



Flood Re

High Level Solution Architecture Document

Effective from date of issue
March 2015

DEFINITION OF TERMINOLOGY

Term	Definition
Capita Ops	Capita personnel undertaking Flood Re Managing Agent services (Non Financial)
Capita Finance	Capita personnel undertaking Flood Re Managing Agent services (Financial)
Cedent	Any Insurer or authorised Delegated Authority who cedes Flood risk to Flood Re under the terms of the Reinsurance Treaty and the Underwriting Manual
Landmark	Sub Contractor to Capita providing elements of the IT solution and associated infrastructure and Service Desk Support
Underwriting Bordereau	Format for receipt of policy information defined by Flood Re and Capita.
Claim Bordereau	Format for receipt of claim information defined by Flood Re and Capita
Property Data Hub (PDH)	Central record of property data as received from the valuation agencies in England, Wales, Northern Ireland and Scotland
Relevant Insurers	Insurance companies authorised to underwrite insurance that will have access to the Bordereaux system in order to cede premium and register claims. Further definition can be found in the Glossary of Terms.
Other Scheme Participants	This group includes Relevant Insurers, Brokers, Delegated Authorities, Software Houses, and Aggregators that will have access to the Property Data Hub (PDH) in order to establish Eligibility Period and Eligibility Category for customers' addresses as part of the quote process.
MOU	Memorandum of Understanding
Flood Re Insurer ID	Unique Insurer ID or the ID of a fully delegated authority which is supplied as part of the on-boarding process.

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1. PURPOSE

The purpose of this document is to defined the requirements of Flood Re to the Managing Agent. The solution encompasses:

- i) Property Data Validation
- ii) Bordereaux Consolidation
- iii) Reinsurance Management
- iv) Associated Management Information (MI)

1.1 Scope

This document defines the high level solution that underpins the Flood Re operation and the interaction with Relevant Insurers and other industry participants, in particular those processes with a system or interface dependency. It does not address all processes that are necessary to support the operation.

1.2 Intended Audience

This document is intended to be read to provide functional and logical understanding of the service being provided by the Managing Agent and to inform the Insurer's planning and processes for the implementation of Flood Re. The recommended audience for this document is likely to include Project Managers, Business Analysts, and Solution Architects.

2. SOLUTION CONTEXT

2.1 Objectives

Ref	Objective
OBJ01	To support the defined requirements of Flood Re
OBJ02	To support the operational management of Flood Re processes
OBJ03	To provide a cohesive solution in respect of the above

2.2 Scope

The solution defined in this document addresses the requirements defined by Flood Re to the Managing Agent.

This document defines the high level solution that underpins the Flood Re operation and the interaction with Relevant Insurers and other industry participants, in particular those processes with a system or interface dependency. It does not address all processes that are necessary to support the operation.

This document will evolve as the design of the solution progresses to ensure that all requirements are addressed.

Out of Scope

This document does not address the systems or services that the Managing Agent is providing solely for Flood Re employees e.g. desktop provision and actuarial services.

2.3 Associated Documents

This document is part of the Flood Re information pack listed below.

The diagrams appearing within the body of the document have also been included as full page versions within Appendix 1 at the end of this document to ensure that the text is clearer for reading.

Reference	Details
Layman's Guide	Overview and Summary of End to End implementation.
High Level Solution Architecture Document	High Level End to End Solution Architecture
Bordereaux Functional Design	Business process and Solution functional details for Underwriting and Claims Bordereau services
Property Data Hub Functional Design	Business process and Solution functional details for Property Address Enquiry services for validating Eligibility Category and Eligibility Period.
Technical Design	Provides the Technical Interface Details for the Bordereaux and Property Data Hub solution services.

2.4 Key Design Considerations

	Issue	Assumption	Impact of Change
1	The percentage take up of the Flood Re ID (FRid)	The (FRid will be adopted in order to achieve SoR 5.11.35 "...minimum of 99.8% address match rate against the defined schema for Industry Participants and the online domestic property and New Build Data Hub".	Impact on service offered but design not affected – i.e. lower match will result in higher rate of service desk calls / manual match effort.
2	Flood Re definition of Relevant Insurer	That it means underwriting Insurers and not intermediaries acting on their behalf.	Expected volumes and sources of Bordereau submission significantly impact the system and service design.
3	Insurer only submissions	That each Relevant Insurer or authorised Delegated Authority will supply one Bordereau for new and amended risks and one for claims. No submissions will be received from brokers or intermediaries or other Insurers submitting Bordereau on their behalf. Subsequent corrections to Bordereau will also be accepted.	Expected volumes and sources of Bordereau submission significantly impact the system and service design.
4	100% risks only	That no subscription/binder business below 100% of the risk will be ceded.	A mechanism to calculate and validate proportions of premium and associated risks and claims will significantly impact system design.
5	Service Desk Contact volumes	That external contact with the service desk will be limited to Relevant Insurers, or an authorised Delegated Authority, and their associated Property Data Hub users. No intermediaries or brokers have cause to contact the helpdesk; all their queries would be dealt with by the ceding Insurer.	Expected volumes and source of calls significantly impact service design.
6	Bordereau Validation	Bordereau will be validated against the specific business rules set out in the Bordereau functional spec. Bordereau will not be validated against the wider ceding rules set out to the Insurers by Flood Re, such as full eligibility criteria defined within the scheme document and examples expressed in the underwriting manual.	Fundamental Service and Design Change.
7	Eligibility Criteria	For avoidance of doubt; it will be assumed that risks being submitted by the Insurer meet the eligibility criteria set out by Flood Re. However, the key criteria (post 2009 and council tax band are part of the validation)	

3. BUSINESS SOLUTION SUMMARY

3.1 Managing Agent Model

The following summarises the operational locations for Flood Re:

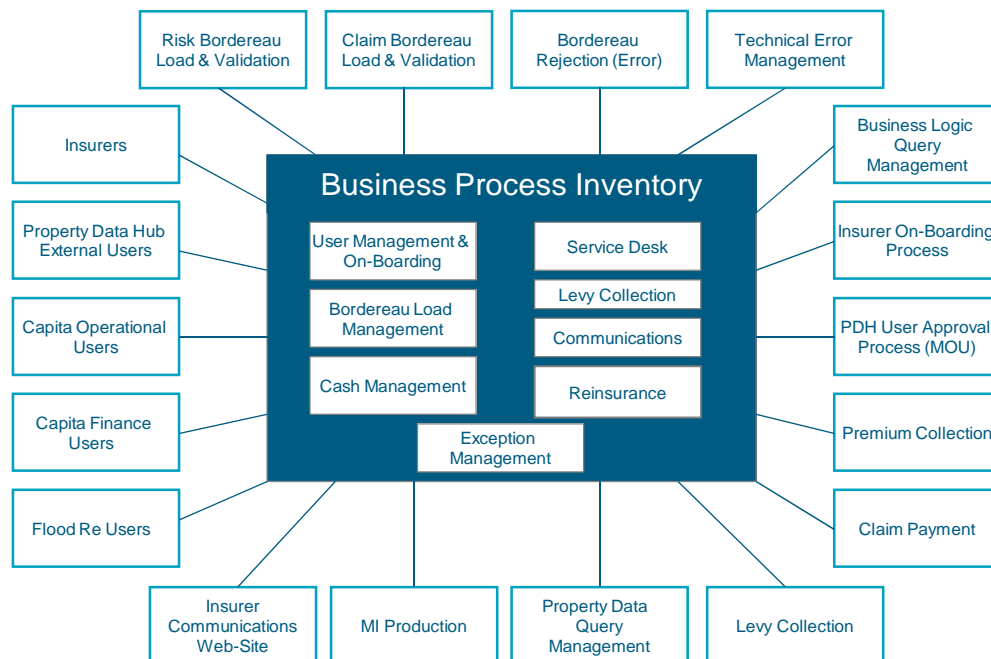
- Capita Operations is located in Gresham Street London
- Capita Reinsurance is located at Gresham Street London
- Capita Finance is located at The Grange in Cheltenham
- Flood Re is located at Gresham Street London
- Capita Service Desk is located at Gresham Street London
- Landmark Service Desk is located at Exeter
- Relevant Insurers and Members are external and remote end-users of some processes
- Other scheme participants and Property Data Hub users, are external and remote end-users of some processes
- Reinsurers are external contacts for data

3.2 Business Processes in Scope

3.2.1 Business Process Structure

This outlines how the multiple parts of the solution (technical and organisational) operate together to create an end to end solution for Flood Re.

Business Process Meta Model



3.2.2 Business Processes

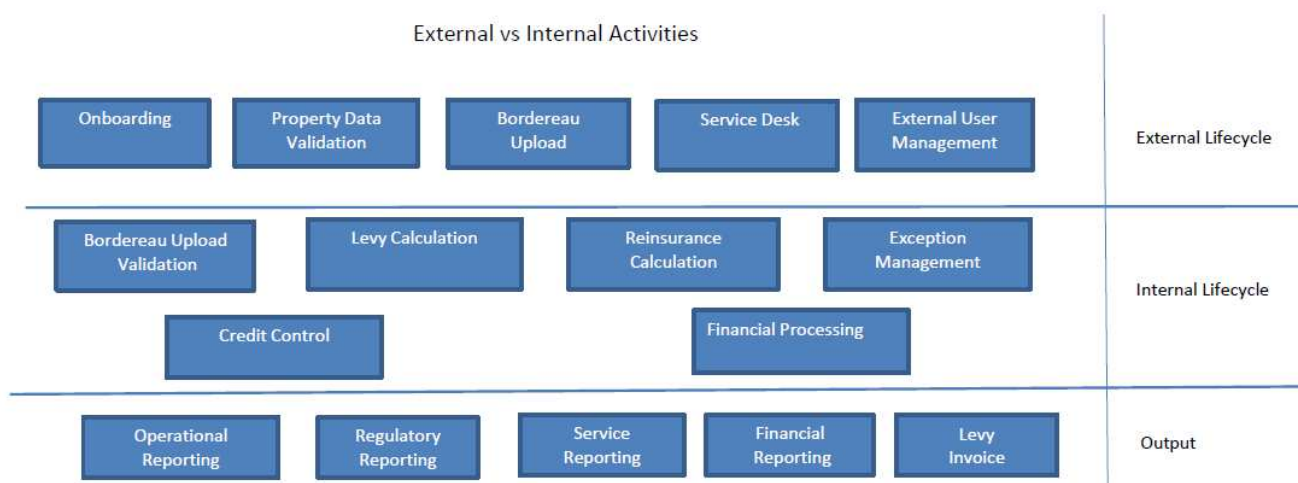
The Business Process Framework addresses the material business processes that are within scope for Flood Re:

- Business Process
- Usage of systems
- Organisational area
- Reports – Standard and Exception

This document represents the end to end solution as understood at the point of High Level Design.

3.3 Lifecycle Processes

The processes for the Flood Re operation are identified as 'External', where they are triggered by or rely upon the Relevant Insurers or other PDH Users, or 'Internal' where they are directly within the solution's span of control. The diagram below splits the processes accordingly and subsequently they are broken out in more detail later in the document. This diagram is also contained in Appendix 1 of this document.



3.3.1 On-boarding and Company Access

All external access will be managed via the on-boarding process and access to all system areas will be controlled and restricted according to authorised usage.

These processes relate to the way in which user entities will be established as authorised users to enable interaction with the Flood Re systems and processes.

Business Processes	User Group(s)	Location(s)
Creation of new scheme members	Capita Ops/Landmark	London/Exeter
Creation of new property hub users	Capita Ops/Landmark	London/Exeter
Despatch of documents to new scheme members	Capita Ops	London
Despatch of documents to property hub users	Capita Ops	London
Processing of completed documents	Capita Ops	London

The following user types are identified:

External System User Matrix

	Levy	Property Data Hub (Offline)	Property Data Hub (Online)	Bordereau Upload Web-Service	Bordereau Upload .csv file	MI	Website Documents
Relevant Insurers	x	x	x				x
Ceding Insurers		x	x	x	x		x
Property Data Hub Users		x	x				

Members, Non Members and Legacy Members are considered, for the purposes of system access and Bordereau receipt tracking, to be Relevant and Ceding Insurers depending upon their intention to cede risks to the scheme.

Requirements

External users will be required to complete and sign documentation undertaking to comply with the rules of Flood Re prior to being established as:

- i) Relevant Insurers and Members, who are required to pay Levy, can validate property data, cede underwriting and claims Bordereau or
- ii) other Scheme Participants, referred to in this document as Property Data Hub users whose usage is restricted to property validation.

Outline Solution

System users will be created initially via the on-boarding process:

Requests for access to the system will be initiated via:

- i) The despatch of welcome packs to the defined list of Relevant Insurers
- ii) Contact from prospective Property Data Hub users and new Relevant Insurers seeking access

The status of all entities will be maintained from the point of processing the initial request to join, to becoming an authorised user.

All entities who apply for access to the service in any capacity will be maintained as either active or inactive for the purposes of system access. No other status will be system maintained.

Data concerning the status of user companies, such as Member, Non Member and Legacy Member will be maintained via 'Contact Management' as they do not impact system access.

3.3.2 User Entity Data Requirements

Requirements

In addition to authorising entities; to deliver, manage and report effectively upon Flood Re activities, elements of data must be recorded for each company dependent upon type.

The following identifies data requirements associated with each entity type:

	Relevant Insurers	PDH Users
User Type	x	x
Membership Type (Status)	x	x
Company Name	x	x
Company Address	x	x
System User ID	x	x
FRid	x	
Automated email group address	x	x
Valid from/to date(s)	x	x
Bank Account Details	x	

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The Flood Re ID (FRid) will be allocated as part of the on-boarding process and will be used by Flood Re to identify each Insurer throughout the life of their association with Flood Re. The system will use this ID to identify uploaded Bordereau data and be maintained against the relevant property data contained in the hub.

Functional Access

Below is the breakdown of the externally facing mechanisms that must be available to each user type.

User Type/ Access Type	Relevant Insurers	Capita	Landmark	Flood Re	PDH Users	Guy Carpenter
User Administration	x	x	x			
Digital Cert Creation			x			
Portal Log-In	x					
Data Upload	x					
Bordereau Technical Query	x					
Bordereau Business Query	x					
Online Property Address Query	x				x	
Offline Property Data	x				x	
Upload Response (Technical)	x	x	x			
Upload Response (Business)	x	x	x			
Consolidated Bordereaux Data				x		x
Consolidated Reinsurance Data						x
Management Information		x		x		

Solution

System access related information will be housed within the property and Bordereau data management engine. The user entity information and associated data will be used in relevant MI.

3.3.3 User Management

User entities will be established at two levels; the companies requiring access to interact with Flood Re and the individuals associated with each company who undertake the work.

The below processes relate to the management of user entities that will interact with the Flood Re systems.

Business Processes	User Group(s)	Location(s)
New Users – Authorised Entity	Capita Ops	London
New Users – New Entity	Capita Ops	London
Amended Users Details – Existing Users	Capita Ops	London
De-Authorising Entity	Capita Ops	London

Requirements

In addition to the capture of data elements to create users, it is necessary that administrative processes to manage existing users and company entities be provided. These include:

- New company entity
- Change to company entity
- Removal of access for company entity
- Reinstatement of company entity
- New individual associated with a company
- Change to individual associated with a company
- Removal of access for an individual entity
- Reinstatement of an individual

The mechanism to update company and user profiles must be accessible to Landmark and nominated Capita employees.

Solution

A user administration facility will be built and housed in the Bordereau Load/Validation engine. This will be accessible to nominated Capita and Landmark users. The user entity information and associated data will be used in relevant MI.

3.3.4 Contact Management

Data required to manage the process that does not directly impact system access will be also be held as appropriate:

- Bank account and credit control contact data will be maintained in the Managing Agents finance system
- Contact data for the management of exceptions and ensuring incoming calls are tracked through to completion, such as contacts for the on-boarding process, will be maintained. This tracking mechanism will also use the Flood Re Insurer ID or PDH System User ID.

3.4 Property Address Matching / Data Validation

Summary Requirement

Ceding Insurers are required to identify the Eligibility Category, Eligibility Period indicator and FRid for properties they insure if they wish to cede the risks to Flood Re.

The below processes are required for this area:

Business Processes	User Groups	Location
Batch property upload and response	PDH users	External
Renewal property upload and response	PDH users	External
Bordereau submission - property validation	Ceding Insurers	External
Exception Management for above	PDH users/Ceding Insurers/Landmark	External/Landmark

Property data will be made available to the Insurers and industry participants via Flood Re to inform underwriting decisions. Subsequently this information will be provided as part of the underwriting Bordereau submitted to Flood Re and be checked as part of the Bordereau validation undertaken.

A mechanism is required to provide and subsequently validate the property information at three stages in the process:

- i) Quote stage (batch or individual) prior to Bordereau submission
- ii) Bordereau submission stage
- iii) MTA submission

Quote Stage – Online Property and New Build Database - Solution Outline

- i) Single property address validation: Enable a web service for integration with the authorised participants own IT systems to support individual quote production
- ii) Batch property address validation: Provide a web-service that enables multiple addresses to be submitted to support the renewal process. The service will also attempt to improve the match rate by manual resolution of the exceptions that fail the batch process
- iii) Address validation response message: Generate FRid, identify Eligibility Category and Eligibility Period indicator and submit to requesting PDH User

Quote Stage – Offline Property and New Build Database – Solution Outline

- i) The complete property data set will be available for download for use in authorised participant's own environment. This will include the FRid. No property matching facility is provided by this data set.

Property Matching Exceptions are detailed later in this section.

Bordereau Load – Solution Outline

- i) Where a FRid is supplied by the Insurer it will be validated to establish that it is an existing FRid, but the associated address will not be checked against the Property Data Hub
- ii) Where a FRid is supplied, the associated address provided by the Insurer will be stored in the Bordereau data along with the address held in the Property Data Hub
- iii) If no FRid is supplied for the risk the address will be validated directly against the property database. If no match on the address can be found the line will be rejected. The absence of a FRid will significantly increase the number of rejections based on not being able to recognise the address

Flood Re Unique Identifier

The Flood Re unique identifier or 'FRid' is being created by the Managing Agent for all of the 30 million UK properties that will be stored on the online and offline version of the Property Data Hub.

It is highly recommended that Insurers incorporate storing and using the FRid as part of their overall Flood Re implementation. The primary reason for this is that use of the FRid when ceding Bordereaux will ensure a match for that property and ensure that the risk is ceded successfully.

A new property identifier has been created as there is not universal coverage of other unique references such as the Royal Mail UDPRN or National Land and Property Gazetteer UPRN. There is also some re-use and duplication occasionally of these references which can cause difficulties when ensuring that a consistent address match is being made to the same property again and again (i.e. for new business and renewal).

Insurers and other ceding parties can access the FRid in the following ways:

- Upfront address matching with the Managing Agent as part of on boarding
- Through individual or batch address queries to the Property Data Hub once all systems are live
- Through local implementation of the offline property file

Use of the FRid to query the Property Data Hub will ensure consistently, that property tax band and year of build flag information is returned for the correct address.

Additionally use of the FRid when ceding underwriting Bordereaux and submitting claims Bordereaux will ensure that submissions pass address match validation and that the Bordereaux are submitted for the correct addresses.

The format of the FRid will be alphanumeric as per the UUI (Universal Unique Identifier).

Property Matching Exceptions

Address Matching Process/function	How exceptions handled
Up front address matching to provide Insurers with the FRid, will use batch address matching process/function for renewals detailed below	Any addresses not automatically matched will go through internal manual matching within Landmark and Insurers will be notified of these when/if resolved
Individual address queries to the Property Data Hub	If not automatically matched then an error response is returned as part of the web service response. Insurer can decide whether to alter the address input or submit address where they have errors via batch process below or contact FR Service desk where a manual matching process will be followed
Batch address queries to the Property Data Hub (for renewals)	If not automatically matched then a "queue" of non-matched results will be passed to the Landmark team for manual data matching and Insurers will be notified of these when/if resolved
Bordereaux address matching	Error responses will be returned if data contained for address, does not comply with the schema or no match is found (and no FRid submitted). Insurers can then either remove the line of Bordereaux where the error appeared, correct and re-submit or contact the FR Service Desk. Manual matching will aid this process and Insurers will be advised how to amend the structure / content of the address to ensure a match

3.5 Levy Calculation & Collection

Requirement

Relevant Insurers are required to pay an industry Levy to finance Flood Re. This payment is known as 'Levy 1'.

Levy 1 contributions will be calculated annually and be based on Insurers reported Gross Written Premium (GWP) in the agreed period and apportioned pro-rata on that basis. The Managing Agent will calculate, from Insurer Statutory Returns, the amount to be paid and collect Levy 1 from Relevant Insurers on a quarterly basis.

The Flood Re regulations fully define what is meant by a relevant insurer's 'gross written premium' (Regulation 6). In summary, it is the aggregate sterling amount paid or payable by, or on behalf of, holders of home insurance for the relevant risk element of home insurance, before the deduction of any amount (including commission), but after the deduction of insurance premium tax.

The 'relevant risk element', in relation to home insurance, is any risk of damage to, or loss or destruction of a dwelling and / or the contents of a dwelling.

3.5.1 Levy Calculation and Communication

Solution

The initial 'Levy 1' collection will be calculated as a ratio of the amount to be raised based on the Insurers statutory annual returns for two years prior. A subsequent request will be made for GWP figures for the previous Calendar Year to allow an adjustment to be made to ensure the actual Levy amount due is based on the previous Calendar Year to the Financial Year.

The calculation of Levy 1 will be calculated according to the agreed Formula and the resulting amount for each Insurer will be created as an outstanding amount on that Insurers account, split quarterly. The first quarterly payment will then be requested. An adjustment will be required when definitive GWP data is provided and will be reflected in the subsequent three quarterly payments.

An invoice will be raised and sent to the Insurer. The invoice will detail the bank account to which payment should be submitted.

On receipt of the Levy the amount will be booked to the Insurer's account.

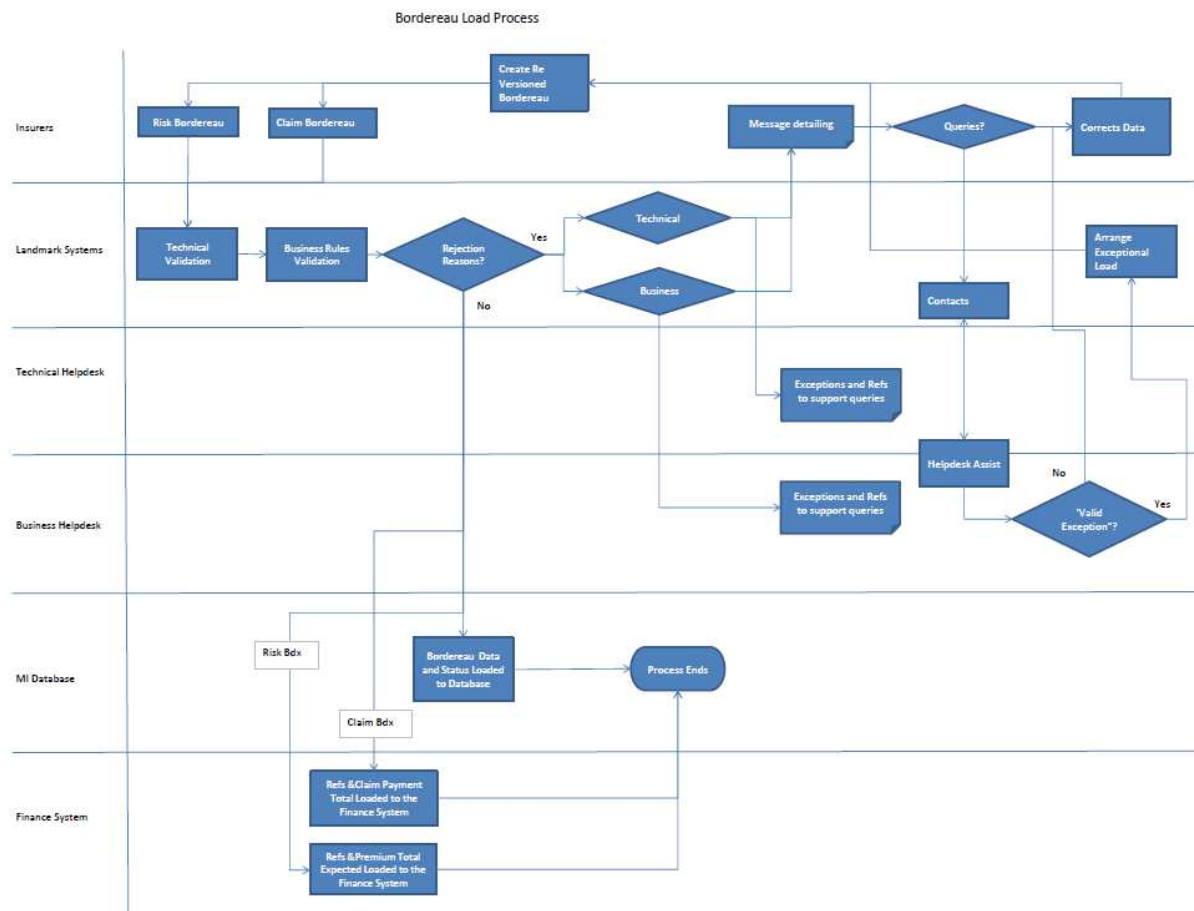
If the Levy is not received the amount will be treated as a debt to Flood Re and will be managed and escalated according to credit control practice and Flood Re guidance.

Levy 2 and Levy 2 refund

Should a subsequent Levy be required or if any applicable refund is due this will be calculated in accordance with the Scheme Documents and managed as either an invoice or a payment via the Insurer ledger.

3.6 Bordereau Load and Process

This diagram is also contained in Appendix 1.



Bordereau Load – Summary Requirement:

- To provide an automated web-based mechanism by which Relevant Insurers submit underwriting and claims Bordereaux, including those that are a 'nil return'.
- To monitor and report upon those Insurers who do not submit Bordereau at the intervals stipulated e.g. one return per month of ceded risks and one return per month of claims associated with previously ceded risks. Nil returns are required from Ceding Insurers.
- To validate the key fields in the data provided.
- To consolidate the data received into a single database for subsequent reporting and reinsurance programme management.

Business Processes – Bordereau Load	User Group(s)	Location(s)
Upload of Bordereau via web service	Relevant Insurers	External
Upload of Bordereau via csv file	Relevant Insurers	External

Bordereau Load - Solution Outline:

A Bordereau layout for underwriting risks and claims will be provided to the Relevant Insurers, together with the detail of file headers, versioning required, data required, column order, format and the constraints that will be applied to each data item.

- Submission via web-service: The Insurer will be provided with the appropriate technical information to submit the Bordereau via a web service (JSON)
- Submission via CSV (comma separated values): The Insurer will also be provided with a load mechanism via a Graphical User Interface (GUI) interface on the portal, by which method a CSV file can be uploaded.
- The Bordereau will be logged as received and then passed for validation.
- If a Bordereau cannot be read in enough detail for it to be passed to the data validation stage it will be rejected with a message identifying the nature of the problem.

Bordereau Validation and Response – Summary Requirement

If initial load is successful:

- Bordereaux will be validated against the rules defined in the Bordereau functional specification; predefined validations of Flood Re Insurer ID, property FRid where supplied and address, Eligibility Category and Mid Term Adjustment (MTA) calculations.
- The Insurer will be notified of risk rows that do not pass validation and the reason(s) relevant to each risk.

Business Processes – Bordereau Validation	User Group(s)	Location(s)
Validation of Bordereau	Relevant Insurers	External
Production of Acceptance/Exception message	Relevant Insurers	External

Bordereau Validation and Response – Solution

After the Bordereau has been validated a message will be generated and delivered via the same means that the Bordereau was submitted. The message will:

- Confirm acceptance of the entire Bordereau OR
- Detail any reasons why the Bordereau has failed with reference(s) and a description per line of data. If a Bordereau has any exceptions then the entire data-set is rejected.

The 'exceptions' message will be delivered back to the submitting Insurer and also to the relevant service desks to enable assistance to be offered should the ceding Insurer require further clarification.

Where a Bordereau is returned the Insurer can:

- Remove the failed rows and resubmit
- Correct the failed rows and resubmit the entire Bordereau.
- Correct the failed rows and resubmit separately

The Insurer is required to version control Bordereau submissions in accordance with the Bordereau functional specification.

The Bordereau received will be validated against the rules set-out in the Bordereau specification documents. References and descriptions for underwriting and claim Bordereau exceptions will be pre-defined.

Bordereau load, content and validation are dealt with in detail in the Bordereau specification documents.

3.6.1.1 Calculation of Mid Term Amendments (MTA)

Bordereau received will be checked against the validation rules defined with Flood Re. In addition to field constraints, where a change impacts on the underwriting determination, Flood Re will apply a mid term adjustment and advise Insurers.

Calculations will be performed by Bordereaux processing, based on the various scenarios discussed with Flood Re. Full descriptions of the MTA calculations are contained in the Bordereau Functional Specification document.

MTA Calculation Tolerance

To avoid unnecessary rejections and limit the volume of exceptions a 'tolerance' set at +/- £1.00 has been set within the system to handle rounding differences arising from MTA calculation methodology. For the avoidance of doubt no tolerance will be applied to New Business Transactions.

3.6.1.2 Calculation of Date Cover Commences

Date Cover Commences refers to the date cover starts based on the date that risks or MTA's were notified to the scheme. If risks and subsequent MTA's are notified later than 120 days of the Policy Transaction Effective Start Date then cover starts on the date the risk or MTA is accepted. Otherwise cover commences on Policy Transaction Effective Start Date. The date that refers is stored against the underwriting Bordereau.

Note: Insurers will be informed via a Managing Agent exception process, if any of the risks ceded are greater than 120 days of the *Policy Term Effective Start Date*.

3.6.1.3 Verification of Claim against Date Cover Commences

On receipt of a claim the date of loss will be checked against 'date cover commences' for the latest version of the risk received. If the date of loss is earlier then the claim is rejected as invalid with a line error message. Other validation checks will be performed as per the Bordereau specification documents.

3.6.1.4 Valid Data Exceptions

It is expected that there will be a small number of occasions where valid properties or claims cannot be accepted through the Bordereau load validation, for example due to:

- There is a small variation in the MTA calculation. See MTA Calculation Tolerance above.
- There is no tax band, or a variance in the tax band, supplied in the property data but the Insurer has information to demonstrate validity.
- The Alternative Accommodation limit has been relaxed by the Insurer so the claim amount is higher than the risk limit

Exceptions will be addressed directly with the Insurer on a case by case basis via the service desk to enable the Bordereau data to be accepted. On the Managing Agent agreeing the exception with the Insurer, the Insurer will submit an exception Bordereau containing only that risk or claim and the acceptance rules will be relaxed for the individual Bordereau instance. Where possible the Insurer will be required to update the source information to avoid repeat exceptions on the same risk or claim.

This process is outlined in the Bordereau Load and Processing diagram in 3.6 and also in Appendix 1 of this document

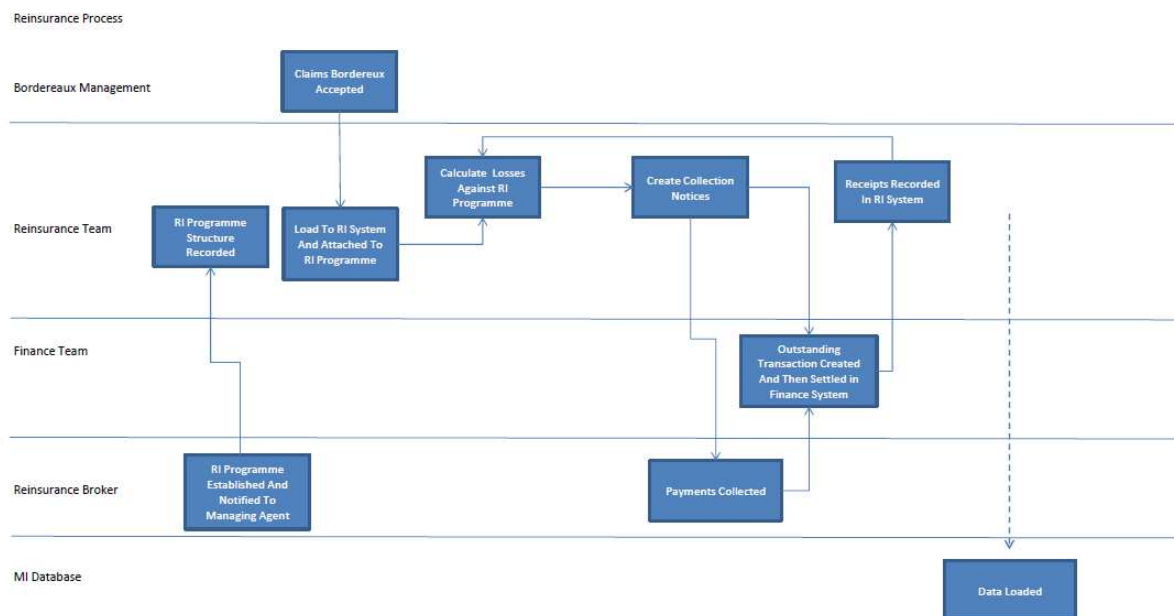
Reports will be run to identify patterns in the allowed exceptions to enable the service to be improved and streamlined.

A reasonable percentage for exceptions in the Bordereau data received is considered to be in the order of 0.1% of the total. If exceptions are higher than that threshold, the reasons for those exceptions will be managed via the regular service reviews and a variance process.

3.7 Reinsurance Processes

Outwards Reinsurance for Flood Re will be purchased via by the Flood Re Reinsurance Broker (Guy Carpenter). Information to support management of the outwards reinsurance programme will be created and captured using the Managing Agents reinsurance system.

Reinsurance Process (This diagram is also contained in Appendix 1)



Requirement

A means to calculate and track losses against the reinsurance programme, calculate RI premium and claims payable and manage the payment and collection of those amounts. All data captured in the Reinsurance system should be available for MI.

Business Processes	User Group(s)	Location(s)
Calculation of Reinsurance Losses	Capita	London
Creation of Collection Notice	Capita	London
Collection of retrocession claim payments	Capita	London

Solution

The Managing Agent's reinsurance system will be established to reflect the Flood Re outwards reinsurance structure. Claims data will be loaded to establish the reinsurance position and generate the reports and collection notices. The resulting outwards and net data will be loaded into the MI database.

Supply of Inwards Data to the Reinsurance Broker

The content of Bordereau has been validated by the Flood Re reinsurance broker as sufficient for the purposes of data modelling. The Bordereau data in its entirety will be made available to the reinsurance broker for upload into their modelling tool. The method of transfer is still to be confirmed between the Managing Agent and the reinsurance broker but is currently thought to be a file delivered via Secure File Transfer Protocol (SFTP).

3.8 Exception Processes

Requirement

The Flood Re service is expected to handle exceptions triggered by:

- Contact from a customer/external entity requesting clarification or action, such as explanation of a Bordereau rejection and agreeing specific exceptions.
- A periodic or ad-hoc exception report generated according to pre-defined criteria that identify circumstances that fall outside expected actions. These are identified in this document as Exception Reports.

3.8.1.1 Bordereau Exception Management (Incoming Contact)

A service desk will provide assistance to authorised users in respect of Bordereau exceptions.

Business Processes	User Group(s)	Location(s)
Bordereau Exception Technical	Landmark	Exeter
Bordereau Exception Business	Capita Ops	London

Where a Bordereau fails to load due to exceptions in the data or layout, contact will be invoked by the ceding Insurer entity to the service desk and allocated according to the type of query.

The Service Desk operation is dealt with in more detail in 3.10 of this document.

3.8.1.2 Business Queries

The Service desk will also respond to more general service enquiries from Relevant Insurers and other authorised users. These enquiries may relate to any area of the service.

Business Processes	User Group(s)	Location(s)
Property Validation Queries	Landmark	Exeter
Insurance Exception Queries	Capita Ops	London
Property Validation and Exception Queries	Landmark	Exeter

3.8.1.3 Exception Reports for Manual Processing

Some areas of the service will be treated as 'exceptions' in that they fall outside the 'straight through' validation and processing generally expected.

Business Processes	User Group(s)	Location(s)
Late notification risks	Capita Ops	London
Absent nil returns (participating Insurers)	Capita Ops	London

Solution

Such exceptions will be identified from MI that covers all the data in the service. These will be run on a scheduled or ad hoc basis. The following exception reports have been identified as required.

- Late/Absent Bordereau
- Late notification of risks (where claims are associated)
- Incomplete on-boarding processes
- Audit file sample
- Valid data 'Exceptions'

Some exception reports will be run and analysed in order to identify possible breaches; others will be pro-actively actioned such as late Bordereau and absent nil returns.

Exception MI Action Tracking

Tracking of pro-active actions taken for exceptions will be managed through a Contacts Database to ensure that each item requiring action is followed through.

3.8.1.4 Audit of Files

Requirement

Monthly random sample selection extract based on:

- 400 policy records (Across Insurers)
- 25 Claims or 0.5% of claims notified per insurer, whichever is the greater

Business Processes	User Group(s)	Location(s)
Audit of Files	Capita Ops	London

Solution

- An extract from the MI will be created via a randomised algorithm to provide the business with the record to check manually against Insurer files
- A secondary check run across the data to identify any anomalies in the accepted data to ensure that validation on import is being applied correctly
- In addition, exception reports will be developed that identify any records that, while valid, may indicate a trend

The Audit Management approach is currently being finalised and will be shared separately.

3.8.1.5 1:200 Annual Loss

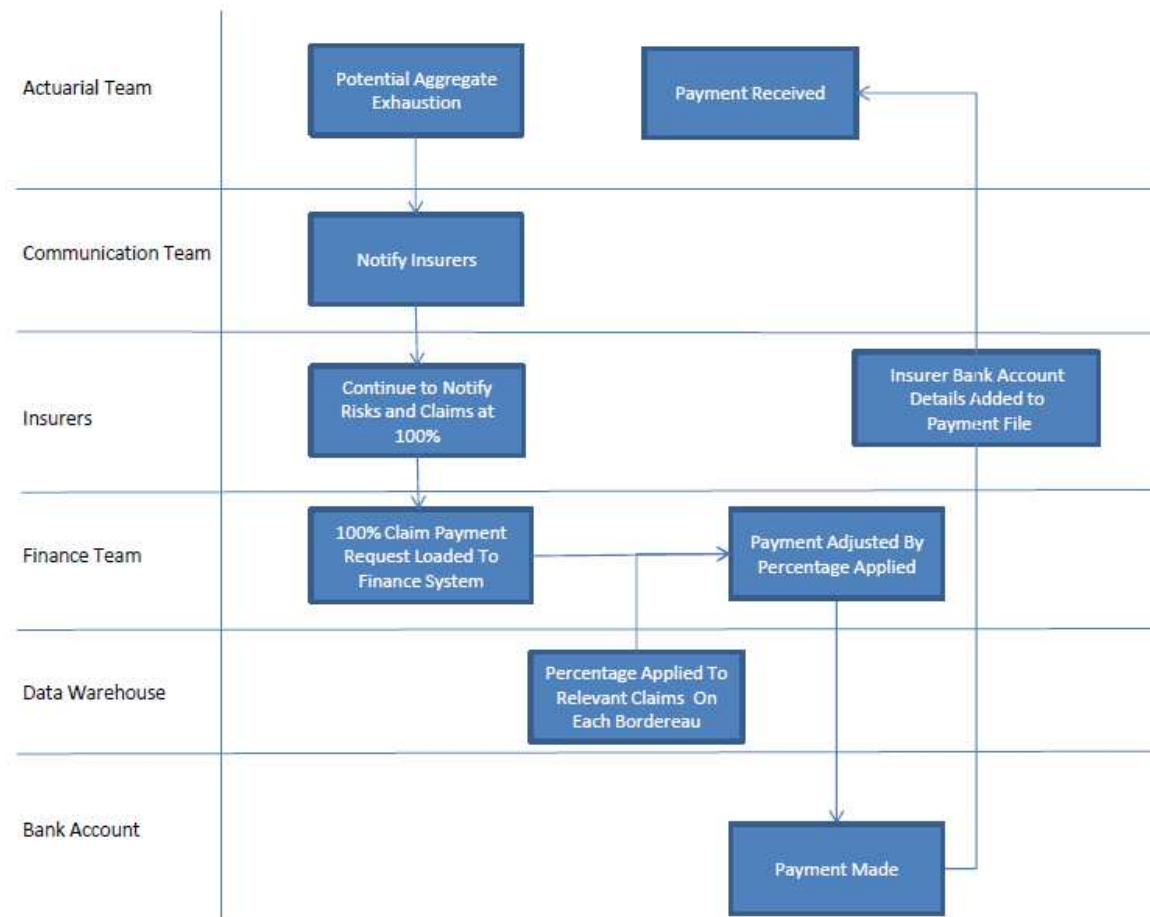
In the event insurers' claims to Flood Re exceed the Annual Aggregate Loss Limit in a financial year then ceding insurers will not recover to 100%. Instead, Flood Re will pay claims in proportion to the aggregated inwards ultimate losses claimed in the financial year relative to Annual Aggregate Loss Limit for that financial year. For example, if the inwards ultimate aggregate loss across all cedants is 25% above the Annual Aggregate Loss Limit, all ceding insurers will ultimately receive a payout of £100 for every £125 of ceded loss or 80% of their claim amounts. Declaration of a 1:200 event may result in a percentage 'clawback' of previously settled claims.

If a 1:200 annual loss is anticipated by Flood Re, the Bordereau will continue to be delivered to Flood Re at the 100% level. The application of the reduction percentage will be applied post receipt based

on the date of loss. The 100% and the pro-rated amount will be recorded in the MI database and a separate credit amount will be recorded in the Ledger. This method will enable the retrospective adjustment to be made based on a single data source.

The pro-rated claim payment process is outlined below. This diagram is also in Appendix 1 of this document.

1:200 Pro Rated Claim Payment Process



SUPPORTING PROCESSES

3.8.2 Finance – Cash Management

Requirement

The Managing Agent Client Accounting Team is responsible for managing Flood Re's bank accounts and ensuring that the appropriate transfers are made between these in a timely manner. The Client Accounting team is also responsible for ensuring that settlements for claims are made to the appropriate deadlines and ensuring reconciliation between the bank accounts and internal data sources.

Business Processes	User Group(s)	Location(s)
Members Ledger	Client Accounting	Cheltenham
Process Claim Payments	Client Accounting	Cheltenham
Process Premium Receipts	Client Accounting	Cheltenham
Bank Account Reconciliation	Client Accounting	Cheltenham
Process Levy Payments	Client Accounting	Cheltenham
Retrocession Premium Payments	Client Accounting	Cheltenham
Retrocession Claim Receipts	Client Accounting	Cheltenham

Solution

The finance processes managed by client accounting covers the receipt and payment of monies, investment administration and the reconciliation and accounting for these activities. The Managing Agent's reinsurance system and reporting tool support these processes.

Bank Accounts

New bank accounts will be set up for Flood Re on the Managing Agent's finance system to handle day to day finances and investments.

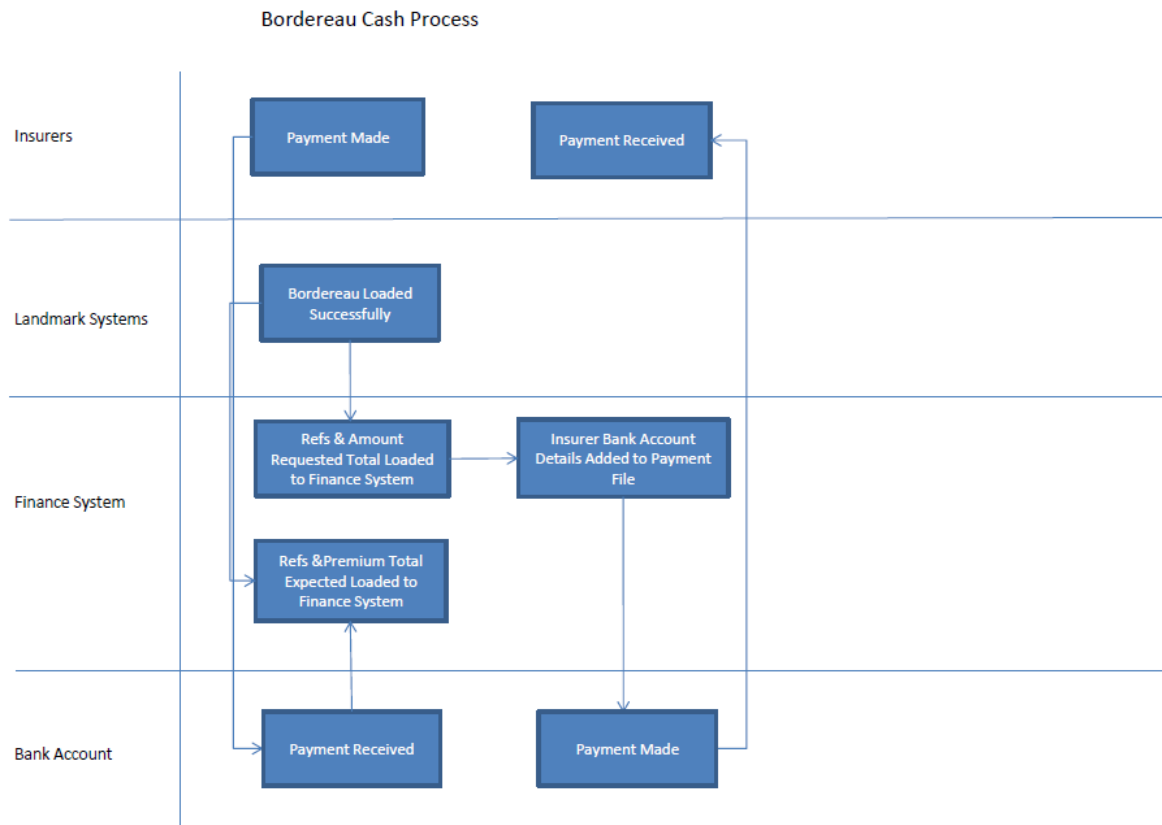
Relevant Insurer Ledger

Each Relevant Insurer will have an account established on the ledger system to track credit and debit transactions associated with Levy, premium and claims.

Claim Bordereau Payment Process

As part of the Bordereau validation the 'payment requested' for the claim Bordereau will be validated and the amount passed from the Bordereau system to the financial Ledger. That amount will be created as a bank transaction and sent to the account recorded for the Relevant Insurer, identified with the Bordereau references to enable the Insurer to match back to the submitted Bordereau request. Credit Control checks will be applied prior to payment to ensure any overdue premium has been received.

Bordereau cash process (This diagram is also contained in Appendix 1):



Electronic payments will be made by the Client Accounting Team using the client's banking software to the predefined bank account recorded for the Insurer entity.

Underwriting Bordereau Receipts

On acceptance of an underwriting Bordereau the total premium expected will be created as an outstanding balance in the Insurers account in the ledger system.

It is expected that payments will be received via bank transfer to the Flood Re designated bank account referenced with the relevant Bordereau. The received amounts will be matched against the outstanding ledger amount and subsequently the status of 'payment received' will be added to the Bordereau and associated transactions in the Bordereau data stored in the data warehouse.

Bank Reconciliation / Control Account Reconciliation

All reconciliations will be performed by the Client Accounting Team.

3.9 Credit Control

3.9.1 Credit Control: Levy Collection

Requirement

The Levy payment required must be calculated, communicated and collected based on each Insurer 'GWP' value according to the rules defined and communicated.

Business Processes	User Group(s)	Location(s)
BAU Levy Collection	Client Accounting	Cheltenham

3.9.2 Credit Control Premium Receipt & Claim Payment

Requirement

Claim Bordereau settlements must be made to the Insurer within 30 days of the Bordereau being validated and accepted. Premium due must be paid to Flood Re within 30 days of the risk being accepted to the service. Where premium is not received, or claim payments are queried, the Managing Agent will provide a credit control function.

Business Processes	User Group(s)	Location(s)
BAU Credit Control	Client Accounting	Cheltenham

BAU Solution

Credit Control for Flood Re will be managed via standard Credit Control practices based on payment due date. Due dates and cash receipt will be monitored via debt reporting and post due date the Insurer will be contacted at intervals until payment is received.

3.9.3 Credit Control Escalation & Sanctions

Business Processes	User Group(s)	Location(s)
Credit Control Escalations	Capita Ops	Gresham St
Sanctions	Capita Ops	Gresham St

Escalated Solution

If payment becomes significantly overdue the contact will be handed to Capita Operations in Gresham Street as part of Insurer relationship management, to pursue and if necessary to agree sanctions with Flood Re.

3.10 Service Desk

Requirement

A Service Desk will be established to provide assistance with the following:

- Levy Calculation and Collection
- System Access
- On-boarding
- Property data validation
- Technical queries (upload failure)
- Bordereau validation queries

Business Processes	User Group(s)	Location(s)
Business logic query management	Insurers/Capita	External/London
On-boarding	Insurers/PDH Users/Capita	External/London
Underwriting Bordereau processing	Insurers/Capita	External/London
Claims Bordereau processing	Insurers/Capita	External/London
Property data query management	PDH users/Landmark	External/Exeter
Exception Management	Capita	London

Solution

- There will be two physical Service Desk locations:
 - Capita Gresham Street London
 - Landmark, Exeter
- Calls to the Service Desk will be routed to the appropriate team; there will be links between the two teams to ensure managed hand-offs.
- Any escalations will be managed by Capita Operations and recorded via contact management, to ensure visibility.
- The Service Desk user groups, the likely reasons for contact and which operational area is expected to handle each call type initially is outlined in the table below.

External Queries - Handling area by source and type of query

Queries													
Contacts	On-boarding	Access to Property Hub	Data Hub Queries	Postcodes	Rating Schedule	BAU User Access Issues/ Password Re-sets	Levy Calcs & Capital Contribution	Finance Queries	Refunds	Bordereau Technical	Bordereau Validation	Inwards Underwriting Queries	Bordereau Operations Exceptions
Relevant Insurers	Operations	Landmark	Landmark	Landmark	Landmark	Landmark	Finance	Finance	Operations	Landmark	Operations	Operations	Operations
Ceding Insurers	Operations	Landmark	Landmark	Landmark	Landmark	Landmark	Finance	Finance	Finance	Landmark	Landmark	Operations	Operations
PDH Users	Operations	Landmark	Landmark	Landmark	Landmark	Landmark							

3.11 Management information

Requirement

Provision of a data warehouse and reporting application, which can be interrogated to enable the extraction of data relating to (but not limited to) underwriting, claims, financial, Solvency II and ad-hoc data requirements. This data will be extracted and stored separately for future use by Flood Re and Relevant Third Parties.

Business Processes	User Group(s)	Location(s)
Exception Management	Capita Ops	London
Management Information	Flood Re/Capita Ops	London

Outline Solution

A reporting database will be established that consolidates data collected across the service and structures information in a format that is conducive to efficient report production.

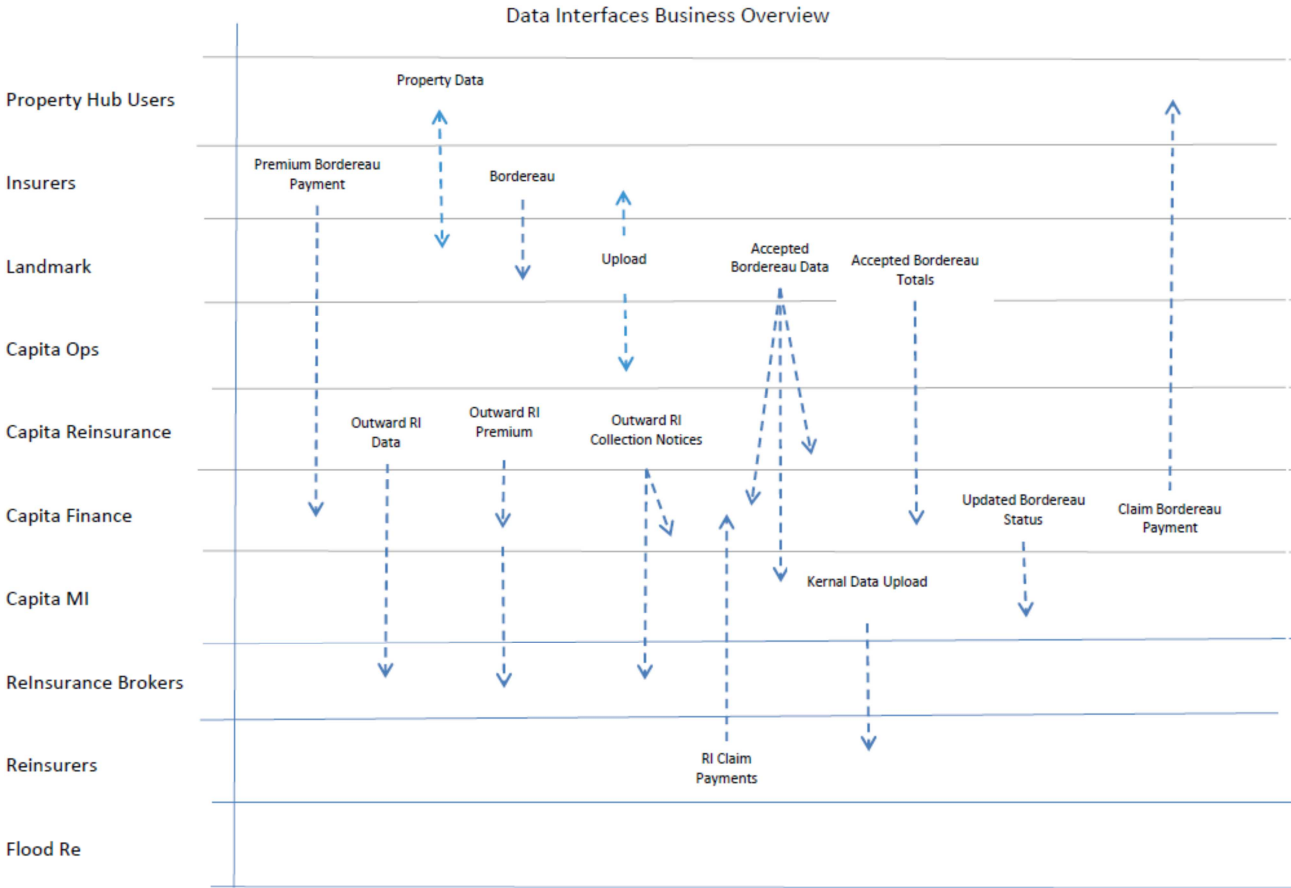
- Due to the multiple and disparate data sets involved, Capita and Flood Re users will not be given direct access to the underlying data. Reports will be provided as predefined data sets with appropriate parameters for flexibility.
- Reports to external recipients, will be produced to the defined specification and no further parameters will be provided.

The requirements for reporting have been defined with Flood Re with regard to the MI to support the Governance Forums, to ensure the successful running of the Flood Re business on a day to day basis. These reports are split into the broad categories of:

- Operational Reporting
- Contractual Reporting
- Parliamentary Reporting
- Internal Reporting
- Exception Reporting

3.12 Data Interfaces - Business Overview

This diagram is also contained in Appendix 1.



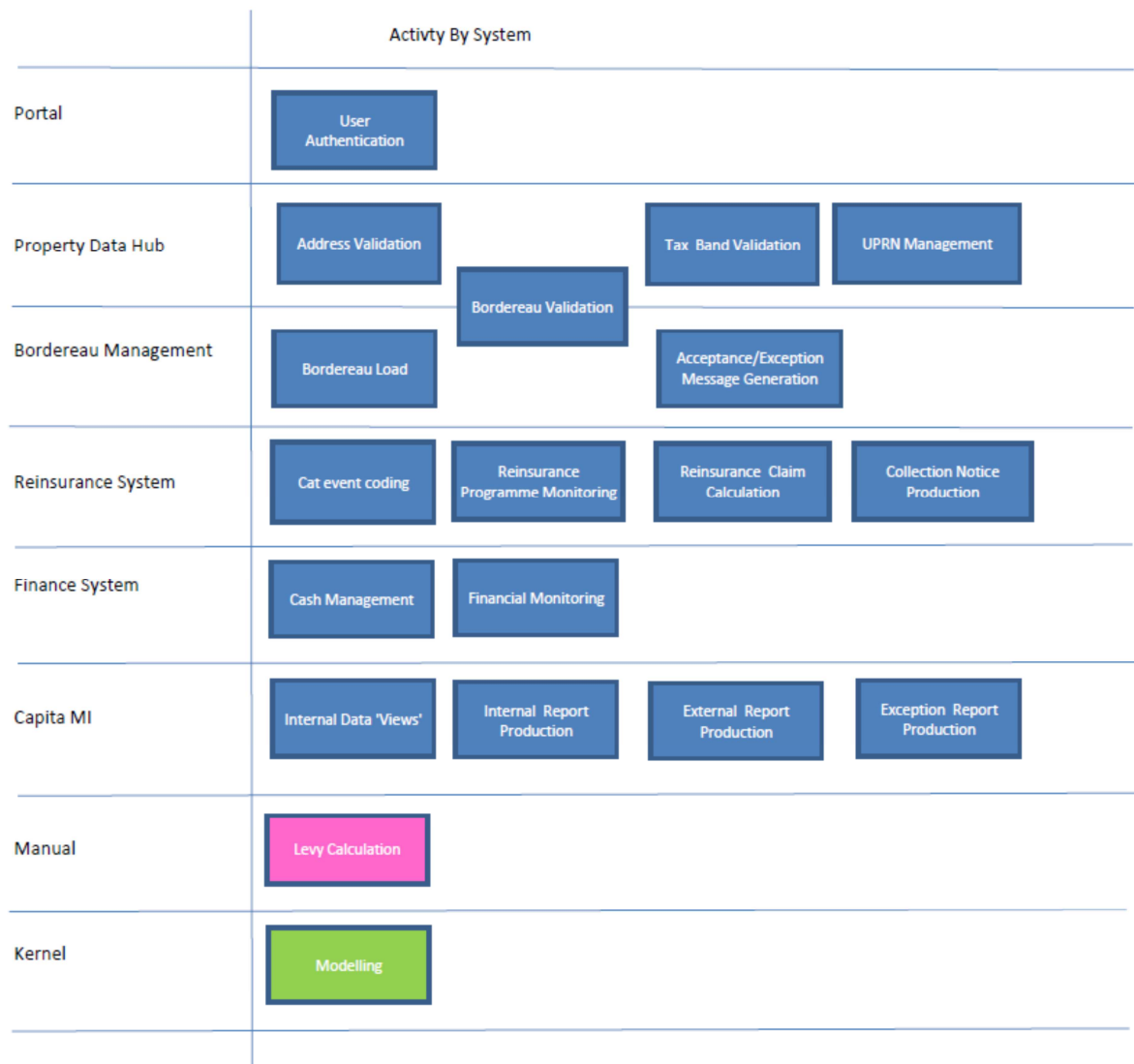
3.12.1 Business/Data Interfaces

	From	To	Description
1	Insurer	Landmark Portal	Batch Property Files (Renewals and Data Hub)
2	Insurer	Landmark Portal	Bordereau submissions via web service.
3	Landmark Bordereaux DB	Finance System	Payment requested/due from the inward Bordereau for underwriting and claims to create the debt transaction, to be reconciled with the bank for premium receipts and make payments for claims
4	Landmark Bordereau Load	Insurer	Bordereau acceptance or detailed rejection messages
6	Landmark Bordereau Load	Service Desks	Bordereau detailed rejection messages
7	Landmark Bordereau Load	Data Warehouse	Bordereau rejection details for subsequent reporting.
8	Landmark DB	Reinsurance System	Details of all inward claim Bordereaux
9	Landmark DB	Data Warehouse	Extract of all Bordereaux, Property, User hierarchy and Insurer Hierarchy
10	Reinsurance System	Data Warehouse	Details of reinsurer settlements, event coding etc
11	Reinsurance System	Finance System	Invoices and premium payment details for reinsurance settlements etc.
12	Finance System	Data Warehouse	Details of the Bordereau payments received/paid
13	Insurer	Property Hub	Enquiries on the property hub and the offline data file
14	Reinsurance System	Guy Carpenter	Data in support of reinsurance claims to be supplied to Guy Carp
16	Finance	Insurer	Claim Payment
17	Insurer	Finance	Premium and Levy Collection

3.13 Business Activity by System

The following diagram groups user activity by proposed system.

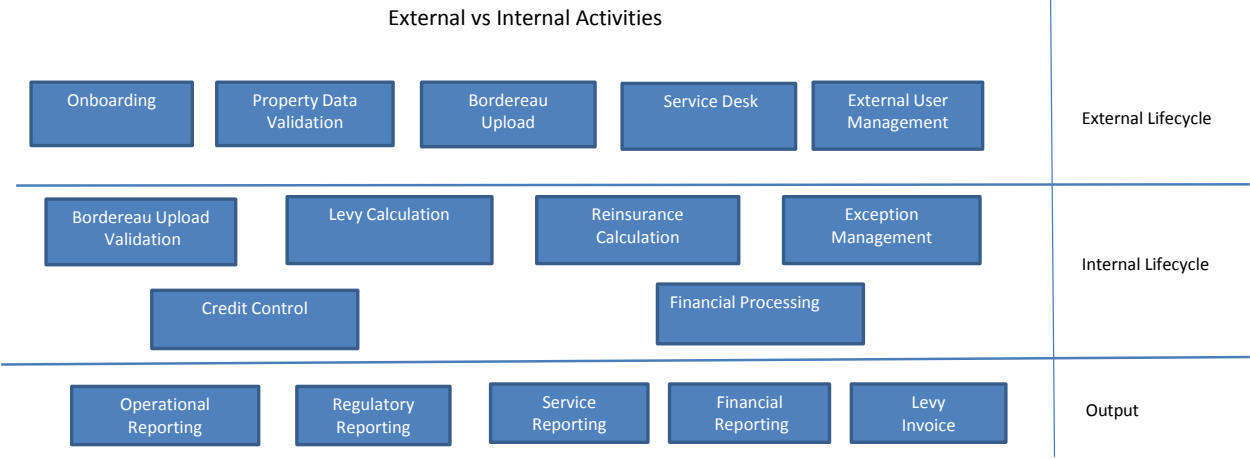
This diagram is also contained in Appendix 1.



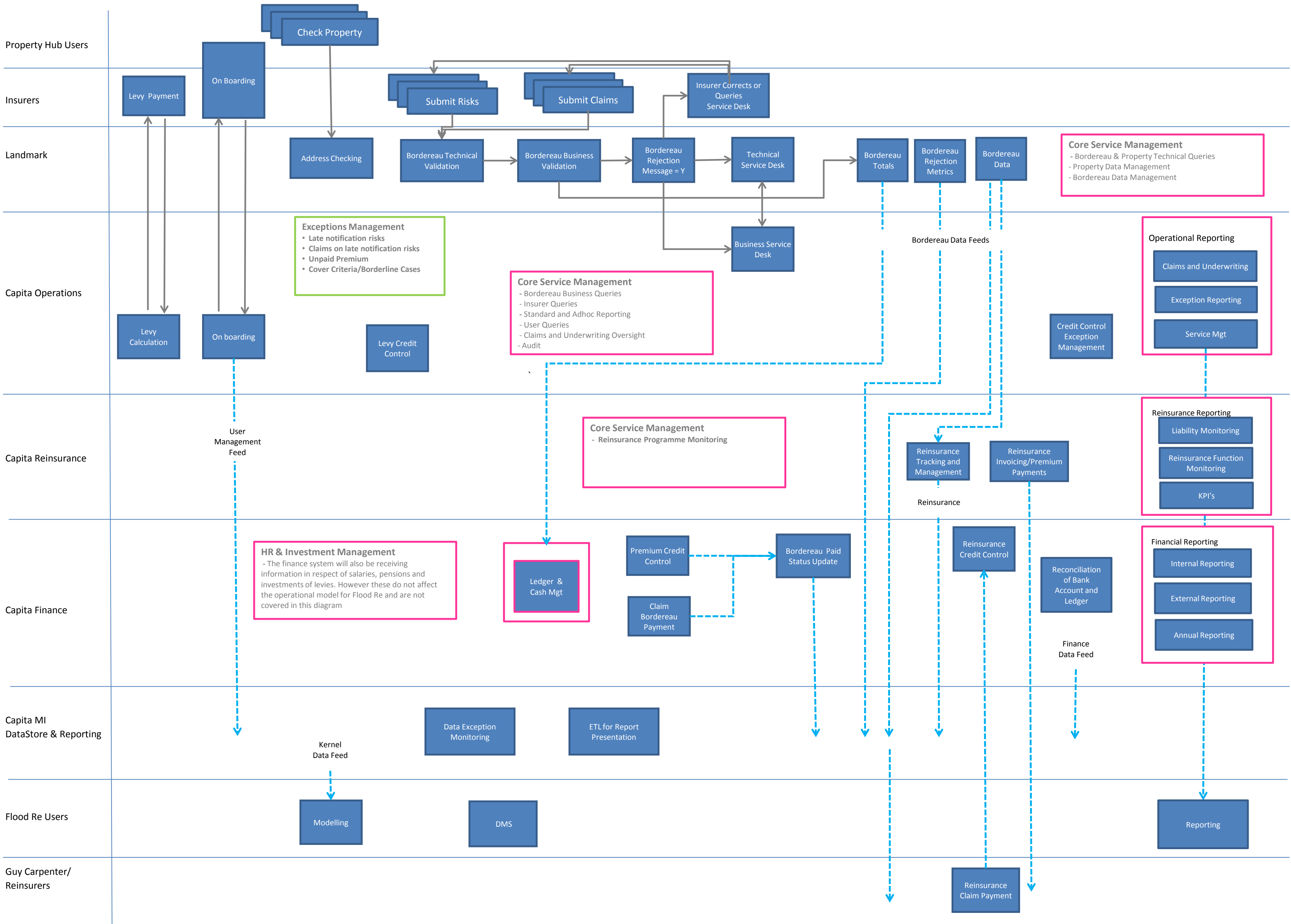
4. APPENDIX 1

The diagrams listed below can be found in the subsequent pages:

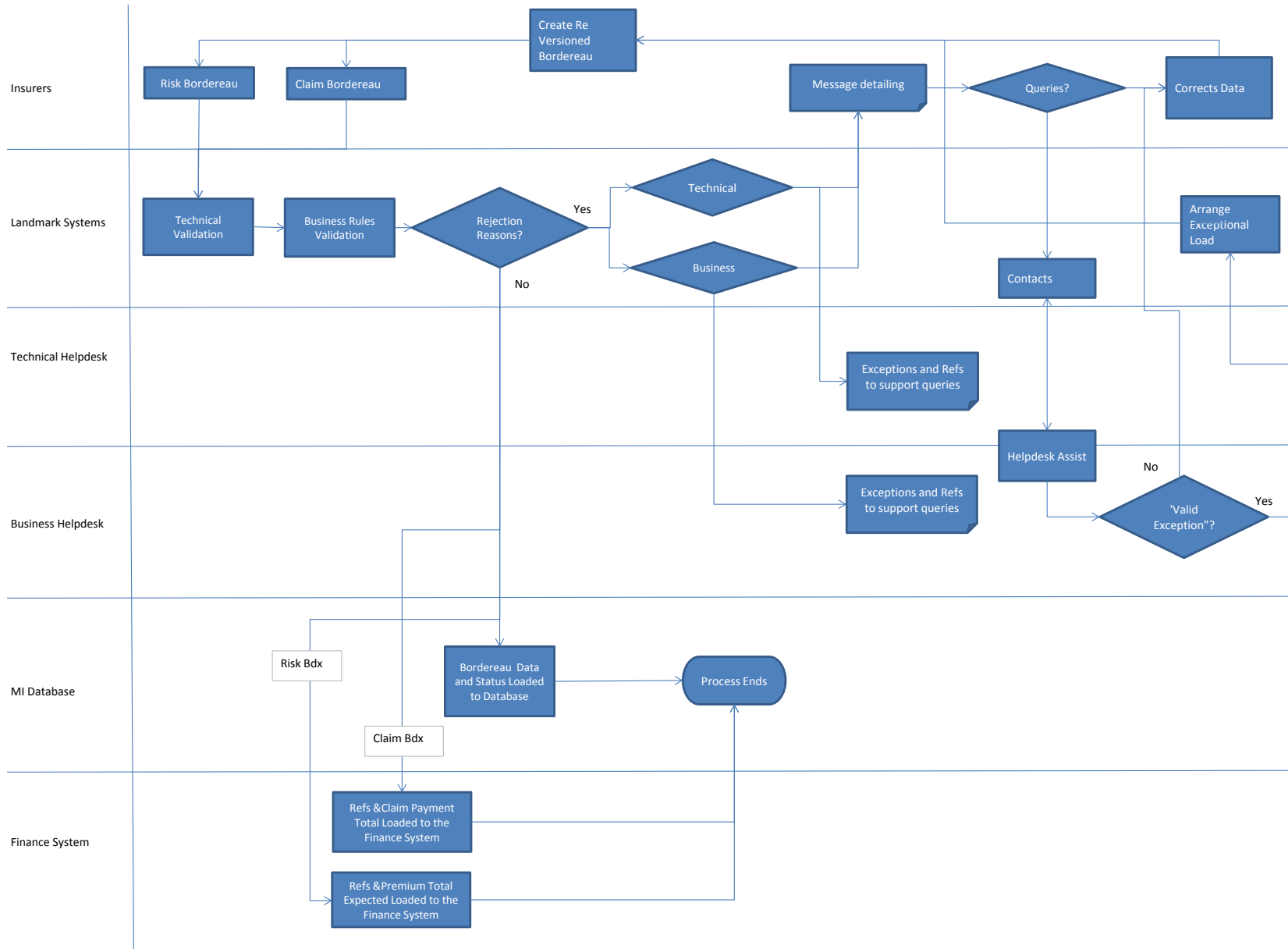
- A External vs Internal Activities
- B High Level Activity Diagram
- C Bordereau Load and Process
- D Reinsurance Process
- E 1:200 Event – Pro Rated Claims Payment Process
- F Bordereau Cash Process
- G Data Interfaces Business Overview
- H Activity By System



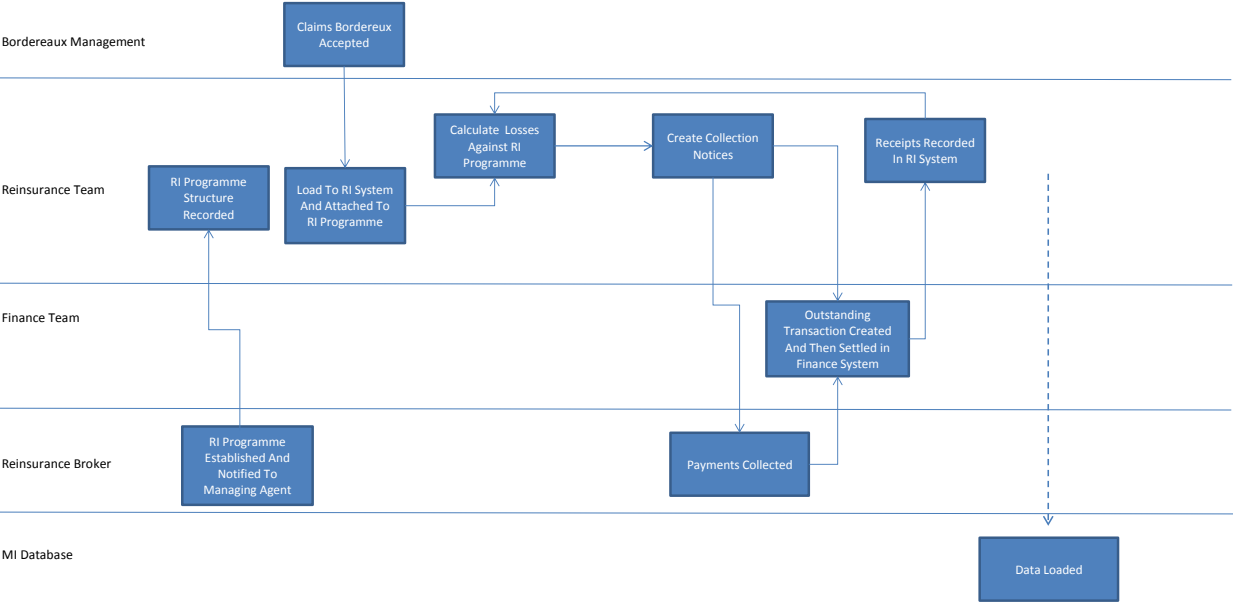
Flood Re High Level Activity Diagram



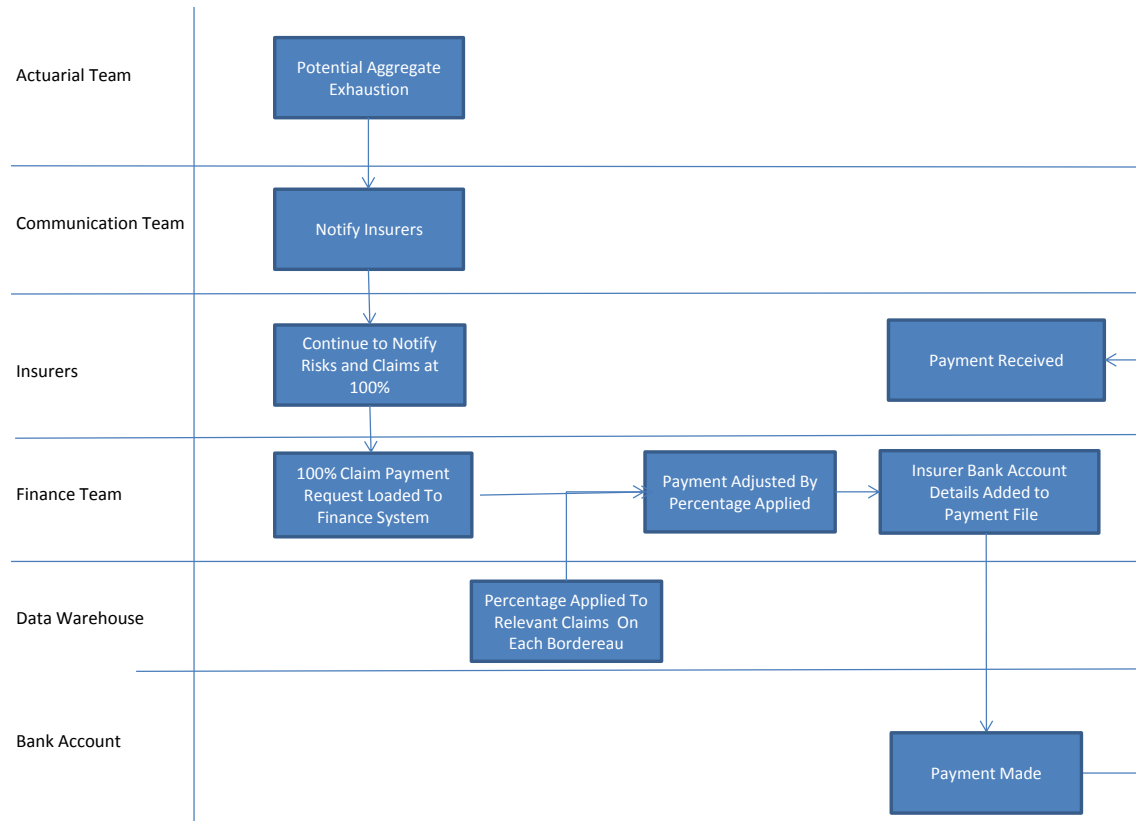
Bordereau Load Process



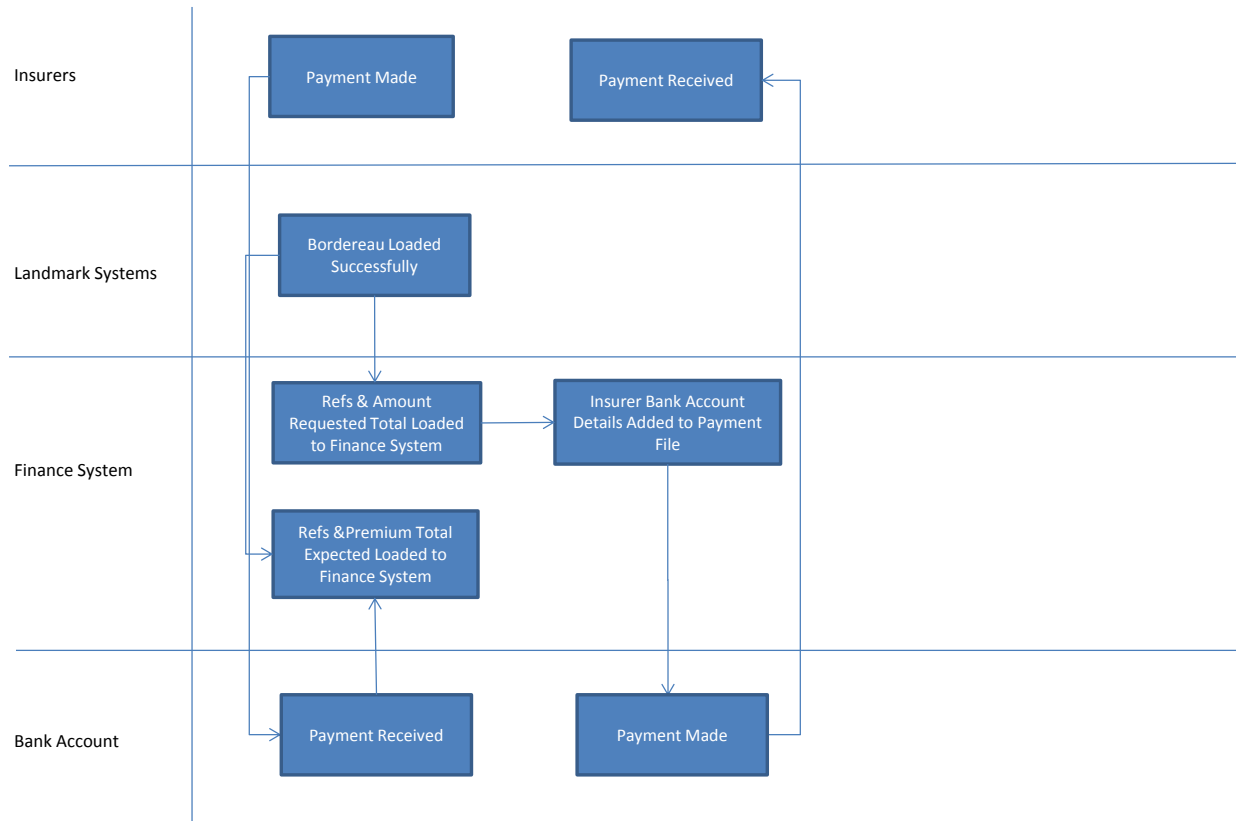
Reinsurance Process



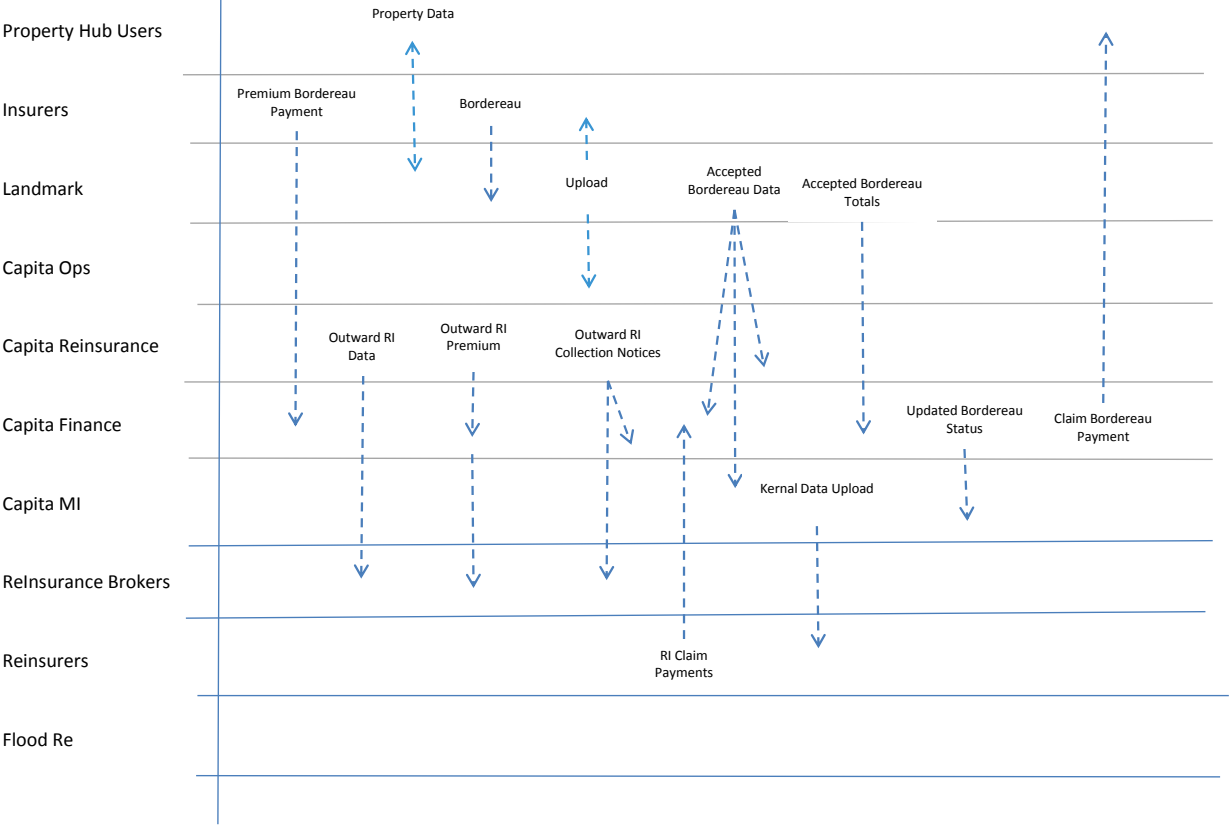
1:200 Pro Rated Claim Payment Process



Bordereau Cash Process



Data Interfaces Business Overview



	Activity By System			
Portal	User Authentication			
Property Data Hub	Address Validation		Tax Band Validation	UPRN Management
Bordereau Management	Bordereau Load	Bordereau Validation	Acceptance/Exception Message Generation	
Reinsurance System	Cat event coding	Reinsurance Programme Monitoring	Reinsurance Claim Calculation	Collection Notice Production
Finance System	Cash Management	Financial Monitoring		
Capita MI	Internal Data 'Views'	Internal Report Production	External Report Production	Exception Report Production
Manual	Levy Calculation			
Kernel	Modelling			