Information Objects (Blocks)

A business report or financial report, which is a specialization of the more general business report, are made up of objects that contain information. This objects that contain information have that information organized in different logical patterns. For example, information could be in the form of a "roll up", in the form of a "roll forward", or some other logical pattern that the information in the object follows.

This document is to explain logic that is common to every information object or "block" of information or "information block" that exist within a financial report (or more generally in a business report) and also point the reader to specific information about the different logical patterns of information that exist in these reports.

As a quick example, below you see three very basic blocks of information:

	Period [Aspect]	
	2022-12-31	2021-12-31
Balance Sheet [Arithmetic]		
Assets	€ 3,500	€ 0
Liabilities	0	0
Equity	3,500	0

	Period [Aspect]
	2022-01-01 | 2022-12-31
Comprehensive Income [Roll Up]	
Revenues	€ 7,000
(Expenses)	(3,000)
Gains	1,000
(Losses)	(2,000)
Comprehensive Income	€ 3,000

	Period [Aspect]
	2022-01-01 | 2022-12-31
Changes in Equity [Roll Forward]	
Equity, Beginning Balance	€ 0
Comprehensive Income	3,000
Investments by Owners	1,000
(Distributions to Owners)	(500)
Equity, Ending Balance	€ 3,500

Each of the basic blocks of information have similar patterns and some different patterns that distinguish one block of information from the other blocks of information. Each of the three blocks of information above involve mathematical relationships; but not all blocks of information have a mathematical

relationship necessarily. Blocks of information can be interrelated to one another. There tends to be the following logical patterns represented withing an information block:

- Set
- Roll Up
- Roll Forward
- Arithmetic
- Variance (a.k.a. Difference)
- Adjustment (a.k.a. Restatement, Correction of Error)
- Text Block
- Member Aggregation
- Member Nonaggregation
- Roll Forward Info

As stated, the focus of this document is not each of the other logical patterns; rather the focus of this specific document is the similarities of each of these information block objects.

Axioms

The following is a summary of the logic that exists within each and every information block object that is contained within a business report or financial report.

1. There exists a set of information block objects which comprise a business report or financial report.
2. Each information block object is identifiable as being one of the following logical patterns of information: Set, Roll Up, Roll Forward, Arithmetic, Variance, Adjustment, Member Aggregation, Member Nonaggregation, Roll Forward Info.
3. If any other blocks of information logic patterns exist; then that logic pattern can be documented and added to the set of existing logic patterns listed above. At this time, there are no such known additional logic patterns.
4. Information block objects are defined by a combination of dimension/member logical patterns and lineitems/abstract/concept logical patterns.
5. LineItems MUST always exist so a LineItem pattern (a.k.a. concept arrangement pattern) will always exist.
6. Explicitly defined noncore Dimensions/Members MAY exist (a.k.a. member arrangement patterns) but are not required although core aspects (reporting entity, concept, calendar period) always exist.
7. Every information block object can be modeled using XBRL:
    a. Presentation relations following logical relationships between the artifacts used to model this information which include: Network, Hypercube, Dimension, Member, LineItem, Abstract, Concept.
    b. Calculation relations, if roll up mathematical relations exist, using Concepts.
    c. Definition relations, if a hypercube exists.
    d. XBRL Formulas, if additional mathematical relations exist.
    e. Facts.

8. It is possible to convert XBRL presentation relations into proper XBRL calculation relations and XBRL Definition relations if the XBRL presentation relations are represented logically and consistently.
9. Common practices or common knowledge for formatting numeric and nonnumeric information exists. (Note that different locals and different user preferences can exist for this common knowledge)
10. It is possible to generate artifacts that are human readable and where it is possible to understand the logic of the information conveyed by a block of information.
11. One block of information can be related to one or more other blocks of information; there are logical interconnections that exist between blocks of information.
12. A disclosure is comprised of one-to-many blocks of information.
13. A block of information can be complete or incomplete (adequate or inadequate) in terms of the machine-readable rules that describe the logical of that block of information. It is highly desirable that the rules provided are complete and adequate (as contrast to incomplete and/or inadequate).
14. Disclosure names (tokens, identifiers) may, or may not, be defined by a base XBRL taxonomy; if not defined that supplemental/enhanced information can be defined by a third party.