Data Governance using Visible Analyst

Capture and visualize all references to your data lineage before defining data governance for third party applications.

Visible Systems Corporation
711 Atlantic Avenue, Boston, MA 02111

All rights reserved. Visible Systems Corporation 2019

Questions often raised are:

Who updated this data last and where else is it used?
What business entities are being defined or have been defined in the last model?
Who are the consumers of the metadata throughout my organization?
What rules are established around a particular metadata object?
Who has authorization over the metadata and how can it be changed?
What reports use or rely on this metadata?
Which applications for which we are responsible are driven from and supported by the metadata?

Key Issues Addressed by Visible Governance:

Coverage Analysis:

- Let me see how my requirements are covered by the metadata?

Impact Analysis:

- Which part of the metadata is impacted by a change in my requirements? Who changed it? When was it change? Why was it changed?

Transparency Analysis:

- Does everyone understand how metadata can be dynamically viewed in the repository? Where is it being used and in which models?

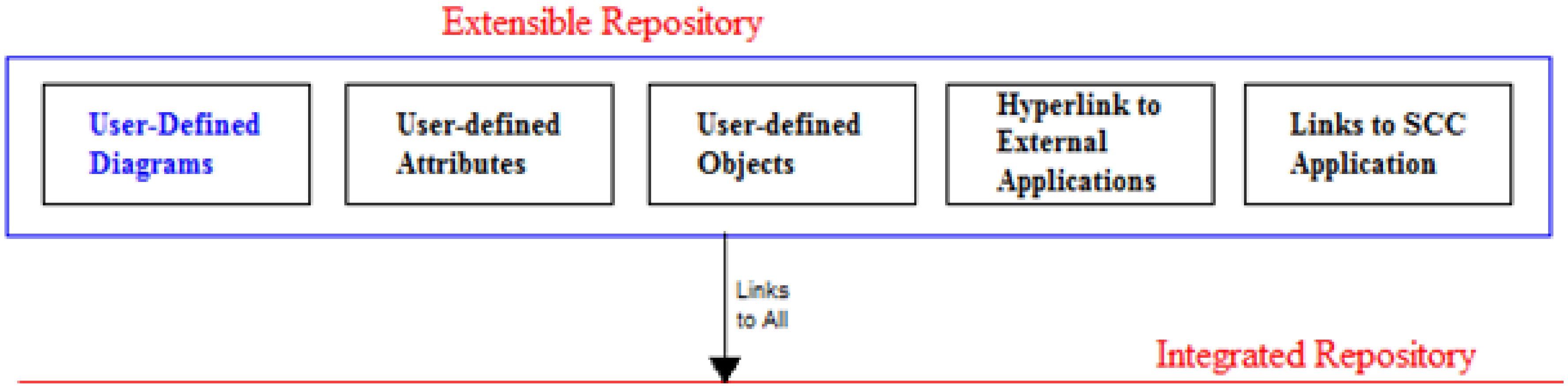
Set up Visible Governance in Four Simple Steps:

Step 1: Create Project User Defined Objects and Attributes.

Step 2: Capture Meta Data from Source Systems.

Step 3: Maintain Updates to Repository through Append feature.

Step 4: Visualize and Reuse Meta Data in Model-based formats.



Step 1: Create Project User Defined Objects and Attributes

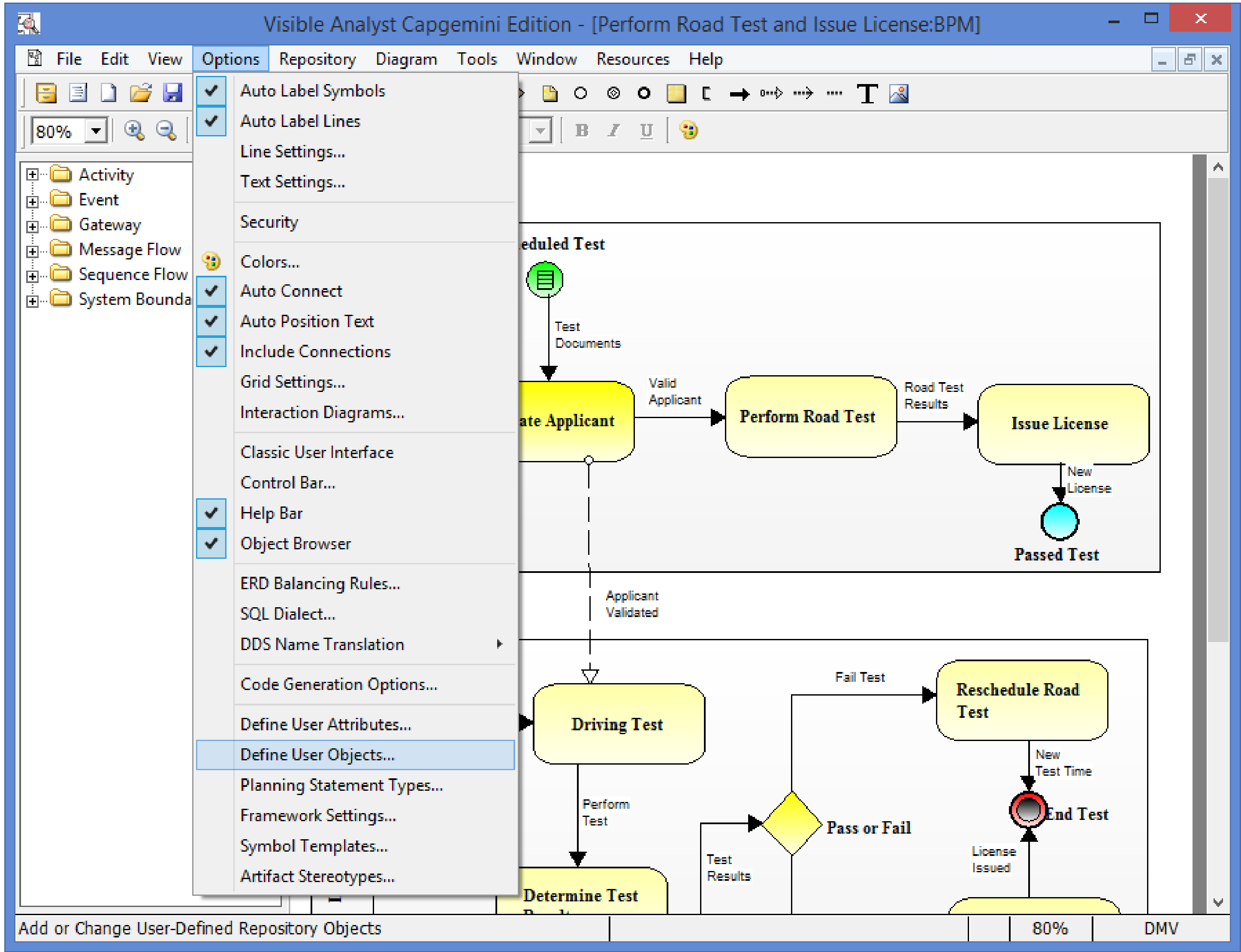
- Options Menu – Define …

User Defined Object and Attributes

- A little known feature in the Visible Analyst, Defining User Defined Objects and Attributes will be used to initially set up Governance.

User-Defined Objects: This feature allows the user-defined objects to be linked to any repository objects and reference other objects within the composition field of the user-defined object. You can then produce an association matrix report depicting the linkage between objects.

User-Defined Attributes: The Visible Analyst repository is extensible. New fields, called user-defined attributes, can be defined or selected from a pick list in a project repository, allowing you to extend the information that can be stored with an object. The field information that can be stored includes name, type and length.



Add or Change User-Defined Repository Objects

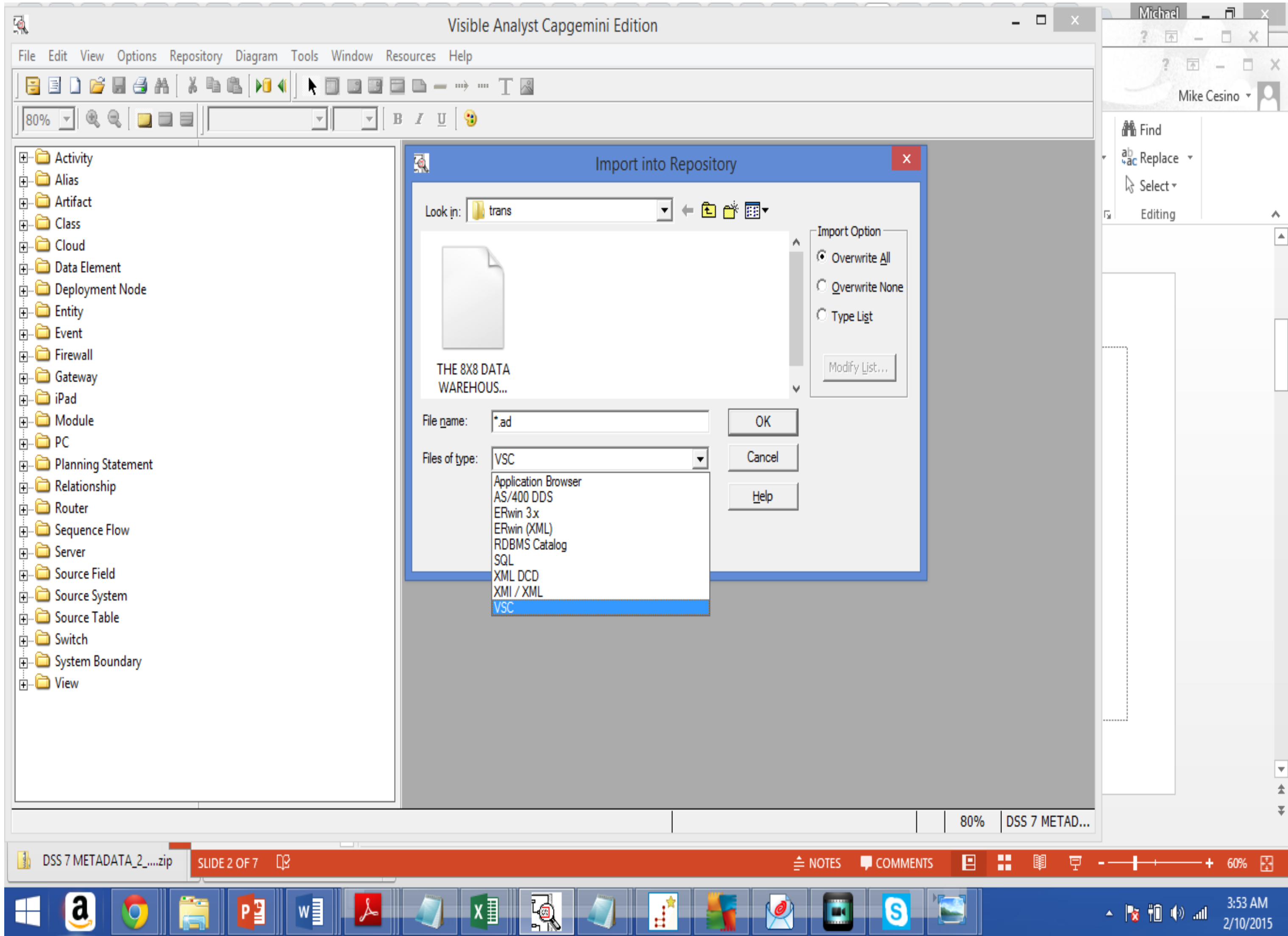
Step 2: Capture Meta Data from Source Systems

- Visible Analyst Capture

RDBMS Catalog Import

- Data Model information can be transferred between any of the supported RDBMSs and Visible Analyst in a seamless fashion.

- This function populates a Visible Analyst project database with the data model information as defined in the RDBMS.
- The information captured includes all entity and attribute definitions, any key information, as well as views, triggers, constraints and stored procedures, if your RDBMS supports them. Refer to SQL DDL import for more information.
- Automatic ERD diagram generation as a way to view and segment the data into appropriate subject areas.
- Upon importing, the Database Compare (Model vs Schema) is run to produce a report on the differences between the model and the database.



Import into Repository

Look in: trans

THE 8X8 DATA WAREHOUS...

File name: *.ad

Files of type: VSC

Import Option

● Overwrite All

○ Overwrite None

○ Type List

Step 3: Maintain Updates to Repository through the just released "Append" feature.

Append to Repository - Command Line Import

- Repository information can be updated from Sources (systems, files, or platforms) in the event a Source has been updated.

- This function populates a project repository with the meta data information updated in the Source system(s), file(s) or platform(s).
- The information captured includes all entity and attribute definitions, any key information, as well as views, triggers, constraints and stored procedures.
- Append enables you to retain revision history for all project Repository items.

- Visible Analyst
  - Command Line Options (not case sensitive):

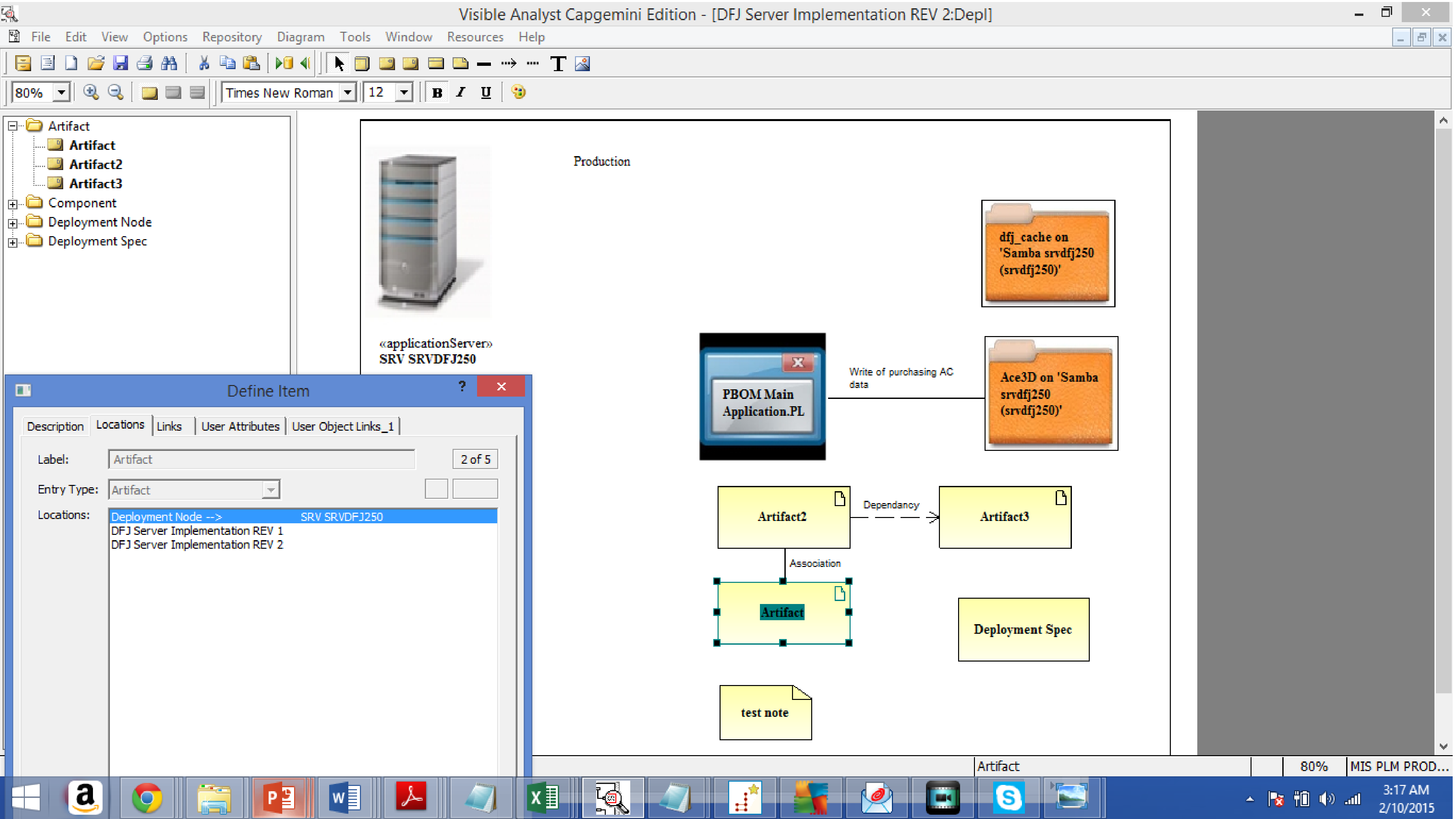
- /VSCIMPORT - Perform import (Required)
- /UID - User Id (Required for network version)
- /PASSWORD - Password (Required if user account is password protected)
- /PATH - Full path of VSC file to import (Required)
- /PROJECT - Name of project. If project doesn't exist it will be created
- (Required)
- /LOGPATH - Path to store log files (error, action overlap). If not
- specified, transient data path is used
- /APPEND - Appends any new information to the existing information for the alias, notes, and values and meanings field (for data elements).

- Return Codes

- 0 - Success
- 1 - Import file not specified
- 2 - Target project not specified
- 3 - Import project could not be initialized (usually a rights issue)
- 4 - Import failed

- Example command
- Example command
- C:>va32 /VSCIMPORT /UID=supervisor /PATH=c:\temp\proj.ad /PROJECT=test

Step 4: Visualize and Re-use Meta Data in Model-based formats.



Label: Artifact   2 of 5

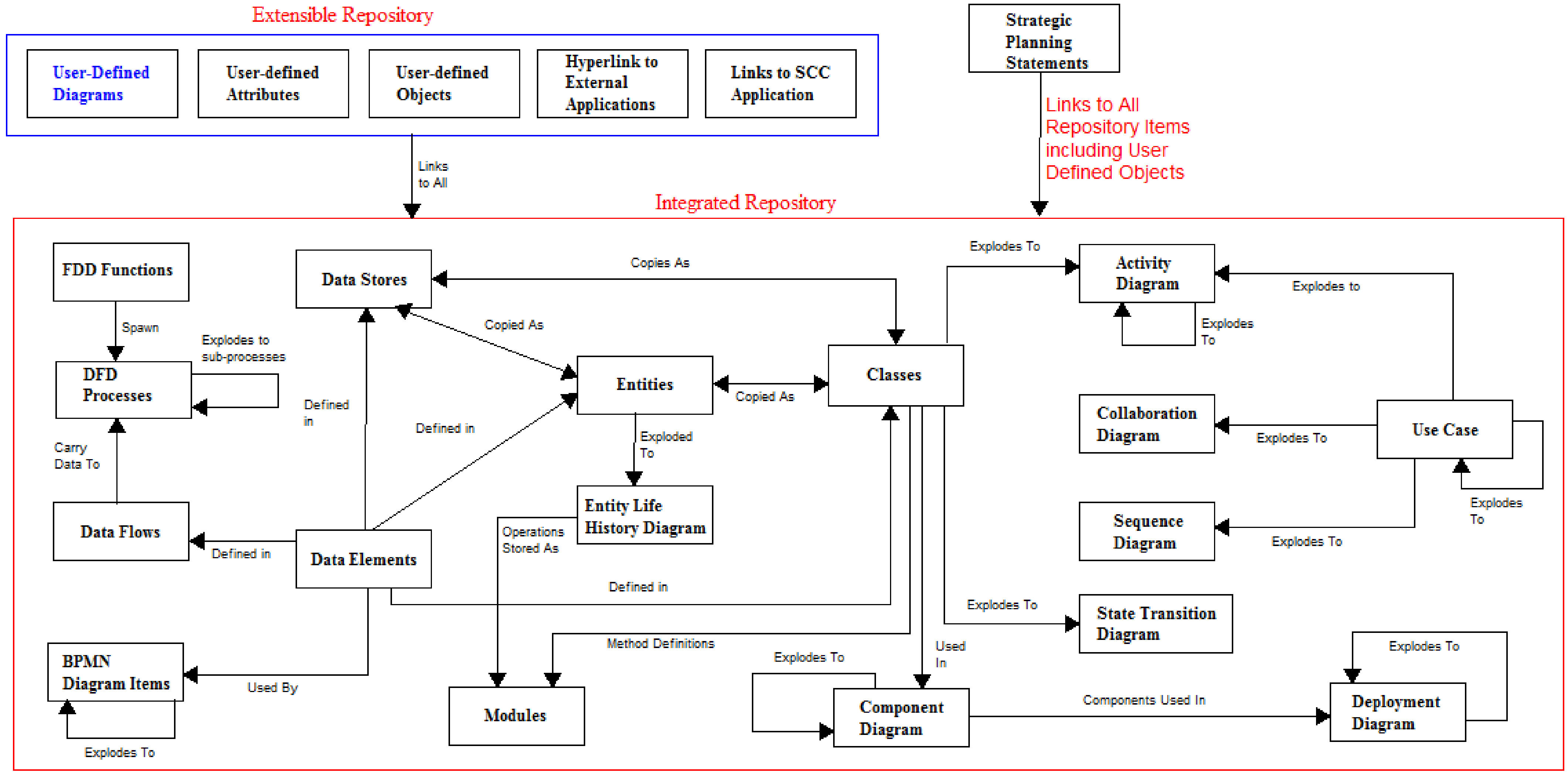
Entry Type: Artifact

Locations:
Deployment Node --> SRV SRVDFJ250
DFJ Server Implementation REV 1
DFJ Server Implementation REV 2

Once User Defined Objects and Attributes are defined, you will be able to see who is responsible for which Meta Data and where used in the Repository (i.e. Functions, Data Flows, Entities, etc.) .

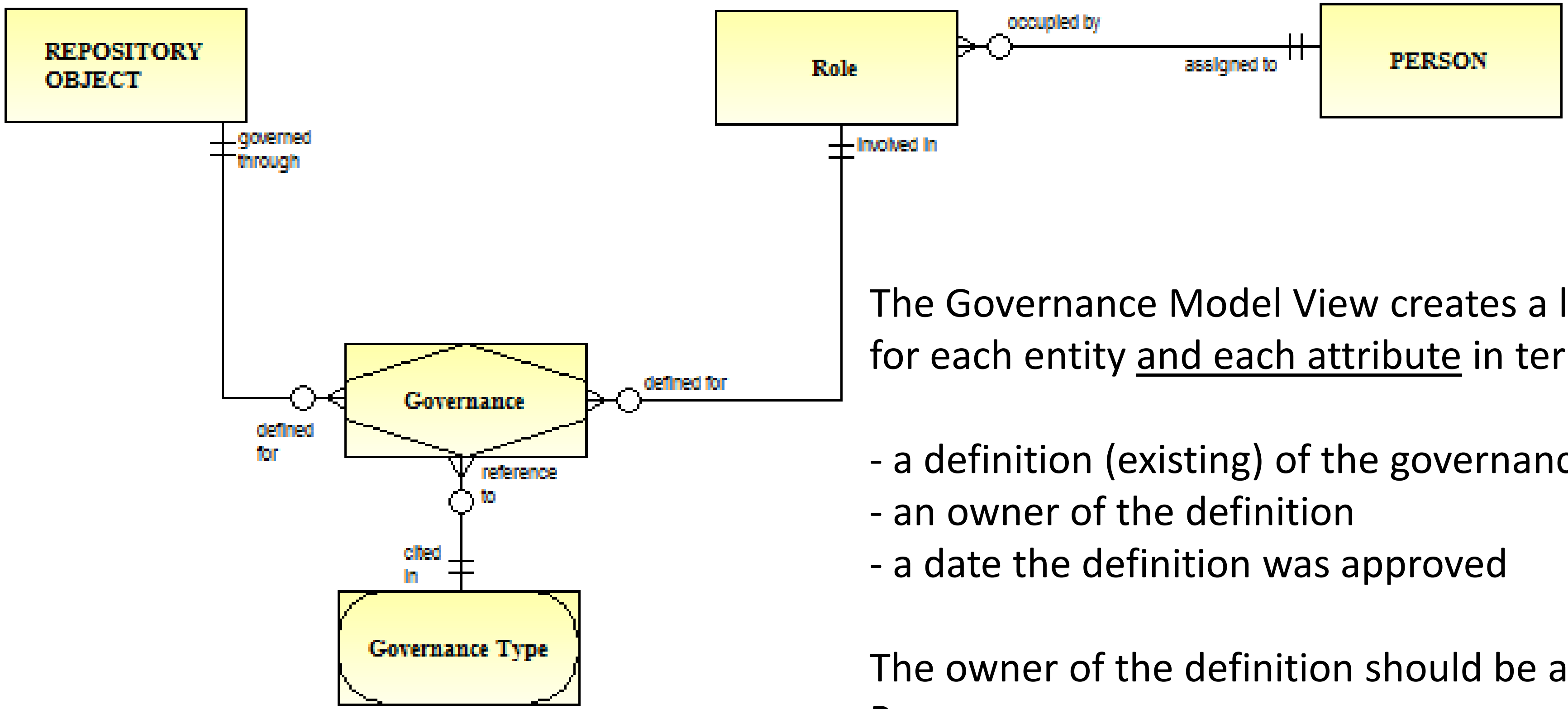
Visible Analyst Integrated Model Driven Development Environment

Real-time Concurrent Multi-user Project Access



User Defined Attributes and User Defined Objects

Examples of various scenarios follow ….



The Governance Model View creates a level of Governance that allows a record for each entity and each attribute in terms of:

- a definition (existing) of the governance activity
- an owner of the definition
- a date the definition was approved

The owner of the definition should be a link to a role rather than a named Person.

Every REPOSITORY OBJECT is potentially recorded in a GOVERNANCE table that connects the nature of the Governance (Governance Type) and a Role.

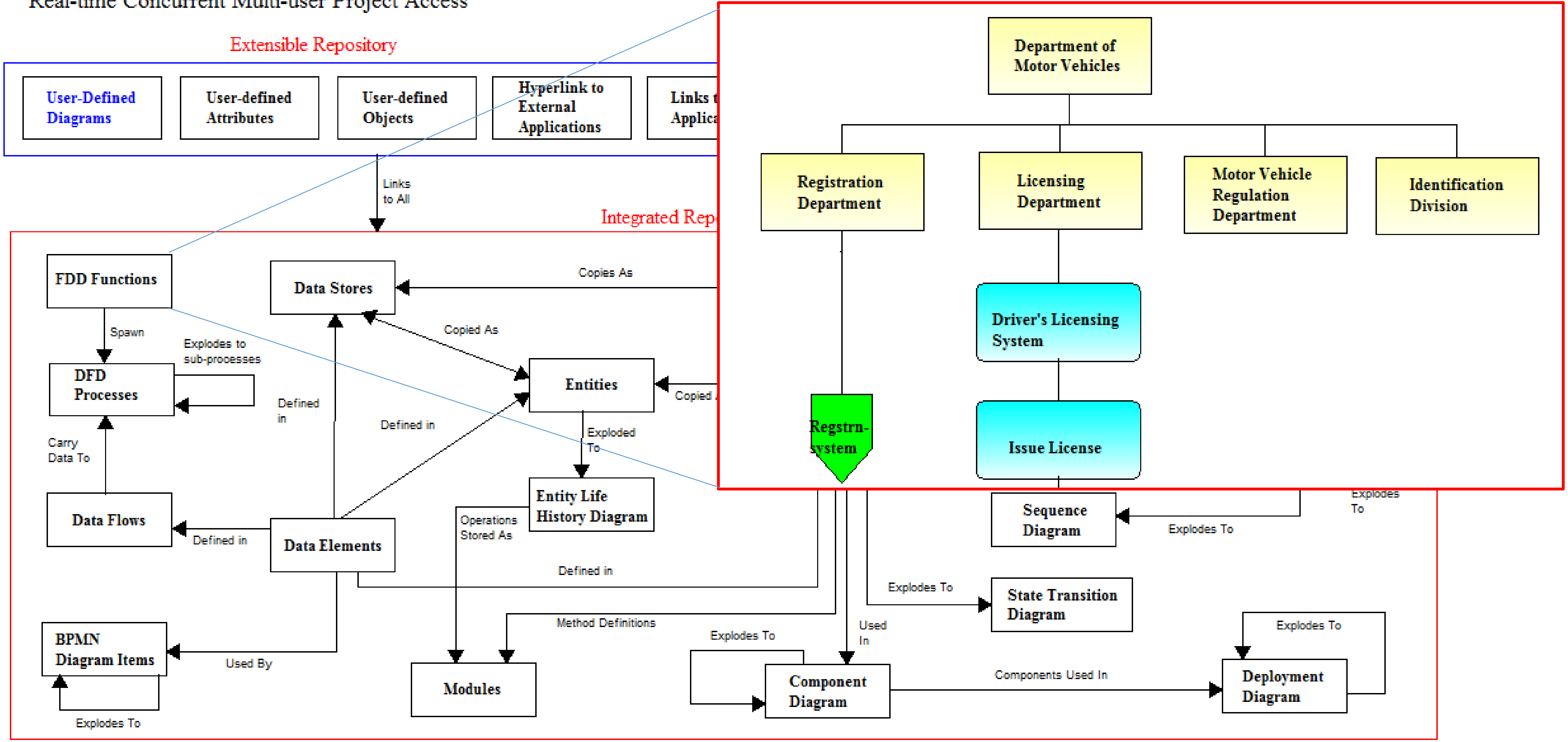
A Role can only be occupied by one PERSON and the PERSON may change Role but the Role will retain the Governance responsibility.

Governance Types will be Owner, Deputy Owner, Data Steward, Data Manager and Subject Matter Expert.

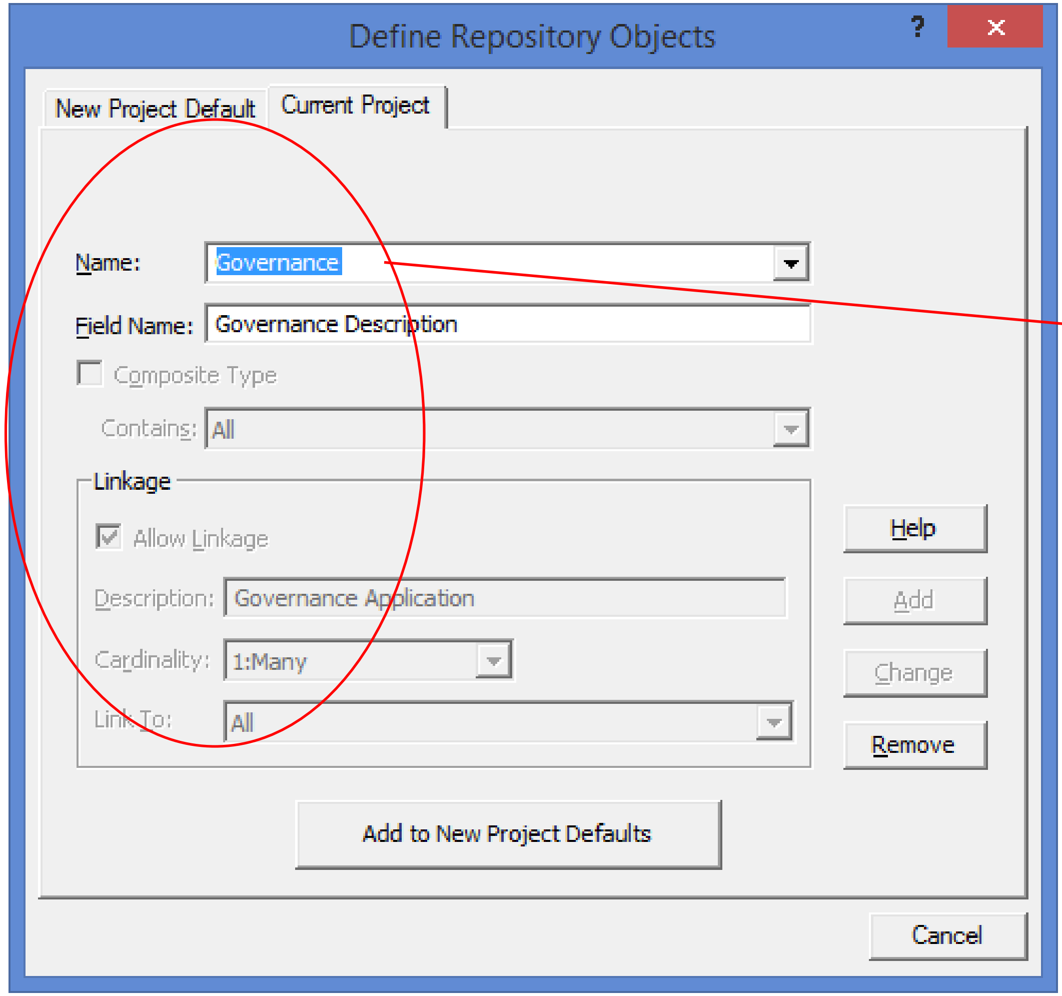
You can zoom in on the Repository to see how Governance is implemented for a particular area. We will zoom in on the Licensing Department Function as an example.

Visible Analyst Integrated Model Driven Development Environment

Real-time Concurrent Multi-user Project Access



The first step is to set up Governance as User Defined Object that can be a composite type of object and can be linked to other objects in the Repository (in this example Licensing Department).


Define Repository Objects

New Project Default | Current Project

Name: Governance

Field Name: Governance Description

□ Composite Type

Contains: All

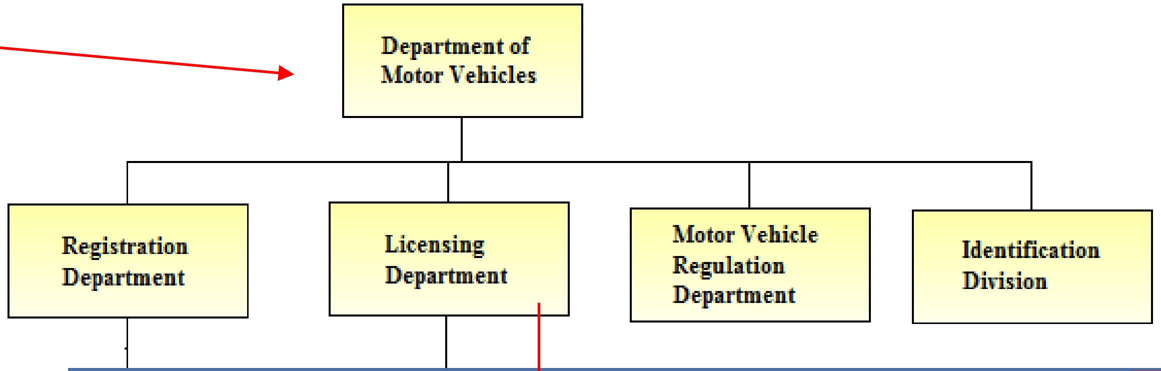
Linkage

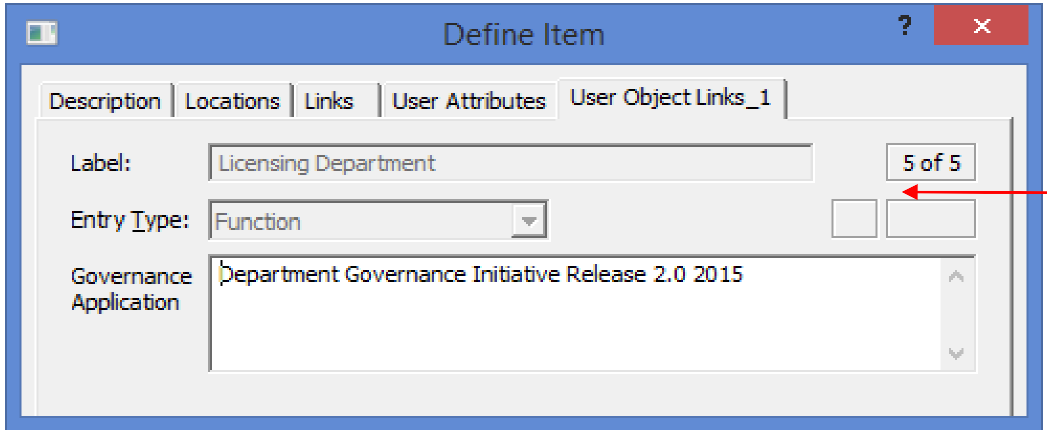
☑ Allow Linkage

Description: Governance Application

Cardinality: 1:Many

Link To: All



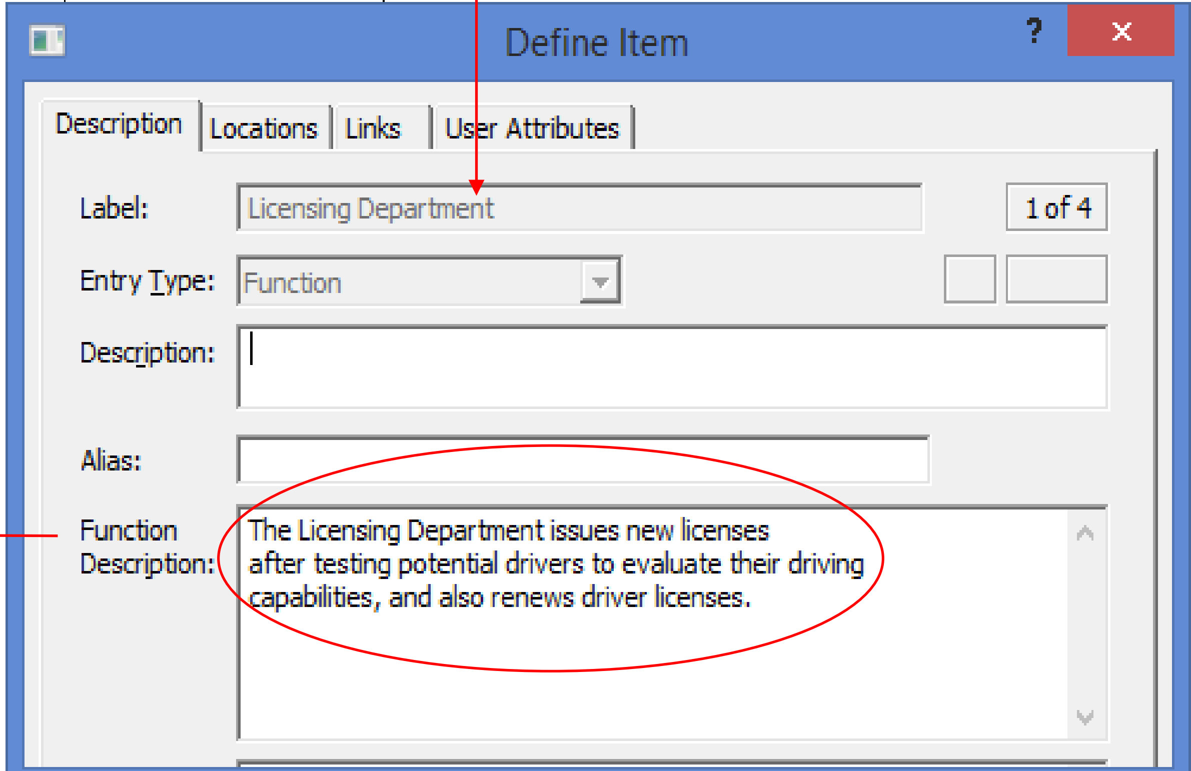

Define Item

Description | Locations | Links | User Attributes | User Object Links_1

Label: Licensing Department — 5 of 5

Entry Type: Function

Governance Application: Department Governance Initiative Release 2.0 2015


Define Item

Description | Locations | Links | User Attributes

Label: Licensing Department — 1 of 4

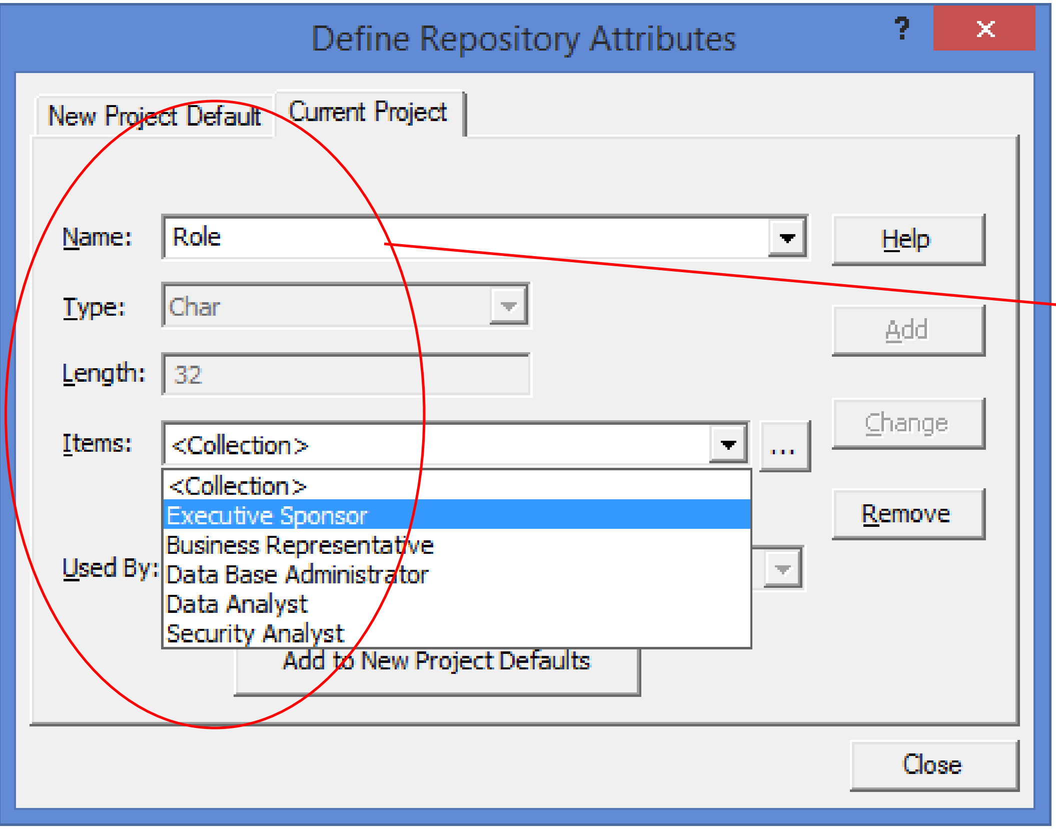
Entry Type: Function

Description:

Alias:

Function Description: The Licensing Department issues new licenses after testing potential drivers to evaluate their driving capabilities, and also renews driver licenses.

The second step is to set up a Role (i.e. Executive Sponsor, Business Representative, Data Base Administrator, Data Analyst, Security Analyst, etc.) as a User Defined Attribute.


Define Repository Attributes

New Project Default | Current Project

Name: Role

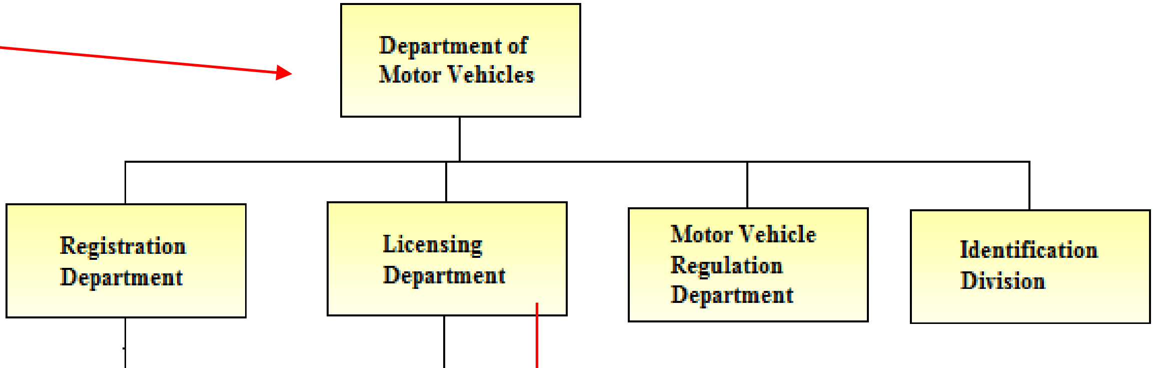
Type: Char

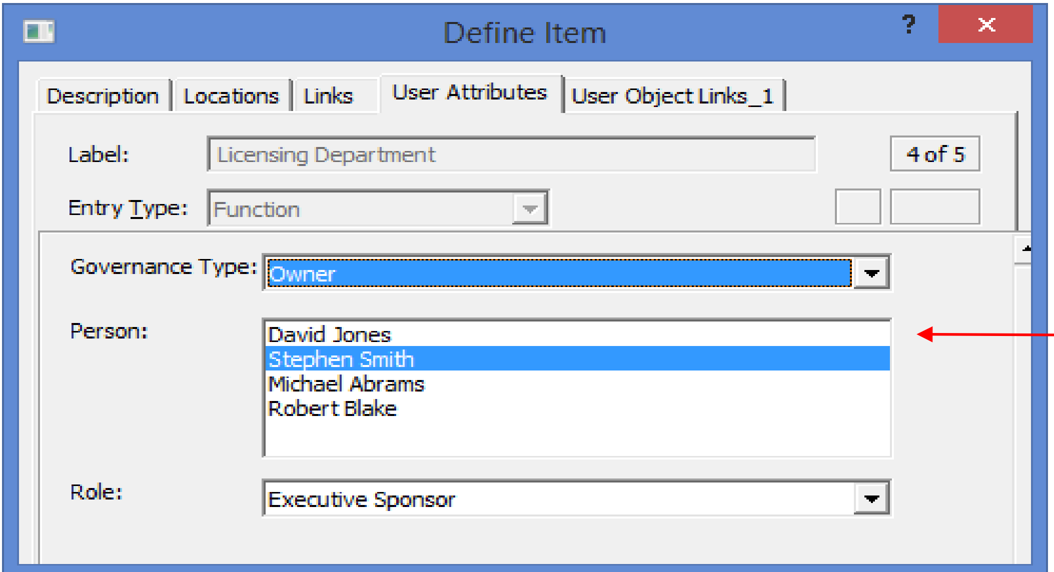
Length: 32

Items: <Collection>

- <Collection>
- Executive Sponsor
- Business Representative
- Data Base Administrator
- Data Analyst
- Security Analyst

Used By:




Define Item

Description | Locations | Links | User Attributes | User Object Links_1

Label: Licensing Department — 4 of 5

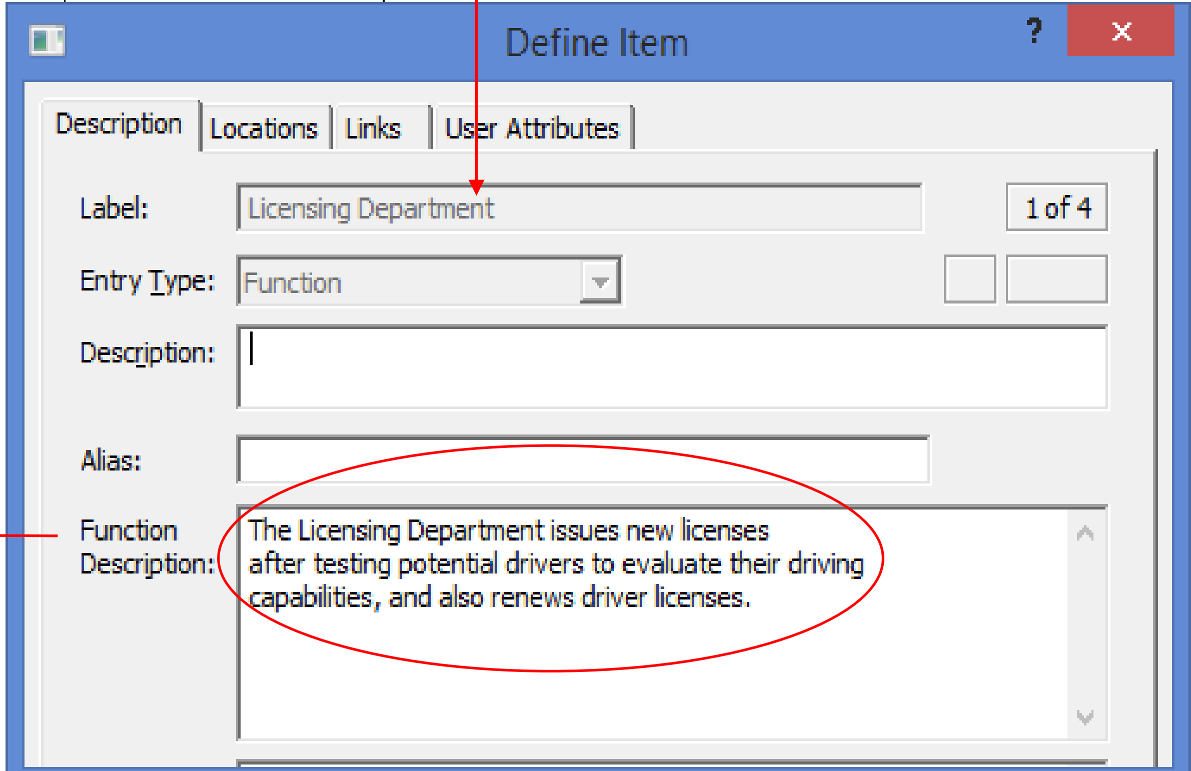
Entry Type: Function

Governance Type: Owner

Person:

- David Jones
- Stephen Smith
- Michael Abrams
- Robert Blake

Role: Executive Sponsor


Define Item

Description | Locations | Links | User Attributes

Label: Licensing Department — 1 of 4

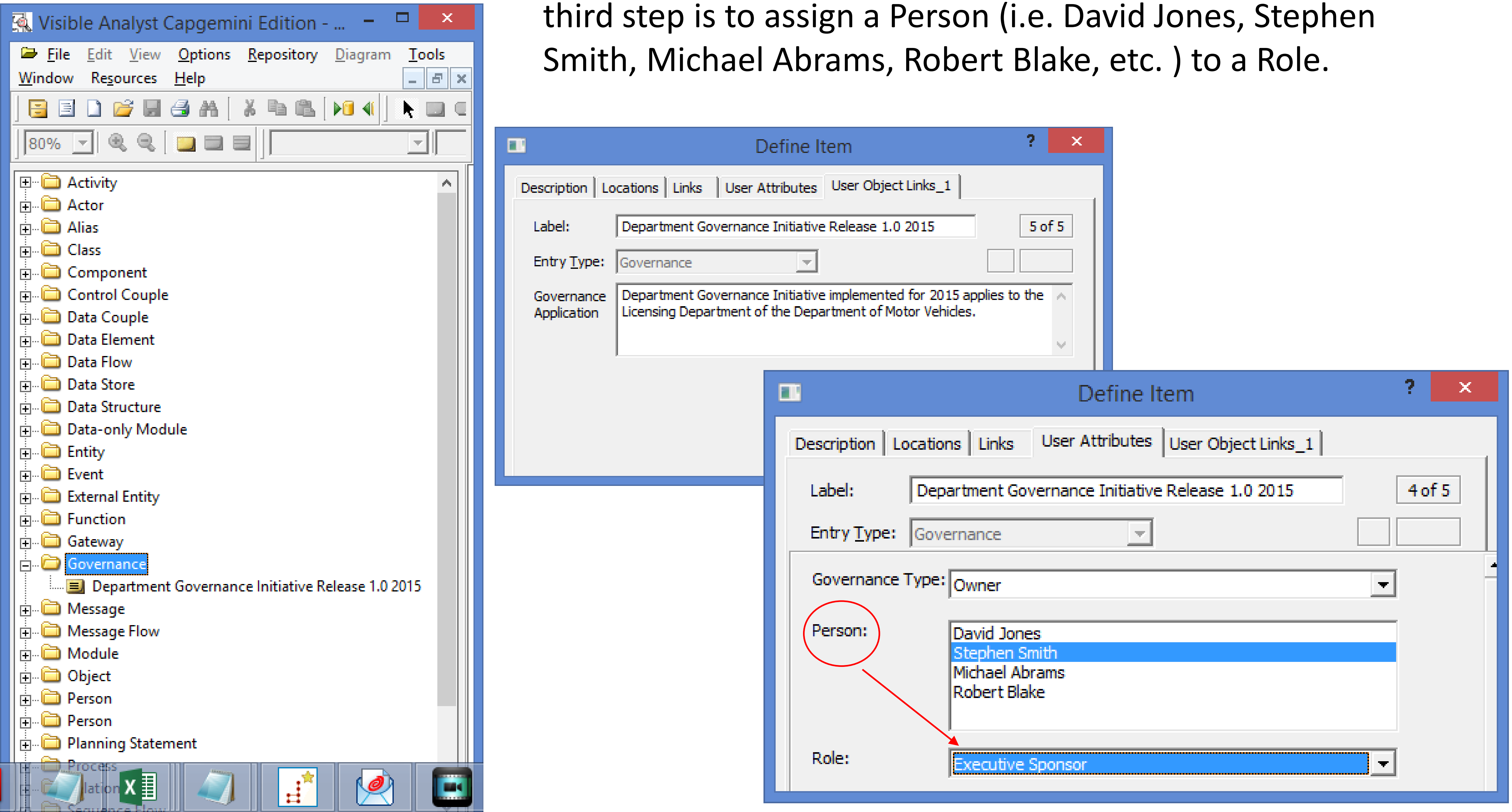
Entry Type: Function

Description:

Alias:

Function Description: The Licensing Department issues new licenses after testing potential drivers to evaluate their driving capabilities, and also renews driver licenses.

Once Person has been set up as a User Defined Attribute, the third step is to assign a Person (i.e. David Jones, Stephen Smith, Michael Abrams, Robert Blake, etc.) to a Role.



Define Item

Label: Department Governance Initiative Release 1.0 2015 — 5 of 5

Entry Type: Governance

Governance Application: Department Governance Initiative implemented for 2015 applies to the Licensing Department of the Department of Motor Vehicles.

Define Item

Label: Department Governance Initiative Release 1.0 2015 — 4 of 5

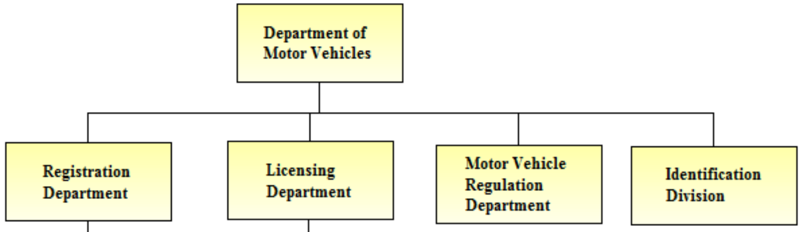
Entry Type: Governance

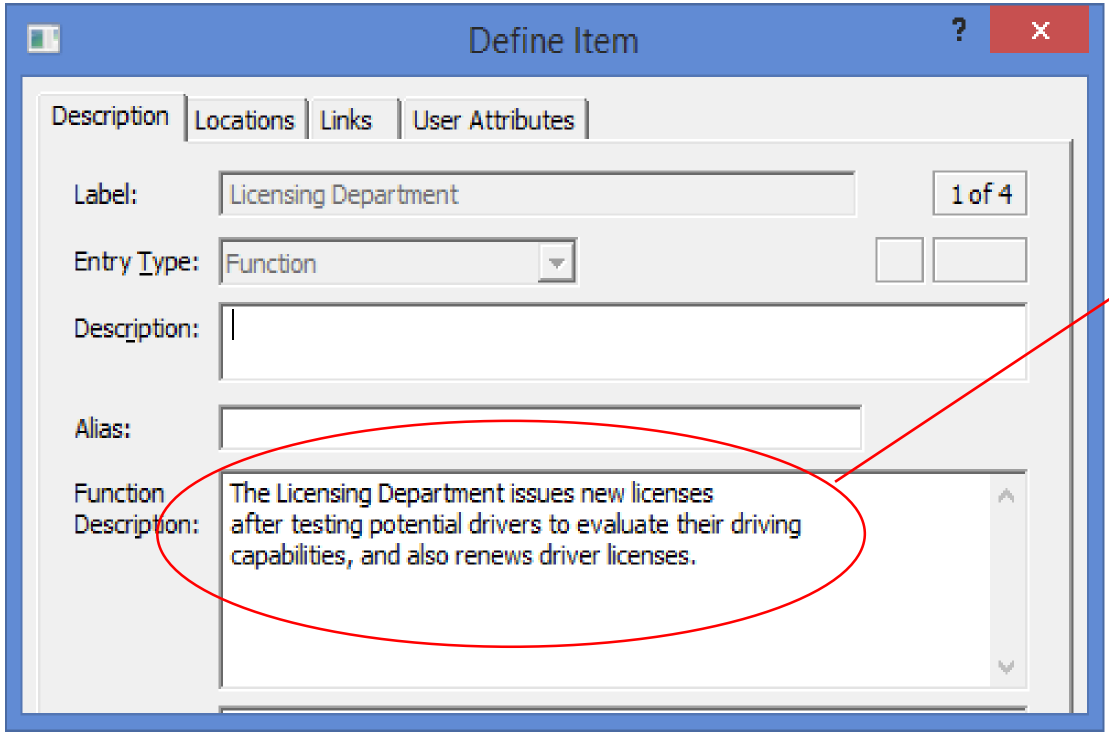
Governance Type: Owner

Person:
David Jones
Stephen Smith
Michael Abrams
Robert Blake

Role: Executive Sponsor

Now you can clearly see that there can be up to 4 Roles in Governance for the Licensing Department; (Executive Sponsor, Data Base Administration, Data Analyst, Security Analyst). You can also see Stephen Smith is assigned to the Role as Data Base Administrator. Later on, this can be changed whereby David Jones is re-assigned to the Role Data Base Administrator.





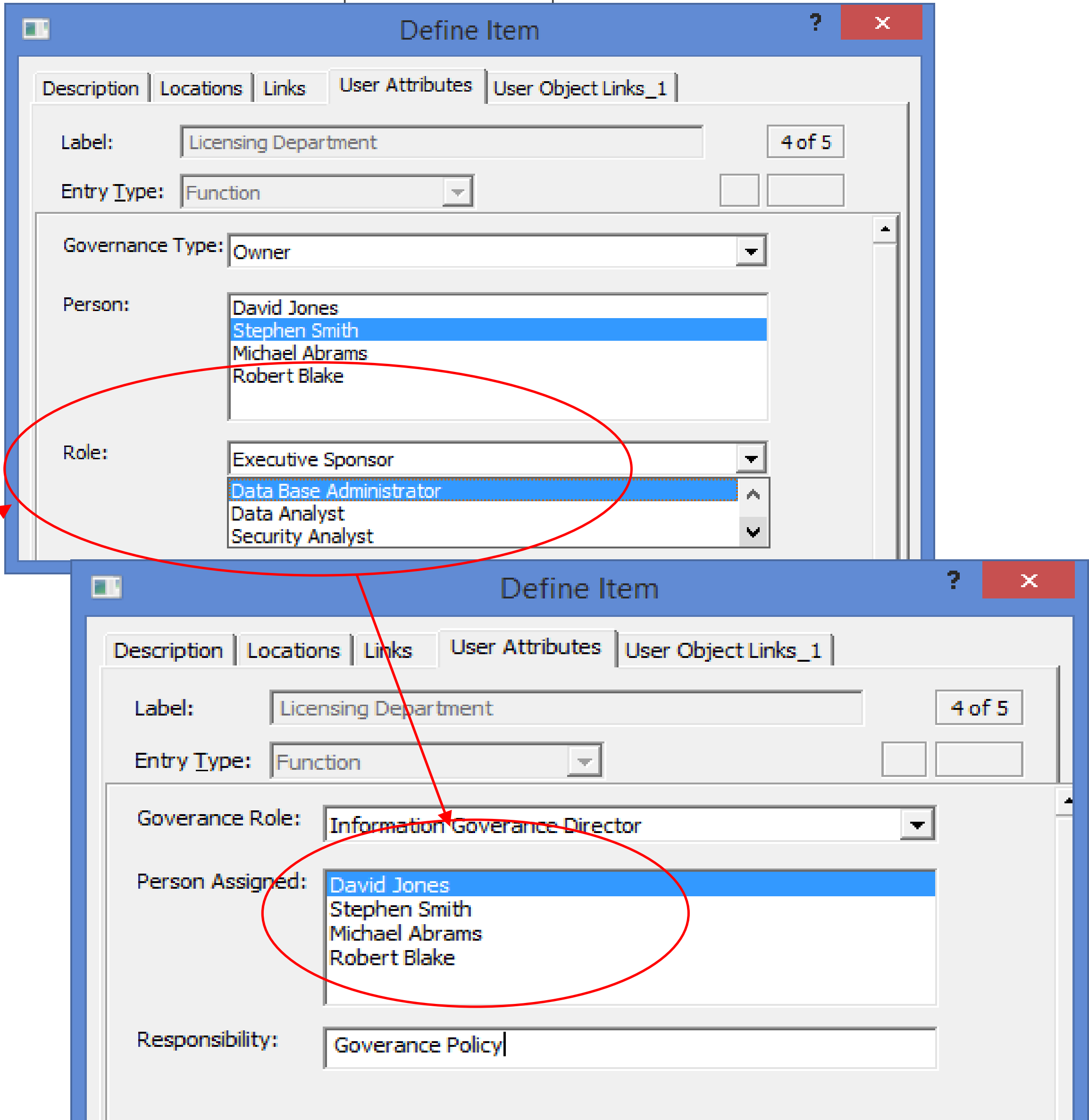
Label: Licensing Department 1 of 4

Entry Type: Function

Description:

Alias:

Function Description: The Licensing Department issues new licenses after testing potential drivers to evaluate their driving capabilities, and also renews driver licenses.



Label: Licensing Department 4 of 5

Entry Type: Function

Governance Type: Owner

Person: David Jones, Stephen Smith, Michael Abrams, Robert Blake

Role: Executive Sponsor

Data Base Administrator, Data Analyst, Security Analyst

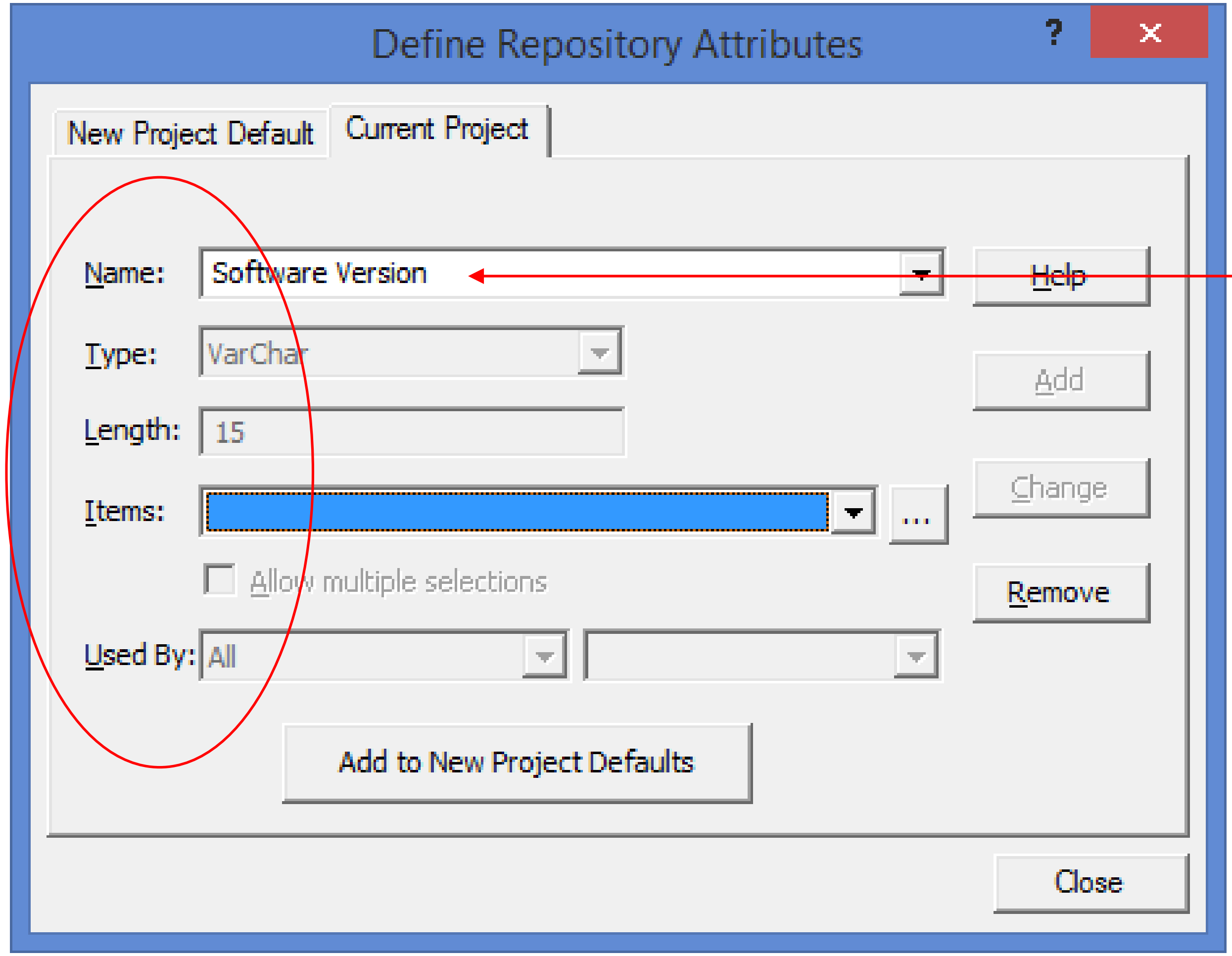
Label: Licensing Department 4 of 5

Entry Type: Function

Goverance Role: Information Goverance Director

Person Assigned: David Jones, Stephen Smith, Michael Abrams, Robert Blake

Responsibility: Goverance Policy



Name: Software Version

Type: VarChar

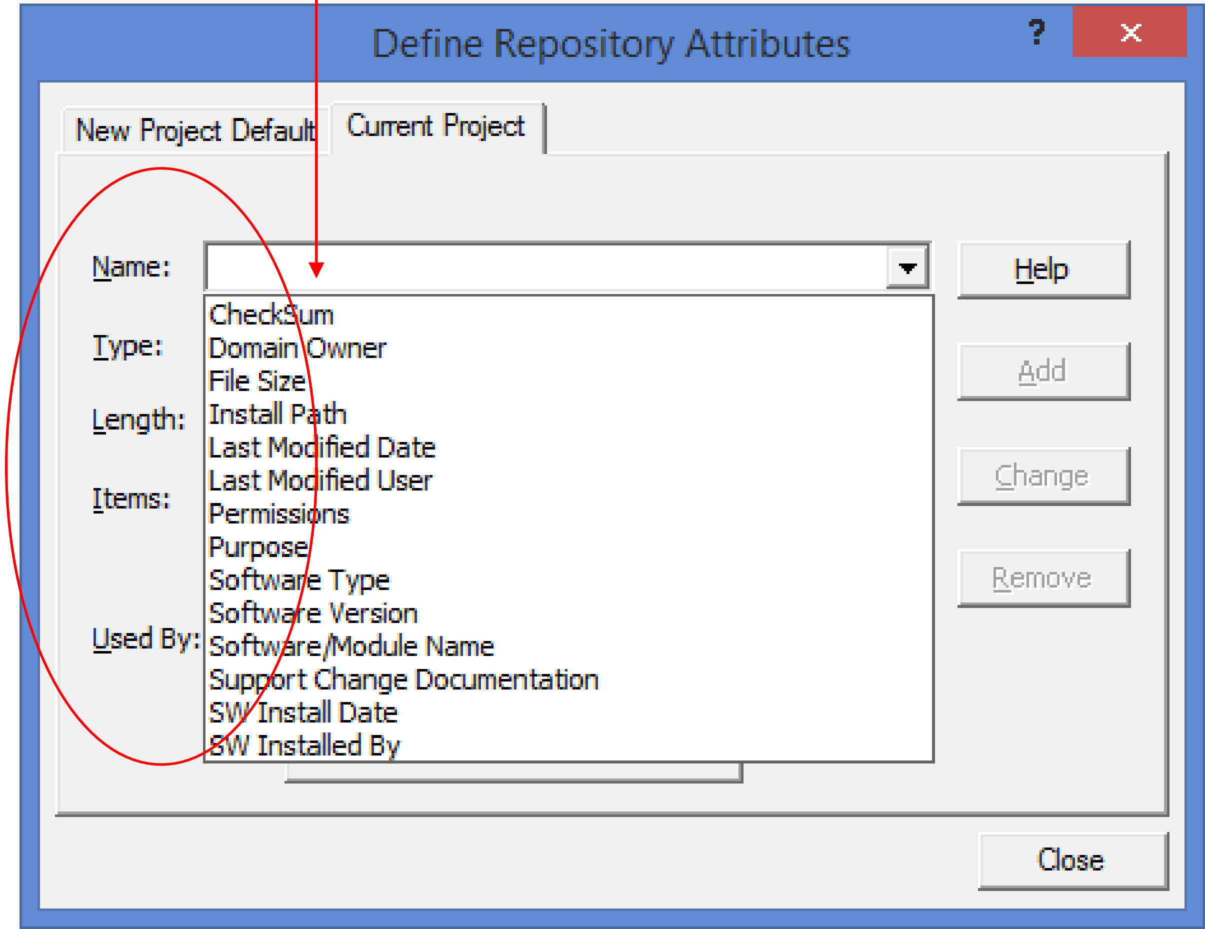
Length: 15

Items:

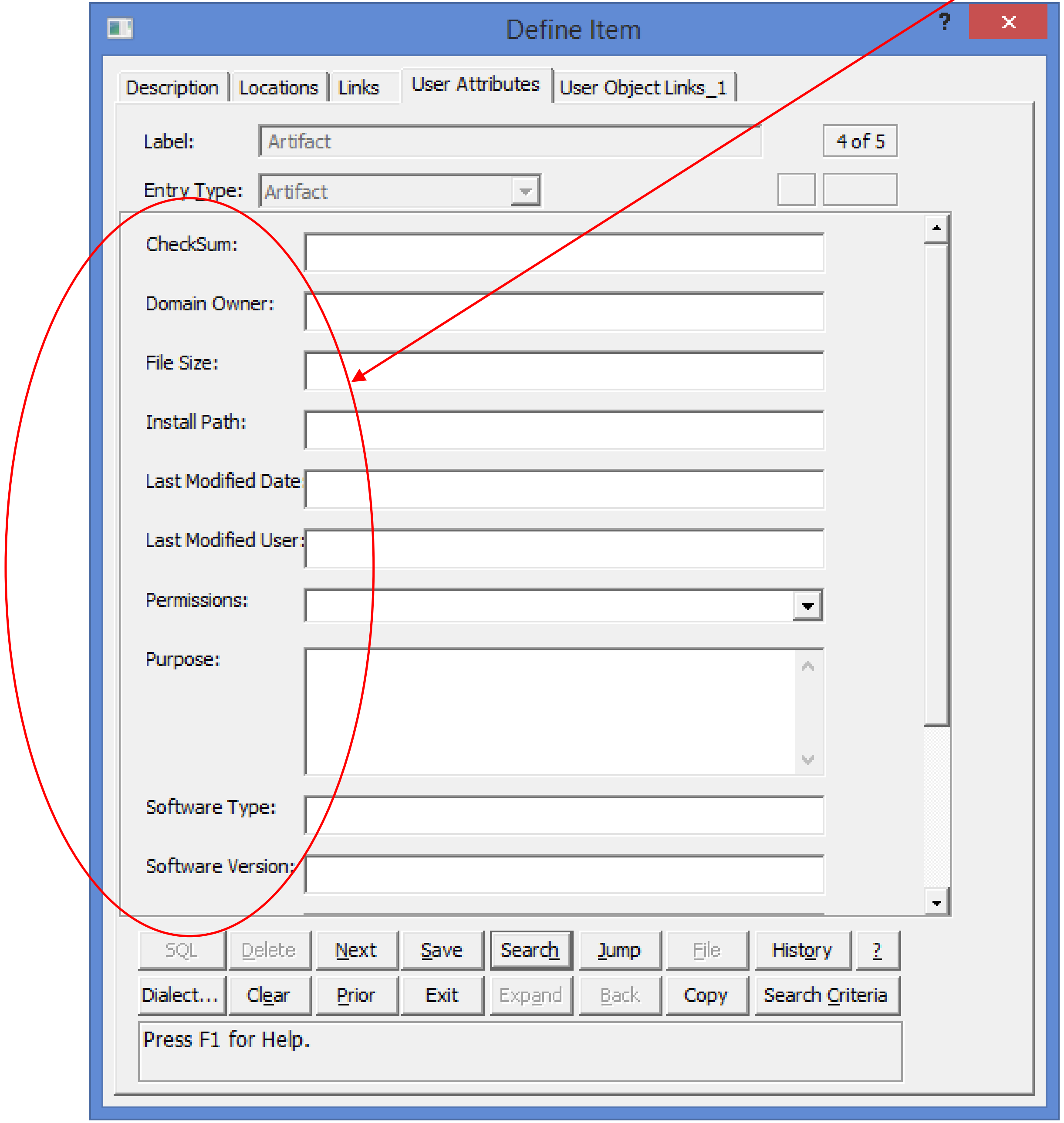
□ Allow multiple selections

Used By: All

Defining the Repository Attributes involves giving it a Name, Type, Length, Items and Used By value or you can select a User Defined Attribute from a pick list (see below).



You may have up to one hundred User Defined Attributes for each type of object in the Repository.

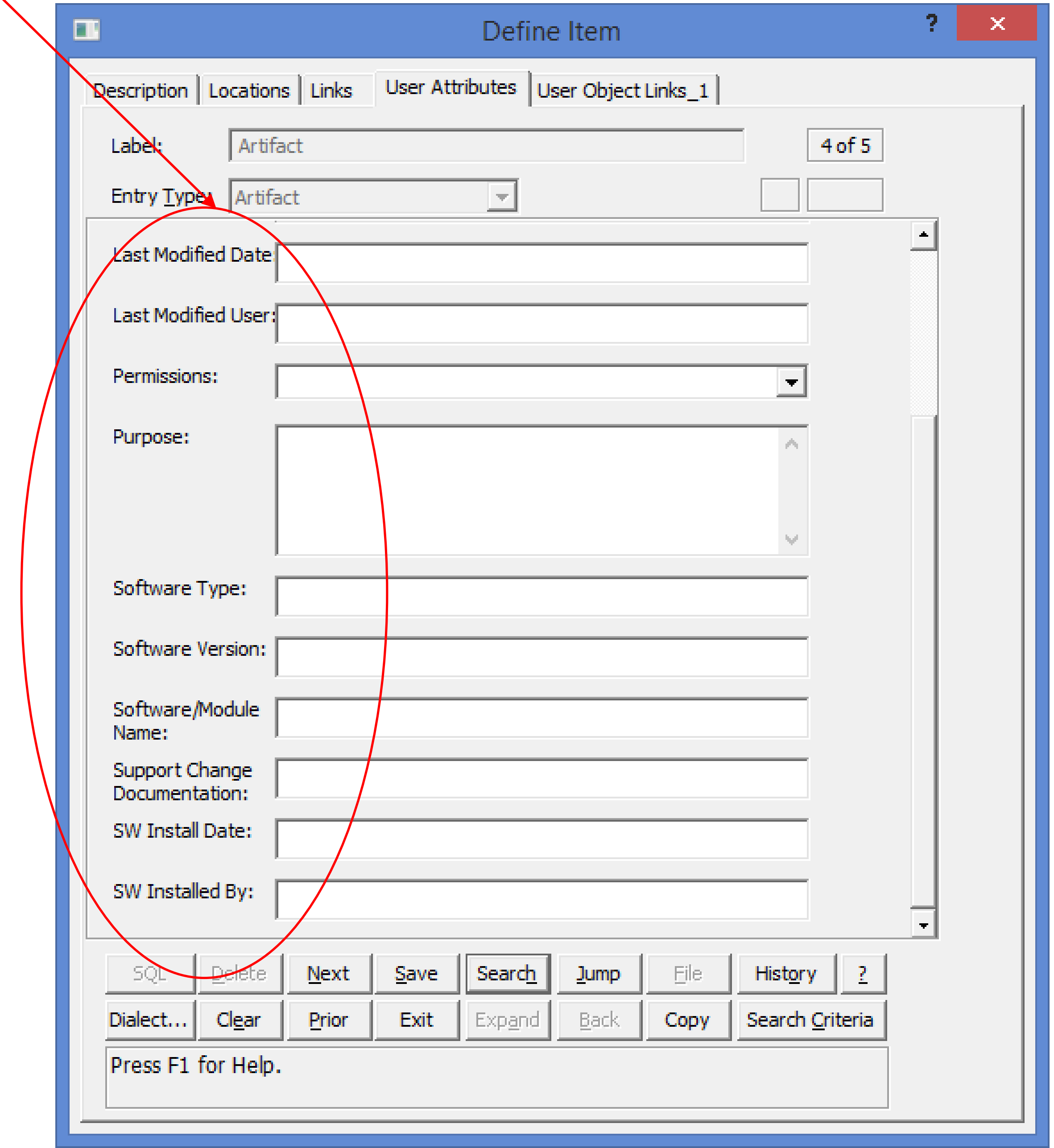


Label: Artifact

Entry Type: Artifact

4 of 5

Press F1 for Help.



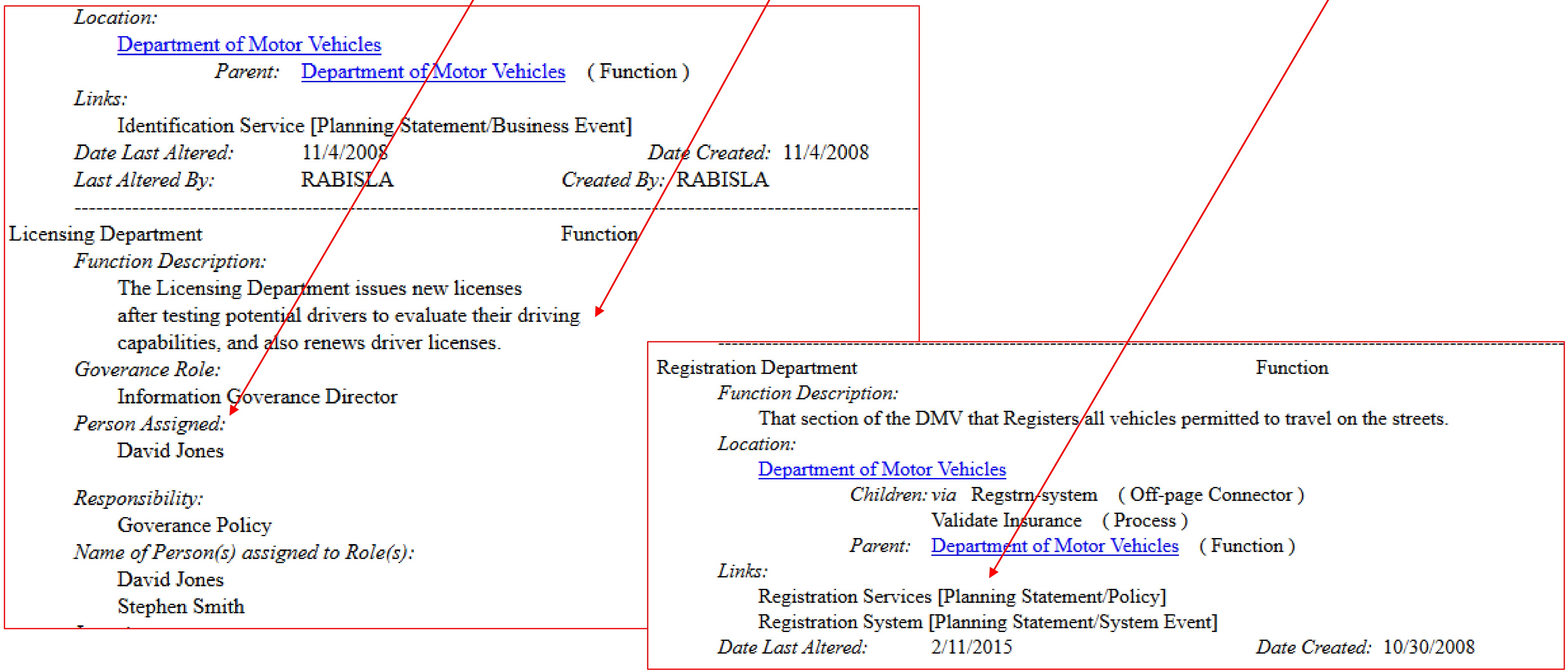
Label: Artifact

Entry Type: Artifact

4 of 5

Press F1 for Help.

Numerous Queries are available to see who is responsible for specific Governance activities and a cross reference to linked components of the information architecture where these activities are referenced.



Location:

Department of Motor Vehicles

Parent: Department of Motor Vehicles (Function)

Links:

Identification Service [Planning Statement/Business Event]

Date Last Altered: 11/4/2008 *Date Created:* 11/4/2008

Last Altered By: RABISLA *Created By:* RABISLA

Licensing Department Function

Function Description:

The Licensing Department issues new licenses after testing potential drivers to evaluate their driving capabilities, and also renews driver licenses.

Goverance Role:

Information Goverance Director

Person Assigned:

David Jones

Responsibility:

Goverance Policy

Name of Person(s) assigned to Role(s):

David Jones

Stephen Smith

Registration Department Function

Function Description:

That section of the DMV that Registers all vehicles permitted to travel on the streets.

Location:

Department of Motor Vehicles

Children: via Regstrn-system (Off-page Connector)

Validate Insurance (Process)

Parent: Department of Motor Vehicles (Function)

Links:

Registration Services [Planning Statement/Policy]

Registration System [Planning Statement/System Event]

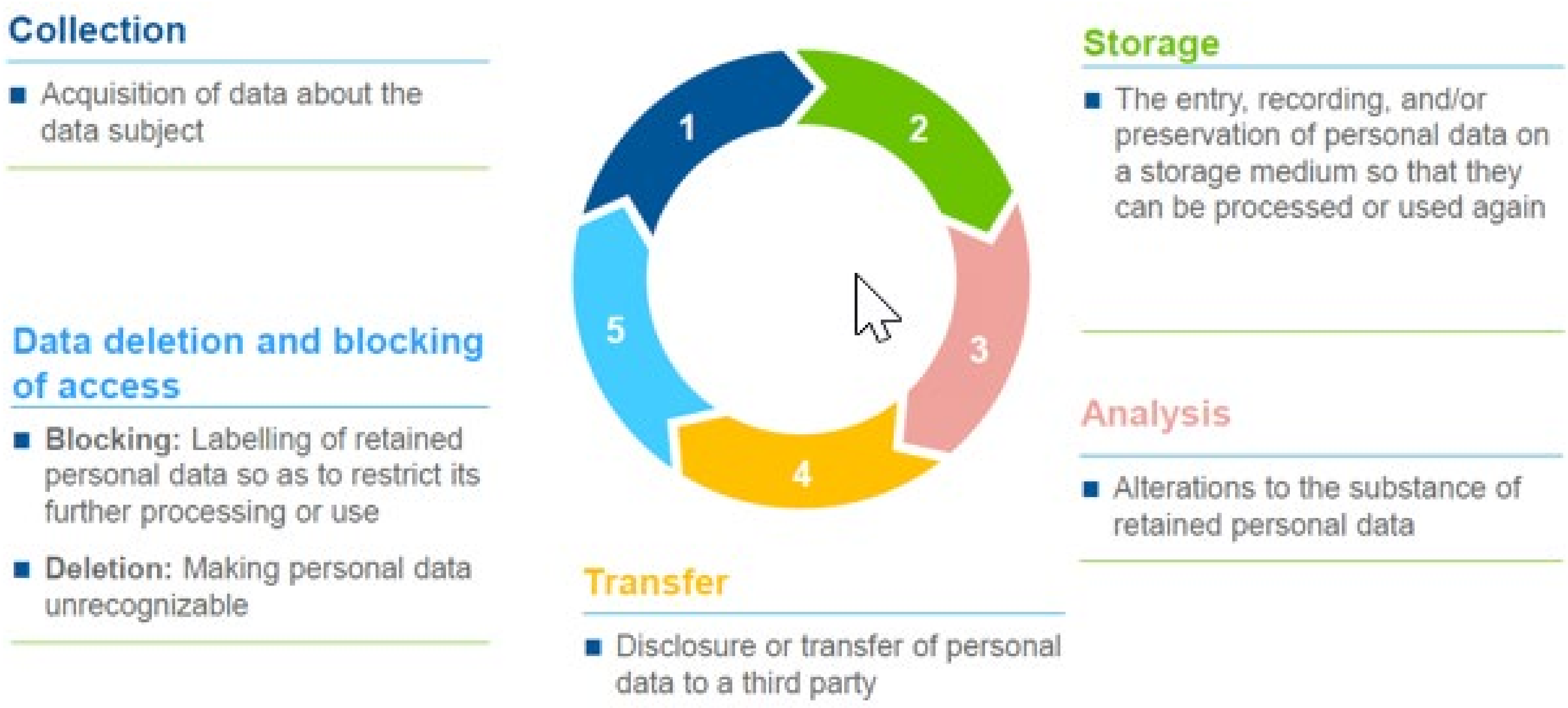
Date Last Altered: 2/11/2015 *Date Created:* 10/30/2008

Take a look at pre-recorded videos of two demos. The links can be found on the following web page http://www.visiblesystemscorp.com/subscriptions/EDG.htm

Personal and Sensitive Data

Now with that you have a Data Governance Program in place you are able to more easily identify and trace your personal and sensitive data throughout the data lifecycle.

Personal and Sensitive Data Lifecycle



Collection

- Acquisition of data about the data subject

Storage

- The entry, recording, and/or preservation of personal data on a storage medium so that they can be processed or used again

Analysis

- Alterations to the substance of retained personal data

Transfer

- Disclosure or transfer of personal data to a third party

Data deletion and blocking of access

- **Blocking:** Labelling of retained personal data so as to restrict its further processing or use
- **Deletion:** Making personal data unrecognizable