Online Commodity Trading Platform

In the recent times, online commodity trading platforms have piqued the interest of governments, trading authorities & commodity exchanges worldwide. The implementation of IT interventions especially for managing commodity auctions has seen significant success in achieving time and cost efficiencies in the trade cycle. Early adopters in this space have witnessed a spurt in buyer seller participation, number of trading windows and volume traded on such platforms.

The high level of transparency enabled through end to end automation of trading promotes access to market and fair price discovery of quality produce. With the emerging demands and market dynamics in commodity trading, it is imperative that local supply chains move towards digitally transforming the trade cycle in order to maintain or expand their global commodity market share.

"TRADE ISN'T ABOUT GOODS. TRADE IS ABOUT INFORMATION. GOODS SIT IN THE WAREHOUSE UNTIL INFORMATION MOVES THEM."

PRIMARY STAKEHOLDERS IN TRADING ECOSYSTEMS

Auction Organizers

Responsible for conducting the auction at their respective auction centres. Seek higher market share in commodity trade and healthy profit margins in supply chains.

Producers or Sellers

Responsible for production of primary commodity & processing it into saleable form. Seek transparency in closing prices that assures them of the receipt of full value for their produce. Interested in forecast of future market conditions to plan ahead & optimize earnings.

Warehouses

Responsible for receiving & storing commodities on behalf of producers and buyers. Update the quantity & quality to the broker. Withdraw samples for quality check by brokers. Check loading instructions and release commodities after auction.

Brokers

Responsible for selling commodities on behalf of sellers. Undertake activities related to auction such as sampling and cataloguing of commodities, fixing and modifying reserve price on behalf of sellers. Also undertake pre & post sale documentation, collection and deposit of taxes on behalf of producers

Buyers

Responsible for purchasing commodities sold at the auction. Interested in securing supply at competitive market prices. Seek transparency in products & terms of sale, predictability of price regime & flexibility in sourcing over various delivery periods. Only then will buyers fully reveal what they are willing to pay for the product and only then will market clearing prices truly reflect market conditions.

STAGES IN TRADING PROCESS

Pre-Auction:

■ The commodity producers send their produce to warehouses for cataloguing their produce in the auction sale of the nearby auction centre.

■ The brokers prepare and publish the auction catalogue within the stipulated time of a sale for a particular centre based on the arrival of commodities marked for that centre. Brokers also collect samples from those commodities for quality evaluation purpose (base price and reserve price fixation).

■ Such catalogues are shared with the buyers so that they can ear mark their favourite lots and decide on a pre-bid price.

Auction:

■ The trade auctioning authority defines auction rules, sequence of brokers to appear in the auction & manages the entire auction process

■ On the floor, negotiation occurs between the broker & the buyer. Based on the pre-bid received by the buyers, the broker has the right to change the base price. The broker declares the lots open for auction & has the right to accept or reject an offer made by buyers. Lots not opened up or sold in the auction can be lined up for re-auction.

Post-Auction:

■ After completion of auctions in a particular day, the successful bidders make full payments of the lots purchased based on the invoices raised on them by brokers on behalf of the producers and obtain the delivery order for taking physical delivery of the commodity from the warehouses. The maximum time period for a buyer for making payment is defined.

■ The amounts received in the bank are then finally distributed to all beneficiaries (sellers, brokers, warehouses) in required proportion within stipulated time. The settlements of payments i.e. receipt and disbursal of auction proceeds takes place through a settlement bank designated for that centre

CHALLENGES IN MANUAL TRADING ECOSYSTEMS

1. Stagnating prices of commodities in auctions
2. Lengthy & bureaucratic commodity trading cycle
3. Manipulation of market by large oligopolists
4. High costs due to procedural & logistical issues
5. Limited time & information for fair price discovery
6. Poor quality of produce sold to centres

COMPONENTS OF ONLINE TRADING PLATFORM ─────

Membership Management

Supports a robust governance framework where existing commodity trade business rules relating to membership parameters can be easily incorporated into the system

01. Registration of primary stakeholders & other participants (warehouses, transporters & banks)
02. Profiling and verification of registered members on the platform
03. Definition of roles, responsibilities and hierarchy of members in the ecosystem
04. Customizable business rule-based allocation of roles and attributes
05. Access control and grouping based on parameters (subscriptions, geography or organization)
06. Built-in workflow and multi-level approval system to bid, buy and sell

Catalogue Management

Enables consolidation of information on commodities available for sale in a catalogue. Defines visibility of aggregated information to stakeholders based on their role in the value chain.

01. Manage the creation, aggregation & access of pre-auction and auction catalogue content by brokers
02. Support pricing decisions through price index exploration & search feature on historical data
03. Enable brokers to import quality checking & valuation information from 3rd party systems
04. Enable buyers to add their own parameters to catalogue for comparison and decision making
05. Provide filtering mechanism through standard text & keyword searching, commodity attribute exploration, historical performance and product comparison features.
06. Support diverse views of the catalogue for brokers and buyers

Automated Auction

Manages real time bidding at increased speed & efficiency and facilitates price discovery. Supports automation of various auction format & flexibility in business rule configuration.

01. Enable complete management of auction floors for brokers & buyers during auctions

02. Allow customization of auction parameters such as splitting of lots (buyer selling match), buyer anonymity, time for bid completion, number of buyers allowed to bid

03. Support consolidation of auction sales data (sale price & quantity of lots) and buyer information.

04. Allow automation of pre-set bidding (auto-bidding or proxy bidding) in which the buyer submits the bid specifying quantities & maximum price he is willing to play before the auction commences

05. Allow automation of ascending-price clock auction format in which the bidder needs to maintain active bids in each round of the auction

06. Enable configuration of business rules for re-auction factoring variation in demand & supply

e-auction Process Flow
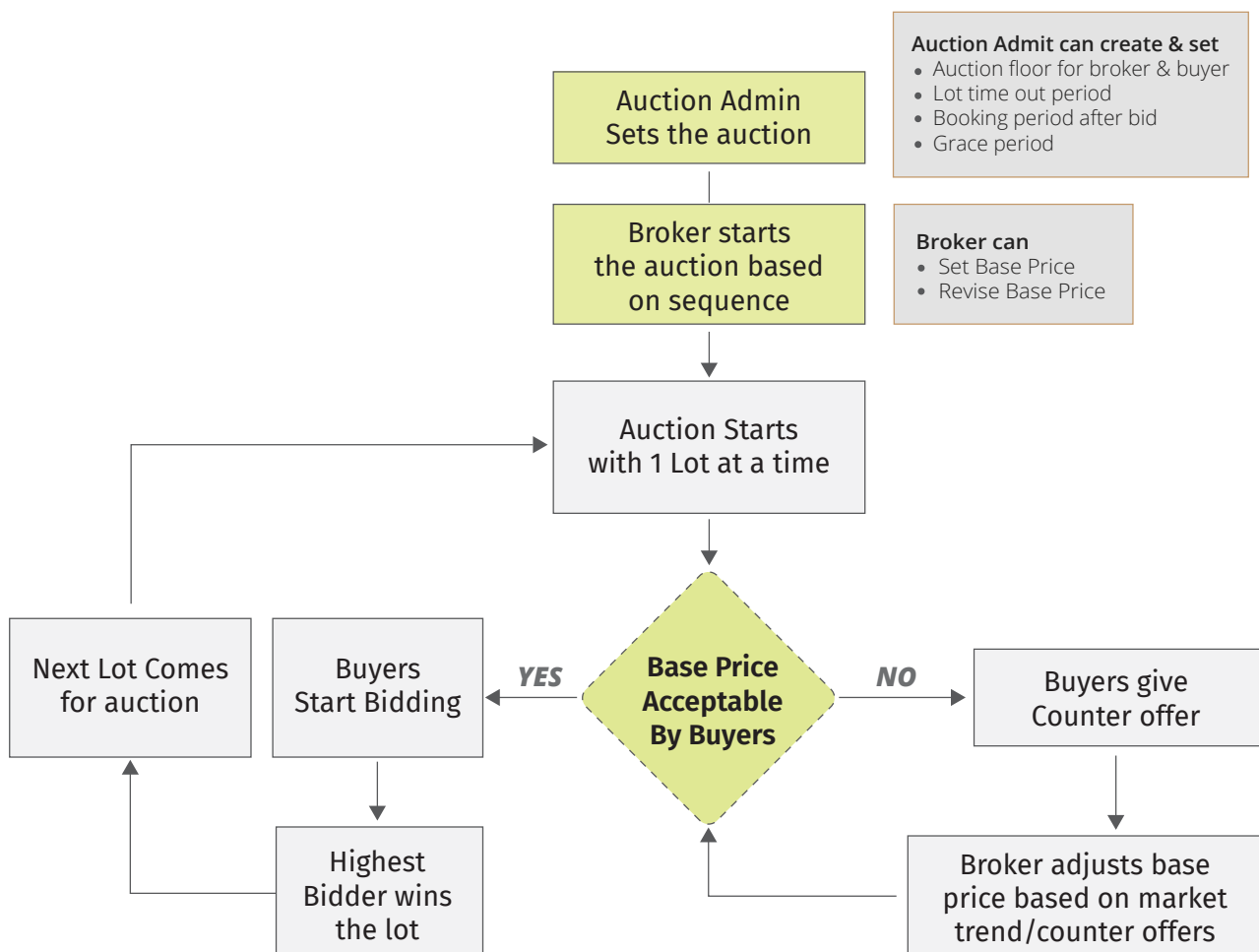
Business Management

Controls and manages key tea trade business transactions of post auction, including sale order, sale invoice, payment confirmation, order release document, delivery order, loading instructions and reporting data

01. Enables automation of post auction activities including sale invoice, payment confirmation, order release document, delivery order & loading instructions

02. Support notification feature for all defined commodity trade transaction documents and forms as per pre-defined approval hierarchy

03. Dynamic & distinct access functionalities for all trading partners including producers, buyers, brokers, warehouses and banks

Market Analytics & Insights

Provides advanced information & insights that enable stakeholders in the value chain to take informed decisions on risk mitigation and ROI maximization.

01. Comprehensive reporting & historical analysis of all transactions & activities from other modules

02. Real-time accurate, realizable, & consistent price information on commodities in trading hours

03. Synopsis of trading activity each day that includes opening price, closing price, highest price, lowest price, traded quantity and worth, differential in the closing price of current day vs previous day

04. Visualization of averages over time periods & performance comparison of different commodities

05. Predictive modelling of future price curves over different delivery period contracts

INTEGRATED TEA TRADING SYSTEM, KENYA

The East Africa Tea Trade Association manages teas coming in from 10 different countries of east, central & Southern Africa on a single auction platform based out of Mombasa in Kenya. These auctions account for a trade worth US$1.3 billion dollars (about 22 per cent of Kenya's foreign exchange). It is the source income for more than 6 million Kenyans.

CSM partnered with EATTA to realize its vision of moving from the public outcry method to digital method of conducting auctions. It conceptualized & implemented an IT enabled platform that brings together an ecosystem of 81 producers, 9 packers, 86 buyers and 11 brokers. The digital auction platform, now operational, has reduced the average tea trade cycle by 40%. As global buyers grow increasingly conscious of quality, the supply chain visibility and product traceability enabled by audit trails on this platform are significant. Most importantly, the go-live of this platform amidst a pandemic has kick started a major revival of the East African economy.

Parameters	Manual Outcry Method	Automated Auction
Tea Trade Cycle Time	32 days	19 days
Period between tea offering & catalogue closure	5 days	2 days
Period between catalogue closure & auction date	19 days	10 days
Period between auction date & payment date	T+9 days	T+5 days
Period between auction closure & result dissemination	3 to 12 hours	Real-time
No. of documents handled	47	24
Auction speeds	3 lots/min	5 lots/min

Tea Field 1

Tea Field 2

Tea Producer

2. Auction

Tea Trade Auctioning Authority
(the East African Tea Trade Association)
- Set Auction Rule
- Decide Sequence of Brokers
- Manage Process

On- ground Negotiation between Brokers & Buyers

Brokers Declare the Lots open for Auction
- Accept/Reject offer

Re-auction of Lots not opened/unsold

1. Pre-Auction

Tea Sample Collection for Tasting & Valuation

Fixation of Base & Reserve Price

Catalogue Shared with Buyers

Buyers Earmark their Favourite Lot & Decided Pre-bid Price

East African Tea Trade Association

Online Tea Auction

Delivery Order

Bank

BANK

3. Post-Auction

Bidders make Full Payments on behalf of the Producers

Obtain Delivery Order

Physical Delivery of Teas from Warehouse

Designated Bank
- Payment Received is distributed to the Beneficiaries Sellers, Brokers & Warehouse
- Receipt & Disbursal of Auction

Warehouse

Buyer's Warehouse

Physical Delivery of Tea

CSM Technologies is a pioneering Tech Services organization that harnesses the power of existing and emerging technologies to provide solutions with tangible impact on efficiency of governance and quality of citizens' lives.

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