

TECHNICAL EVALUATION REPORT

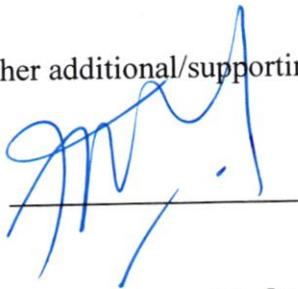
(As Per Rule 35 of PP Rules, 2004)

- 1 Name of Procuring Agency Federal Board of Revenue (HQ)
- 2 Method of Procurement Two Stage Bidding Procedure
- 3 Title of Procurement AUTHORIZED VENDORS FOR INSTALLATION AND MAINTENANCE OF PRODUCTION COUNTING SYSTEM IN BEVERAGES SECTOR
- 4 Tender Inquiry No. 5(1)S(Admin)2025
- 5 PPRA Ref. No. (TSE). TS560027E EPADS Reference No: F-250405813
- 6 Date & Time of Bid Closing 17th October, 2025 11:00 AM
- 7 Date & Time of Bid Opening 17th October, 2025 11:30 AM
- 8 No of Bids Received 03
- 9 Criteria for Bid Evaluation Technical Bid Evaluation Report Attached.
- 10 Details of Bid(s) Evaluation Technical Bid Evaluation Report Attached.

Name of Bidder	Technical Marks (if applicable)	Rule/Regulation/SBD*/Policy/Basis of Rejection/Acceptance as per Rule 35 of PP Rules, 2004.
M/s Authentik	-	Responsive
M/s Tollink Pakistan Pvt Ltd.	-	Non-Responsive
M/s ISSM Labeling Pvt Ltd.	-	Non-Responsive

11. Any other additional/supporting information, the procuring agency may like to share.

Signature: _____



Farrukh Anwar Sial
Secretary (Administration)

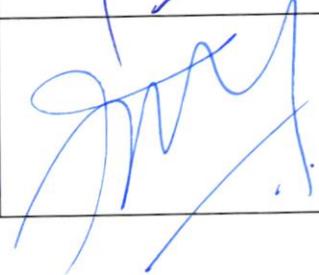
Official Stamp: _____

(Committee members signature placed at Annex-I)

***Standard Bidding Documents (SBD).**

5(1)S(Admin)/2025

**AUTHORIZED VENDORS FOR INSTALLATION AND MAINTENANCE OF
PRODUCTION COUNTING SYSTEM IN BEVERAGES SECTOR**

Designation	Role	Signatures
Member (Admin/ HR)	Chairman/ Convener	
Member (Audit/CRM)	Member	
Member (Customs Operations)	Member	
Chief (Admin & Finance)	Member	
Secretary (Administration)	Secretary (Procurement Committee)	

INVITATION TO BID

TECHNICAL BID(S) EVALUATION REPORT

Invitation to Bid Reference No.	TS560027E
Invitation to Bid Title	Hiring of Authorized Vendors for Installation and Maintenance of Production Counting System in Beverages Sector
Invitation to Bid Issuance/ Publishing Date (Stage-I)	29 th March, 2025
1 st Pre-Bid Meeting date	14 th April, 2025
Addendum No. 01 to IFB date	17 th April, 2025
Corrigendum No. 1 date (Extension in Bid Submission Date)	23 rd April, 2025
Bids Submission Date (Stage-I)	6 th May, 2025
Invitation to Bid Issuance/ Publishing Date (Stage-II)	25 th September, 2025
Bids Submission Date (Stage-II)	17 th October, 2025
Publishing	National Press (two leading national daily newspapers – One English and One Urdu) Website(s): FBR
Procurement Method/ Process	Two stage bidding procedure – Open Competitive Bidding Process
Technical Bids Evaluation Report Signing Date	10th February, 2026

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Annexure-II	Technical Bid Opening Statement.
Annexure-III	Proof of Concept Reports (POC)
Annexure-IV	Mandatory Requirements for Eligibility/Responsiveness and Bid Evaluation Criteria (Technical)

1. Project Background

The Federal Board of Revenue (FBR) invites proposals from eligible vendors for the deployment, maintenance, and operational support of a barcode scanning and counting system, including sensors if required, or an alternative solution proposed by the vendor. The system will provide real-time, accurate production counts for beverage bottles and cans. The selected vendor will be responsible for installing a production count solution, capturing and transmitting data to an Industrial PC for SKU identification and count recording. The vendor will also integrate the solution with FBR's system, mapping SKUs through barcodes or unique identifiers for all beverage manufacturers.

To validate performance, vendors must conduct a testing demonstration, ensuring compliance with functional and operational requirements. Additionally, vendors will provide ongoing technical support, maintenance, and periodic updates to ensure system efficiency, timely troubleshooting, and compatibility with FBR's evolving specifications. Pricing proposals must align with FBR's prescribed requirements. The procurement process shall be conducted in accordance with the Public Procurement Regulatory Authority (PPRA) Rules under the Two-Stage Bidding Procedure.

A. SCHEDULE OF REQUIREMENTS FBR intends to cover all beverage lines in Pakistan as per the following installation schedule:

- Cumulative 20% lines to be covered by: 31st August 2025
- Cumulative 50% lines to be covered by: 31st October 2025
- Cumulative 100% lines to be covered by: 31st December 2025

Authorized vendor(s) should have all required equipment (hardware and software) readily available to be able to deploy the required barcode scanning and counting system or an alternative solution proposed by the vendor across beverage manufacturing facilities in Pakistan.

TECHNICAL REQUIREMENT

Objective & Vision:

The FBR, is undertaking a significant digitalization initiative aimed at enhancing its tax collection capabilities and addressing structural gaps in Pakistan's tax system. As part of this transformation, FBR seeks to deploy a production counting system at all beverage manufacturing facilities in Pakistan to improve tax compliance and prevent revenue leakage within the beverages sector, particularly in the handling of filled bottles at beverage manufacturing facilities in Pakistan. As part of the agreement, selected vendors will be responsible for providing and installing barcode scanning system or an alternative solution proposed by the vendor. Vendors will also be responsible for providing post installation maintenance and tech support services to the procuring client.

FBR recognizes the critical role of technology in tackling the challenges of tax evasion, unreported production, and discrepancies in beverages production data. This production counting project aims to deliver real-time visibility into total production of beverage manufacturers. The solution will enable FBR to monitor the production count of beverages ensuring accurate reporting, transparent audits, and correct tax payments. A panel of multiple authorized vendors will provide manufacturers access to a pool of competitive vendors.

- (i) Business Functions and Performance Requirement
- (ii) Functional Performance Requirements of the Information System
- (iii) Related Information Technology Issues and Initiatives

2. Brief Terms of Invitation to Bid Document

Period for delivery of services	FBR intends to cover all beverage lines in Pakistan as per the following installation schedule: Cumulative 20% lines to be covered by: 31st August 2025 Cumulative 50% lines to be covered by: 31st October 2025 Cumulative 100% lines to be covered by: 31st December 2025 Authorized vendor(s) should have all required equipment (hardware and software) readily available to be able to deploy the required barcode scanning and counting system or an alternative solution proposed by the vendor across beverage manufacturing facilities in Pakistan.
Bid Validity from bid opening	The Bid Validity period shall be 120 days or extendable as mutually agreed.
Bid Security	PKR 1,000,000 (mandatory)
Performance Security/Guarantee	The Performance Guarantee shall be applicable and will be set at fixed amount of PKR 5,000,000 only. Note: This limit may be revised and lowered
Liquidated Damages	<ul style="list-style-type: none"> • Rate: A penalty of 0.2% of the total performance guarantee per day of non-compliance for each affected site. • Maximum Deduction: The cumulative penalty shall not exceed the value of the performance guarantee submitted by the vendor
Currency for Evaluation of Bid	Pak Rupees (PKR)

3. Bid Process

The bidding process for the subject activity is Two stage bidding procedure – Invitation to Bid – Open. Invitation to Bid notification was published in national press (two leading national daily newspapers – One English and One Urdu) on 29th March, 2025 (Annexure-I) as well as uploaded on e-PADS, FBR (<https://www.fbr.gov.pk/>) and PPRA (<https://www.ppra.gov.pk/>).

Summary of bid process is listed below:

Invitation to Bid Reference No.	TS560027E
Invitation to Bid Title	Hiring of Authorized Vendors for Installation and Maintenance of Production Counting System in Beverages Sector
Invitation to Bid Issuance/ Publishing Date (Stage-I)	29 th March, 2025
1st Pre-Bid Meeting date	14 th April, 2025
Addendum No. 01 to IFB date	17 th April, 2025
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Bids Submission Date (Stage-II)	17 th October, 2025
Publishing	National Press (two leading national daily newspapers – One English and One Urdu) Website(s): FBR
Procurement Method/ Process	Two stage bidding procedure – Open Competitive Bidding Process
Technical Bids Evaluation Report Signing Date	10th February, 2026

4. Technical/ Financial Evaluation Committee

Following Technical/ Financial Evaluation Committee was designated for the evaluation of the subject Invitation to Bid:

Sr. No	Name	Designation	Role
1.	Mr. Zubair Bilal	Member (IR-Operations), FBR	Chairman/ Convener
2.	Mr. Ashhad Jawwad	Member (Customs Policy)	Member
3.	Dr. Najeebullah	Chief (Tax Reforms)	Member
4.	Dr. Muhammad Khurram	Chief (Mgt/HR-IR)	Member
5.	Ms. Ayesha Niaz	Chief (Mgt/HR-Customs)	Member
6.	Dr. Farid Ahmed Khan	Chief (F&C) – Customs	Member
7.	Mr. Muhammad Ali Khan	Secretary (Expenditure), FBR	Member/Secretary
8.	Mr. Waqar Ahmed	Second Secretary (IR-CPF)	Member
9.	Faisal Sattar	Chief Executive Officer (PRAL)	Member

5. Bid(s) Received

On the bid submission date and time (29th April, 2025 at 11:00 AM) following bids were received:

Sr. No	Bidder	Bid Submitted
1	M/s TollLink Pakistan Pvt Ltd	✓
2	M/s Authentik	✓
3	M/s ISSM Labeling Pvt Ltd.	✓

6. Bid Opening

In accordance with the bid opening procedure of two-stage method, technical bids were opened publicly on the same date immediately after bid submission time at FBR House by the Technical/ Financial Evaluation Committee in the presence of bidders authorized representatives. The bids availability on e-PADS was checked and confirmed in presence of bidders authorized representatives. Availability of bid security as per Invitation to the Bids terms was read out at the time of bid opening meeting. The bid opening statement is placed at **(Annexure-II)**.

7. Preliminary Examination

Preliminary examination of the technical bids was carried out. The examination included verification/ review of bidder bid form, completeness of the bid, eligible countries, bid validity confirmation and availability of bid security as per requirement of the Invitation to Bid. The finding(s) from preliminary examination is summarized below:

Bidder	Bid Form	Eligible Country	Bid Validity	Bid Security	Substantial Responsiveness	Acceptance for detailed Examination
M/s TollLink Pakistan Pvt Ltd	Yes	Pakistan	Yes	Yes	Yes	Yes
M/s Authentik	Yes	Pakistan	Yes	Yes	Yes	Yes
M/s ISSM Labeling Pvt Ltd.	Yes	Pakistan	Yes	Yes	Yes	Yes

8. Proof-of-Concept Testing

Bidders were required to conduct mandatory Proof-of-Concept (POC) testing for proposed solutions at selected industry sites. POC tests were conducted for all three vendors between December 2025 and January 2026. M/s Authentik was the only bidder that successfully passed the POC requirements. The POC reports submitted by the POC criteria assessing all three bidders is attached at **Annexure-III**.

9. Detailed Technical Evaluation

- a. Mandatory Requirements for Eligibility/Responsiveness and Bid Evaluation Criteria (Technical) – **Annexure-IV**

10. Bids Accepted as responsive to the Invitation to Bid

Sr.	Bidder
1.	M/s Authentik

11. Bids Accepted as Non-responsive to the Invitation to Bid

Sr.	Bidder
1.	M/s TolLink Pakistan Pvt Ltd
2.	M/s ISSM Labeling Pvt Ltd.


Muhammad Ali Khan
Secretary (Expenditure)
Federal Board of Revenue
Islamabad



A. INVITATION TO BID

[AUTHORIZED VENDORS FOR INSTALLATION AND MAINTENANCE OF PRODUCTION COUNTING SYSTEM IN BEVERAGES SECTOR

(Three years from authorization)

1. This Invitation to Bid is to all firms that participated in Stage 1 of the RFP that was published following the Procurement Notice (PN) or Procurement Advertisement (PA) No. **5(1)-S(Admin)/2025** for the subject Project/Procurement which appeared in **Jang & Express Tribune** vide dated **29.03.2025**.
2. The Federal Board of Revenue (FBR) invites sealed bids from eligible vendors, registered with PPRA on E-PADS as vendors and with Income Tax and Sales Tax Departments, and included in Active Taxpayer's List of FBR, for the deployment of a production counting solution across the beverage industry in Pakistan. The vendors are required to submit their proposals for a production count solution (e.g. Barcode Scanning – detailed in RFP), provided it meets both the Technical and Proof of Concept (POC) evaluation criteria (including preferable accuracy of 99% with a minimum requirement of 95%) defined in Section V–Scope of Work and is cost-effective.
3. Bidding documents are available on e-PADS and FBR/PPRA Websites i.e. <https://www.ppra.gov.pk> & <https://www.fbr.gov.pk/> and can be downloaded free of cost. Encrypted electronic bids duly completed and in conformity with Bidding Documents must be submitted online on e-Pak Acquisition and Disposal System (e-PADS) website till **11 AM – 10th October, 2025**.
4. The instant procurement for authorized vendors is being carried out under PPRA Ordinance, 2002 (including Section 2(1)) read with Public Procurement Rules, 2004. Procurement structure has been designed keeping in view Rule 4 and other relevant provisions under PPR, 2004 including but not limited to provisions as referred at Rule 15, Rule 21, Rule 29 and the rules connected thereto. The translation of the relevant provisions of PPR, 2004 into procurement design/structure has been made part of the instant bidding document.
5. The procurement shall be carried out in accordance with PPRA's Two-Stage Bidding Procedure:
 - a. **Stage 1:** Bidders shall submit a technical proposal, including the indicative price per installation point and breakdown of price per component, which will be evaluated based on the Technical Evaluation Criteria defined in Section V. Successful bidders will be required to conduct a POC which will be evaluated based on POC Evaluation Criteria defined in Section V. Afterwards, FBR will conduct a Bidders Conference to discuss all solutions and their feasibility of implementation. Post the Bidders Conference, FBR will, at its discretion, finalize a specific production counting solution for implementation. A revised RFP with FBR's finalized solution will be circulated with all bidders after the Bidders Conference.



- b. **Stage 2:** All eligible bidders will be required to submit a technical proposal, including the indicative price per installation point and breakdown of price per component, and conduct a POC test for the solution finalized by FBR. Upon evaluation, FBR will shortlist successful bidders and issue authorization. **This document is for Stage 2 of the bidding process and all firms who submitted a technical proposal for Stage 1 are invited to bid for Stage 2.**
6. A pre-bid meeting for Stage 2 will take place as per the following details:
- a. Pre-bid meeting, to clarify vendor queries, will take place submission on 10 AM on 1st October, 2025 in Room 358, 3rd Floor, FBR House, Constitution Avenue, G-5, Islamabad.
The bidders who wish to join the meeting virtually can join by using the following link [Meeting Link: <https://vlc.fbr.gov.pk> Meeting id: 518518 Password/PIN: 0369Time:11AM
7. The original bid along with 2 copies, properly filled in, and enclosed in sealed envelopes must be delivered to the address, **Room 510, 5th Floor, FBR House, Constitution Avenue, G-5, Islamabad**, at or before 1100 hours by **10-10-2025**. The bids shall be opened promptly thereafter in public and in the presence of bidders' representatives who choose to attend the opening in Room 358, 3rd Floor, FBR House, Constitution Avenue, G-5, Islamabad.
8. **This document is for Stage 2 of the bidding process and all firms who submitted a technical proposal for Stage 1 are invited to bid for Stage 2.** Bidders who submitted bid security as part of Stage 1 of this RFP are not required to submit additional bid security for Stage 2
9. Interested eligible bidders may request for further information/clarification by email at secretary.admin@fbr.gov.pk during official business days and timings, within Seven (07) days before the proposal submission deadline.
10. FBR may reject all bids at any time prior to the acceptance of a bid by invoking rule 33 of Public Procurement Rule (PPR), 2004.

Farrukh Amir Sial
Secretary (Administration)
Room 506, Fifth Floor,
Federal Board of Revenue (HQ) Islamabad
Email: secretary.admin@fbr.gov.pk
Phone No: 051-9203679

REVISED TECHNICAL BID OPENING

(STAGE TWO)

PPRA Web Reference No: TS560027E

EPADS Reference No: F-250405813

Title: "AUTHORIZED VENDORS FOR INSTALLATION AND MAINTENANCE OF PRODUCTION COUNTING SYSTEM IN BEVERAGES SECTOR"

Bid opening date: 17th October, 2025 Time: 11:30 AM

S.No.	Name of Firm	Name of Representative	Bid Submission (Hard & Soft)	Financial Bid Submission	Signature
1.	AUTHENTIK	Tarvit Ahmed	✓ Hard found	✓ Separate ✓	
2.	ISSM LABELING SOLUTION PVT LTD	Haider Shakique	✓ Hard found	✓	
3.	TOLLINK PAKISTAN PVT LTD	✓ Ahmed Raza ✓ Dawood, mutual	Hard found -	✓	

Farrukh Amir Sial
Secretary (Administration)
Federal Board of Revenue
Islamabad

Muhammad Ali Khan
Secretary (Expenditure)
Federal Board of Revenue
Islamabad

REVISED TECHNICAL BID OPENING
VENDORS/FIRMS ATTENDANCE

PPRA Web Reference No: TS560027E

EPADS Reference No: F-250405813

Title: **“AUTHORIZED VENDORS FOR INSTALLATION AND MAINTENANCE OF PRODUCTION COUNTING SYSTEM IN BEVERAGES SECTOR”**

Bid opening date: 17th October, 2025 Time: 11:30 AM

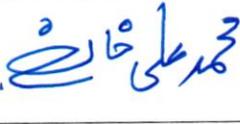
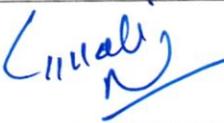
S.No.	Name of Firm	Name of Representative	CNIC No	Contact No. & Email	Signature
1.	AUTHENTIK	Tanweer Ahmed	6110131822195	0321-8573515	
2.	ISSM LABELLING SOLUTION PVT LTD	Haider Shafige	34202-71222-535	Haider.shafige@issm.ai 0310-5463614	
3.	TOLLINK PAKISTAN PVT LTD	M. David	12101-0998582	03339971647 dauidkhan@tolink.com.pk	

REVISED TECHNICAL BID OPENING
OFFICERS ATTENDANCE SHEET

PPRA Web Reference No: TS560027E

EPADS Reference No: F-250405813

Title: "AUTHORIZED VENDORS FOR INSTALLATION AND MAINTENANCE OF PRODUCTION COUNTING SYSTEM IN BEVERAGES SECTOR"

S.No.	Name of officer & Designation	Signature
1.	Farrukh Amir Sidi	 17.10.2025
2.		
3.	SEC Expeditive. 	 17.X.25
4.		
5.		
6.		
7.		
8.		

**Government of Pakistan
Revenue Division
Federal Board of Revenue
(Transformation Delivery Unit)**

No.TDU/FBR/ISB/2024-25/

Islamabad the 14th January, 2026 ✓

**Subject: SUBMISSION OF POC (PROOF OF CONCEPT) EVALUATION
REPORT IN RESPECT OF BEVERAGES SECTOR**

Please refer to the subject noted above.

In pursuance of Member (IR-Operations) office order No. 1(42)SA-M(IR-Ops)/2026/801-R dated 01-01-2026, the stage-two Proof-of-Concept (POC) evaluation report in respect of barcode serialization solution in beverage sector is enclosed for your perusal and further necessary action.



(Abdur Rehman)
Second Secretary (TDU)

Encl: As above

Secretary (Technical/Financial Committee), FBR, Islamabad
No. POC/TDU/FBR/ISB/2024-25/2/5476-R

Proof of Concept Report - Authentik

Date: 9th December 2025

Facility: Mehran Bottlers – Karachi

Attendees: Abdur Rehman, Adnan Jabbar, Rizwan Sarfaraz, Fakhar Sharif, Kamran Satti

Objective

The objective of this exercise was to examine the solution proposed by Authentik in response to Stage 2 of the RFP published in September 2025 for production monitoring in beverages sector. The Proof of Concept (POC) test was conducted based on the criteria published in the RFP.

Solution Description:

The solution was deployed across two separate lines:

Deployment 1 PET Bottle Line: 2 Omron V430 Industrial barcode scanner (1 deployed at filling stage, one immediately after), 2 Photoelectric unit counting sensors, (1 deployed on-line after filling stage to count individual bottles, 1 deployed near the end of line to count packed cases)

Deployment 2 Can Line: 1 Omron V430 (deployed before filling stage), 2 Photoelectric unit counting sensors (one deployed after filling stage and one deployed at end of line to count packed cases)

CCTV cameras are deployed at all lines to give full view of the deployed solutions and any interference/obstruction.

Barcode scanners were mounted strategically to capture barcodes of production units. Placement per line varied depending on product type (e.g. on PET line there was no labelling stage, hence scanners were placed along the line to maximize chances of capturing barcode successfully regardless of positioning of label on bottle). Counting sensors were placed near the end of each line to count final product. Pulse signals from sensors are transmitted to a PLC to count production in real-time. The PLC then transmits structured data to a line controller / SBC. The line controller / SBC then relays data to a site server using token-based authentication. This data is also relayed to a cloud-based server hosted by the vendor.

Signals from both the barcode scanner and the sensors are transmitted to a Programmable Logic Controller (PLC). The PLC processes and organizes this input data, ensuring accurate association between unit counts and SKUs.

Finally, the structured data is sent to a cloud-based dashboard. This interface provides real-time visibility into production activity, including SKU-wise counts, enabling more effective monitoring, analysis, and reporting of line performance.



POC Results

- **Test 1: Counting accuracy at low conveyor speed (1.5L PET bottles)**

A test was conducted for a batch of Pakola 1.5L PET bottles passing through the labeler and conveyor belt. Bottles were palletized into cases, with 6 bottles per case. The total count recorded by the solution was compared with the POC team's manual count. The solution successfully detected and counted 672 bottles (112 cases), matching the actual count of both bottles and cases with 100% accuracy. Accuracy achieved: 100%

- **Test 2: Counting accuracy at high speed (250 ml Cans)**

A test was conducted for a batch of Fanta 250ml Cans. The solution's count was compared with the POC team's manual count. The system detected and counted 576 cans, against the actual count of 576. Accuracy achieved: 100%

- **Test 3: Dynamically detect changeover (1.5L PET bottles)**

A test was conducted during a regular production run of 1.5L Pakola Bottles. A bottle of another SKU (1.5L Apple Cidra) was added to the middle of the line during production. The solution was correctly able to identify the change to new SKU, count the 1 bottle accurately against that SKU, and then successfully revert back to the 1.5L Pakola Bottles when they resumed. Accuracy achieved: 100%

- **Test 4: Dashboard functionality**

The solution incorporated an on-prem dashboard and a cloud-based dashboard for FBR. Solution status, line status, per-line unit counts, per-site unit counts, and analytics for production to date, counts by SKU, and total counts per selected time period were all available. The dashboards were also updating live-production counts with 100% accuracy.

- **Test 5: Alerts Management System**

Alerts management system was functional, with alerts displayed on both on-prem and cloud dashboards. Alerts were being generated for batch changes, scanner/sensor disconnection/re-connection, and connectivity and power outages. The system was also able to generate alerts for when production line was active but scanners were not detecting objects. However, no alerts for scanner obstruction were programmed.

POC Conclusions and Observations

The image shows five distinct handwritten signatures in blue ink, arranged horizontally below the 'POC Conclusions and Observations' header. The signatures vary in style, with some being more stylized and others more legible.

The POC was able to achieve 100% accuracy across tests for both PET bottles and cans. Mandatory criteria on dynamic detection of changeover and dashboard and AMS functionality were also successfully met. Deployment of sensors and scanners were not directly reflective of RFP requirements but were fully suited to site and line conditions. Alerts management needs to be developed further and hardware units deployed per line need to be rationalized.

Proof of Concept Report – ISSM Labelling

Date: 12th December 2025

Facility: Coca-Cola International – Lahore

Attendees: Abdur Rehman, Adnan Jabbar, Rizwan Sarfaraz, Fakhar Sharif, Kamran Satti

Solution Description: Barcode scanners were deployed at labelling stage and on the production line to identify and validate SKU. Unit counting sensors placed at two points on the line count (and validate counts) and transmit data to an IPC that then transmits processed data to a cloud-based dashboard. CCTV cameras were included to transmit live-feed of production line and solution deployment.

Deployment 1 PET Bottle Line (36,000 Bottles/Hour): 2 SICK Fixed-mount laser barcode scanners (1 deployed at labelling stage, one further down the production line), 2 Photoelectric unit counting sensors, (1 deployed on-line after labelling stage, 1 deployed near the end of production line)

POC Results

- **Test 1: Counting accuracy at regular speed (1.5L PET bottles)**

A test was conducted for a batch of Coke 1.5L PET bottles passing through the labeler and conveyor belt. The total count recorded by the solution was compared with the POC teams manual count and verified against the manufacturers official count. The solution detected and counted 20 against an actual count of both 183 bottles.

Accuracy achieved: 11%

- **Test 2: Dynamically detect changeover (1.5L PET bottles)**

A test was conducted during a regular production run of 1.5L Coke Bottles. A label from another SKU was added to the middle of the line during production. The solution was unable to identify the change to new SKU

Accuracy achieved: 0%

POC Conclusions and Observations



The vendor was unable to meet essential POC requirements on counting accuracy and change-over detection on PET bottles. No further tests were conducted. Certain mitigating factors were noted, including technical problems in the manufacturer's production line and the unavailability of Can production lines but were not considered sufficient to account for the lack of basic system accuracy and performance.

Proof of Concept Report – TollLink Pakistan

Date: 9th January 2026

Facility: Lotte Akhtar Beverages – Lahore

Attendees: Abdur Rehman, Adnan Jabbar, Rizwan Sarfaraz, Fakhar Sharif, Kamran Satti

Solution Description: Solution was deployed at a 35,000 bottles per hour PET line at Lotte Akhtar Beverages facility. Deployment included 1 Keyence barcode scanner placed at the labeler, a Keyence unit counting sensor further down the line, and additional Keyence barcode scanner and unit counting sensor deployed at the end of the line post palletization and packaging to verify counts. Data from each device was received by a PLC and transmitted to an IPC which forwards the data to an on-site dashboard and a cloud-based dashboard for analytics.

Note on site conditions: The POC was scheduled for the 8th of January with the vendor initiating deployment from the 5th of January. However, the PET line at the taxpayers site underwent serious technical faults and outages beginning from the 7th of January severely restricting the availability of a live and functional testing environment for the vendor. The test was delayed till the 9th of January to provide the vendor with more time, with production on the line resuming intermittently between the 8th and 9th of January. Line outages continued on the day of testing as well and tests were conducted during brief periods where line was functional.

Test 1: Counting accuracy at regular speed (500ml PET bottles)

A test was conducted on 192 500ml PET bottles (for counting accuracy and validation). 192 bottles were correctly counted by the first of the two deployed unit counting sensors. These bottles were then palletized further down the line into 16x12bottle packs. The second counting sensor counted 31 packs instead of an actual count of 16.

Accuracy achieved on Counter 1: 100% (192 out of 192 bottles counted)

Accuracy achieved on Counter 2: 0% (Counted 31 Packs / 372 bottles vs. 16 packs / 192 bottles)



Test 2: Changeover detection (500ml PET bottles)

A test was conducted on a batch of fresh labels at the labeler (solely for identification). The first barcode scanner was unable to identify any labels correctly.

Accuracy achieved: 0%

POC Conclusions and Observations

The POC team noted the site conditions and the limiting factors on vendor performance and appropriate testing environment. While line outages and limited availability of a live testing environment within the last 24 hours prior to the test were unfortunate, the POC team was in agreement that ample time had been provided to the vendor to complete all preparations, deployment, and testing. As such, the POC was conducted on essential functionality required of the system (identification and counting accuracy). The vendor was unable to meet performance criteria across both tests, with an accuracy of 50% on counting and 0% on identification. Given that the basic requirement of the solution was not met, no further testing was deemed necessary.



Abdur Rehman
Second Secretary
(TDU/VCD)
14.01.2026



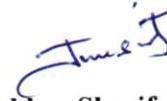
Adnan Jabbar
Second Secretary
(TDU)
14.01.2026



Kamran Arshad Satti
Second Secretary (TDU)
14.01.2026



Rizwan Sarfraz
Joint Director (T&TS)
14.01.2026



Fakhar Sharif
PRAL Representative
14.01.2026

Vendors shall provide the details of all consumables and Other Recurrent Cost items as per the proposed solution.

Example of possible consumables and other recurrent cost items are:

- Costs for hosting the application online: cloud or server-based installation
- Costs for software licenses: Integrated Development Environment (IDE) such as Visual Studio, other software tools for frontend development or database management. Nonetheless, it is highly recommended Open-source tools are more recommended
- Costs for software licenses involving hardware: necessary software needed for developing and maintaining the different hardware such as barcode readers
- Costs for Operating System: Windows license in installed machines or Windows Server for hosting the application

D. Technical Evaluation Criteria

01. Technical Evaluation

TECHNICAL EVALUATION CRITERIA

Technical Evaluation Criteria				
Sr. No.	Metric	Particulars	Marks	Supporting documents
1	Specific experience of the applicant for their proposed solution in an industrial environment	No. of projects where the applicant has deployed their proposed solution in a manufacturing plant in any industry	2 or more projects = 10 marks	Previous clients' PO or experience certificate mentioning total number of projects.
			1 project = 5 marks	
			No project = 0 marks	
2	Specific experience of the applicant for production counting on high-speed lines	No. of projects where the applicant has deployed real time production counting system on high-speed production lines	2 or more projects = 10 marks	Previous clients' PO or experience certificate mentioning total number of projects.
			1 project = 5 marks	
			No project = 0 marks	
3	Specific experience of the applicant	No. of projects where the applicant has deployed IT systems	2 or more projects = 10 marks	Previous clients' PO or experience certificate

	with deployment of fully integrated IT systems	integrating hardware and software involving transmission of captured data through cloud-based systems	1 project = 5 marks No project = 0 marks	mentioning total number of projects.
4	Robustness of the solution	This metric will assess the solution's robustness. This would include but is not limited to: coverage of all SKU types (e.g., cans, plastic bottles, glass bottles, etc.), degree of operational disruption caused at the installation point, ease of implementation, environmental resilience, future proofing (e.g., ease of introducing new SKUs, packaging, etc.), etc.	Maximum marks: 30	Any supporting documents deemed necessary (e.g. implementation plan, proof of accuracy of solution across SKU types, environmental compliance report, etc.)

Upon submission of proposals, bidders will be evaluated based on the Technical Evaluation Criteria specified above. To be eligible for conducting POC, vendors must achieve a minimum **technical evaluation score of 70%**. Any proposal that does not meet this minimum threshold will be considered non-compliant and will not be further considered in the bidding process.

02. The Project Plan submitted by the Authorized Vendor shall comprehensively address the following subjects for the barcode scanning and counting solution or an alternative solution proposed by the vendor:
1. **Project Organization and Management Plan**
 - o Define the roles, responsibilities, and governance structure for effective project execution.
 - o Include escalation pathways and points of contact for smooth communication and issue resolution.
 2. **Equipment Details**

- Detailed specifications, quantities, and brands of all equipment being used to deploy the system (including hardware and software).
- Indicative price per installation point and breakdown of price per component of deploying the bidder's proposed production count solution

3. Delivery and Installation Plan

- Detailed timelines and logistics for delivering and installing all components of the barcode scanning system.
- Specify dependencies (e.g., on-site readiness, power, and connectivity requirements).

4. Disaster Recovery Plan

- Detailed disaster recovery plan which includes details of primary contact, response team, post-mortem analysis of incident, and plan for restoration of operations in case of an on-site disaster.
- Detailed communication plan including disaster recovery calling tree with escalation levels and contacts information
- Detailed activation criteria which include conditions or events that trigger the activation of the disaster recovery plan
- Detailed recovery runbook which includes guidelines to follow to restore all operations for all components
- Detailed backup and restoration procedures to ensure daily backups in place while ensuring minimal production disruption

5. Training Plan

- Comprehensive training modules for the FBR and manufacturer staff covering system operation, data analysis, and troubleshooting.
- Include follow-up refresher sessions.

6. Pre-Commissioning and Operational Acceptance Testing Plan

- Testing protocols to validate system functionality, integration, and compliance with performance benchmarks prior to commissioning.
- Include criteria for Operational Acceptance.

7. Warranty Service Plan

- Details of warranty coverage, including response times, replacement policies, and periodic maintenance schedules.

8. Task, Time, and Resource Schedules

	<ul style="list-style-type: none"> ○ A Gantt chart or similar representation of key tasks, milestones, and associated timelines. ○ Resource allocation details (e.g., personnel, equipment). <p>9. Post-Deployment Service Plan (if applicable)</p> <ul style="list-style-type: none"> ○ Outline post-deployment service provisions, including options for extending support agreements. <p>10. Technical Support Plan</p> <ul style="list-style-type: none"> ○ 24/7 support infrastructure, escalation matrix. ○ Availability of spare parts and maintenance procedures. <p>11. System Development Plan</p> <ul style="list-style-type: none"> ○ Detailed customization plan for the barcode scanning system or an alternative solution proposed by the vendor to meet the specific needs of the FBR. ○ Include integration with existing systems, data security protocols, and scalability provisions. <p>12. Compliance and Certification Plan</p> <ul style="list-style-type: none"> ○ Ensure adherence to relevant regulatory and security standards (e.g., PTA-approved equipment, evaluation certifications). ○ Provide documentation and timelines for obtaining all necessary certifications. <p>13. Reporting and Monitoring Plan</p> <ul style="list-style-type: none"> ○ Mechanism for regular progress updates to the FBR. ○ Include provisions for dashboards or analytics reports to monitor system performance.
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E. Testing and Quality Assurance Requirements	
01.	<p>Inspections</p> <ul style="list-style-type: none"> i. The vendor must demonstrate the viability and capability of their proposed solution by conducting an operational test at a designated beverage plant prior to license award. ii. The vendor shall be responsible for the safe and sound delivery of all hardware and other products as per the Purchase Order, at the FBR’s designated locations as per Schedule within the timescales stated in the Purchase Order. iii. The FBR or its authorized representatives shall have the right to inspect and test the Product being supplied and installed by the vendors on or after delivery as per the Purchase Order.

	<p>iv. The FBR shall inspect and/or test the Product agreed to be supplied by the Vendor as per the Purchase Order to verify their conformity to the specification given in this agreement and the purchase Order. This shall include comprehensive tests provided by the Vendor and performed by the FBR to prove that the Product operate in accordance with the requirements of the FBR as per the Purchase Order and this Agreement.</p> <p>v. Should any inspected or tested Products fail to conform to the specifications as required by the FBR and as per the Purchase Order, the FBR may reject them and the Vendor shall either replace the rejected Products or make alterations necessary to meet specification requirements of the FBR at no cost to the FBR</p>						
<p>02.</p>	<p>Proof of Concept Tests</p> <p>In stage one, the bidder will be required to conduct a POC on one installation point for either the barcode scanning and counting solution (and sensor if required) or the alternate solution proposed by the vendor - provided it passes the Technical Evaluation Criteria defined in Section V – Scope of Work and is cost-effective.</p> <p>The POC will be evaluated based on the criteria defined below.</p> <p>In stage two, the bidder will be required to conduct a POC for the solution finalized by FBR on one installation point. The POC will be evaluated based on:</p> <ol style="list-style-type: none"> The evaluation criteria defined in the table below; OR, Revised evaluation criteria established by FBR for the finalized solution <table border="1" data-bbox="236 1232 1476 1736"> <thead> <tr> <th>Metric</th> <th>Requirement</th> <th>Qualification criteria based on test</th> </tr> </thead> <tbody> <tr> <td>Solution accuracy</td> <td>Correctly detect and identify SKU and count number of units against the relevant SKU on a running production line</td> <td> <p>Pass: 95% (or higher percentage) correct count of units against correct SKU.</p> <p>>= 99%: Above satisfactory</p> <p>>= 95% & < 99%: Satisfactory</p> <p><95%: Unsatisfactory</p> <p>Fail: Below 95% correct count of units against correct SKU</p> </td> </tr> </tbody> </table>	Metric	Requirement	Qualification criteria based on test	Solution accuracy	Correctly detect and identify SKU and count number of units against the relevant SKU on a running production line	<p>Pass: 95% (or higher percentage) correct count of units against correct SKU.</p> <p>>= 99%: Above satisfactory</p> <p>>= 95% & < 99%: Satisfactory</p> <p><95%: Unsatisfactory</p> <p>Fail: Below 95% correct count of units against correct SKU</p>
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<p>03.</p>	<p>Operational Acceptance Tests</p> <ol style="list-style-type: none"> Pursuant to GCC Clause 24 and related SCC clauses, the FBR (with the assistance of the Supplier) will perform the following tests on the System and its Subsystems following 						