

Annex C Glossary

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A

Object	Group	Definition	Explanatory Text	Synonyms
Acquisition Activity	Business	The set of executed processes and the actual resources required as inputs and produced as outputs to acquire data about a given <i>Population</i> for a particular reference period. It includes the process and resources required to acquire data in a <i>Statistical Program c</i> consisting of gathering data via one or more <i>Data Channels</i> in order to create or feed one or more <i>Data Resources</i> .	This object holds <i>Statistical Activity</i> information that relates specifically to data collection or acquisition. It inherits the relationships and attributes from the <i>Statistical Activity</i> type.	

Acquisition Design	Business	The specification of the resources required and processes used and description of relevant methodological information for a set of activities to collect data about a given <i>Population</i> .	This object holds <i>Statistical Program Design</i> information that relates specifically to data collection or acquisition. It inherits the relationships and attributes from the <i>Statistical Program Design</i> type. Related to <i>Acquisition Design</i> is <i>Acquisition Activity</i> , which holds the detailed information about the conduct of <i>the Acquisition Activity</i> for a single reference period, The <i>Acquisition Design</i> describes the methodology and design elements that are intended to apply across all <i>Acquisition Activities</i> until such time as a decision is made to alter the design.	
Administrative Details	Base	A placeholder for extensions to the GSIM model.	GSIM does not seek to replicate or embed constructs from the administration of objects held in metadata registries, but includes this placeholder to allow for future extensions.	
Analysis Population	Concepts	A <i>Population</i> used for the analysis, processing, or dissemination of statistical data.	<i>Population</i> determined by parameters of an analysis	object class, analytical population
Analysis Unit	Concepts	A <i>Unit</i> that is defined for the analysis, processing, or dissemination of statistical data.	Object corresponding to an <i>Analysis Population</i>	analytical unit, unit of analysis

Assessment	Business	An activity to analyze quality or effectiveness and consider available options.	The <i>Assessment</i> is a generic class that regroups different types of more specific assessments. An example of <i>Assessment</i> is a SWOT assessment that identifies the Strengths, Weaknesses, Opportunities and Threats of a specified proposal. Another example is a <i>Gap Analysis</i> that formalizes the difference between the current situation and the state to reach due to certain requirements. An <i>Assessment</i> can use various objects as inputs, whether they are the main objects that the <i>Assessment</i> is about or auxiliary information objects that help the accomplishment of the assessment.	
Attribute Component	Structures	The role given to a <i>Represented Variable</i> in the context of a <i>Data Structure</i> . The role is to hold the pertinent information in addition to the identifiers and measures for a particular unit in a <i>Data Set</i> .	For example the publication status of an observation (e.g. provisional, final, revised), or information specific to the use of an Identifier in the context of a <i>Data Set</i> .	

B

Object	Group	Definition	Explanatory Text	Synonyms
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Business Case	Business	<p>A proposal for a body of work that will deliver outputs designed to achieve outcomes. A <i>Business Case</i> will provide the reasoning for initiating a new <i>Statistical Program Design</i> for a <i>Statistical Program</i>, as well as the details of the change proposed.</p>	<p>A <i>Business Case</i> is produced as a result of a detailed consideration of a <i>Change Definition</i>. It sets out a plan for how the change described by the <i>Change Definition</i> can be achieved. A <i>Business Case</i> usually comprises various evaluations, for example a SWOT assessment, or <i>Gap Analyses</i> for the different solutions that are considered for satisfying the <i>Statistical Need</i>. The <i>Business Case</i> will also specify the stakeholders that are impacted by the <i>Statistical Need</i> or by the different solutions that are required to implement it.</p>	
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<p>Business Function</p>	<p>Production</p>	<p>Something an enterprise does, or needs to do, in order to achieve its objectives.</p>	<p>A <i>Business Function</i> delivers added value from a business point of view. It is delivered by bringing together people, processes and technology (resources), for a specific business purpose.</p> <p><i>Business Functions</i> answer in a generic sense "What business purpose does this <i>Process Step Design</i> serve?" Through identifying the <i>Business Function</i> associated with each <i>Process Step Design</i> it becomes easier in the future for someone with an equivalent business need to identify <i>Process Step Designs</i> that they might reuse (in whole or in part).</p> <p>A <i>Business Function</i> may be defined directly with descriptive text and/or through reference to an existing catalogue of <i>Business Functions</i>. The phases and sub-processes defined within GSBPM can be used as an internationally agreed basis for cataloguing high level <i>Business Functions</i>. A catalogue might also include <i>Business Functions</i> defined at a lower level than "sub process". For example, "Identify and address outliers" might be catalogued as a lower level <i>Business Function</i> with the "Review, validate and edit" function (5.3) defined within GSBPM.</p>
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Business Service	Production	<p>A defined interface for accessing business capabilities (an ability that an organization possesses, typically expressed in general and high level terms and requiring a combination of organization, people, processes and technology to achieve).</p>	<p>A <i>Business Service</i> may provide one means of accessing a particular <i>Business Function</i>. Requesting a particular service through the defined interface may result in a business process (workflow) being executed.</p> <p>The explicitly defined interface of a <i>Business Service</i> can be seen as representing a "service contract". If particular inputs are provided then the service will deliver particular outputs in compliance within specific parameters (for example, within a particular period of time).</p> <p>In the case of GSIM, a <i>Business Service</i> typically implements a particular <i>Process Method</i> to perform a particular <i>Business Function</i>.</p> <p>Note: The interface of a <i>Business Service</i> is not necessarily IT based. For example, a typical postal service will have a number of service interfaces: - Public letter box for posting letters - Counter at post office for interacting with postal workers</p>	
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C

Object	Group	Definition	<i>Explanatory Text</i>	Synonyms
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<p>Category</p>	<p>Concepts</p>	<p>A <i>Concept</i> whose role is to extensionally define and measure a characteristic.</p>	<p><i>Categories</i> for the <i>Concept</i> of sex include: Male, Female</p> <p>Note: An extensional definition is a description of a <i>Concept</i> by enumerating all of its subordinate <i>Concepts</i> under one criterion or sub division.</p> <p>For example - the Noble Gases (in the periodic table) is extensionally defined by the set of elements including Helium, Neon, Argon, Krypton, Xenon, Radon. (ISO 1087-1)</p>	<p>class</p>
<p>Category Item</p>	<p>Concepts</p>	<p>An element of a <i>Category Set</i>.</p>	<p>A type of <i>Node</i></p>	
<p>Category Set</p>	<p>Concepts</p>	<p>A list of <i>Categories</i></p>	<p>A kind of <i>Node Set</i> for which the <i>Categories</i> have no assigned <i>Designations</i>.</p> <p>For example: Male Female</p>	
<p>Change Definition</p>	<p>Business</p>	<p>A structured, well-defined specification for a proposed change.</p>	<p>A related object - the <i>Statistical Need</i> - is a change expression as it has been received by an organization. A <i>Statistical Need</i> is a raw expression of a proposed change, and is not necessarily well-defined. A <i>Change Definition</i> is created when a <i>Statistical Need</i> is analyzed by an organization, and expresses the raw need in well-defined, structured terms.</p> <p>A <i>Change Definition</i> does not assess the feasibility of the change or propose solutions to deliver the change - this role is satisfied by the <i>Business Case</i> object. The precise structure or organization of a <i>Change Definition</i> can be further specified by rules or standards local to</p>	

a given organization.

Once a *Statistical Need* has been received, the first step is to do the conceptual work to establish what it is we are trying to measure. The final output of this conceptual work is the *Change Definition*.

The next step is to assess how we are going to make the measurements - to design a solution and put forward a proposal for a body of work that will deliver on the requirements of the original *Statistical Need*. The *Change Definition* is an input to this *Process Step* and the final *Business Case* is an output. Depending on the needs of individual agencies a *Change Definition* may be created before or after a *Business Case* has been created, or even created to a basic extent before the *Business Case* development and further developed after a *Business Case* has been

			approved and a decision made to proceed with the change.	
Channel Activity Specification	Business	The description of the <i>Data Channel</i> made at run time.	This object is a specialization of a <i>Data Channel</i> and is used to describe the behaviour of a <i>Data Channel</i> at execution time.	
Channel Design Specification	Business	The description of the <i>Data Channel</i> made at design time.	This object is a specialization of a <i>Data Channel</i> , and is used to make the design of the characteristics of a <i>Data Channel</i> before using it.	
Classification	Concepts	A set of related <i>Classification Schemes</i> . The <i>Classification</i> relates <i>Classification Schemes</i> which differ as versions or variants of each other.	For example, NAICS (North American Industrial Classification System) is a <i>Classification</i> , but NAICS 2002 and NAICS 2007 are <i>Classification Schemes</i> , as they are different versions of NAICS.	
Classification Family	Concepts	A set of <i>Classifications</i> that are related from a certain point of view.	The <i>Classification Family</i> includes <i>Classifications</i> devoted to describing the same subject matter, such as industries.	
Classification Item	Concepts	A <i>Category</i> at a certain <i>Level</i> within a <i>Classification Scheme</i> .		
Classification Scheme	Concepts	A structured list of mutually exclusive <i>Categories</i> . Such a structured list may be linear or hierarchically structured.	<i>Classification Scheme</i> has two subtypes - <i>Classification Version</i> and <i>Classification Variant</i> . In a hierarchical <i>Classification Scheme</i> , <i>Categories</i> organized into <i>Levels</i> determined by the hierarchy. The <i>Categories</i> in each <i>Level</i> are mutually exclusive and exhaustive.	
Classification Variant	Concepts	A <i>Classification Variant</i> is based on a <i>Classification Version</i> . In a variant, the <i>Categories</i> of the <i>Classification Version</i> are split, aggregated or regrouped to provide additions or alternatives to the standard order and structure of the base version.		

Classification Version	Concepts	A <i>Classification Version</i> is a list of mutually exclusive <i>Categories</i> representing the version-specific values of the classification variable.	A <i>Classification Version</i> has a certain normative status and is valid for a given period of time.	
Code	Concepts	A <i>Designation</i> for a <i>Category</i>	<i>Codes</i> are unique within their Code List. Example: M (Male) F (Female)	
Code Item	Concepts	An element of a <i>Code List</i> .	A type of <i>Node</i>	
Code List	Concepts	A list of <i>Categories</i> where each <i>Category</i> has a predefined <i>Code</i> assigned to it.	A kind of <i>Node Set</i> for which the <i>Category</i> contained in each <i>Node</i> has a <i>Code</i> assigned as a <i>Designation</i> . For example: 1 - Male 2 - Female	
Code Value	Concepts	An alpha-numeric string used to represent a <i>Code</i> .	This is a kind of <i>Sign</i> used for <i>Codes</i> .	
Collection Description	Business	The set of information that provides a textual description of the processes and methods used to undertake an <i>Acquisition Activity</i> . It provides a set of contextual and reference metadata about the acquisition process.		

Concept	Concepts	Unit of thought differentiated by characteristics	ISO 1087-1 defines <i>Concept</i> as a "unit of knowledge created by a unique combination of characteristics". First, the term knowledge is poorly defined, and the word thought seems to capture the idea more cleanly. Second, different systems may try to capture the same thought but depend on different characteristics (i.e., attributes). For instance, typical demographic surveys care about age, sex, income, ethnicity, and education of persons. However, persons in a justice survey are either criminals or victims.	
Concept System	Concepts	Set of <i>Concepts</i> structured by the relations among them.	Here are 2 examples 1) Concept of Sex: Male, Female, Other 2) ISIC (the list is too long to write down)	
Conceptual Domain	Concepts	Set of <i>Categories</i> , irrespective of any relations among them	Here are 3 examples - 1) Sex categories (enumerated CD): male, female, other 2) Non-negative whole number (described CD) 3) Endowment categories (enumerated CD) \$0-\$99,999; \$100,000-\$999,999; \$1,000,000 and above	
Contact Details	Base	A collection of modes and strings by which an <i>Organization Item</i> can be contacted.	Contact modes can include (but are not limited to) telephone, e-mail or fax. In these cases, the relevant strings would be the telephone number, e-mail address and fax number.	
Context Key	Base	Gives semantic or structural meaning to the value of a <i>Contextual String</i> .	<i>Context Key</i> has two subclasses - <i>Type</i> and <i>Language</i> . For example: <i>Type</i> = Short Name, or <i>Language</i> = French	

Contextual String	Base	A textual value, which is given context by one or more <i>Context Keys</i> .	A <i>Contextual String</i> can be given context by one or more <i>Context Key</i> . For example: <i>Type</i> = Short Name, or <i>Language</i> = French	
Control Transition	Business	Governs how to determine the next <i>Instrument Control</i> based on factors such as the current location in the <i>Instrument</i> , the response to the previous questions etc.		
Correspondence Table	Concepts	A tool for the linking of <i>Classifications</i> . A <i>Correspondence Table</i> systematically explains where, and to what extent, the <i>Categories</i> in may be found in different <i>Classification Schemes</i> of the same <i>Classification</i> or in <i>Classification Schemes</i> of different <i>Classifications</i> .	Given 2 <i>Category Sets</i> 1) Marital Status A: Married, Single 2) Marital Status B: Married, Single, Widowed, Divorced A <i>Correspondence Table</i> harmonizing the 2 <i>Category Sets</i> will contain <i>Maps</i> that link <i>Categories</i> from each set: Married (A) ➤ Married (B) Single (A) ➤ Single (B), Widowed (B), Divorced (B) where the arrow points to the <i>Category</i> which is more generic.	

D

Object	Group	Definition	Explanatory Text	Synonyms
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<p>Data Channel</p>	<p>Business</p>	<p>A means of exchanging data.</p>	<p>A <i>Data Channel</i> is an abstract object that describes the means for communicating with <i>Data Resource(s)</i>. The <i>Data Channel</i> identifies the <i>Instrument Implementation</i>, <i>Mode</i>, and <i>Data Resource</i> that are to be used in a process. In some cases the <i>Data Channel</i> that is used by the <i>Data Provider</i> to send its responses could be different that the one used by the statistical office or organization to request information; the statistical office may put electronic formats that can be downloaded by the <i>Data Provider</i> and once answered returned by traditional mail. Two specialized objects are used to implement this abstract object: <i>Channel Design Specification</i> used at design time and <i>Channel Activity Specification</i> used at run time.</p>	
<p>Data Consumer</p>	<p>Base</p>	<p>An organization that uses data or metadata as input for further processing.</p>		
<p>Data Flow</p>	<p>Structures</p>	<p>The <i>Data Flow</i> represents both the availability of data over time and the availability of sub sets of the possible data that could be made available according to a <i>Data Structure</i>.</p>	<p>There may be many data sets structured according to a <i>Data Structure</i>, perhaps made available at a pre-defined frequency (for example, monthly).</p> <p>There can be many <i>Data Flows</i> that share the same <i>Data Structure</i>: for instance data for National Accounts may be compartmentalized into a number of <i>Data Flows</i> for organizational purposes or for data discovery purposes (there can be different <i>Data Flows</i> for different sub sets of National Accounts where each sub set is structured by the same <i>Data Structure</i>).</p>	

Data Location	Structures	Identifies where a <i>Data Set</i> can be retrieved from.	This could be a <i>Data Set</i> structured in a known format and retrievable via a URL, or the URL of a service that can be queried to return such a <i>Data Set</i> . It could also be the location of a publication.	
Data Point	Structures	A placeholder in a <i>Data Set</i> for an item of factual information obtained by measurement or created by a production process	Example for Unit Data: (1212123, 43) could be the age in years on the 1st of January 2012 of a person (<i>Unit</i>) with the social security number 1212123. The social security number is an identifying variable for the person whereas the age, in this example, is a variable measured on the 1st of January 2012.	
Data Provider	Base	An organization, association, group or person who delivers information for a <i>Statistical Activity</i> .	A <i>Data Provider</i> is an organization, association, group or person that possesses statistical information (that it has collected, produced, bought or otherwise acquired) and that is willing to supply those data and metadata to a statistical organization.	data supplier
Data Resource	Structures	An organized collection of stored information made of one or more <i>Data Sets</i> which may be sourced from multiple <i>Acquisition</i> or <i>Statistical Activities</i> .	<i>Data Resources</i> are collections of structured or unstructured information that are used by a statistical activity to produce information. This information object is a specialization of an <i>Information Resource</i> .	data source
Data Set	Structures	An organized collection of data.	Examples of <i>Data Sets</i> could be observation registers, time series, longitudinal data, survey data, rectangular data sets, event-history data, tables, data tables, cubes, registers, hypercubes, and matrixes. A broader term for <i>Data Set</i> could be data. A narrower term for <i>Data Set</i> could be data element, data record, cell, field	database, data file, file, table

Data Structure	Structures	Defines the structure of an organized collection of data (<i>Data Set</i>).	The structure is described using <i>Data Structure Components</i> that can be either <i>Attribute Components</i> , <i>Identifier Components</i> or <i>Measure Components</i> . Examples for unit data include social security number, country of residence, age, citizenship, country of birth, where the social security number and the country of residence are both identifying components (<i>Unit Identifier Component</i>) and the others are measured variables obtained directly or indirectly from the person (<i>Unit</i>) and are <i>Unit Measure Components</i> .	
Data Structure Component	Structures	The identification of the <i>Represented Variable</i> used in the context of a <i>Data Structure</i> .	<p>A <i>Data Structure Component</i> can be an <i>Attribute Component</i>, <i>Measure Component</i> or an <i>Identifier Component</i>.</p> <p>Example of <i>Attribute Component</i>: The publication status of an observation such as provisional, revised.</p> <p>Example of <i>Measure Component</i>: age and height of a person in a <i>Unit Data Set</i> or number of citizens and number of households in a country in a <i>Data Set</i> for multiple countries (<i>Dimensional Data Set</i>).</p> <p>Example of <i>Identifier Component</i>: The personal identification number of a Swedish citizen for unit data or the name of a country in the European Union for dimensional data.</p>	

Data Type	Concepts	The computational model for some data, characterized by axioms and operations, and containing a set of distinct values.	Here are 3 examples (with type families taken from ISO/IEC 11404) 1) State (nominal data): unordered, no arithmetic 2) Integer (interval data): Ordered, subtraction, bounded below 3) Enumerated (ordinal data): ordered, no arithmetic	
Datum	Concepts	Association of a <i>Unit</i> with an element of a <i>Value Domain</i> .	A <i>Datum</i> is the actual instance of data that was collected. It is the value with which a cell in a table is populated. Here are 2 examples - 1. <M, male> (for <i>unit</i> Dan Gillman with respect to sex of US persons) 2. <3, \$1,000,000 and above> (for <i>unit</i> John Hopkins with respect to endowments for US universities)	
Described Conceptual Domain	Concepts	A <i>Conceptual Domain</i> , with each <i>Concept</i> defined by a <i>Rule</i> .	For example: All real numbers between 0 and 1 (where 'number' is a <i>Concept</i> , and 0 and 1 are possible designations.)	non-enumerated conceptual domain
Described Value Domain	Concepts	A <i>Value Domain</i> , with each <i>Designation</i> defined by a <i>Rule</i> .	For example: All real decimal numbers between 0 and 1 (Where 'decimal number' is a <i>Designation</i> , such as the numeric string 0.5 for the number one half)	non-enumerated value domain
Design Context	Business	Methodological metadata that provide the basis for the specification of the information objects required as input to and output from the <i>Process Step Design</i> including <i>Process Method</i> and <i>Rules</i> .		
Designation	Concepts	The name given to an object so it can be identified.	The association of a <i>Concept</i> with a <i>Sign</i> which denotes it.	term, code, appellation
Dimensional Attribute Component	Structures	A <i>Represented Variable</i> that is required to supply information in addition to the identification and measures of a <i>Dimensional Data Set</i> .	Example: The publication status of an observation such as provisional, revised.	

Dimensional Data Point	Structures	A placeholder or cell in a <i>Dimensional Data Set</i> determined by the crossing of (all) the values for the <i>Identifier Components</i> to contain the value (<i>Datum</i>) for an <i>Instance Variable</i> (defined by a <i>Measure Component</i>) with respect to a given <i>Unit</i> .	A <i>Dimensional Data Point</i> is uniquely identified by the combination of exactly one value for each of the dimensions (<i>Dimensional Identifier Component</i>) and one measure (<i>Dimensional Measure Component</i>). There may be multiple values for the same <i>Dimensional Data Point</i> that is for the same combination of Dimension values and the same measure. The different values represent different versions of the data in the <i>Data Point</i> . Values are only distinguished on the basis of quality, date/time of measurement or calculation, status, etc. This is handled through the mechanisms provided by the <i>Datum</i> information object.	cell
Dimensional Data Set	Structures	A collection of aggregated data that conforms to a known structure.		hyper cube, macro data, n-cube, aggregated data, multi-dimensional data, dimensional data
Dimensional Data Structure	Structures	Defines the structure of a collection of aggregated data by <i>Represented Variables</i> (in their respective roles as <i>Dimensional Measure Components</i> , <i>Dimensional Attribute Component</i> or <i>Dimensional Identifier Components</i>) and their <i>Value Domains</i> .	This is similar to the SDMX Data Structure Definition: Set of structural metadata associated to a <i>Data Set</i> , which includes information about how <i>Concepts</i> are associated with the measures, dimensions, and attributes of a data cube, along with information about the representation of data and related descriptive metadata.	file description, data set description
Dimensional Identifier Component	Structures	A <i>Represented Variable</i> that is required to identify or classify each observation value in a <i>Dimensional Data Set</i> .	Example: The name of a country in the European Union, the type of dwelling, the gender of a person, age-category of person	dimension

Dimensional Measure Component	Structures	A <i>Represented Variable</i> that has been given a role in a collection of aggregated data to hold the summary values (means, mode, total, index, etc.) for a specific sub-population.	Examples: average age or total income in a sub-population	measure
Dissemination Activity	Business	The set of executed processes and the actual resources required as inputs and produced as outputs in the dissemination of data for a given <i>Population</i> for a particular reference period, or of metadata. It describes the process and resources required in the dissemination of data and metadata in a <i>Statistical Program</i> .	This object holds <i>Statistical Activity</i> information that relates specifically to data and metadata dissemination. It inherits the relationships and attributes from the <i>Statistical Activity</i> type. A special type of <i>Dissemination Activity</i> is <i>Publication Activity</i> .	
Dissemination Design	Business	The specification of the resources required and processes used and description of relevant methodological information for a set of activities to disseminate data about a given <i>Population</i> , or metadata.	This object holds <i>Statistical Program Design</i> information that relates specifically to dissemination. It inherits the relationships and attributes from the <i>Statistical Program Design</i> type.	
Dissemination Service	Structures	The mechanism for delivering, and possibly creating, structured content dynamically in response to a consumer request and in accordance with defined parameters as provided by that consumer.	<p>A <i>Dissemination Service</i> will deliver a <i>Representation</i> created by a process that it invokes. The inputs into the <i>Dissemination Service</i> determine and feed the process that is to be invoked.</p> <p>A <i>Dissemination Service</i> retrieves the information to be structured and delivered through an <i>Information Resource</i>. As part of the service execution, the consumer may be given a chance to browse or search through the collection of information available from the <i>Information Resource</i> exposed by the <i>Dissemination Service</i>. Based on the results, the consumer can then refine the <i>Output Specification</i> as (further) input to the <i>Dissemination</i></p>	

n Service to complete the process of creating and delivering the information required in the form of a *Representation* to the consumer.

Example:

1. SDMX SOAP Data Web Services: The query XML message provides the Service with data selection and the specification of the preferred format (e.g. Generic format or Structured format, time series or cross-sectional). Based on this input the Service will retrieve a *Data Set* from the *Data Resource* and invoke a process that will format the data as an SDMX data message.
2. A manual service such as a response to a telephone request where the person answering the call based on the caller's request would mail a PDF (which might either be a

			Product or dynamically created from another source).
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E

Object	Group	Definition	Explanatory Text	Synonyms
Enumerated Conceptual Domain	Concepts	A <i>Conceptual Domain</i> expressed as a list of <i>Categories</i> .	Example: The Sex categories of 'Male' and 'Female'.	
Enumerated Value Domain	Concepts	A <i>Value Domain</i> expressed as a list of <i>Designations</i> .	Example - Sex Codes <m, male>; <f, female>; <o, other>	
Environment Change	Business	A requirement for change (type of <i>Statistical Need</i>) that originates from a change in the operating environment of the statistical activity.	<p>An <i>Environment Change</i> reflects variations in the context of execution of the <i>Statistical Activity</i> that create a need for a modification in the way that this activity is conducted. <i>Environment Changes</i> can be of different origins and also take different forms. They can result from a precise event (budget cut, new legislation enforced) or from a progressive process (technical or methodological progress, application or tool obsolescence). Other examples of <i>Environment Changes</i> include the availability of a new <i>Data Resource</i>, the opportunity for new collaboration between agencies, etc.</p> <p><i>Environment Change</i> objects may be structured in very diverse ways, but an object will usually group text material describing the type of change that has occurred and created the need for change. This allows the statistical organization to document precisely the (possibly multiple) changes in environment that have led to the <i>Statistical Need</i>.</p>	

Evaluation Assessment	Business	A type of <i>Assessment</i> that evaluates the process outputs of a statistical activity based on a formalized methodological framework.	The evaluation can be done in regard to various characteristics of the output, for example its quality, the efficiency of the production process, its conformance to a set of requirements, etc. The result of an <i>Evaluation Assessment</i> can lead to the creation of a <i>Statistical Need</i> : in this case, the <i>Statistical Need</i> will reference the <i>Evaluation Assessment</i> for traceability and documentary purposes.	
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F

Object	Group	Definition	Explanatory Text	Synonyms
Frame Population	Concepts	A <i>Population</i> represented by records in a frame, which is the observable part of a <i>Target Population</i> and provides a reasonable approximation to it.	Example: most recent population census frame	object class

G

Object	Group	Definition	Explanatory Text	Synonyms
Gap Analysis	Business	An expression of the difference (the 'gap') between the current state and a desired future state.	A <i>Gap Analysis</i> is a type of <i>Assessment</i> that compares the actual state of the activity with a potential state that would correspond to the implementation of a change. An organization will list the factors that define its current state and what is needed to reach its target state. This will for example document a <i>Business Case</i> and help to take the decision to implement the change or not.	need assessment

I

Object	Group	Definition	Explanatory Text	Synonyms
Identifiable Artefact	Base	An abstract class that comprises the basic attributes and associations needed for identification, naming and other documentation.		
Identifier Component	Structures	The role given to a <i>Represented Variable</i> in the context of a <i>Data Structure</i> . The role is to identify the unit in an organized collection of data.	An <i>Identifier Component</i> is a sub-type of <i>Data Structure Component</i> . The personal identification number of a Swedish citizen for unit data or the name of a country in the European Union for dimensional data.	
Individual	Base	A person who acts, or is designated to act towards a specific purpose.		
Information Request	Business	An outline of a need for new data or metadata required for a particular purpose.	An <i>Information Request</i> is a special case of <i>Statistical Need</i> that comes in a more organized way, for example by specifying on which <i>Subject Field</i> the information is required, or what type of <i>Concept</i> is to be measured, or even the type of <i>Units</i> that are under consideration. The <i>Information Request</i> can for example be expressed internally, or by another statistical organization or authority.	
Information Resource	Structures	An abstract notion that is any organized collection of information.	The only concrete subclass is <i>Data Resource</i> . The <i>Information Resource</i> allows the model to be extended to other types of resource.	
Instance Interviewer Instruction	Business	The use of an <i>Interviewer Instruction</i> in a particular <i>Instrument</i> .		
Instance Question	Business	The use of a <i>Question</i> in a particular <i>Instrument</i> .		
Instance Question Block	Business	The use of a <i>Question Block</i> in a particular <i>Instrument</i> .		
Instance Statement	Business	The use of a <i>Statement</i> in a particular <i>Instrument</i> .		

<p>Instance Variable</p>	<p>Concepts</p>	<p>The use of a <i>Represented Variable</i> within a <i>Data Set</i>. It may include information about the source of the data.</p>	<p>The <i>Instance Variable</i> is used to describe actual instances of data that have been collected. Here are 3 examples:</p> <p>1) Gender: Dan Gillman has gender <m, male>, Arofan Gregory has gender<m, male>, etc.</p> <p>2) Number of employees: Microsoft has 90,000 employees; IBM has 433,000 employees, etc.</p> <p>3) Endowment: Johns Hopkins has endowment of <3, \$1,000,000 and above>, Yale has endowment of <3, \$1,000,000 and above>, etc.</p>	
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Instrument	Business	<p>A tool conceived to record the information that will be obtained from the <i>Observation Units</i>.</p>	<p>The <i>Instrument</i> describes the tool used to collect data. It could be a traditional survey, a set of requirements for a software collection program, a clinical procedure, etc.</p> <p><i>Instrument</i> is described from the perspective of the statistical organization collecting the data. It includes the special type of <i>Instrument</i> used for the explicit purpose of gathering data through a questionnaire (Survey <i>Instrument</i>). The behavior and characteristics of a concrete <i>Instrument</i> is determined by an <i>Instrument Implementation</i>. Several implementations can be based in the same <i>Instrument</i> giving the possibility of using multiple channels and to apply different collection techniques (<i>Modes</i>) to gather data.</p> <p>An example of this is when a printed format to collect information for a survey is substituted by a software program; in both cases the <i>Instrument</i> will collect the data from the <i>Unit</i> but the behavior of the <i>Instrument</i> will be different accordingly with its implementation.</p>	
Instrument Control	Business	<p>A record of the flow of an <i>Instrument</i> and its use of <i>Questions, Interviewer Instructions</i> and <i>Statements</i>.</p>		

Instrument Implementation	Business	A concrete and usable tool for gathering information based on the rendering of the description made by an <i>Instrument</i> .	This represents an implementation of an <i>Instrument</i> . It describes the way in which an <i>Instrument</i> has been translated from a design to a concrete tool. It could represent a printed form, a software program made following a specific technological paradigm (web service, web scraping robot, etc.), the software used by a specialized device to collect data, etc. When it describes a <i>Survey Instrument</i> , it can contain descriptions of how each construct (e.g. <i>Questions</i> , <i>Value Domains</i> , validation <i>Rules</i> contained in the <i>Instrument</i>) is implemented.	
Interviewer Instruction	Business	Directions given to an interviewer to aid the completion of the <i>Instrument</i>	Example: "Show prompt card before reading question"	

L

Object	Group	Definition	Explanatory Text	Synonyms
Language	Base	The linguistic code used. This takes into account geographic variations, e.g. Canadian French or Australian English.		
Level	Concepts	Set of <i>Concepts</i> which are mutually exclusive and exhaustive	For example, section, division, group and class in ISIC Rev. 4. A <i>Level</i> often is associated with a <i>Concept</i> , which defines it.	

Logical Record	Structures	Describes a type of <i>Unit Data Record</i> for one <i>Unit</i> within a <i>Unit Data Set</i> .	<p>A <i>Logical Record</i> describes the record using variables of which one or more can uniquely identify the record (<i>Identifier Component</i>). It represents characteristics of a real or artificially constructed <i>Unit</i>, which could be represented by a <i>Concept</i>. The relationships between <i>Logical Records</i> are given by <i>Record Relationships</i>.</p> <p>Examples: household, person or dwelling record.</p>	
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M

Object	Group	Definition	Explanatory Text	Synonyms
Maintenance Agency	Base	The organization or expert body that maintains an artefact.		
Map	Concepts	An expression of the relation between a <i>Category</i> in a source <i>Classification Scheme</i> and a corresponding <i>Category</i> in the target <i>Classification Scheme</i> .	<p>Given 2 <i>Category Sets</i></p> <p>1) Marital Status A</p> <ul style="list-style-type: none"> • Married • Single <p>2) Marital Status B</p> <ul style="list-style-type: none"> • Married • Single • Widowed • Divorced <p>The 2 Married <i>Categories</i> may be compared as follows Married (A) -> Married (B) where the arrow points to the <i>Category</i> which is more generic.</p>	

Measure Component	Structures	The role given to a <i>Represented Variable</i> in the context of a <i>Data Structure</i> . The role is to hold the observed/derived values for a particular <i>Unit</i> in an organized collection of data.	A <i>Measure Component</i> is a sub-type of <i>Data Structure Component</i> . For example age and height of a person in a <i>Unit Data Set</i> or number of citizens and number of households in a country in a <i>Data Set</i> for multiple countries (<i>Dimensional Data Set</i>).	
Mode	Business	A set of characteristics that describe the technique (the "how") used for the data acquisition through a given <i>Data Channel</i> based on a specific <i>Instrument Implementation</i> .	While the <i>Data Channel</i> describes the means used for data acquisition, the <i>Instrument</i> describes the "what" (i.e. the content, for example, in terms of questions in a questionnaire or a list of agreed time series codes in a data exchange template) and an <i>Instrument Implementation</i> describes the tool used to apply the <i>Instrument</i> ; the <i>Mode</i> describes "how" the <i>Data Channel</i> is going to be used. The <i>Mode</i> is relevant for all types of <i>Data Channels</i> , <i>Instrument Implementations</i> and <i>Instruments</i> and can change over time. The list of <i>Modes</i> will potentially grow in the future and vary from organization to organization.	
Multiple Question Item	Business	A construct that has all of the properties of a <i>Question</i> but additionally links to sub questions.	A <i>Multiple Question Item</i> is a specific type of <i>Question</i> .	

N

Object	Group	Definition	Explanatory Text	Synonyms
Node	Concepts	A combination of a <i>Category</i> and related attributes.	A <i>Node</i> is created as a <i>Category</i> , <i>Code</i> or <i>Classification Item</i> for the purpose of defining the situation in which the <i>Category</i> is being used.	

Node Set	Concepts	A set of <i>Nodes</i>	<p><i>Node Set</i> is a kind of <i>Concept System</i>. Here are 2 examples:</p> <p>1) <i>Sex Categories</i></p> <ul style="list-style-type: none"> • Male • Female • Other <p>2) <i>Sex Codes</i></p> <ul style="list-style-type: none"> • <m, male> • <f, female> • <o, other> 	
Non Structured Data Set	Structures	A <i>Data Set</i> whose structure is not described in a <i>Data Structure</i> .		

O

Object	Group	Definition	Explanatory Text	Synonyms
Observation Unit	Concepts	A <i>Unit</i> for which information can actually be obtained during data collection.	The sub-set of the <i>Population</i> of interest for which information can actually be obtained. For example, if the <i>Population</i> is the persons living in Ontario, the <i>Observation Units</i> might be persons currently residing in Ontario neither in an institution nor in a remote northern location nor temporarily out of the province.	collection unit, unit of observation, unit of collection
Organization Item	Base	An abstract class which has two sub classes: <i>Organization Unit</i> and <i>Individual</i> .		
Organization Item Role	Base	The function or activities of an <i>Organization Item</i> , in statistical processes such as collection, processing and dissemination.		organization role
Organization Scheme	Base	A maintained collection of <i>Organization Items</i> .		
Organization Unit	Base	A unique framework of authority within which a person or persons act, or are designated to act, towards some purpose.		organization

Output Specification

Structures

Contains the specifications for the dynamic creation and delivery of a *Representation* by a *Dissemination Service*.

An *Output Specification* is a specialization of *Parameter Input*. It is in fact a request for the dynamic creation and delivery of a *Representation*. It contains references to the information (e.g. a *Data Set*, a *Data Structure*, a *Code List*, a publication plan) desired with specifications concerning selections, (technical) form and/or method of delivery.

The references to the information come from the collection of information sources provided by the *Information Resource* that is exposed by the *Dissemination Service*. The consumer may select any (combination) of those information sources by including the references in the *Output Specification*.

Note that the *Output Specification* may be "soft" or "broad" in that it may identify groups of internal information objects rather than individual ones. For instance, all *Data Sets* within a certain (sub) category or theme. This may lead to multiple *Representations* being delivered.

As part of the *Output Specification*, the consumer may be given the option to select one of a number of possible formats for the *Representation* (e.g. SDMX, CSV, JSON or PDF) or to select one of a number of possible methods for delivery (web service response, email, FTP, mail delivery, etc.) The *Dissemination Service* may be used to request future deliveries of *Representations* for information that is

not yet available. This results in a subscription, where the specification of the *Representations* to be

			delivered in future is given in the <i>Output Specification</i> .	
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P

Object	Group	Definition	Explanatory Text	Synonyms
Parameter Input	Production	Inputs used to specify which configuration should be used for a specific <i>Process Step</i> which has been designed to be configurable.	Parameter Inputs may be provided where <i>Rules</i> and/or <i>Business Service</i> interfaces associated with a particular <i>Process Step</i> have been designed to be configurable based on inputs passed in to the <i>Process Step</i> .	
Population	Concepts	The total membership of a defined class of people, objects or events	<i>Population</i> has a number of subtypes. Here are 3 examples – 1. US adult persons 2. US computer companies 3. Universities in the US	

<p>Process</p>	<p>Production</p>	<p>A nominated set of <i>Process Step Designs</i>, and associated <i>Process Controls</i> (flow), which have been highlighted for possible reuse.</p>	<p>In a particular statistical business process, some <i>Process Steps</i> may be unique to that business process while others may be applicable to other business processes. A <i>Process</i> can be seen as a reusable template. It is a means to accelerate design processes and to achieve sharing and reuse of design patterns which have approved effective. Reuse of process patterns can also lead to reuse of relevant <i>Business Services</i> and business <i>Rules</i>. By deciding to reuse a <i>Process</i>, a designer is actually reusing the "pattern" of <i>Process Step Designs</i> and <i>Process Controls</i> associated with that <i>Process</i>. They will receive a new instance of the <i>Process Step Designs</i> and <i>Process Controls</i>. If they then tailor their "instance" of the <i>Process Step Designs</i> and <i>Process Controls</i> to better meet their needs they will not change the definition of the reusable <i>Process</i>.</p>	
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<p>Process Control</p>	<p>Production</p>	<p>A decision point which determines the flow between <i>Process Steps</i>.</p>	<p>The typical use of <i>Process Control</i> is to determine what happens next after a <i>Process Step Design</i> is executed. The possible paths, and the decision criteria, associated with a <i>Process Control</i> are specified as part of designing a production process. There is typically a very close relationship between the design of <i>Process Steps</i> and the design of <i>Process Controls</i>.</p> <p>It is possible to define a <i>Process Control</i> where the next <i>Process Step</i> that will be executed is a fixed value rather than a "choice" between two or more possibilities. Where such a design would be appropriate, this feature allows, for example, initiation of a <i>Process Step</i> representing the GSBPM Process Phase (5) to always lead to initiation of GSBPM sub-process Integrate Data (5.1) as the next step.</p> <p>This allows a process designer to divide a business process into logical steps (for example, where each step performs a specific <i>Business Function</i>) even if these <i>Process Steps</i> will always follow each other in the same order. In all cases, the <i>Process Control</i> defines and manages the flow between <i>Process Steps</i>, even where the flow is "trivial". <i>Process Step Design</i> is left to focus entirely on the design of the <i>Process Step</i> itself, not sequencing between steps.</p>	
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<p>Process Input</p>	<p>Production</p>	<p>Any instance of an information object which is supplied to a process step at the time its execution is initiated.</p>	<p><i>Process Input</i> has three subtypes: <i>Process Support Input</i>, <i>Parameter Input</i> and <i>Transformable Input</i>, to be able to identify the range of roles that the <i>Process Inputs</i> perform in the course of a <i>Process Step</i>. A <i>Process Input</i> may be provided to a <i>Process Step</i> to: - "add value" to that input by producing an output which represents a "transformed" version of the input.</p> <ul style="list-style-type: none"> • control (for example, as a parameter) or influence the behavior of the <i>Process Step</i>. • be used by the <i>Process Step</i> as either an input or a guide. <p>Note: The same instance of an information object may perform different roles in regard to different <i>Process Steps</i>.</p>	
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<p>Process Input Specification</p>	<p>Production</p>	<p>A record of the types of inputs required for a Process Step Design</p>	<p>The <i>Process Input Specification</i> enumerates the <i>Process Inputs</i> required at the time a <i>Process Step Design</i> is executed. For example, if five different <i>Process Inputs</i> are required at the time, the <i>Process Input Specification</i> will describe each of the five inputs. For each required <i>Process Input</i> the <i>Process Input Specification</i> will record:</p> <ol style="list-style-type: none"> 1. the type of <i>Process Input</i> (<i>Parameter Input</i>, <i>Process Support Input</i> or <i>Transformable Input</i>); and 2. the type of information object (based on GSIM) which will be used as the <i>Process Input</i> (Example types might be a <i>Dimensional Data Set</i> or a <i>Classification</i>). <p>The <i>Process Input</i> to be provided at the time of <i>Process Step</i> execution will then be a specific instance of the type of information object specified by the <i>Process Input Specification</i>. For example, if a <i>Process Input Specification</i> requires a <i>Dimensional Data Set</i> then the corresponding <i>Process Input</i> provided at the time of <i>Process Step</i> execution will be a particular <i>Dimensional Data Set</i>.</p>	
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<p>Process Method</p>	<p>Production</p>	<p>A specification of the technique which will be used to perform the unit of work.</p>	<p>The technique specified by a <i>Process Method</i> is independent from any choice of technologies and/or other tools which will be used to apply that technique in a particular instance. The definition of the technique may, however, intrinsically require the application of specific <i>Rules</i> (for example, mathematical or logical formulas).</p> <p>A <i>Process Method</i> describes a particular method for performing a <i>Business Function</i>. Similarly to the way in which <i>Business Function</i> documents the high level purpose of a process step ("what business purpose does this process step serve?"), <i>Process Method</i> documents the high level methodological "how" associated with the <i>Process Step</i>. Where a <i>Process Step Design</i> applies a method which is not specifically statistical in nature, however, this can still be recorded as the <i>Process Method</i>.</p>	
<p>Process Metric</p>	<p>Production</p>	<p>A <i>Process Output</i> whose purpose is to measure and report some aspect of how the <i>Process Step</i> performed during execution.</p>	<p>A <i>Process Metric</i> is a sub-type of <i>Process Output</i> which records information about the execution of a <i>Process Step</i>. For example, how long it took to complete execution of the <i>Process Step</i> and what percentage of records in the <i>Transformable Input</i> was updated by the <i>Process Step</i> to produce the <i>Transformed Output</i>.</p> <p>One purpose for a <i>Process Metric</i> may be to provide a quality measure related to the <i>Transformed Output</i>. For example, a <i>Process Step</i> with the <i>Business Function</i> of imputing missing values</p>	

is likely to result, as its *Transformed Output*, in a *Data Set* where values that were missing previously have been imputed.

Statistical quality measures, captured as *Process Metrics* for that *Process Step* may include a measure of how many records were imputed, and a measure of how much difference, statistically, the imputed values make to the dataset overall.

Another purpose for a *Process Metric* may be to measure an aspect of the *Process Step* which is not directly related to the *Transformed Output* it produced. For example, a *Process Metric* may record the time taken to complete the *Process Step* or other forms of resource utilization (for example, human and/or IT).

Often these two kinds of *Process Metrics* will be used in combination when seeking to, for example, monitor and tune a statistical business process so its statistical outputs achieve the highest level of quality possible based on the

			time, staff and/or IT resources that are available.	
Process Output	Production	Any instance of an information object which is produced by a <i>Process Step</i> as a result of its execution.	<p><i>Process Outputs</i> are subtyped.</p> <ul style="list-style-type: none"> • <i>Transformed Output</i> is the result which provides the "reason for existence" of the <i>Process Step</i>. If that output were no longer required then there would be no need for the <i>Process Step</i> in its current form. Typically a <i>Transformed Output</i> is either a <i>Process Input</i> to a subsequent <i>Process Step</i> or it represents the final product from a statistical business process. • A <i>Process Metric</i> records information about the execution of a <i>Process Step</i>. For example, how long it took to complete execution of the <i>Process Step</i> and what percentage of records in the <i>Transformable Input</i> was updated by the <i>Process Step</i> to produce the <i>Transformed Output</i>. 	

<p>Process Output Specification</p>	<p>Production</p>	<p>Identifies the types of <i>Process Outputs</i> the associated <i>Process Step Design</i> will produce when it is executed.</p>	<p>The <i>Process Output Specification</i> enumerates the <i>Process Outputs</i> that will be generated at the time the associated <i>Process Step Design</i> is executed. For example, if five different <i>Process Outputs</i> will be generated at the time of <i>Process Step</i> execution the <i>Process Output Specification</i> will describe each of the five outputs. For each <i>Process Output</i> the <i>Process Output Specification</i> will record:</p> <ol style="list-style-type: none"> 1. the type of <i>Process Output</i> (<i>Process Metric</i> or <i>Transformed Output</i>) 2. the type of GSIM information object which will be generated as the <i>Process Output</i>. <p>An example type might be a <i>Dimensional Data Set</i>. The <i>Process Output</i> generated at the time of <i>Process Step</i> execution will then be a specific instance of the type of information object specified by the <i>Process Output Specification</i>. For example, if a <i>Process Output Specification</i> refers to generation of a <i>Dimensional Data Set</i> then the corresponding <i>Process Output</i> generated at the time of <i>Process Step</i> execution will be a particular <i>Dimensional Data Set</i>. For each <i>Process Step</i> execution a different <i>Dimensional Data Set</i> will be generated.</p>	
<p>Process Step</p>	<p>Production</p>	<p>One in a series of tasks which comprise a statistical business process</p>	<p>A <i>Process Step</i> implements the <i>Process Step Design</i> specified in order to produce the outputs for which the process step was designed.</p>	

<p>Process Step Design</p>	<p>Production</p>	<p>Defines how a Process Step will be performed. This includes specifying the <i>Process Inputs</i> to that work and the <i>Process Outputs</i> that will be produced.</p>	<p>A <i>Process Step</i> can be as big or small as the designer of a particular business process chooses. From a design perspective, one <i>Process Step</i> can contain "sub-steps", each of which is conceptualized as a (smaller) <i>Process Step</i> in its own right. Each of those "sub-steps" may contain "sub-steps" within them and so on indefinitely. It is a decision for the process designer to what extent to subdivide steps. At some level it will be appropriate to consider a <i>Process Step</i> to be a discrete task (unit of work) without warranting further subdivision. At that level the <i>Process Step</i> is designed to process particular <i>Process Inputs</i>, using a particular <i>Business Service</i>, to produce particular <i>Process Outputs</i>. The flow between a <i>Process Step</i> and any sub steps is managed via <i>Process Control</i>.</p>	
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<p>Process Step Execution Record</p>	<p>Production</p>	<p>A record of the execution of a <i>Process Step</i>. The record includes the actual <i>Process Inputs</i> to, and <i>Process Outputs</i> from, each <i>Process Step</i>, as well as the evaluation of each <i>Process Control</i> (which, in turn, determines the specific sequence of <i>Process Steps</i> performed during execution).</p>	<p>Each Process is an instance of executing a repeatable Process Step Design. At the time of Process Step Execution specific instances of input objects (for example, specific Data Sets, specific Variables) will be supplied.</p> <p>Each instance of Process Step may produce unique results even though the Process Step Design remains constant. One reason is that specific instances of inputs are provided for each Process Step.</p> <p>Even when the inputs remain the same, metrics such as the elapsed time to complete execution of process step may vary from execution to execution. For this reason, each Process Step Execution Record details of inputs and outputs for that instance of implementing the Process Step Design. It also records the outcome of Process Control evaluation at the end of the process step.</p> <p>In this way it is possible to trace the flow of execution of a business process through all the process steps which were involved.</p>
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Process Support Input	Production	<p>A form of <i>Process Input</i> that influences the work performed by the <i>Process Step</i>, and therefore influences its outcome.</p>	<p><i>Process Support Input</i> is a sub-type of <i>Process Input</i>. Typical <i>Process Support Inputs</i> include metadata resources such as <i>Classifications</i> or structural information used in the processing of data.</p> <p>Examples of <i>Process Support Inputs</i> could include - A <i>Code List</i> which will be used to check whether the <i>Codes</i> recorded in one dimension of a dataset are valid - An auxiliary <i>Data Set</i> which will influence imputation for, or editing of, a primary <i>Data Set</i> which has been submitted to the <i>Process Step</i> as the <i>Transformable Input</i>.</p> <p>In these examples, which <i>Code List</i> to use, or which auxiliary <i>Data Set</i> to use, may be specified via a <i>Parameter Input</i>. The details of the <i>Code List</i> or the auxiliary <i>Data Set</i> are <i>Process Support Inputs</i>.</p>	
Product	Structures	<p>Static package of objects that can be disseminated as a whole.</p>	<p>A <i>Product</i> is a static presentation of artefacts created by fixed processes. The artefacts may be representations of data, visualizations, explanation, interpretation etc. Example: Publications, press releases, articles, list of classifications, etc.</p>	publication
Production Activity	Business	<p>The set of executed processes and the actual resources required as inputs and produced as outputs in the production of data for a given <i>Population</i> for a particular reference period. It describes the process and resources required in the production of data in a <i>Statistical Program</i>.</p>	<p>These objects hold <i>Statistical Activity</i> information that relates specifically to data production. It inherits the relationships and attributes from the <i>Statistical Activity</i> type.</p>	

Production Design	Business	The specification of the resources required and processes used and description of relevant methodological information for a set of activities to process data about a given <i>Population</i> .	This object holds <i>Statistical Program Design</i> information that relates specifically to production - the act of taking data that have been collected and transforming them. It inherits the relationships and attributes from the <i>Statistical Program Design</i> type.	
Provision Agreement	Structures	A service-level agreement, a legal mandate, the terms of a mutual agreement, a memorandum of understanding, or any other terms/conditions which affect the provision of data.	<p>The <i>Provision Agreement</i> does not need to have any formal consent of the <i>Data Provider</i>. For instance data collection via web scraping may identify the <i>Data Provider</i> but requires no formal agreement. A web service that provides data to anyone that queries it also may not need any formal agreement (save that perhaps of implicit agreement under the terms of the web service). Nevertheless, in both these cases the data may be structured according to a <i>Data Structure</i> which is associated to the <i>Data Flow</i>.</p> <p>A <i>Provision Agreement</i> represents the union of a specific <i>Data Provider</i> and a specific <i>Data Flow</i> for which the <i>Data Provider</i> supplies data. The location of the <i>Data Sets</i> that are available for this <i>Provision Agreement</i> are associated in the <i>Data Location</i>.</p>	

Publication Activity	Business	The mechanism for creating structured, static content in response to an internal trigger.	<p>A <i>Publication Activity</i> is a specific type of <i>Dissemination Activity</i>. A <i>Publication Activity</i> is triggered by an internal need to create a new <i>Product</i>. This is most commonly based on knowledge about a general need of potential consumers or the objective to actively provide information to consumers. Examples are the writing, editing and approval of a press release, web article or publication.</p> <p>A <i>Publication Activity</i> may make use of <i>Dissemination Services</i> to get the necessary input. A <i>Publication Activity</i> may interpret or transform (e.g. visualize) statistical data, but cannot do any statistical processing.</p> <p>A <i>Publication Activity</i> produces a <i>Product</i> and makes this available to <i>Dissemination Services</i> (possibly through an <i>Information Resource</i>) for the actual dissemination.</p>	
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Q

Object	Group	Definition	Explanatory Text	Synonyms
Question	Business	Describes the text used to interrogate a respondent, the <i>Concept</i> that is measured and the allowed responses.	One specific type of <i>Question</i> is the <i>Multiple Question Item</i> .	
Question Block	Business	A set of <i>Questions</i> , <i>Interviewer Instructions</i> and <i>Statements</i> which are used together.	<p>A statistical organization will often have a number of <i>Question Blocks</i> which they reuse in a number of <i>Instruments</i>. Examples of <i>Question Blocks</i> include:</p> <ul style="list-style-type: none"> • Household <i>Question Block</i> • Income <i>Question Block</i> • Employment <i>Question Block</i> 	question module

Question Group	Business	A set of <i>Questions</i> which are gathered or stored together for the purpose of discovery.	<p><i>Questions</i> in <i>Question Groups</i> are similar in some way (for example, all the <i>Questions</i> relate to obesity).</p> <p><i>Questions Groups</i> are often found in databases that can be searched to find <i>Questions</i> which meet specific criteria</p>	question pool, question bank
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R

Object	Group	Definition	Explanatory Text	Synonyms
Record Relationship	Structures	Describes relationships between <i>Logical Records</i> within a <i>Unit Data Structure</i> . It must have both a source <i>Logical Record</i> and a target <i>Logical Record</i> in order to define the relationship.	<p>All relationships are defined in pairs. Hence multiple relationships may be needed to clarify all <i>Record Relationships</i> within a <i>Unit Data Set</i> e.g. household and person, household and dwelling etc.</p> <p>Example: Relationship between person and household <i>Logical Records</i> within a <i>Unit Data Set</i>.</p>	

Representation	Structures	<p>A "custom-built" artefact that has a consumable (human or machine) format. It is the output of a <i>Dissemination Service</i>. It is what is ultimately delivered to the consumer.</p>	<p>A <i>Representation</i> brings together various maintainable artefacts and their related artefacts. It is essentially the application of rules to an artefact (and possibly its related artefacts) which transform the object into a format fit for consumption. This consumption may be something that is understandable to a person or a machine.</p> <p><i>Representation</i> can be in different forms; e.g. tables, graphs, structured data files.</p> <p>Examples:</p> <ul style="list-style-type: none"> • A table of data. Based on a <i>Data Set</i>, the related <i>Data Structure</i> is used to label the column and row headings for the table. The <i>Data Set</i> is used to populate the cells in the table. Reference metadata is used to populate footnotes and cell notes on the table. Confidentiality rules are applied to the <i>Data Set</i> to suppress any disclosive cells. • A data file based on a standard (e.g. SDMX). - A PDF document describing a <i>Classification</i>. • Any structural metadata object expressed in a standard format (e.g. DDI 3.1 XML). • A list of <i>Products</i> or services (e.g. a product catalogue or a web services description language (WSDL) file). • A web page containing <i>Classifications</i>, descriptions of <i>Variables</i>, etc. 	presentation, publication, delivery, product
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<p>Represented Variable</p>	<p>Concepts</p>	<p>The association of a <i>Variable</i> with a <i>Value Domain</i> which represents it. The <i>Represented Variable</i> is used as part of a <i>Statistical Activity</i>.</p>	<p>Here are 3 examples –</p> <ol style="list-style-type: none"> 1. Sex variable which will be collected using <m, male>, <f, female>, <o, other> 2. Number of Employees variable which will be collected using an Integer or Count of Individuals. 3. Endowment of Universities variable which will be collected using <1, \$0-\$99,999>, <2, \$100,000-\$999,999>, <3, \$1,000,000 and above> 	
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Rule	Production	A specific mathematical or logical expression which can accept inputs and be evaluated based on those inputs.	<p>There are many forms of <i>Rules</i> and their purpose, character and expression can vary greatly. Evaluation <i>Rules</i> consist of computing an output which will result in a particular course of action. The logical <i>Rules</i> implemented by a <i>Process Step</i> and their implementations in executable form. A single <i>Rule</i> (at the conceptual level) may be expressed in different ways when using different notations and/or different software at the implementation level.</p> <p><i>Rules</i> can be "nested". In other words, a <i>Rule</i> can accept the outputs/evaluations from one or more other <i>Rules</i> as its inputs. This approach can be useful to achieve reuse of <i>Rules</i>.</p> <p>A <i>Rule</i> can be used to generate new data (for example, determine values for a derived Variable) based on existing data. <i>Rules</i> can also be designed to apply "if then else" logic or "case" logic. <i>Parameter Inputs</i> can be included in the definition of a <i>Rule</i> and values provided for those parameters at the time the <i>Rule</i> is evaluated.</p>	
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S

Object	Group	Definition	Explanatory Text	Synonyms
Sign	Concepts	Something that suggests the presence or existence of a fact, condition, or quality.	It is a perceivable object. This object is used to denote a <i>Concept</i> as a <i>Designation</i> .	

Statement	Business	A report of facts in an <i>Instrument</i>	<p><i>Statements</i> are often included to provide further explanation to respondents. Example:</p> <p>"The following questions are about your health"</p>	
Statistical Activity	Business	The set of executed processes and the actual resources required as inputs and produced as outputs to investigate the characteristics of a given <i>Population</i> for a particular reference period. It may describe process and resources required to acquire (<i>Acquisition Activity</i>), produce (<i>Production Activity</i>), and disseminate (<i>Dissemination Activity</i>) data in a <i>Statistical Program</i> .	A <i>Statistical Activity</i> includes the run-time information used to actually execute a set of processes. Activities occur in the context of each <i>Statistical Program Cycle</i> and execute a particular <i>Statistical Program Design</i> .	
Statistical Need	Business	A requirement, request or other notification that will be considered by an organization. A <i>Statistical Need</i> does not have necessarily have structure or format - it is a 'raw' need as received by the organization. A <i>Statistical Need</i> may be of a variety of types including <i>Environmental Change</i> or <i>Information Request</i> .	<p>The <i>Statistical Need</i> is a proposed or imposed change as it has been received by an organization. A <i>Statistical Need</i> is a raw expression of a proposed change, and is not necessarily well-defined. A related object - <i>Change Definition</i> - is created when a <i>Statistical Need</i> is analyzed by an organization. <i>Change Definition</i> expresses the raw need in well-defined, structured terms.</p> <p>Once a <i>Statistical Need</i> has been received, the first step is to do the conceptual work to establish what it is we are trying to measure. The final output of this conceptual work is the <i>Change Definition</i>.</p> <p>In some cases, the <i>Statistical Need</i> can result from the <i>Assessment</i> of the quality, efficiency, etc. of an existing process.</p>	
Statistical Program	Business			

A set of activities to investigate characteristics of a given *Population*. It describes the purpose and context of a set of *Statistical Activities*.

The *Statistical Program* is one of a family of objects that provide the environmental context in which a set of statistical activities is conducted. *Statistical Program* is the top level object that describes the purpose and objectives of a set of activities. *Statistical Program* will usually correspond to an ongoing activity such as a survey or output series. Some examples of *Statistical Program* are:

- Labour Force Survey
- Multipurpose
Household Survey -
National Accounts -
Demography -
Overseas Arrivals
and Departures

Related to the *Statistical Program* object there are *Statistical Program Design* and *Statistical Program Cycle* objects that hold the detailed information about the design and conduct of the *Statistical Activity*.

In the case of the traditional approach, an organization has received a *Statistical Need* and produced a *Change Definition* and an approved *Business Case*. The *Business Case* will specify either a change to the design or methodology of an existing *Statistical Program*, which will result in a new *Statistical Program Design*; or a change to one or more existing *Statistical Programs* (for example, to add an additional objective to the *Statistical Program*); or result in a new *Statistical Program* being created.

<p>Statistical Program Cycle</p>	<p>Business</p>	<p>A set of activities to investigate characteristics of a given <i>Population</i> for a particular reference period.</p>	<p>A <i>Statistical Program Cycle</i> documents the execution of an iteration of a <i>Statistical Program</i> according to the associated <i>Statistical Program Design</i> for a certain reference period. It identifies the activities that are undertaken as a part of the cycle and the specific resources required and processes used and description of relevant methodological information used in this cycle defined by the <i>Statistical Program Design</i>.</p>	
<p>Statistical Program Design</p>	<p>Business</p>	<p>The specification of the resources required and processes used and description of relevant methodological information about the set of activities investigating characteristics of a given <i>Population</i>. Includes the <i>Statistical Activities</i> that are required to acquire (<i>Acquisition Activity</i>), produce (<i>Production Activity</i>), and disseminate (<i>Dissemination Activity</i>) data in a <i>Statistical Program</i>.</p>	<p>The <i>Statistical Program Design</i> is one of a family of objects that provide the operational context in which a set of statistical activities is conducted.</p> <p>A simple example is where a <i>Statistical Program</i> relates to a single survey, for example, the Labour Force Survey. The <i>Statistical Program</i> will have a series of <i>Statistical Program Design</i> objects that describe the methodology and design used throughout the life of the survey. When a methodological change is made to the survey, a new <i>Statistical Program Design</i> is created to record the details of the new design.</p>	
<p>Subject Field</p>	<p>Concepts</p>	<p>One or more <i>Concept Systems</i> used for the grouping of <i>Concepts</i> and <i>Categories</i> for the production of statistics.</p>	<p>A <i>Subject Field</i> is a field of special knowledge under which a set of <i>Concepts</i> and their <i>Designations</i> is used. For example, labour market, environmental expenditure, tourism, etc.</p>	<p>subject area, theme</p>

Survey Instrument	Business	A specialized kind of <i>Instrument</i> used for the explicit purpose of gathering statistical data.	<i>Survey Instrument</i> is a tool used to gather information from a <i>Data Resource</i> . It can be applied in several ways using different formats and modes, for example, as paper forms in face-to-face interviews, as online self-administered interviews, as computer-assisted questionnaires in telephone interviews, as electronic templates downloaded from the web and returned via email. The <i>Survey Instrument</i> provides a generic description of the data collection form independent of the format and mode.	
Survey Population	Concepts	A <i>Population</i> for which information can be obtained in a survey.	A <i>Population</i> which can realistically be studied (example: people currently residing in the province of Ontario not in an institution nor in a remote northern location nor temporarily out of the province). The <i>Survey Population</i> is therefore often a subset of the <i>Target Population</i>	object class

T

Object	Group	Definition	<i>Explanatory Text</i>	Synonyms
Target Population	Concepts	A <i>Population</i> for which a <i>Statistical Activity</i> is designed to make estimates.	<i>Population</i> for which estimates are desired in a <i>Statistical Activity</i> , though practical considerations may dictate that some <i>units</i> are excluded. If so, the resulting sub-set of <i>units</i> for which information can be obtained is the <i>Survey Population</i> .	object class

<p>Transformable Input</p>	<p>Production</p>	<p>A type of <i>Process Input</i> whose content goes into a <i>Process Step</i> and is changed in some way by the execution of that <i>Process Step</i>. Some or all of the content will be represented in the <i>Transformed Output</i>.</p>	<p><i>Transformable Input</i> is a sub-type of <i>Process Input</i>. Producers of official statistics often conceptualize data (and sometimes metadata) flowing through the statistical business process, having statistical value added by each <i>Process Step</i> and being transformed along the way.</p> <p>The concept of <i>Transformable Input</i> allows this notional flow of information through the production process to be traced, without confusing these inputs with other inputs - such as <i>Parameter Inputs</i> and <i>Process Support Inputs</i> that are controlling or influencing a particular <i>Process Step</i> but do not "flow through the business process" in the same sense. Typical <i>Transformable Inputs</i> are <i>Data Sets</i> and structural metadata (if changed by a process and needed to describe another output or as an object in their own right).</p>	
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Transformed Output	Production	A <i>Process Output</i> (a result) which provides the "reason for existence" for the <i>Process Step</i> .	<p>A <i>Transformed Output</i> is a sub-type of <i>Process Output</i>. Typically a <i>Transformed Output</i> is either a <i>Process Input</i> to a subsequent <i>Process Step</i> or it represents the final product from a statistical business process.</p> <p>In many cases a <i>Transformed Output</i> may be readily identified as an updated ("value added") version of one or more <i>Transformable Inputs</i> supplied to the <i>Process Step</i> execution.</p> <p>Note: If the output were no longer required then there would be no need for the <i>Process Step</i> in its current form.</p>	
Type	Base	Identifies a narrower meaning for the value in the <i>Contextual String</i> .		

U

Object	Group	Definition	Explanatory Text	Synonyms
Unit	Concepts	The object of interest in <i>Statistical Activities</i> and corresponds to at least one <i>Population</i> .	Here are 3 examples - 1. Individual US person (i.e., Arofan Gregory, Dan Gillman, Barack Obama, etc.) 2. Individual US computer companies (i.e., Microsoft, Apple, IBM, etc.) 3. Individual US universities (i.e., Johns Hopkins, University of Maryland, Yale, etc.)	
Unit Attribute Component	Structures	A <i>Represented Variable</i> that is required to supply information in addition to the identification and measures in a <i>Unit Data Set</i> .	Example: The publication status of an observation such as provisional, revised.	

Unit Data Point	Structures	A placeholder in a <i>Unit Data Record</i> to contain the value (<i>Datum</i>) for an <i>Instance Variable</i> with respect to a given <i>Unit</i> .	For example (1212123, 43) could be the age in years on the 1st of January 2012 of a person (<i>Unit</i>) with the social security number 1212123. The social security number is an identifying variable for the person whereas the age, in this example, is a variable measured on the 1st of January 2012. The value can be obtained directly from the <i>Unit</i> or indirectly via a process of some kind.	
Unit Data Record	Structures	Contains the specific values (as a collection of <i>Unit Data Points</i>) related to a given <i>Unit</i> as defined in a <i>Logical Record</i> .	<p>For example (1212123, 48, American, United Kingdom) specifies the age (48) in years on the 1st of January 2012 in years, the current citizenship (American), and the country of birth (United Kingdom) for a person with social security number 1212123.</p> <p>The <i>Unit Data Record</i> is a collection of <i>Unit Data Points</i> that provide either a complete or restricted view of the state of a <i>Unit</i> as observed over a specific period or at a specific point in time.</p>	
Unit Data Set	Structures	A collection of data that conforms to a known structure and describes aspects of one or more <i>Units</i> .	Example: A synthetic unit record file is a collection of artificially constructed <i>Unit Data Records</i> , combined in a file to create a <i>Unit Data Set</i> .	micro data, unit data, synthetic unit record file

Unit Data Structure	Structures	Describes the structure of a <i>Unit Data Set</i> .	For example (social security number, country of residence, age, citizenship, country of birth) where the social security number and the country of residence are the identifying components (<i>Unit Identifier Component</i>) and the others are measured variables obtained directly or indirectly from the person (<i>Unit</i>) and are <i>Unit Measure Components</i> of the <i>Logical Record</i> .	file description, dataset description
Unit Identifier Component	Structures	The role that has been given to a <i>Represented Variable</i> , in a <i>Unit Data Structure</i> , to identify the <i>Unit</i> .	For example the person identification number in Norway.	
Unit Measure Component	Structures	The role that has been given to a specific <i>Represented Variable</i> to hold the observed or derived values related to a <i>Unit</i> as identified by the <i>Unit Identifier Components</i> , in an organized collection of data.	For example age and height of a person in a <i>Unit Data Set</i>	
Unit of Measure	Concepts	Units by which some quantity is measured.	Here are 3 examples - 1. Kilograms; 2. Count; 3. Dollars	

V

Object	Group	Definition	Explanatory Text	Synonyms
Value Domain	Concepts	A set of allowed values (determinants). A <i>Value Domain</i> is a <i>Concept System</i> where all <i>Concepts</i> are designated, but in which there are no relations.	Here are 3 examples - 1) Sex codes (enumerated Value Domain) m, male; f, female; o, other 2) Non-negative whole decimal number (described Value Domain) , count of people; 3) Endowment categories (enumerated Value Domain) , dollars: 1, \$0-\$99,999; 2, \$100,000-\$999,999; 3, \$1,000,000 and above	

Variable	Concepts	The use of a <i>Concept</i> as a characteristic of a <i>Population</i> that is intended to be measured as part of a <i>Statistical Activity</i> .	Here are 3 examples - 1. Sex 2. Number of employees 3. Endowment	
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