

ICT-18-2026 Data Warehouse, Dashboards and AI Reporting

Issued by: Institute of Singapore Chartered Accountants (ISCA)

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Quotation closing date: 30 October 2026, 5pm Singapore Time (GMT+8)

Submission to: edmund.liu@isca.org.sg

Target go-live: By January 2027

1. Invitation

ISCA invites qualified vendors to quote for the design, implementation and support of a cloud hosted data warehouse. The solution will consolidate data from ISCA's systems, improve data quality, and provide a trusted source for dashboards, reporting and AI assisted analysis.

The appointed vendor shall build an initial **ISCA KPI dashboard** and enable authorised ISCA staff to create and modify their own dashboards using AI assisted tools. The project shall include ten years of available historical data, automated daily data pipelines and six months of support after go-live.

2. Project objectives

The solution shall enable ISCA to:

- Consolidate data from its CRM, financial system, LMS, Zendesk, email cloud system, social media accounts and agreed external sources.
- Link a person's purchases, emails, courses, payments and Zendesk interactions into a reliable unified record, subject to appropriate access controls.
- Establish consistent business definitions and improve the quality of source data.
- Provide curated data for reporting, an ISCA KPI dashboard and AI assisted self-service dashboard creation.
- Refresh agreed data sources automatically each day.
- Add future internal and third party data sources without redesigning the entire solution.

3. Scope of work

3.1 Discovery, governance and design

The vendor shall work with ISCA's project committee and business representatives to confirm source systems, reporting priorities, data volumes, access requirements and data quality issues.

ISCA's relevant business owners will decide which system is the **authoritative source** for each data domain or field where systems contain conflicting information. The vendor shall document these decisions, advise on their implications and implement the approved rules.

The vendor shall deliver a source inventory, architecture, implementation plan, data model, data dictionary and definitions for agreed KPIs.

3.2 Historical data and integrations

The initial integrations shall cover ISCA's:

- CRM;
- Financial system;
- LMS;
- Zendesk;
- Email cloud system; and
- Social media accounts and available analytics.

The vendor shall plan to ingest **ten years of historical data** from each applicable source, where that data exists and can be accessed. The quotation shall identify any source that cannot provide the full ten years, explain the constraint and propose a practical alternative.

The vendor shall state its assumptions on data volumes and include historical extraction, transformation and loading costs in its price.

The solution shall also allow future ingestion of third party data through suitable methods such as APIs, secure file transfer or controlled uploads. The vendor shall identify any third party licensing, API or access dependencies.

3.3 Data cleaning and person matching

The vendor shall provide a **data cleaning specialist** to profile, clean, standardise and reconcile data across systems. This includes addressing duplicates, incomplete records, inconsistent formats and conflicting values.

The vendor shall propose a method to link each person's purchase, email, course, payment and Zendesk records. It shall document matching rules, exceptions and cases requiring business review. Where records cannot be matched confidently, the solution shall flag them rather than silently merge them.

All material cleansing and authoritative-source rules require approval from ISCA's relevant business owners. The vendor shall provide reconciliation results and a process for reviewing unresolved data quality issues.

3.4 Warehouse and daily pipelines

The vendor shall build curated, documented datasets suitable for ISCA's agreed KPIs, dashboards and analysis. Agreed sources shall be refreshed through **automated daily pipelines** after go-live.

The solution shall include scheduling, monitoring, failure alerts, recovery procedures and controls to identify missing, incomplete or duplicate loads. Vendors shall propose a daily processing schedule and state when refreshed data will normally be available to users.

3.5 KPI dashboard and AI assisted reporting

The vendor shall work with ISCA to define and build an initial **ISCA KPI dashboard**. During discovery, ISCA and the vendor shall agree on its measures, breakdowns, filters, users and visual layout. The dashboard shall be editable by authorised ISCA staff after handover.

The vendor shall also provide an AI assisted capability through which authorised staff can ask questions about approved data and create or modify dashboards and reports. For example, a user should be able to request a comparison by period or member segment and review the resulting chart and underlying figures.

The reporting capability shall:

- Use ISCA-approved datasets and business definitions;
- Respect each user's data access permissions;
- Show the source, reporting period, filters and calculation behind reported figures;
- Allow users to verify figures against underlying data;

- Indicate when data is missing or an answer is uncertain; and
- Allow ISCA staff to save, edit and reuse dashboards without ongoing vendor involvement.

Vendors may propose AI features for trend detection, unusual-pattern alerts or suggested data cleaning rules. Any AI-suggested change to production data shall require human review and approval.

The proposal shall identify the AI tools or models used, where ISCA data will be processed, how prompts and outputs will be handled, and all applicable licensing or usage charges. ISCA data must not be used to train a vendor's or third party's models without ISCA's written approval.

3.6 Cloud and security

Vendors shall propose a suitable architecture and provide **comparable options involving Alibaba Cloud, AWS and Snowflake**, where technically appropriate. Proposals shall explain the role of each proposed product or service, its data location, advantages, limitations and total cost. Vendors may propose an architecture that combines a cloud provider with Snowflake, provided the components and their costs are clear.

The solution shall include appropriate encryption, role based access, administrator controls, audit logs, backup and recovery, environment separation, vulnerability management and incident response arrangements. Vendors shall explain how personal and confidential data will be protected throughout ingestion, storage, reporting and AI processing.

ISCA shall retain ownership of its data and must be able to export its data and documentation at the end of the contract.

4. Delivery team and timeline

The vendor shall provide a named **project manager** responsible for the delivery plan, stakeholder coordination, risks, dependencies and progress reports. The vendor shall also provide a named **data cleaning specialist** and identify the other proposed team members and their expected time commitments.

Vendors shall submit a milestone plan for discovery, design, historical loading, integration, dashboard and AI development, testing, training and go-live. The proposal shall show how the vendor will achieve **go-live by January 2027**, identify any decisions or access required from ISCA, and state any timeline risks.

5. Testing, handover and acceptance

The vendor shall conduct integration, data reconciliation, security and user acceptance testing with ISCA. Acceptance tests shall cover:

1. Loading and reconciliation of the agreed available historical data, up to ten years.

2. Correct linkage of agreed person records across systems, with exceptions visible for review.
3. Successful automated daily refreshes and recovery from a failed load.
4. Accuracy of agreed KPI dashboard figures against approved source data and definitions.
5. The ability of authorised ISCA users to create and edit dashboards with AI assistance.
6. AI responses that show their calculation basis and respect access restrictions.
7. Completion of documentation, administrator training and business-user training.

The vendor shall propose measurable acceptance thresholds for ISCA's approval during the design stage. Before go-live, it shall provide architecture and operating documentation, data mappings, a data dictionary, pipeline procedures and support handover materials.

6. Support and managed service

The base quotation shall include **six months of support after go-live** for incidents, pipeline failures, delivered solution defects, data reconciliation issues and the AI reporting capability. Vendors shall state support hours, response and resolution targets, escalation procedures and exclusions.

Vendors shall also provide a **separately priced annual managed-service option** to operate and monitor the pipelines, maintain the solution and support ISCA after the initial six months. The option shall clearly distinguish routine operations from enhancements and new integrations.

7. Quotation requirements

Please include:

- Company profile, relevant experience and client references;
- Proposed architecture and comparable platform options;
- Project plan and approach to the January 2027 go-live;
- Proposed team, including the project manager and data cleaning specialist;
- Approach to historical loading, data cleaning and person matching;
- Approach to the KPI dashboard and AI assisted self-service reporting;
- Security, data protection, backup and recovery arrangements;
- Six-month support plan and separately priced annual managed service;
- Itemised implementation, cloud, software, AI usage, support and recurring costs; and

- Assumptions, dependencies, exclusions and optional prices.

Shortlisted vendors may be asked to demonstrate how an ISCA user would create a dashboard from a natural-language request and verify the figures it displays.

Submission deadline: 30 October 2026, 5pm Singapore Time (GMT+8)

Proposal validity period: 30 days proposal validity until 30 November 2026

Confidential system information and vendor pricing

This ITQ identifies data sources by category only. ISCA will not disclose system names, architecture details, credentials, data samples or internal KPI definitions in the initial invitation.

Vendors shall prepare their initial quotations based on the source categories and requirements stated in this ITQ. Each quotation must clearly state its assumptions about the number of integrations, data volumes and complexity. Vendors shall provide separate prices for additional integrations, historical data extraction and material changes in data volume or scope.

ISCA may provide shortlisted vendors with further information through a controlled process, subject to confidentiality requirements. Where this information affects the proposed solution or price, shortlisted vendors may be asked to submit a revised quotation on a consistent basis.

The appointed vendor shall work with ISCA's business owners during discovery to define the initial ISCA KPI dashboard, confirm authoritative data sources and agree on measurable acceptance criteria. ISCA will approve these definitions before implementation.