



# Integrated Management System at Punjab Mandi Board





**P**unjab has a vast and well established mandi infrastructure that handles about 120-130 lakh metric tonnes (LMT) wheat and 170-180 LMT Paddy arrivals during each season. Punjab State Agricultural Marketing Board (Punjab Mandi Board) in early 2019 implemented a comprehensive end-to-end digitization of its process in an integrated digital ecosystem. The integrated management system (IMS) has helped Punjab Mandi Board to achieve high operational efficiency and transparency through a central point of communication with real time access to information for stakeholders. The objective of IMS Project in Punjab Mandi Board is

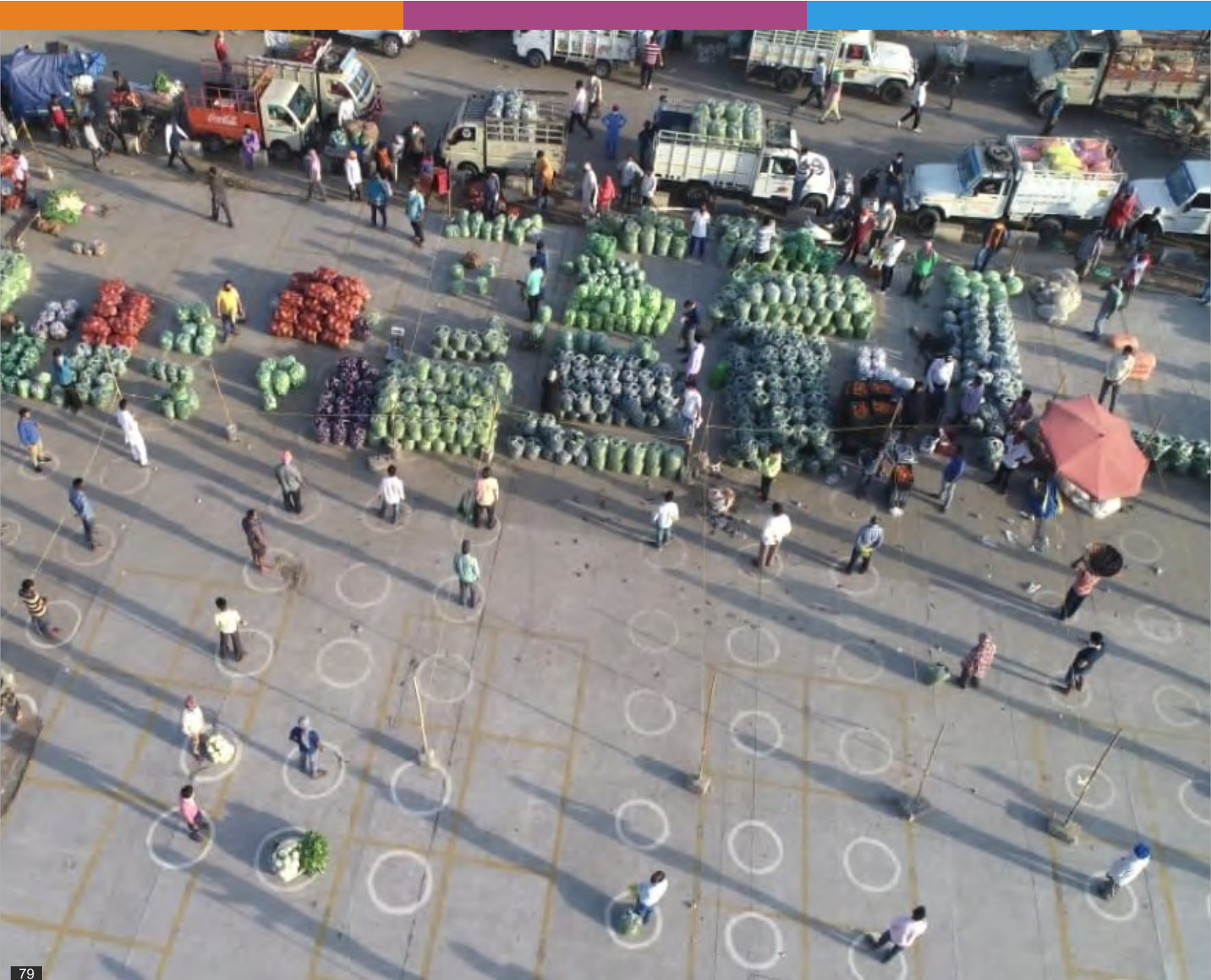
- (a) to enhance the efficiency and transparency in mandi operations;
- (b) to extend the ease of doing business by facilitating online processes replacing paper applications and records;

- (c) to check malpractices of fake and bogus billing thereby reducing loss of fee/charges;
- (d) to maintain a lean and efficient organization where operations are facilitated by independent checks and balances with negligible day to day manual intervention;
- (e) to have a GPS and mobile based 'ring fenced' staff attendance and monitoring system; and
- (f) to digitize old records along with an online electronic property register.

The process re-engineering introduced under the IMS has helped Punjab Mandi Board optimize its operational efficiency. The system has ushered in transparency and productivity empowering the farmers, labour, arthiyas and general public. It has enabled the Board to maintain a clear/unambiguous picture of its activities on a real-time basis. Auction rates of all agriculture produce, fruits and

vegetables are displayed and accessible to public. The synergies generated by the implementation of the digitized mandi operations including procurement 'by invitation' rather than 'by will' has given certainty to the mandi operations right upto the farm level where farmers can plan harvest and sale of produce.

This helps in immediate auction/sale of agriculture produce and the farmers return back home on the same day. This system can now be synchronized to adapt to the ongoing field challenges. These novel procurement mechanisms were improvised further during rabi marketing season (RMS) 2020-21 wheat procurement, a season that came with constraints of COVID-19. This helped to ensure 100% procurement of the offered 127 LMT wheat (approx.) without a single case of COVID-19 spread in the mandis.



Absence of manual intervention has enhanced transparency in operations and ensures accountability of all stakeholders. This non-partisan approach has helped to build and strengthen the trust of the government in all stakeholders.

An innovative procurement e-tool of IMS, the Arthiya-Kisan Pass System integrated with unique E-PMB mobile App - has helped to replace mandi procurement 'by will' with 'by invitation'. In the new system of IMS/procurement by will, the farmer is aware of his turn in the mandi so he can plan his harvest and make arrangements for transporting the produce to the specified mandi, accordingly. The certainty of date wise arrival helps the government procurement agencies and private entities to prepare for and secure the food grains timely. Prompt payment to the farmers is also ensured.

The IMS automation and digitization has assisted the Human Resources restructuring the organization and reassigning staff to the cutting edge level and critical areas of operations vis-à-vis their experience. With the implementation of IMS, Punjab Mandi Board has streamlined procedures to a level of favorable wage to productivity ratio.

The digitization and procedure shakeup has put the Punjab Mandi Board on track to attaining sustained growth in collection of revenue with minimal human intervention. The augmented transparent and objective systems have ensured that the mandi network across the state meets the mandate for regulating the agri-trade for elimination of malpractices.

An algorithm based online tool has been developed to generate online passes based on Punjab Mandi Board's historical data. Net gain/loss factor is calculated which is adjusted in the next day's allotment. i.e. the Arthiya who failed to get any allotment or got less than his entitlement for the day, is given priority allotment the succeeding day. The allotted passes are deducted from the balance capacity of the Arthiya. Previous year's trade is taken as a base to estimate the current year's capacity of the procurement centre and arthiya, respectively.

Each market committee (MC) is given web-portal access to generate passes. All passes for the day are to be generated in a single attempt as per the ratio calculated by the system on the bases of Arthiya capacity. MC, on the basis of empty blocks in the mandi generates the number of passes to be issued for the day for a mandi.

These easy to use practical innovations under the IMS have not only enhanced free flow of grains during procurement in both marketing seasons (rabi and kharif) but also ensured that at no time the mandis overflow with produce. This has given certainty to farmers by allowing them to plan their harvest and transport to the mandis. The arthiyas and procurement entities can make advance adequate arrangements in mandis and storage for timely securing the agriculture produce. The regulated arrivals ensure that there is no glut in the mandis and advance arrangements are made for safe arrival and storage of agri-produce.

The Integrated Management System has three sub-systems viz., Mandi Management System, Estate Management

System and Accounts Management System. The Mandi Management System has subsystems for online license monitoring, farmer facilitation, gate entry management, auction management, fee/revenue monitoring and management facilitation and reporting. The Estate Management System has modules for property allotment, payment, change of ownership and other options. The allottees have personalized login to monitor the status of property and application. Accounts Management System facilitates budget preparation and authorization, and maintenance of records relating to receipts, payments, investments, deposits, payroll management and tax payments etc.,. This has given the Board a real time access to the finances and accounts of the 154 market committees. The monitoring and audit of the accounts is now done remotely.

The e-PMB Mobile App is integrated with IMS and makes system available through mobile app.

