67 million tonnes of food are lost annually, resulting in an economic impact of over INR 92,000 crores.

Such losses not only undermine economic efficiency but also threaten the integrity of India’s food security framework. For decades, gaps in warehousing infrastructure, a lack of real-time monitoring, and fragmented systems have weakened the supply chain. Depots, once overlooked in the larger distribution chain, are now recognized as critical nodes that must evolve to match the scale and complexity of national food provisioning.



A Vision Realized: Depot Darpan Ushers in Digital Oversight

In response to these long-standing challenges, the **Department of Food and Public Distribution (DFPD) launched Depot Darpan**, a digital initiative designed to transform the management, monitoring, and maintenance of food storage depots. The system, comprising a robust portal and mobile application, offers a new level of transparency and accountability across the warehousing landscape.

Inaugurated on **May 20, 2025**, by the Hon'ble Union Minister of Consumer Affairs, Food & Public Distribution, Depot Darpan represents a paradigm shift in how warehouse infrastructure and operations are audited, analyzed, and acted upon.

The platform now covers over 2,278 warehouses, including those managed by FCI, the **Central Warehousing Corporation (CWC)**, state agencies, and private entities—enabling unified performance tracking across the board. This project, designed and developed in alignment with the Government's digital transformation priorities, reflects a sophisticated approach to public infrastructure governance. With 100% of self-assessments conducted digitally via web and mobile platforms, and real-time geo-fenced reviews carried out at over 90% of depots, the **system ensures on-site authenticity and transparency**. Over 12,000 assessments have been submitted, reviewed, and escalated through the platform. At the same time, automated alerts and escalation mechanisms have enabled timely compliance actions in more than 80% of flagged cases—marking a transformative shift in how depot performance is monitored and improved.

From Blind Spots to Real-Time Intelligence

Depot Darpan brings a data-driven lens to a domain that was once dependent on manual logs and physical inspections. Through geo-tagged inputs and a dual-assessment framework, depot managers now evaluate infrastructure quality based on parameters like safety, hygiene, environmental compliance, and technology readiness. These inputs generate automated star ratings, helping depots consistently benchmark and improve their standards.

Operational efficiency is also quantified through metrics such as stock turnover, workforce costs, inventory losses, and space utilization, providing policymakers with the insights they need to drive reform and prioritize funding where it matters most.



A Digital Backbone Powered by Emerging Technologies

What sets Depot Darpan apart is its intelligent integration of advanced technologies. Leveraging IoT sensors, the platform continuously monitors temperature, humidity, CO?, and phosphine levels, fire hazards, and unauthorized access. These environmental metrics play a crucial role in preserving food quality and ensuring occupational safety for workers.

On the innovation front, features like AI-based bag counting, Automatic Number Plate Recognition (ANPR) for vehicle tracking, and Face Recognition Systems (FRS) for access control underscore the platform’s forward-thinking design. This suite of technologies provides a granular, real-time view of depot conditions, available anytime, anywhere, via mobile dashboards.

Shifting from Paperwork to Proactive Governance

The days of manual record-keeping and fragmented oversight are being replaced by digital workflows that prioritize agility and precision. Depot Darpan automates inspection reports, enables GPS-tagged assessments, and supports 100% validation by supervisory officers—all backed by randomized third-party audits.

This shift empowers decision-makers to intervene quickly, reduces the administrative burden on field staff, and creates a feedback loop that continuously improves performance.

Redefining Food Security Through Smart Monitoring

Depot Darpan is more than a monitoring tool—it’s a strategic enabler of national food security. With comprehensive digital coverage across thousands of warehouses, the system ensures greater transparency, timely compliance, and efficient use of public resources. The introduction of performance-linked star ratings has introduced a culture of accountability and measurable outcomes into warehousing operations, ensuring that infrastructure investments are guided by real-time needs rather than assumptions.

As India works to minimize food loss and strengthen last-mile delivery, such digital tools will become indispensable. By linking backend infrastructure directly with frontline distribution outcomes, Depot Darpan helps ensure that food grains reach citizens in good condition and on time.

Conclusion: A Quiet Transformation, Engineered by Innovation

The transformation brought about by Depot Darpan is no coincidence—it is the result of a deep, deliberate understanding of public systems, complex logistics, and scalable technology. Its successful implementation for the Food Corporation of India (FCI), a key pillar in the nation's warehousing and food distribution ecosystem, highlights how digital solutions, when thoughtfully designed and deployed, can modernize even the most intricate government operations.

At the heart of this transformation is CSM Tech, whose proven track record in public sector digital infrastructure made it possible to turn vision into reality. By establishing a unified source of truth for depot performance, compliance, and operational efficiency, CSM Tech has helped reinforce institutional accountability and national trust in the food supply chain.

Depot Darpan reflects not only the operational health of India’s food depots but also the government’s evolving commitment to good governance, transparency, and public service delivery. We see a warehousing ecosystem that is smarter, safer, and future-ready—where every grain is stored with care, every depot is monitored with intelligence, and every citizen’s right to food is protected by technology.



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