



BIC Task & Finish Working Groups Project Briefing Document

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BIC Committee Review

Reviewed by	Name	Organisation	Date
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Metadata Committee			25/10/16
BIC Operational Board			25/10/16

BIC Committee Approval

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1. PURPOSE

BIC developed a suite of Trade XML Web Services between 2006 and 2009 but only one of these web services was specifically for libraries (Get MARC record). These web services have now been reviewed by the BIC Web Services Task & Finish Working Group (T&FWG) and as part of its work, this group examined the suitability of the existing web services for library use. A BIC Libraries Web Services Workshop was held in June 2015 and this workshop identified a number of web services which could be very useful to libraries and their trading partners. As developing these library web services would require specialist input, it was recognised that a separate group should be set up, (to be called the BIC Library Web Services T&FWG). This was put to the BIC Libraries Committee and the result is this document which suggests the commissioning of this T&FWG.

2. BACKGROUND

The BIC Library Web Services T&FWG will undertake the development of a suite of BIC Web Services specifically designed for use in libraries. The T&FWG will imitate the successful methodology already in use by BIC to develop web services for the trade. This involves identifying a shortlist of required web services. Francis Cave, BIC's XML Consultant, develops a set of web service message pairs, working with the T&FWG which consists of all interested stakeholders (who are BIC Members). Each web service is sent "out for comment" to a wider group including BIC members, committees and T&FWGs and any feedback is noted and any necessary amendments made. Once the web service is ready, it is published on the BIC website and available for use by BIC members.

3. PROJECT DEFINITION

3.1. PROJECT OBJECTIVES

The project deliverable is a new suite of web services designed specifically for libraries. Some of the guidance documentation has already been developed by the trade web services T&FWG and this will be reviewed and, if necessary, amended to be suitable for libraries. The effort involved is envisaged to be:

- 1) Establishing who the interested parties are so that they form the T&FWG. Any BIC members may register an interest in the work of this T&FWG and may attend the first meeting and subsequent conference calls. Note that some users of the BIC Web Services standard are based outside the UK so it is not practicable for them to attend the first meeting. However, it is envisaged that they may want to attend subsequent conference call meetings if interested.
- 2) At least one single face to face meeting of the T&FWG. This will be held at BIC HQ and will involve hiring a room etc.
- 3) A review of the priorities suggested by the BIC Libraries Web Services Workshop and some analysis of the existing trade web services to see whether adapting some to suit libraries would be better than starting afresh in each case.
- 4) It is envisaged that there will be some input by BIC XML Consultant, Francis Cave (author of the EDItX messages which form the basis of BIC's existing suite of web

services.) In order to establish a budget for this work it will be necessary to commit to a cost for Francis' time. This will be detailed later in this document.

- 5) A new suite of library web services would be produced by the BIC Library Web Services T&FWG and these would be uploaded to the BIC website by the BIC Business Manager and promoted to the BIC community by BIC's Training, Events and Communications Committee. Note that one of the problems with BIC's web services has been that it is not known how widely these standards have actually been implemented. The new web services will be available on the new BIC website and users will register to download the standard. Hopefully this will give BIC useful usage feedback and the opportunity to follow up with advice and training etc.
- 6) Business benefits include making a set of library web services available for use by BIC members and non-members. By using a standard set of web services, it will save development time in library systems, increase systems compatibility and reduce duplication and thus cost, Web services are relatively inexpensive to develop, implement and test and using a standard suite should be of benefit to BIC members. For example one supplier can implement a standard web service with all trading partners instead of having to develop, implement and manage a proprietary web service for each trading partner.
- 7) A later promotional phase for this project may be considered in future and this could cover writing case studies which would show how BIC members have implemented BIC Web services and how this has been beneficial.

3.2. PROJECT SCOPE

The formal deliverables are a new suite of BIC Library web services, including a number of new message pairs, with accompanying guidelines documentation/Implementation Checklist and FAQs. They will be published on the new BIC website.

BIC Members may need help and encouragement to invest in web services so one deliverable from this project should be a library version of the "Beginner's Guide to Web Services". This may cover both major types of web services, SOAP and REST, or the T&FWG may decide to specialise in one method if appropriate.

It is envisaged that the T&FWG will review the list of requirements identified in the BIC Libraries Web Services Workshop and as necessary identify, prioritise and develop new web service message pairs as requested by BIC members or members of the T&FWG.

Progress reports will be presented to the BIC Libraries Committee and the BIC Metadata Sub-Committee (where relevant), reporting on progress made on message pairs which are of interest to these committees. A close link will be maintained with the BIC Trade Web Services T&FWG. As the majority of these web services involve the library supply chain, the BIC Libraries Committee will be the authorising committee.

The work will go through possibly several phases e.g. analysis – development – testing – publishing, for each message pair or for similar sets of messages. Messages will be published in draft when they are ready for use rather than at the end of the whole project. Live versions will be made available once the draft versions have been tested.

Note that the success of this project will depend on BIC members getting involved with the T&FWG, reviewing the web services when they are published as “Out for Comment” and then testing and implementing these messages.

3.3. OUTLINE PROJECT DELIVERABLES AND/OR DESIRED OUTCOMES

The project will deliver a suite of new web services as requested or identified by libraries and their stock suppliers and systems vendors, other interested parties or members of the BIC Library Web Services T&FWG or the relevant BIC committees e.g. BIC Library Committee, BIC Metadata Sub-Committee or the BIC Library technical clinic.

Note that all web services will first be published as a draft and will then be available for testing. Once they have been tested they can be published as a live version available for all. This status of draft or live will be made clear on the new website. All BIC members should be informed when web services are published on the website in both draft and live versions.

The Project will identify milestones and report to the relevant BIC committees at each milestone.

It is envisaged that the T&FWG should identify use cases and produce a briefing document for BIC's TEC committee to enable it to promote the benefits of BIC's web services for libraries. The TEC Committee will be involved in promoting the web services developed by the BIC Trade Web Services T&FWG and this work should be coordinated with the library work to take advantage of any similarities.

The following is a very brief list of the web services which the workshop identified. Note that priority should be given to web services for which there is an enthusiastic user base ideally represented by both senders and receivers on the T&FWG. Experience in the trade web services T&FWG has shown that it is crucial to get interested stakeholders into the T&FWG and engaging with the messages in order to deliver robust web services.

Skeleton Document of Requirements (an output from the BIC Library Web Services Workshop)

1. Enhanced Content
 - Catalogue enrichment
 - Price & Availability (P&A) (already exists for trade)
 - P&A Metadata (MARC Web Service already exists)

2. Inter-Library Loans (ILL)
 - Availability
 - Reserve item
 - Option to cancel request
 - Status check, e.g. in transit
 - Renew item
 - Return item
 - Receipt
 - Recall item
 - Terms request

Unity Union Catalogue

3. Financial authorisation
Invoice, order, receipt
eProcurement
Mixed-rate VAT
4. EDI
(possibly revisit some EDI messages via web services. - ebooks via EDI is one message requested by BIC Library Technical Clinic)
5. PDA (Patron Driven Acquisition)
6. PDA Print Books
7. Reading lists
P&A
Quotes
Upload to supplier selection → P&A
8. Loan usage – public
9. Supplier Selection
Approvals
Stocked or on order
10. Subscriptions
Authentication
HTTPS REST
JSON (Other JSON versions may be required)
11. Transformation layer
12. Claims requests (damaged, etc.)
13. Consolidated invoices
14. Request skeleton MARC (already available?)
15. Changes sync

Clearly the above list needs further definition and prioritisation work so that it is clear what each web service will do and an example of the outline contents of each sent message and reply message should be agreed. This will ensure that all members of the new T&FWG and the authorising committee(s) understand the scope of the work before the messages are developed. One or two of the above list are long running issues which

have not been completely solved in EDI for example “Consolidated Invoices” which was raised at the BIC Library Technical Clinic and workarounds were agreed using EDI. Web services may offer a fresh and more complete solution to these issues.

The BIC Library Committee or the BIC Library Web Services T&FWG may decide to phase this work as there are so many potential web services. Each phase could be authorised and developed before moving on to the next. The BIC Library Web Services workshop was very successful in setting out a large amount of potential web services development but the prioritisation process must thin this down to a first and second phase with messages that users are most keen to implement. At the workshop Bertrams Library Services described a new model connecting libraries and stock suppliers by a range of web services messages. If this model is to become a reality it will require significant input and engagement from Bertrams and other interested parties.

Other Deliverables include:

Beginners Guide to Library Web Services

Marketing plan or list of requirements to be issued to the BIC TEC Committee

Documentation to assist with implementation

Establishing success criteria for the project

Relationship with BIC’s Library Communications Framework (LCF)

Note that BIC's ongoing work on the LCF is managed by a separate panel and an on-going maintenance group. BIC has decided to structure its work on library web services into two distinct groups, one covering internal web services and another covering external web services. Internal includes web services designed to communicate between systems within the library e.g. between the LMS and the RFID Kiosk. This is the area already covered by the LCF. It was felt that adding external web services to the workload of the LCF group would slow down progress in this area. The external work will look at web services outside the library e.g. that connect the library with other libraries, stock suppliers etc. This two pronged approach should ensure that LCF momentum is maintained and that external web services are given an appropriate level of attention. These two groups will have some personnel in common e.g. Francis Cave, BIC's XML Consultant, who will develop the XML messages. This will ensure that the new external web services will conform to the principles already established by the library framework (LCF).

3.4. CONSTRAINTS

It will be vital to recruit a competent chair and a committed T&FWG to work on this project and these individuals must all buy into the Project Brief and the T&FWG Terms of Reference from the outset. They will need to be informed in advance of the following:

- Time needed from them in total and how this breaks down over the course of the duration of the project
- What actions are likely to be expected of them and when

The workload of key individuals will be a potential constraint. John Garrould (Connect Group/Bertrams Books/Bertrams Library Service) would be an ideal chair of this group but his workload may not permit his involvement at this level. An alternative chair from a library interested in this work or from a stock supplier or systems vendor would be ideal if John cannot undertake this role. A deputy chair who is up to speed on the issues could assist John. In the absence of a BIC member willing to do this Simon Edwards could undertake this role (as he does for the Trade T&FWG). This would provide useful continuity and liaison between the two groups .

Budget is a potential constraint. BIC's Executive Director needs clarity on exactly what the overall costs incurred will be. The main costs for BIC are likely to be the involvement of consultants, Francis Cave and Simon Edwards.

Time could be a constraint particularly for members of the T&FWG who all have "day" jobs. Therefore, in order to manage expectations and respect everyone's time, a firm timeline needs to be agreed with the T&FWG and communicated to BIC's Executive Director before any work is begun.

The constraints on the project are as follows:

1. Time available for the Chair of the group to chair meetings and provide feedback, usage data and suggestions for improvement
2. Consultant's availability. Francis Cave is the BIC technical consultant needed for this project to develop the XML messages.
3. It is envisaged that the T&FWG will start with a face to face project meeting at CILIP necessitating a room hire. Then every two months a conference call will be held to discuss progress made and any issues raised.
4. It is assumed that the T&FWG will undertake a brief scoping exercise to establish and prioritise the list of message pairs to be developed. The project is expected to run for about 12 months with regular meetings by conference call at two monthly intervals. Face-to-face meetings may be called if deemed necessary.

3.5. INTERFACES

Many BIC members may be interested in this web services work in libraries. The BIC Library Committee is authorising this work and the Metadata sub-committee, Physical Supply Chain Committee and the BIC Trade Technical Implementation Clinic and BIC Libraries Technical Implementation Clinic may be interested and involved in this work. The output will be published on the website. Note that once the web services are published the T&FWG will disband and the on-going standards maintenance work will be undertaken by the appropriate technical clinics in this case the BIC Libraries Technical Clinic.

Additional interest may come from overseas organisations who may be interested in web services and who may trade with UK based organisations. However, these may not be BIC members. (Note only BIC members can be part of a T&FWG)

There may be an interest from EDItEUR who have been involved in the development of the EDItX messages, which form the basis of the BIC Web Services (trade) message

payloads. They may want to be involved with this T&FWG and would be a welcome addition to the project.

4. OUTLINE BUSINESS/INDUSTRY CASE

Business benefits include:

- A new set of web services standards for use in libraries
- Accompanying documentation to assist organisations with implementation
- The web services will enable libraries and their suppliers to develop new solutions to improve areas such as ebook ordering, inter-library loans, integration with authority and university finance systems, enhanced metadata solutions and improved facilities such as Patron-Driven Acquisition and supplier selection.

Negative aspects of not doing this work could be that those who wanted it done might do it themselves as a non-standard work outside BIC. A non-BIC alternative, actively promoted and updated version could then be used by BIC members whilst BIC's web services standards would fall into dis-use. Clearly this would be damaging to BIC's reputation and role in the industry, as BIC would have failed to respond to members' needs.

It is BIC's role to respond to its members and develop standards to enable them to trade more efficiently, offer improved service etc. Web services offer a relatively low cost means of communicating information between organisations in near real-time and this immediacy of information can improve the way that organisations communicate with each other. The libraries have not benefited from the previous work done by BIC in this area and this is their chance to develop innovative solutions using web services technology.

5. QUALITY EXPECTATIONS

These web services can be judged a success by the fact of their successful implementation although this is often invisible to BIC and hard to quantify. First, each message pair will be rigorously tested by the project team and won't be published as live until fully tested in draft. Previously messages have been published as a draft so that early adopters could test them, implement them and feedback to BIC. This approach will be adopted for all messages which are changed.

Ongoing efforts to monitor usage of these messages would be very helpful in establishing their success. Trading partners offering these services could feed usage statistics to BIC on a quarterly basis. This would help with forecasting and planning in the future. It would also enable more empirical success criteria to be set and monitored. T&FWG participants who plan to implement new or existing messages will be encouraged to provide statistics on usage.

Note that quality will be established whilst the message pair is in draft. Once established the message pair will move to a live state.

Once the T&FWG has finished its work it will be closed down and the BIC Library Technical Implementation Clinic (reporting to the BIC Libraries Committee) will act as custodian to any further requests for updates or revisions to these BIC standards. These will be collected

together and monitored for their importance. If sufficient changes are needed again in the future then a fresh T&FWG will be considered.

A timeline will be established by the T&FWG. The group will review the list of message pairs and decide on a priority sequence. This will form the timeline over 9 months with milestones as each message pair or family of similar message pairs will be published in draft for testing and then finally published in live. The objective is to work through these message pairs over a 9 to 12month period. The timing is not crucial for BIC as long as the costs (consultancy fees) are within budget.

The importance of this work will be in the following order of priority: 1. Quality. 2. Cost, 3, Timeline.

Quality is most important because BIC's work has to be to the highest standards. Cost is the second priority because BIC's budget is important and BIC's resources must be managed. Timeline is the least important because if overrunning slightly was still within budget and delivered optimum quality then this would be acceptable. The timeline is only estimated. The crucial point is that delay should not lead to increased costs.

6. ACCEPTANCE CRITERIA

BIC has little or no data on actual usage of web services standards and almost all the library web services will be completely new. One of the benefits of the new BIC website should be the ability to monitor interest in BIC standards and the ability to log downloads of the standards and guidelines. BIC can then follow up with users to ensure that the standards are working successfully. The T&FWG could be tasked with setting the success criteria of the project based on member data at the start of the project and by website data once the new website is live.

The following is a draft of possible acceptance criteria for this project:

1. Each message pair is in use or is likely to be used in the near future by the industry
2. Each message pair fulfills a business need for the industry
3. Each message pair has been examined by the T&FWG and found to be fit for purpose
4. The messages have been fully described together with implementation instructions and user guidelines

It is assumed that the T&FWG will review the acceptance criteria and possibly amend at the first meeting.

7. RISKS

Not doing this work could mean that those who wanted it done might do it themselves as a non-standard piece of work outside BIC. Web services are less expensive to develop and implement than say EDI, and it is likely that there would be a proliferation of non-standard web services in the library sector over time. Acting now and delivering a suite of industry standard web services for libraries could really help to encourage take up of standard solutions.

The business risk for BIC is that BIC will become less relevant to the library sector.

There is a risk that any single web service might not suit a BIC member's, or an industry organisation's, business practice but this project is designed to make the messages as suitable as possible. It should be noted that often web services and other BIC standards work is an opportunity for businesses to change and improve their working practices and this may be an opportunity for some organisations and may be necessary to obtain maximum benefit from one or more of BIC's web services.

8. OUTLINE PROJECT PLAN

The BIC Libraries Committee, Metadata Committee and Operational Board will be asked to sign off on this project brief. This briefing document will be reviewed by the BIC Executive Director and then circulated to these committee(s) via email. It is hoped that a sign off will be possible by the start of November 2016 and that the project could hold its first meeting in December 2016/early Jan 2017 with a proposed end date (month) of Jan 2018. Note that web services will be published as they are completed during the life of the project rather than waiting until the end of the project to publish them all in one release.

Project Costs

BIC's costs are limited to room hire and consultants' fees

The only room cost will be for the preliminary face-to-face meeting. It is anticipated that all further meetings are very likely to be by conference call using a free service. If further face-to-face meetings are required that will be factored into the overall costs but these shouldn't be a barrier to the project.

If the project over runs then it will be necessary to obtain permission from the Executive Director and the Board before any additional cost is incurred.

9. BUDGET/COSTS

BIC Consultant's fees will be incurred by Francis Cave and Simon Edwards during this project.

The fees are estimated as follows:

Francis:

- T&FWG Meetings and Conference calls

- Preliminary face-to-face meeting: 2 hours
- 6 conference call meetings: 12 hours
- Review of existing web services for use in libraries: 18 hours

It is likely that some existing BIC web services will provide the basis for equivalent library web services. Assuming 6 message pairs will require this attention at 0.5 days for each message pair revision and update of the documentation and associated XML Schema and WSDL resources, a budget of 18 hours would cover this.

- Development of new library web service standards: approximately 60 hours

It is difficult to predict how long some of the required web services will take to develop. Where they are similar to trade messages, and Francis will not require much input, they could be

developed at the rate of one message pair per day. With perhaps a first tranche of 10 message pairs, this would give about 60 hours. Much depends on the support given to Francis by the T&FWG.

So Francis's total work is estimated as follows:

Meeting and calls: 14 hours

Review and Revision of Existing BIC Web Services: 18 hours

Development of new library web service standards: 60 hours

Contingency: 5 hours

Total: 97 hours

Simon:

Preliminary face-to-face meeting: 2 hours

6 Conference call meetings: 12 hours

Deputy Project lead role, agendas, minutes review, project progress forms, reporting to BIC Libraries Committee and contribution to the various deliverables including user guide, website description etc. = approx 18 hours.

Contingency: 5 hours

Total = 37 hours

If the project overruns or identifies any additional work or deliverables then it will be necessary to obtain permission from the Executive Director and the Board before any additional cost is incurred.

10. AUTHORITY RESPONSIBLE

Executive Director, BIC.

11. PROPOSED TASK & FINISH WORKING GROUP LEADER/PROJECT MANAGER

The Proposed Chair of the group is John Garrould, Bertrams Group IT Director, although this is to be confirmed.

Temporary Deputy Chair will be Simon Edwards, BIC Consultant.

12. CUSTOMERS AND USERS

Some members of the existing BIC Web Services T&FWG are from the library community and these and others attended the BIC Library Web Services Workshop so there is a current list of interested stakeholders which BIC should invite to take part in this group. In addition BIC could invite volunteers from the wider BIC membership such as librarians, stock suppliers, systems vendors, data aggregators, academic and trade publishers that supply libraries direct i.e. via their own distribution channels, and other service providers etc.

Attendees of the BIC Library Web Services Workshop:

Blackburn	Marcus	Operations Director	Civica UK
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Campbell	Colin	Software Engineer	PTFS-Europe
Carter	Colin	Director, Library Engagement	Innovative
Cave	Francis	Consultant	Francis Cave Digital Publishing
Cooke	Catherine	Senior Business Systems Analyst	Westminster Libraries
Doran	Niamh	Senior Application Support Analyst	Civica UK
Edwards	Simon	Consultant	Simon Edwards
Field	Jonathan	Technical Director	PTFS Europe Limited
Garrould	John	Head of Information Technology	Bertrams
Holt	Matthew	Library Systems Development Manager	Bertrams
Jones	Graham	IT Project Manager	Askews and Holts Library Services Ltd
Luke	Karina	Executive Director	Book Industry Communication Ltd
Scott	Richard	Senior Programmer	BDS Ltd
Scott	William	EDI Projects Manager	Bertram Group
Sherman	Heather	Head of Library Programme Management	Dawson Books
Stevens	Neil	Software Developer	Capita
Thomas	David	Product Specialist UK	SirsiDynix
Willan	Terry	Business Analyst	Capita
Wright	Jennifer	Training & Development Manager	BDS Ltd

Other suggestions:

Delegate from Axiell

Keir Finnerty from Coutts ProQuest

Barbara Pacut from SirsiDynix

Delegate from Ex-Libris

Representation from academic/special libraries

Representation from academic and trade publishers who are supplying libraries directly via their own distribution channels.

Any of the above attendee organisations that have fallen out of BIC membership since the Workshop was held, or that are in bad standing with BIC (i.e. have outstanding subscription dues) will not be eligible to participate in the project. They may (upon consideration by the T&FWG) be invited as one-off guests only.

Possible interested parties from the trade web services T&FWG:

Some may want to nominate a business or technical expert from their own organisation to attend the working group. A call for volunteers will be needed to attract other members to this T&FWG and this should be followed by one or more reminders and a clear deadline.

13. REPORTING

It is assumed that the T&FWG will report to the BIC Libraries Committee which meets quarterly. Previous experience has shown that reporting on a monthly basis is probably too frequent and

quarterly or every two months reporting better reflects progress made as it coincides with the expected schedule of conference calls and BIC's management needs.

The costs to budget ought to be managed by the BIC Executive Director rather than the chair of the project as the only project costs for BIC are the room hire (within BIC's control) and the consultancy fees which are also within BIC's control.