This concerns chapter UN 3.2 “Unify scenarios” of the IBCS® Standards

Some ideas concerning the semantic notation of scenarios
to be released in the next version of IBCS®

Consistent use of fills and labels when comparing to previous periods

Beat Honegger, Raphael Branger

beat.honegger@plus-it.ch
rbranger@it-logix.ch

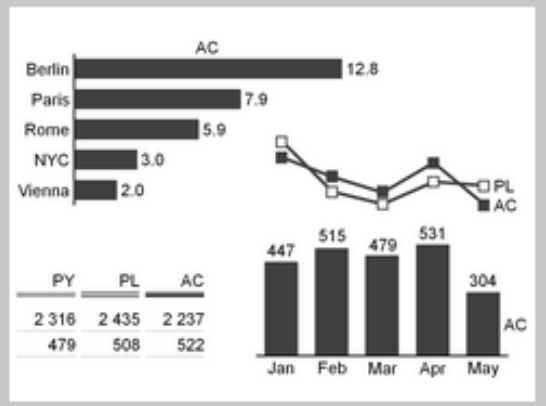
Agenda

- Introduction (10’)
  - Discovering the problem
  - What does IBCS V1.1 say & inconsistencies on the SUCCESS poster
- Proposals for an improved standard (10’)
  - Time Series vs. Scenario Comparison Analysis
  - Absolute vs. relative time labels
- Discussion of Table Header Alternatives (15’)
  - What’s the issue?
  - Group Work
- Summary (5’)

Discovering the Problem

- Gather in groups of three and get paper and a pencil.
- **Please draw a simple report containing the following elements**:
  - Title area
  - Column chart
  - Table
- Table: we want to compare revenue figures of 2016 and 2017.
- Chart: we want to compare the revenue figures of 2012..2017

What does IBCS V1.1 say?



Actual scenarios: measured data

Scenarios with measured data are identified by a solid dark (e.g. black or dark gray) fill for the areas of the respective visualization elements.

If measured data of recent periods ("Actual") are compared with measured data from earlier periods (e.g. "Previous year", "Previous month"', "Month YoY") the areas representing the earlier periods are identified by a lighter solid fill (e.g. light gray).

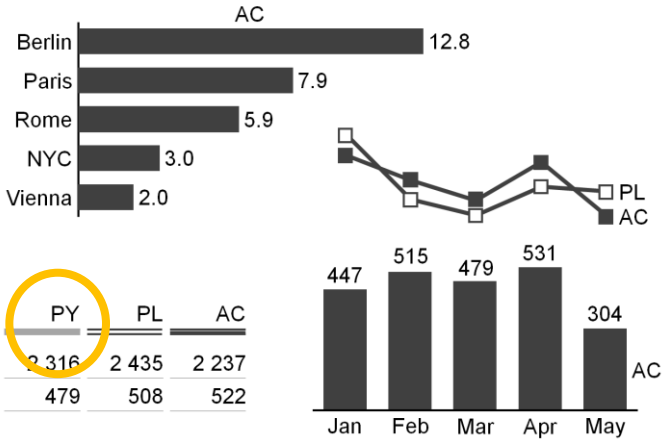
The suggested two-letter codes for the most important measured data scenarios are "AC" for "Actual" and "PY" for "Previous Year".

https://www.hichert.com/standards/#ids%5B%5D=18710

It's pretty simple, isn't it?

The problem: There is some understanding in the IBCS community, that previous year periods are to be colored «in general» in a lighter version of the color used for the actual period. But as the following examples show:

- There is no consistent application of light coloring for previous periods in the various sample pictures.
- Titles for previous periods are not consistent



https://www.hichert.com/wp-content/uploads/2017/08/UN-3.2-1.png

EX 1.2 Use appropriate table types

Time table	'14	'15
Italy		
Austria		
UK		
France		
Rest		
Europe		

Variance table	PL	FC	ΔPL
Italy			
Austria			
UK			
France			
Rest			
Europe			

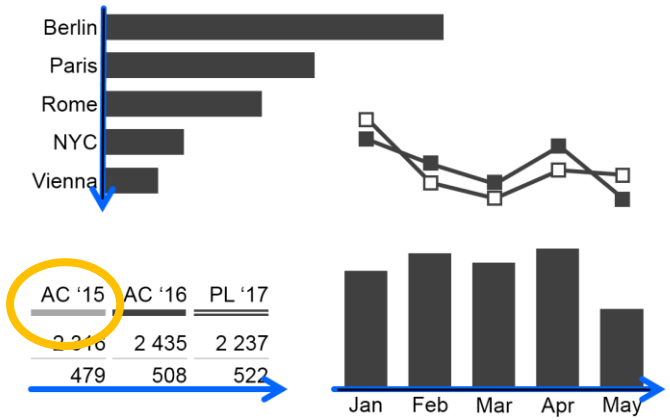
Cross table	Sales	Profit
Italy		
Austria		
UK		
France		
Rest		
Europe		

https://www.hichert.com/wp-content/uploads/2017/08/EX-1.2.png

Electronic Inc.
Net sales in mEUR
2010..2016

	2010	2011	2012	2013	2014	2015	2016
Austria	560	530	546	543	555	509	456
Belgium	56	72	58	59	77	79	88
France	140	149	134	137	165	155	178
Germany	345	279	260	234	288	297	268
Italy	78	91	86	77	69	59	71
Sweden	77	81	86	85	93	95	98
Denmark	61	70	66	70	78	79	93
Rest of EU	502	498	545	601	688	782	655
EU	**1 819**	**1 830**	**1 781**	**1 811**	**2 013**	**2 055**	**1 907**

https://www.hichert.com/wp-content/uploads/2017/08/EX-1.2-22.png



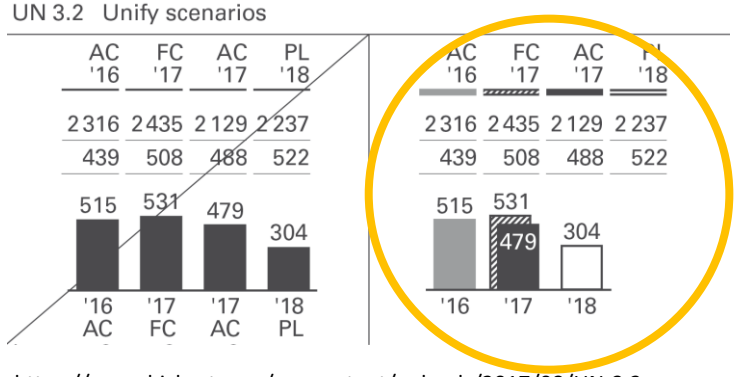
https://www.hichert.com/wp-content/uploads/2017/08/UN-3.3-1.png

Electronic Inc.
Profit and loss statement in mUSD
2013 and 2014, ΔPY and ΔPY%

	2013		2014		ΔPY		ΔPY%	
	Home	Intern.	Home	Intern.	Home	Intern.	Home	Intern.
Software revenue	265	809	244	906	-21	+97	-8%	+12%
Support revenue	87	244	88	255	+1	+11	+1%	+5%
Consulting revenue	121	388	114	340	-7	-48	-6%	-12%
Revenue	**473**	**1 441**	**446**	**1 501**	**-27**	**+60**	**-6%**	**+4%**
Cost of sales	122	477	134	450	+12	-27	+10%	-6%
Gross profit	**351**	**964**	**312**	**1 051**	**-39**	**+87**	**-11%**	**+9%**
Research and development expenses	78	223	88	240	+10	+17	+13%	+8%
Selling and general administrative expenses	97	307	99	298	+2	-9	+2%	-3%
Other operating income	22	45	52	145	+30	+100	+136%	+222%
Other operating expenses	76	45	62	55	-14	+10	-18%	+22%
Other financial income (expenses), net	12	- 5	23	- 8	+11	-3	+92%	+60%
Income from continuing operations bef. tax	**66**	**349**	**- 12**	**321**	**-78**	**-28**	**-118%**	**-8%**
Income tax expenses	23	122	27	129	+4	+7	+17%	+6%
Income from continuing operations	**43**	**227**	**- 39**	**192**	**-82**	**-35**	**-191%**	**-15%**
Income from discontinued operations	56	66	66	72	+10	+6	+18%	+9%
Net Income	**99**	**293**	**27**	**264**	**-72**	**-29**	**-73%**	**-10%**

https://www.hichert.com/wp-content/uploads/2017/08/EX-1.2-27.png

UN 3.2 Unify scenarios



https://www.hichert.com/wp-content/uploads/2017/08/UN-3.2.png

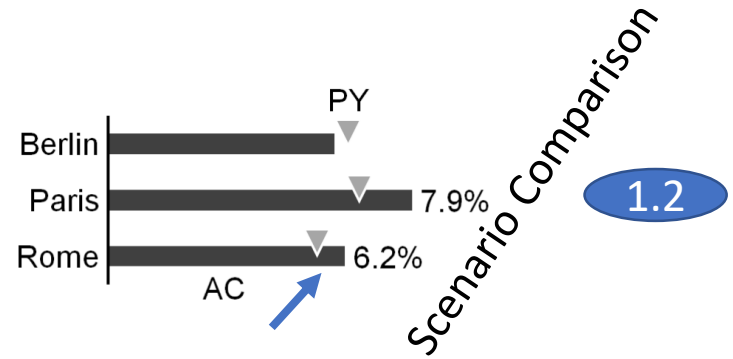
Proposals for an improved standard

As a work group we suggest that the IBCS are enhanced with one or more statements of how to handle the coloring and labeling of previous periods.
But first of all, we need to better grasp the problem.

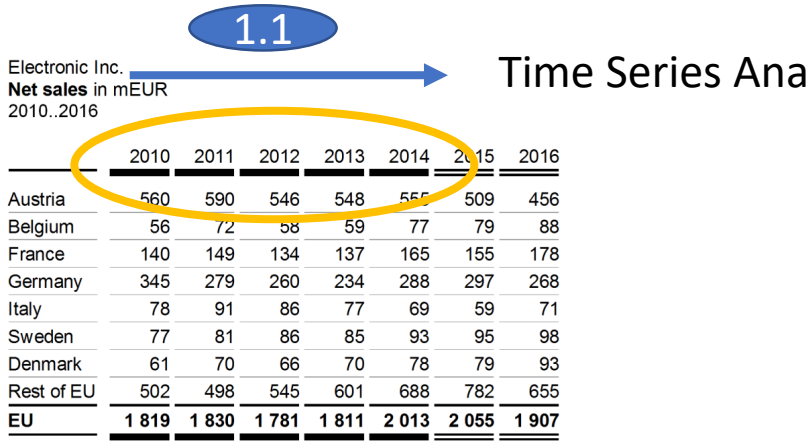
1. We need to clarify that there are two major types of analysis we can apply:

    1. **Time Series Analysis**
    2. **Scenario Comparison** (or Variance) **Analysis**
       In this workshop we focus on the comparison of AC to PY values!

https://www.hichert.com/wp-content/uploads/2017/08/UN-3.3-1.png



https://www.hichert.com/wp-content/uploads/2017/08/UN-4.1-2..png



	2010	2011	2012	2013	2014	2015	2016
Austria	560	590	546	548	555	509	456
Belgium	56	72	58	59	77	79	88
France	140	149	134	137	165	155	178
Germany	345	279	260	234	288	297	268
Italy	78	91	86	77	69	59	71
Sweden	77	81	86	85	93	95	98
Denmark	61	70	66	70	78	79	93
Rest of EU	502	498	545	601	688	782	655
EU	**1 819**	**1 830**	**1 781**	**1 811**	**2 013**	**2 055**	**1 907**

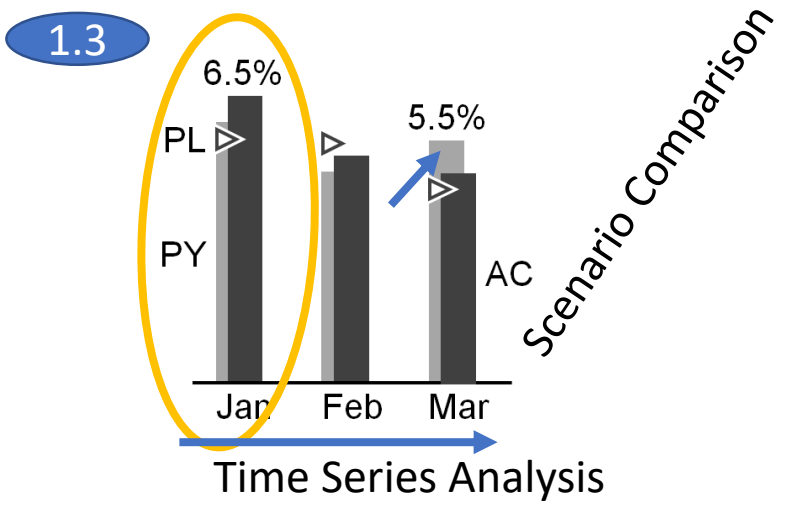
https://www.hichert.com/wp-content/uploads/2017/08/EX-1.2-22.png

	PY	PL	AC	ΔPY	ΔPY%	ΔPL	ΔPL%
Austria	560	590	559	-1	-0%	-31	-5%
Belgium	56	72	58	+2	+4%	-14	-19%
France	140	149	134	-6	-4%	-15	-10%
Germany	345	279	260	-85	-25%	-19	-7%
Poland	78	91	86	+8	+10%	-5	-5%
Sweden	77	81	86	+9	+12%	+5	+6%
Italy	61	70	66	+5	+8%	-4	-6%
Other	502	498	545	+43	+9%	+47	+9%
Europe	**1 819**	**1 830**	**1 794**	**-25**	**-1%**	**-36**	**-2%**

https://www.hichert.com/wp-content/uploads/2017/08/EX-1.2-23.png

1. We need to clarify that there are two major types of analysis we can apply (cont.):

    3. **Especially in charts you can also combine these two analysis types in the same chart**:
    The «Scenario Comparison» then shows a past period usually on a higher level of the time hierarchy compared to the time series analysis, e.g. one year in the past for comparison with the current period.

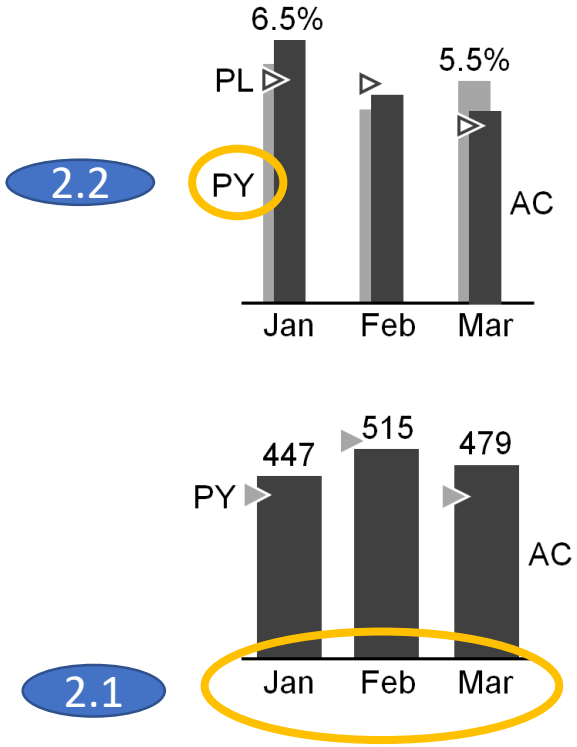


https://www.hichert.com/wp-content/uploads/2017/08/UN-4.1-1-1.png

Let's have a look at time related labels!

2. There are two kind of (time related) labels
   1. **«Absolute time labels»** like 2010, 2011, Jan, Feb etc.
   2. **«Relative time labels»** like AC and PY.
      The term relative indicates that the label can only be interpreted if you know the context which indicates the absolute time period.

      The **coloring (solid or light) are «relative» in the same sense** that they need an absolute context to be interpreted in the right way.



https://www.hichert.com/wp-content/uploads/2017/08/UN-4.1-1-1.png

Electronic Inc.
Net sales in mEUR
2010..2016

2.1

	2010	2011	2012	2013	2014	2015	2016
Austria	[illegible]	[illegible]	[illegible]	548	555	509	456
Belgium	56	72	58	59	77	79	88
France	140	149	134	137	165	155	178
Germany	345	279	260	234	288	297	268
Italy	78	91	86	77	69	59	71
Sweden	77	81	86	85	93	95	98
Denmark	61	70	66	70	78	79	93
Rest of EU	502	498	545	601	688	782	655
EU	**1 819**	**1 830**	**1 781**	**1 811**	**2 013**	**2 055**	**1 907**

https://www.hichert.com/wp-content/uploads/2017/08/EX-1.2-22.png

Electronic Inc.
Net sales in mEUR
2015-Q1

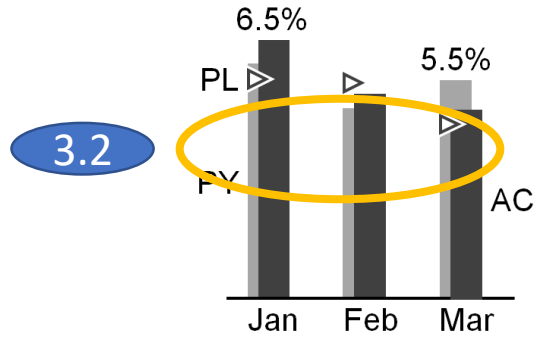
2.2

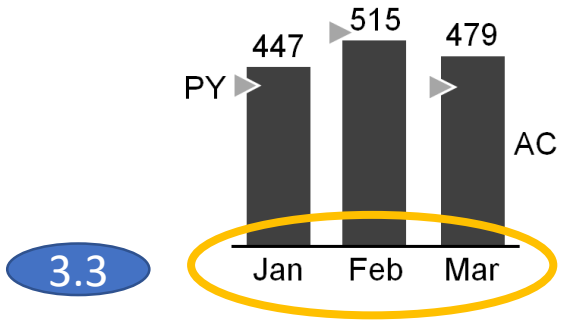
	PY	PL	AC	ΔPY	ΔPY%	ΔPL	ΔPL%
Austria	560	[illegible]	559	-1	-0%	-31	-5%
Belgium	56	72	58	+2	+4%	-14	-19%
France	140	149	134	-6	-4%	-15	-10%
Germany	345	279	260	-85	-25%	-19	-7%
Poland	78	91	86	+8	+10%	-5	-5%
Sweden	77	81	86	+9	+12%	+5	+6%
Italy	61	70	66	+5	+8%	-4	-6%
Other	502	498	545	+43	+9%	+47	+9%
Europe	**1 819**	**1 830**	**1 794**	**-25**	**-1%**	**-36**	**-2%**

https://www.hichert.com/wp-content/uploads/2017/08/EX-1.2-23.png

The following rules could be added to IBCS V1.2, e.g. in UN3.2 Unify scenarios:

3. Rules for the «Time Series Analysis»
    1. The overall title shows the beginning and the end of the time series with two dots in between.
    2. Columns and table headers representing a Time Series Analysis are drawn in solid dark color always (if they represent an AC figure). (Exception for tables showing only AC data; then no scenario indication is needed)
    3. The axis labels (below columns in charts, above column headers in tables) show the explicit name of the shown period (e.g. 2010, 2011, 2012 etc. or Jan, Feb, Mar etc.)





Electronic Inc.
Net sales in m
2010..2016

3.1

	2010	2011	2012	2013	2014	20	
Austria	560	590	546	548	555	509	456
Belgium	56	72	58	59	77	79	88
France	140	149	134	137	165	155	178
Germany	345	279	260	234	288	297	268
Italy	78	91	86	77	69	59	71
Sweden	77	81	86	85	93	95	98
Denmark	61	70	66	70	78	79	93
Rest of EU	502	498	545	601	688	782	655
EU	**1 819**	**1 830**	**1 781**	**1 811**	**2 013**	**2 05**	

3.3

3.2

https://www.hichert.com/wp-content/uploads/2017/08/EX-1.2-22.png

The following rules could be added to IBCS V1.2, e.g. in UN3.2 Unify scenarios:

4. Rules for the «Scenario Comparison»
    1. The overall title shows the «main» period. This sets the context to interpret the colors (dark, light) as well as comparison labels (PY, AC) right.
    2. Columns and table headers representing a Scenario Comparison Analysis (that means the comparison values, PY) are drawn in lighter color always.
    3. Columns representing a Scenario Comparison Analysis in charts (that means the comparison values, PY) don't need a dedicated label (e.g. 2010, 2011, 2012 etc. or Jan, Feb, Mar etc.) as these columns are relative to the «main» period. Optionally you can add a label «PY» to indicate the meaning of these columns.

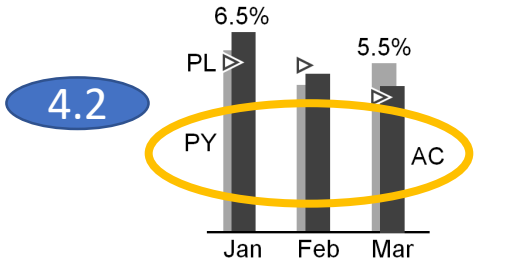
Electronic Inc.
Net sales in m€
2015-Q1

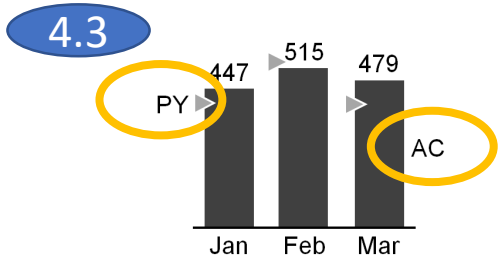
4.1

4.2

	PY	PL	AC	ΔPY	ΔPY%	ΔPL	ΔPL%
Austria	590	590	559	-1	-0%	-31	-5%
Belgium	56	72	58	+2	+4%	-14	-19%
France	140	149	134	-6	-4%	-15	-10%
Germany	345	279	260	-85	-25%	-19	-7%
Poland	78	91	86	+8	+10%	-5	-5%
Sweden	77	81	86	+9	+12%	+5	+6%
Italy	61	70	66	+5	+8%	-4	-6%
Other	502	498	545	+43	+9%	+47	+9%
Europe	**1 819**	**1 830**	**1 794**	**-25**	**-1%**	**-36**	**-2%**

https://www.hichert.com/wp-content/uploads/2017/08/EX-1.2-23.png





Discussion of Table Header Alternatives for Scenario Comparisons

①

Profit and loss statement in mUSD
2018 AC, PY, ΔPY, ΔPY%

2017	2018	ΔPY	ΔPY%

②

Profit and loss statement in mUSD
2018 AC, PY, ΔPY, ΔPY%

2017	2018	Δ2017	Δ2017%

③

Profit and loss statement in mUSD
2018 AC, PY, ΔPY, ΔPY%

PY	AC	ΔPY	ΔPY%

④

Profit and loss statement in mUSD
2018 AC, PY, ΔPY, ΔPY%

PY (2017)	AC (2018)	ΔPY	ΔPY%

⑤

Profit and loss statement in mUSD
2018 AC, PY, ΔPY, ΔPY%

2017 (PY)	2018 (AC)	ΔPY	ΔPY%

⑥

Profit and loss statement in mUSD
2017, 2018, ΔPY, ΔPY%

2017	2018	ΔPY	ΔPY%

⑦

Profit and loss statement in mUSD
2017, 2018, ΔPY, ΔPY%

2017	2018	Δ2017	Δ2017%

⑧

Profit and loss statement in mUSD
2018 AC, PY, ΔPY, ΔPY%

	2018		
PY	AC	ΔPY	ΔPY%

During the breakout session there was a clear vote for further discussing and refining the standards re this topic.
The table header variants 3 & 8 (multi years) got most approval. Variants 1 & 2 were discussed controversially and got approval from a minority only.
There was a general agreement not to repeat relative labels in the overall title.
There were the following additional ideas mentioned:

- Rename «Variance Table» into «Scenario Comparison Table» in order to unify naming between charts and tables
- Rename «AC» to «CY» (Actuals is a term valid for both, current year values as well as previous year values)
- Add a semantic color below delta column headers (similar to the semantic axis in variance charts) showing the comparison scenario.
- New variant 2 with Δ'18-'17 instead Δ2017
- If there is no need of the titles PY, AC if there are no variance shown.
- Find a Solution for the redundancy of black and grey with the Title PY and AC (example: 2017 {PY}, {PY:2017}..)

③

Profit and loss statement in mUSD
2018 ~~AC, PY, ΔPY, ΔPY%~~

PY	AC	ΔPY	ΔPY%

②

Profit and loss statement in mUSD
2018 ~~AC, PY, ΔPY, ΔPY%~~

2017	2018	Δ2017	Δ2017%

⑧

Profit and loss statement in mUSD
2018 ~~AC, PY, ΔPY, ΔPY%~~

	2018		
PY	AC	ΔPY	ΔPY%

①

Profit and loss statement in mUSD
2018 ~~AC, PY, ΔPY, ΔPY%~~

2017	2018	ΔPY	ΔPY%

Based on the findings on the previous slide, we might refine parts of the IBCS standard as follows:

5. The example EX1.2.27 shows a «Scenario Comparison Analysis», not a Time Series Analysis. And it shows a combination of relative coloring, absolute time lables (2013, 2014) and relative time labels (ΔPY, ΔPY%). The overall title indicates a time series.
    1. We suggest that the overall title should only show the main period (given the fact that this is not a time series but a comparison with one single previous period)
    2. The column headers should show either only relative labels
    3. or only absolute lables.
    4. For multi period tables (e.g. 2014, 2015) a hierarchy of table headers is appropriate.

5.0

Electronic Inc.
Profit and loss statement in mUSD
2013 and 2014, ΔPY and ΔPY%

	2013		2014		ΔPY		ΔPY%	
	Home	Intern.	Home	Intern.	Home	Intern.	Home	Intern.
Software revenue	265	809	244	906	-21	+97	-8%	+12%
Support revenue	87	244	88	255	+1	+11	+1%	+5%
Consulting revenue	121	388	114	340	-7	-48	-6%	-12%
Revenue	**473**	**1 441**	**446**	**1 501**	**-27**	**+60**	**-6%**	**+4%**
Cost of sales	122	477	134	450	+12	-27	+10%	-6%
Gross profit	**351**	**964**	**312**	**1 051**	**-39**	**+87**	**-11%**	**+9%**
Research and development expenses	78	223	88	240	+10	+17	+13%	+8%
Selling and general administrative expenses	97	307	99	298	+2	-9	+2%	-3%
Other operating income	22	45	52	145	+30	+100	+136%	+222%
Other operating expenses	76	45	62	55	-14	+10	-18%	+22%
Other financial income (expenses), net	12	- 5	23	- 8	+11	-3	+92%	+60%
Income from continuing operations bef. tax	**66**	**349**	**- 12**	**321**	**-78**	**-28**	**-118%**	**-8%**
Income tax expenses	23	122	27	129	+4	+7	+17%	+6%
Income from continuing operations	**43**	**227**	**- 39**	**192**	**-82**	**-35**	**-191%**	**-15%**
Income from discontinued operations	56	66	66	72	+10	+6	+18%	+9%
Net Income	**99**	**293**	**27**	**264**	**-72**	**-29**	**-73%**	**-10%**

https://www.hichert.com/wp-content/uploads/2017/08/EX-1.2-27.png

5.1 ③
Profit and loss statement in mUSD
2018 ~~AC, PY, ΔPY, ΔPY%~~

5.2
PY | AC | ΔPY | ΔPY%

② 5.3
Profit and loss statement in mUSD
2018 ~~AC, PY, ΔPY, ΔPY%~~

2017 | 2018 | Δ2017 | Δ2017%

②
Profit and loss statement in mUSD
2018 ~~AC, PY, ΔPY, ΔPY%~~

2017 | 2018 | Δ'18-'17 ~~Δ2017~~ | Δ'18-'17% ~~Δ2017%~~

⑧ 5.4
Profit and loss statement in mUSD
2018 ~~AC, PY, ΔPY, ΔPY%~~

2018
PY | AC | ΔPY | ΔPY%