



## Data flow mapping

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This document is intended to provide guidance to help you in your preparations for GDPR readiness. It provides information about features of this offering, and aspects of the product's capabilities, that may help your organisation with GDPR requirements. This information is not an exhaustive list, due to the many ways that clients can choose and configure features, and the large variety of ways that the product can be used in itself and with third-party applications and systems

## Social Program Management (SPM) data flow diagram

One of the key considerations for customers who are addressing GDPR readiness is the documentation of end-to-end processing activities and data flows throughout their systems.

This document contains information that will help customers to create a complete mapping and inventory for their Social Program Management (SPM) deployment.

SPM implements several data flows that are associated with its business processes. Through configuration and customisation, customers can alter how the existing data flows operate and implement their own data flows.

The following diagram is representative of data flows in a default installation and shows where custom flows can be implemented.

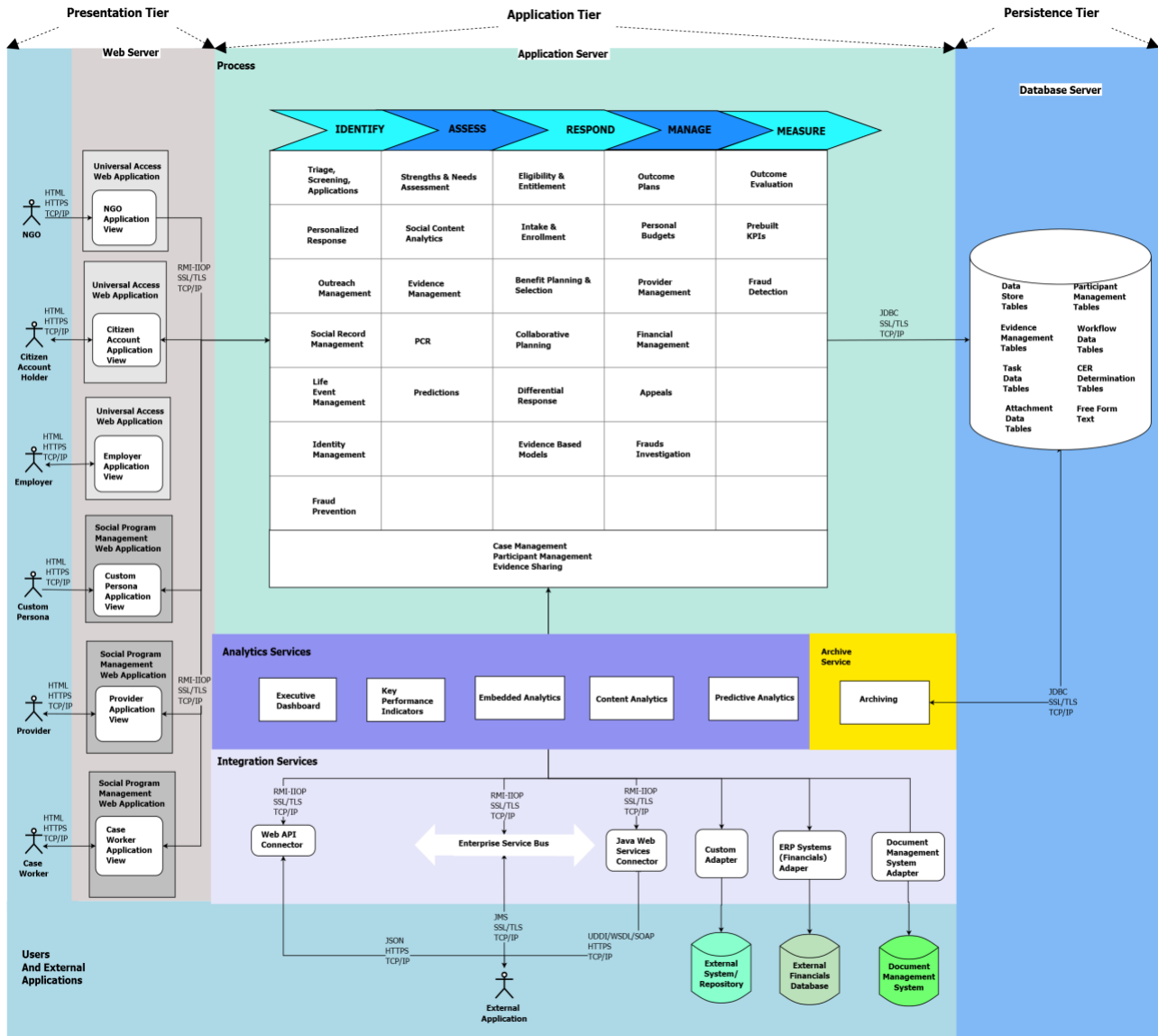


Figure 1: Data flow in Social Program Management

## Detailed description of diagram by section

### Users and external applications

The “Users and External Applications” section shows user personas that interact with front-end portals and external applications that interact with integration services.

For more information, see the following sections in this document:

- [Mapping of IEG Script input to data store entities](#) for details about the flow of data that users can enter through IEG scripts to the datastore.
- [Mapping of data store entities to evidence](#) for details about how data store entities are mapped to evidence entities.

- [Data flows triggered by user actions on a user interface meta-data \(UIM\) page](#) for details about the flow of data that is entered by using user interface meta-data (UIM) , including the creation or modification of dynamic evidence case data.
- [Integration services](#) for details about external application interactions with the integration services.

## Process

The Process section shows the platform components and application modules under the corresponding phase of the needs-to-outcomes process flow. For more information, see the Knowledge Centre topics at [platform components](#), [application modules](#) and [needs-to-outcomes](#).

Components that are shown in the Process section of the diagram use automated, scheduled, and deferred processes that all have associated data flows. The associated flows, how they are triggered, and how configuration and customisation can affect the flows are documented in the Knowledge Centre under the corresponding section for each component or module.

For more information, see the following sections in this document:

- [CER data flows](#) for details about the data flows that result from the execution of Cúram Express Rules, which are used by Eligibility and Entitlement and also by other features. For more information, see [CER overview](#) in the Knowledge Centre.
- [Evidence Sharing data flows](#) for details about the data flows that are associated with the Evidence Broker application module.
- [Workflow data flows](#) for details about the data flows that are associated with the Workflows Management System functionality.
- [Batch Processing data flows](#) for details about the data flows that are associated with SPM batch processing.

## Analytics services

The analytics section shows the analytics services that can be applied to client data.

The SPM application module, Business Intelligence and Analytics, provides some of the functionality that is shown in the analytics section, namely dashboards, key performance indicators and embedded analytics.

For more information about the Business Intelligence and Analytics component, see the [Business Intelligence and Analytics](#) section in the Knowledge Centre.

The content and predictive analytics functionality can either be provided by non-SPM products or can be implemented by customers.

## Integration services

The integration services section shows the integration points between SPM and existing internal systems or external agency systems. Each system integration point can have one or more interfaces for information exchange. SPM supports a range of approaches to enable integration with other systems.

For more information, see the following sections in this document:

- [Cúram Web APIs](#) for details about data flows that are associated with Web APIs.
- [Cúram Java Web Service APIs](#) for details about data flows that are associated with Web Service APIs.
- [Integration with Enterprise Resource Planning \(ERP\)](#) for details about data flows that are associated with ERP integration.
- [Integration with WebSphere Business Process Management \(WBPM\)](#) for details about data flows that are associated with WBPM integration.
- [Integration with Content Management System \(CMS\)](#) for details about data flows that are associated with CMS integration.

#### Database server

The previous diagram does not show all available tables in the SPM database. Instead, it shows a high level categorisation of some of the areas where personal data can be stored in the SPM database, as listed in the [Data Minimisation and Categorisation](#) document.

The diagram also does not show the various configuration tables that are used to control the flow and processing of data, but this document describes the configuration in later sections.

**Note:** In the Knowledge Centre, see the [Entity classes](#) topic for a description of how tables are modelled through the [Cúram Development Environment](#). For information about how to identify the set of screens, and the associated external APIs that read from or write to the tables, see the [Cúram Analysis Documentation Tooling \(CADT\)](#) documentation.

#### Archiving

The archiving section shows the services that provide the capability to archive historical data in its original business context, as well as to query and restore the data.

Customers might either use their own custom archiving solution, or a third-party solution.

SPM has a component called Cúram Archiving that works with IBM InfoSphere Optim Archive Enterprise Edition to provide a set of Cúram templates for the archival of business and technical objects including tables and relationships, and selection criteria to identify all records that should be moved into an archiving environment. Customers can implement their own templates for use with Optim Archive Enterprise.

For more information about the component, see [Cúram Archiving](#) in the Knowledge Centre. For information about how to use Optim Archive Enterprise, see the [InfoSphere Optim Data Growth Solution](#) Knowledge Centre.

## SPM and data flows

### Cúram data store related data flows

#### Mapping of IEG Script input to data store entities

##### Intelligent Evidence Gathering Editor

- Intelligent Evidence Gathering (IEG) Editor is a Flex based editor that is available to users who have an AdminApp application view.
- Administrators can view the list of IEG scripts that are deployed on their system through the Intelligent Evidence Gathering section of the Administrative Workspace and can create, view or modify the script definition by launching the IEG editor.
- In either view or edit mode, the IEG editor shows how the input fields map to data store entities and attributes.
- The IEG editor integrates with the [Data Store Editor](#) which is used to define the structure of a data store. Administrators can also view the list of configured data stores through the Intelligent Evidence Gathering section of the Administrative Workspace and can create, edit and view the data store design using the Data Store Editor.
- For more information about the IEG editor, see [Intelligent Evidence Gathering \(IEG\) Editor](#) in the Knowledge Centre.

##### Cúram Analysis Documentation Tooling (CADT)

- Cúram Analysis Documentation Tooling (CADT) can be used to navigate through the documentation pages for an IEG script, screens within those scripts, and the data stores where captured data is persisted.
- CADT will additionally show the location of the IEG script XML file and the data store XSD in the source code tree.
- For more information about CADT, see the [Cúram Analysis Documentation Tooling \(CADT\)](#) document.

##### Viewing IEG scripts XML and data store XSD files in the Cúram Developer Environment

- IEG XML files can be viewed in the Cúram Development Environment. For more information, see the [Cúram Development Environment](#) section of the Knowledge Centre.
  - See the [Authoring Intelligent Evidence Gathering scripts](#) section of the Knowledge Centre for a description of the logical structure of IEG XML, how it determines the flow of control through the script, and the mapping of user input to the data store entities.
  - See the [Working with Intelligent Evidence Gathering](#) section of the Knowledge Centre for a description of the process for developing IEG scripts and their integration with SPM.

- Datastore XSD files can also be viewed in the Cúram Development Environment.

#### Mapping of data store entities to evidence

Data mapping is the process by which data from the datastore is mapped into SPM evidence entities. Data mappings are managed by the Cúram Mapping Engine. For more information, see [Cúram Data Mapping Engine](#) in the Knowledge Centre.

Viewing data mapping specification and configuration files in the Cúram Development Environment  
Mapping specification and mapping configuration XML files can also be viewed or edited through the Cúram Development Environment.

See the following sections in the Knowledge Centre for more information:

- [Introduction of the Writing Mapping Specifications and Configurations for Static Evidence and PDFs](#) for a description of the files and their respective purposes.
- [Developing with the Data Mapping Engine](#) for details about the schema for mapping [specification](#) and [configuration](#) files. The section also describes how to write mapping specifications and configurations for the following items:
  - [Static Evidence and PDFs](#)
  - [Dynamic Evidence](#)
  - [Third Parties](#)

#### Code managed data mapping

SPM supports the customisation of the intake application process, as described in the [How to Customise the Process Intake Application Workflow](#) Knowledge Centre topic.

Refer to the following for more information about this customisation

- [How to Use Events to Extend Intake Application Processing](#)
- [How to Customise the Concern Role Mapping Process](#)

SPM also supports the customisation of [Life Events](#) in Universal Access.

For more information about the customisation of the [Life Events](#) component , see the following Knowledge Centre topics:

- [Life Events](#)
- [Customising Advanced Life Events](#)
- [Pre-populating a Life Event](#)
- [Driving Updates from Life Events](#)

## Cúram Express Rules (CER) related data flows

### CER rule execution

#### CER development and testing tools

For more information, see the following sections in the Knowledge Centre:

- [Authoring and Testing Environment](#) for a high level overview of the set of CER development and testing tools.
- [CER Development and Testing Tools](#) for a listing of the tools and a comprehensive guide to the use of each tool. For example: [RuleDoc](#) can be used to describe a CER rule set in a non-technical way.

#### Cúram Analysis Documentation Tooling (CADT)

See the [Cúram Analysis Documentation Tooling \(CADT\)](#) guide that is packaged with the tool for a description of the documentation pages that relate to CER rules.

### CER determinations

See [How Determinations Are Stored](#) in the Knowledge Centre for information about how the Eligibility and Entitlement Engine stores the result of a case determination.

### CER rule object converters and propagators data flows

#### Knowledge Centre documentation

See [Understanding Rule Object Converters and Propagators](#) for details about rule object conversion and propagation.

#### Cúram Express Rule data configurations

SPM users who have access to the AdminApp application view can view or edit the data configuration that governs how CER rule objects are converted and propagated through the Rules and Evidence section of the Administrative Workspace.

The data configuration refers to the rule object converters and propagator configuration files that are documented at [Understanding Rule Object Converters and Propagators](#) in the Knowledge Centre.

### Evidence sharing data flows

The SPM evidence broker mediates the sharing of evidence between cases in an agency. According to an agency's needs, administrators can create sharing configurations based on case and evidence types. Flexible sharing configuration options enable administrators to configure exactly what evidence is shared between cases.

The evidence broker can be used to analyse how evidence has been shared around a system by searching for all instances of evidence sharing that have occurred on a case or are currently in progress between cases. The shared instances search provides details about the evidence broker's decision for each evidence record that it shares.

See the [Evidence Broker section](#) in the Knowledge Centre for details about how the evidence broker controls the sharing of evidence between cases.

## Data flows triggered by user actions on a user interface meta-data (UIM) page

### Cúram Analysis Documentation Tooling (CADT)

CADT can be used to help identify the Java façade APIs that read client data, and also to identify the database tables from which the APIs read the client data. CADT provides links to the Javadoc for the referenced APIs and to the documentation for the referenced tables.

CADT also provides details about Dynamic Evidence that includes the logical structure of an evidence type version, previews of the create and view evidence dynamic UIM screens, and the associated rule sets for the evidence type, how they are invoked, and in what context. For more information, see [Dynamic Evidence](#) in the Knowledge Centre.

### Dynamic evidence Editor

The definition of dynamic evidence, including the user interface, the logical structure of an evidence type version, and the generated rule sets that are associated with the evidence type (processing and data rule sets) are managed through the dynamic evidence type versions. Dynamic evidence type versions can be created, activated, and deleted by using the Dynamic Evidence section of the Administrative Workspace. For more information, see [Dynamic Evidence Type Versions](#) in the Knowledge Centre.

A specific evidence type version can be edited and viewed through the Dynamic Evidence Editor, which can be launched from the Dynamic Evidence section of the Administrative Workspace. For more information, see [Administering Dynamic Evidence](#) in the Knowledge Centre.

## Related artefacts that can be viewed in the Cúram Developer Environment

### User interface metadata

User interface metadata (UIM) is an XML based language that describes the contents and layout of one of the main elements in the user interface, a UIM page. Customers can define the calls to façade layer operations in UIM files with either a “. uim” or “. vim” extension.

For more information, see the following sections in the Knowledge Centre:

- [Server Interface Reference](#) for an overview on how this is done.
- [Maintaining Dynamic UIM Pages](#) for details about Dynamic UIM maintenance. Dynamic UIM is UIM that is cached in the resource store, rather than static which resides on the file system.
- [Component Artefacts](#) for a listing of the types of UIM source artefacts for the front end.



## Server model files

The Cúram Development Environment supports the definition and viewing of documentation for the façade layer operations, which are modelled by using Rational Software Architect (RSA).

For more information, see the following sections in the Knowledge Centre:

- [Working with the Cúram Model in Rational Software Architect \(RSA\)](#) for details about how to view and modify the Cúram UML model through RSA.
- [Cúram modeling reference](#) for details about the Cúram UML artefacts and their logical structure.

**Note:** When customising or extending SPM, it is good practice for the source artefacts to be properly documented. For information about how to document model artefacts, see [The Properties View](#) topic in the Knowledge Centre.

## Dynamic evidence Artefacts

See the [Configuring Dynamic Evidence](#) section in the Knowledge Centre for details about the artefacts that are associated with an evidence type version.

## Batch processing data flows

For information about batch processing data flows, see the following sections in the Knowledge Centre:

- [Cúram batch process reference](#) for details about the default batch processes that are included in a default installation of SPM, including a high-level description of the processing that is performed by each process.
- [Developing batch processes](#) for details about how to develop custom batch processes.
- [Developing streamed batch programs](#) for details about how to develop custom streamed batch processes.
- The batch related subsections of [Administering operations for a production system](#) for details about how to administer batch operations.

## Workflow data flows

Related artefacts that can be viewed in the Cúram Development Environment

For information about workflow data flows, see the following sections in the Knowledge Centre:

- [Cúram Workflow Reference](#) for details about the source artefacts that are associated with a workflow.
- [Workflow data flows](#) for a description of how data is stored and manipulated in a workflow process instance.

## Administrative section

Administrative users who have access to the AdminApp application view can access workflow administrative functions through the Workflow section of the Administrative Workspace.

Workflow administrative functions include the listing, creation, importation, and management of the release of the following items:

- Process definitions
- Workflow data object templates
- Event classes
- Work queues
- Allocation targets
- Allocation CER rules

The functionality for monitoring process instances and process instance errors can be accessed by navigating to the Process Monitoring section that is also in the Administrative Workspace.

## Cúram Analysis Documentation Tooling

See the [Cúram Analysis Documentation Tooling \(CADT\)](#) guide that is packaged with the tool for a description of the documentation pages that relate to workflows.

## Service-oriented architecture (SOA) integration data flows

See the [Integrating](#) section of the Knowledge Centre for an overview of how to integrate application data with other applications, either within an enterprise or with external systems.

## Integration with enterprise resource planning (ERP) Systems

SPM supports integration with ERP systems.

See the [Cúram Integrated ERP Operations](#) section in the Knowledge Centre for information about how to configure an SPM-ERP financial environment. The section also contains details about how common configuration data can be synchronised between the SPM and ERP systems through the use of the Cúram Financial Adapter and the Cúram Master Data Adapter.

## Integration with WebSphere Business Process Management (WBPM)

SPM supports integration with WebSphere Business Process Management(WBPM).

See the [Cúram WBPM Integration](#) section in the Knowledge Centre for information about how to connect WebSphere Business Process Management to an SPM inbound web service. The section also contains instructions about how to start a WebSphere Business Process Management web service with an SPM outbound web service.

## Integration with a Content Management System (CMS)

SPM supports integration with a Content Management System (CMS).

See the [Content Management Interoperability Services Integration](#) section in the Knowledge Centre that describes how to register a target system so that customers can use a CMS as a repository for documents. When integration with a content management system is enabled, attachments, Microsoft

Word communications, and pro forma communications documents are stored and retrieved from the content management system.

#### Cúram web API data flows

For information, see the following sections in the Knowledge Centre:

- [Developing Cúram Web APIs](#) for details about how to develop a custom web API.
- [Creating a configuration](#) subsection for details about how to create the resource configuration XML file, including how to create Swagger documentation for the API.
- [Building a Cúram Web API](#) for details about how clients of the API can view the Swagger Documentation for the available API endpoints.

#### Cúram Java web services API data flows

For information, see the following sections in the Knowledge Centre:

- [Integrating with External Applications through Web Services](#) for details about how to build a custom Web Services API, and how to create and view the Web Services Description Language (WSDL) and Universal Description, Discovery, and Integration (UDDI) configuration that lists and describes the available web services.
- [Cúram Incremental Modernisation and Transformation Web Services Cookbook](#) for details about SPM inbound web services that are included in a default installation.

#### Analytics data flows

##### Business Intelligence and Analytics Reports

For information, see the following sections in the Knowledge Centre:

- [Business Intelligence and Analytics](#) for an overview of the Business Intelligence and Analytics Reports feature, its associated data flows, how to develop Business Intelligence Reports and how to deploy Business Intelligence and Analytics content by using IBM Cognos.
- [Developing New Reports](#) for details about the data flow that is associated with report generation when [BIRT](#) report functionality is used.

## Further information

### The GDPR text

The text of the GDPR in full [http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2016.119.01.0001.01.ENG&toc=OJ:L:2016:119:TOC](http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2016.119.01.0001.01.ENG&toc=OJ:L:2016:119:TOC)

### SPM GDPR technotes

Social Program Management is in the process of releasing documents that cover various GDPR related topics. All documents will be attached to the following tech note:

- <https://www.merative.com/support/spm/news/gdpr-information>

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