Work group 3 for IBCS® Version 1.2
Application of semantic notation: Which rules are mandatory, which optional?

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Introduction
At the London IBCS 2018 conference, there was a number of conversations about
- How consultants guide companies on adopting the International Business Communication Standards and what is required for it to determined IBCS compliant.
- How the IBCS association keeps the standard nature of the IBCS semantic rules while giving companies flexibility to adopt the core building blocks of IBCS while maintaining flexibility in adhering to other requirements.

As a result, a work group was set up to tackle the questions of which rules are mandatory, which rules are optional? The work group comprised of Edyta Szarska, Jürgen Faisst and Bryan Gough.

The work group went through the semantic rules in detail and grouped those that we think are required IBCS notation and which ones where there is IBCS suggested notation but the company has the ability to determine its own notation standards. The work group considered the rules as laid out in v1.1 as well as the notation manual template IBCS version 1.1.

Why only semantic rules?
It was agreed that the IBCS notation required semantic rules are the building blocks of IBCS which remain core to building a standard which can be consistently applied by the many users of business reports, presentations and dashboards in aiding comprehension across differing companies, industries and locations. Also, the semantic rules are the only ones depending on conventions rather than scientific research.

Y is always displayed as X and a display of X means Y
As part of the discussion, there was detailed conversations around whether all rules could work bi-directional or have exceptions to the rule working in both directions.
- Bi Directional - Y is always displayed as X and a display of X means Y
    Time series is always presented horizontally, horizontal presentation means a time series.
- One directional – Y is always displayed as X but a display of X doesn't necessarily mean Y
    o *Time series is always presented horizontally but horizontal presentation doesn't not necessarily mean a time series.*

In the case of the time series being presented horizontally, it was deemed that other kinds of graphical presentation could be horizontal (statistical, bell chart) so this is one directional.

Suggested classification of IBCS semantic notation
The work group have grouped the documented in two parts:
(1) Which semantic rules require the report designer to follow the IBCS stated notation as documented in International Business Communications Standards (IBCS Version 1.1) and in the Notation manual template (IBCS version 1.1), these are classified as "IBCS notation required".
(2) Which IBCS stated notation can be used as a suggested notation with however the company having the ability to amend the notation to fit corporate circumstances "Company Specific notation". However, IBCS still requires as a rule that the company specific notation is applied consistently across that company's business reports, presentations and dashboards.

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Suggested classifications for semantic rules

Unify 1 – Unify Terminology.
Covering UN 1.1 - Unify Terms and Abbreviations and UN 1.2 - Unify Numbers, units and dates.

#	Rule	IBCS notation required	Company specific notation
1.1	Unify Terms and abbreviations		✓
1.2	Unify numbers, units and dates		✓

It is suggested that the choice of which terminology to use is at the optionality of the company but it is vital that whatever is chosen should be used consistently across the organization.

Unify 2.1 – Unify Message

#	Rule	IBCS notation required	Company Specific notation
2.1	Unify message - Position at the top - Exact position and layout	 ✓	 ✓

In terms of the position of the message, IBCS requires that the message should be placed at the top of the report, but in terms of the exact position and layout we believe the IBCS notation as stated are logical suggestions but the company is given the ability to adjust the exact position and layout (for example, 3 lines rather than 2) can be included in the company specific notation manual as long as applied consistently.

Unify 2.2 – Unify titles and subtitles.

#	Rule	IBCS notation required	Company Specific notation
2.2	Unify titles and subtitles - Position title at the upper left corner - Title contents complete in combination of title and subtitle (Reporting unit, measure and time) - Exact position and layout	 ✓ ✓	 ✓

IBCS notation requires that the title (but not subtitles) are positioned in the top left corner but the exact position as stated in the notation manual can be adjusted to a company specific notation but again any company specific notation should be applied consistently.

It is an IBCS requirement that a combination of any title and applicable subtitle, includes the name of the reporting unit, measure and time. Any elements that relate to the whole report should be included in the title, where as any element which relates to a subset of the report should be included in the relevant subtitle.

IBCS notation manual has given recommendations for the exact position and layout of any title or subtitle, but this can be amended to a company specific notation as long as its applied consistently.

Unify 2.3 – Unify the positions of legends and labels.

#	Rule	IBCS notation required	Company Specific notation
2.3	Unify the positions of legends and labels - No use of external legends and labels - Exact position and layout	✓ *(with exceptions)*	✓

The use of imbedded labels is part of the required IBCS notation however in some exceptional circumstances it would be deemed appropriate (for example, large amount of data sets, charts with two value axes. IBCS still recommends the use of embedded legends and labels where possible. The exact positioning and layout of legends and labels are not dictated by the IBCS notation and can be adjusted for a specific company.

Unify 2.4 – Unify comments

#	Rule	IBCS notation required	Company Specific notation
2.4	Unify Comments - Link comments to content - Exact position and layout	✓	✓

Due to IBCS the level of comprehension increases when comments refer directly to the visual representation, therefore the linking of comments to the data visualization is a required IBCS notation however, the exact positioning and layout can be adjusted to company specific notation (this however should be followed consistently).

Unify 2.5 – Footnotes

#	Rule	IBCS notation required	Company Specific notation
2.5	Unify footnotes		✓

Where footnotes are required to provide general explanations or explanations of abbreviations IBCS suggested the placement of the footnote at the bottom left corner but leaves the final format and placement to a company specific notation manual.

Unify 3.1 – Unify measures

#	Rule	IBCS notation required	Company Specific notation
3.1	Unify Measures		
	- Ratios half width of basic measures	✓	
	- Exact width of basic measure as percent of category width (e.g. two thirds)		✓

To aid comprehension and report understanding, IBCS notation requires there to be a distinction between basic measures and ratios. IBCS requires that the ratio be ½ the width of the basic measure as a simple way of achieving that distinction. However, the exact width of a basic measure as percent of the category width can vary as long as it is applied consistently throughout.

Unify 3.2 – Unify Scenarios

#	Rule	IBCS notation required	Company Specific notation
3.2	Unify Scenarios		
	- AC solid, PL outlined, FC hatched	✓	
	- Previous periods lighter in case of comparisons	✓	
	- Naming and abbreviations		✓

IBCS notation requires actual data being solid dark color, plan data being represented by bordered areas and expected (forecasted) data is hatched. The use of previous period actual data (like PY) being a lighter color than the latest data is only applied in case of comparisons.

Note: Whereas previous periods being a reference for comparison are always depicted gray, gray color doesn't necessarily mean a previous period. Gray color is used in many different cases, e.g. in stacked columns and bars.

IBCS suggests the abbreviations for the differing scenarios of AC, PL, FC and PY however the company notation can dictate alternative abbreviations as long as they don't hinder understanding and are used consistently. For example, a company may use BU representing Budget rather than PL as long as consistently applied.

Unify 3.3 - Unify Time periods and Points of time.

#	Rule	IBCS notation required	Company Specific notation
3.3	Unify time periods and points of time		
	- Orientation of time series is horizontal and from left to right	✓	
	- Abbreviations		✓
	- Different category widths for different period types on a single page (the shorter the period the smaller the width)	✓	

Required IBCS notation remains that a time series is represented horizontally from left to right, however horizontal display may not necessarily represent a time series. Exceptions include statistical graphs like bell curves.

The use of different category widths to distinguish between sizes of time periods (years compared to days) remain an IBCS required notation but is only required when the distinction is useful to the comprehension of the report, e.g. if the different period types are displayed on a single page.

Unify 3.4 – Unify Structure dimensions, use vertical dimensions

#	Rule	IBCS notation required	Company Specific notation
3.4	Unify structure dimensions		
	- Orientation of structures vertically (from top to bottom)	✓ (with exceptions)	

IBCS required notation that structures such as regions, business units, customers etc. are structured vertically. However as noted in 3.3, there are exceptions to this rule where global standards and clarity of information means that data that is not time periods is represented horizontally (e.g. statistical representations).

Unify 4.1 – Unify Scenario Analysis

Scenario Comparisons

#	Rule	IBCS notation required	Company Specific notation
4.1	Unify scenario analysis – *Scenario Comparison*		
	- Scenario comparisons done by overlapped columns, scenario triangles or both.	✓	
	- Reference scenario positioned to the left (horizontal) or above (vertical).	✓	
	- "+" used on positive variances	✓	
	- Use of semantic axes	✓	

IBCS gives two options for representation of scenario comparisons, either the overlapped columns / bars, the use of scenario comparison triangles or a combination of both options when comparing more than one scenario. It is deemed that these are the only ways scenario comparisons should be represented, so remains a required notation. The position of the reference scenario (in an Actual and PY comparison PY is the reference scenario) to the left in a horizontal display or the top in a vertical display remains IBCS required notation.

The use of "+" to emphasis the variance when labelling a positive variance remains a required IBCS notation whereas the notation for a negative variance should follow the company specific notation as defined in reference to UNIFY 1.2.

The use of the scenario representation as stated in UNIFY 3.2 in the axis, is believed to aid the user of the information so the use of Semantic axes remains a required IBCS notation.

Colors for displaying variances

#	Rule	IBCS notation required	Company Specific notation
4.1	Unify Scenario analysis – *Colors for displaying variances*		
	- Red and green represent good and bad variances	✓	
	- Color for neutral variance		✓
	- Choice of color code for red, green and gray		✓

The use of red and green was deemed universal as indicators for good and bad, so remains a required IBCS notation however the choice of a color for neutral variances or the choice of color code for the red and green can be specified in the company's own notation manual.

Other scenario analysis items

Rule	Rule	IBCS notation required	Company Specific notation
4.1	Unify Scenario analysis – Other issues - Colored pin with semantic head for relative variances. - Abbreviations	✓	✓

The coloring of the heads of pins on relative variances remains part of the required IBCS notation, with the color choices following the company specified notation. Same is with abbreviations, however the IBCS suggestions are worth considering.

Unify 4.2 – Unify time series analysis and Unify 4.3 – Unify structure analysis

#	Rule	IBCS notation required	Company Specific notation
4.2& 4.3	Unify time series and structure analysis - Symbols and abbreviations		✓

Symbols and abbreviations used in time series analysis and structural analysis are suggested by the IBCS, for example the use of _Mar'19 for representing YTD March 2019 however the company has the ability to set its own notation for symbols and abbreviations when relating to this kind of analysis.

5. Unify Indicators

#	Rule	IBCS notation required	Company Specific notation
5 (incl. 5.1, 5.2& 5.3)	Unify Indicators - Consistent use of indicators - Specific design of indicators - Usage of outlier indicator for unimportant outliers only.	✓ ✓	✓

When using highlighting, scaling or other indicators, IBCS have given suggestions on how this can be achieved with suggested notation but the company has the ability to set its own specific notation as long as the notation is applied consistently. For example, the IBCS suggests the use of the highlighting ellipse to bring attention to key data points. The company could decide that highlighting with a marker is a better

fit for that company, as long as this is set out in the company's notation manual and is applied consistently.

To maintain the integrity of the business report, presentation or dashboard it is IBCS required notation that outlier indicator usage is used only for unimportant outliers.