

Shared Learning Group

BizTalk Integration

LLPG to CRM

Prepared By
Craig Turner (Rotherham MBC)

Contributors:
Graeme Hutchinson (LB Newham)
Richard Copley (Rotherham MBC)

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1.0 Purpose

1.1 *Statement of intent*

The purpose of the BizTalk integration work streams is to investigate the feasibility of integrating commonly used public sector systems and services utilising the BizTalk integration architecture. This document sets out to define the work stream set up to deliver integration between a Local Land and Property Gazetteer (LLPG) and a Customer Relationship Management system (CRM).

It is assumed that this document will define the standards by which the members of the Shared Learning Group will be able to implement LLPG and CRM integration at a local level. There will be a number of standards that must be adhered to, that will ensure the technical deliverables from this work stream are implemented effectively within the receiving authority. It is understood that local variations will exist and that the technical offering from this work stream will need an amount of local tailoring.

All technical deliverables from this work stream will be offered free and on an as-is basis, initially to all authorities contributing to the SLG programme.

All findings and outcomes from this work stream will appear on the SLG portal; this should be regarded as the ultimate source for all documentation and deliverables.

1.2 *LLPG and CRM Requirements*

It is essential that timely and accurate property information is available to customer service agents at the point of contact to the citizen. To achieve this there are a number of functions that need to be performed on the LLPG data such as data cleansing and geo-coding. It is assumed that these functions are currently in existence in each authority and, therefore, will not be covered explicitly within this document.

The requirements covered in this document are limited to the integration between LLPG and CRM, as defined herein, business processes around LLPG maintenance are not covered.

The integration stated is concerned only with the Basic Land and Property Unit (BLPU) aspect of the LLPG, and not the alternative addresses associated with a single BLPU.

Dynamic lookup of the LLPG by the CRM system, although accepted as potentially the best long term solution, is out of scope of this project as the property information will be held locally in the receiving CRM system.

1.3 Local Authority Commitments

Each participating Local authority has committed to ensure that the relevant and necessary resources are available. This commitment will ensure that resources are available as specified in the agreed project plan. This plan must be agreed by both parties prior to any commitments being made.

Local authority commit to;

- Making resources available, as defined in the project plan
- Making available a suitable hardware environment, this may be an existing installation, rather than the suppliers preferred environment.
- Attending meetings offsite if they can not reasonably be accommodated at the participating authority

1.4 Definition of Terms

To ensure clarity the following terms are used in this document and are defined below:

The System – This is defined as the solution that is delivered as part of the piece of work defined herein. The system will include any third party software required to make the solution work as one core system.

Edge System(s) – this is defined as any system that interfaces with the system, as defined above. Integration can be via any method.

The supplier – the Microsoft partner organisation engaged to submit a proposal, or chosen to deliver the project.

2.0 Stakeholders

There are a number of stakeholders in the LLPG work stream. It is essential that each of the stakeholders is aware of their roles and responsibilities with respect to the deliverables of the work stream. It is also essential that all stakeholders play an active role in the definition of the deliverables to ensure the requirements cover as much as possible the requirements from a broad range of authorities.

2.1 Lead authority:

Rotherham Metropolitan Borough Council		
Lead Contributor :		
Name	Craig Turner	
eMail	craig.turner@rotherham.gov.uk	
Mobile	07748 142 619	
Business Contributor :		
Name	Paul Edwards	
eMail	Paul.edwards@rotherham.gov.uk	
Mobile		
LLPG & BizTalk Lead :		
Name	Richard Copley	
eMail	Richard.copley@rotherham.gov.uk	
Mobile		
CRM Lead :		
Name	Charlotte Harris	
eMail	Charlotte.harris@rotherham.gov.uk	
Mobile		

2.2 Contributing authorities:

London Borough of Newham	
Lead Contributor :	
Name	Graeme Hutchinson
eMail	Graeme.Hutchinson@newham.gov.uk
Mobile	07803 926 041
Business Contributor :	
Name	Shane Mills
eMail	shane.mills@newham.gov.uk
Mobile	07786 032 543
LLPG Technical Lead :	
Name	Graeme Hutchinson
eMail	Graeme.Hutchinson@newham.gov.uk
Mobile	07803 926 041
BizTalk Technical Lead :	
Name	Graeme Hutchinson
eMail	Graeme.Hutchinson@newham.gov.uk
Mobile	07803 926 041
CRM Technical Lead :	
Name	Graeme Hutchinson
eMail	Graeme.Hutchinson@newham.gov.uk
Mobile	07803 926 041

Derby City Council	
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Lead Contributor :	
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Name	Jason Gruber
eMail	Jason.gruber@derby.gov.uk
Mobile	

Business Contributor :	
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Name	
eMail	
Mobile	

LLPG Technical Lead :	
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Name	
eMail	
Mobile	

BizTalk Technical Lead :	
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Name	
eMail	
Mobile	

CRM Technical Lead :	
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Name	
eMail	
Mobile	

3.0 Deliverables

3.1 General Statement

The technical architecture and supporting document requirements for this work stream are detailed in section 5.0.

The Shared Learning Group was set up to ensure technology that can be shared amongst not only its active members, but also other Local Authorities across the UK. Therefore it is essential that the system is designed in such a way that will enable any Local Authority to carry out their own installation of the system in their local environment.

The solution must be installed on one nominated local authority site for each of the following source/target combinations.

Rotherham Metropolitan Borough Council		
	CRM	Siebel CRM (Contact Central LG2 Version)
	LLPG	Symphony GMS

London Borough of Newham		
	CRM	LA CRM
	LLPG	CAPS Uniform

Derby City Council		
	CRM	Microsoft CRM
	LLPG	<please Insert>

Timescales are to be agreed by the supplier and the Local Authority in question. It is accepted that there may be dependences at a local level that have an impact on timescales. Each party will endeavour to implement the system at the earliest possible opportunity based upon local circumstances. The timescales will be documented in the relevant project plans.

3.1 Intellectual Property Rights (IPR)

The discussions and detail of any IPR issues will be discussed separately to this document. They are likely to be conducted by Microsoft representatives and the appointed Heads of the SLG. The detail of this will follow in due course.

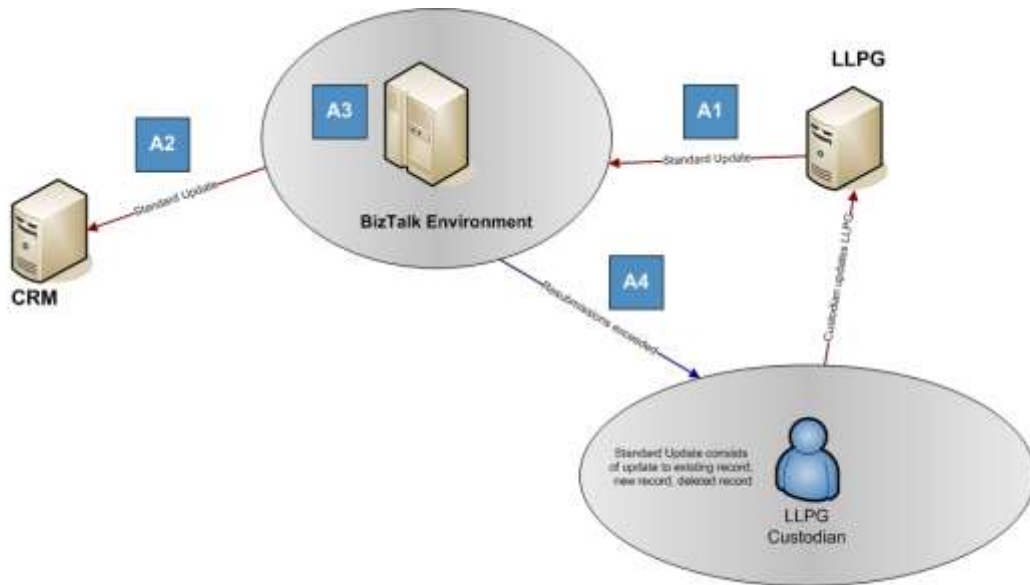
3.2 Pricing

The SLG are likely to require a range of pricing options broken down into clear areas (e.g. day rates, bulk discounts etc.). The format at present is open but may in the future be based on a specific authority procurement framework or other best practice guidance.

It is suggested that at this stage a clear, detailed response on pricing is produced based on the specification requirement contained within this document.

4.2 Processes

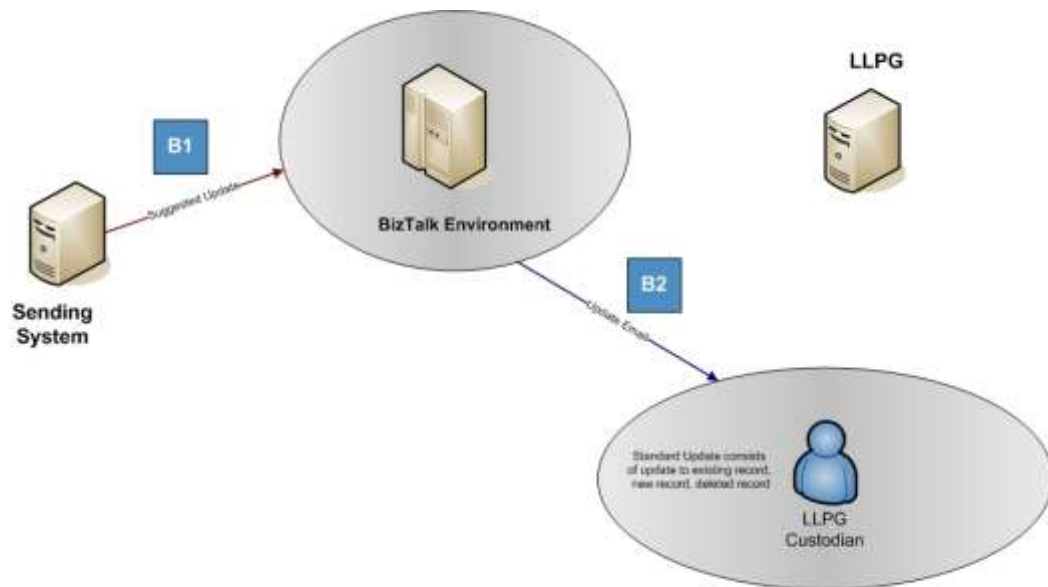
Standard insert/update from LLPG - Process A



Standard insert/update from LLPG (Process A)

Step	Description
A1	<p>Trigger : LLPG notifies BTS of new/updated record Data schema : Valuebill schema DT-BS7666-v2-0.xsd</p> <p>Either via direct query into LLPG database or using web service from LLPG system (preferred)</p>
A2	<p>Action : BizTalk interfaces with relevant subscribers</p> <p>Insert or update (as appropriate) the record into the property table in the host CRM application</p>
A3	BizTalk will control resubmissions upon failure to update.
A4	Email LLPG Custodian if resubmissions exceed agreed threshold.

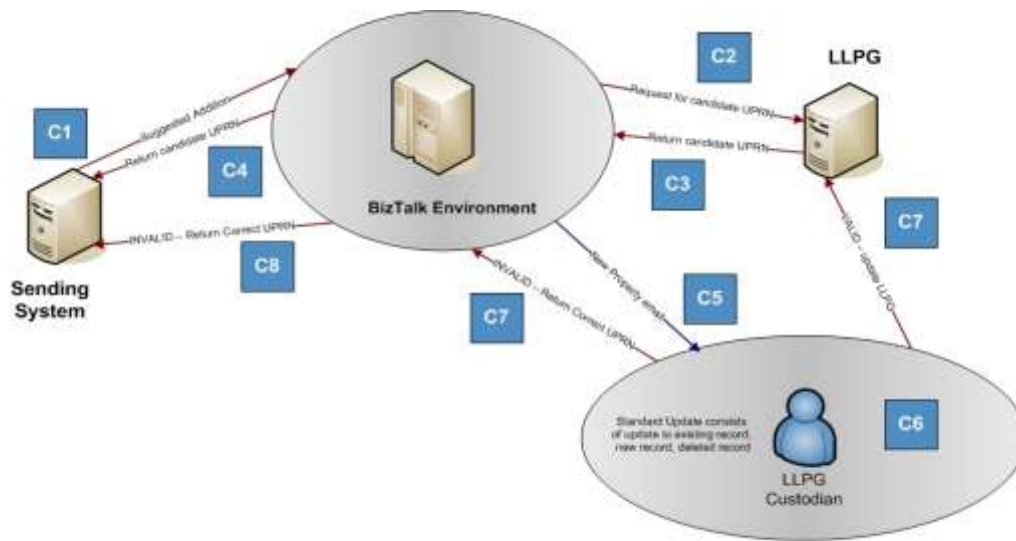
CRM Suggested update to existing address (inc. demolished) - Process B



CRM Suggested update to existing address (inc. demolished) - Process B

Step	Description
B1	<p>Trigger : BizTalk receives a notice of change via a BizTalk web service. Data schema : Valuebill schema DT-BS7666-v2-0.xsd and extensions for free form entry of addresses (e.g Address line 1, address line 2) and reason for update</p> <p>The CRM system is not stated as the sending service, as it is felt that this may not be a service built into CRM systems without modification, therefore the sending service is left open to the implementing authority.</p>
B2	<p>Action : BizTalk sends an update email to the LLPG custodian</p>
	<p>This is the end of this process, however please note that any updates created via this process will fed into the standard insert/update process (Process A), or historical process (Process E)</p>

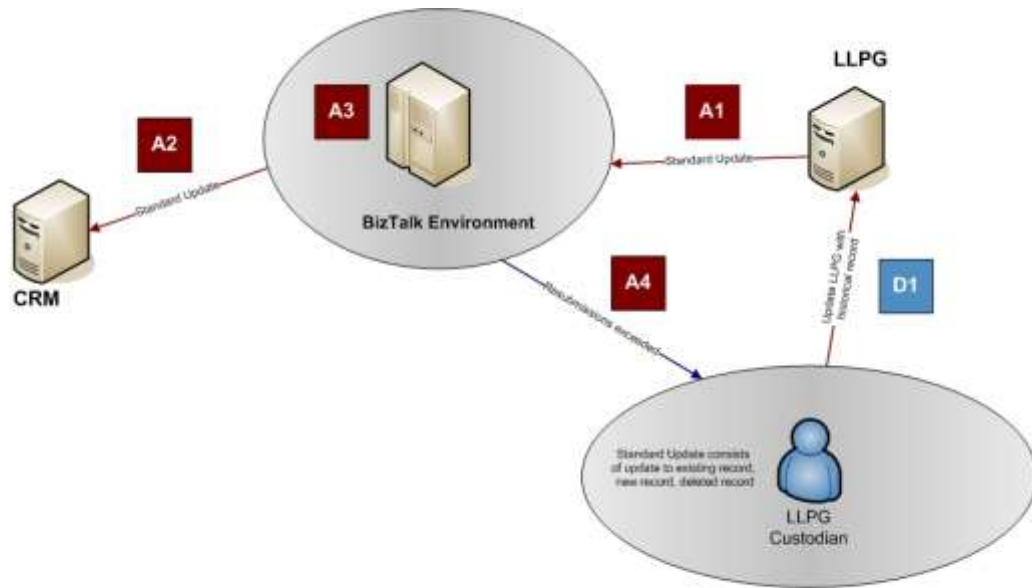
Suggested new address – Process C



Suggested new address – Process C

Step	Description
C1	Trigger : BizTalk receives a notice of new address via a BizTalk web service. Data schema : Valuebill schema DT-BS7666-v2-0.xsd and extensions for free form entry of addresses (e.g Address line 1, address line 2) and reason for update The CRM system is not stated as the sending service, as it is felt that this may not be a service built into CRM systems without modification, therefore the sending service is left open to the implementing authority.
C2	Action : BizTalk sends a request for new candidate UPRN number to LLPG This needs validation that issue of real UPRN is acceptable, or alternatively to use a dummy UPRN at this stage. (this will significantly change the process)
C3	Action : LLPG return candidate UPRN to BizTalk Either via direct query into LLPG database or using web service from LLPG system (preferred)
C4	Action : BizTalk returns the candidate UPRN to initiator of (C1), this number is then used for the creation of the new property.
C5	Action : BizTalk sends a request for a new property email to the LLPG custodian with the candidate UPRN
C6	Action : custodian reviews request.
C7	Action : Request Accepted : custodian updates LLPG This is the end of this process, however please note that any updates created via this process will fed into the standard insert/update process (Process A)
C8	Action : Request denied : custodian returns correct UPRN for the property Action : BizTalk to return correct UPRN to initiating system (C2)

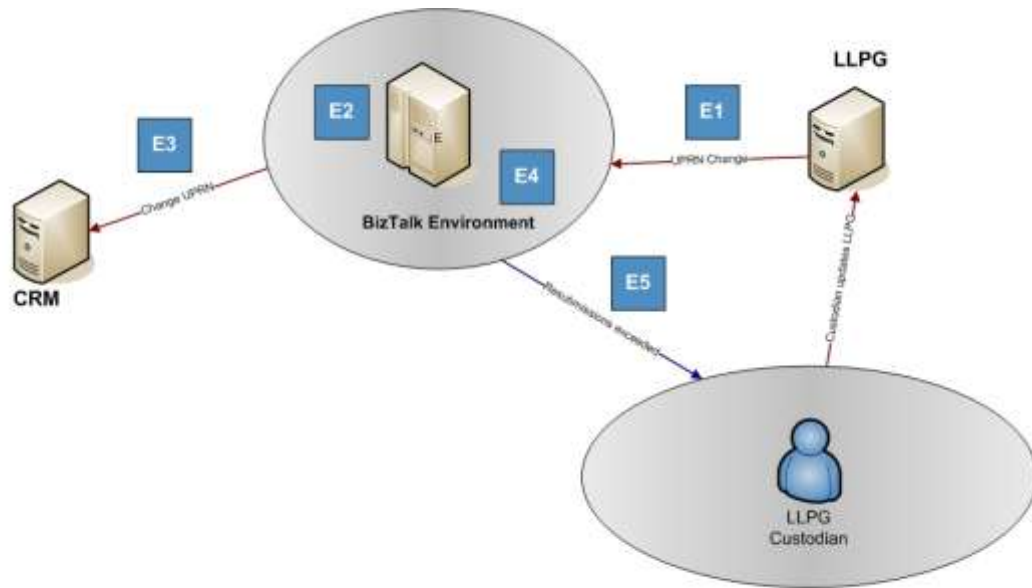
Make UPRN historical (i.e. demolition of property) – Process D



Make UPRN historical (i.e. demolition of property) – Process D

Step	Description
D1	<p>Trigger : LLPG notifies BizTalk of historical record Data schema : Simple UPRN schema.</p> <p>Either via direct query into LLPG database or using web service from LLPG system (preferred)</p>
D2	<p>Action : BizTalk interfaces with relevant subscribers</p> <p>mark the record as historical in the property table in the host CRM application, this is done via the standard update process (Process A)</p>

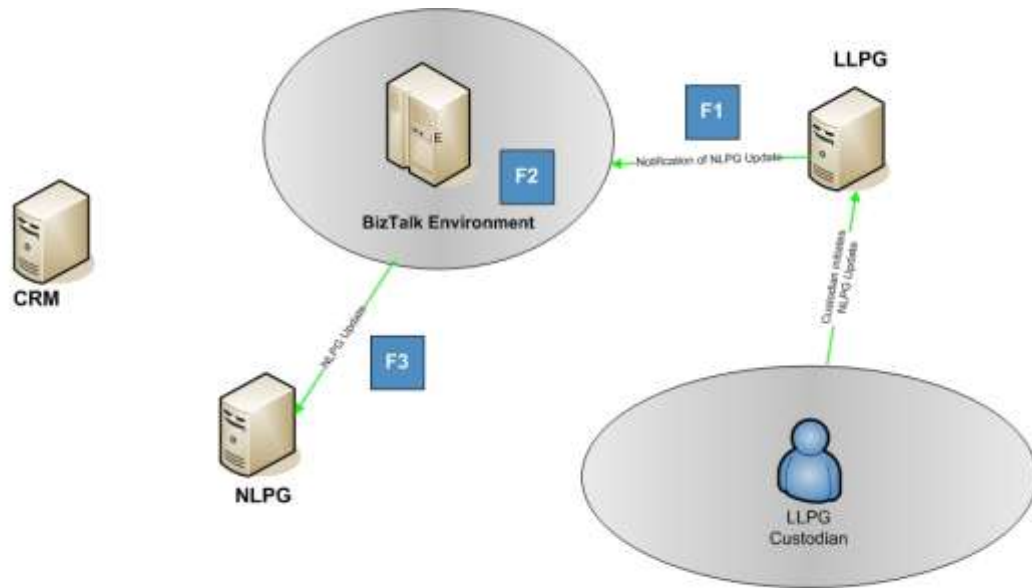
Change of UPRN – Process E



Change of UPRN – Process E

Step	Description
E1	Trigger : LLPG notifies BizTalk of change of UPRN Data schema : Simple UPRN New UPRN and Old UPRN schema. This can be used for de-duplication purposes.
E2	BizTalk sends a request to the subscribers to the service to check if the system has a record of the Old UPRN as specified in the Schema
E3	If a match is found, BizTalk initiates an update to the record replacing the Old UPRN for the New UPRN
E4	BizTalk will control resubmissions upon failure to update.
E5	Email LLPG Custodian if resubmissions exceed agreed threshold.

Update NLPG – Process F



Update NLPG – Process F

Step	Description
F1	Trigger : LLPG notifies BizTalk of NLPG Update Data schema : Simple UPRN New UPRN and Old UPRN schema.
F2	BizTalk carries out data transformation to produce a DTF 6.0 file
F3	BizTalk sends the file to the NLPG (ultimately this would be an automatic process, short term this would most likely be a file drop, and a manual send)

5.0 Technical Architecture

5.1 Data Schema

It is essential that the data model is defined such that all stakeholders are able to implement the integration into their local environment. Furthermore it is paramount that national standards are adhered to, which will ensure compliance with national data standards.

After investigation into the most relevant schema to adopt, it was felt that the BS7666 schema, which is a subset of the ValueBill Schema should be used.

The BS7666 schema can be found online at the following address, or in Appendix A of this document.

Online : <http://www.govtalk.gov.uk/documents/BS7666-v1-4.xsd>

Each process defines the schema used within that particular process and, where relevant, details additional information requirements above and beyond those of the national schemas. These are kept to an absolute minimum, but due to the process requirements additional information sets at times are unavoidable.

5.2 Interfaces

The design of many of the processes defined above (eg. A1, A2, B1 etc) will be dependent on capabilities of the source or target systems. Therefore, the processes have been designed in such a way that the core elements exist with flexibility at the source and target ends to accommodate local implementations.

The preferred approach is to use the source or target systems commercially available packages, where available. Such examples of this are:

- CAPS Solutions offer an XML file-drop package which supports extraction of data for specific UPRNs in BS7666 format.
- Symphony's iExchange platform used to integrate with LLPG data in BS7666 format.

This particularly applies to requirements whereby the target system is to be updated. Any other method of interfacing with target systems, not using the approved method, would probably breach warranty agreements.

It is the responsibility of the supplier to determine the availability of such commercial packages based upon those defined within the scope of this piece of work, as detailed in sections 5.3 and 5.4 .It is also the responsibility of the supplier to propose how these packages would be integrated, based on the processes defined in section 4.0. In the absence of a standard interface, the supplier must propose an alternative method for integration that is compatible with the relevant local and national standards.

5.3 LLPG systems within scope

There are a number of systems identified for inclusion in this work stream. They are as follows:

Rotherham Metropolitan Borough Council		
	System Name	Symphony GMS
	Supplier	Aligned Assets
	Website	www.aligned-assets.co.uk

London Borough of Newham		
	System Name	CAPS Uniform
	Supplier	CAPS Solutions
	Website	http://www.caps-solutions.co.uk/

5.4 CRM systems within scope

There are a number of systems identified for inclusion in this work stream. They are as follows:

Rotherham Metropolitan Borough Council		
	System Name	Siebel CRM
	Supplier	Oracle
	Website	www.siebel.com

London Borough of Newham		
	System Name	LA CRM
	Supplier	Information Services Belfast
	Website	http://www.belfastcity.gov.uk/isb/

Microsoft		
	System Name	Microsoft CRM
	Supplier	Microsoft
	Website	www.microsoft.com

5.6 System requirements

5.6.1 Software

- Suppliers must state the environment under which the system operates. This should detail operating systems and system applications (for example SQL server), all relevant versions and patch levels.
- Suppliers must specify any dependencies which need to be in place to ensure the system will operate effectively
- Suppliers must specify any third party software which will be required in addition to the suppliers' software. This is to include details of how the third party software integrates with the system and the technologies used by this software.
- All programming languages used in the development of the system must be identified and, where appropriate, must conform to local standards.

5.6.2 Hardware

- Suppliers must state the hardware environment or environments under which the system operates. This must include both the minimum environment in which the system will effectively operate and the most appropriate environment based on the following key criteria;
 - Business Continuity
 - Disaster Recovery
 - Performance
 - Ease of support and development
- Suppliers must provide a comprehensive architecture design for the system, including how it integrates with the relevant edge systems.
- Suppliers must detail how the system can integrate with existing components at the authorities identified in this document. This may include core components of the system, such as existing BizTalk environments. It is the responsibility of the supplier to ensure they adequately capture this information, utilising the contacts contained within this document.
- Suppliers must provide relevant hardware sizing figures based upon multiple levels of transactions through the system. This should include, but is not exclusive to;
 - Hard Disk Capacity
 - RAM Capacity
 - CPU configuration and specification
- Suppliers must specify minimum infrastructure requirements, including connectivity between the core components of the system and edge systems.

5.6.3 Documentation

- Suppliers must provide comprehensive documentation, in electronic format, and must include the following;
 - User documentation, to include:
 - Edge system elements
 - LLPG Custodian functions
 - Customer Service Agent functions
 - Setup and installation guide, to include:
 - System pre-requisite documentation
 - Step by step installation guide for Disaster Recovery
 - Explanation of each element and its purpose within the system
 - All the relevant source files, and software necessary to achieve the above
 - Housekeeping guide, to include:
 - Daily/Weekly/Monthly checklist
 - Guide to ensuring system performance is maintained
 - System error guide, including resolutions
 - Technical Documentation, to include;
 - Full system architecture overview
 - Source code, with full explanation of function
 - File definitions
 - System flow diagrams
 - BizTalk aspects documented using the Biztalk documentor, and included in the documentation as a compiled HTML help file.
 - BizTalk Binding Files
 - BizTalk Orchestration Files
 - BizTalk Specialised Adaptor .NET Code
 - Testing and UAT documentation, to include:
 - Full details of system tests carried out
 - Supplier to assist with creation of UAT document
 - Project Documents, to include:
 - Programme plan
 - Full project plan for each Local Authority involved
 - Testing plan
 - Exception, and risk report
 - System acceptance document
- User Documentation must be intuitive, clear and easy to understand. It must be presented in a logical, procedural order so that users are guided through the system in a series of steps.

5.6.4 Performance & Volume

- The system must provide high levels of serviceability, availability and usability, together with consistent response times for its online components.
- Suppliers must provide details that demonstrate how this will be achieved.
- Suppliers must specify whether there is a recommended upper limit for transactions processed via the system and indicate whether this is dependent on their complexity and size.
- The aim of the system is to provide uninterrupted service; suppliers must specify any maintenance tasks that will have a negative impact on system availability. This should be included in the housekeeping guide.
- Suppliers must indicate their willingness to accept full responsibility for ensuring that the system software and environment meets the estimated throughput. Suppliers must specify a timescale in which this will be in effect and the measures by which any issues will be resolved.

5.6.5 Standards

- It is a fundamental requirement that all component systems are fully compliant with the latest and still emerging standards that will enable interconnectivity of systems, both within the local authority, and those of our partner service providers.
- The solution should also make use of emerging Government standards for interoperability such as e-GIF (Government Interoperability Framework).
- The solution must also adopt BS7666 as the standard for storage of address and property data and the corresponding (emerging) personal details standards (known as BS8766)

5.6.6 Testing

- The solution for each of the source/target combination specified must be installed and fully tested on the nominated local authority site.
- The local authority requires that any solution be fully tested by the supplier before it is handed over to the local authority. System testing scripts will be given to the local authority before arrangements are made to install the system locally. The scripts will include description of each test carried out, its purpose, and the expected and actual result.
- The local authority will wish to conduct a full acceptance test programme before and after implementation. This must be featured in both the project plan, and the testing plan.
- Suppliers should indicate the scope of testing required and the time and resources that will be required from the local authority to complete the programme

- The local authority will agree problem management and problem resolution targets with the supplier
- All problems found during testing should be resolved by the supplier, at no expense to the local authority
- Pre-Implementation Acceptance Testing - Suppliers should put forward a schedule of pre-testing and on-site acceptance testing for their proposed solution that will be discussed and agreed by the local authority. This testing schedule should cover all the elements set out within the statement of requirements.
- Post-Implementation Review Testing - Suppliers should put forward a schedule of testing that will occur after the system has been implemented to ensure that all elements of the solution are working as expected following implementation.

5.6.7 Support & Assistance

It is essential that any system implanted is sustainable moving forward. The system should be designed in such a way that the supporting documentation will cover all aspects of support of the system by the implementing local authority.

There may be situations where local authorities are not in a position to carry out the support of the system with the in-house team. Therefore it is a requirement of the proposal that the supplier include a range of support arrangements that individual authorities can purchase. The proposal should include a range of support options and should include the following information;








- Overview of the support offered
- Items covered
- Items specifically not covered
- Assumptions
- Service Level Agreement descriptions and targets

Suppliers must also include costs for complete installation of the system, as there may be authorities that are not in a position to install the system, due to lack of technical experience in the relevant areas.

The supplier must also agree to ensure that the support and installation costs are consistent across the entire customer base. The standard pricing for support and installation will be made available through the SLG. Any supplier found to be inflating the price of the defined standard offerings, will be removed from the portfolio of the SLG and alternative suppliers will be engaged to support future engagements.

This does not preclude the supplier from offering additional services, however standard offerings agreed through the SLG must remain standard across the entire customer base. Caveats around onsite support charges are acceptable given the widespread geographical location of the potential customers; however these must be clearly explained within the support and installation offerings.

6.0 Supporting Documentation

Process Documents (require Visio to view)			
 High Level Design	 Process A	 Process B	 Process C
 Process D	 Process E	 Process F	