




Turnkey Digitalization & Smart Library Transformation

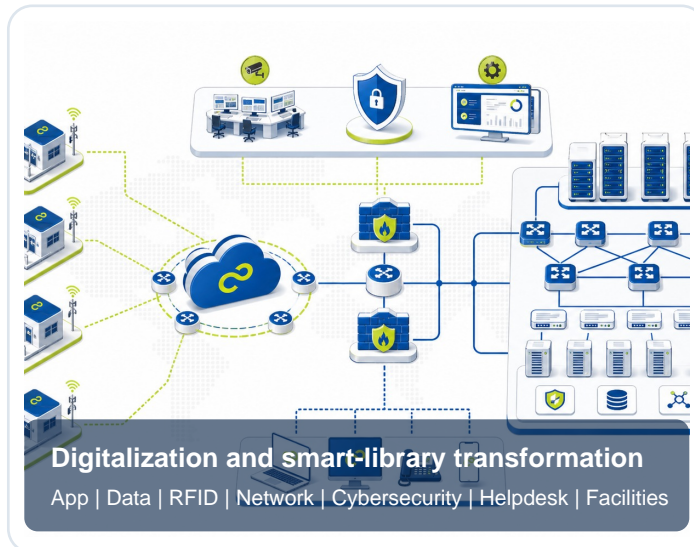


Turnkey Digitalization, RFID Library Automation, Application Development, Data Center, Network, Cybersecurity, and Managed Operations

EXECUTIVE CONTEXT

COMnet delivered a large digitalization and library modernization program that combined application design, data digitization, IT procurement, network and bandwidth enablement, RFID-based library automation, helpdesk setup, training, and ongoing operations maintenance. The project integrated digital service delivery with core infrastructure, cybersecurity controls, physical security systems, facility upgrades, and multi-OEM governance across data center, network, storage, backup, cloud DR, and user-experience components.

 RFID Library automation	 WAF App security	 DR Cloud continuity
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IMPACT

- Converted manual and fragmented library operations into a digitally enabled service model spanning application workflows, data digitization, RFID automation, and user self-service.
- Improved citizen/user experience through a modern Library Experience Center, self-check-in/checkout, book-return facilities, RFID smart cards, and active LED video wall engagement.
- Established a secure and scalable technology foundation covering servers, storage, backup, networking, Wi-Fi, WAF, firewall, DDoS protection, and endpoint/cybersecurity controls.
- Enhanced operational maturity through helpdesk setup, NMS integration, training, capacity building, and structured operations maintenance.
- Reduced delivery complexity by consolidating procurement, supply, installation, integration, and multi-OEM coordination under a single accountable delivery model.

MAJOR ISSUES

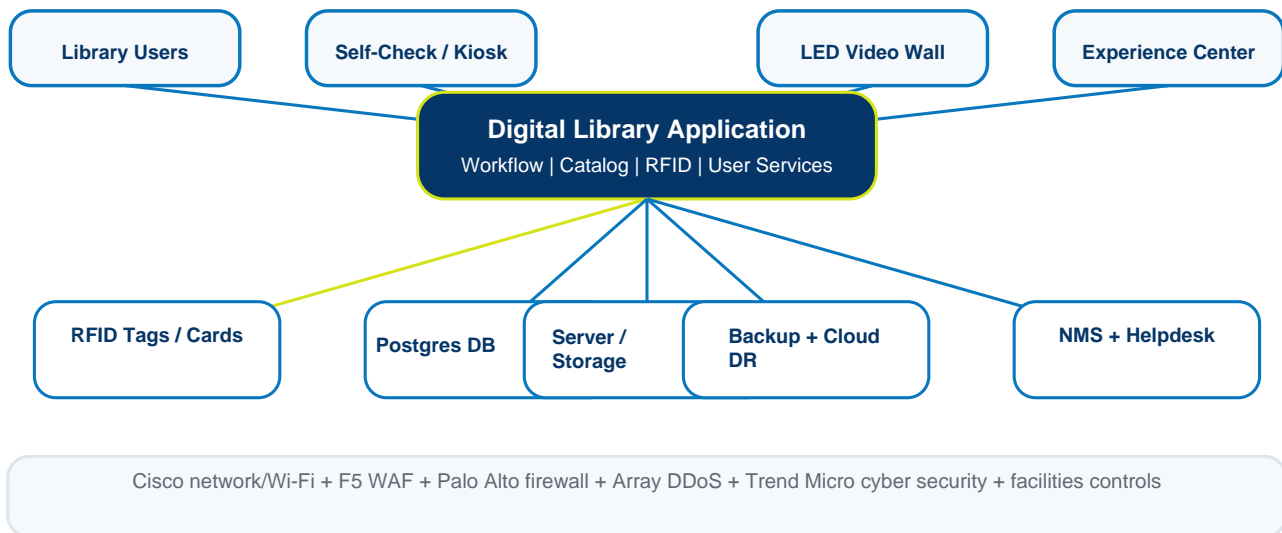
- Legacy library processes depended on physical records, manual circulation, and limited digital workflow visibility, creating operational delays and poor scalability.
- The program required simultaneous modernization of applications, digitized content, RFID devices, IT infrastructure, facilities, and user-experience systems.
- Multiple technology domains - servers, storage, backup, network, security, database, DR, BMS, CCTV, video wall, and helpdesk - introduced integration and governance complexity.
- Secure public-service delivery required application protection, perimeter controls, DDoS readiness, cyber defense, physical security, and controlled operational support.
- The client required training, capacity building, and maintainable operations to ensure adoption beyond initial deployment and technology handover.

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HIGHLIGHTS

ARCHITECTURE AND DEPLOYMENT SCOPE

REFERENCE ARCHITECTURE AND DEPLOYMENT MODEL



- Delivered application design, development, implementation, and data digitization for a modern digital library ecosystem.
- Executed IT procurement, supply, installation, and bandwidth enablement required for the project environment.
- Upgraded library facilities and implemented RFID-based Library Management capabilities including RFID tags, smart cards, self-check-in, checkout kiosk, book-return station, anti-theft sticker, and staff-station reader.
- Implemented Library Experience Center at Vidhan Bhavan and an active LED video wall to improve user engagement and information display.
- Established helpdesk setup operations, training, capacity building, and operations maintenance for long-term service sustainment.
- Integrated a broad OEM stack including Hitachi Vantara, Cisco, F5, Palo Alto, Array, Trend Micro, IBM Postgres, Commvault, Cloud4C, Mota Data, Honeywell, Panasonic, Absen, and others.

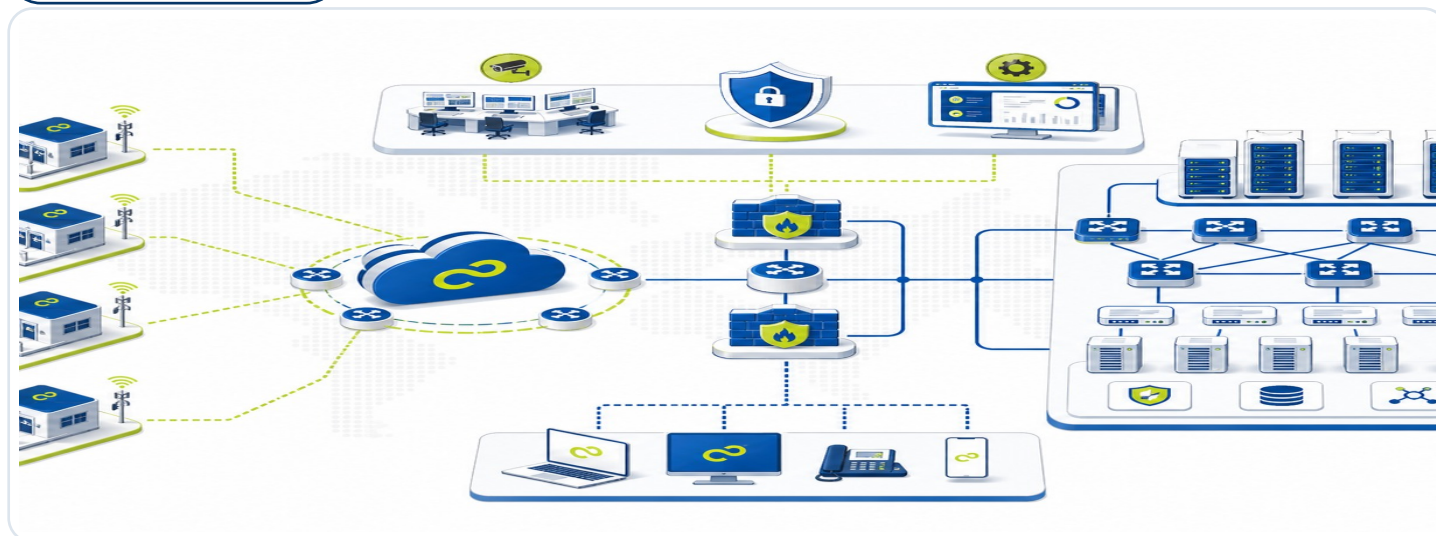
- **Digital Application Layer:** Custom application design, development, and implementation supported library workflows, user services, and digital service delivery.
- **Data Digitization Layer:** Physical and legacy records were transformed into searchable digital assets aligned to operational and user-access requirements.
- **RFID Automation Layer:** RFID tags, smart cards, self-check-in, checkout kiosk, book-return station, anti-theft stickers, and staff-station readers automated circulation and asset tracking.
- **Core Infrastructure Layer:** Hitachi Vantara servers, storage, and tape drives, IBM Postgres database, Commvault backup, Cloud4C DR, and rack/UPS/PAC systems supported availability and resilience.
- **Network and Security Layer:** Cisco networking/Wi-Fi/DCN, F5 WAF, Palo Alto firewall, Array DDoS, and Trend Micro cybersecurity controls protected digital services and connectivity.
- **Operations and Facility Layer:** Mota Data NMS/helpdesk, Honeywell BMS/VESDA/fire alarm, Panasonic CCTV, Absen video wall, and lighting/facility systems supported secure physical and operational readiness.

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KEY STRATEGIES



- Turnkey Program Governance: COMnet managed the project as an integrated digital transformation rather than isolated technology workstreams, reducing delivery fragmentation.
- Digital-First Operating Model: Application workflows, digitized data, RFID automation, and self-service library capabilities were aligned to improve throughput and user experience.
- Security-by-Design Architecture: Perimeter security, WAF, DDoS controls, cybersecurity tooling, and physical security were embedded into the deployment scope from the start.
- Infrastructure Resilience and Continuity: Servers, storage, backup, Cloud DR, UPS, PAC, and facility monitoring were planned as a resilient technology foundation for sustained service delivery.
- Multi-OEM Orchestration: COMnet coordinated a broad technology ecosystem across infrastructure, network, security, facilities, and application domains to preserve accountability.
- Capacity Building and Adoption: Training, helpdesk setup, and operational handover ensured that users and operations teams could sustain the platform after go-live.
- Lifecycle Operations Readiness: NMS, helpdesk, maintenance processes, and documentation supported ongoing performance, incident management, and continuous improvement.

EXECUTIVE TAKEAWAY

COMnet transformed a complex digitalization mandate into an integrated technology, security, and operations program. By combining custom application delivery, data digitization, RFID library automation, resilient infrastructure, cybersecurity, facility modernization, and support operations, the project created a scalable digital service platform suitable for mission-critical public-sector and enterprise environments.

OUTCOME SNAPSHOT

- Modernized service delivery through digital workflows, RFID automation, and improved library user experience.
- Created an integrated technology foundation spanning applications, infrastructure, security, facilities, and operations.
- Improved long-term sustainability through training, helpdesk, monitoring, maintenance, and multi-OEM support governance.

TRANSFORMATION SUMMARY

Application + data digitization + RFID library automation + data center + cyber security + facilities + support operations