



Leading with Innovation

RFID Chute Implementation and Alma Integration University of the Free State

Presenters: Tsholofelo Maleho & Sifiso Banda



*Inspiring excellence, transforming lives
through quality, impact, and care.*

VISION 130
*Renew and Reimagine
for 2034*

UNIVERSITY OF THE
FREE STATE
UNIVERSITEIT VAN DIE
VRYSTAAT
YUNIVESITI YA
FREISTATA

 **UFS**



Outline

- Introduction
- UFS LIS Context
- Traditional drop box vs RFID Chute (Sapphire 24/7 book drop)
- Investigation & feasibility study
- Infrastructure setup and technical requirements
- Operational workflow of the chute system
- Staff and student training
- Challenges encountered and lessons learned
- Value added and next steps



UFS in numbers



121 years old

3 campuses

7 faculties

39 639 total students

3% distance-learning students

5 018 staff members

3 707 international collaborating institutions

UFS IN NUMBERS

 Established in 1904

 3 campuses

 7 faculties



ECONOMIC AND
MANAGEMENT SCIENCES



EDUCATION



HEALTH SCIENCES



THE HUMANITIES



NATURAL AND
AGRICULTURAL SCIENCES



THEOLOGY AND
RELIGION



BUSINESS SCHOOL

Students
(2025 registrations)
39 639



Students
(2024 graduates)
9 250



Registered 97%
contact 3%
distance



Introduction

Strategic Alignment for RFID Chute Implementation

Library services
reimagined

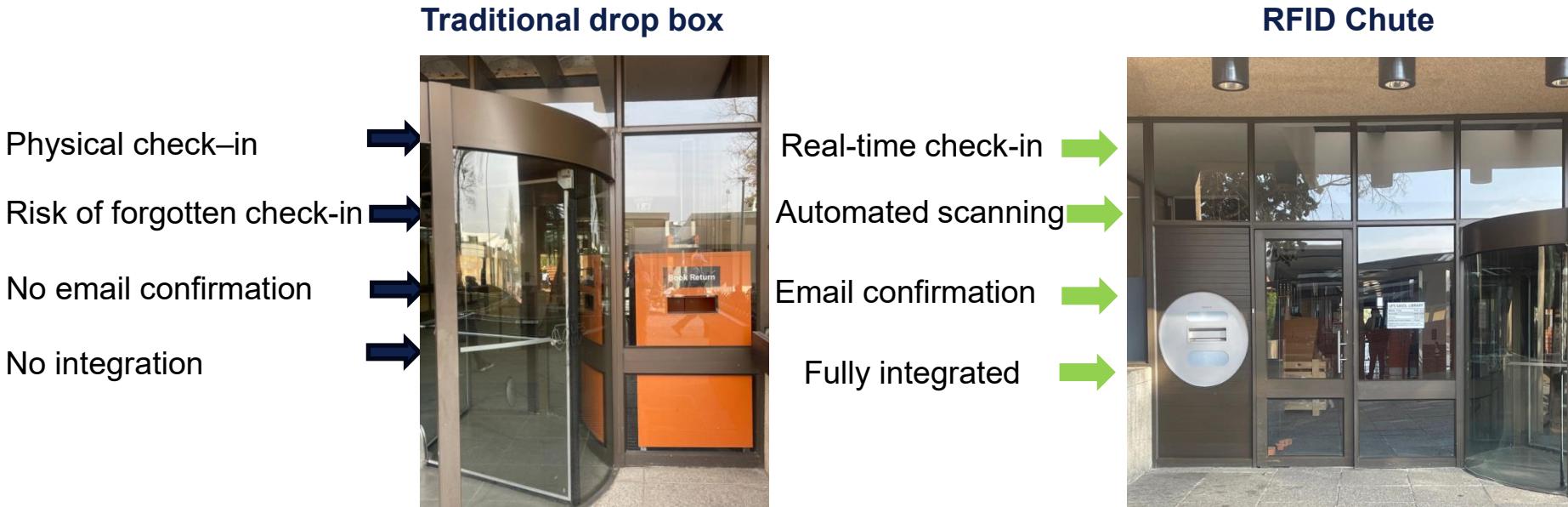
UFS Integrated
Performance
Plan (ITP)

Vision 130:
Innovation &
impact

User centric
approach



Traditional Drop Box vs RFID Chute





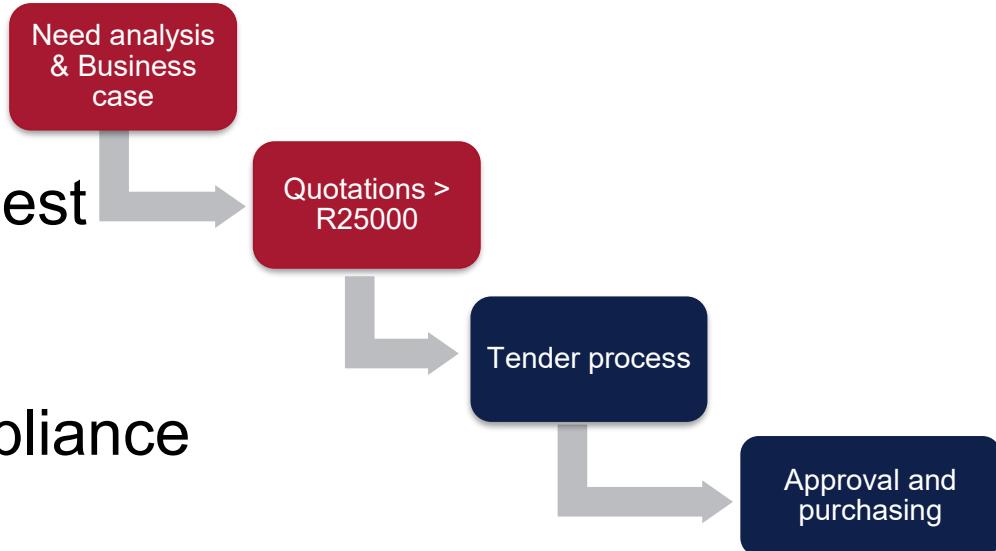
Investigation and feasibility study

- Benchmark - International trends
- Assessed vendor options and costs
- Stakeholder engagement
 - ICT, Facilities, LIS Exco, LMC, Vendors, Librarians
- Tailored solution for each site – *Not a one size fits all*



The procurement journey

- Needs analysis
- Business case
- **Funding: Special request**
- Quotations > 250 000
- Formal approval
- Final sign-offs for compliance





Scoping and planning

UFS Stakeholders:

- Alma Administrators
- Librarians
- Library Executive
- ICT
- UFS Estates
- Dialog ID (vendor)
- UFS Finance





Scoping and planning...cont

Project Plan

Project Plan Gantt Chart

Timeline: Start: Tue 10/1/24 | Nov 24 | Dec 24 | Jan 25 | Feb 25 | Mar 25 | Apr 25 | May 25 | Jun 25 | Jul 25 | Aug 25 | Sep 25 | Oct 25 | Nov 25 | Dec 25 | Today

Legend: Task Mode: 1. Configuration (blue), 2. Testing (orange), 3. Training (green), 4. Phase 1 (red), 5. Phase 2 (yellow), 6. Phase 3 (purple), 7. Phase 4 (pink), 8. Phase 5 (light blue), 9. Phase 6 (light green), 10. Phase 7 (light orange), 11. Phase 8 (light pink), 12. Phase 9 (light purple), 13. Phase 10 (light blue-green), 14. Phase 11 (light pink), 15. Phase 12 (light purple), 16. Phase 13 (light blue), 17. Phase 14 (light orange), 18. Phase 15 (light green), 19. Phase 16 (light pink), 20. Phase 17 (light purple), 21. Phase 18 (light blue-green), 22. Phase 19 (light pink), 23. Phase 20 (light purple), 24. Phase 21 (light blue), 25. Phase 22 (light orange), 26. Phase 23 (light green), 27. Phase 24 (light pink), 28. Phase 25 (light purple), 29. Phase 26 (light blue-green), 30. Phase 27 (light pink), 31. Phase 28 (light purple), 32. Phase 29 (light blue), 33. Phase 30 (light orange), 34. Phase 31 (light green), 35. Phase 32 (light pink), 36. Phase 33 (light purple), 37. 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Phase 5327 (light green), 5327. Phase 5328 (light pink), 5328. Phase 5329 (light purple), 5329. Phase 5330 (light blue-green), 5330. Phase 5331 (light pink), 5331. Phase 5332 (light purple), 5332. Phase 5333 (light blue), 5333. Phase 5334 (light orange), 5334. Phase 5335 (light green), 5335. Phase 5336 (light pink), 5336. Phase 5337 (light purple), 5337. Phase 5338 (light blue-green), 5338. Phase 5339 (light pink), 5339. Phase 5340 (light purple), 5340. Phase 5341 (light blue), 5341. Phase 5342 (light



Scoping and planning..cont

Tailored infrastructure needs



Neville Alexander Library



Sasol Library



TK Mopeli Library



Infrastructure requirements

Physical components:

- Steel frame
- Lockable cabinet
- UPS



Technical requirements:

- Power outlet and network point

Network configuration:

- Static IP





Chute components

Physical components

Exterior

- Chute frame



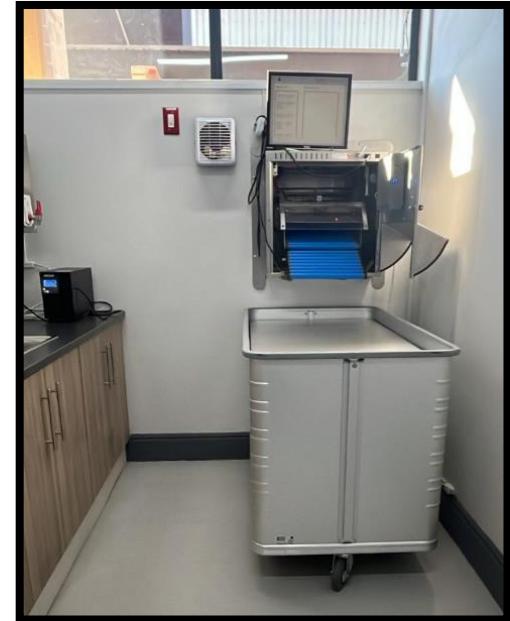
Interior

- Chute cabinet
- Computer
- Screen (when needed)
- Keyboard and mouse
- Bin (size varies)
- UPS

Exterior

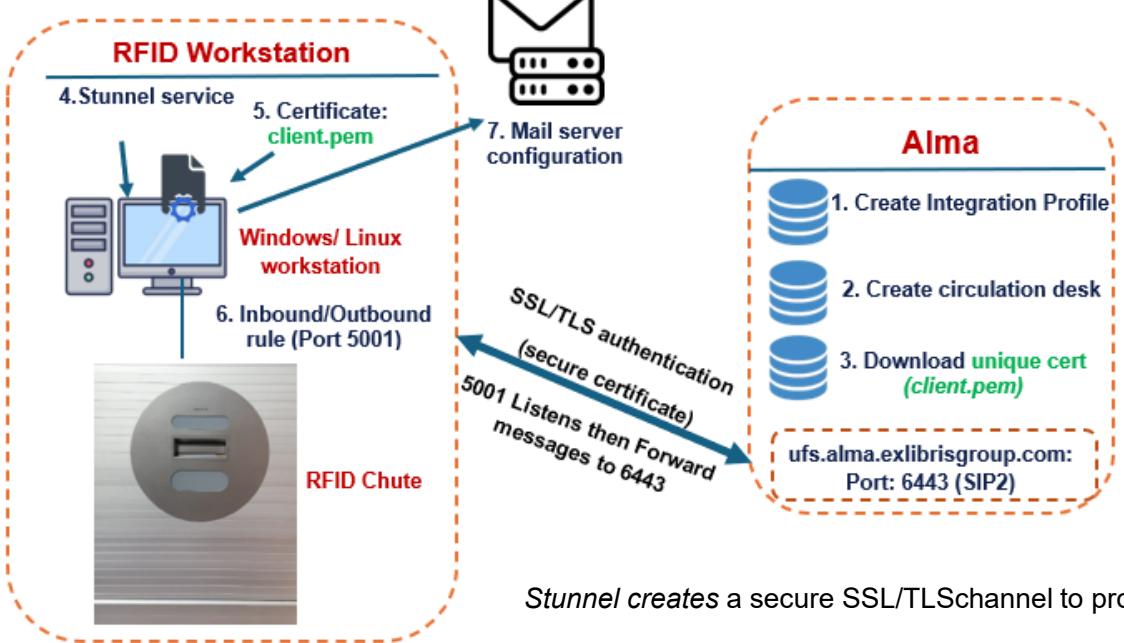


Interior



System integration with Alma

The chute system connects to Alma using the SIP2 protocol.



```
[Integration Profile 1]
key = client.pem
cert = client.pem
client = yes
accept = 5001
connect = ufs.alma.exlibrisgroup.com:6443
TIMEOUTclose = 0
TIMEOUTconnect = 200
TIMEOUTidle = 86400
sslVersion = TLSv1.2
```

Port 6443: Listens to secure SIP2 message



User Training & Support

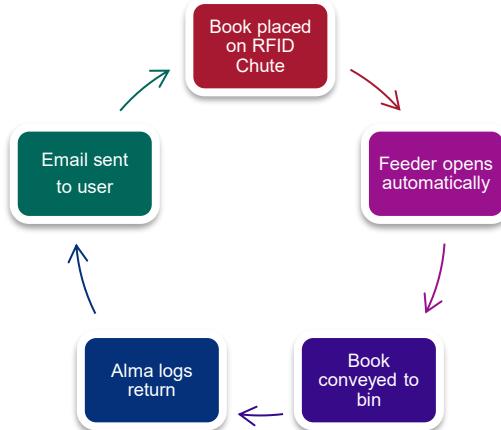
- Training of staff and students
- [Training video](#)
- [How-to-guide](#)
- Communication to UFS community



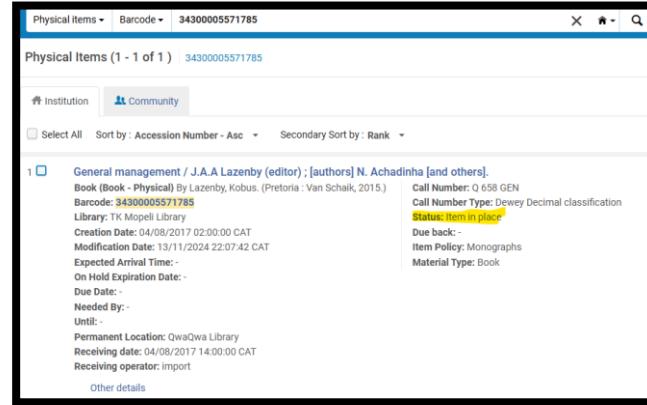


Chute workflow

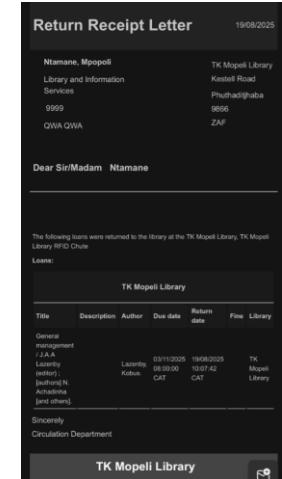
1. Book placed on RFID Chute
2. Book is conveyed into the bin.



3. Item is checked in on Alma



4. User receives an email confirmation





Learning through challenges

- Initial project estimation was 4 months.
- Remote access for vendor by ICT
- Chute software updates required reconfiguration
- No block flag
- Remote vendor support via VPN
- Time zone and structural complications
- UPS required due to load shedding
- Tailored Infrastructure



Recommendations

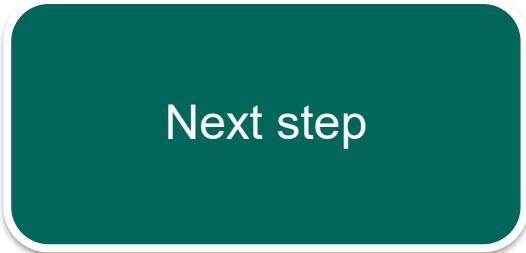
- Feasibility study essential
- Engage all stakeholders in initial planning
- Plan for structural requirements (Not a one size fits all)
- Plan for power failure / (UPS)



Conclusion



- Enhanced user experience
- Seamless, fast, book returns
- Reduced manual labour



- User experience
- Second Chute in the Sasol Library



Thank you

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References

1. Mamatha, N., 2024. Redefining libraries with technology: Radio Frequency Identification (RFID). *International Journal of Research in Library Science*, 10(3), pp. 34–41. <https://doi.org/10.26761/ijrls.10.3.2024.1771>
2. Otike, F. and Barát, Á.H., 2021. Roles and emerging trends of academic libraries in Kenya. *Library Hi Tech News*, 38(7), pp.19-23.
3. Ex Libris Developer Network, (n.d.) *Self check integration*. Available at: <https://developers.exlibrisgroup.com/almal/integrations/selfcheck/> [Accessed: 10 July 2025].
4. Ex Libris Developer Network, (n.d.) *Stunnel integration*. Available at: <https://developers.exlibrisgroup.com/almal/integrations/stunnel/> [Accessed: 18 August 2025].
5. Ex Libris Knowledge Center, n.d. *Self-check machines*. Available at: [https://knowledge.exlibrisgroup.com/Alma/Product_Documentation/010Alma_Online_Help_\(English\)/090Integrations_with_External_Systems/040Fulfillment/060Self-Check_Machines](https://knowledge.exlibrisgroup.com/Alma/Product_Documentation/010Alma_Online_Help_(English)/090Integrations_with_External_Systems/040Fulfillment/060Self-Check_Machines) [Accessed: 18 August 2025].
6. University of the Free State, 2023. *Community engagement strategic plan 2023–2028*. Available at: <https://www.ufs.ac.za/supportservices/departments/community-engagement-home/about/strategic-plan-2023-2028> [Accessed: 18 August 2025].