



University of HUDDERSFIELD

University of Huddersfield Repository

Devenney, Amy and Stone, Graham

HIKE Report: to evaluate the suitability of Intota and KB+ for the UK higher education marketplace

Original Citation

Devenney, Amy and Stone, Graham (2013) HIKE Report: to evaluate the suitability of Intota and KB+ for the UK higher education marketplace. Project Report. University of Huddersfield, Huddersfield.

This version is available at <http://eprints.hud.ac.uk/id/eprint/17976/>

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

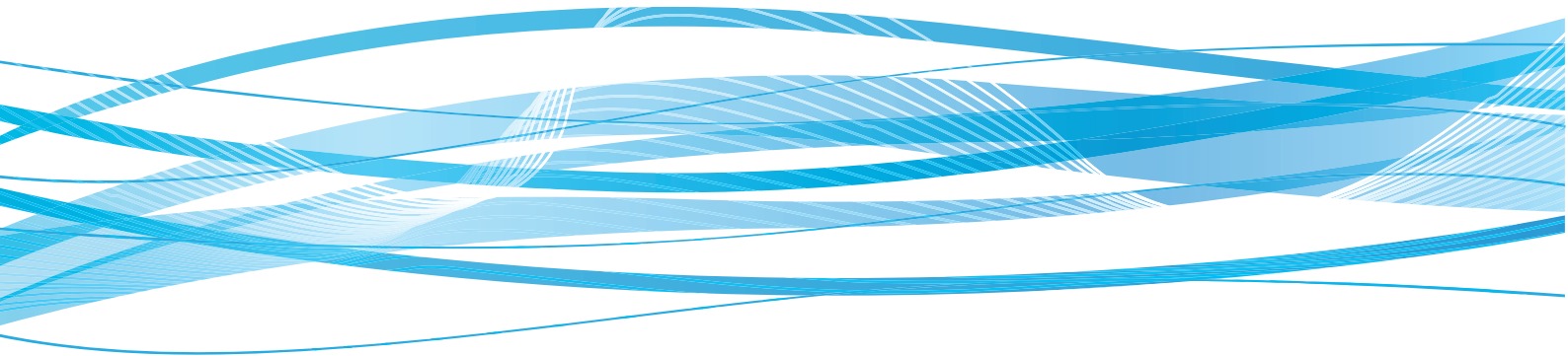
For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

<http://eprints.hud.ac.uk/>

HIKE

Huddersfield, Intota, KnowledgeBase+ Evaluation

Final Report
July 2013



Funded by Jisc

In partnership with JISC Collections and Serials Solutions



SerialsSolutions[®]



Compiled by Amy Devenney and Graham Stone

Published by University of Huddersfield

University of Huddersfield
The University of Huddersfield
Queensgate
Huddersfield HD1 3DH
Email enquiries g.stone@hud.ac.uk

First published 2013
Text © The Authors 2013

Every effort has been made to locate copyright holders of materials included and to obtain permission for their publication.

The publisher is not responsible for the continued existence and accuracy of websites referenced in the text.

A CIP catalogue record for this book is available from the British Library.
ISBN 978-1-86218-117-5

COVER IMAGE:
Mike Spikin



This work is licensed under a [Creative Commons Attribution 3.0 Unported License](https://creativecommons.org/licenses/by/3.0/).

1.0	Acknowledgments.....	4
2.0	Executive Summary.....	5
2.1	Workflows.....	5
2.2	Knowledge Base+ evaluation.....	5
2.3	Intota Evaluation.....	6
2.4	Management of Change.....	6
2.5	Dissemination.....	6
3.0	Recommendations.....	7
3.1	Recommendations for JISC Collections and KB+.....	7
3.2	Recommendations for Serials Solutions and Intota.....	8
4.0	Introduction.....	10
4.1	Project Summary.....	10
4.2	Library Management Systems.....	10
4.3	Intota.....	10
4.4	Knowledge Base Plus (KB+).....	10
5.0	Workflows.....	12
5.1	Introduction.....	12
5.2	Acquisitions Team.....	12
5.2.1	Why are we investigating a new system?.....	12
5.2.2	Vertical analysis showing complexity.....	13
5.3	Ordering.....	14
5.3.1	Streamlining the ordering processes.....	14
5.3.2	Reducing the number of systems used and creating efficiencies while ordering.....	14
5.3.3	Creating efficiencies in the initial ordering process.....	15
5.3.4	Reducing delays in order to shelf time.....	15
5.3.5	Instant access to e-books.....	15
5.3.6	Improved reporting features on the acquisitions module.....	15
5.4	Financial processes.....	15
5.4.1	Non-integration of Agresso and Horizon.....	16
5.4.2	Streamlining the payment process.....	16
5.5	E-Resources and Journals.....	16
5.5.1	Reading lists.....	16
5.5.2	Evaluation.....	16
5.5.3	Core titles.....	17

5.5.4	New subscriptions and Renewals	18
5.5.5	Renewals	19
5.5.6	Conclusion	19
6.0	Knowledge Base+	20
6.1	Introduction	20
6.2	Feedback on KB+ Phase 1	20
6.2.1	Link between the subscription and the related licence information.....	20
6.2.2	Default setting for the individual subscription homepage	21
6.2.3	Clarification of terms.....	22
6.2.4	Comparison tool.....	23
6.3	Feedback on the KB+ renewals feature	23
6.4	Integration of KB+ with other commercial products	24
6.4.1	Aims and Objectives of the systems	25
6.4.2	Population of the two databases	25
6.4.3	The functionality of the systems.....	27
6.4.4	Ideal workflow and use of KB+ and 360 Resource Manager	28
7.0	Intota.....	30
7.1	Introduction	30
7.2	Intota and Interoperability.....	31
7.3	Intota and Dawson Books	32
7.3.1	National Book Contract.....	32
7.3.2	Ordering	33
7.3.3	Book reports.....	33
7.3.4	MARC records	33
7.3.5	E-books.....	34
7.3.6	Out of print books.....	34
7.3.7	Additional features	34
7.4	Intota and Patron-Driven Acquisition	35
7.5	Intota and HE financial systems	36
7.5.1	Problems of existing systems and lack of integration.....	36
7.5.2	Why is such interoperability needed?	37
7.5.3	What is currently available?.....	37
7.5.4	Interoperability between Agresso and Intota.....	37
7.5.5	RFID receiving.....	38

7.5.6	Conclusion.....	38
8.0	Management of Change	39
8.1	ETHICS	39
9.0	Conclusion.....	41
9.1	KB+	41
9.2	Intota as a replacement to the traditional LMS.....	41
9.3	Ideal workflows.....	41
9.3.1	Selection of a new e-journal	41
9.3.2	Renewal of a journal	41
9.3.3	Electronic PDA.....	42
9.3.4	Reading Lists.....	42
9.3.5	Selection by academics/librarians	42
10.0	Implications for the future.....	43
10.1	Implications for JISC Collections and KB+	43
10.2	Implications for Serials Solutions and Intota	43
10.3	Implications for JISC and the wider community	43
10.4	Implications for the University of Huddersfield.....	43
11.0	References	45
Appendix I	47
	Figure 1: Workflow detailing the process of ordering and receiving an Ebook.....	47
	Figure 2: Workflow to detail the process of ordering and receiving a book by DawsonEnter.....	48
	Figure 3: Workflow to detail the process of ordering and receiving a book from suppliers within the National Book contract.....	49
	Figure 4: Workflow to detail the process of ordering and receiving a book from suppliers within the National Book contract.....	50
	Figure 5: Workflow detailing process undertaken for book reports	51
	Figure 6: Workflow detailing the financial process for paying for books	52
Appendix II	53
Appendix III	56
	Figure 1: Ideal workflow – selection of a new title.....	56
	Figure 2: Ideal renewal of a Journal.....	57
	Figure 3: Ideal workflow for electronic PDA	58
	Figure 4: Ideal workflow for the acquisition of resources of Reading lists.....	59
	Figure 5: Ideal workflow for academic/subject team suggestions	61

1.0 Acknowledgments

The authors would like to thank all those that have assisted during the project, particularly:

- Jisc for funding the project
- Ben Showers, Programme Manager for the Library Systems Programme, for his invaluable support and advice
- Jane Burke and her colleagues at Serials Solutions
- Damyanti Patel, Owen Stephens and the whole KB+ team for their assistance
- Our sister projects on the Library Systems Programme, particularly the LMS Change project, Sero Consulting and the University of Wolverhampton for their encouragement and exchange of ideas
- Heather Sherman, Head of Technical Development at Bertram Books
- Briony Heyhoe-Pullar and the Acquisitions Team at Huddersfield
- Mark Pullar, Head of Learning Services at MidlandHR for his assistance on the management of change section
- Colleagues at the University of Central Lancashire for their assistance in the sections on RFID for acquisitions and financial integration
- Delegates at the JISC HIKE project workshop, held on 26 February 2013 at the University of Huddersfield for their contribution and sanity testing
- Yvonne Whiting and the Agresso team at the University of Huddersfield
- The project team:
 - Sue White (Director of Computing and Library Services)
 - Dave Pattern
 - Allison Larkins
 - Liam Earney
 - Magaly Bascones

2.0 Executive Summary

HIKE (Huddersfield, Intota, KB+ Evaluation) is a Jisc funded project managed by Computing and Library Services at the University of Huddersfield and the Knowledge Base Plus (KB+) project at JISC Collections. We are also working closely with Serials Solutions and their Intota development team.

The aim of the Jisc HIKE project is to evaluate the suitability of Intota and KB+ for the UK higher education (HE) marketplace and provide recommendations for further developments of both products. The representation of the University of Huddersfield on the Community and Technical Advisory Groups of KB+, and on the Serial Solutions Advisory Board and UK User Group make the institution ideally placed to carry out this evaluation. In order to assess the success of the project we identified several measurable targets:

2.1 Workflows

The approach the project took was that in order to evaluate the suitability and potential of both KB+ and Intota as a replacement for the traditional Library Management System (LMS) we had to understand the issues that arise from the workflows and processes that we have in place for the current LMS and related university systems. Understanding these workflows allows us to define what we want – and want to avoid – in a new system.

Much of the groundwork relating to the journals workflow had been carried out as part of the SCONUL Shared ERM and TERMS projects. Therefore, the project team concentrated on the Acquisitions workflow, including PDA and reading list requests, much of which is still fairly new to the team. These workflows are discussed in greater detail in section 6.0, while section 10.3 outlines some potential new workflows. All workflows are available in Appendices I-III.

After investigation of the Acquisitions workflows it was possible to create a ‘wish list’ which highlighted a number of features and efficiencies for consideration by Serials Solutions for the development of Intota.

The workflows and evaluation of the products were highlighted and discussed with KB+ and Serial Solutions in a number of reports, face-to-face meetings and blog posts throughout the project and brought together in this final project report.

2.2 Knowledge Base+ evaluation

The project team worked alongside the KB+ team at JISC Collections in testing the system. Particular attention was paid to populating KB+ with licence information and data. The project looked critically at whether adoption of KB+ into the Huddersfield workflows would create efficiencies. A number of recommendations were made that the project felt would enhance KB+.

The team also spent time testing and reporting back on the KB+ renewals feature, again, this was critically assessed, with a number of further recommendations being made regarding this feature.

Finally we compared KB+ against 360 Resource Manager, the ERM option from Serials Solutions. The outcomes of the comparison will also be of use to those universities which subscribe to ERMs from alternative providers. The project fully supports the use of both KB+ and commercial ERM. Each system has its own individual strengths, while also complimenting each other. However, the project believes that full integration, via an API, is required in order for the maximum efficiencies to be

made. Section 6.0 discusses this further and makes a number of recommendations (see also section 3.0).

As a result of our work with the KB+ team, we firmly believe that KB+ will reduce duplication of staff time and effort in the population and on-going maintenance of individual knowledge bases and will foster shared community activity and partnership to reduce the amount of work undertaken by each institution.

2.3 Intota Evaluation

We investigated the requirement for Intota to be interoperable with other systems in order to be attractive for the UK marketplace. We began by identifying the systems with which interoperability was desired before moving on to evaluating the importance of each system to the running of the library. We then considered the interoperability of Intota with Dawson Books, Patron-Driven Acquisition and HE financial systems in more depth. We held a HIKE day in February 2013 as a way of crowdsourcing the work we had done. After producing a substantial list of requirements for interoperability we grouped them and assessed the dependency of the library on these external systems. As a result, the project made a number of recommendations for the development of Intota, section 8.0 discusses this further and makes a number of recommendations (see also section 3.0).

2.4 Management of Change

We investigated the cultural change required to successfully implement such an innovative system as Intota; however, this is not an objective of the project that can easily be measured as a success or failure. Therefore we made a number of observations on the management of cultural change during the implementation of a new system in order to ensure that all staff are happy and comfortable with the change.

2.5 Dissemination

The HIKE project has a blog, which will continue to be updated after the project's completion at: <http://library.hud.ac.uk/blogs/projects/hike/>

This final project report is also available at: <http://eprints.hud.ac.uk/17976>



This work is licensed under a [Creative Commons Attribution 3.0 Unported License](http://creativecommons.org/licenses/by/3.0/).

3.0 Recommendations

3.1 Recommendations for JISC Collections and KB+

Recommendation 1: We recommend that a link to the licence properties and PDF of the licence that relates to the subscription is included.

Recommendation 2: We recommend that the default setting of the subscription homepage is altered so that the subscription detail is automatically open and the details are visible.

Recommendation 3: We recommend that it would be beneficial to have a comparison tool within KB+ (or as an extension of ELCAT), which would allow us to compare any licence on KB+, whether nationally or individually agreed, in any format with another.

Recommendation 4: We recommend that the renewals spreadsheet also include reasons as to why some of the titles are missing year on year, e.g. if they have ceased publication, transferred to another publisher, combined with another journal etc.

Recommendation 5: We recommend that the renewals spreadsheet identify which journal titles are hybrid (subscription and OA) and which are OA.

Recommendation 6: We recommend that the renewals spreadsheet that is uploaded into KB+ is tweaked in order for it to be able to be uploaded into Serial Solutions to amend the knowledgebase to accurately reflect our new holdings.

Recommendation 7: We recommend that the JUSP (Journals Usage Statistics Portal) information should be included or linked to on the comparison spreadsheet.

Recommendation 8: We recommend that UK Serials Solutions subscribers populate the following fields in 360 Resource Manager:

- Fair clause – permitted uses of the published material such as ILL
- Scholarly sharing – non-systematic classroom use e.g. the printing of a section of a journal by a tutor for their class as a one off.
- Electronic link – VLE or wiki
- Perpetual access holdings - indicate the dates of our perpetual access e.g. 1996 – 2000
- Governing law/copyright/governing jurisdiction = UK/US copyright
- Execution date – date the licence was signed and agreed
- There are also a number of fields relating to the use of published material and repositories which may also be useful. However, this would require integration with SHERPA.

Recommendation 9: We recommend that both systems are used but for different purposes:

- 360 Resource Manager will help the Information Resources team in the management of electronic resources in an active way
- KB+ will provide an ideal reference tool for answering enquiries relating to the access and use of e-resources and the administration of NESLi2 subscriptions.

Recommendation 10: For KB+ and Serials Solutions subscribers we recommend that the information about the licences and the changes to identify the core titles and access dates etc.

should be enacted in KB+ first and then exported to 360 Resource Manager to save the duplication of work.

Recommendation 11: We recommend that exports from KB+ must be able to reflect ALL the locally made amendments by each institution to the subscriptions.

Recommendation 12: We recommend that both systems need to be able to display the same fields – or at least a set of core fields.

Recommendation 13: In order for this proposed data transfer between the two systems to be achieved, we recommend that KB+ develop an API to enable the transfer of data between KB+ and commercial ERMs.

3.2 Recommendations for Serials Solutions and Intota

Recommendation 14: We recommend that Intota would need to find a standard way of displaying the data from all of the different suppliers.

Recommendation 15: It is recommended that Intota develops a series of default settings which can be amended by individual libraries to ensure that if the book is available from any of the chosen suppliers they are shown immediately and the search is only widened if there are no results from the chosen suppliers or the library manually chooses to widen it.

Recommendation 16: We recommend that a notification or pop-up be introduced after the order has been sent to confirm the number of items ordered

Recommendation 17: We recommend that Intota is able to receive this feed and display the information within a dashboard.

Recommendation 18: We recommend that Serial Solutions consider the possibility of poor records when developing Intota.

Recommendation 19: We recommend that immediate access, alongside real-time invoicing, must be available to institutions through Intota.

Recommendation 20: We recommend that Intota develops out of print purchasing workflows between out of print suppliers and approved book suppliers with shelf ready capabilities.

Recommendation 21: We recommend Intota develop a mechanism to see whether an item is in the system already.

Recommendation 22: We recommend that Intota create a way to track e-book purchases against aggregated e-book collections in conjunction with KB+.

Recommendation 23: We recommend that Intota develop an integrated ILL/PDA system, which allows users choice and provides detailed management reports.

Recommendation 24: We recommend that Intota provides a complete set of reports for libraries to assess the success of PDA against traditional collection development processes.

Recommendation 25: We recommend that in order to be a valid proposal for the UK HE community, Intota must integrate with Agresso (and any other financial systems on offer).

Recommendation 26: We recommend that an API between Intota and Agresso is developed to pull data into a dashboard.

4.0 Introduction

4.1 Project Summary

The overall objectives of the Jisc funded HIKE (Huddersfield, Intota, KB+ Evaluation) project were twofold:

1. To investigate and evaluate the possibility of integrating data flows between KB+ and local knowledge bases at Huddersfield and the Serials Solutions knowledgebase behind Intota
2. To evaluate the suitability and potential of Intota as a replacement to the traditional LMS in the UK market and make recommendations for further enhancements to Serials Solutions.

The project built upon the work carried out by Huddersfield in both Phase I of the KB+ project, the TERMS project and as an early adopter of Summon.

The project used regular reports via a project blog using appropriate tags as well as targeted tweets to engage the community using the #jiscHIKE hashtag.

<http://library.hud.ac.uk/blogs/projects/hike/>

The project also worked closely with the KB+ Community and Technical Advisory Boards, the Serials Solutions Advisory Board and the UK Serials Solutions User Group.

4.2 Library Management Systems

Legacy Library Management Systems (LMS) are hindering academic libraries, not only do they require a dedicated team of specialists to support them, but their workflows, often based around print resources, are inflexible requiring lengthy workarounds to deal with electronic resources. Additionally, their lack of integration with important university systems (finance, student records, etc.) often means duplication of work and therefore increased risk of error.

Problems with the traditional LMS include:

- Their inability to deal with the changing formats of resources, digital resources have superseded print collections often leading to complaints by staff that the system is not up to the job
- The confusion created by the different interfaces encountered by users as they search for information. Users familiar with the ease of searching the internet desire the same ease when searching the library for information.¹

4.3 Intota

Intota is a single, Software-as-a-Service solution that aims to support the entire resource lifecycle for libraries, including selection, acquisition, cataloguing, discovery and fulfilment regardless of the format of the resource. Carl Grant² describes Intota from Serials Solutions as “a true cloud computing solution” and a “total approach from end user discovery to the library’s back room”. Serials Solutions conceived Intota around the principles of linked data, interoperability and lower total cost of ownership.

4.4 Knowledge Base Plus (KB+)

Following work from Jisc and significant investment from HEFCE, Knowledge Base Plus (KB+), released in September 2012, aims to remedy some of the challenges currently faced by UK academic

institutions in the management of subscribed e-resources. KB+ has been developed by JISC Collections following the findings of the Jisc/SCONUL Shared Services for Electronic Resources Management (ERM) Project³. One of the main issues that arose from this project was that management and maintenance of correct data across a wide variety of library systems is an unnecessary and costly duplication of staff time. It is hoped that KB+ will help to alleviate this issue by:

- Providing accurate and up to date resource management information
- Facilitating the ability to share data between diverse systems

In achieving these aims KB+ will minimise the duplication of staff time and effort in the population, maintenance and correction of knowledge bases, which will allow institutions to focus on improving services with e-resources and foster shared community activity which will reduce the amount of work undertaken by the institution but increase the breadth of activity.

5.0 Workflows

5.1 Introduction

One aim of this project is to evaluate the suitability and potential of Intota as a replacement for the traditional LMS in the UK market. However, before we can know what we want from such a system we need to understand the issues that arise from the workflows and processes we have in place for the current LMS, Horizon, and related university systems.

Once we have established these issues it will be possible for us to identify what we expect from a new system, such as Intota, and where it can improve on the older models. In order to do this we decided to concentrate initially on the Acquisition's workflow at Huddersfield to try to ascertain which areas posed issues for our staff. Compiling workflows for the main processes of the Acquisition team allowed us recognise areas where efficiencies can be made, either by de-duplication of work, through tasks which are time intensive or areas where accuracy could be improved. It is hoped that by identifying areas in need of improvement we will be able to describe criteria against which we can evaluate the success of Intota and also suggest areas for further development.

5.2 Acquisitions Team

The acquisitions workflows (see Appendix 1) highlight some of the main tasks undertaken by the Acquisitions team. It is worth noting that some of the workflows highlight local practice at Huddersfield and that this will differ in other institutions. However, we believe that they will prove useful for others when analysing their own processes.

We also decided to examine these processes from another angle. Firstly we considered the issues with Horizon and further demands that may be placed on the system in light of future technological developments, structural changes and financial constraints. We then moved on to consider a vertical analysis of the processes undertaken by the Acquisitions Team. This type of analysis allowed us to recognize the different levels of work complexity and importance.

5.2.1 *Why are we investigating a new system?*

Further to the problems outlined above, there are also a number of existing issues with the current LMS:

- No integration with our reading list software, MyReading – manual checks have to be done between the LMS and the reading lists. At the other end of the process, once the books have been processed they have to be manually added to the MyReading list software
- Ordering processes – there is no one unified and streamlined ordering process, this is dependent on the format and the supplier of the item
- Ability to monitor and plan budgets is poor
- Ability to create reports and obtain relevant statistics is poor
- No integration with Agresso (the university's financial system) resulting in duplication of financial information
- No integration with supplier databases, current practice is to manually import order records and MARC records.

We have also identified a number of future requirements that will cause issues with the current system:

- Ability to purchase, display and provide access to e-resources
- Ability to cope with variant forms of e-resources
- Ability to cope with advances in purchasing options e.g. punch-out systems
- Ability to cope with advances in student resource requirements
- Ability to be able to analyse usages statistics and provide detailed management information
- Ability to keep licence and subscription information together and linked to the relevant resource
- Availability of all information relevant to the resource to make an informed decision before purchasing (individual book price, discount, servicing charge, licence information, access criteria, credits, etc.).

5.2.2 Vertical analysis showing complexity

We carried out a horizontal analysis of the existing workflows to identify all the tasks undertaken within the department (see Appendix 1) before moving on to consider a vertical analysis. This type of analysis allowed us to recognize the different levels of work complexity and importance and is based on the *Effective Systems Design and Requirements Analysis: the ETHICS Approach* by Enid Mumford.⁴ The analysis clarified the following activities:

Operating activities – to include the regular tasks that allow the main functions of the department to be carried out

- Checking and amending orders from the subject teams before sending them to the suppliers
- Creating order records on the LMS
- Receiving items from the suppliers and checking the correct item has been sent
- Processing and receiving items on the LMS
- Checking access to ordered e-books and making them available electronically
- Dealing with enquiries from customers
- Dealing with and payment of invoices relating to library resources
- Linking new items to entries on reading lists.

Problem prevention/solution activities – to identify problems which must be prevented or quickly and easily solved (what we do not want to happen)

- Customer enquiries need to be quickly and easily dealt with
- Incorrect/duplicate items ordered
- Input of the wrong financial information
- Spining errors which make the item impossible to find on the shelf
- Incorrect bibliographic information on bib records.

Co-ordination activities – to identify the activities that are co-ordinated within the department and those which are co-ordinated with other systems/departments

- Order of books is done in co-ordination with the subject teams, the DawsonEnter system (our preferred supplier in the National books contract) and the MyReading software

- Payment of invoices in co-ordination with the Finance department
- Dealing with book notifications with the subject teams
- Ensuring that the books are on reading lists - needs to be co-ordinated with MyReading software
- Importing of MARC records in co-ordination with the DawsonEnter system
- Coordination with ASIS (the student record system – SITS vision) in order for the MyReading software to pick up module information
- DawsonEra (and Coutts MyiLibrary) platform, used to access ebooks
- Access to supplier websites and databases when ordering resources.

Development activities – to identify products, services, etc., which need to be developed/improved.

- Receiving process (RFID receiving)
- Checking
- Patron Driven Acquisition (PDA)
- Inter-Library Loans (ILL) linked to acquisitions
- EDI invoicing.

Control activities – to identify how the department is controlled to ensure it works efficiently and meets its targets

- Sample weeks of order to shelf times
- Staff task logs
- Statistics
- Quality control
- Checking order confirmations
- Cost Centre and nominal assignments are sent for budget holder approval
- PDA parameters.

From the analysis carried out above it is possible to identify a number of issues with the processes carried out by the Acquisitions team, based on the use of Horizon, that need to be considered.

5.3 Ordering

5.3.1 Streamlining the ordering processes

As demonstrated by the workflows in Appendix 1 (figs. 1, 2, 3 and 4) the Acquisitions Team at Huddersfield has four different ordering processes dependant on the format of the item and the supplier used. We suggest that this needs to be streamlined into one efficient and easier ordering process, which deals with all the different formats of the items and can source the various suppliers used. This development should help to reduce staff time and limit the likelihood of human error.

5.3.2 Reducing the number of systems used and creating efficiencies while ordering

It is also possible to see the large number of systems and the frequency with which they are used during the acquisitions process in order to get the items from order to shelf. Movement between the different systems is time consuming and each step requires a high degree of accuracy. Reducing the

number of systems used during the acquisitions process would accelerate the process and help reduce the potential for error.

5.3.3 *Creating efficiencies in the initial ordering process*

While the two points above deal with creating a single process for ordering all formats of items and reducing the number of systems used in the ordering process there are also efficiencies that could be made within the ordering process itself.

- Figure 2, in Appendix 1, shows the movement between the different systems during the ordering process. The order details on DawsonEnter are checked before the order is sent to Dawson, this order is then imported to Horizon via Filezilla (our ftp server) to create a Purchase Order. The Purchase Order is approved and sent via EDI back to Dawson to place the order, this process could be simplified
- Similarly in Figures 3 and 4 the copying and pasting of key information from the Purchase Requests, created by the subject teams, to the Purchase Orders, which can be sent to Dawson also show where efficiencies could be made.

5.3.4 *Reducing delays in order to shelf time*

With the exception of e-books, all ordered items are received in the Acquisitions team, unpacked and then placed on the holding shelves before being dealt with. At busy times this has the potential to delay the process and impact on student satisfaction. A recent visit to consult with colleagues at University of Central Lancashire (UCLAN) discussed their implementation of RFID for book receiving. All but one copy of each book goes straight out on to the shelves; this copy is then sent to Acquisitions to check the bibliographic and item information. While this step is not crucial to the development of Intota it is important that we bear this innovation in mind when evaluating Intota. Such a change would also decrease the staff time spent handling the new books as they currently handle every copy bought whereas under RFID they would only handle one copy of each book.

5.3.5 *Instant access to e-books*

There is currently a minimum 24-hour delay between EDI'ing the Purchase Order to Dawson and receiving the e-book confirmation and link. This delay may frustrate users familiar with the instantaneous access to e-books available via Amazon and I-Tunes. It is suggested that instant access must be looked at when developing Intota and other library services platforms.

5.3.6 *Improved reporting features on the acquisitions module*

It is important that we keep account of everything spent outside the National Book Contract; currently this is recorded manually on a spreadsheet in addition to Horizon and Agresso. A more advanced reporting feature, which would allow more detailed reports to be run, would be advantageous.

5.4 *Financial processes*

The aim of these suggested improvements is to streamline and create a more efficient ordering process, which would reduce the staff time spent on tasks and create a better user experience. Although Huddersfield has a set of quality control checks in place and a service level agreement with major suppliers, errors can occur as part of the ordering process. This has a negative impact on the user experience of the library; a system that can reduce the risk of these mistakes will be highly sought after.

Similarly, by observing the financial processes that are undertaken in the Acquisitions team to monitor and plan spending in the book budgets and pay for the items acquired, it is possible to discern a number of issues that need addressing in order to create a more streamlined, accurate and efficient process. The issues are discussed below.

5.4.1 Non-integration of Agresso and Horizon

Non-integration results in duplication of work. Before paying invoices for items, we manually check all the delivery notes to ensure all items have been received despite the items already having been received on Horizon. Similarly financial information, such as book price, is manually input into Horizon and then manually input into Agresso. It is unlikely we would be able to use Intota in place of Agresso; therefore integration between the two systems will be essential.

5.4.2 Streamlining the payment process

Appendix 1, Figure 6 shows the number of steps and variety of systems that are used to record and pay invoices for items received. Although the book reports are a small element of the acquisitions process they are nevertheless important. We need to maintain accurate management reporting, e.g. to report on items that are not likely to be published in the current financial year or cancelled items which release money back into the budget. However, the workflow relating to book reports (Appendix 1, figure 5) highlights how multi-faceted the process is and how reliant it is on emails and the transfer of information to the LMS; this increases the possibility of delays and transfer of incorrect information. Therefore a system such as Intota must investigate and produce a more streamlined and reliable system of providing accurate and timely book reports.

5.5 E-Resources and Journals

When looking at the workflows for E-Resources and journals we concentrated on the main processes in the lifecycle of a journal – the selection of a new e-journal, the renewal of an e-journal and a mid-deal renewal. We define a mid-deal renewal as the renewal year on year of a multi-year deal. The majority of these deals run from January to December, however, some ‘mid-year’ renewals also take place at other times. All the workflows for the E-Resources and Journals team can be found in Appendix II. It is possible to identify a number of issues within these processes where efficiencies could be made and as such need to be considered by KB+ and Intota.

5.5.1 Reading lists

New title requests usually come from subject teams after liaison with academics and researchers in the Schools. However, with the development and implementation of the MyReading project it is important that we consider how we will identify journal titles that academics have indicated contain relevant material for the students, but which we do not currently subscribe to. Currently colleagues manually check reading lists against holdings. It was suggested that it may be possible to create an automated alert so that when a journal we do not have access to appears on a reading list the team is alerted to look in to purchasing access if appropriate.

5.5.2 Evaluation

Before subscribing to a journal, the team carry out an evaluation process on the proposed title. This data is then passed back to the subject teams to allow them to make an informed decision. The information that is collected by the team is outlined in the Appendix II, Figure 7 and includes the fourteen deal breakers for consideration when licensing e-resources as recommended by the TERMS project.⁵

Collecting information from different sources can prove time consuming. It was suggested that the reporting feature on KB+ could be developed further to include more of the information that is used to evaluate the resource. Although the reporting feature currently looks at some of this information, such as licence criteria, it could be enlarged to include the criteria recommended as best practice by TERMS.

However, although these points are important for the institution to consider before entering into an agreement, they are less of a concern if the resource has appeared on a reading list or the request is a result of specific research funding. In this case the new journal title request would by-pass much of the evaluation stage, although given the current monetary constraints it may mean that the ordering of a new title requires the cancellation of another – and for this to happen, some evaluation must take place.

5.5.3 Core titles

Core titles are at the very heart of understanding many 'big deal' journal subscriptions and are crucial when looking at post-cancellation access. However, core titles are a very complex issue and vary from institution to institution and publisher deal to publisher deal.

The NESLi2 model licence defines a core title as, "the core collection of journals selected by the Institution from the Licensed Material. The core collection will be updated by the Publisher in consultation with the Institution at least annually. The Publisher will list the selected journals in the core collection of each Institution in Schedule 2 of such Institution's NESLi2 Licence for Journals."⁶ So basically, the core titles are the ones we had before the big deal - any title that is subscribed to individually (either as electronic, print or electronic and print) and is invoiced individually.

Core titles can also be found outside the negotiated big deal – this is where we have part of the deal, e.g. the STM collection, but the publisher requires us to keep subscriptions to all of their content.

Post-cancellation access to subscribed content is dependent on whether the title is core or part of a package. Core titles, as historical individual subscriptions, allow you to retain access to all the issues for the years that you have subscribed to. So for the core titles within deals you will still retain access to the years you have paid for. Generally for titles that are part of negotiated deals, once the deal has ended you will only retain access to the electronic issues for the years that you were paying. For example, if a deal is negotiated between 2009-2012 for access to a group of journals covering the years 1990-present, while you are paying for the deal you will have access to all the electronic issues between 1990 and the present, however, once the deal has expired, if you do not renew your subscription you will only retain access to electronic issues between 2009-2012. Obviously post-cancellation access is completely dependent on the contract between the library and the publisher.

Cancellation allowances are governed by core and non-core titles and can vary depending on an institutions subscription and are never consistent between publishers. For example, Huddersfield subscribes to the STM collection from one publisher and has core titles within this collection and also within the SSH collection which we do not subscribe to. Generally we are not allowed to cancel any core titles inside the collection we subscribe to or in the 'unsubscribed' SSH collection above our cancellation allowance specified in the licence. However, for any title cancelled within a package all access is lost. These rules apply to any titles with an e-element.

Another deal differs in that it is e-only content and is based on the JISC Collections pricing bands rather than core subscriptions pricing. This has eliminated the idea of core subscriptions until the end of the deal. During the deal all core subscriptions are identifiable but are in a limbo state until the end of the deal. When the deal expires all core titles will be returned to their previous status and will be invoiced individually unless we cancel them or another deal is negotiated. Within this deal access to the titles as part of the deal will be available for the years we have subscribed to but access to those titles identified as core will be retained from any previous access we may have had in addition to the years of the deal.

Other publishers also have the notion of core titles within their deals. While the definition of what constitutes a core title remains the same throughout the different publishers, each individual publisher will impose different regulations and restrictions about post-cancellation access and cancellation allowances on their core titles.

The question is – how do we translate this complicated process to KB+ and 360 Resource Manager? Especially when we have core titles that either do not exist for the deal or that are not even in the deal.

Each year, as part of the NESLi2 deals renewal process, we receive a list of our ‘core’ titles from each publisher. We then work through the list checking each title recorded as a ‘core’ title against our own lists of ‘core’ titles and the information from our subscription agent to identify the discrepancies between them. For the majority of the titles there is agreement between the journals team, the publishers and the subscription agent, however, there are always a small number of titles that we do not agree on – and this happens year after year after year! While some are titles where all parties do not agree as to whether they are core or not, others are trials that will automatically renew if they are not cancelled.

Discrepancies in the lists cause major headaches for all parties during the renewal process as we have to open negotiations to resolve the differences that arise despite already having agreed a contract. This process can take a long time due to the queries that go back and forth, and the explanations and discussions over the different titles. This process can also, occasionally, impact on the student experience. If the titles have not been agreed, the payments not made and the new agreements not signed by each party before January it can result in the loss of access to the materials. Other reasons for having an accurate and up to date understanding of our subscriptions can be found in a blog post describing KB +.⁷

5.5.4 New subscriptions and Renewals

The team currently completes paper requisition forms, which are passed to the Acquisitions Team to raise an order on Agresso. Once this order has been approved the order is placed with the subscription agent/publisher and they are given the purchase order number. Details of the order, such as the order number and price, are also entered onto a spreadsheet. To simplify the process we would ideally like a punch-out system from the Agresso eMarketplace to Swets, JISC Collections and other subscription agents and publishers. Any of the additional information that is recorded on the spreadsheet relating to the journal title could be recorded in the note field of the journal on KB+. This process could also be used to purchase the renewal subscriptions that occur every year.

5.5.5 Renewals

As laid out in TERMS best practice, the renewal process starts with an intelligence gathering stage.^{8,9} This data, such as communication with vendors/publishers, periods of downtime and user feedback should be collected throughout the year and recorded in a consistent manner. KB+ and 360 Resource Manager offer the facility to be able to record this information in a consistent place and manner. Renewals will be discussed further as part of section 6.3.

5.5.6 Conclusion

Having studied the workflows for the E-Resources and Journals team it is clear that they are complex and time-consuming processes that require attention to detail. It is hoped that with the release of KB+ and the development of Intota these particular difficulties in the renewals process for the journal teams, publishers and subscription agents may start to become a thing of the past. With KB+ offering institutions the facilities to keep an electronic record of their 'core' journal titles and to upload electronic documents it is hoped that the management of journal subscriptions will become easier, more efficient and more accurate, and in time making renewal negotiations become less problematic.

It is crucial that KB+ and Intota consider and develop the areas where efficiencies can be made.

6.0 Knowledge Base+

6.1 Introduction

In order to try and understand how KB+ is going to help with the management of the electronic resources lifecycle we quantified the number of resources we have. In total we have access to and guide students towards 645 different e-resources, these include: subscriptions such as Early English Books Online; negotiated journal packages such as ScienceDirect; free resources such as 19th century British pamphlets; individual journal subscriptions with an e-access element; and links to other miscellaneous resources.

- Of these 645 resources, 483 (75%) – mostly journals and aggregated resources - are available through Serial Solutions knowledge base, of these 483 we only have licences for 175 (36%) of the resources.
- Of the 162 resources that are not available through Serial Solutions we have licences for 66 (40%).

Therefore we only have around 37% of the possible licences.

Although it appears as though we have only a small percentage of the licences we should have, in a number of instances licences are not available for the resource at all. Some are free or open access, others are resources from small vendors, which although require a subscription do not have a licence. This is something we need to consider in future, we could for example, approach publishers/vendors to accept the SERU guidelines.¹⁰

6.2 Feedback on KB+ Phase 1

With the possibility of 645 licences to look after and the need to ensure all the subscription details are correct, it is crucial that we have a resource that can help maintain accurate and historical information and so reduce the amount of staff time spent on such tasks. During this project, in order to evaluate the use of KB+ and provide feedback to the development team, we populated the KB+ database with the subscription and licence information relevant to the University of Huddersfield.

6.2.1 *Link between the subscription and the related licence information*

While linking one of our subscriptions with its relevant licence we realised there was no direct link to the licence in its PDF format or the licence properties once you have gone into the actual subscription page and can see the journal title entitlements. Figure 6.1 shows the page where the entitlements of an individual subscription are shown and where there is no link to the relevant licence.

KB+ Manage Amy Devenney

Home / University of Huddersfield Current Subscriptions / Subscription 213 Details Editable by you CSV Export (No header)

University of Huddersfield Subscription Taken

Wiley Online Library Full Collection 2012_2014 NESLI2

Current Entitlements Add Entitlements Documents Notes

Show/Hide Subscription Details +

Entitlements (1 to 10 of 1355)

Filter: Submit Query

#	Title	ISSN	eISSN	Core	Start Date	End Date	Embargo	Coverage Depth	Coverage Note	Actions
<input type="checkbox"/>	<input type="text" value="Edit Selected"/>	<input type="text" value="Apply Batch Changes"/>		<input type="button" value="Click to edit"/>	<input type="button" value="edit"/>	<input type="button" value="edit"/>	<input type="button" value="Click to edit"/>	<input type="button" value="Click to edit"/>		
<input type="checkbox"/>	1	ABACUS	0001-3072	1467-6281	<input type="checkbox"/>	01 January 1997	<input type="button" value="Click to edit"/>	<input type="button" value="Click to edit"/>		<input type="button" value="Delete"/>

Figure 6.1 KB+ individual subscription page

Recommendation 1: We recommend that a link to the licence properties and PDF of the licence that relates to the subscription is included.

We believe this would benefit users as they would easily be able to look up an individual journal and link to the licence that it is controlled by. Although there is a link from the licence to the subscription it controls, this implies that you need to know the licence to find the title.

6.2.2 Default setting for the individual subscription homepage

While adding data to KB+ we noted that when you go in to an individual subscription it automatically hides the subscription detail. However, this hides important details (see Figures 6.2 and 6.3).

KB+ Manage Amy Devenney

Home / University of Huddersfield Current Subscriptions / Subscription 213 Details Editable by you CSV Export (No header)

University of Huddersfield Subscription Taken

Wiley Online Library Full Collection 2012_2014 NESLI2

Current Entitlements Add Entitlements Documents Notes

Show/Hide Subscription Details +

Entitlements (1 to 10 of 1355)

Filter: Submit Query

#	Title	ISSN	eISSN	Core	Start Date	End Date	Embargo	Coverage Depth	Coverage Note	Actions
<input type="checkbox"/>	<input type="text" value="Edit Selected"/>	<input type="text" value="Apply Batch Changes"/>		<input type="button" value="Click to edit"/>	<input type="button" value="edit"/>	<input type="button" value="edit"/>	<input type="button" value="Click to edit"/>	<input type="button" value="Click to edit"/>		
<input type="checkbox"/>	1	ABACUS	0001-3072	1467-6281	<input type="checkbox"/>	01 January 1997	<input type="button" value="Click to edit"/>	<input type="button" value="Click to edit"/>		<input type="button" value="Delete"/>

Figure 6.2 KB+, showing hidden subscription details

KB+ Manage Amy Devenney

Home / University of Huddersfield Current Subscriptions / Subscription 213 Details Editable by you CSV Export (No header)

University of Huddersfield Subscription Taken

Wiley Online Library Full Collection 2012_2014 NESLI2

Current Entitlements Add Entitlements Documents Notes

Show/Hide Subscription Details

Subscription Information

License Wiley Online Library (Journals) 2012-2014 NESLI2

Package Name Full Collection (Wiley)

Vendor

Consortia NESLI2

Start Date 01 January 2012

End Date 31 December 2014

Nominal Platform Wiley Online Library

Entitlements (1 to 10 of 1355)

Filter:

#	Title	ISSN	eISSN	Core	Start Date	End Date	Embargo	Coverage Depth	Coverage Note	Actions
<input type="checkbox"/>	Edit Selected		<input type="button" value="Apply Batch Changes"/>		<input type="button" value="Click to edit"/>	<input type="button" value="edit"/>	<input type="button" value="edit"/>	<input type="button" value="Click to edit"/>	<input type="button" value="Click to edit"/>	

Figure 6.3 KB+: subscription detail open

Recommendation 2: We recommend that the default setting of the subscription homepage is altered so that the subscription detail is automatically open and the details are visible.

A link could be included that jumps down to the title information if you do not want to see the subscription detail.

Note: This recommendation was based on KB+ Release 1 which went live in September 2012, and was adopted and implemented by JISC Collections in Release 2, released in February 2013.

6.2.3 Clarification of terms

While inputting the Huddersfield data into KB+ there were a couple of areas that needed a further explanation:

- The identification of core journals - one of our first tasks was to identify the individual journal titles that form our core subscription (see section 5.5.3). After identifying all the titles that we currently have individual subscriptions to within the deals (our core titles) we realised that there was nowhere to identify core titles that we had previously cancelled under our cancellation allowance. However, the 'renewals' feature in KB+ Release 2 will allow us to amend our core titles each year to reflect our cancellations within a new subscription. We will be able to track our core titles through the yearly subscriptions, and for any core titles that were cancelled prior to KB+ but still retain post-cancellation access it is possible to attach a note of these titles to the subscription
- Journal title start date - when identifying and editing the information about the core journal titles it was unclear as to whether the start date of the individual titles should be the earliest year the core subscription gives access to (e.g. 2005) or whether it should be the first year

we have access to the journal (e.g. 1996 because we have access through the NESLI package).

Note: This need for clarification was accepted by the KB+ team so that the release of KB+ Release 2 included the addition of two extra columns to identify the start and end dates of the core subscription as well as the columns that identify the dates we have through the deal.

Although these are both small points, because the aim of KB+ is to reduce the time and cost spent managing the data relating to electronic resource management, by having the management and maintenance of the data done centrally and shared or co-ordinated across the HE academic library community, it is important that all parties have a clear understanding of what the data is. By working to agreed standards and definitions it will be easier to share information across the library community.

6.2.4 Comparison tool

Often, for an individual e-only title and associated licence, there is also a NESLi2 licence with the publisher. It would be beneficial to be able to compare the two licences. If we found that NESLi2 had negotiated a better deal than our individual agreement, e.g. walk-in users, unlimited users vs. simultaneous users, it would enable us to try and negotiate a better deal during our renewal. Now we could just do that anyway – we can easily view the NESLi2 licence at the JISC Collections website, but it would be great if we could use ELCAT (Electronic Licence Comparison & Analysis) to do the comparison for us? At the moment it only allows the comparison of nationally agreed licences in ONIX-PL format.

Recommendation 3: We recommend that a comparison tool is added to KB+ (or as an extension of ELCAT), which would allow us to compare any licence on KB+, whether nationally or individually agreed, in any format with another.

6.3 Feedback on the KB+ renewals feature

The KB+ renewals feature simplifies the journals renewals process by providing a tool which will help maintain an accurate list of titles within the different packages we subscribe to, identify the subscription dates and any core titles within the collection. As each year's subscription details are uploaded into the system, KB+ will provide historical record of all the titles we have subscribed to, the access we have to these, identification of the core titles with any changes tracked, and the changes in publishers and titles tracked through the years.

The renewals feature allows us to compare current subscriptions, with the core titles clearly identified, with the titles in the proposed renewal from the publisher. It is also possible to compare these with any other journal packages offered irrespective of publisher. For example, you could compare Package A year X with year Y, but also package B etc. The comparison is clearly displayed by a colour-coded spreadsheet and identifies the titles available in the package, highlighting those titles that are missing from the previous year's collection and any new titles that have entered the package. This is an extremely important feature as it will clearly identify the titles that have issues.

Recommendation 4: We recommend that the renewals spreadsheet also include reasons as to why some of the titles are missing year on year, e.g. if they have ceased publication, transferred to another publisher, combined with another journal etc.

Recommendation 5: We recommend that the renewals spreadsheet identify which journal titles are hybrid (subscription and OA) and which are OA in order to help us identify double dipping.

The comparison spreadsheet can be downloaded in order to amend the details of the coming year, e.g. add the core titles, to reflect your holdings before uploading the spreadsheet back into KB+ to record the coming year's holdings. In order for this document to be used as a record of historical entitlements and reflect the current holdings of the institution accurately, additional information would also need to be included in the comparison spreadsheet, e.g. format of the title, print, electronic or both, and the dates of the access. This information would then allow users to upload the spreadsheet directly into the knowledge base.

Recommendation 6: We recommend that the renewals spreadsheet that is uploaded into KB+ is tweaked in order for it to be able to be uploaded into Serial Solutions to amend the knowledgebase to accurately reflect our new holdings.

We believe that the renewals feature will greatly help the Journals team by automating processes such as:

- Gathering the information on the titles that have changed title or publisher, ceased or are new in the package
- Displaying the information in an easy to read and interpret colour-coded spreadsheet
- Highlighting titles which have changed from the previous year.

Another potential efficiency gain would be the inclusion of JUSP data in the renewals feature of KB+ (or vice versa). This would mean that if a title was dropped from a package we would be able to evaluate the impact it may have on our institution by evaluating the usage stats from the previous year. Additionally if it were possible to gather any information about the stability and availability of the resource throughout the preceding year, e.g. the percentage of 'downtime', that would also be useful in evaluating the impact any missing titles may have on our institution.

Recommendation 7: We recommend that the JUSP (Journals Usage Statistics Portal) information should be included or linked to on the comparison spreadsheet

6.4 Integration of KB+ with other commercial products

As part of the HIKE project we have been populating and using both Serial Solutions 360 Resource Manager and KB+. This has allowed us to make a comparison between the two systems in order to propose an ideal workflow.

At Huddersfield, we will use the information held in these two systems in different ways. Primarily data from both systems will be used to help the team with the management of the electronic resources lifecycle, but it is also used as a reference tool for the subject teams to answer any enquiries on access, ILL allowances, etc. In order to evaluate the systems we proposed to compare and contrast three different areas of the system before offering an ideal workflow and suggestions of any developments that would need to be considered to facilitate the proposed workflow. The three areas for the initial investigation are

- the aims and objectives of the two systems

- the population of the two databases
- the functionality of the two systems

6.4.1 Aims and Objectives of the systems

The aim of KB+ is to support the management of all electronic resources by holding the pertinent information from the current licences and subscriptions that are maintained by the library, holding historical data about subscriptions and licences, and providing a forum for shared community activity relating to the management of electronic resources. It does not aim to compete with Electronic Resource Managements systems (ERMs), such as 360 Resource Manager from Serials Solutions, but to improve the quality of metadata which is supplied to them.

In contrast the purpose of 360 Resource Manager is to hold information about resources and aid in their management. By entering all the information about a resource such as fund and payment information, contact details, password and access information, expiry dates and licence details 360 Resource Manager has the potential to play an active part in the selection, acquisition and renewal of electronic resources through integrated alerts, automated reports and the interlinking of resource information. For example, once you have set an expiry date on a subscription you can ask the system to notify you of the impending renewal.

6.4.2 Population of the two databases

Populating the two systems begins with the creation of a new licence. In both it is possible to either create an entry from scratch or to copy an existing template including the restrictions and modify it. For each licence in KB+ there is an information box which holds the name of the licence, the notice period for cancellation, linked subscriptions and the URL of the licence if available. The location of the information box is well placed at the top of the page (Figure 6.4).

Information	
Linked Subscriptions	213 (Wiley Online Library Full Collection 2012_2014 NESLI2)
Reference	Wiley Online Library (Journals) 2012-2014 NESLI2 ✎
Notice Period	2 months ✎
Licence Url	http://www.jisc-elcat.com/elcat/index.pl?ns_licence_url=1&s_base=JISC%20Collections%2FNESLI2%20Lic%2FWiley%20Subscription%20Services%2C%20Inc.%2FWiley%20Online%20Library%20NESLI2%202012-2014%2F01012012-31122014&action=View+it ✎
Licensor Ref	Click to edit ✎
Licensee Ref	Click to edit ✎

Figure 6.4 Licence information on KB+

The key properties of the licence, which were defined and identified by the KB+ community as the properties that are most frequently needed, are displayed in a traffic light table (Figure 6.5). For each property 'yes', 'no' or 'other' can be selected, an explanation and further information can then be provided if required. An electronic copy of the licence and any other relevant documents can then be uploaded. There is also the facility to add notes.

Licence Properties		
Property	Status	Notes
Concurrent Access	No limit	Click to edit
Remote Access	Yes	Click to edit
Walk In Access	Yes	Click to edit
Multi Site Access	Yes	Click to edit
Partners Access	Other	Teaching and/or library staff who at the request of the Institution provides support to current students of that institution Click to edit
Alumni Access	No	Click to edit

Figure 6.5 Traffic light table in KB+ used to display the key properties of an electronic resource

In 360 Resource Manager there are two sections relating to the licence that need to be populated. The first is the general information about the licence such as the name, duration of the licence, location of the licence, status and the period of notice of expiration that the library would like. Similar to KB+ this is located as the first page of licence details, which is useful as it gives the main points of information relating to the licence. Another page, for specifying the terms of the licence, is a mixture of tick boxes, drop-down and free text fields (Figure 6.6). We found 360 Resource Manager harder to populate as it required a more in-depth knowledge of the licences and many of the fields required information based on North American licence models that do not always have a UK equivalent. There were also a number of fields that would be relevant for UK HE but were missing such as: the ability to use the resource at multi-sites or for overseas students. Like KB+ it offers the ability to link the licence to the resource/resources it governs, but because they are linked to the Serial Solutions Knowledge Base there are a larger number of resources to which licences can be linked.

Figure 6.6 An electronic resource licence in 360 Resource Manager

There are a number of fields within 360 Resource Manager that we are not using but which we believe will be beneficial for us to populate and use in the future. By recording this information in a clear, concise and systematic way 360 Resource Manager will allow us to easily extract the information in order to answer enquiries and make informed decisions in the selection, acquisition

and renewal of electronic resources. Like KB+, 360 Resource Manager also offers the opportunity to add notes.

Recommendation 8: We recommend that UK Serials Solutions subscribers populate the following fields in 360 Resource Manager:

- ***Fair clause – permitted uses of the published material such as ILL***
- ***Scholarly sharing – non-systematic classroom use e.g. the printing of a section of a journal by a tutor for their class as a one off.***
- ***Electronic link – VLE or wiki***
- ***Perpetual access holdings - indicate the dates of our perpetual access e.g. 1996 – 2000***
- ***Governing law/copyright/governing jurisdiction = UK/US copyright***
- ***Execution date – date the licence was signed and agreed***
- ***There are also a number of fields relating to the use of published material and repositories which may also be useful. However, this would require integration with SHERPA.***

Another difference between the two systems is that you are unable to upload an electronic copy of the licence into 360 Resource Manager thus you are still dependent on the paper copy. However, 360 Resource Manager does offer additional features, e.g. recording administrative details such as the dates of acquisition and renewal, the log on details for users and admin users, the contact details of the account manager, and payment details such as invoice details, amount and fund.

6.4.3 The functionality of the systems

We found that the pertinent information of the licence was displayed on KB+ in clean, clear and easy to understand way. The presentation of this information provides a quick and easy reference tool for someone answering an enquiry. However, if you were using KB+ to answer a query about a resource or journal you would need to know which licence governed your resource or which collection the journal was part of before you could identify and find the correct licence on KB+ to extract the relevant information.

Whereas with 360 Resource Manager you can search the Serial Solutions Knowledge Base at journal level and then follow a series of links which will take you to the licence that governs that journal. However, the presentation of the licence information in 360 Resource Manager is not as easy to understand as in KB+. The 360 Resource Manager screens are very busy due to the small font and line spacing of the page; this makes it difficult to identify the relevant information at first glance.

KB+ is the easier of the two systems to populate and displays relevant licence information. However, a certain amount of knowledge about the resource is required to be able to find the terms of the licence. Conversely 360 Resource Manager is harder to populate as it requires more detailed information and it is harder to find and extract the information, but it is easier to find the relevant licence within the system without any prior knowledge of the resource. 360 Resource Manager offers additional features KB+ does not, therefore although additional time may be spent inputting detailed data, theoretically, in the long run, it will save you time.

Recommendation 9: We recommend that both systems are used but for different purposes:

- ***360 Resource Manager will help the Information Resources team in the management of electronic resources in an active way***

- ***KB+ will provide an ideal reference tool for answering enquiries relating to the access and use of e-resources and the administration of NESLi2 subscriptions.***

6.4.4 Ideal workflow and use of KB+ and 360 Resource Manager

After inputting data and comparing and contrasting the two systems we propose the ideal workflow is to input data into KB+ first before exporting to 360 Resource Manager. KB+ is easier to populate and clearer for the user to understand which fields require which information. Additionally, as JISC Collections produce definitive lists of journal titles within the different collections each year it is only necessary to amend the lists once to identify the core titles for your institution and check against the previous year's list for changes of titles within the collections by using the new renewals tool.

For those Serials Solutions customers that decide not to subscribe to KB+, the option would still be available to populate licence information from scratch or by using the templates provided in 360 Resource Manager.

Recommendation 10: For KB+ and Serials Solutions subscribers we recommend that the information about the licences and the changes to identify the core titles and access dates etc. should be enacted in KB+ first and then exported to 360 Resource Manager to save the duplication of work.

There are a number of sections within 360 Resource Manager such as the costing information and administrative details that do not have an equivalent in KB+ and would therefore need to be populated separately.

It is possible to download the generic subscriptions negotiated by JISC Collections and to export all of the subscriptions taken by your institution, which have been amended to reflect the local holdings as CSV files. Although this export does include the local changes made by the institution on the start and end date of the coverage and any embargoes, it does not include the identification of the institutions core titles – this information is crucial for the management of electronic journals.

Recommendation 11: We recommend that exports from KB+ must be able to reflect ALL the locally made amendments by each institution to the subscriptions.

All JISC Collections licences have already been provided to Serial Solutions for inclusion in 360 Resource Manager. However, these licences are the generic ones that do not contain local information – in addition, 360 Resource Manager cannot display the licence terms in the traffic light system available on KB+. Additionally there are a number of fields within KB+ that contain information relevant to UK HE institutions, such as multiple site access and overseas student's access, which are missing from 360 Resource Manager.

Recommendation 12: We recommend that both systems need to be able to display the same fields – or at least a set of core fields.

In order for the workflow that we have proposed to utilise both KB+ and 360 Resource Manager to their full potential, both systems would need further developments. In addition to the generic exports of journal titles in each collection, KB+ would need to develop the ability for institutions to export their subscription details and include all local changes in the export. In turn Serial Solutions

would need to consider providing the option of importing data into 360 Resource Manager. Although they currently offer uploading information for their customers, the facility to import your own data would be easier and more useful. Another development that would need to be considered is the method of data transfer. Although it is currently possible via CSV file, such exports require further manipulation of the data into an acceptable format before being uploaded into another system; therefore a more suitable method would use compatible data fields. However, the ideal method of transferring data from KB+ to Resource Manager and vice versa would be through an API.

In an ideal world the definitive lists of journal titles within the collections and their associated licences could then be exported via an API into 360 Resource Manager. The fields not populated by KB+ would ideally be populated by another API to the relevant system or manually. Once fully populated with the information needed, 360 Resource Manager could then help the team by playing an active part in the selection, acquisition and renewal of electronic resources through integrated alerts, automated reports and the interlinking of resource information.

Recommendation 13: In order for this proposed data transfer between the two systems to be achieved, we recommend that KB+ develop an API to enable the transfer of data between KB+ and commercial ERMs.

We hope that this sort of functionality will be made available by KB+ as it develops and by Serials Solutions as part of Intota. But why stop at APIs between KB+ and Intota - for example, might it be possible for financial information from Agresso and administrative information from our subscription agent to be pulled in via API too?

7.0 Intota

7.1 Introduction

Intota is one of several new products that fall under the general description of “library services platforms”, a term popularised by library automation consultant Marshall Breeding. In general, these products share the following in common:

1. Software as a Service (SaaS) - The products are remotely hosted, freeing the library from maintaining and supporting a local server. Typically, the physical servers will be located in commercially managed data centre.
2. Multi-Tenancy - Unlike previous SaaS offerings by library system vendors, a single installation of the product serves many (or possibly all) customers. This simplifies the rollout of updates and provides a more cost effective hosting model for the vendor.
3. APIs - As the product is hosted outside of the institution, integration with other corporate systems is typically achieved using APIs to transfer data in real-time.

Serials Solutions initially announced their intention to develop a product at the ALA Annual Conference 2011 in New Orleans¹¹ and the name “Intota” was publicised in early 2012. Full commercial rollout of the product is expected in 2015.

At the ALA Midwinter Conference 2013, the company announced that Intota Assessment would be made available before the end of 2013.¹² This analytics service provides “book and serials analysis and consolidated usage” and a “robust suite of business intelligence tools to help libraries make informed decisions regarding collection development”. Although Assessment will ultimately be a part of the full Intota product, it will also be made available as a standalone service.

As part of the development of Intota, Serials Solutions are re-engineering a number of their existing products – including 360 Resource Manager and the 360 Core Knowledge Base – in order to increase support for books and print material collections. For this reason, the product is being developed in a number of phases, building outwards from resource management and acquisitions processes. The final phase will provide fulfilment, which is analogous to circulation in a traditional LMS.

At the time of writing, the company is working with six US-based development partners,¹³ including Ball State and Oklahoma State universities, who are testing early iterations of Intota and providing feedback to Serials Solutions.

Throughout this early development phase, Serials Solutions have demonstrated the latest development versions of Intota at a number of large library conferences, including UKSG and the Annual and Midwinter ALA Conferences in America. These have been interspersed with a number of live webinars, which are archived on the company’s web site.¹⁴

Dave Pattern has represented the company’s UK customers at the biannual Serials Solutions Advisory Board meetings, held prior to the Annual and Midwinter ALA Conferences. This has allowed the HIKE project team to hold face-to-face meetings with key personal involved with the development of Intota and we believe that the subsequent exchange of ideas has been beneficial not only for the University of Huddersfield and Serials Solutions, but also for the broader HE community in the UK.

7.2 Intota and Interoperability

One of the main criticisms levelled at the current LMS is their lack of integration with other systems. It is crucial that Intota can 'talk' to other systems. This interoperability was one of the themes investigated at the JISC HIKE project workshop, held on 26 February 2013 at the University of Huddersfield. The aim of the workshop was to gather information from other UK Serial Solutions customers to help us evaluate the broader suitability of Intota for UK HE. As part of the workshop, one of the sessions focused on creating a list of APIs. After producing a substantial list we then grouped them into relevant groups and assessed the dependency of the library on these external systems (Figure 7.1).

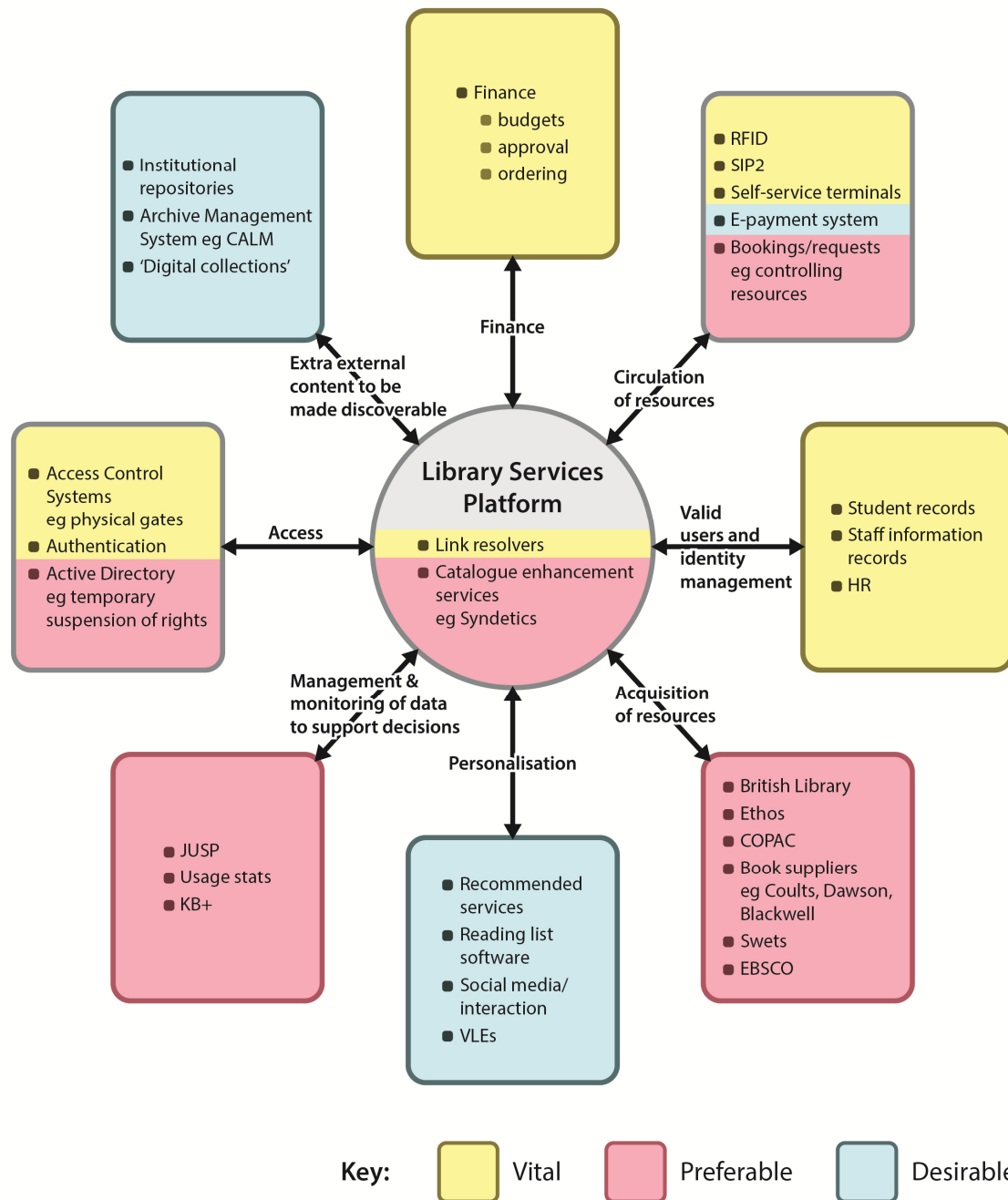


Figure 7.1 Diagram to show the different systems either essential or desirable for a new system and the dependence of the library on them.

The following key applies:

- Yellow: systems which are mission critical
- Pink: systems that are desired as they will create efficiencies
- Blue: nice to have systems that would enhance the user experience.

However, while acknowledging that it would be beneficial to have links to all these systems, the group also acknowledged that certain API's and the resulting changes, such as the removal of a separate library catalogue, may be a step too far for some. It was felt that in these cases the impact and effects of cultural change through the implementation of a new system must also be considered (see section 8.0).

7.3 Intota and Dawson Books

The HIKE project met with Dawson Books, our preferred supplier in the National Books Contract, to discuss current acquisitions workflows and the implications for Intota, the Acquisitions team at Huddersfield and Dawson Books.

We began by discussing the information that would need to be provided by Dawson Books via Intota in order for us to make an informed decision on purchases, ideally:

- format of the item
- supplier
- estimated delivery date
- price

The actual price we would like to see would be the overall cost of the item including servicing, delivery, VAT and discount rather than the list price. At a later stage we would also want to know the individual price breakdowns in order to assign the costs to different budget nominals, at Huddersfield we pay for shelf ready processing costs out of a different budget to the actual book itself.

For e-books the following additional information would be required:

- licence information
- access criteria (how many users can have access, other options for more users)
- purchase module (outright, credit based, availability as subscription through a collection)

Dawson Books confirmed that they would be able to supply all of this information; however, this data would also need to be displayed by other suppliers within Intota.

Recommendation 14: We recommend that Intota would need to find a standard way of displaying the data from all of the different suppliers.

7.3.1 National Book Contract

Adherence to the National Book Contract was raised as an issue at this stage as we would only want to see information about the suppliers we had a contract with.

Recommendation 15: It is recommended that Intota develops a series of default settings which can be amended by individual libraries to ensure that if the book is available from any of the chosen suppliers they are shown immediately and the search is only widened if there are no results from the chosen suppliers or the library manually chooses to widen it.

7.3.2 Ordering

One suggestion would be to automate the whole ordering process, perhaps creating a profile for each librarian defaulting to specific loan types, etc. Unfortunately this would not be possible for individual orders at Huddersfield because there are too many variations. However, it is hoped that once our reading list software system is fully developed there will be formulae that allows for semi automation of the process rather than going to the subject teams for approval and thus making efficiencies in the workflow.

7.3.3 Book reports

Book reports are currently supplied via EDI or email. Dawson indicated that it would be possible to supply this information directly to Intota via a feed. It was then suggested that these feeds could appear on a dashboard on the homepage of an individual alongside reports from all the suppliers.

Due to the number of reports received it was decided that this would need to be customized so that the reports would only go to the relevant staff, this led to the suggestion that reports from all suppliers would go directly to the relevant staff or group based on the fund codes the items/resources are paid from. While discussing the idea of a dashboard, it was also suggested that a general overview could be presented at point of log in, for example, a graph could be used to show projected spend against actual spend and there could be detail on the amounts left in the budget, both committed and spent. In addition reports would need to be exported as a CSV file. Custom and standard reports would also need to be displayed on screen in html.

It was also suggested the supplier notifications such as, not yet published (NYP) or order cancelled could be displayed in the dashboard. By clicking on the notification it could take you through to the item altered allowing you to view the information and act on it if needed.

It was suggested that a pop-up notification system could be employed, after each purchase a pop-up could appear informing the user how much of the budget has been spent and how much is left and be used to notify the team as to whether their monthly spend is on track, over budget or under budget. It was thought that the pop ups after each purchase could show the projected spend for that month and the actual spend for the month to clearly identify if the spend is on target. This information could be displayed in a variety of ways: percentages, figures or as a graph.

Recommendation 16: We recommend that a notification or pop-up be introduced after the order has been sent to confirm the number of items ordered.

Recommendation 17: We recommend that Intota is able to receive this feed and display the information within a dashboard.

7.3.4 MARC records

At Huddersfield we currently import MARC records when we receive the books on to the system. However, it is thought that with Intota we will be able to pull the records from the cloud at the time of order. While this will potentially save money as we will no longer be paying the supplier for them,

Dawson Books highlighted the possibility of poor records. Although it was acknowledged that the majority of the records would be of a high standard it was brought to our attention that books purchased pre-publication and e-books often have poor quality records.

Recommendation 18: We recommend that Serial Solutions consider the possibility of poor records when developing Intota.

7.3.5 E-books

It currently takes around 48 hours after ordering for an e-book record and link to become available on the catalogue, however, users now expect instantaneous access to e-books. One of the main reasons for the delay in the access to the book was the creation of the catalogue record. However, with the implementation of Intota such a record may not be needed as the e-book will be retrievable from Summon via the knowledge base and this will remove the need of a catalogue record.

Recommendation 19: We recommend that immediate access, alongside real-time invoicing, must be available to institutions through Intota.

7.3.6 Out of print books

It was agreed that a more efficient way of ordering and supplying out of print items must be found. There are a number of issues surrounding the order and supply of out of print items through the library's approved book suppliers, such as:

- out of print items not always being listed on the book supplier's database, even though in a number of cases they are able to obtain them
- if the items do appear, there can be inadequate information and sometimes no price
- the cost of these items can be a lot more expensive
- the speed of supply can often be a lot slower
- the current process generally leads to confusion amongst the subject teams as to the best place to obtain the item from, which often means lots of emails/phone calls between subject teams, the Acquisitions team and Dawson
- Often books arrive unprocessed, an issue for Huddersfield since moving to shelf ready some time ago.

One idea is a two tiered ordering system whereby if we were to find a copy with an out of print distributor through Intota (via an out of print supplier option?) we could select to purchase that option but then request that it be processed by Dawson Books. This would then result in the item being delivered shelf ready via Dawson Books. While it was agreed that this was a good idea we were unsure how it would work in practice, for example, how would Dawson Books receive and purchase the item from the out of print distributor, and agreed that further discussion would be needed if we were to pursue this.

Recommendation 20: We recommend that Intota develops out of print purchasing workflows between out of print suppliers and approved book suppliers with shelf ready capabilities.

7.3.7 Additional features

We discussed the possibility of being able to see if an item under consideration is already on order, had been previously supplied or is currently sat in a basket awaiting approval. Dawson Books

confirmed that this information would be able to be supplied to Intota and that Serial Solutions would need to find a way of displaying this information.

Recommendation 21: We recommend Intota develop a mechanism to see whether an item is in the system already.

On a similar theme the possibility of a reporting feature, which could remember what had been searched for was discussed and thought to be advantageous. For example, if you had looked for a number of e-books within a collection (publisher or aggregated) it was hoped that the system would be able to notify you and recommend that you purchase the collection.

Recommendation 22: We recommend that Intota create a way to track e-book purchases against aggregated e-book collections in conjunction with KB+.

7.4 Intota and Patron-Driven Acquisition

Patron-Driven Acquisition (PDA) or Demand Driven Acquisition (DDA) is a method of purchasing materials for a library based on a known patron demand.¹⁵ It is an example of the 'just-in-time' acquisitions model enabling the library to ensure the needs of the user are met, as opposed to the 'just-in-case' acquisitions model in anticipation of the user's needs. The rise in the implementation of PDA by libraries means that web-scale management systems must have the capacity to work with this acquisition model, and as such will be a useful criterion for us in the evaluation of the suitability of Intota for Huddersfield and the wider community.

The majority of studies on PDA have tended to be favourable showing that items purchased by PDA are more cost effective than those purchased under the normal selection method because they generally have higher circulation. At University of West-Maddison 73% of items bought in response to an ILL request circulated twice or more in a two year period as opposed to 6% of the items acquired through the normal selection method.¹⁶ At Brigham Young University e-book PDA gave similar results, they were 26% cheaper than the ones obtained through the traditional methods and were used 13.75 times more.¹⁷ The same study at BYU also demonstrated that although many of the print books obtained through PDA were the same price as those purchased by the traditional selection method they were circulated more frequently giving a lower cost per use. Statistics from the University of Huddersfield e-book PDA trial in 2011 showed that PDA titles had double the usage of non-PDA titles. The average number of views per month for a non-PDA title was 0.966 as opposed to the 2.03 views of a PDA title.

Our sister project in the Library System Programme, E-BASS25 has done extensive work on the different PDA Models available.¹⁸ Huddersfield has undertaken a number of trials with e-book PDA with Dawson, Coutts and Ebrary. However, unlike the case at West-Maddison we have not integrated ILL and PDA, e.g. after having received an ILL request the team would decide whether to fulfil the loan request or whether to purchase the item for the collection permanently, either in print or electronic form. This system would need to be an automated process for the user and would need adequate management reporting to the Acquisitions Team.

Recommendation 23: We recommend that Intota develop an integrated ILL/PDA system, which allows users choice and provides detailed management reports.

Despite usage figures described above, some librarians still harbour reservations about the use of PDA in academic libraries. One of their main concerns is that it may result in the collection becoming less academic and more 'popular', another concern is that because the budgets for these models of acquisitions are often shared and there is no easy way of monitoring the spend one subject area could spend more than their percentage of the budget to the disadvantage of another.¹⁹ However, recent research has demonstrated that these fears are unfounded, Shen et al. investigated the difference in the academic quality of books chosen by PDA and those chosen by the librarians. By asking librarians to choose the items they would order from a list of books and then presenting the same list to patrons, the researchers found that the selections were very similar in content, thus disagreeing with the notion that the items selected by the patrons would not be as academic as those chosen by the librarians.

Another concern, which is unique to e-book PDA, is the uploading and subsequent deleting of numerous catalogue records to the library catalogue which can take time. It took the University of Huddersfield 3-4 days to upload 120,000 records and then at least a day to delete them. The main concern with this delay is that it is not possible to instantly delete them if the budget is spent; however with the implementation of Intota it is hoped that this problem may be resolved. Rather than uploading the records to the catalogue and then deleting them, the books will be made available through the Knowledge Base by switching them on and off.

Growing evidence is showing that PDA is a very successful acquisitions model, which allows the library to increase its holdings with cost effective specialist academic content that is wanted by the patrons and has a successful circulation rate. It is crucial then that a system such as Intota must have this acquisitions model built into the workflow.

Recommendation 24: We recommend that Intota provides a complete set of reports for libraries to assess the success of PDA against traditional collection development processes.

7.5 Intota and HE financial systems

Currently, we have to manually key-in data and receive items on both systems in order to ensure that both have a record. Not only does this take time but it also increases the risk of error, this has implications for accurate reporting and budget monitoring. Why do we use the two systems to account the same information? Why do we not focus on inputting the details into one system?

7.5.1 Problems of existing systems and lack of integration

Agresso is used by 136 other HEIs in the UK to oversee all transactions, save all relevant paperwork and prepare for any audits. With such a centralised system it would be impossible for us to move all our financial information for resources to the LMS. Horizon is also unable to support the recording of financial transactions to the level of detail that is required by the University auditors. Furthermore, Agresso is able to offer additional features, such as the ability to report on purchases broken down by supplier and period and the ability to split payments between nominal and cost centre. However, Horizon is integrated with the book suppliers' database, therefore if we were to move all the transactions to Agresso we would not have records of the complete lifecycle of the resource nor any information to use for any enquiries that may arise later.

Another issue that would need to be considered is the method of payment. At Huddersfield we currently pay for all our books by credit card and all the electronic resources by BAC's, therefore

when looking at interoperability between the two systems it is important that they account and carry out an automated process for both payment methods.

7.5.2 Why is such interoperability needed?

Interoperability between the two systems is essential as it would save duplication of effort, and it would provide more accurate figures for reporting, managing budget spend and planning budgets. Interoperability would reduce the amount of staff time inputting data and would allow the resource budgets to be closely and accurately observed.

7.5.3 What is currently available?

It appears that the only product that is currently available to facilitate the integration of an LMS with other systems is Keystone from Capita. For example, it can pass the invoice details from the LMS to the financial system or it could embed library account information in to VLE's or portals. While Keystone is definitely a step in the right direction there are still issues with the interoperability that it allows between the two systems. The movement of data between the two systems occurs overnight as a script, this results in a delay between the receiving of an item and the actioning of the payment of the invoice. Ideally this should be near instantaneous so that our budgets are accurate and up to date. Additionally the integration between the LMS and financial system only works for book invoices as it is based on EDI invoices, so the integration is not possible for journals or standing order invoices without introducing EDI invoicing which is not currently possible at Huddersfield.

Therefore we are a long way from achieving complete interoperability between the two systems. We would ideally like to see Intota achieve this interoperability, which would allow financial information to be passed between the two systems, for the updates to be done in real time and for overviews of the budgets to be available in Intota from the financial system for librarians to be able to budget and plan accordingly.

7.5.4 Interoperability between Agresso and Intota

The HIKE Team met with colleagues in the Finance department to discuss the procurement process for books including our current workflows, an ideal workflow and the possible interoperability between Intota and Agresso that would be needed to facilitate this.

The current workflows outlined in section 5.0 highlight the pressure points in the system - areas that we need to rationalise. Our present workflow represented a 'financial danger zone' to the University by leading to delays in the financial commitment. It is crucial that Agresso has accurate and real-time information available at all times for the University's Senior Management team. In light of this we discussed a possible workflow between Intota and Agresso using E-marketplace that would ensure Agresso would have reliable information.

It was proposed that Intota could be set up a supplier on E-marketplace as and that to order books we would log into Agresso, select E-marketplace as the procurement option and then punch out to Intota as a supplier. Once in Intota we could search approved suppliers and return our results. We would then be able to select the items we would like to purchase and place them in a basket. After selecting all the items we could then return to Agresso and retrieve our 'shopping', pulling all the items we have placed in our basket back into Agresso. This would create a purchase order with each individual item having its own line. At this point it would be possible to select the correct cost centre and nominal to charge the item to or split the price between different nominals if needed.

Once the 'shopping' has been pulled back into Agresso and assigned to the correct cost centre and nominal this would be sent to the budget holder for approval. Once the whole order has been approved it is sent to the supplier/suppliers and the money is committed on Agresso. Upon receiving the books we would need to receive the items on Agresso, this would allow the electronic invoice that has been sent by the supplier to automatically be paid by either BAC's or credit card depending on the preference of the institution. However, the payment method of the supplier would have to have been set up in advance, and for payment by credit card to be possible the supplier must have the facility to accept online payments. Agresso also has the functionality, providing the correct fields are known, to be able to send a file to update Intota and make the items received and available. This file could be programmed to update Intota at regular intervals, the frequency of which can be determined by the institution. It was noted that this workflow would not create an order record within Intota and that the item would only be recorded on Intota after it had been received in Agresso. Is this a problem? Would we need to know which books are on order? After a brief discussion we decided that it was something that we would need to discuss further, however it may possibly be something for Intota to consider - the ability to create an order record from the 'shopping basket' which is exported to Agresso.

Recommendation 25: We recommend that in order to be a valid proposal for the UK HE community, Intota must integrate with Agresso (and any other financial systems on offer).

7.5.5 RFID receiving

A further step would be to move to RFID receiving, currently in place at UCLAN. Agresso can currently read HTML and barcodes therefore it may be possible for it to read the information in a RFID tag in order to receive the item. However, it was stressed that the line number of the order would have to be programmed into the tag in order for Agresso to receive the item and reconcile the financial information.

7.5.6 Conclusion

By using the university financial system we ensure greater accuracy and real time financial data. However, the subject teams do not use Agresso and they may feel more comfortable accessing the information they need in Intota. The web version of Agresso offers a homepage which can display real time information relating to selected budgets either as figures or as graphs. Could Intota pull this information, via an API, to the dashboard of Intota? If the information was pulled across each time the user logs on it would ensure the figures were accurate.

Recommendation 26: We recommend that an API between Intota and Agresso is developed to pull data into a dashboard.

8.0 Management of Change

The implementation of Intota and/or KB+ will bring about a change in practice and role for many staff in the library. While some staff will eagerly and enthusiastically embrace this change, others will struggle giving up something they know to adopt the unknown, even if they know it is better than what they have.²⁰ They may worry about the extra work it may bring, outside of their comfort zone, the need to learn new skills and a new way of thinking.²¹

However, change is often needed within organisations. In the instance of Intota it is hoped that this change will bring an improvement to the system and associated workflows outlined in the proceeding sections of this report.

In order for the implementation of change in an organisation to be successful it needs all members of staff to be behind the idea. Failure to get the backing of staff from the beginning can create potential barriers to change as individuals can hinder the process by not adapting to the new circumstances or encouraging other members of staff to change.²² This may affect others causing disillusionment until eventually the process of change is slowed to a stop. Many people react like this as they believe that there isn't the need for change or because they do not think they can adapt to the change.

8.1 ETHICS

Mumford argued that ETHICS (Effective Technical and Human Implementation of Computer-based Systems), a socio-technical approach to change, is an important way to ensure all employees are behind the change. This can be achieved by encouraging the participation of all staff who use the system to be involved at all points of the design and implementation of a new system. This promotion of participation is based on Mumford's belief that there is a mutually dependant relationship between humans and systems that recognises that both the human and technical inputs need to be present to create a highly efficient system.²³ Traditionally, designers of systems were focused on creating highly technical systems, which created efficiencies through the reduction of staff. This generally had a negative impact on the company as it decreased the efficiency of remaining staff, as they were unhappy with their roles, resulting in absenteeism, high staff turnover, etc. Therefore by encouraging participation it is believed that employees are more likely to support the change as they are invested in it, as a result this will lead to greater job satisfaction for the employees and greater efficiencies for the organisation.

The replacement of the LMS is a big change. When managing the change in systems and working practices it is important that we keep in mind the personal touch, ensuring that relationships within the team are trusting and solid, communication channels are open both ways and staff are completely involved in and informed about the project. Thus it is hoped staff will support and feel comfortable with the change creating enhanced job satisfaction which in turn will create a more efficient organisation.

With this methodology in mind, the final topic for discussion at the JISC Hike project workshop looked at how we could manage the implementation of such radical change to ensure that all staff are happy and comfortable with the change and to guarantee that the adoption of a new system is successful, and what steps could we take to ensure this. It was felt that this could be enabled through a series of workshops in which members of staff could identify for themselves areas where

there are duplication, risk of error and points of pain in the old system and then help to define how the new system would bring benefits. It was felt that such a workshop would only work if an environment was created where staff would feel comfortable to come forward and express their concerns and anxieties about the new systems without being criticised or judged – staff need the opportunity to moan. One suggestion at this point was the use of an external moderator for such workshops. It was also suggested that these workshops should be continued after the implementation and evolve in to a user group where staff regularly evaluate the system and provide feedback about possible developments. Staff need to understand the journey and help to identify the skills gaps.

It was also suggested that we need to evolve people into new jobs. One way of offering reassurance to staff would be to show how the time that had become free through the automation of processes would be used, this was not just about giving staff mundane tasks but about giving them the opportunity to develop themselves through the participation in projects, etc. and to show how the new systems would benefit the user experience. The timing of the installation of a new system was also believed to play an important part in how the change is perceived by staff. While implementation at the busiest period of the year was not recommended it was thought that it should be during a moderately busy period in order to demonstrate the effectiveness and benefits of the new system.

Another useful point was that many 'back room' teams have been dealing with change for some time, however, the biggest impact may actually be on the subject teams as their role may change, e.g. PDA vs. 'traditional' orders. It was felt that teams need to be engaged from the outset as there is a clear tension between the need to do more outreach work and ordering resources at granular level.

We live in a constantly changing and developing world and it is important that institutions and workflows have enough flexibility to be able to constantly enact change to keep in-line with these developments. Therefore it is important that using all the ideas above we can create an environment that is safe, comfortable and open to change. Intota is part of a suite of changes and it is our responsibility to adapt to them.

9.0 Conclusion

The HIKE project's stated objectives were to:

1. Investigate and evaluate the possibility of integrating data flows between KB+ and local knowledge bases at Huddersfield and the Serials Solutions knowledgebase behind Intota
2. Evaluate the suitability and potential of Intota as a replacement to the traditional LMS in the UK market and make recommendations for further enhancements to Serials Solutions.

9.1 KB+

The HIKE Team have been working very closely with the KB+ development team throughout the project. As a result of this, we firmly believe that KB+ can be fully integrated into our workflows and that this will significantly reduce staff time specifically around the renewal period. As such, we are committed to embed KB+ into our work practices (see below).

There has also been significant communication between KB+ and Serials Solutions (as well as other resource discovery vendors), which has enabled nationally agreed licences in ONIX-PL format to be displayed in 360 Resource Manager. There is still some way to go to implement some of the recommendations from this report in order to make data flows between KB+ and Serials Solutions more seamless, however, this project believes that development is moving in the right direction.

9.2 Intota as a replacement to the traditional LMS

The project has also been working very closely with staff at Serials Solutions regarding the development of Intota. The project has found that Serials Solutions have been very responsive to our comments and suggestions and have been prepared to talk to UK based suppliers such as Dawson and Agresso. Thus far in the development of Intota we feel assured that the product, when available will be suitable as a replacement for the LMS.

9.3 Ideal workflows

In order for both KB+ and Intota to be embedded into the acquisitions and journals and e-resources processes, a significant re-engineering of workflows would need to take place at Huddersfield. In the section below we have attempted to produce a number of ideal workflows as a starting point, however, these workflows are dependent on a number of factors, outlined below and illustrated in Appendix III.

9.3.1 Selection of a new e-journal

For journals identified on reading lists, the dependent factor would be academics maintaining accurate and up to date reading lists for their modules in order for Intota to run a report. Ideally, this would identify journals which are on reading lists, but are not currently held by the library.

In addition, development of various Intota APIs would be needed to talk to subscription agents, publishers and University financial systems, such as Agresso through eMarketplace.

9.3.2 Renewal of a journal

While compiling the workflow it became apparent that the main area where efficiencies could be made was at the data gathering stage, e.g. to make cancellations in a big deal using a cancellation allowance. The other area that would benefit from development would be the ordering and payment process as outlined in 9.3.1 above.

9.3.3 Electronic PDA

This ideal workflow would need very little input from the team and almost completely automates the setting up of electronic PDA. It also removes the task of uploading and removing MARC records to the catalogue which takes up a significant amount of time.

If this workflow were to be realised the only input that would be needed from the institution would be a discussion and decision on which subject areas/class numbers to include in the PDA.

9.3.4 Reading Lists

This workflow is dependent on accurate reading lists being supplied in a timely manner and being maintained throughout the year by academics. We aim to use a combination of in-house formulas and subject team expertise to govern the number of the books identified on reading list that should be purchased. Student numbers on course modules are provided by the student information system (SITS Vision) e.g.:

If an ebook is marked as essential reading, buy 1 copy for every 25 students on the module but for a print copy only buy 1 copy for every 10 students.

We believe that a significant proportion of the book budget will be spent through this acquisition method therefore it is crucial that we get this right and consider all aspects of the workflow to identify and resolve any issues that may arise.

9.3.5 Selection by academics/librarians

The remaining budget would come from selection, although this would account for a smaller proportion of the overall budget, the process could be significantly streamlined using Intota and web forms.

10.0 Implications for the future

10.1 Implications for JISC Collections and KB+

We are pleased to report that many of the recommendations in this report have already been included in the latest releases of KB+. In order for KB+ to become embedded in workflows at UK universities, the team need to keep consulting the wider community via channels such as the Customer Advisory Group.

There are implications over future costs of KB+, which may result in some potential users holding back from becoming engaged. The project welcomes the decision to put back a subscription model for a further year. It would be advantageous for KB+ to become more of a one stop shop, e.g. integration with JUSP, the UK LOCKSS alliance, Jisc LAMP and even SHERPA Romeo could make a subscription model far more favourable.

In addition, the more KB+ can connect to vendors, such as Serials Solutions via a series of APIs, the more efficient our workflows will become.

Finally, most UK universities (and vendors/publishers) now know what KB+ is; the next stage would be to promote a series of user case studies to show the efficiencies that could be achieved by adoption.

10.2 Implications for Serials Solutions and Intota

Serials Solutions have been sent an advance copy of this report and we are very pleased with their response. We understand that some recommendations have already been taken forward for the next phase of the Intota library services platform.

Serials Solutions must continue to liaise with other vendors in the supply chain to ensure that Intota becomes a product that is relevant to the UK community.

10.3 Implications for JISC and the wider community

Wide scale adoption of library services platforms will result in big changes for University libraries. Re-engineering of workflows and management of cultural change will figure highly if organisations are to be well prepared for these changes. Whilst the project does not see Jisc having a role in helping organisations with cultural change, we believe it can assist in helping institutions prepare for the change in working practice that would be involved through the Library Systems Programme.

There are opportunities for the wider community to talk to Serials Solutions, e.g. the UK User Group, and other suppliers to ensure the product is fit for purpose.

10.4 Implications for the University of Huddersfield

Huddersfield has committed to embedding both KB+ and 360 Resource Manager and 360 Counter into the Information Resources Team workflow by the end of 2013; this includes the population of all licences and subscription information into the relevant modules. Work is also being undertaken in conjunction with the Agresso team to move towards fully embedding the journals and e-resources spreadsheets into Agresso, 360 Resources Manager and 360 Counter, thus dispensing with our many spreadsheets of subscription information. Areas of the acquisitions workflow are also being streamlined where possible. We believe that by doing this we will be ready to move to a library services platform within 2 years.

We will continue to work with our colleagues at KB+ and Serials Solutions in developing both products. Internally, we will set up a task and finish group to carry out a full appraisal of the library services platform marketplace before making a financial commitment to Intota or any other product.

We will also work alongside other interested universities in order to understand the types of change needed, both cultural and work practices.

To this extent, we need to do further work on how the ideal workflows will impact on staff duties. This will necessitate consultation with colleagues in the team to understand how their roles may change.

11.0 References

1. Yongming, Wang and Dawes, Trevor A., The next generation Integrated Library System: a promise fulfilled, *Information Technology and Libraries*, 31(3), 2012, 76-84.
doi: <http://dx.doi.org/10.6017/ital.v31i3.1914>
2. Grant, Carl, The future of library systems: library services platforms, *Information standards quarterly*, 24(4) (2012), p.4-15.
http://www.niso.org/apps/group_public/download.php/9922/FE_Grant_Future_Library_Systems_%20isqv24no4.pdf
3. The SCONUL Shared Services for Electronic Resources Management (ERM) Project:
<http://sconulerm.jiscinvolve.org/wp/>
4. Mumford, Enid, *Designing Human Systems for New Technology: The ETHICS Method*, Manchester, Manchester Business School, 1983.
5. Emery, Jill and Stone, Graham, Acquiring new Content, *TERMS: Techniques for Electronic Resource Management*:
http://library.hud.ac.uk/wikiterms/Acquiring_New_Content#Negotiate_terms_of_contract_26_purchasing
6. JISC Collections, The Model NESLi2 Licence for Journals: <http://www.jisc-collections.ac.uk/Help-and-information/How-Model-Licences-work/NESLi2-Model-Licence/>.
7. Earney, Liam, Understanding historical entitlements to journals (or not), *Knowledge Base +: blog*: http://knowledgebaseplus.wordpress.com/2012/03/19/historical_entitlements/
8. Emery, Jill and Stone, Graham, Ongoing Evaluation and Access, *TERMS: Techniques for Electronic Resource Management*:
http://library.hud.ac.uk/wikiterms/Ongoing_Evaluation_and_Access
9. Emery, Jill and Stone, Graham, Annual Review: *TERMS: Techniques for Electronic Resource Management*: http://library.hud.ac.uk/wikiterms/Annual_Review
10. NISO, *SERU Guidelines*: <http://www.niso.org/workrooms/seru>
11. Serials Solutions: *Serials Solutions Announces Development of New Web-Scale Management Solution to Improve the Efficiency of Library Operations*:
http://www.serialssolutions.com/en/press_room/detail/serials-solutions-announces-development-of-new-web-scale-management/
12. Serials Solutions: *Intota Assessment Available in 2013*:
http://www.serialssolutions.com/en/press_room/detail/intota-assessment-available-in-2013
13. Serials Solutions: *Serials Solutions Announces Intota Development Partners*:
http://www.serialssolutions.com/en/press_room/detail/serials-solutions-announces-intota-development-partners

14. Serials Solutions: *Webinars*: <http://serialssolutions.com/en/webinars/recorded>
15. Breitbach, W. and Lambert, J.E., Patron-Driven E-book Acquisition, *Computers in Libraries*, 31, 6 (2011), 17-20.
16. Dyyk, G. van, Interlibrary loan purchase-on-demand: A misleading literature, *Library Collections, Acquisitions and Technical Services*, 35(2/3), 2011, 83-89 (p. 84). doi: <http://dx.doi.org/10.1016/j.lcats.2011.04.001>
17. Schroeder, Rebecca, When patrons call the shots: patron-driven acquisition at Brigham Young University, *Collection Building* 31(1), 2012, 11-14. doi: <http://dx.doi.org/10.1108/01604951211199128>
18. E-Book Models & Consortial Purchasing: Benefits & Challenges: <http://ebass25.rhul.ac.uk/files/2013/03/Benefits-Challenges.pdf>
19. Shen, L. et al., Headfirst into Patron-Driven Acquisition pool: a comparison of librarian selections versus patron purchases, *Journal of Electronic Resources Librarianship* 23(3), 2011, 203-218 (p. 205). doi: <http://dx.doi.org/10.1080/1941126X.2011.601224>
20. Martin, Jason, That's how we do things around here: organizational culture (and change) in libraries, *In the Library with the Lead Pipe*, August 22, 2012. <http://www.inthelibrarywiththeleadpipe.org/2012/thats-how-we-do-things-around-here/>
21. Bell, Steve, Learning to Lead Others to Change – Leading from the Library, *Library Journal*, 2012. <http://lj.libraryjournal.com/2012/08/opinion/leading-from-the-library/learning-to-lead-others-to-change-leading-from-the-library/>
22. Kotter, J.P., *Leading Change*, Boston, Harvard Business School Press, 1996, p.10.
23. Mumford, p. 13.

Appendix I

Figure 1: Workflow detailing the process of ordering and receiving an Ebook

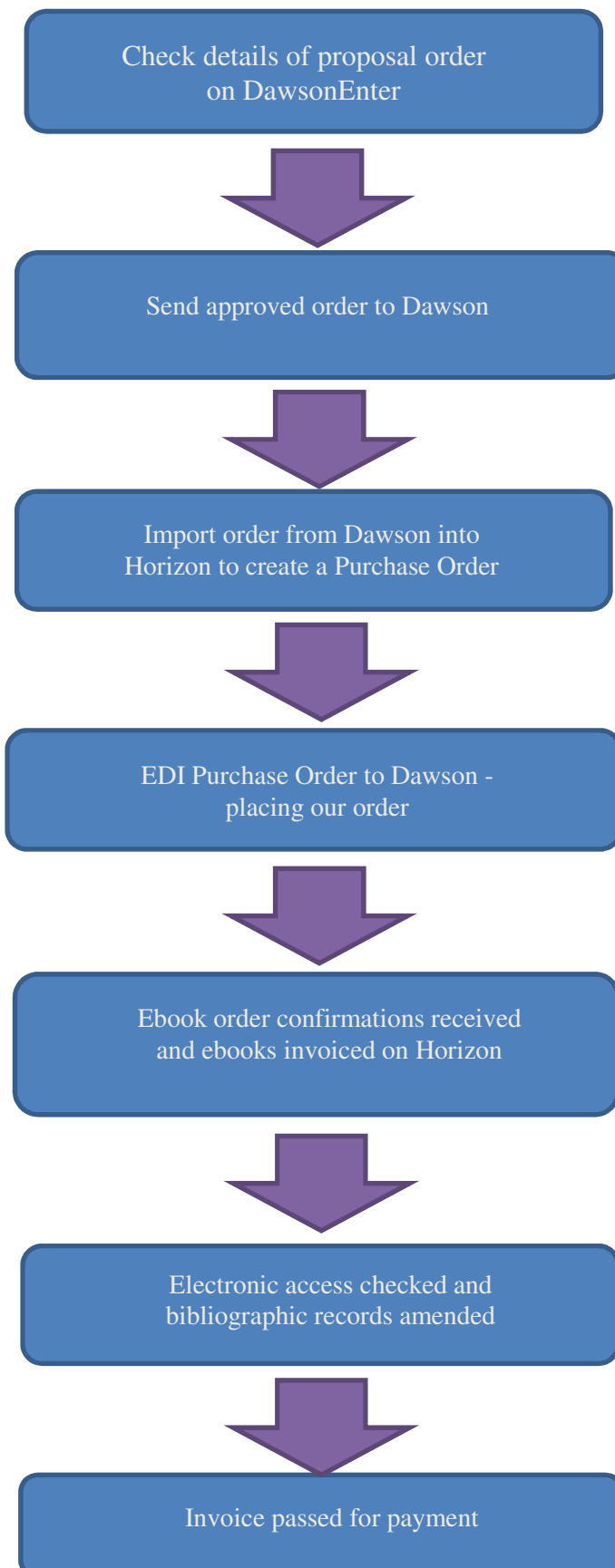


Figure 2: Workflow to detail the process of ordering and receiving a book by DawsonEnter

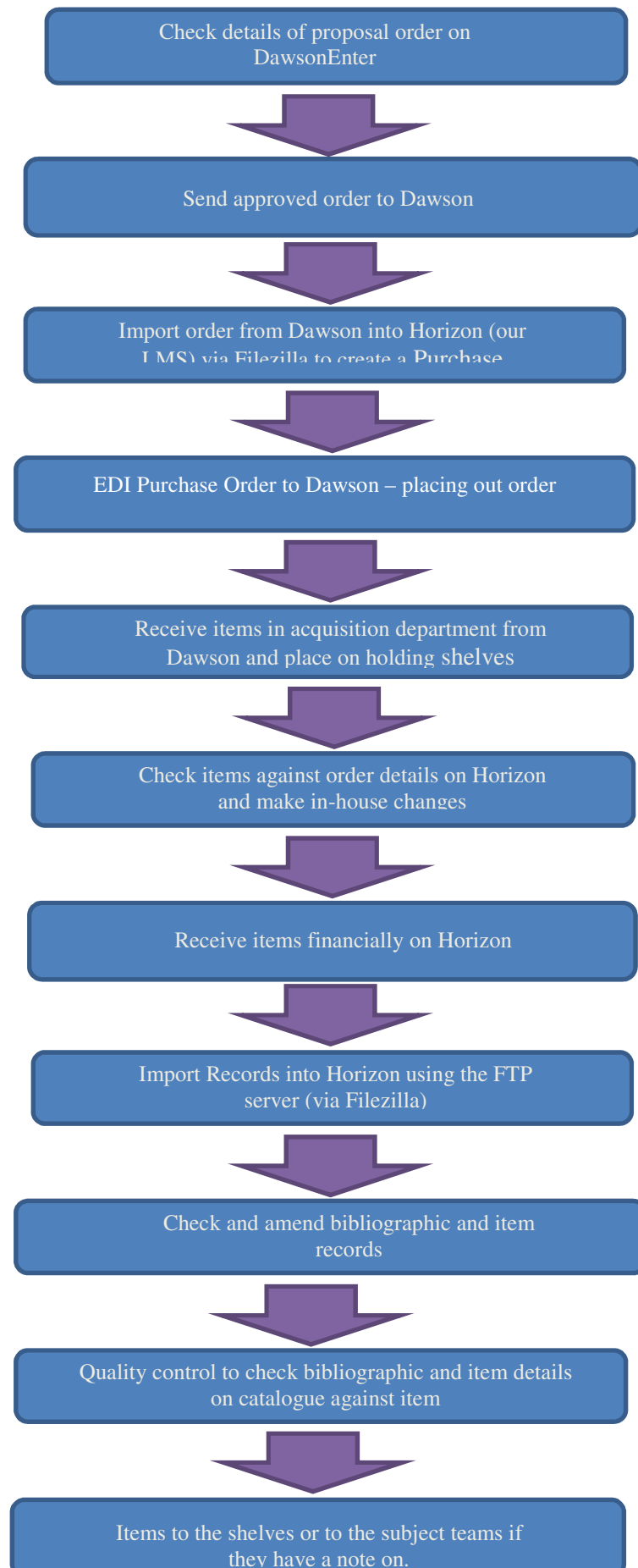
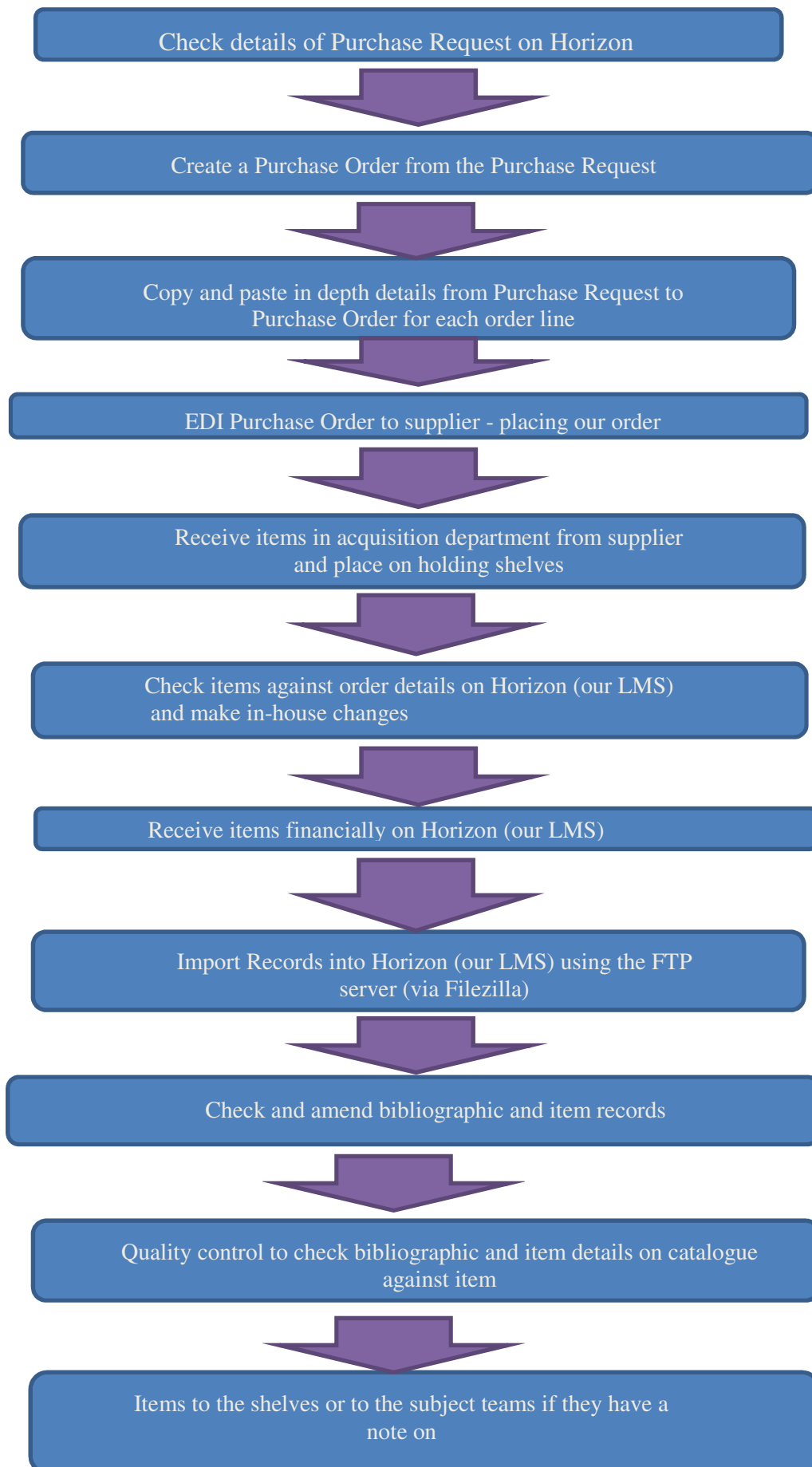


Figure 3: Workflow to detail the process of ordering and receiving a book from suppliers within the National Book contract



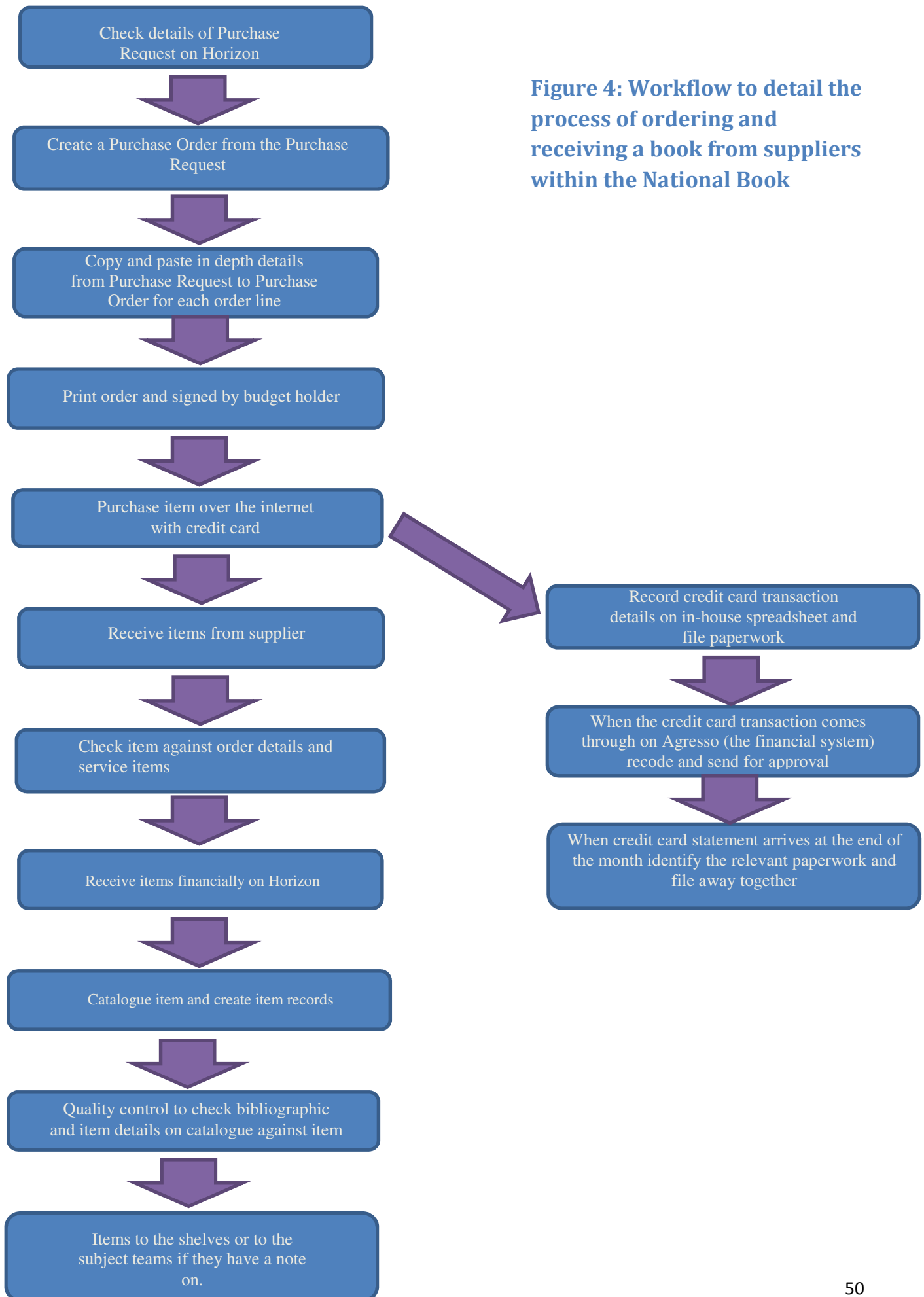


Figure 4: Workflow to detail the process of ordering and receiving a book from suppliers within the National Book

Figure 5: Workflow detailing process undertaken for book reports

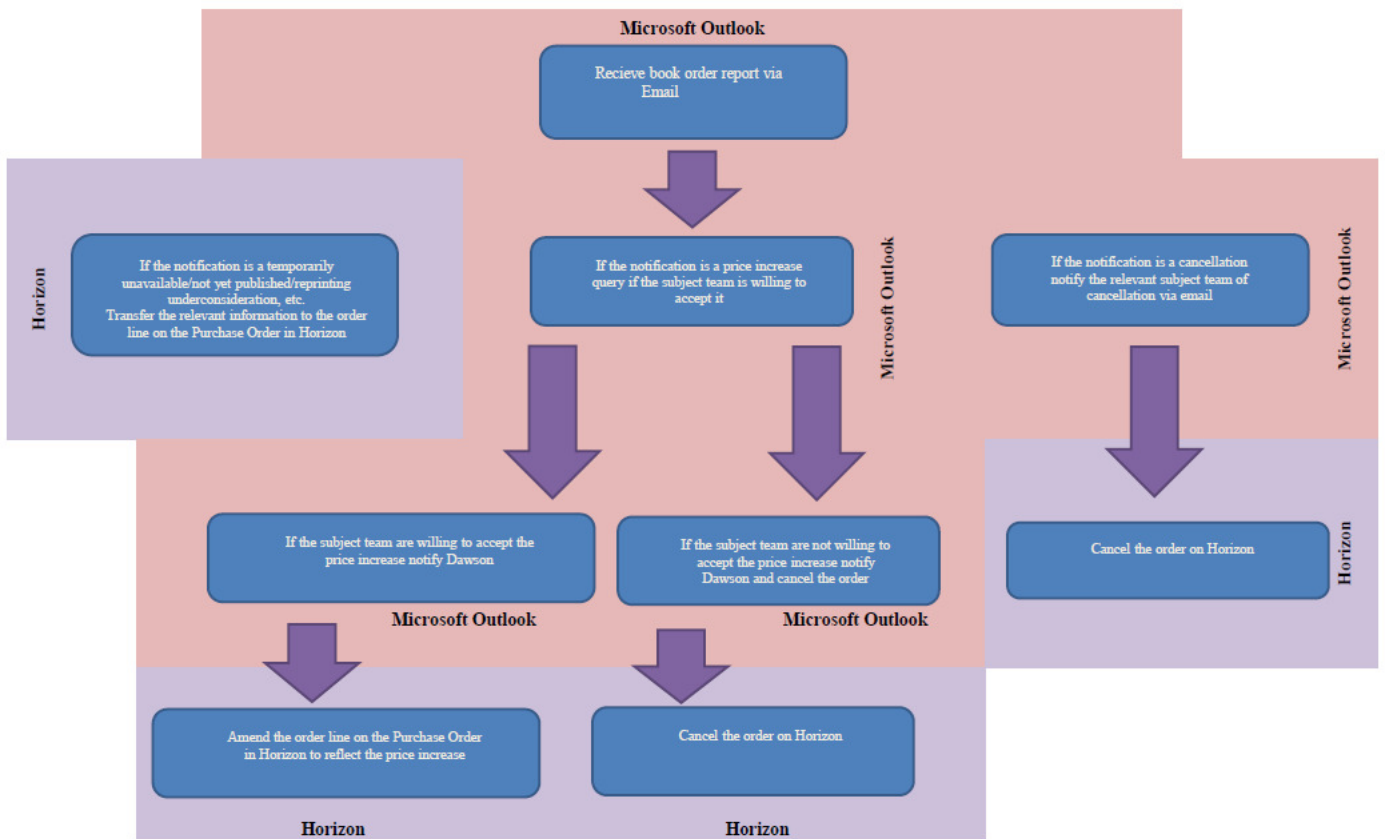
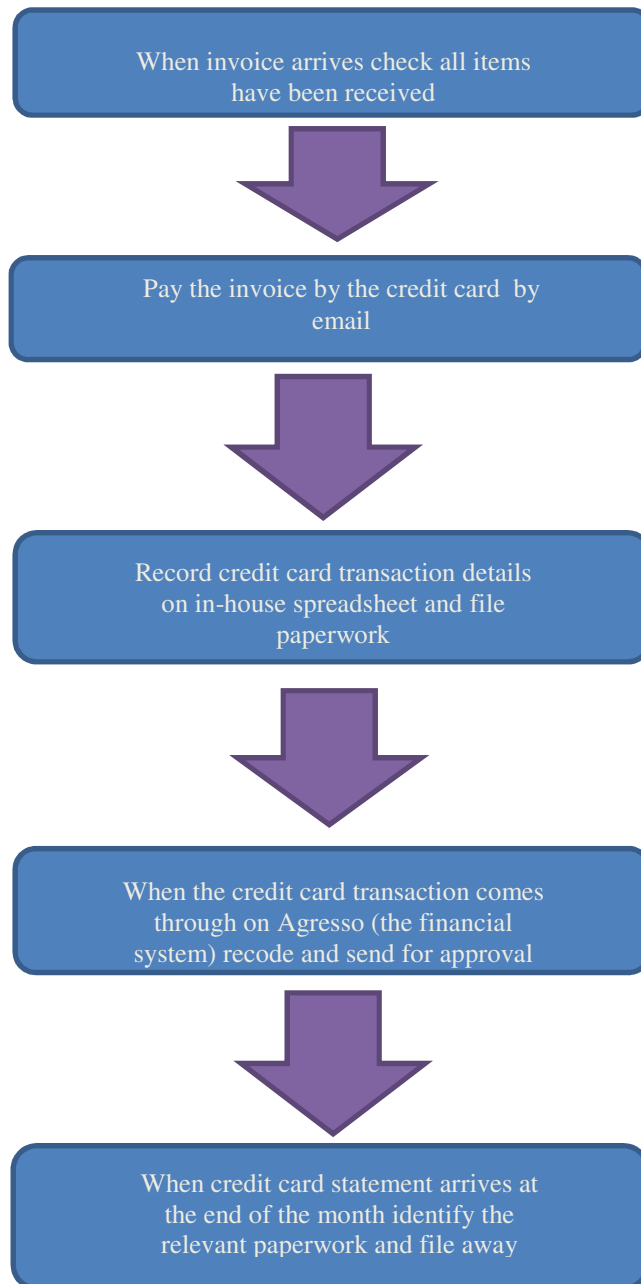


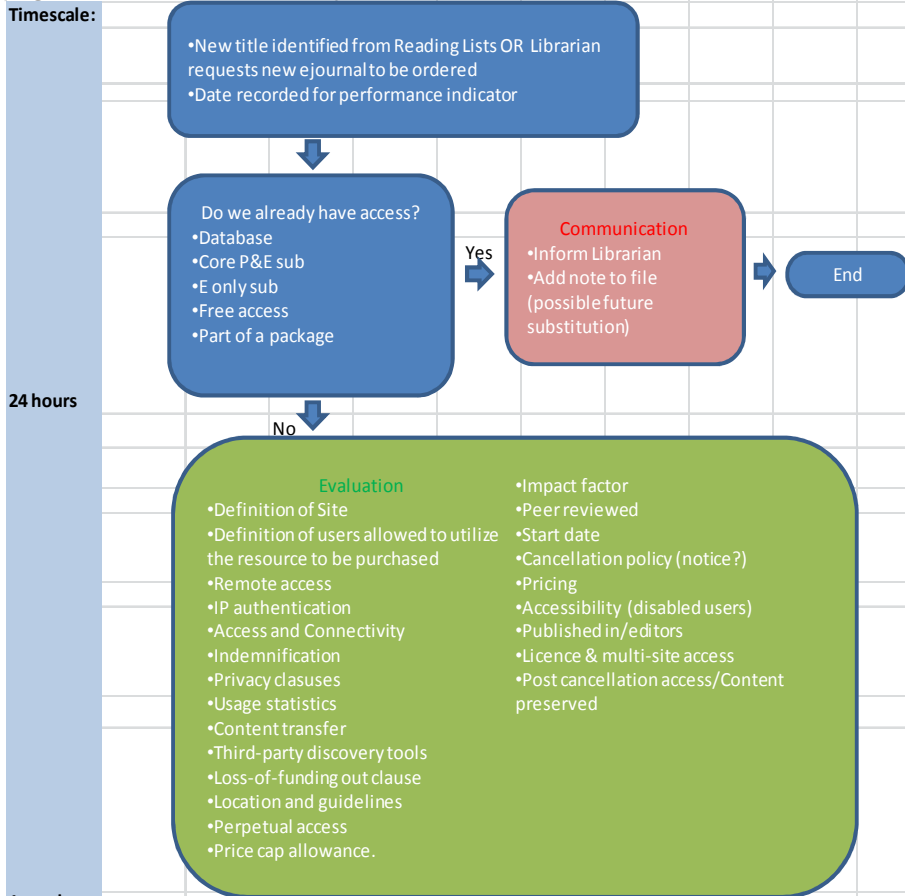
Figure 6: Workflow detailing the financial process for paying for books



Appendix II

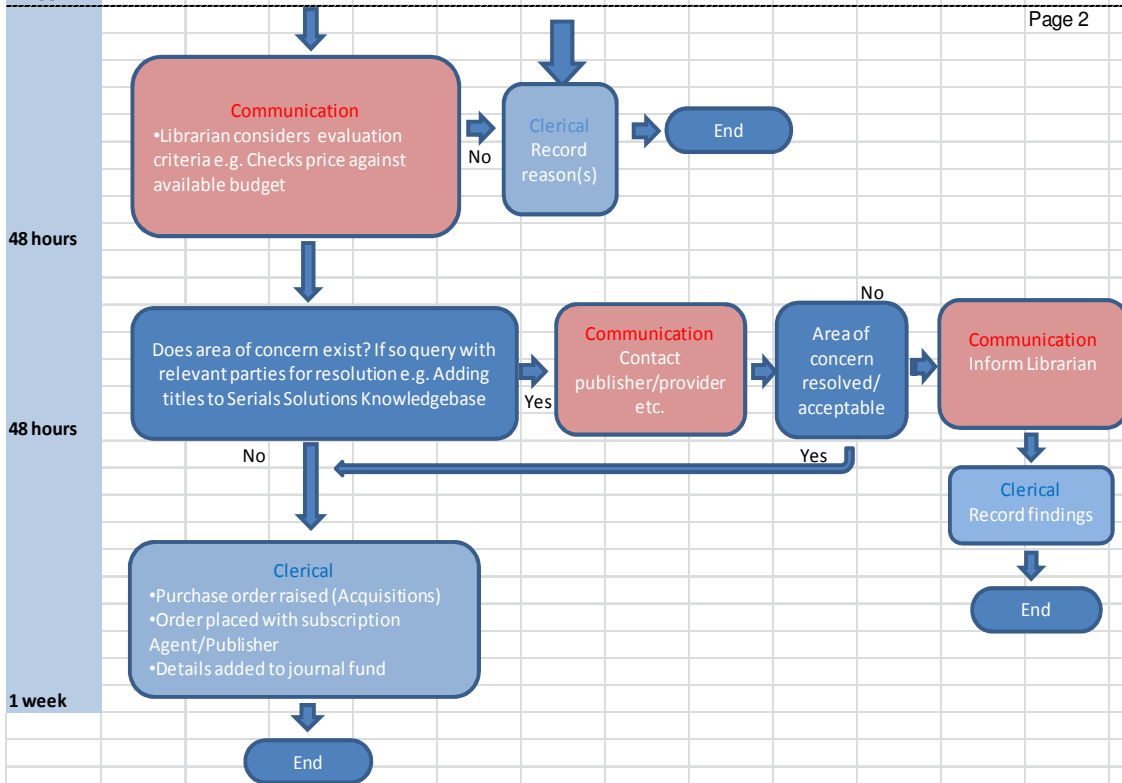
Figure 7: Selection of a new e-journal

Timescale:



24 hours

1 week



48 hours

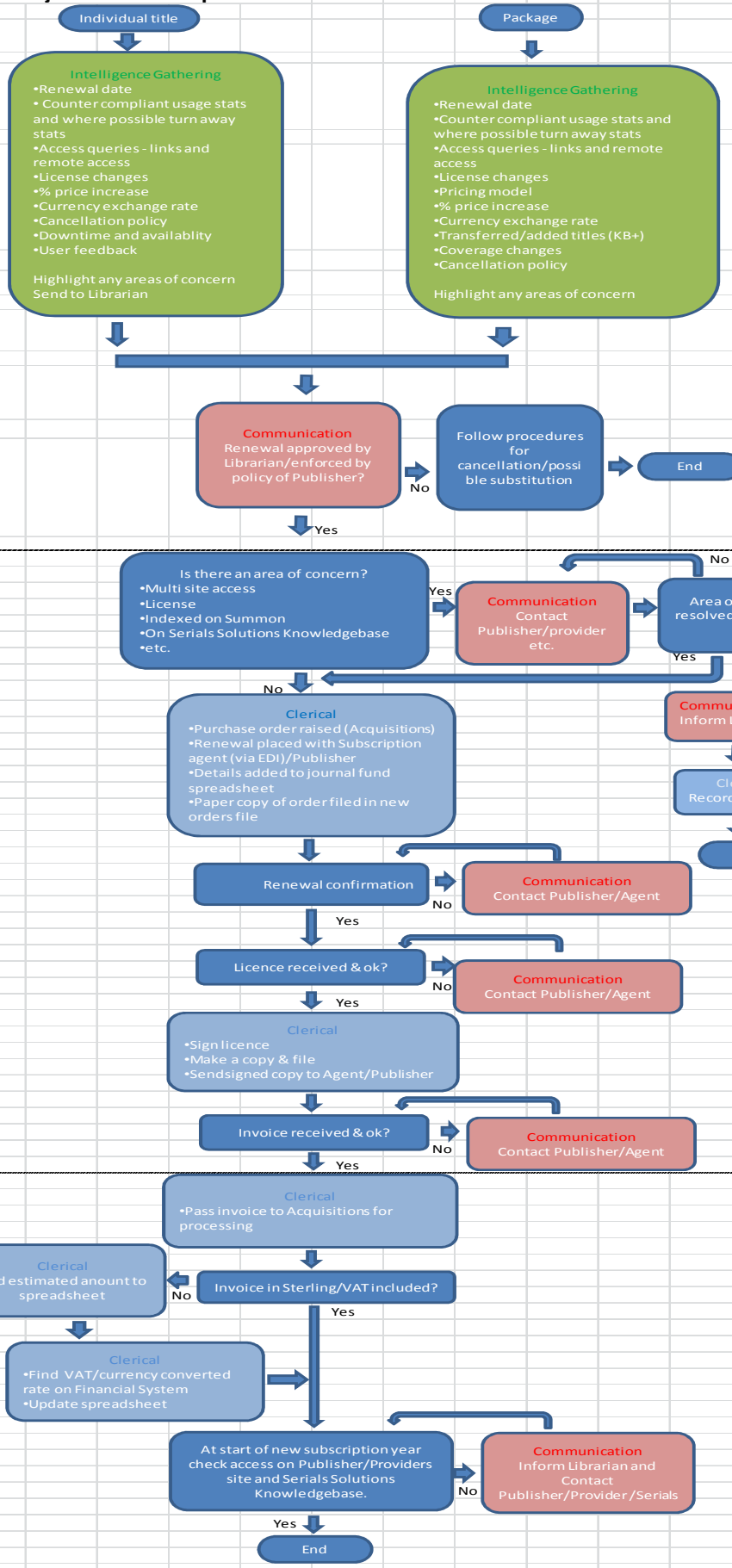
48 hours

1 week

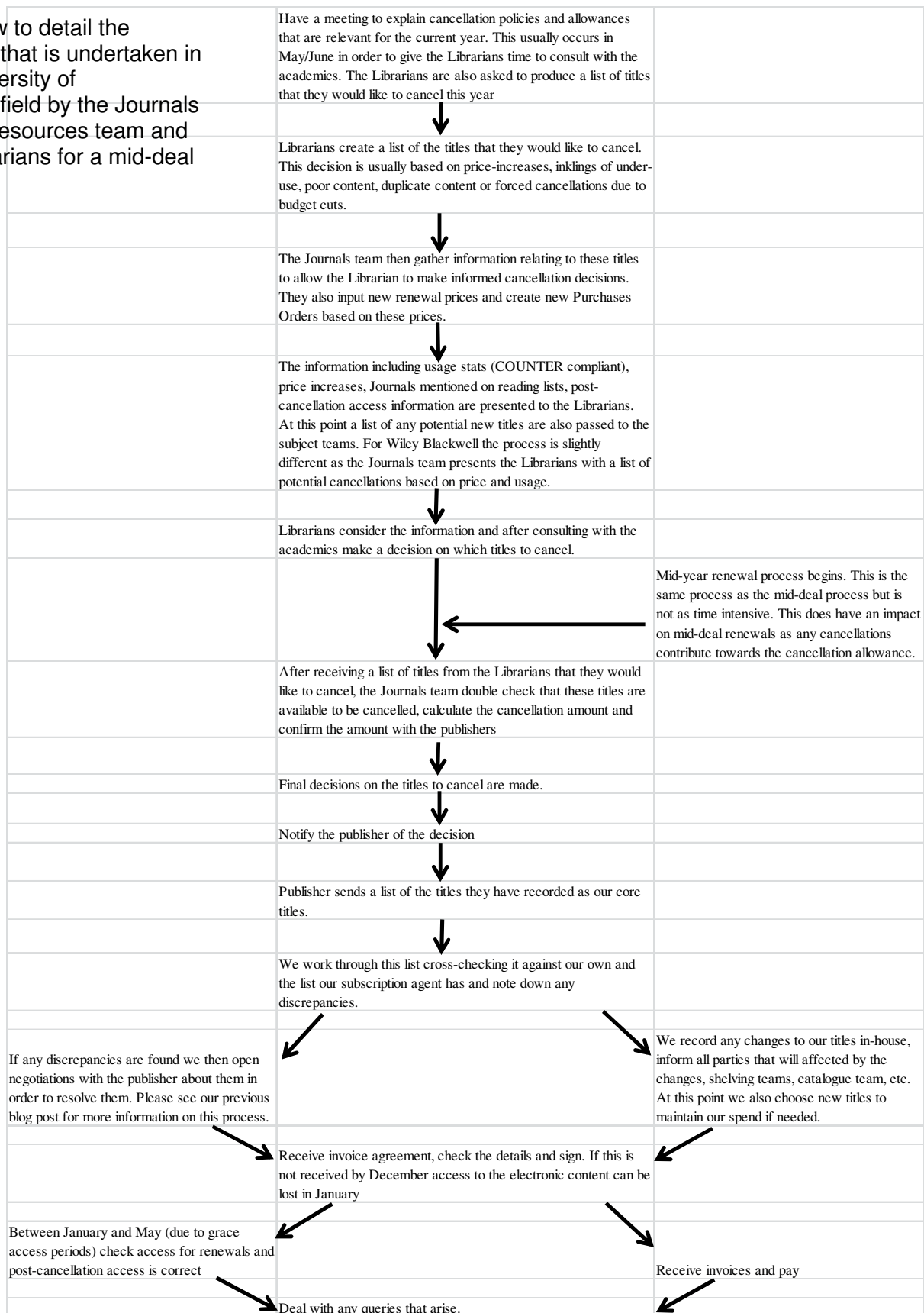
Renewal of an e-journal subscription

Timescale:

2 weeks
48 hours
1 week
48 hours
24 hours
1 week
24 hours
1 week
24 hours
1 month
48 hours



Workflow to detail the process that is undertaken in the University of Huddersfield by the Journals and E-Resources team and the Librarians for a mid-deal renewal.



Appendix III

Figure 1: Ideal workflow – selection of a new title

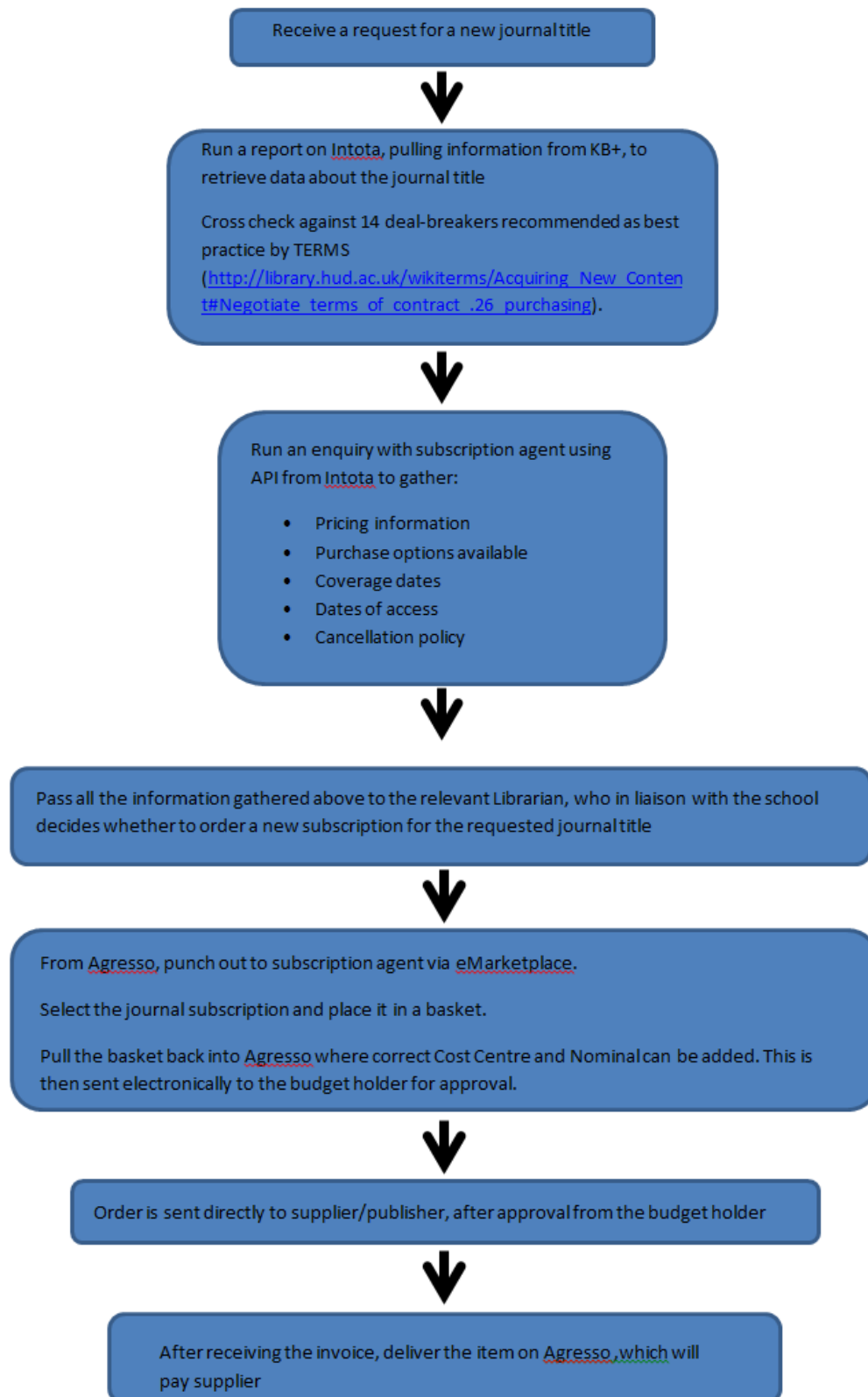


Figure 2: Ideal renewal of a Journal

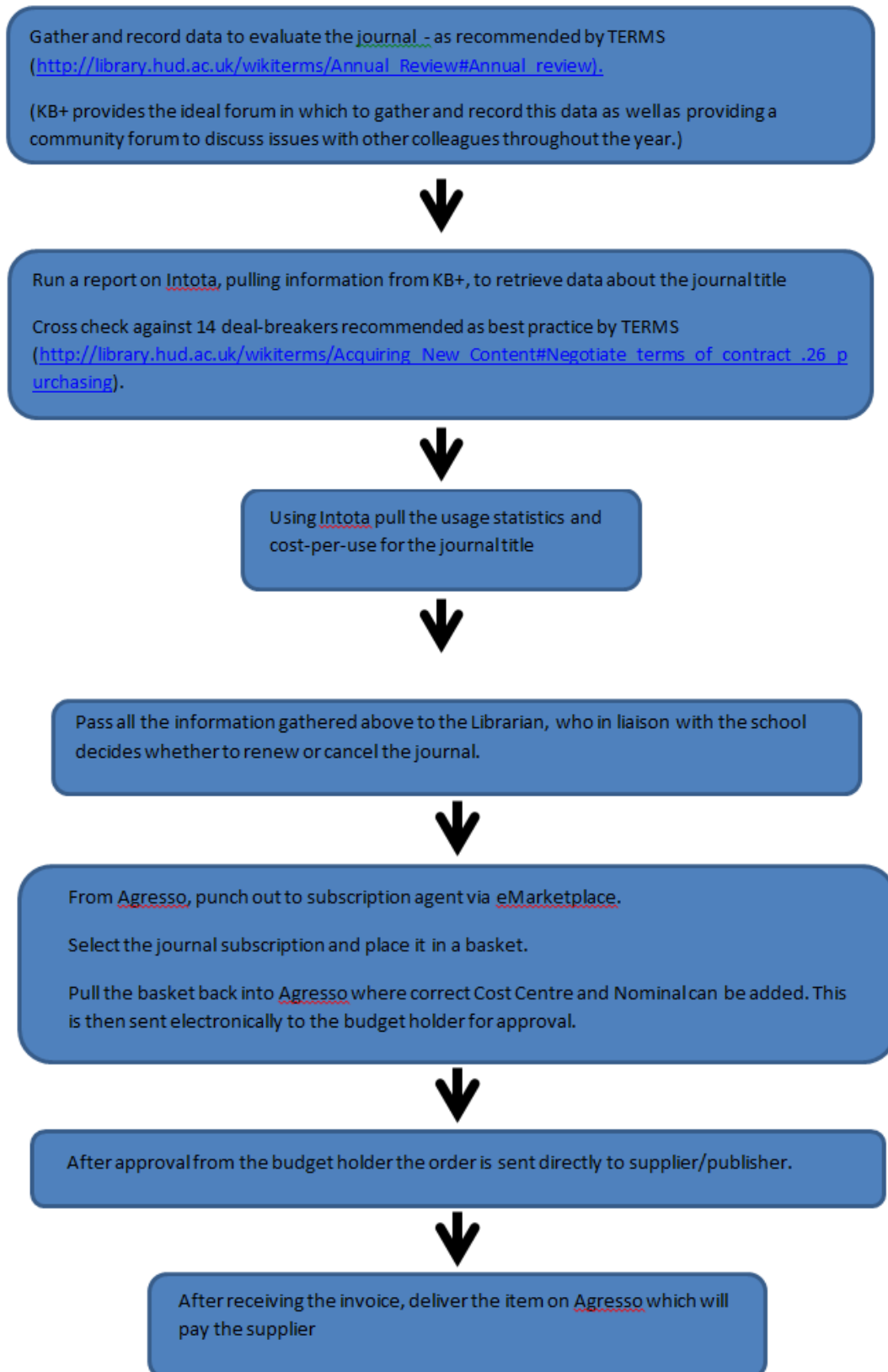


Figure 3: Ideal workflow for electronic PDA

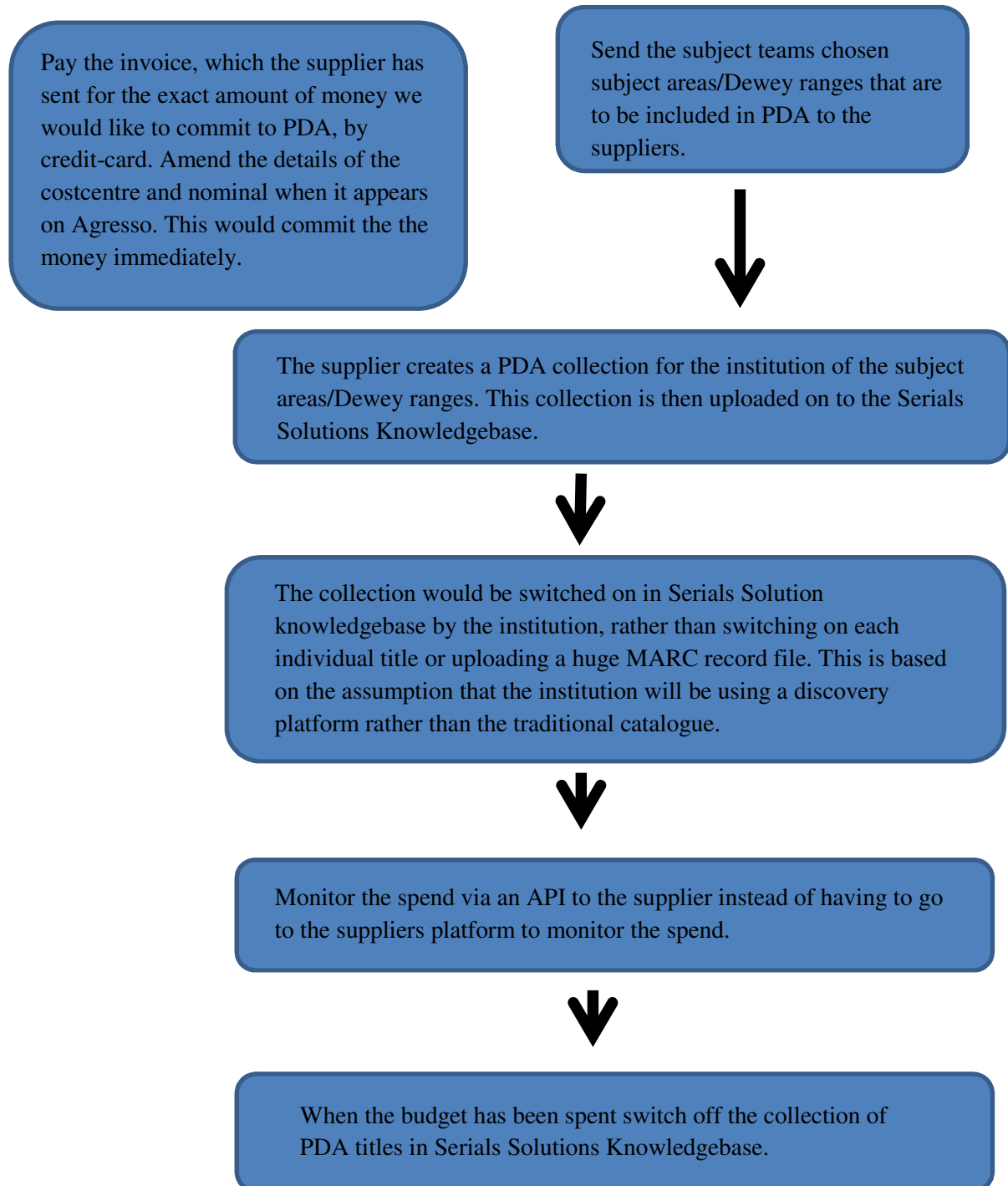
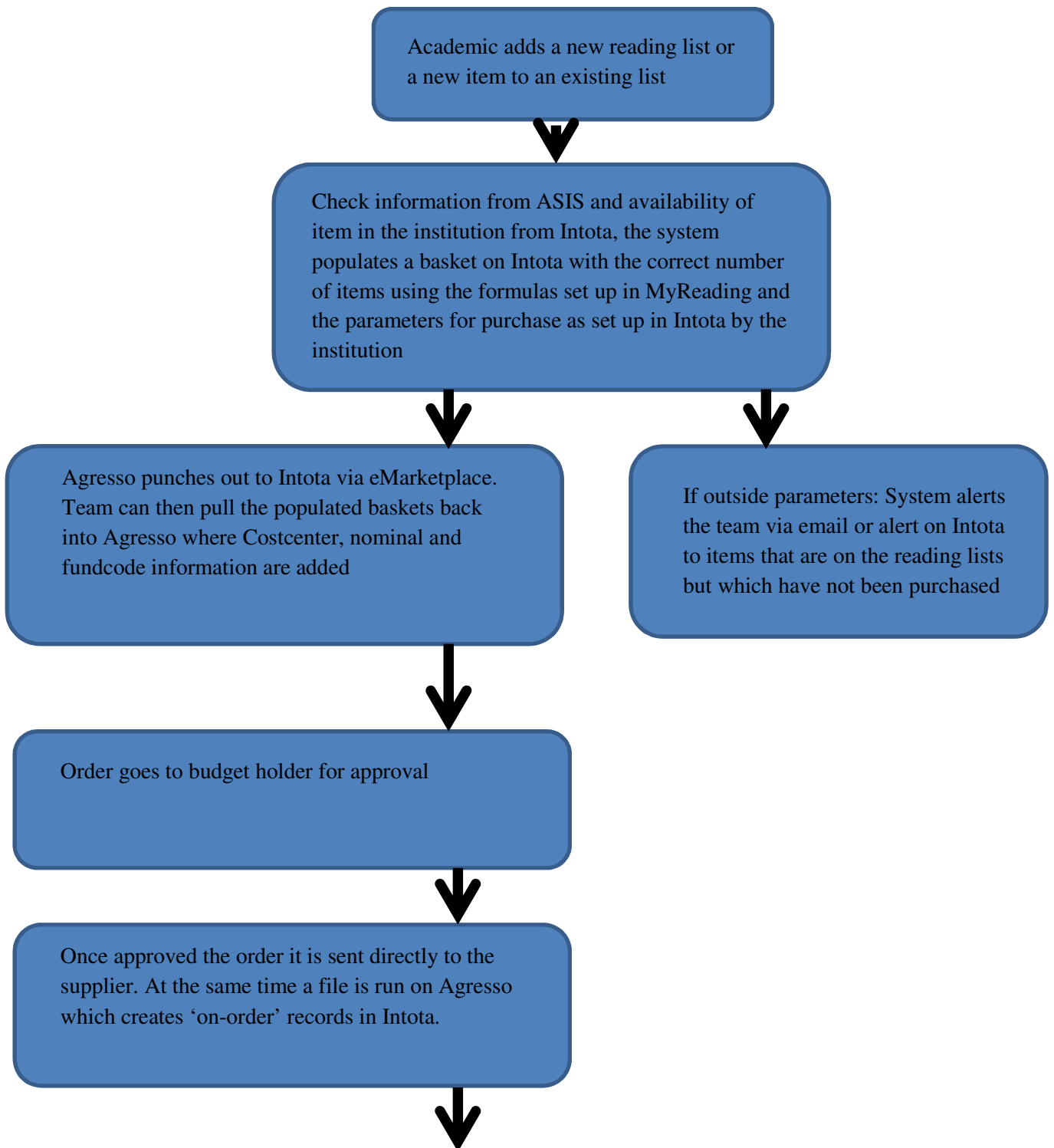


Figure 4: Ideal workflow for the acquisition of resources of Reading lists



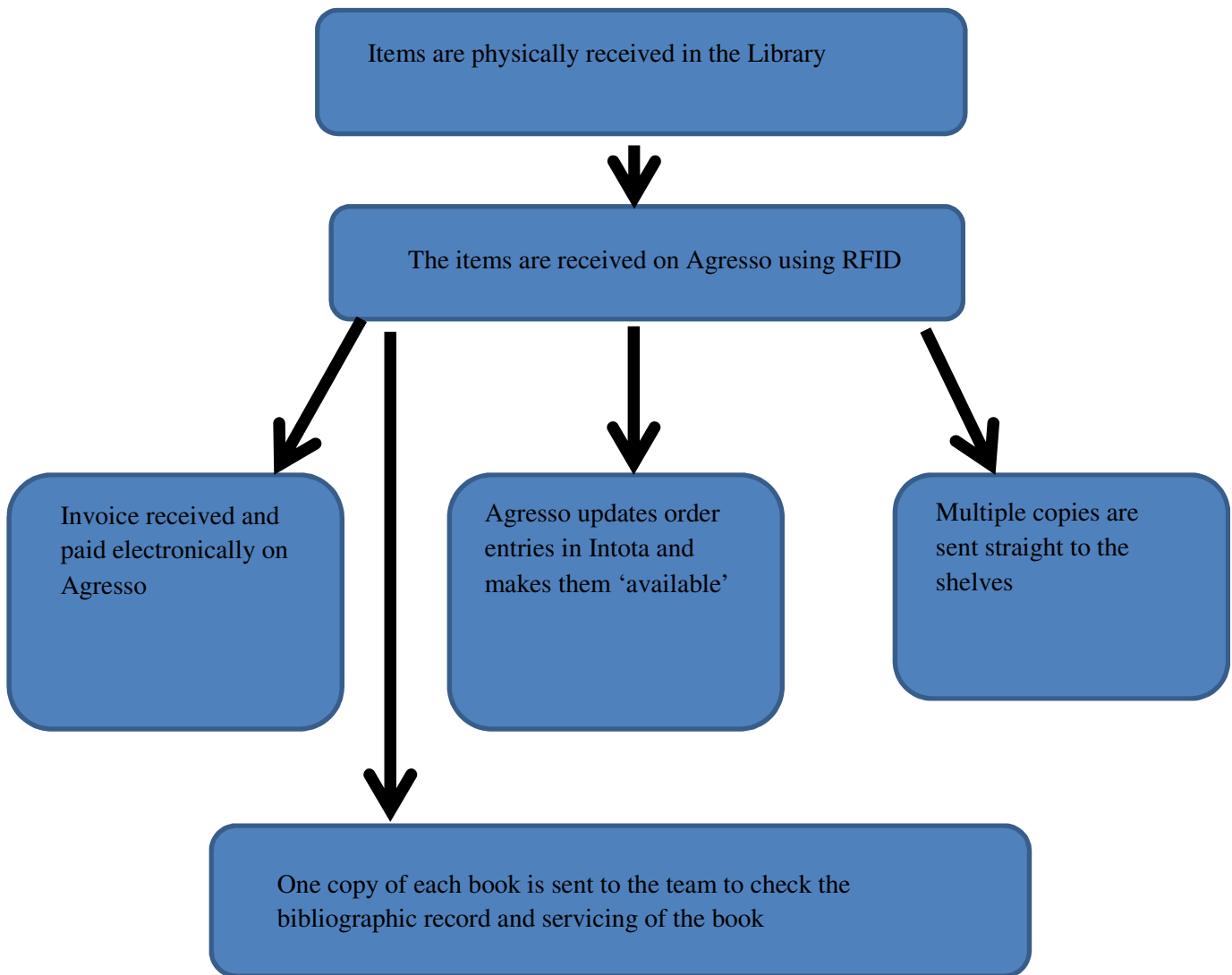


Figure 5: Ideal workflow for academic/subject team suggestions

