

ATMET

TECHNICAL OVERVIEW

Sovereign Digital Operations for Public Institutions

FINAL EDITORIAL REVIEW DRAFT — FOR APPROVAL

Prepared by ESSBC | August 2026

1. Executive Technical Summary

ATMET is an enterprise digital operating platform developed and owned by Al Emarat for Solution Systems and Business Consultancy L.L.C. (ESSBC). It enables public institutions to design, publish, operate and continuously improve digital services through a configurable Low-Code/No-Code environment, while preserving institutional control over data, deployment and day-to-day administration.

The product combines a centrally governed core with configurable modules, workflow orchestration, institutional portals, document generation, reporting and an integration layer. It is delivered as a ready product that is configured for each institution and can be extended through institution-specific development where required.

This document provides two levels of detail: an architectural summary for decision-makers and a technical overview for evaluation teams. It is intentionally not a software requirements specification (SRS), security design disclosure or contractual SLA.

2. Product Definition and Scope

ATMET supports the full digital-service lifecycle: institutional setup, service design, process orchestration, beneficiary onboarding, employee processing, approvals, fees and invoices, notifications, outputs, audit and operational reporting.

The product boundary is deliberate. Standard services and operating rules are configured within the platform. New external integrations, highly complex workflows, institution-specific visual identity and specialized rules for beneficiary categories may require implementation services or custom development.

There is currently no native mobile application. ATMET is delivered through bilingual web portals. Responsive behavior is generally supported, although selected employee-portal functions may require desktop-oriented layouts.

3. Capability Status Model

Status	Meaning in this document
Current	Available in the product and configurable per implementation.
Configurable	Managed by a trained administrator without changing the product core.
Custom	Requires institution-specific analysis, integration or development.
Admap	Under study or development and not presented as complete.

4. Technology Foundation

ATMET is implemented on the Microsoft technology stack using C#/.NET and .NET Core, Microsoft SQL Server, Windows Server and Internet Information Services (IIS). The platform uses an enterprise web interface layer and service-oriented integration patterns. The precise front-end framework may vary by product release and must be confirmed against the applicable release during technical due diligence; this document does not assign an unverified framework.

The architecture is hybrid: a governed product core provides common platform services, while institution-specific services, configurations and integrations remain independently manageable. This balances product consistency with implementation flexibility.

Verification note

The exact front-end framework is intentionally not stated until confirmed against the applicable product release.

5. Logical Architecture

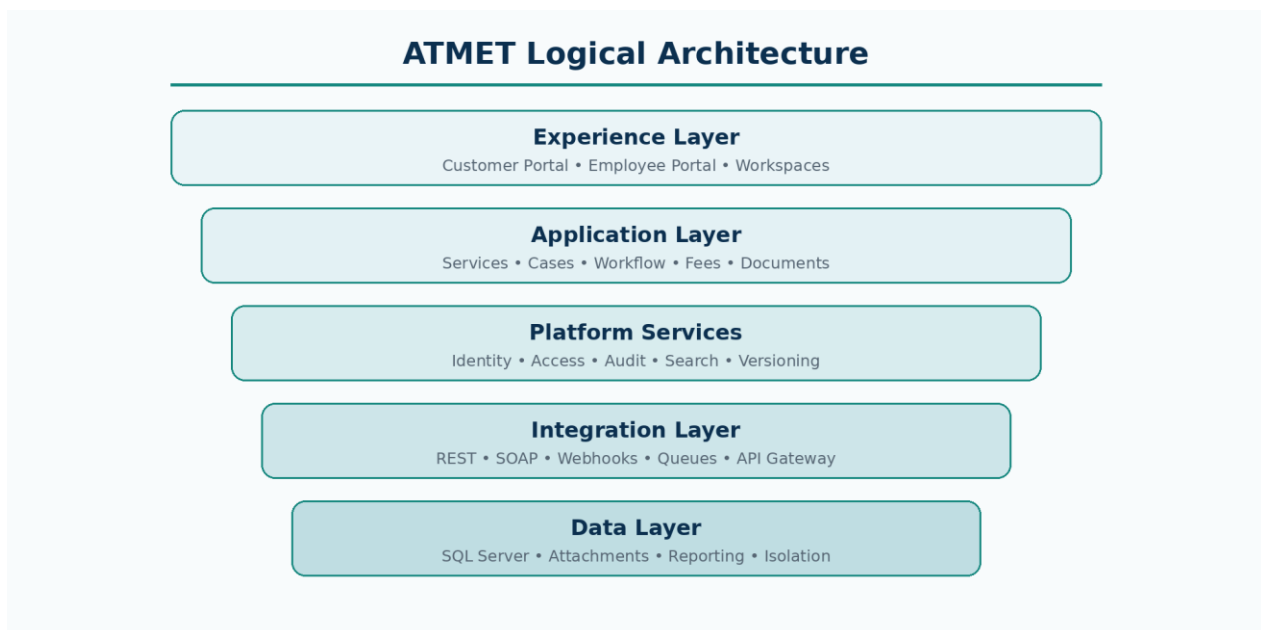


Figure 1 — Logical architecture layers

Experience layer — bilingual customer and employee portals, role-based workspaces, service catalogues, dashboards and administrative consoles.

Application layer — service configuration, case handling, workflow orchestration, business rules, fees, notifications, documents, inspections, violations, complaints, appointments and other domain modules.

Platform services — identity and access, audit, versioning, publishing, search, attachment management, scheduling and operational controls.

Integration layer — APIs and adapters for REST, SOAP, files, direct database exchange, message queues, webhooks and API gateways.

Data layer — Microsoft SQL Server databases, institution-specific isolation, attachment repositories and controlled reporting access.

6. Deployment, Tenancy and Data Isolation

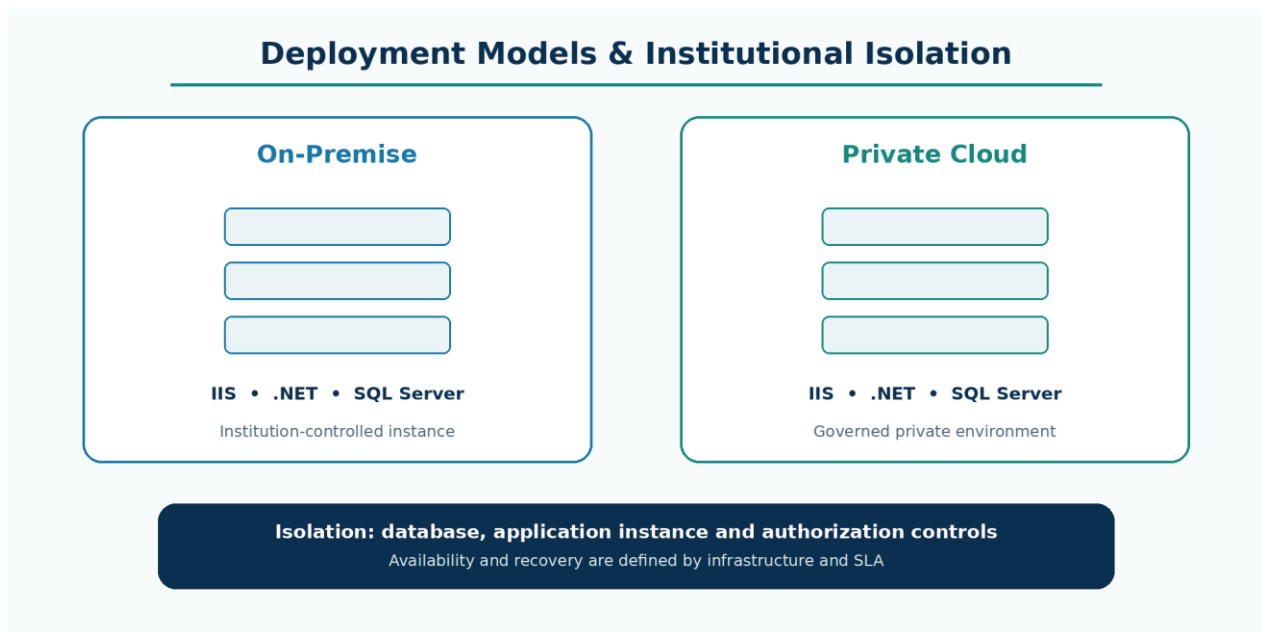


Figure 2 — Deployment and institutional isolation

ATMET supports On-Premise deployment within the institution's data centre and deployment in a Private Cloud. An institution may operate with its own application instance and SQL Server database. A centrally governed multi-institution model is also supported, including central reporting and controlled sharing of master data or service templates when explicitly configured.

Institutional data is isolated through technical separation and authorization controls. The degree of physical or logical separation follows the approved deployment topology. Availability, continuity and recovery arrangements are agreed per implementation based on the institution's infrastructure, security policies and service-level agreement (SLA).

Backup and disaster-recovery execution is commonly the institution's responsibility because government infrastructure may not be directly accessible to ESSBC. Unless otherwise agreed contractually, ESSBC defines application requirements, provides recovery guidance and supports testing or restoration within the authorized access model.

7. Administration, Identity and Access

Administration covers institution master data, departments, sections, jobs, workgroups, users, role profiles, permissions, workspaces, business hours, holidays, reference data and system configuration. Multiple institutions can be administered under separate licensing and governance arrangements.

Supported security capabilities include Active Directory and LDAP integration, single sign-on (SSO), digital identity integration, multi-factor authentication (MFA), role-based access control, field- and action-level permissions, Transport Layer Security (TLS), database security controls, session and password policies, IP restrictions, protected audit records and separation between employee and customer portals.

8. Service Design Studio

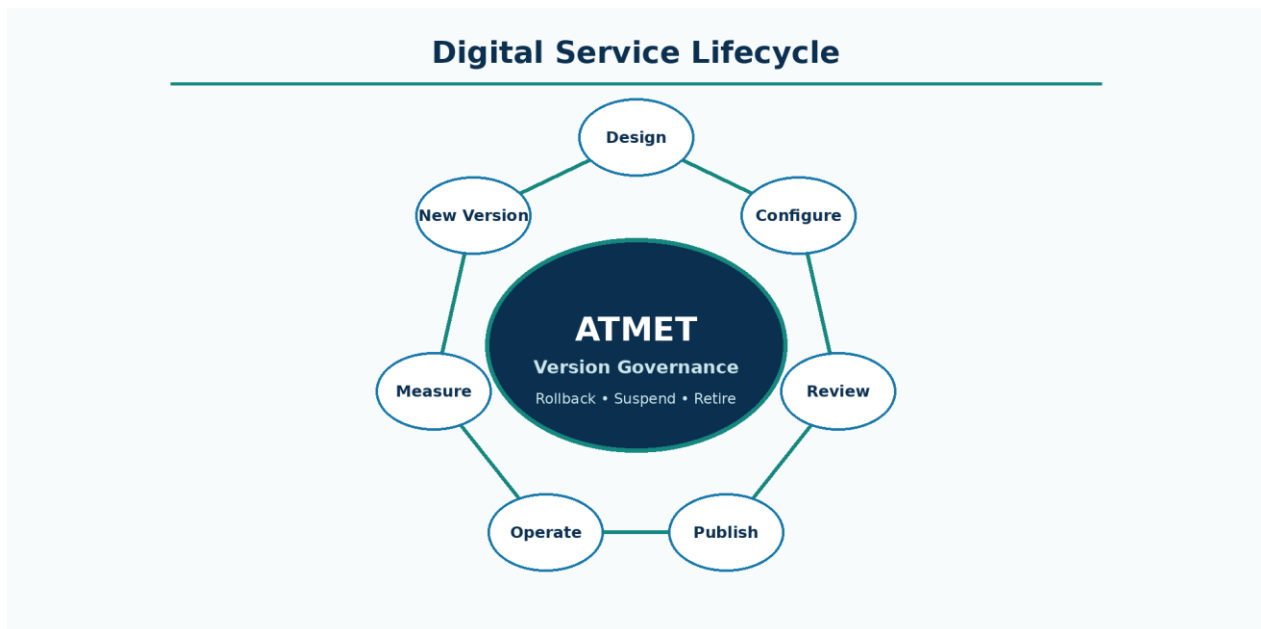


Figure 3 — Service and version lifecycle

Authorized administrators can configure service cards, beneficiary categories, eligibility, stages, tabs, fields, layouts, required attachments, fees, outputs, notification templates, permissions, organizational assignments and publishing rules. They can create versions, publish, suspend, retire or roll back services without changing the ATMET core.

The platform supports bilingual service content and outputs, service catalogues, registration and profile management, request tracking, employee work queues and role-based processing screens.

9. Workflow and Process Orchestration

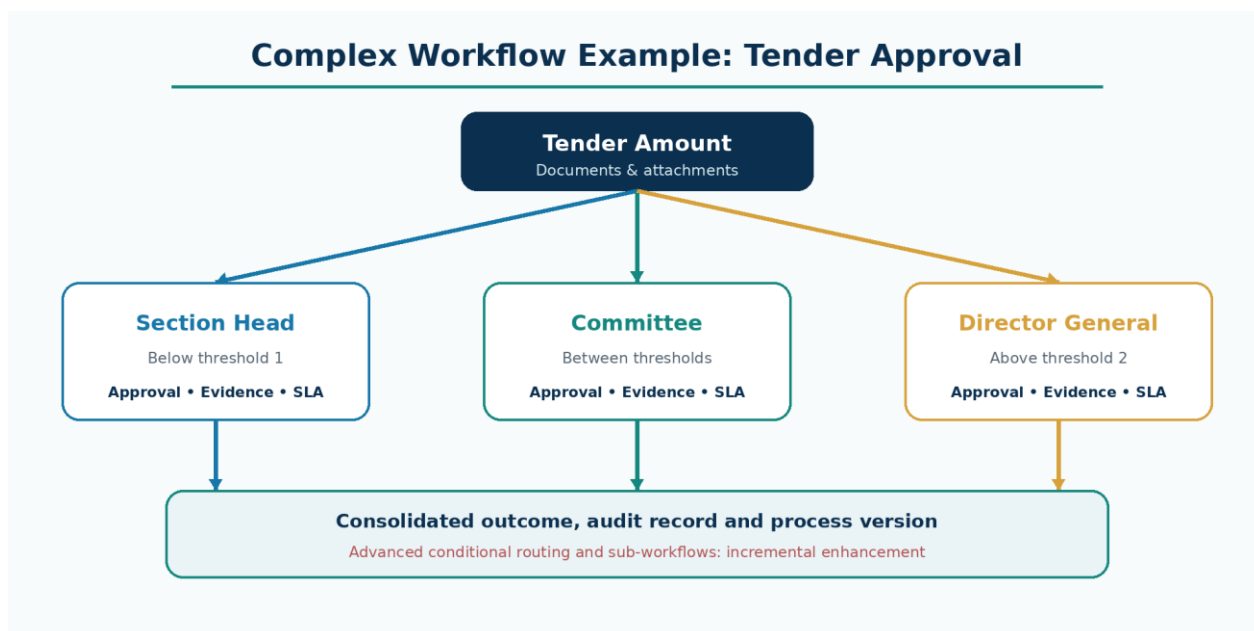


Figure 4 — Complex tender workflow example

The Workflow Engine supports sequential and parallel stages, approvals, rejection and return, delegation, escalation, stage-level SLA, role/department/workgroup routing, suspension, cancellation, reopening, comments, attachments and preservation of in-flight transactions against their original version.

Conditional routing is currently available in a limited form and is being expanded incrementally. Advanced sub-workflow composition follows the same progressive maturity path. Complex services may therefore require ESSBC design and development support.

A representative complex process is a procurement or tender service in which amount thresholds determine whether the case moves to a committee, the Director General or a section head. Each stage may carry its own documents, attachments, approvals and SLA.

10. Business Rules and Low-Code Boundaries

The current Low-Code/No-Code scope allows trained administrators to create services, fields and tabs; assemble workflows and approvals; set permissions, fees and attachment requirements; configure outputs and templates; prepare reports and dashboards; and manage publishing, versioning and rollback.

A general-purpose, administrator-facing If/Then rule designer is under development. Specialized rules for institution-specific beneficiary categories, complex cross-system decisions or non-standard process logic may require programmed extensions.

11. Portals, Language and Accessibility

ATMET provides customer and employee web portals with Arabic and English interfaces. Additional languages can be introduced through implementation configuration. Service content, forms, outputs and notification templates can be maintained bilingually, and the preferred notification language can be selected.

The web experience supports accessibility practices and responsive layouts. Selected employee portal functions may remain optimized for larger screens. Push notifications and WhatsApp are not currently part of the standard notification capability.

12. Documents, Outputs, Search and Audit

Document capabilities include configurable Word-based output templates and variables, PDF outputs, QR verification, electronic approval and electronic signature. Attachment management supports multiple files and types, size controls, malware scanning, versioning, archival, retention rules and external document-management integration.

Search supports structured and full-text approaches, subject to implementation and indexing design. Bulk import, data validation, duplicate prevention and Excel/PDF export are available.

The audit trail is comprehensive and protected. It records access attempts, data changes with before/after values, actor and time context, workflow transitions, approvals, rejections, comments, permission and configuration changes, integration outcomes, and document or signature events.

13. Integration and APIs

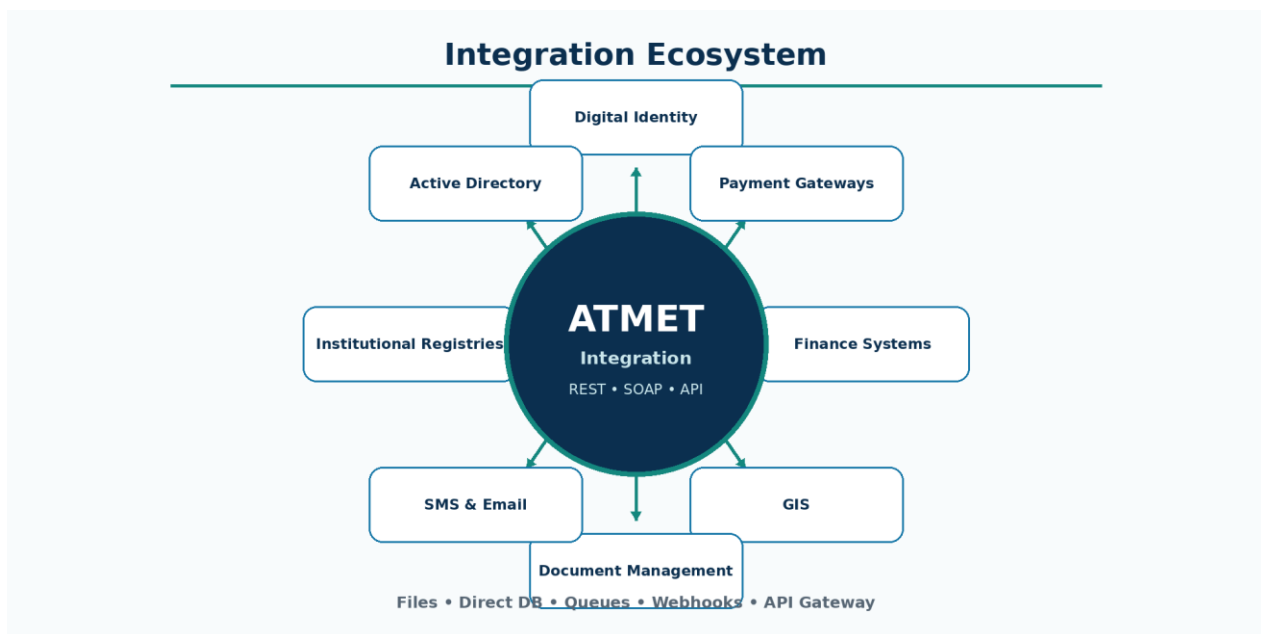


Figure 5 — Integration ecosystem

ATMET supports REST and SOAP services, file-based exchange, authorized direct-database integration, message queues, webhooks and API-gateway patterns. The integration approach is selected according to the external system's security, reliability, governance and transaction requirements.

Implemented integration categories include digital identity, payment gateways, SMS and email gateways, finance systems, GIS, document management, government or institutional registries and Active Directory. A new external connection normally requires analysis, mapping, security coordination, testing and—where necessary—custom adapter development.

14. Functional Modules

The available product modules include: institution and organization administration; users, roles and permissions; master data; Service Designer; Workflow Engine; Business Rules; service publishing and versioning; beneficiary registration; customer and employee portals; document and output management; QR verification and e-signature; fees, invoices and payments; notifications; reports and dashboards; audit; attachments; inspection; violations and penalties; complaints and grievances; appointments; case management; and integration/API management.

15. Reporting and Operational Intelligence

Out-of-the-box reporting includes operational reports, role-based dashboards, SLA indicators derived at database level, employee-performance reports, transaction-volume reports, financial and invoice reports, audit and compliance reports, Excel/PDF export, and drill-down from an indicator to the underlying transaction.

Advanced analytics, external BI integration and institution-specific KPIs can be delivered as implementation extensions. Artificial intelligence is under study and development and is treated as a governed roadmap capability, subject to security, privacy, data-quality and approval requirements.

16. Security, Availability and Operations

ATMET applies layered identity, authorization, encryption, logging, portal-separation and audit controls. ESSBC is progressing through an ISO/IEC 27001 certification program with an accredited international certification body. Certification is not complete and must not be represented as awarded until formally issued.

ATMET supports high-availability, monitoring, redundancy, continuity and recovery controls. The implemented design varies by institution, infrastructure and SLA; therefore, no universal availability percentage is asserted.

Operational services include on-site support, authorized remote support, service desk and ticketing, severity classification, SLA-based response, monitoring, monthly service reporting, training, knowledge transfer, documentation, post-go-live support, preventive maintenance and periodic updates.

17. Reference Implementation

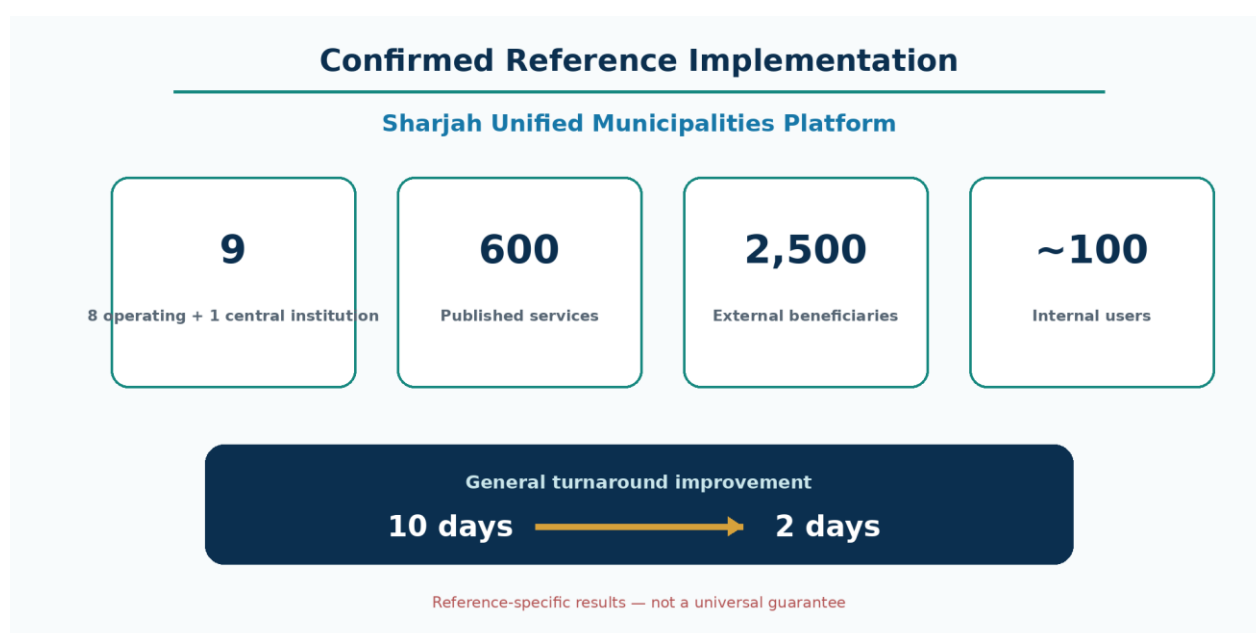


Figure 6 — Confirmed reference metrics

The Sharjah Unified Municipalities Platform is a confirmed reference implementation comprising eight operating institutions and one central institution. It has approximately 600 published services, 2,500 external beneficiaries and 100 internal users. A general transaction turnaround improvement from ten days to two days has been reported for the program.

These figures describe that specific reference environment and should not be interpreted as universal performance or ROI guarantees. Results depend on process scope, institutional adoption, integration readiness and operating conditions.

Reference metrics

9 institutions | 600 services | 2,500 external beneficiaries | ~100 internal users | 10 days → 2 days

18. Licensing, Intellectual Property and Conclusion

ATMET is owned by ESSBC. The ATMET core and Workflow Engine remain ESSBC intellectual property. The institution receives the contractual right to use the licensed product and source code only for customizations developed specifically for that institution; the ATMET core source code is excluded unless expressly agreed. Source-code escrow may be offered in selected contractual cases.

Licensing is perpetual, subject to the applicable license terms, and may be structured using a combination of institution, user and server/deployment factors. White-labeling is available for an additional fee and can include the product name, logo and colour system. ATMET is not represented in this document as a registered trademark.

ATMET provides a sovereign, configurable foundation for institutional digital operations: deployable within controlled infrastructure, extensible through integrations and custom modules, and operable by trained institutional teams. Detailed sizing, topology, security controls, integration scope and SLA remain subject to implementation discovery and contract.