

Library Management System Solutions Options Appraisal

**Thomas Bell : Business Analyst
Date: 6th November 2023**

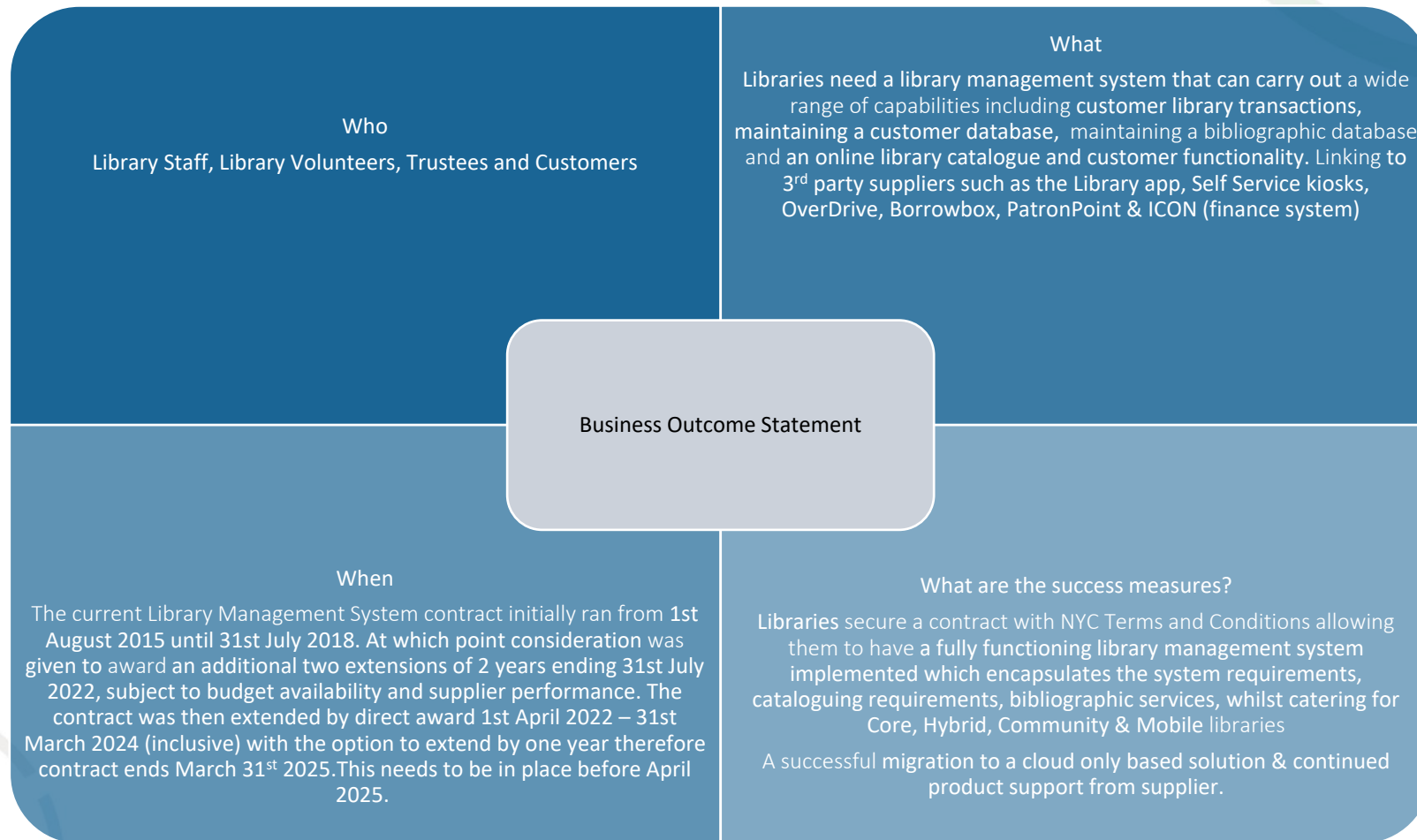
Stakeholders [initial stakeholder analysis]

RACI

The following table is providing a summary of the stakeholder groups consulted

Responsible	Accountable	Consult	Inform	Quality Assurance
"Responsible for the work"	Accountable for the work	Consult regarding the work	Inform the work is taking place	Quality Assurance checks
Thomas Bell – Business Analyst	Hazel Smith – Sponsor – Head of Libraries	Charlotte Stolarski – Procurement Officer	Jo Ireland – Assistant Director Culture and Leisure	Jon Learoyd – Head of Architecture & Infrastructure
Mark Dixon - Solutions Architect		Abigail Burns – Project Manager	Alan Watson - BRM	
Matthew Graham – Assistant Architect		Kendra Nell – Business Support Lesley Watkinson – Finance		
		Helen Tumilty - Customer Services Channel Manager Vincy Benedect – CST Finance		
		Jemma Gotts & Ian Smith – CST Craig Skelhorn-Digital Team		
		John Lewis – Information Security		
		Melanie Fowler – Library Manager – Service Delivery		
		Jenny Tyrer – E-Services Librarian Kevin Cowells – Technology Lead		
		Andrew Lambert – Technology Group Manager Denise Robinson – Technology Lead Laura O'Brien – CST Product Owner		
		Matthew Robinson – Resilience and Emergencies		

Business Outcome Statement



Business Outcomes

Desired Outcome	Description/Measures
Implementing a new LMS solution	User Experience, usability, penetration testing and successful migration of data & users.
Solution is hosted and supported by the supplier with minimal internal IT intervention.	Minimal internal IT work as solution is completely cloud-based.
New contract put in place for a new LMS.	Supplier agrees to our NYC terms & conditions.
Staff and volunteers are adequately trained to use the software	Train the trainer is rolled out to a group of employees who will receive training from the chosen supplier. The internal trainers will train the rest of the library staff & volunteers.
A friendly and accessible user experience for staff, volunteers and customers	Customers, staff and volunteers can easily navigate around the system, and can use accessibility features if needed.
Getting the best value LMS for the allocated Library budget	Ensuring we have a user-friendly Library Management System which is within NYC Library budget.
To ensure sustainability and viability for the current service delivery model	A sustainable LMS with pathway to develop and upgrade services during contract.
Business Continuity and Disaster Recovery is in place	If the system goes offline, there's a back-up available to temporarily work offline until system access is restored. All suppliers at the Discovery Days a promise in place to have LMS uptime above 99.5%

Considerations

PESTLE and Whole Life Costs (Current Solution):

Political	Economic	Social	Technology	Legal	Environmental
No external factors	No external factors	Customer facing service	Cloud Based Service	Providing a Library Service is a statutory requirement.	No external factors
				Data Protection Compliance	
				Contract Compliance	
				Procurement Process Compliance	

[Requirements will exist elsewhere so reference these as inputs, do not repeat list]

[Consider whole life costs of current solution – licences, Support & Maintenance, and internal support costs and risks]

Not considered:

- [out of scope items] - N/A



Additional Consultation

The following table is providing a summary of other persons consulted

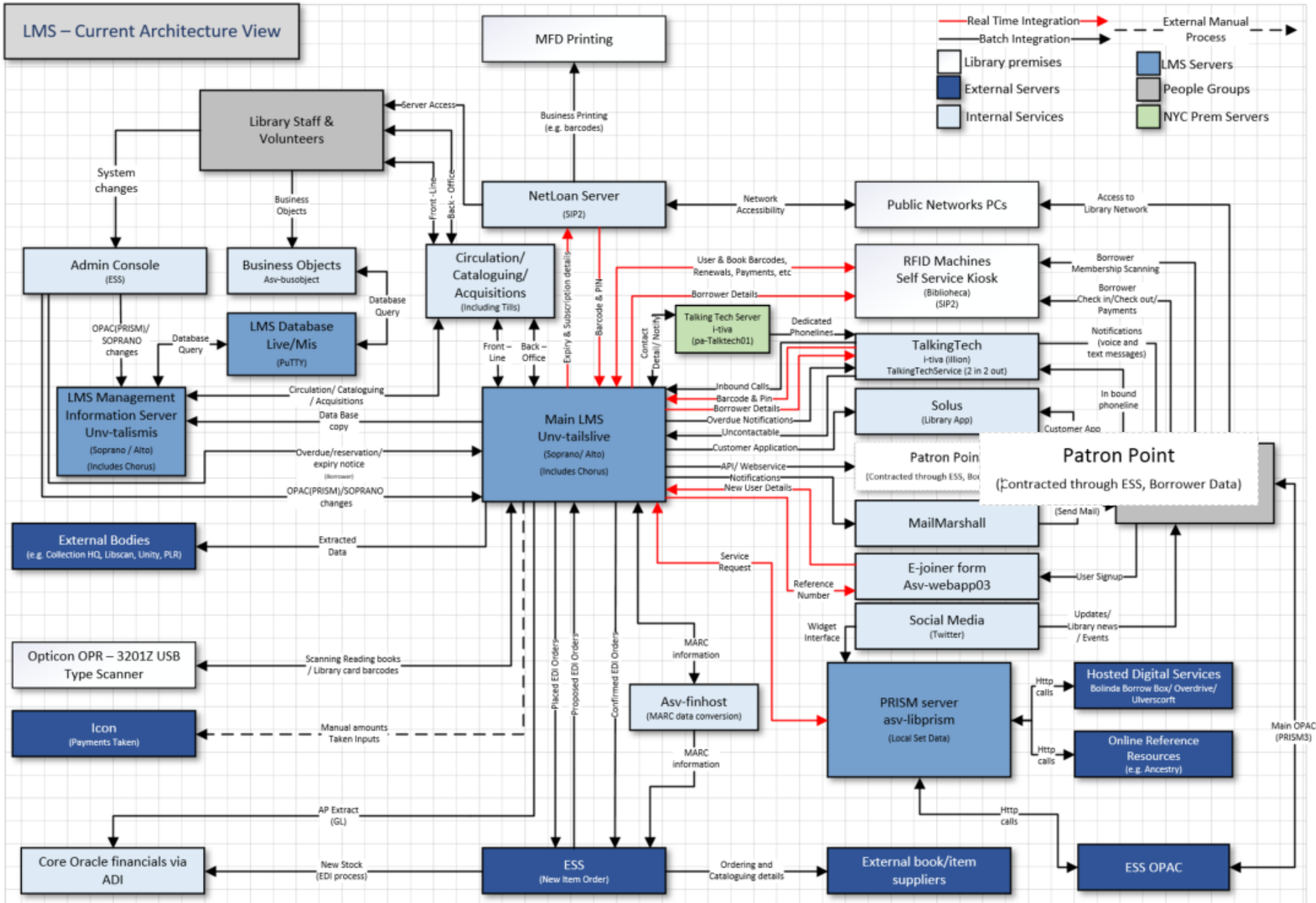
Who	Role	Why
Hazel Smith, Melanie Fowler	Library Managers	To understand the preferred solution, providing knowledge around the current Library Management System and understand current experience and future requirements of customers, employees & volunteers.
Mark Dixon	Solutions	Set out potential architecture and solution options.
Alan Watson	Business Relationship Manager	Provide an oversight, looking at resource need/ask.
John Lewis	Information Security	To understand if there are any issues from a Security POV. Raised there was an interest in data migration, integrity of data and how secure this was, getting reassurance from potential suppliers.
Charlotte Stolarski	Procurement Officer	Consulted the market, set up/ran Discovery Days and in the future – to run the open procurement.
Matthew Robinson	Emergency and Resilience Manager	Disaster Recovery/Business Continuity set-up.
David Kempen/Hannah Flynn	Data Governance	A DPIA is needed. The current contract states that you have to tell Education Software Solutions within 28 days of contract termination that you want your data migrated elsewhere. After 60 days of hearing nothing, our data is deleted. There's no price in the contract so unsure how much ESS charge.

Suppliers at Discovery Days

The following table is providing a summary of external persons consulted

Supplier	System	Notes
Axiell ALM	Axiell Spark	Cloud Based. Quite traditional, icon based screen, user friendly.
Sirsi LTD	Symphony	Cloud Based. Biggest in the market.
Education Software Solutions	Soprano	Cloud Based. Current system. No data migration needed. No current roadmap for future development.
Civica UK	Spydus	Cloud Based. Customer interface very good. Widely used throughout authorities.
Innovative Interfaces	Polaris & Vega	Cloud Based. Impressive customer interface and staff tools. No current UK customers, but many customers abroad mostly in the US.
PTFS Europe	KOHA & Aspen	Open-source system, community led. Mostly smaller authorities that currently use the system.

Current Architecture – Technical View



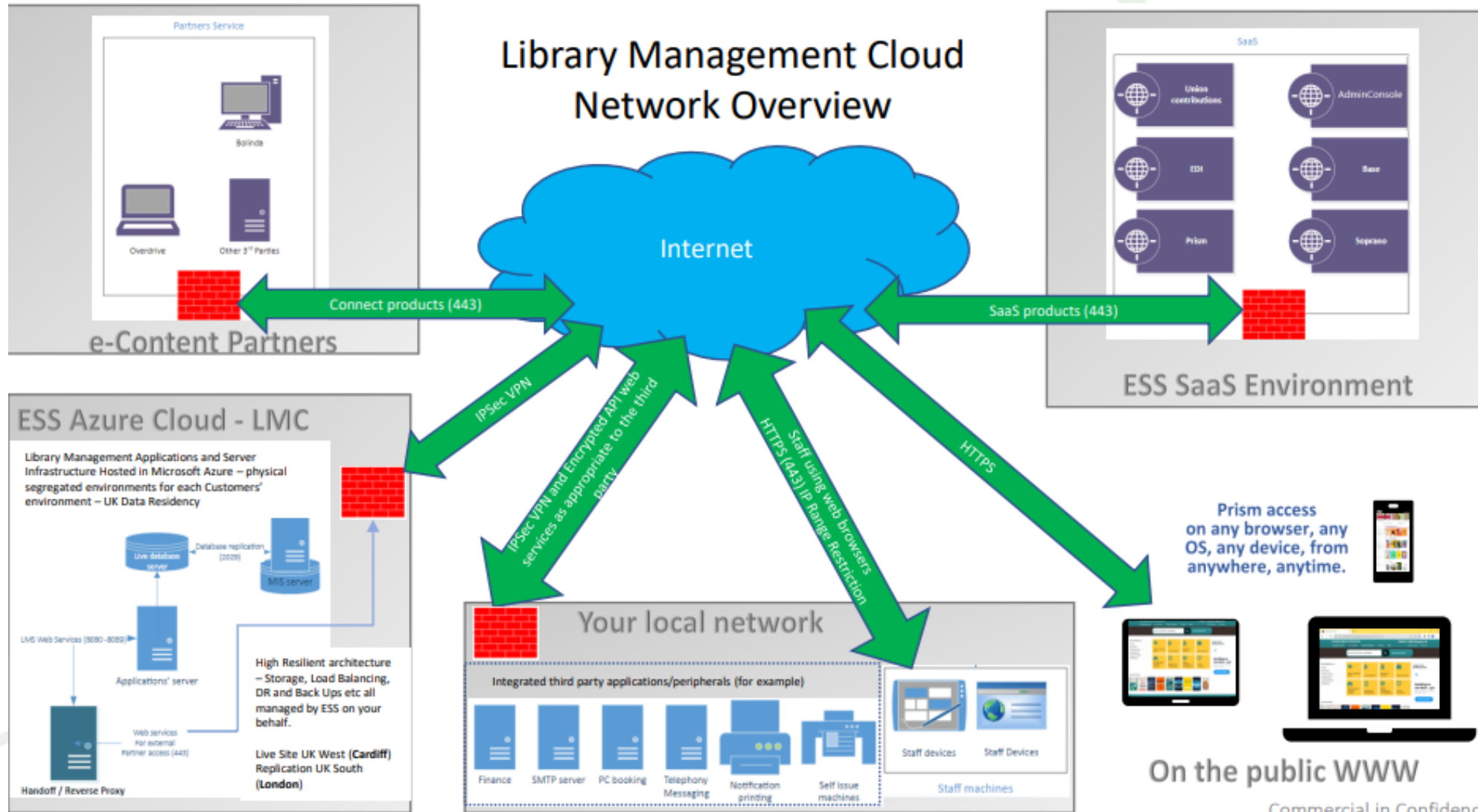
Currently there is no integration between the current LMS and CIVICA ICON.

Double keying occurs when Acquisitions receive an email to say what money has been passed through. Finance put into Oracle, Library staff then receive an email to say it's been paid. LMS and RFID Kiosks weekly takings in report form are matched up with actual takings and keyed into ICON.

LMS linking straight into ICON would save double-keying and a lot of time for Core & Hybrid card payments.

Cash payments would need looking into during integration.

Current Architecture – Network Overview



Commercial in Confidence

Business View Slides

[Library SCAM Matrix Template V0.2.xlsx \(sharepoint.com\)](#)

Service Development		
Service Pricing Management	Service Management	Knowledge Management
	Works Order Management	Research Management
<p>Functional Requirements</p> <p>(please list for this use case) What the system does</p>	<p>The ability to confirm proposed orders in bulk back to 3rd party suppliers via the LMS gateway</p> <p>The ability to cancel the whole or part of an order on the LMS</p>	
<p>Non Functional Requirements</p> <p>(please list for this use case) How the system performs/operates</p>	<p>The ability to set different fines dependant on borrow types</p>	<p>The ability to select which catalogue fields are displayed in catalogue search results (for public and staff catalogues)</p>

Customer Management

Customer Engagement

Channel Management	Customer Data Capture		Customer Validation	Customer Account Management
Customer Self Service (e.g Forms)	Customer Address Capture	Contact Preferences	Service Eligibility Management	
<p>Ability to use the Library Management System from home</p> <p>Ability to use the Library catalogue from a mobile - responsive design</p> <p>The ability for account details to show up current loans, loan history, active reservations, contact method and contact preferences (ie opt in or opt out of marketing notifications), notifications already sent, any charges owing.</p> <p>The ability for the system to be accessible 24/7 from anywhere</p> <p>The ability for customer to join online (is an option on the library catalogue home-screen)</p>		<p>The ability for the LMS to generate and deliver standard notifications via customers preferred delivery method e.g overdues, reservations waiting etc</p>		<p>The ability to link to ICON which processes in-person card payments. Fines, replacement costs, recalls & loans and link to customer accounts.</p>
<p>The ability to have user forums - online user forums where customer from suppliers can share ideas, ask questions, user group meetings. (Currently have an email forum)</p> <p>The ability to create and save personal book lists</p> <p>The ability to have an A-Z menu for searching all North Yorkshire Council Services</p>	<p>The ability to locate addresses via postcode (currently file of North Yorkshire postcodes uploaded to LMS quarterly)</p>		<p>The ability to validate borrower barcode numbers and item barcode numbers</p> <p>The ability to authenticate age of consent for different borrower types being able to borrow particular item types (eg DVDs)</p> <p>The ability for customer to view different borrower catalogues based on their date of birth (Over 18 Adult only section)</p>	

Collaboration	Customer Request Management			Operational Governance	Operational Planning
External Collaboration	Service Request Management	Fulfilment Management		Audit Management	Service Operational Resilience
Organisation to Organisation Collaboration	Request Management	Outcome Management	Referral Management		Operational Business Continuity
		Confirmation (notification) of Outcome Management	Signposting		
The ability to receive quotes(proposed orders) from 3rd party suppliers through the LMS gateway.	The ability to set borrower expiry dates automatically when a new borrower record is created.	The ability for the LMS to generate and deliver standard notifications via customers preferred delivery method e.g overdue, reservations waiting etc		The ability to pass audit by Veritau every 3 years The ability to check the history of editing (operator & date)	The ability to operate offline and download all transactions automatically when the system is back online, and to provide access to transactions which are unable to download automatically for items with exceptions (eg reservations for returned items.)
			<p>The option to add links to other resources and for customers to login to their library account</p> <p>The ability to have a catalogue home page which needs to be able to display links to other library resources e.g digital catalogue, online ref resources, new additions, links to useful websites, links to social media</p> <p>The ability for E-book catalogue records to have active links to the E-book on the supplier's website/app</p>		

Technology Management

Device Management	Systems Management		
Device Maintenance	Systems Testing	System Development	
Mobile device management		System Configuration	Integration Development
Ability to use the Library catalogue from a mobile - responsive design	The ability to have a test environment which is a replica of the live environment (currently test environment is copy of previous day's live data (would ideally like to maintain this system)	<p>The ability to stack up several catalogue/borrower/item records in tabs</p> <p>The ability to add to any of the system parameters - Example of this is a new borrower type</p>	<p>Ability to link to social media on Prism (such as a X feed)</p> <p>The ability to connect to 3rd party products/suppliers and where necessary link so that borrowers can be verified, reservations placed, items renewed.</p> <p>The ability to export files of data via scripts set up and automatically run on regular basis (eg monthly) to Unity, Nielson, CollHQ, (Book trade, send files of data to them) how much books are used & Patron Point.</p> <p>The ability to import EDI invoices from 3rd party suppliers through the LMS gateway</p> <p>The ability to link with Patron Point to find out who has opted into emails.</p> <p>Ability to use LMS from a tablet - staff & volunteers</p>
		The ability to have the option to display cover images (currently images show in Soprano but not in Alto. But no option to choose whether or not they display.)	The ability to EDI, fulfilling orders, what items supplied.

Data Management							
Record and Information Management	Record and Information Management	Data Storage Management	Data Analytics	Data Analytics			
	Data Lifecycle Management	Document Management		Data Monitoring		Business Intelligence (BI) Analytics	Reporting
		Document Scanning		Activity Monitoring	Consumption Monitoring		
<p>Include a public library catalogue</p> <p>The ability to quickly process transactions and update the database in real time</p> <p>The ability to locally amend types & rules for borrowers, loans, item types and fines</p> <p>The ability to locally create and run scripts to bulk amend data for a variety of parameters e.g. by combinations of item type/status, due dates etc (ad hoc/create our own)</p> <p>The ability to sort search results (by date/title/author etc)</p> <p>The ability to display book cover image for all titles</p> <p>The ability to link by title and reservation to different editions i.e paperback reservation linked to hardback edition</p> <p>The ability to put items in transit giving details e.g. date, time it was put in transit and from which site it was sent and which site it is in transit to. (Details currently show in Alto but not in Soprano)</p> <p>The ability to assign a replacement barcode to an item & customer, and to transfer all transaction data across</p> <p>The ability to read 14 digit borrower barcodes, including a combination of numbers and letters</p>	<p>The ability to back-up data regularly (hourly, daily, weekly depending on type of data dealt with)</p> <p>The ability to run regular automatic/scheduled scripts (daily/weekly/monthly) to delete unwanted catalogue records, provide information on reservations and number of copies available, update new borrower details for notifications</p> <p>The ability to create catalogue records from scratch and to copy existing records to marc21,RDA and DDC23 standards</p> <p>The ability to suppress catalogue records from the public catalogue, both by individual record and/or by site.</p> <p>The ability to delete catalogue records</p> <p>The ability to search the catalogue for all items or just "in stock status" by following either individually or in any combination, and with Boolean searching : Author</p>	<p>The ability to be compatible with Opticom OPR-3201Z USB Type Scanner</p>	<p>The ability to run regular automated scripts to report on items (status of loan, number of reservations etc) and to automatically email these reports out to particular recipients.</p> <p>The ability to show item availability, including 'on order' items and capability for customers to both place reservation, and cancel a current reservation if no longer needed</p>	<p>The ability to check stock from CollectionHQ linking to LMS</p>	<p>The ability to see history/details/progress of a reservation (currently full details only available in Alto.)</p>	<p>The ability to provide lists of requested books (customer reservations) for libraries to check at least twice a day and only for libraries which are open on that day</p> <p>The ability to export search results via MS Excel (currently bib search does not export in a usable way. Only loan history exports in a usable way, and this is limited to the past 2 years, ideally need more than 2 years.)</p>	<p>The ability to run report for FOI's. Data needs to be accessible.</p> <p>Ability to update orders with supplier status reports.</p>
<p>The ability to input "dead days" for specific libraries (when libraries are closed) to push back or bring forward return dates to ensure correct fines are charged.</p>						<p>To report daily on how many notifications sent and to whom (broken down to individual borrowers)</p> <p>The ability to run reports without impacting LMS performance</p> <p>The ability to create own/bespoke reports and export in a variety of formats (including MS Excel)</p> <p>The ability to provide details for titles which have not had a full catalogue record supplied as part of quotes/EDI</p>	

Proactive Communication Management	Information Advice and Guidance	Customer Purchase Management		Income Management
Notifications Management		Invoice Management		Income Collections
		Discount Management	Contract Invoice Splitting (Periodic)	

Ability to send out voice, text and email notifications to customers

Ability to produce automatic notices (overdue, reservation collection, borrower expiry and fine notices)

Ability to create/amend notifications to borrowers

The ability for the LMS to generate and deliver standard notifications via customers preferred delivery method e.g overdue, reservations waiting etc

The ability to contact support/helpdesk via phone or support portal, including FAQ'S/Knowledge articles

The ability to add temporary messages to the catalogue homepage (e.g. notice of maintenance work etc)

The ability to waive customer charges on an ad hoc basis

The ability for customer to have subscriptions for audio, DVDs (one charge a year) Netloan linking to LMS

The ability to pass invoices through for payment on the LMS - links to NYC financials (Oracle) - Paying for book orders for the new library stock.

The ability to link to Oracle and process Cheques

The ability to link to ICON which processes in-person card payments. Fines, replacement costs, recalls & loans and link to customer accounts.

Ability to input financial data once (currently inputted on LMS & ICON -Payment system)

The ability to log cash and card payments taken in-person

Operational Security Management		Assets Management		Marketing Management
Information Security Management		Wider Assets Management		Marketing Operations Management
Systems Access Security Management	Data Access Security Management	Inventory/Logistics Management	Asset Lifecycle Management	Campaign Management
				Promotion Marketing Management
<p>The ability to set user permissions to different levels</p> <p>The ability to login to account via Library card number and pin</p> <p>The ability for customer to change their pin and update contact details and contact preferences</p> <p>The ability to prevent access when logging in if a certain number of tries is reached</p>	<p>The ability to have authority controls for authors</p>	<p>The ability to warn if book is already in stock to prevent duplicate records</p> <p>The ability to look up an item with an European Article Number (EAN)</p> <p>The ability to assign stock to different libraries - dynamic stock</p> <p>The ability to receipt and pay multiple copies, individual copies and part orders on the LMS - Book orders for new library stock (part of the Acquisitions process)</p>	<p>The ability to process return of damaged, incorrect or unwanted items</p> <p>The ability to issue items to customers</p> <p>The ability to track where items/assets have been</p> <p>The ability to un-Receipt items on the LMS - This is for the book acquisitions process and is used to change the status of an item (book) back to "order sent" from "in stock." (This can happen for a variety of reasons.)</p>	
<p>Generic and individual logins and the ability to change own passwords/pins and to have concurrent logins</p> <p>The ability to locally reset passwords</p>		<p>The ability to locally amend dynamic stock settings (e.g excluded item types/sites/kiosk settings)</p> <p>The ability to have a validation check on ISBN (International Standard Book Number)</p>	<p>The ability to display a small selection of topical book covers on the catalogue homepage</p>	

Rejected Options

Option	Reason Rejected
Regional Consortium – (teaming up with Yorkshire & Humber authorities to have a joint LMS solution)	Timescales are too tight. We need to ensure we have enough time for implementation given the large number of staff and volunteers who need training and our service delivery model.
G-Cloud 13, CCS & ESPO Frameworks	Not all suppliers at the Discovery Days were on each Framework. ESPO – tight timescales, not been renewed.
Re-use a system we already use at County Hall	No current existing system available.
Build our own bespoke system	Not enough time or resource to create a system which will hit our must have capabilities. Re-use, buy, build.

Executive Summary – Recommended Solution

Preferred Option – Procure New System

Option Summary

- Full Procurement of cloud-based solution, above threshold to the Open Market.

Positive Factors

- Ability to choose between multiple suppliers.
- Design own terms & conditions
- Have own specification and adapt as required.
- Choose length of contract to suit NYC.
- Inclusive of all interested suppliers to return best value.
- Opportunity to improve and develop future services (e.g. customer engagement)
- Opportunity to integrate functions and reduce need for third party suppliers
- Solution is completely cloud-based (greater supplier choice)
- Adequate training is important and offered by all suppliers.
- Reducing on-prem footprint
- Ability to data cleanse during migration

Notable Neutral Factors

- All suppliers at the Discovery Days offered similar solutions.

Negative Factors

- Potential push-back on NYC terms & conditions.
- Procurement exercise is a longer process.

Business Impact (People & Process)

- Training the trainer days from suppliers, leaving the trainers to train internal employees and volunteers separately.
- Resource to train the employees & volunteers.
- Resource from CST
- Small amount of resource from IT

Procurement

- Gateway & Key decision

Financial Impact

- Packages vary in price dependant on capabilities
- Data migration (stock records, catalogue, customer records)
- Training the trainer costs and internal training.
- Re-establish connections to integrate with Public Network PC's & Kiosks.
- Integration with supplier/Power BI & ICON/Oracle - reporting package, dashboard to look at budgets. Civica ICON – Income Management System – money received is processed into ledger.

Technical Impact

- Support data migration
- Technical resource to re-establish connections and integrations with BI, Kiosks & Civica ICON/ORACLE
- Ensuring all 3rd party suppliers are linked up and working (E-resources, BorrowBox)
- Reducing on-prem footprint

Retain & Improve Option – Education Solutions Software

Option Summary

- Retain current supplier

Positive Factors

- Low cost of change
- Reduced support cost
- No training of staff is needed
- Integration is already partially in place
- Cheaper than previous contract annual fee.

Notable Neutral Factors

Negative Factors

- Fulfilment of contract – some issues regarding system performance
- No roadmap for future developments
- Risks to challenge from other suppliers
- Loss of opportunity to develop and improve services (e.g. customer engagement) and integrate functions currently provided by third party suppliers
- Currently hybrid (on prem & cloud) solution

Business Impact (People & Process)

- Low impact to change

Procurement

- Procurement would need to find a Direct to Award route
- Go through Gateway

Financial Impact

- New proposed annual fee is lower than current contract with Education Software Solutions

Technical Impact

None anticipated

Recommendation | Full Procurement of cloud-based solution, above threshold to the Open Market

Benefits

- Ability to choose between multiple suppliers.
- Design own terms & conditions
- Have own specification and adapt as required.
- Choose length of contract to suit NYC.
- Inclusive of all interested suppliers to return best value.
- Opportunity to improve and develop services (customer engagement)
- Solution is completely cloud-based (greater supplier choice)
- Adequate training is important and offered by all suppliers.
- Reducing on-prem footprint
- Option to cleanse data

Risks

- Push-back from suppliers with NYC's Terms and Conditions.
- Insufficient time to implement a new solution
- Data Migration isn't smooth or secure.
- Amount of time to train internal staff & volunteers.
- Education Software Solutions will charge a fee (price isn't mentioned in contract) to transfer data across to new supplier. Have to let ESS know within a 28 day period as data will be deleted after 60 days. This could potentially be done in-house is an option if NYC have the resource, knowledge and permissions. Around 90% of LMS purchasers pay their previous supplier to format the data and send to the new supplier.
- Integration with Supplier BI (if applicable, BI change needed if the supplier chosen isn't CIVICA)

Assumptions

- Suppliers sign up to NYC's Terms and Conditions.
- Data Migration runs smoothly and securely. retention period for financial data acquired is 7 years.
- Sufficient interest from suppliers
- Resource from relevant teams is available (large input from internal Finance department as well as other teams)
- Library Team have capacity to deliver.

Issues

- Limited time to implement a new solution (Supplier varied from 6-12 months)

Dependencies

- Technical Finance linking up with LMS.
- CST, Developers, Procurement, Training & Learning, Solutions.
- Library Team have capacity to deliver.
- LMS audit

DR/BC Arrangements

Include SLAs if known

Business Continuity –

Ability to continue business while offline from all libraries, including the mobile.

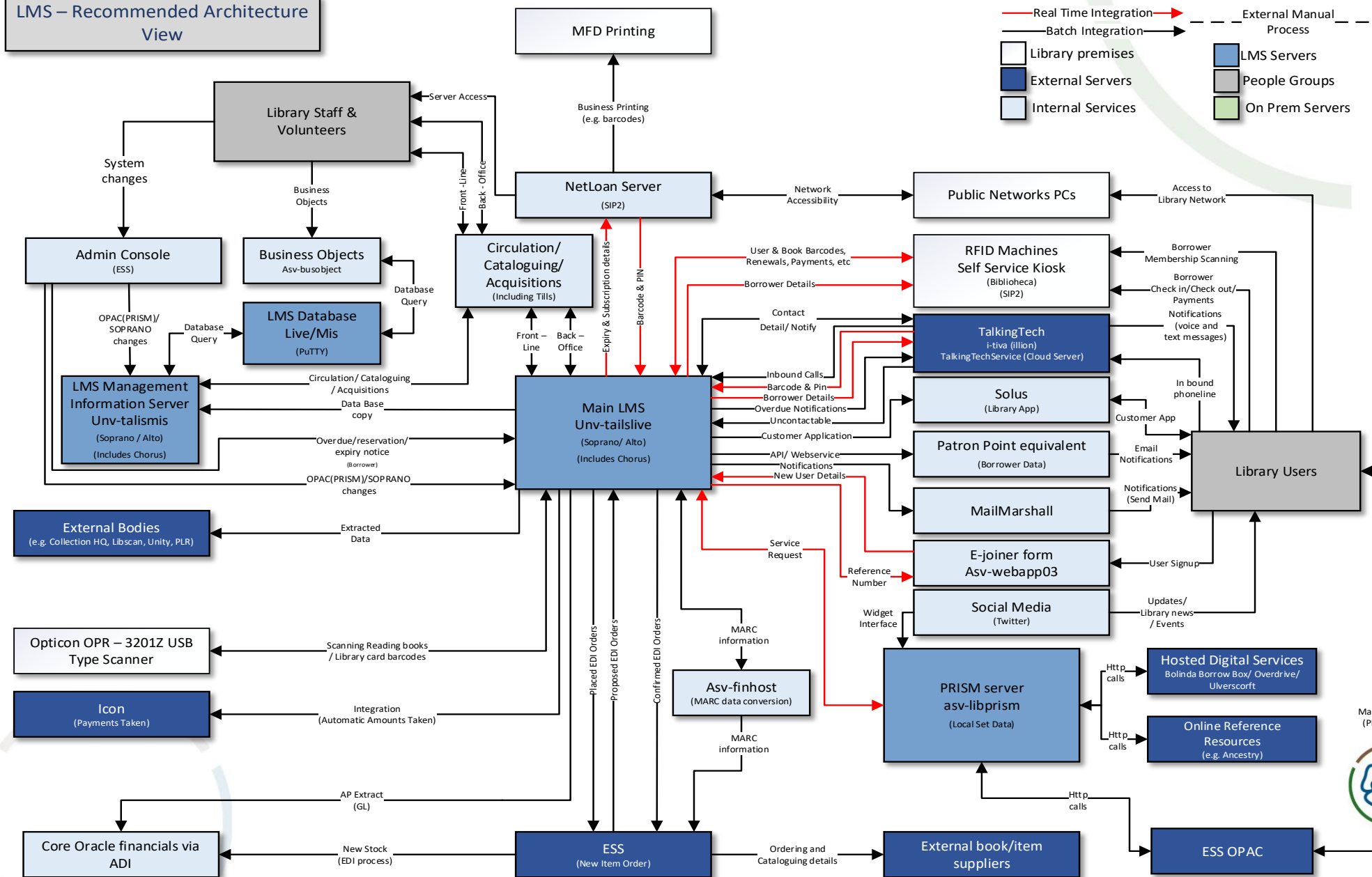
- NYC corporate business continuity plan was signed off by Management Board in March 2023, which identified corporate and critical activities.
- Business Continuity Policy – There's a corporate risk group where directorate business continuity, business impact analysis, incident management plans are discussed.
- Existing critical activities and critical applications are on pre-vesting day Business Continuity Plan, this documentation will be updated during the next annual cycle.
- Business Continuity Plan will need updating by Head of Service w/support from Resilience & Emergencies team.
- Business Continuity is Libraries responsibility as Libraries is a non-time critical service, therefore liaising with Supplier will have to occur.
- The current Business Continuity solution will be adopted for any new supplier.

Disaster Recovery -

- Externally hosted system.
- Wouldn't be affected by a NYC cyber attack.
- Supplier's responsibility to react and recover any lost data.
- Suppliers guarantee at least a 99.5% system uptime.

Recommended Architecture – Solutions View

LMS – Recommended Architecture View



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Implementation Support

Support Required	Why	Estimated Days
Supplier	Data Migration.	9 months - (whole of implementation)
Information Technology UCS/CIA/EUC	Ensure connections are aligned and working. Potential removal of on-prem server (talking tech). Ensure configuration is completed	8-12 days
CST - Community & Social Care	Heavy involvement with implementation, migration, supporting & maintaining the system.	9 months (whole of implementation) – 60-90 days work
CST – Finance	Align Finance system (Oracle) and Income Management System (ICON) connection with LMS solution.	25 days
Finance	Understanding whether there is a new avenue for payment.	5 days
Business Support Exchequer	Testing supplier payments and ICON income processes w/support from CST Finance.	10 days
Communications	Update wording, guidance and links on the Intranet/Internet	10 days
Library Managers	Heavy involvement with the project and implementation of the solution, testing and cascading communications down to library staff & volunteers.	9 months
Library Trainers	Train the Trainer sessions	2-3 days
All Library Staff and Volunteers	Trainers train remainder of staff/volunteers	40 days
Project Manager	Managing the project, ensuring deadlines are been hit and all work that is needed to be carried out, is done so.	9 months – (whole of implementation) 60-90 days
Category Procurement Officer	Liaise with Legal to work up Terms and Conditions, and ensure the contract is signed by the supplier.	2 weeks
Legal	Work up Terms and Conditions w/Procurement & Service Area and making any amendments if needed.	Up to 4 weeks

Implementation Support -Continued

Support Required	Why	Estimated Days
Digital UX	Creation of standard templates and configuration	8 days
Development Team	Ensure that any integrations are understood and resource available to complete	30 days

On-going Support

Support Required	Why	Estimated Days (Internal Only)
E-Services Librarian	If any issues occur on LMS, E-Services Librarian is contacted to be made aware of issues. (e.g order hasn't processed properly, reports showing errors)	Log in daily and when supplier contacts or vice versa.
Information Technology	Liaise with supplier to ensure infrastructure is working.	Weekly
CST - CST - Community & Social Care	User maintenance, upgrades, BAU, support tasks, incident management.	Daily
Supplier	Very frequent checks to ensure system is online and working correctly. If an error occurs for any reason E-Services Librarian is notified.	Every minute
Business Support Exchequer	Process Library payments	Daily

Total Cost of Ownership

High level TCO estimates

Item	Cost During Contract Lifespan
Licences	N/A
Software costs	N/A
Hardware costs	N/A
Infrastructure costs	Removal of on-premise server – Talking Tech service (pa-talktech01) 4 dedicated phone lines, two inbound and two outbound. (Software called iTiva) £0.
Implementation costs	£20,000 - £55,000
Training costs	Included in the price of implementation, however internal trainers will need to train Library Staff & Volunteers. Estimated 40 days to complete training.
External support costs	£33,000 - £70,000
Internal support costs	On-going support mentioned in previous slide
Hosting costs (Internal/External)	External hosting costs included in Annual costs (next slide)

Implementation & Annual Costs

Supplier	Implementation Cost	Annual Costs	Time to implement	Length of Contract
Civica UK	£40,000.00	£70,000.00	6 months	5 years
SirsiDynix	£30,000.00	£59,113.33	6 months	5 years
Education Software Solutions	£0.00	£46,050.00	1-2 months	3 years
PTSF Europe	£55,000	£38,000	9-12 months	5 years
Axiell ALM	£20,000	£33,000	8-12 months	5 years
Innovative Interfaces Incorporated	£40,000	£35,000	9 months	3 years

Next Steps

Approve the recommended solution to open market, implement a new solution (migrate users, set up the Library catalogue, conduct training for employees & volunteers)

Complete a DPIA to systematically and comprehensively document and analyse any personal information processing related to the LMS, whilst identifying and minimising any data protection risks.