



An application of GSIM at Statistics Canada

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Delivering insight through data, for a better Canada



Statistics
Canada Statistique
Canada

Canada

Outline

GSIM as a framework for our reference models

An synopsis of our implementation process

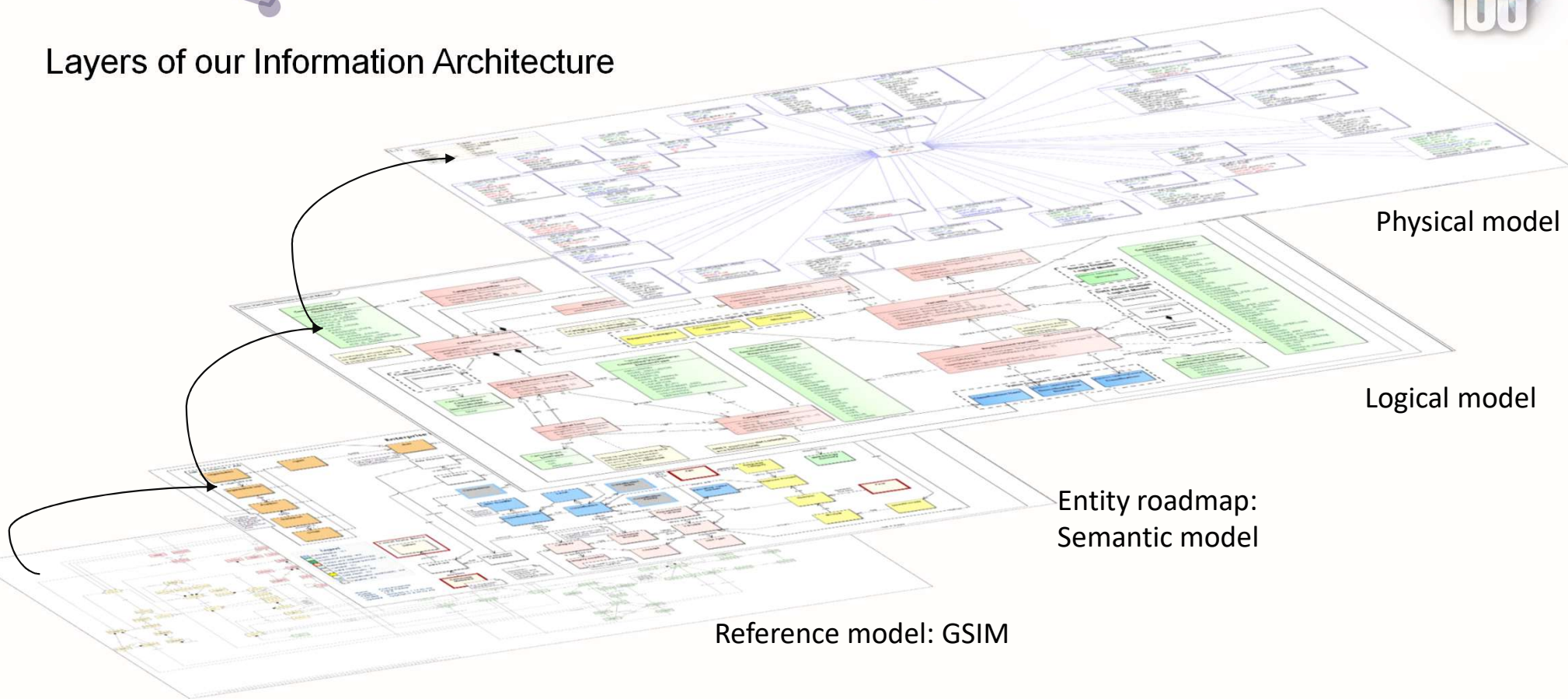
Snapshots of our Picasso application

Benefits of using the GSIM model





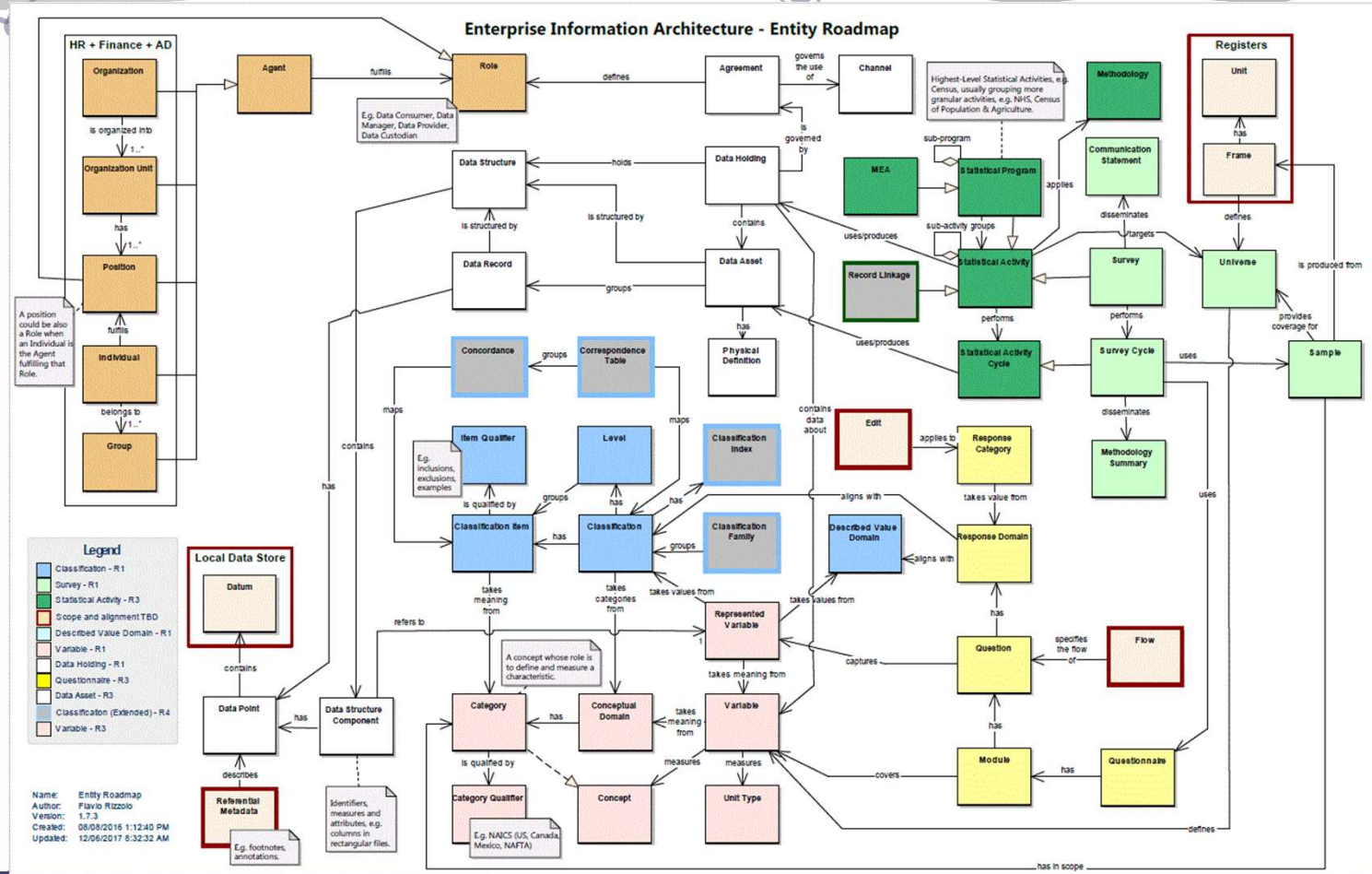
Layers of our Information Architecture



Entity roadmap

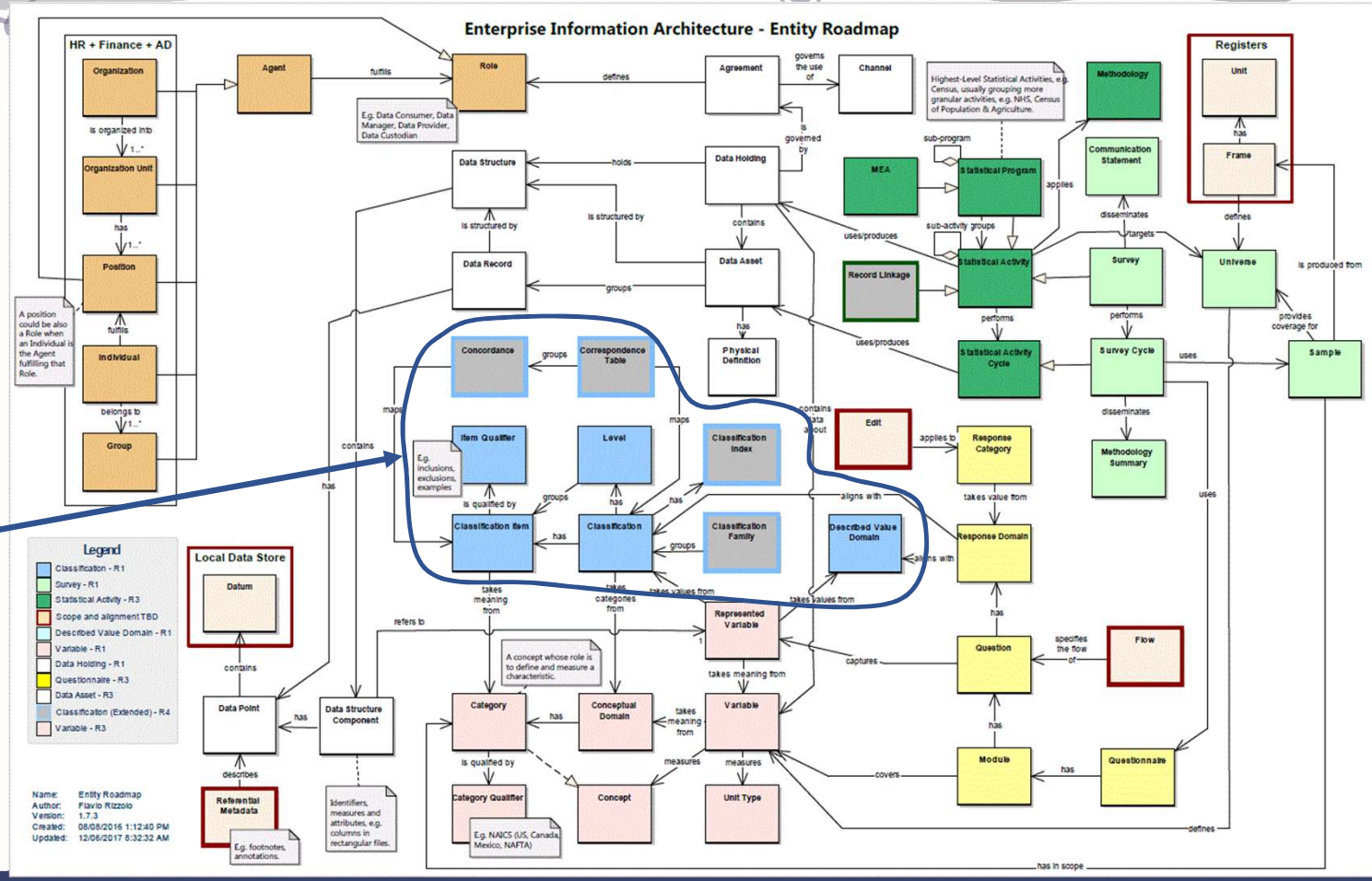
- Models Statistics Canada's core statistical entities
- Maps main concepts needed to conduct statistical activities
- Is designed to align with GSIM objects, sometimes with our own internal names
 - Data Asset for GSIM Dataset, Survey for GSIM Statistical Program
- Broken down into domains at the logical level
 - Variable domain, Data Asset domain, Survey/Statistical Activity domain, etc.

Entity Roadmap



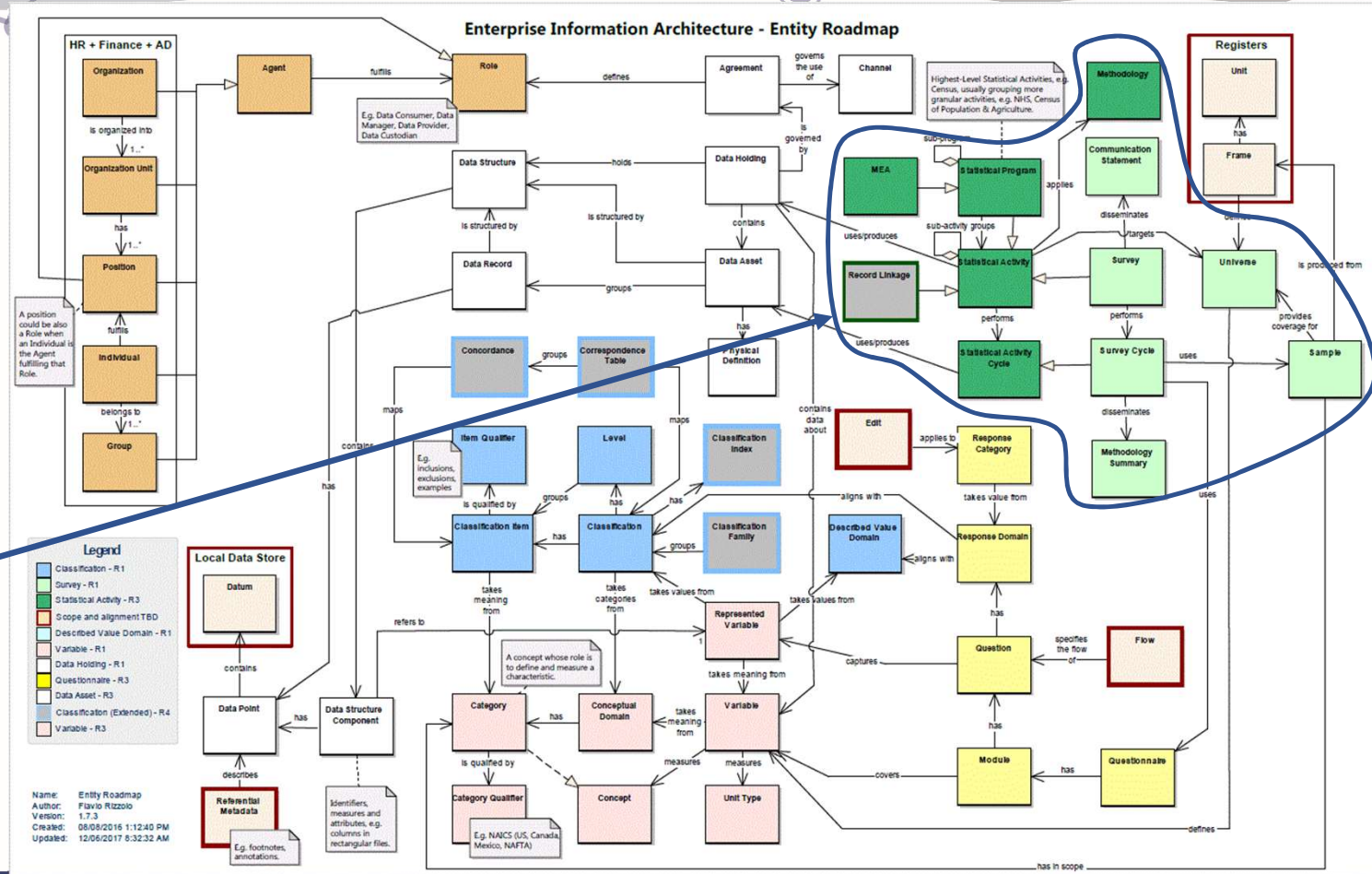
Entity Roadmap

Elements that are part of GSIM Concept group
 ↓
 Value domain logical model



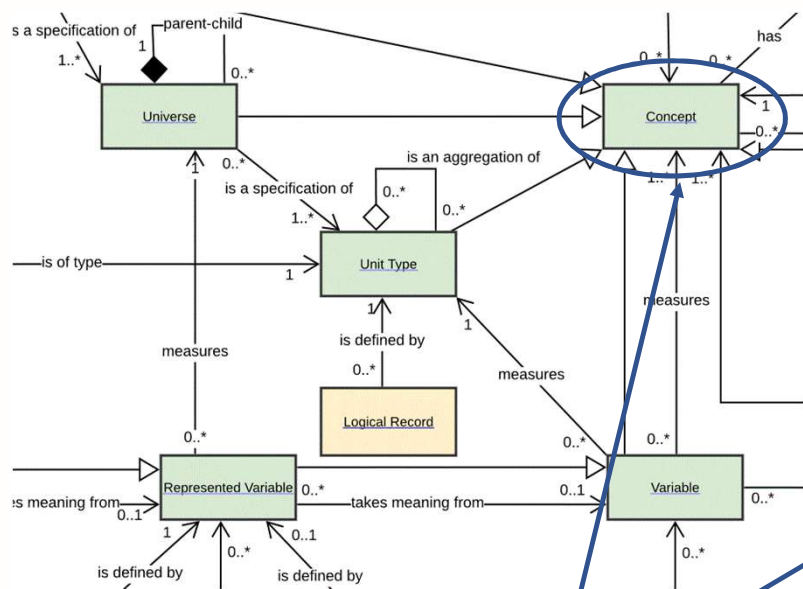
Entity Roadmap

Elements that are part of GSIM Business group
 ↓↓
 Statistical activity domain logical model

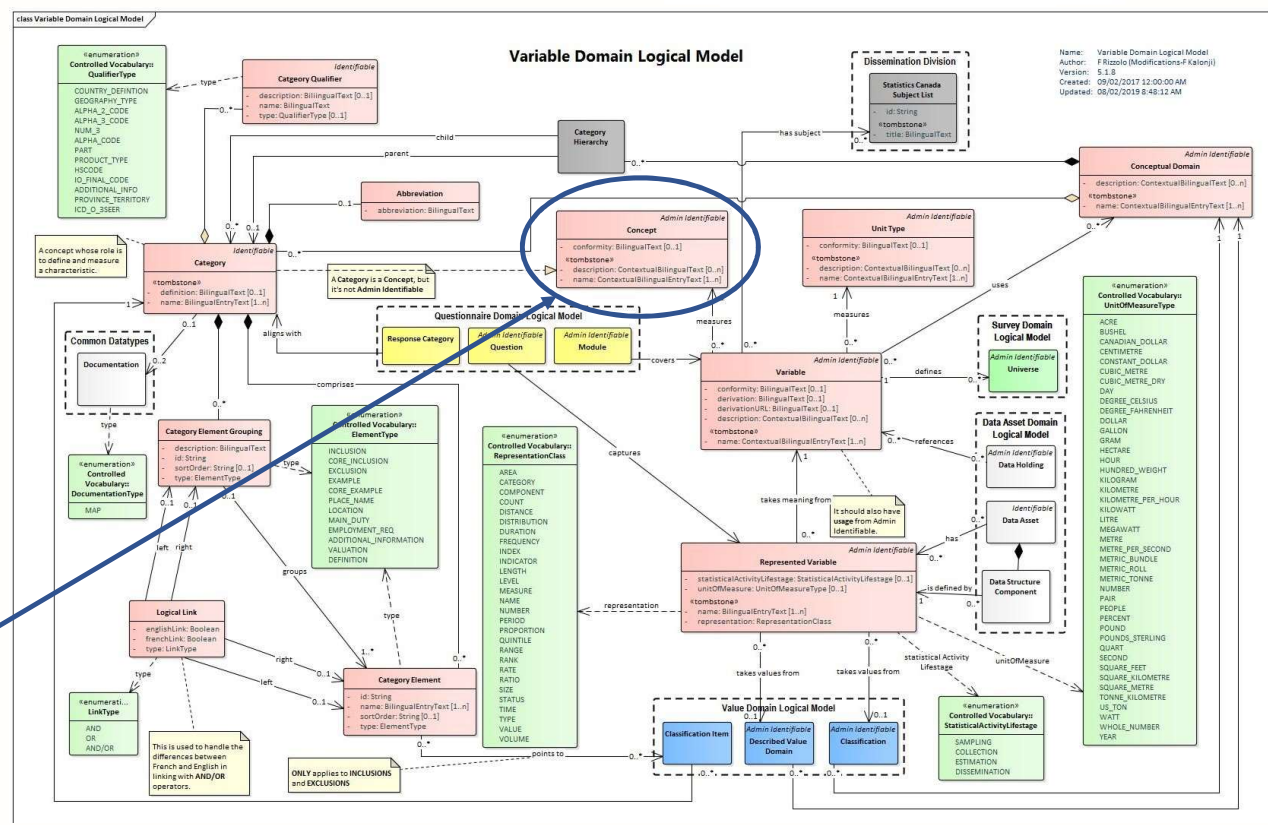


GSIM Concept Group

Variable Domain Logical Model

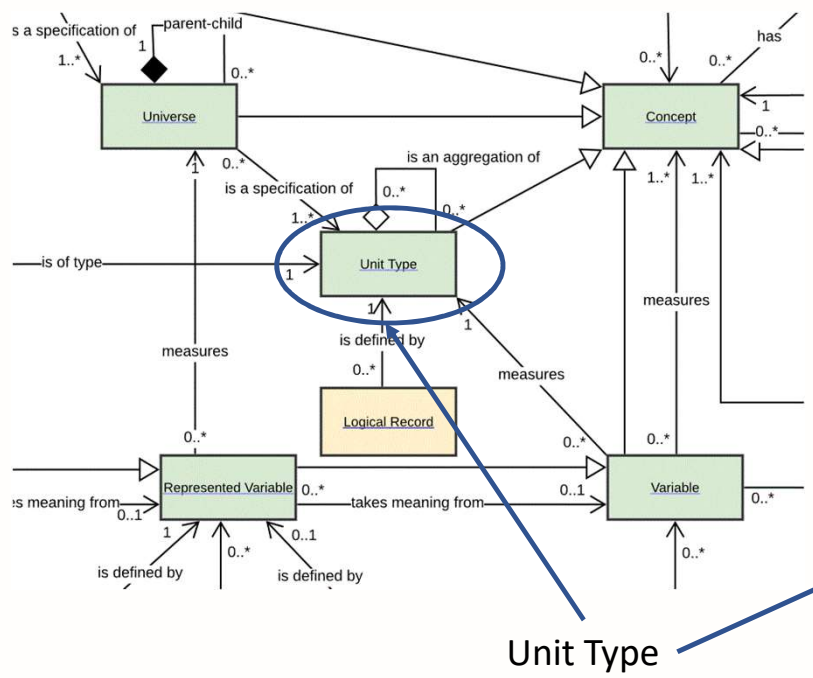


Concept

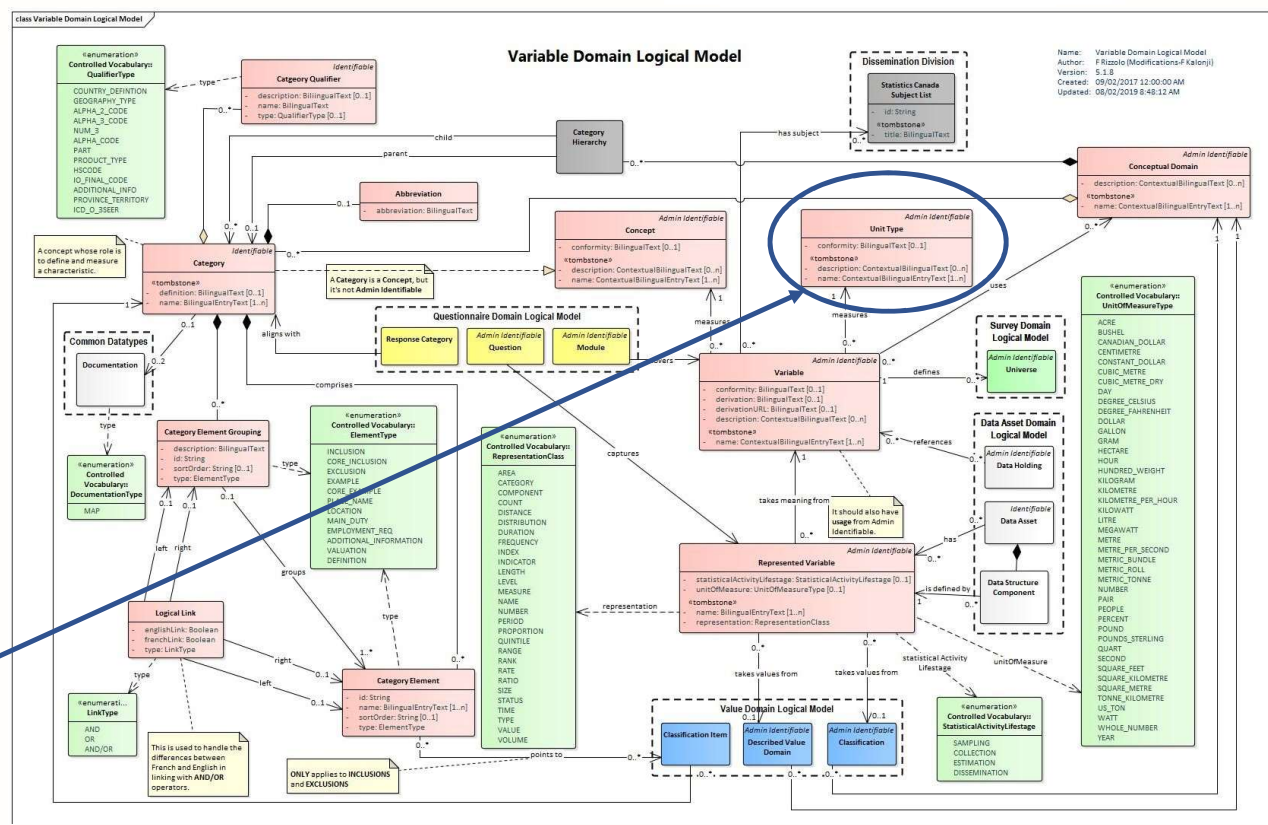


GSIM Concept Group

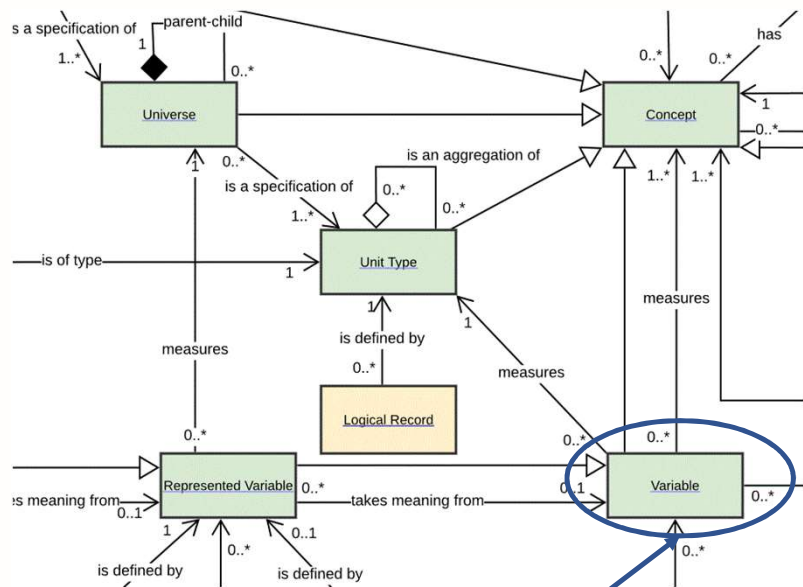
Variable Domain Logical Model



Unit Type

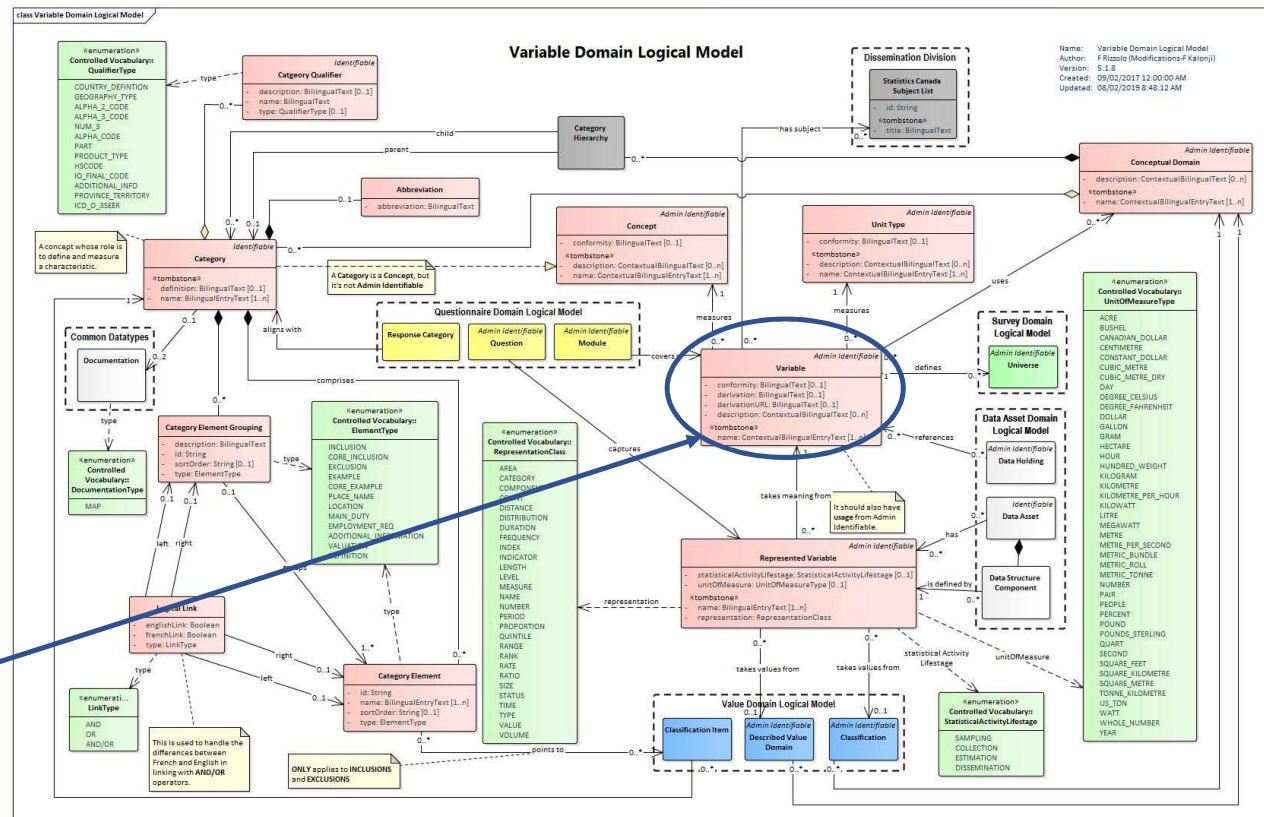


GSIM Concept Group



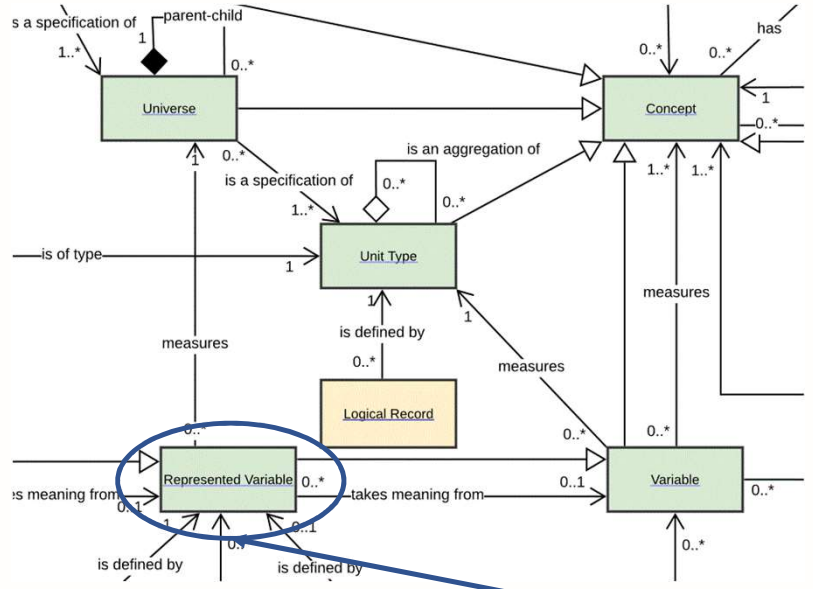
Variable

Variable Domain Logical Model

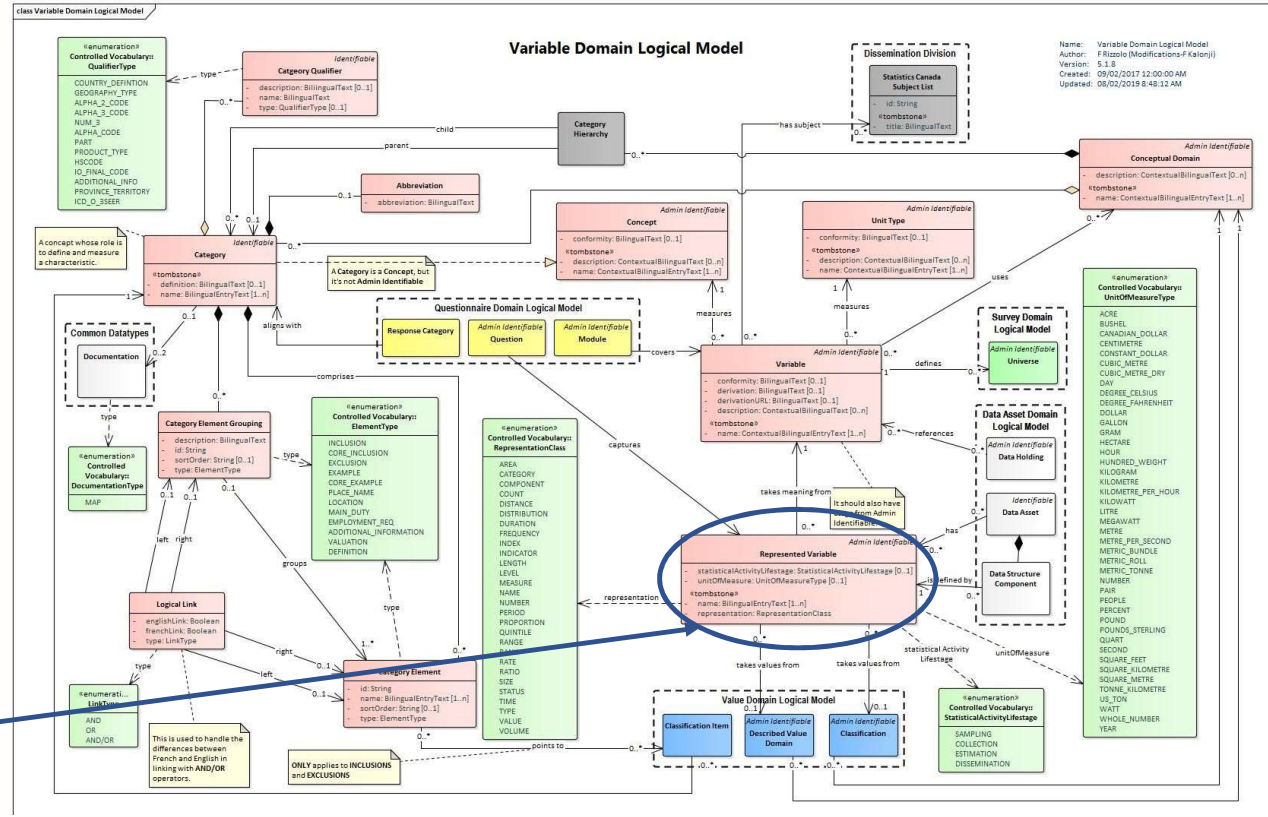


GSIM Concept Group

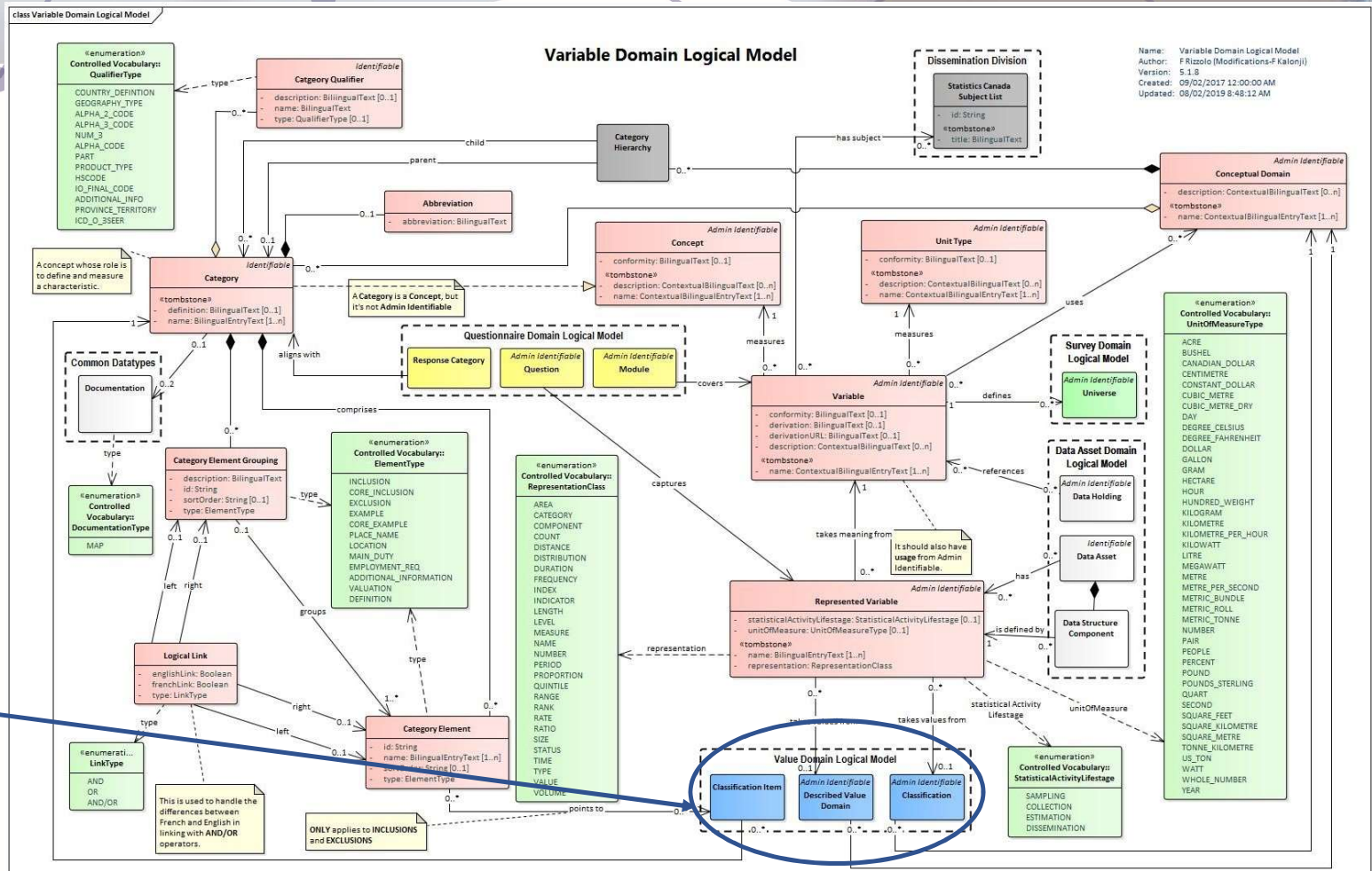
Variable Domain Logical Model



Represented Variable

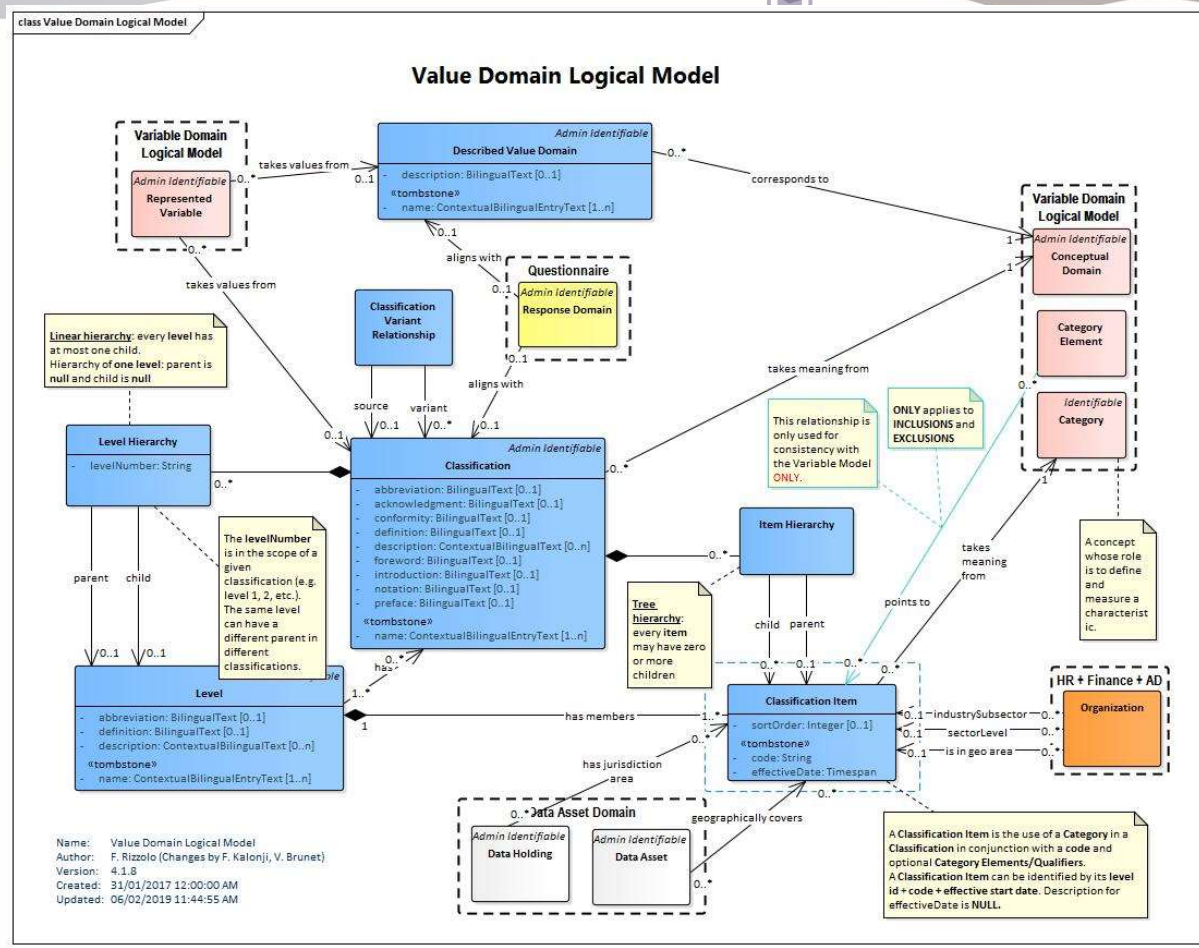


Variable domain logical model

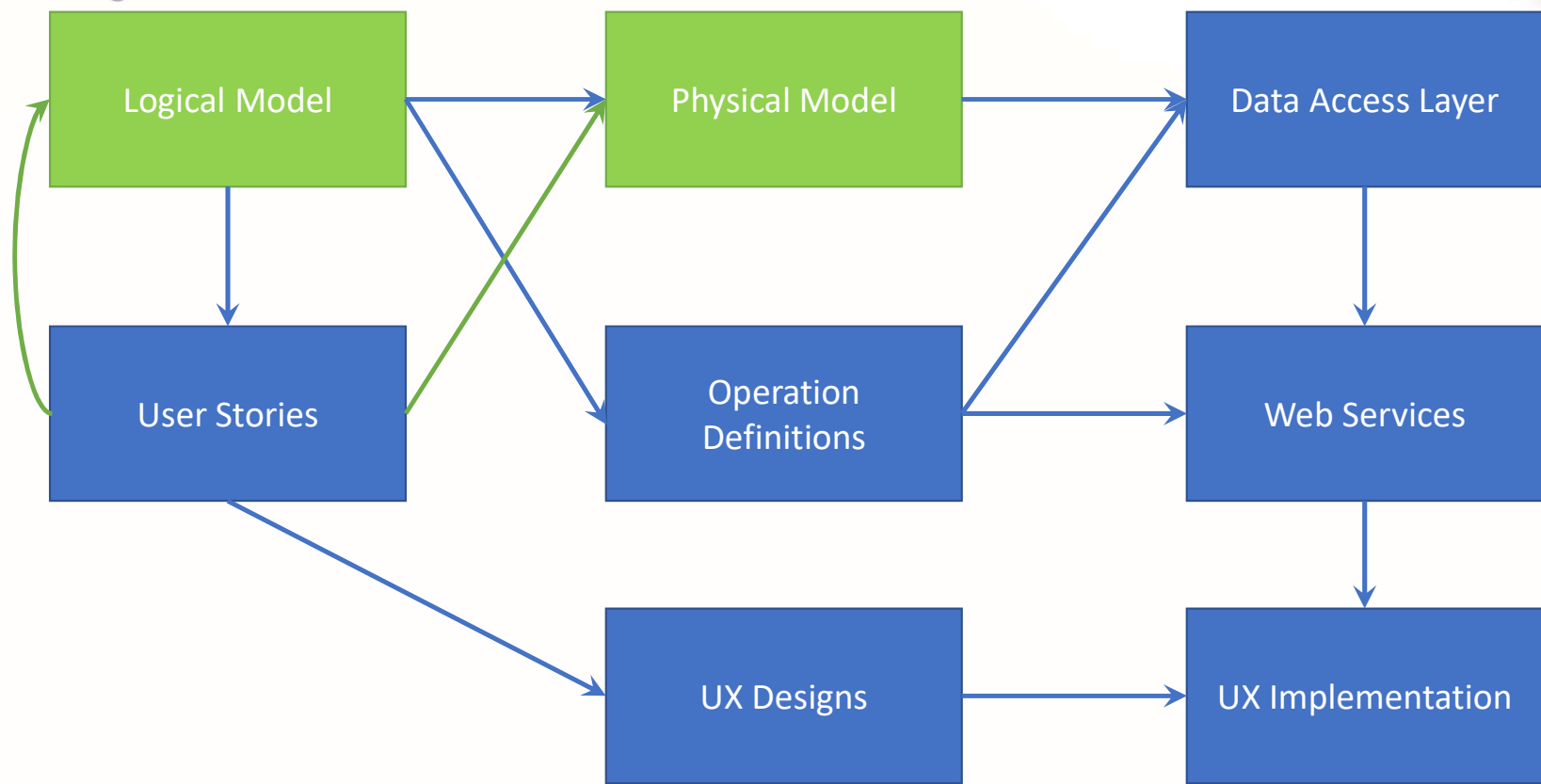


Links with other domains, Value Domain in this case

Value domain logical model



Overview of the process



Operations Definition: Variable

| Operation name | Return type | Parameters |
|--|---|---|
| <code>getVariable</code> | <code>Variable[0..1]</code> | String <code>id</code> Boolean[0..1] <code>includeAssociatedTombstones</code> ParamList[0..1] <code>adminFilters</code> ParamList[0..1] <code>otherFilters</code> String [0..1] <code>contextId</code> Boolean[0..1] <code>includeAllContexts</code> |
| <code>getRepresentedVariable</code> | <code>RepresentedVariable[0..1]</code> | |
| <code>getVariableSummaries</code> | <code>VariableSummary[0..n]</code> | Date[0..1] <code>updatedAfter</code> String[0..1] <code>nameSubstring</code> ParamList[0..1] <code>adminFilters</code> ParamList[0..1] <code>otherFilters</code> String [0..1] <code>contextId</code> Boolean[0..1] <code>includeAllContexts</code> |
| <code>getRepresentedVariableSummaries</code> | <code>RepresentedVariableSummary[0..n]</code> | |
| <code>getVariableSeries</code> | <code>VariableSeriesTombstone[0..n]</code> | String <code>seriesId</code> ParamList[0..1] <code>adminFilters</code> ParamList[0..1] <code>otherFilters</code> String [0..1] <code>contextId</code> Boolean[0..1] <code>includeAllContexts</code> |
| <code>getRepresentedVariableSeries</code> | <code>RepresentedVariableSeriesTombstone[0..n]</code> | |

Picasso Application

- Picasso is Statistics Canada's one stop portal
- Enables management of data and statistical metadata
- A tool for search and discovery of data assets and statistical metadata
- Standards/frameworks
 - Is built on GSIM for data and statistical metadata
 - Uses ISO-11179 standard for the registration process
 - Uses Prov-O terms for tracking provenance information



Picasso: Search results for Wage

Home > Search Results Francine Kalonji

Results

Refine

Search results by entity type

- Concept
- Unit type
- Variable
- Survey
- Universe
- Statistical program
- Classification
- Questionnaire
- Data holding
- Data asset

Results

wage

Search the Administrative Data Inventory only

Results - wage About 10 results

- [Variable - Hourly wage of location - 1.0](#)
2019-Sep-1 to current
- [Variable - Weekly wage of employed person - 1.0](#)
0001-Jan-01 to 0001-Jan-01
- [Variable - Hourly wage of employed person - 1.0](#)
2019-Oct-1 to current



Picasso: Weekly wage of employed person

Picasso

[Home](#) > Variable - Weekly wage of employed person^{1.0}
Francine Kalonji

Variable
Weekly wage of employed person^{1.0}

Details Linked entities Version history
Incomplete Internal

Details

Description

Weekly wage refers to the usual wages or salaries of an employee at his or her main job for a week. Respondents are asked to report their wage/salary before taxes and other deductions, and include tips, commissions and bonuses.

Employed person refers to those who, during the reference period, had a labour force status of "employed". That is, those who, during the reference period: (a) Did any work at all at a job or business, that is, paid work in the context of an employer-employee relationship, or self-employment. This also includes persons who did unpaid family work, which is defined as unpaid work contributing directly to the operation of a farm, business or professional practice owned and operated by a related member of the same household; or (b) Had a job but were not at work due to factors such as their own illness or disability, personal or family responsibilities, vacation or a labour dispute. This category excludes persons not at work because they were on layoff or between casual jobs, and those who did not then have a job (even if they had a job to start at a future date).

Effective period 0001-Jan-01 to current

Concept



Unit Type





Picasso: Classification of Weekly wage rate

[Home](#) > Variable - Weekly wage of employed person^{1.0} Francine Kalonji

Variable
Weekly wage of employed person^{1.0}

Details | **Linked entities** | Version history Ⓢ Incomplete | Ⓜ Internal

Linked entities

Concept

Unit type

Classifications/Measures

Represented variables

Data holdings

| Classifications | | |
|------------------|---------------------|------------------------|
| Name | Version | Effective period |
| Weekly wage rate | 1.0 | 2019-Oct-01 to current |





Picasso: Classification Structure of Weekly wage rate

Home > Classification - Weekly wage rate^{1.0} Francine Kalonji

Classification
Weekly wage rate^{1.0}

Ⓜ Incomplete Ⓜ Internal

Details Classification structure Linked entities Version history

[Expand all](#) [Collapse all](#)

▼ 1 - Weekly wage rate

- 1 - Less than \$500
- 2 - \$500 to \$799
- 3 - \$800 to \$1199
- 4 - \$1200 or more

Classification item

Code - Name 1 - Weekly wage rate

Definition

Effective period 2019-Jan-01 to current

Levels

| Number | Name | Label | Version | Effective period |
|--------|---------------------|-------|---------|------------------------|
| 1 | Weekly wage rate L1 | | 1 | 2019-Oct-01 to current |



Using the GSIM model

- Harmonization of our statistical metadata
- Interpretability and coherence
 - Common language leads to common solution
- Interoperability with the development of web services
- Increase of the visibility of our administrative data
 - Solid framework for representing our administrative data
- Links to standards like DDI and SDMX, used for our micro and aggregate data
- Mapping objects can be a challenge
 - Definitions, descriptive texts, examples, the community are helpful

Thank you!

Questions?

