



Introduction to XBRL

2014-05-07

Rome

Agenda

What is the problem that we try to solve and how to do it?

What is XBRL?

What are the components of an XBRL taxonomy – how to declare information requirements?

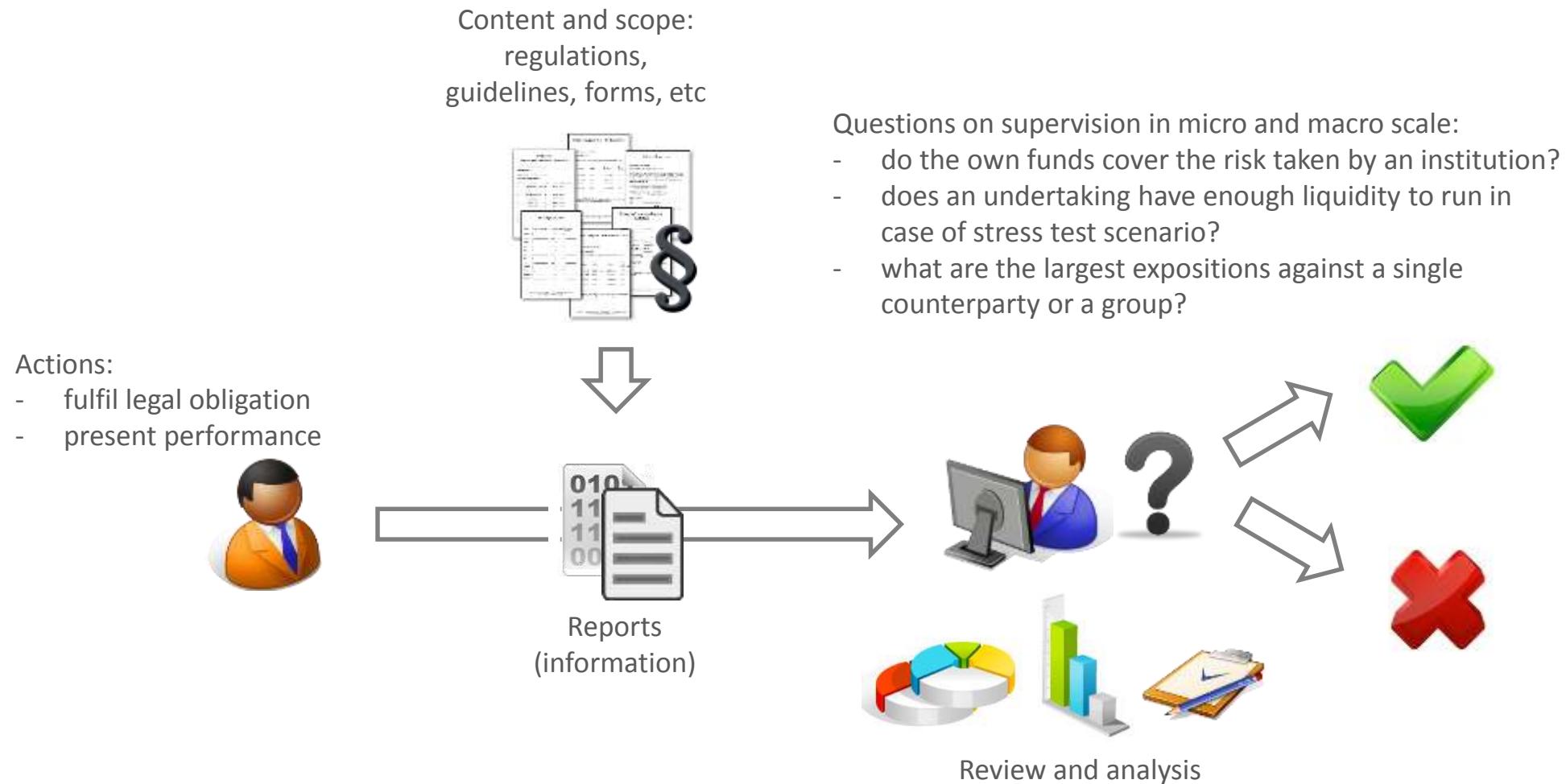
How does an XBRL report (instance document) look like?

Where to find what in the XBRL-DPM taxonomies of EBA and EIOPA?

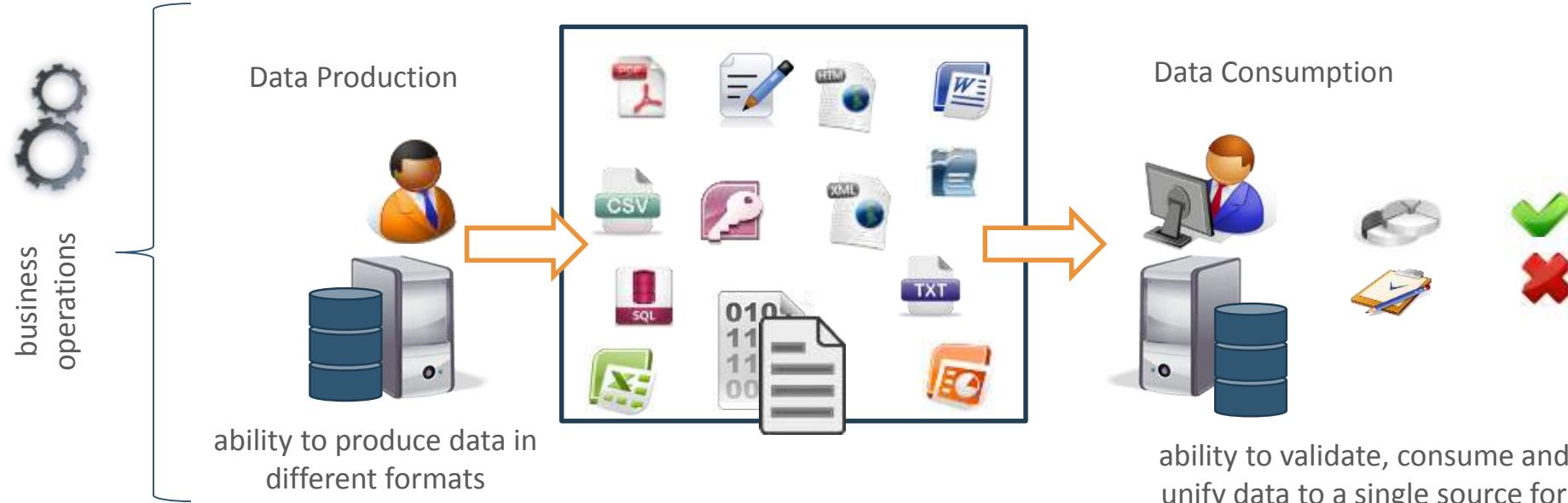
What are the tools and how to use them?



Why do supervisors need data?



What are the problems with data exchange?



consequences:

- need for creating costly interfaces for data extraction to and from different formats
- manual work of rekeying data: time consuming and error prone
- exchanged information missing semantics

result:

- high cost of data exchange (software and human labour)
- delayed access to data and low quality of received information causes ineffective decisions

solution: standard electronic data exchange format!

Which format to choose?



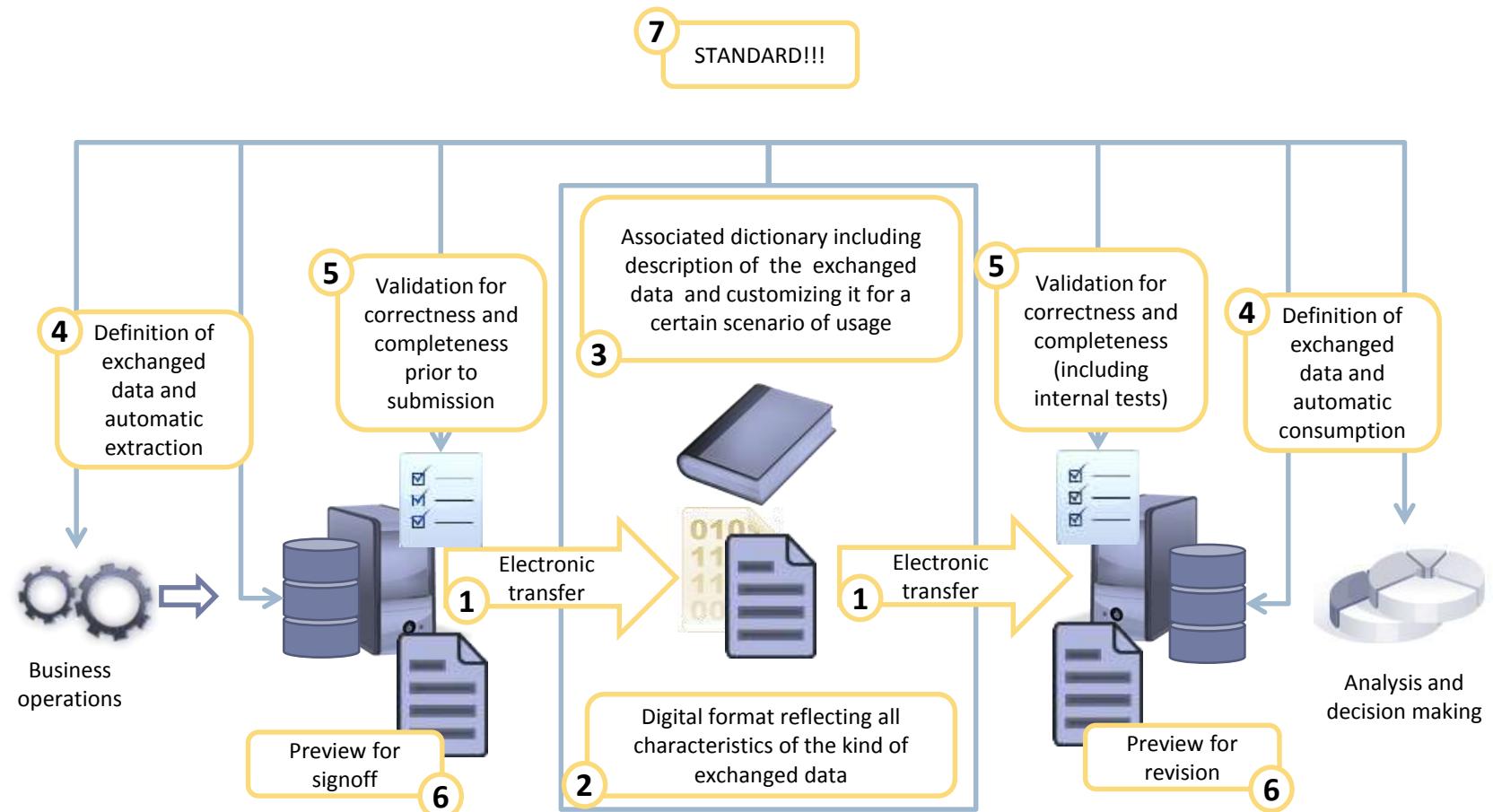
Industry standards:

- Producer, Product, ...
- Person, Social security number,
- Artist, Album, Song, ...
- Author, Book, ...
- Package, Sender, Receiver, ...

CONSOLIDATED INCOME STATEMENT				
Notes	2011	2010	2009	
	(in EUR thousands)			
Revenues	3	302 857	274 404	214 815
Cost of sales		168 143	161 525	129 779
Gross profit	134 714	112 879	85 036	
Selling expenses		25 405	27 382	27 383
General administrative expenses		21 288	17 887	16 030
Research and development costs	5	32 957	28 286	26 532
Other operating income		10 045	5 332	6 632
Notes	2011	2010	2009	
	(in EUR thousands)			
Revenues	3	302 857	274 404	214 815
Cost of sales		168 143	161 525	129 779
Gross profit	134 714	112 879	85 036	
Basic earnings per share (€)		0,48	0,36	0,21
Diluted earnings per share (€)	23	0,48	0,35	0,20



What are the functional and technical requirements for a data exchange format?

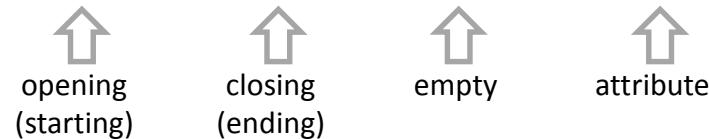


What is XML?

eXtensible Markup Language by W3C: a framework for developing electronic data exchange formats

a markup: annotates fragments of a text document in order to assign it with meaning or for processing purposes

- text within angle brackets: <markup>, </markup>, <markup attribute="..." />



- examples:

```
<person sex="male" age="49">John Smith</person>
```

```
<album genre="pop">
  <title>X&Y</title>
  <artist country="England" type="band">Coldplay</artist>
</album>
```

XML is just syntax, a framework for defining domain specific standards: MathML, ebXML, BioML, ... (Wikipedia lists over 200 dialects based on XML)

How can it look in XML?

```
<FAHFT_D_CA U="EUR" C="123456" P="2014-03-01" D="Q">1090910</FAHFT_D_CA>
```

```
<credit_institution code="123456">
    <period start="2014-01-01" end="2014-03-31">
        <dp_1234 currency="EUR" scale="0" >1090910</dp_1234>
        (...)</period>
    </credit_institution>
```

```
<Series FREQ="Q" COLLECTION="B" TIME_FORMAT="P3M" CURRENCY="EUR" INSTITUTION="123456">
    <Obs TIME_PERIOD="2014-03" OBS_VALUE="1090910" OBS_STATUS="A"/>
    (...)</Series>
```

DP_1234 fx 1090910

A	B	C	D	E	F
1	1. Balance Sheet Statement [Statement of Financial Position]				
2	1.1. Assets				
3					
4					
5					
6					
7	010	Cash and cash balances at central banks	<i>IAS 1.54 (i)</i>		6 390 136
8	020	Cash on hand	<i>ITS part 2.1</i>		3 400 890
9	030	Cash balances at central banks	<i>ITS part 2.2</i>	3	2 980 234
10	040	Other demand deposits	<i>ITS part 2.3</i>	3	9 012
11	050	Financial assets held for trading	<i>IFRS 7.8 (a)(ii); IAS 39.9, AG 14</i>		2 358 292
12	060	Derivatives	<i>IAS 39.9</i>	7	1 090 910
13	070	Equity instruments	<i>IAS 32.11</i>	3	1 200 345
14	080	Debt securities	<i>ITS part 1.14, 15</i>	3	59 821
15	090	Loans and advances	<i>ITS part 1.14, part 3.35</i>	3	7 216



What is

XBRL®

eXtensible Business Reporting Language

?

a flexible framework:
enables
customization and
application in
different reporting
scenarios
independent from
legal regulations

designed for
description and
exchange of business
related data (includes
all required
characteristics and
functionalities for this
application)

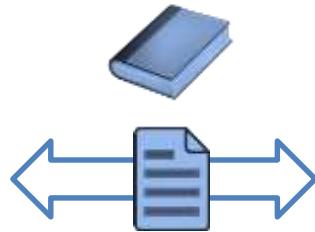
informative
reporting:
exchange of
aggregated data
for analysis and
decision making

communication
(encoding and
decoding) of
information:
sentences/statements
built according to
certain syntax
(grammar) and
semantics (meaning)

public, open, free standard!

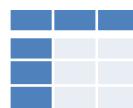
What is the application of XBRL?

initial requirements:



1. standard of describing business concepts in order to...
2. ...transfer information between different systems

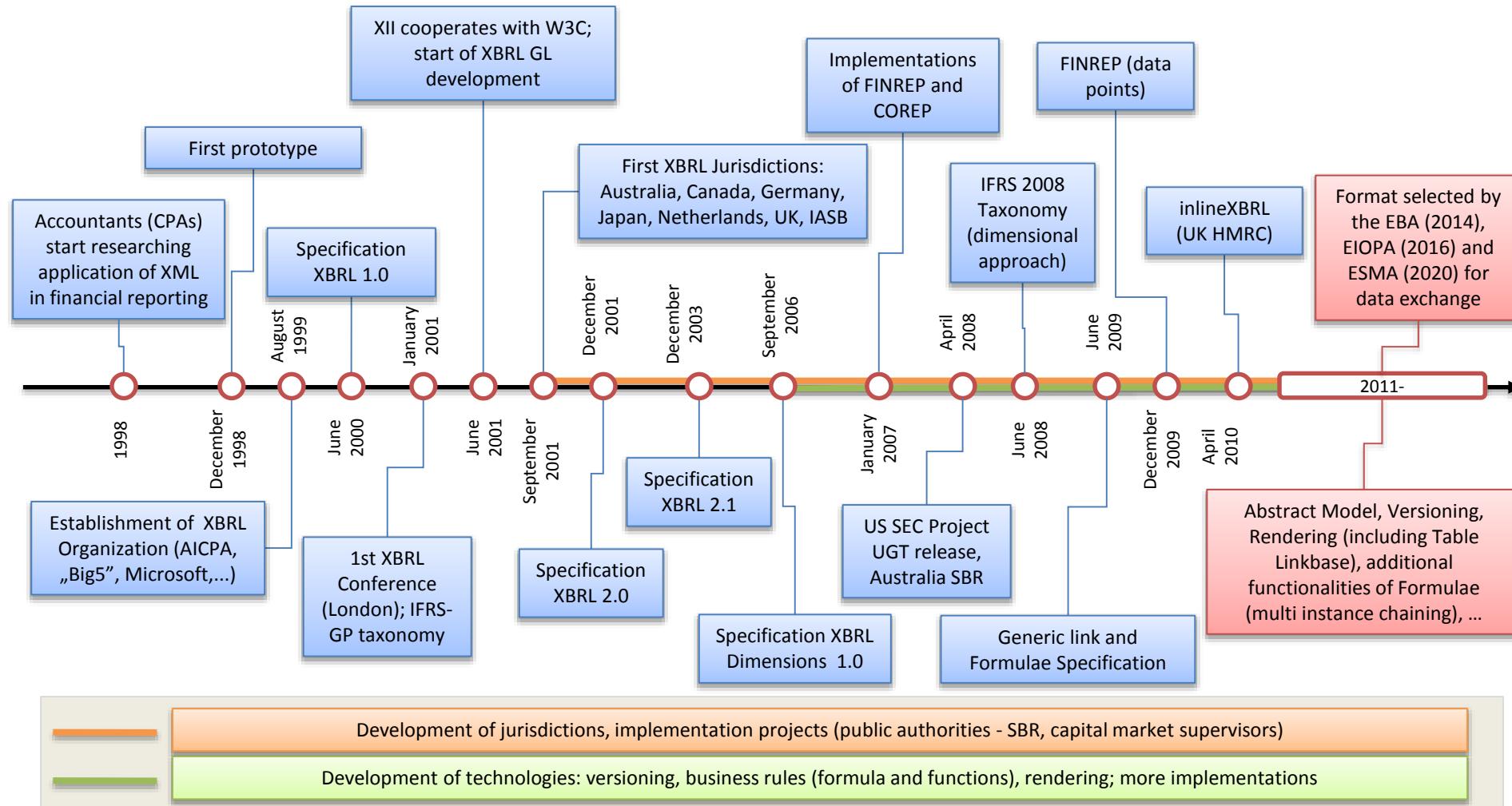
additional requirements:



3. advanced validation (mathematical/logical rules, error messaging)
4. visualization/rendering (e.g. tax forms, tables, reports)
5. versioning of definitions (dictionaries) in time/space
6. „drill-down“ of information (XBRL Global Ledger)

What is the story behind XBRL?

(a few important milestones)



Who stays behind it?

non-profit organization and local jurisdictions (coordination/management of initiatives and works)

700+ members (direct or indirect)

- commercial companies: audit, consulting, software, banks, stock exchanges
- non-profit organizations: accountants, securities exchanges, banks, analysts
- public authorities: banking supervisors, central registers, central banks, securities regulators, statistical offices, tax authorities

aim: development and proliferation of XBRL through the following activities

- management/coordination (Board of Directors, Standards Board, Best Practice Board, etc)
- development and maintenance of specifications (working groups: permanent/temporary)
- support in implementation projects
- increasing awareness (e.g. through events, trainings, ...)

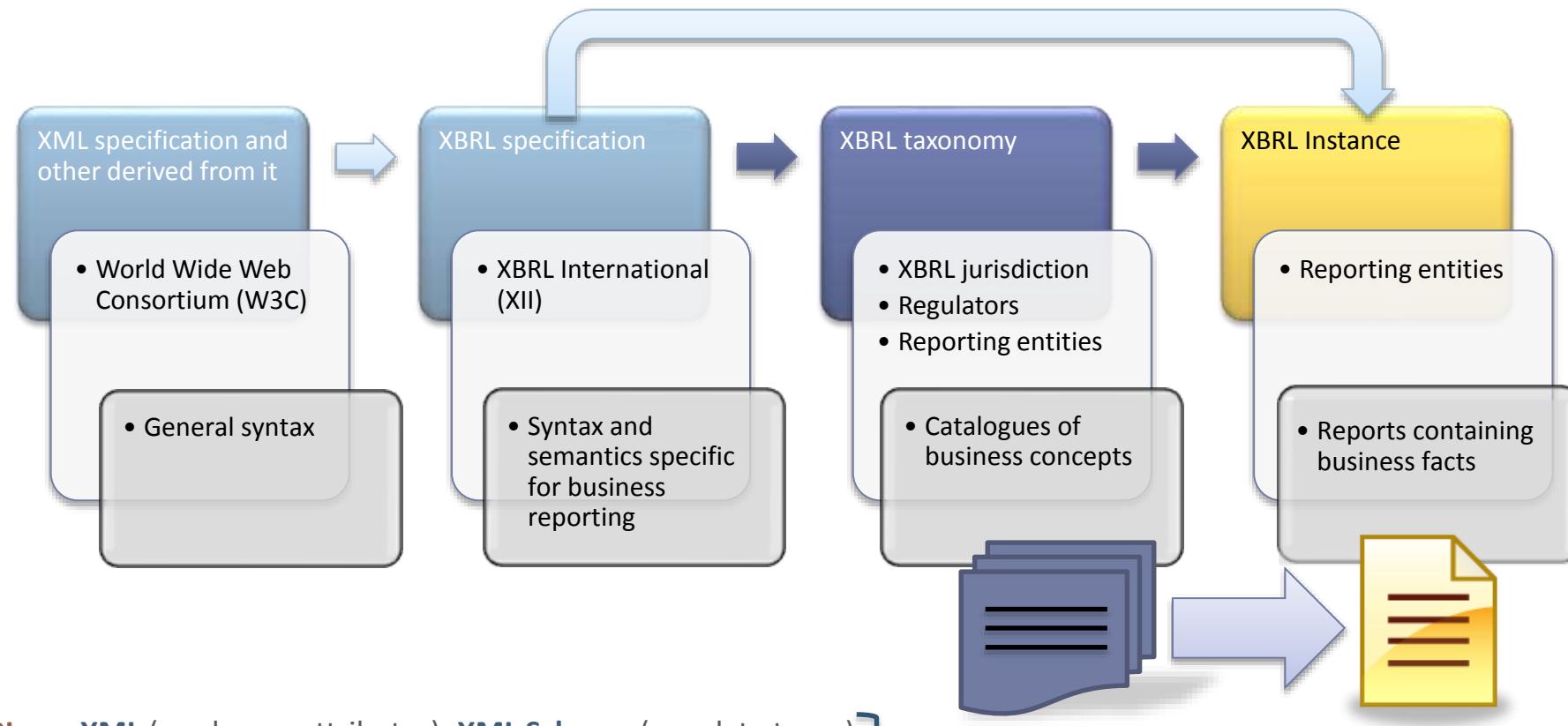
The screenshot shows the XBRL International website. At the top, there's a navigation bar with links like 'Home', 'About us', 'Join and services', 'Project map', 'Events calendar', 'Membership', and 'Contact us'. Below the navigation is a search bar. The main content area features a large blue banner for the '2014 XBRL INTERNATIONAL CONFERENCE' with a world map graphic. To the right of the banner is a sidebar titled 'Upcoming Events' listing various conferences and webinars. At the bottom of the page, there are sections for 'Table Linkbase (aper Published as a Recommendation)', 'XII seeks Technical Director', and 'XBRL POWERED BY ANALYTICAL PLATFORM'.



Who is using XBRL and where?



What are the main components of XBRL?



XBRL = **XML** (mark-ups, attributes), **XML Schema** (e.g. data types)

+ **XLink**, **XPointer** (relations)

+ **Namespace** (owners and versions)

+ **some more rules** (e.g. prohibiting relations)

+ **semantics** (types of relations: presentation guidance, labels, references, dimensions, formulae, ...)

syntax

Where are described the rules of XBRL?

documents describing fundamental technical definition of how XBRL works

- specifications
 - recommendations - XBRL 2.1, Dimensions 1.0, Formula 1.0, Inline XBRL, Versioning, ...
 - candidate releases/recommendations – Formula Extension Modules
 - internal/public working drafts – Table linkbase, Rendering
- conformance suits (tests for compliance and compatibility)
- best practice documents (FRTA, FRIS, GFM, ...) and project specific rules (EDGAR Filer Manual, Eurofiling/EBA/EIOPA Filing Manual)
- Abstract Model (UML diagrams)
- other: registries, collaboration, streamlining, etc

technical files (XML Schema)

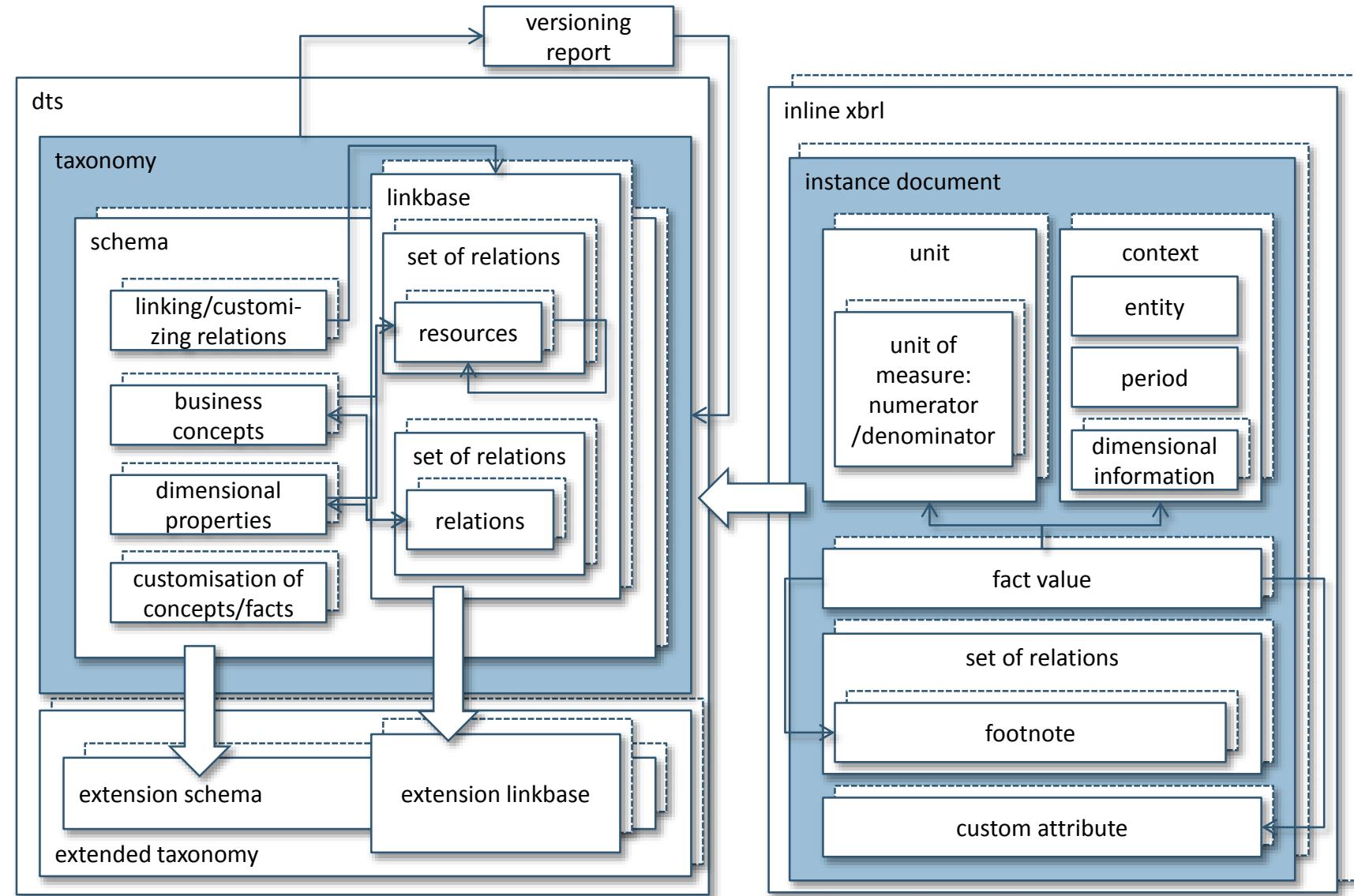
development process:



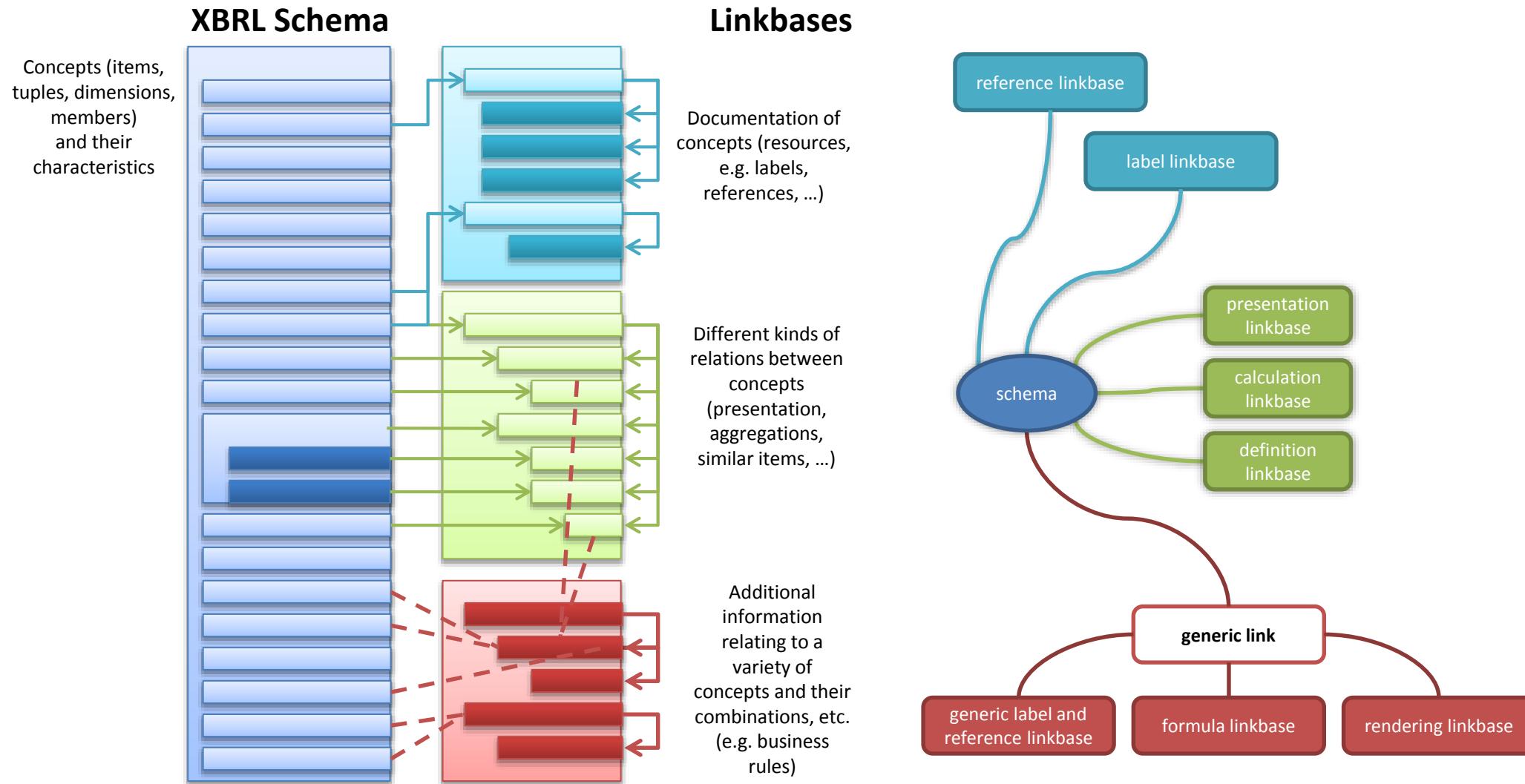
The screenshot shows the XBRL Specifications website. At the top left is the XBRL logo. The top navigation bar includes links for "The XBRL Standard" and "XBRL Specifications". The main content area has a sidebar with "Specification Index" and "XBRL Specifications" sections, including links for "All Document(s) by Area" and "All Document(s) by Status". Below this is a "FAQ" section and a "Out for Review" section with a link to "Specifications recently published for public comment". The main content area features a "Recommendations" section with a list of items under "Under development" and "Other", and a "XBRL Specifications" section with a list of items under "Abstract Model", "Extensible Enumerations", "Streaming Extensions", "Taxonomy Packages", and "Working Group and Work".

<http://specifications.xbrl.org/specifications.html>

What is the architecture of XBRL?



What is the relation between the schema and linkbases and what kind of linkbases there are?



What kinds of business concepts are defined in XBRL?

Declaring business terms:

There is a business term defined in the IFRSs that represents **Inventories**. **Inventories** are reported **as of a particular day** as a **monetary amount** (a number referring to a currency).

Accounting balance nature of inventories is **debit**.

Each group of inventories must be disclosed with their value according to LIFO or FIFO valuation method

Company must disclose their operations for domestic and foreign markets

Company must split their operations according to operating segments

- **item**: financial term that represents a simple fact, i.e. a fact carrying a value, e.g. *Inventories = 1200400.56 USD*
- **tuple**: represents compound facts i.e. a group of pieces of information, e.g. *Inventories Valuation* is a tuple comprising of the following items: *Group of inventories, Valuation method, Value of a group of inventories* reported sequentially as many times as needed (tables with unknown number of rows or columns)
- **dimensions** a certain breakdown or a property that may consist of **explicit list of members** or **implicit (typed) domain** e.g.
 - *Geographical areas of operations* dimension with explicit members *All regions, Domestic* and *Foreign*
 - *Operating segments* dimension with typed domain *SegmentName*

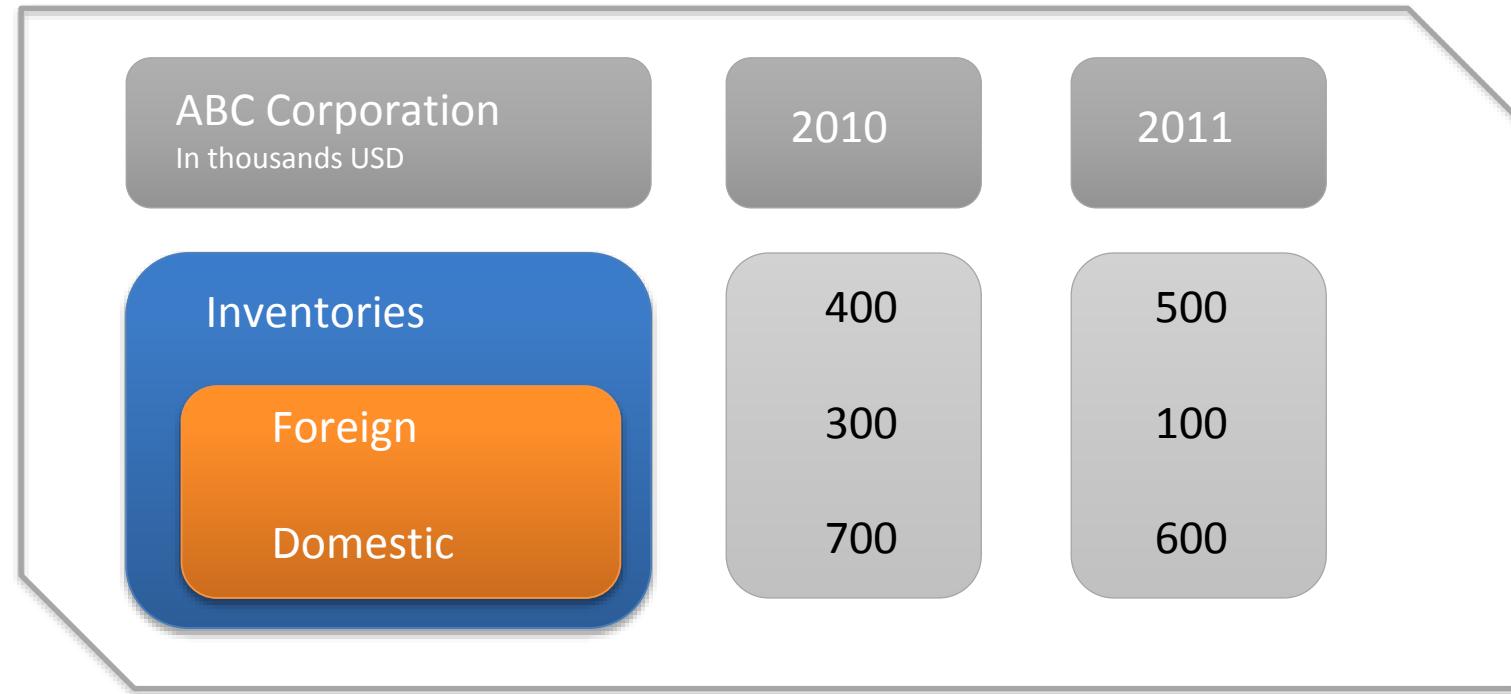
Inventories	...
...	...
...	...

Inventories valuation		
Group of inventories	Valuation method	Value of group of inventories
...
...

Inventories	...
All regions	...
Domestic	...
Foreign	...

Operating segments	Inventories	...
...
...

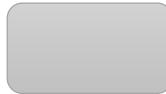
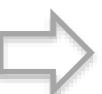
How does it look in an instance document?



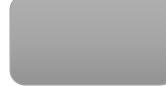
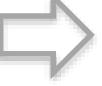
concept



dimensional property



value

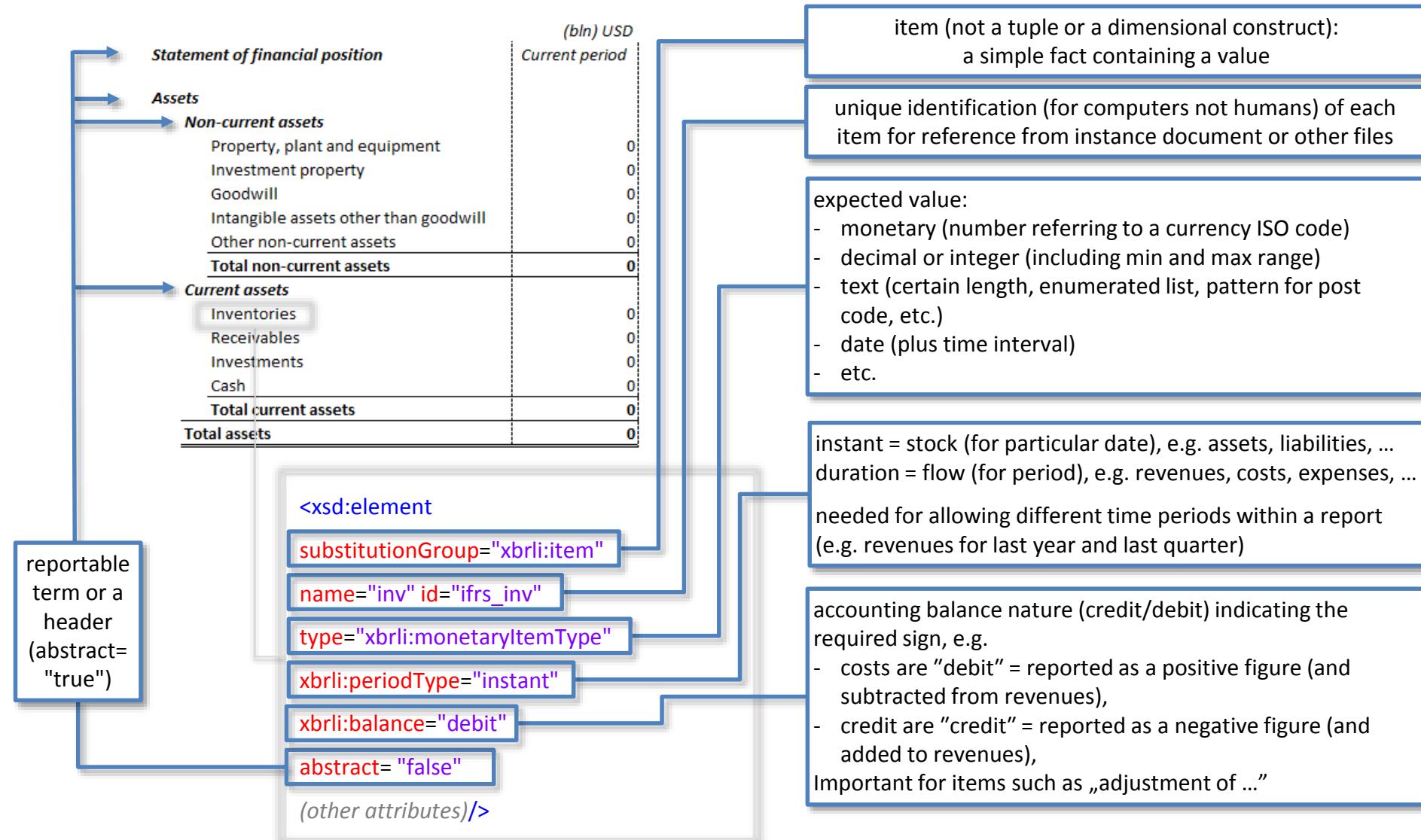


context

Taxonomy

Instance document

How to declare an item?



How does an item instantiation look in a report?

```
<xbrli:context id="c1">
  <xbrli:entity>
    <xbrli:identifier scheme="http://www.eurofiling.info/lei">0012111</xbrli:identifier>
  </xbrli:entity>
  <xbrli:period>
    <xbrli:instant>2014-05-06</xbrli:instant>
  </xbrli:period>
</xbrli:context>
<xbrli:context id="c2">
  <xbrli:entity>
    <xbrli:identifier scheme="http://www.eurofiling.info/lei">0012111</xbrli:identifier>
  </xbrli:entity>
  <xbrli:period>
    <xbrli:instant>2014-05-06</xbrli:instant>
  </xbrli:period>
</xbrli:context>

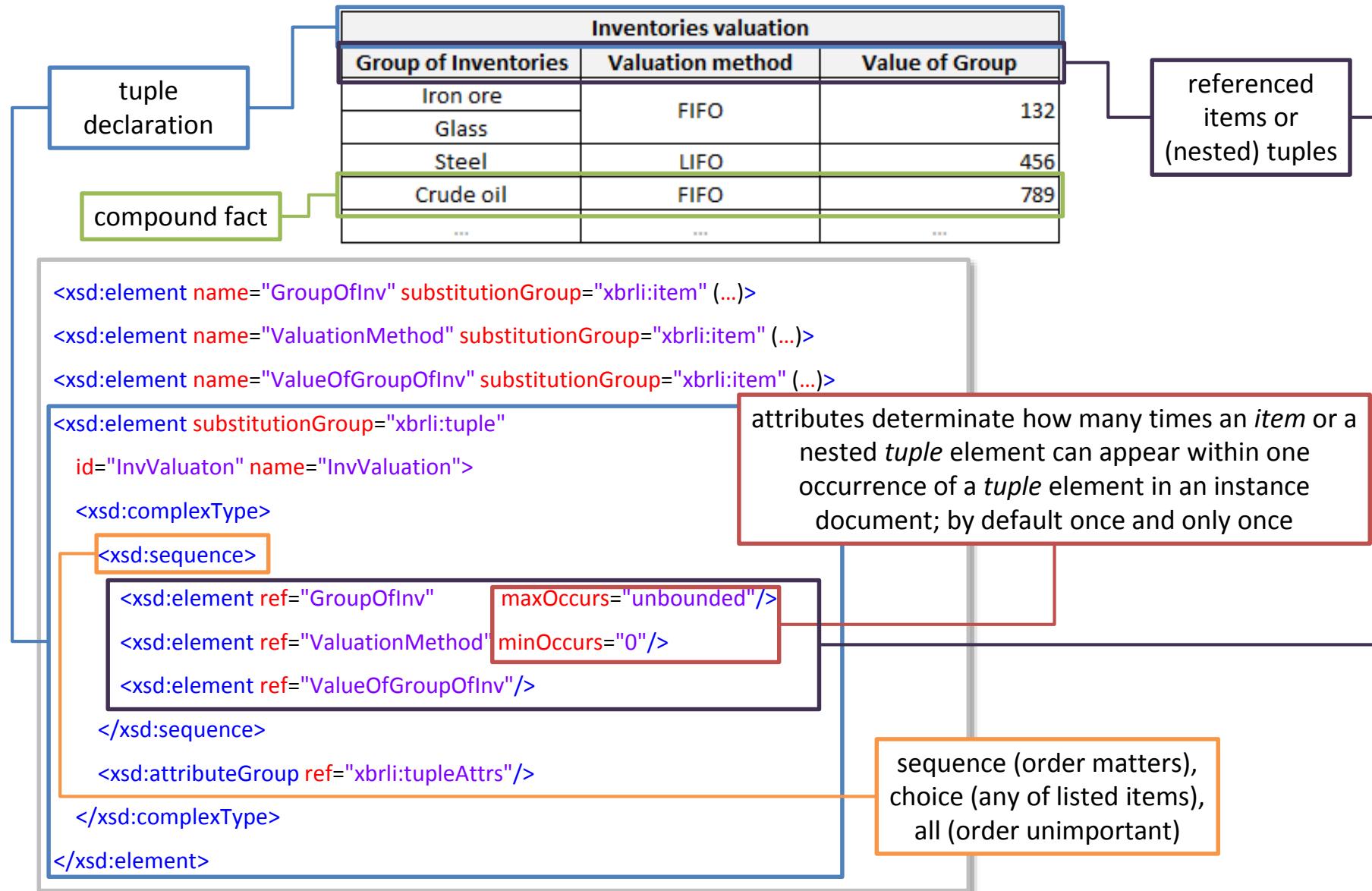
<xbrli:unit id="u">
  <xbrli:measure>iso4217:GBP</xbrli:measure>
</xbrli:unit>

<ifrs:inv decimals="-3" contextRef="c1" unitRef="u">1200000</ifrs:inv>
<ifrs:inv decimals="-3" contextRef="c2" unitRef="u">1240000</ifrs:inv>
```



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How to declare a tuple?



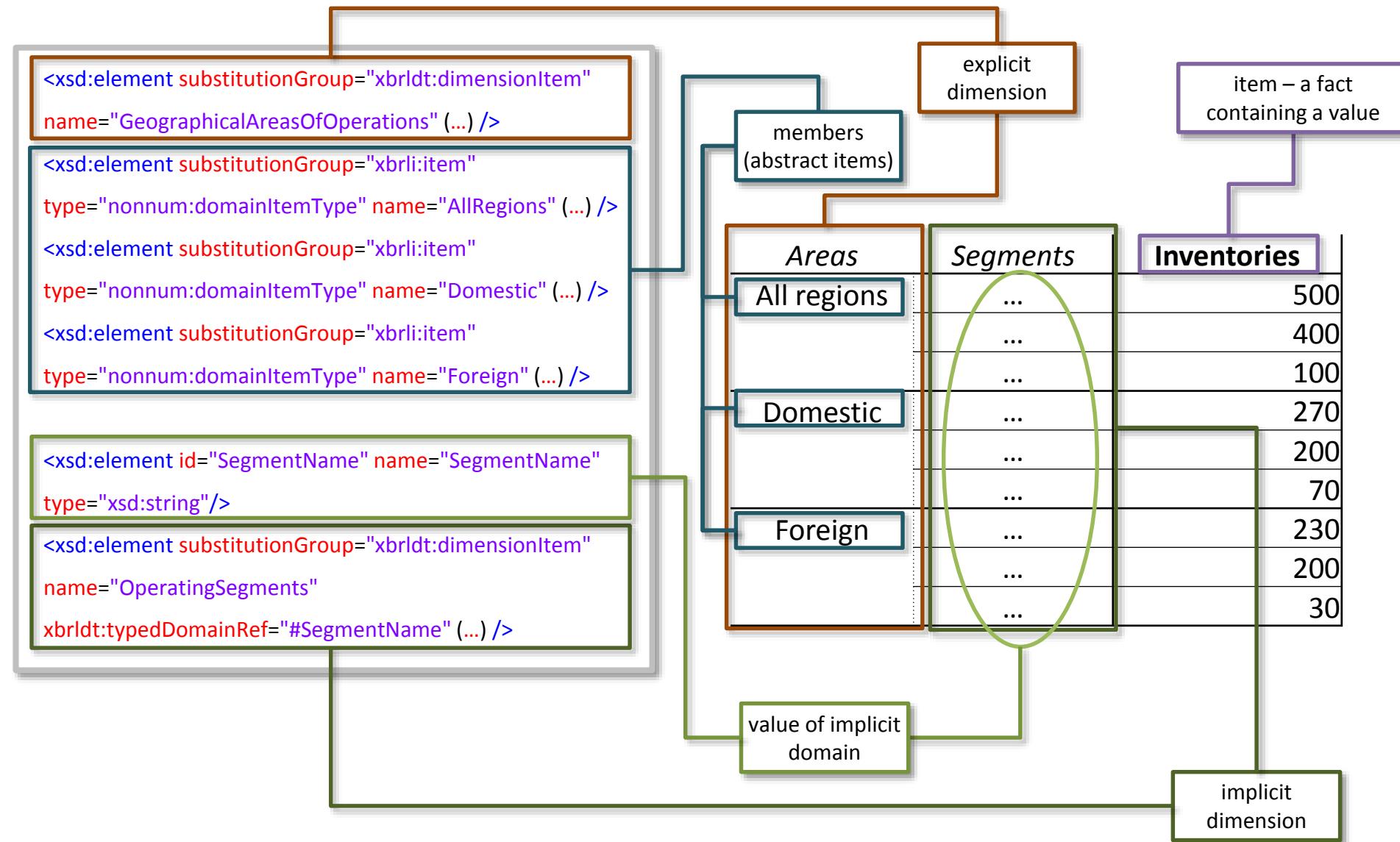
How does a tuple instantiation look in a report?

```
<xbrli:context id="c2">(...)</xbrli:context>  
<xbrli:unit id="u">(...)</xbrli:unit>  
  
<ifrs:InvValuation>  
  <ifrs:GroupOfInv contextRef="c2" xml:lang="en">Iron ore</ifrs:GroupOfInv>  
  <ifrs:GroupOfInv contextRef="c2" xml:lang="en">Glass</ifrs:GroupOfInv>  
  <ifrs:ValuationMethod contextRef="c2">FIFO</ifrs:ValuationMethod>  
  <ifrs:ValueOfGroupOfInv decimals="0" contextRef="c2" unitRef="u">123</ifrs:ValueOfGroupOfInv>  
</ifrs:InvValuation>  
<ifrs:InvValuation>  
  <ifrs:GroupOfInv contextRef="c2" xml:lang="en">Steel</ifrs:GroupOfInv>  
  <ifrs:ValuationMethod contextRef="c2">LIFO</ifrs:ValuationMethod>  
  <ifrs:ValueOfGroupOfInv decimals="0" contextRef="c2" unitRef="u">456</ifrs:ValueOfGroupOfInv>  
</ifrs:InvValuation>
```



.xbrl

How to declare dimensions and domain members?



What is a hypercube?

Diagram illustrating a hypercube structure:

```

graph TD
    hypercube[hypercube] --> Areas[Areas]
    hypercube --> Segments[Segments]
    hypercube --> Inventories[Inventories]
    
```

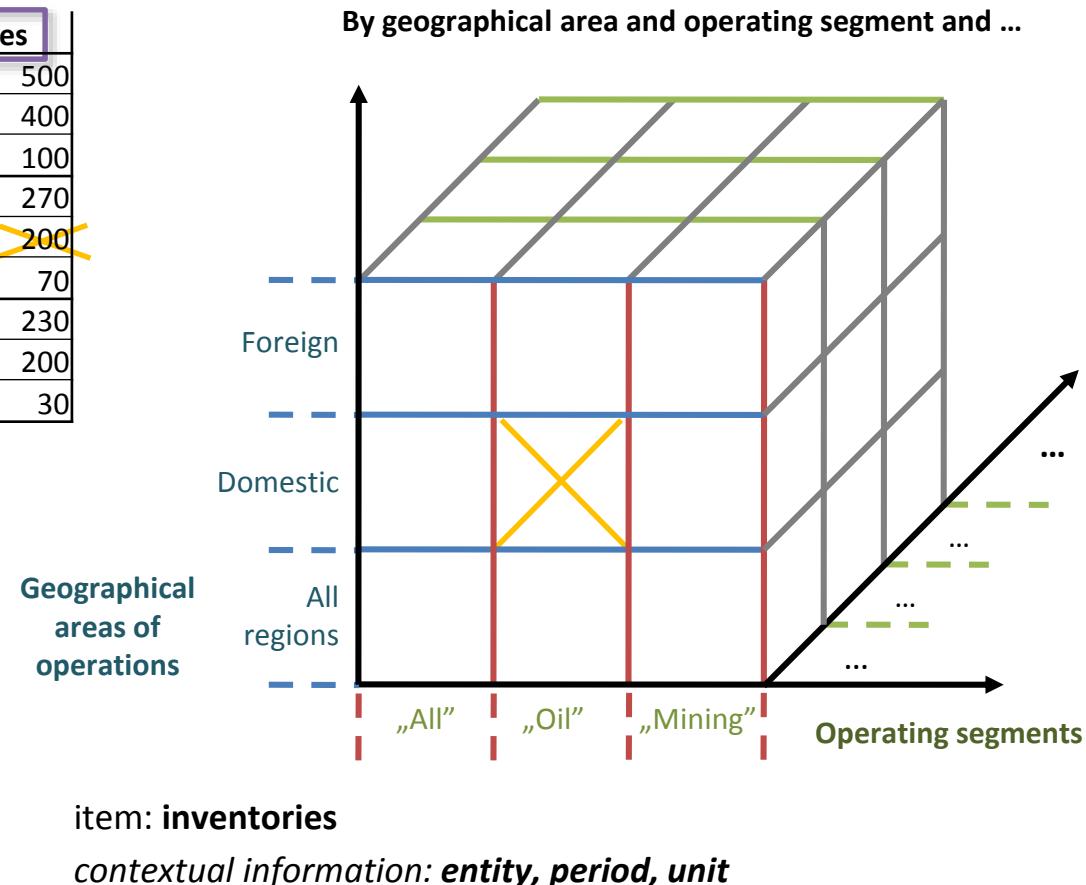
Areas	Segments	Inventories
All regions	All segments	500
	Oil	400
	Mining	100
Domestic	All segments	270
	Oil	200
	Mining	70
Foreign	All segments	230
	Oil	200
	Mining	30

Hypercube
abstract concept allowing to
create an ordered list of
dimensions which Cartesian
product of members is
reportable or is prohibited for an
item

```

<xsd:element substitutionGroup="xbrldt:hypecubeitem"
name="ByGeographicalAreasAndOperatingSegments" (...) />

```



How does a dimensional property instantiation look in a report?

```
<xbrli:context id="c3">
  <xbrli:entity>
    <xbrli:identifier scheme="http://www.eurofiling.info/lei">0012111</xbrli:identifier>
  </xbrli:entity>
  <xbrli:period>
    <xbrli:instant>2013-09-09</xbrli:instant>
  </xbrli:period>
  <xbrli:scenario>
    <xbrldi:explicitMember dimension="ifrs:GeographicalAreasOfOperations">ifrs:Foreign</xbrldi:explicitMember>
    <xbrldi:typedMember dimension="ifrs:OperatingSegments">
      <ifrs:SegmentName>Oil</ifrs:SegmentName>
    </xbrldi:typedMember>
  </xbrli:scenario>
</xbrli:context>

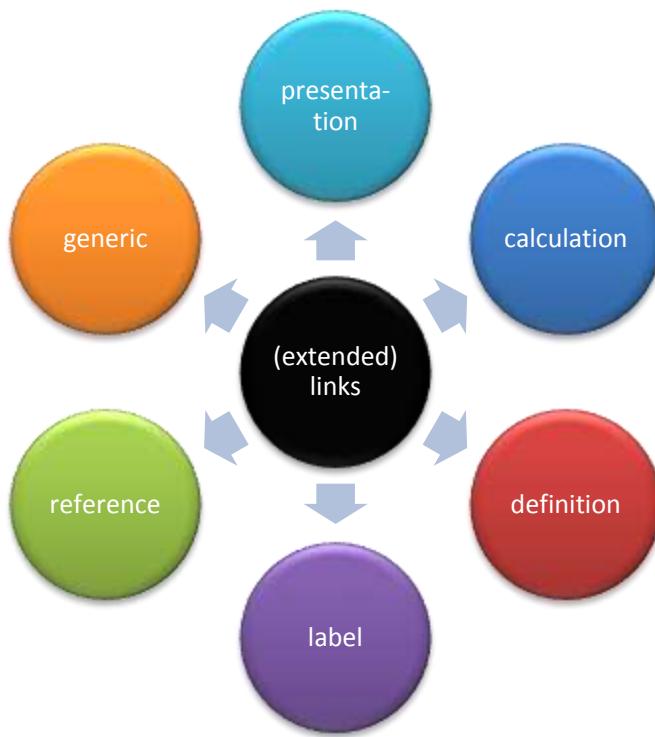
<xbrli:unit id="u">(...)</xbrli:unit>

<ifrs:inv decimals="INF" contextRef="c3" unitRef="u">240</ifrs:inv>
<ifrs:receivables decimals="INF" contextRef="c3" unitRef="u">1020</ifrs:receivables>
```



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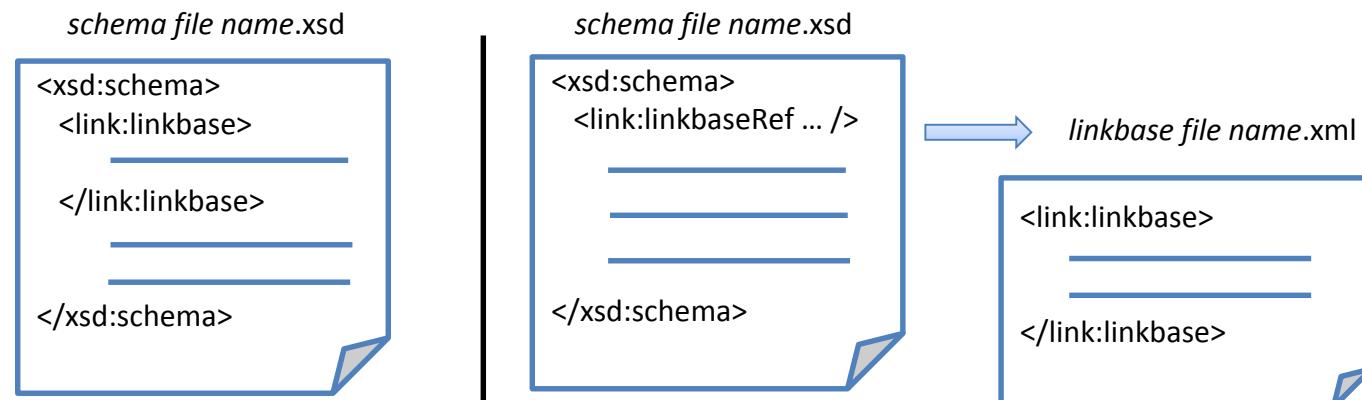
What are the XBRL linkbases?



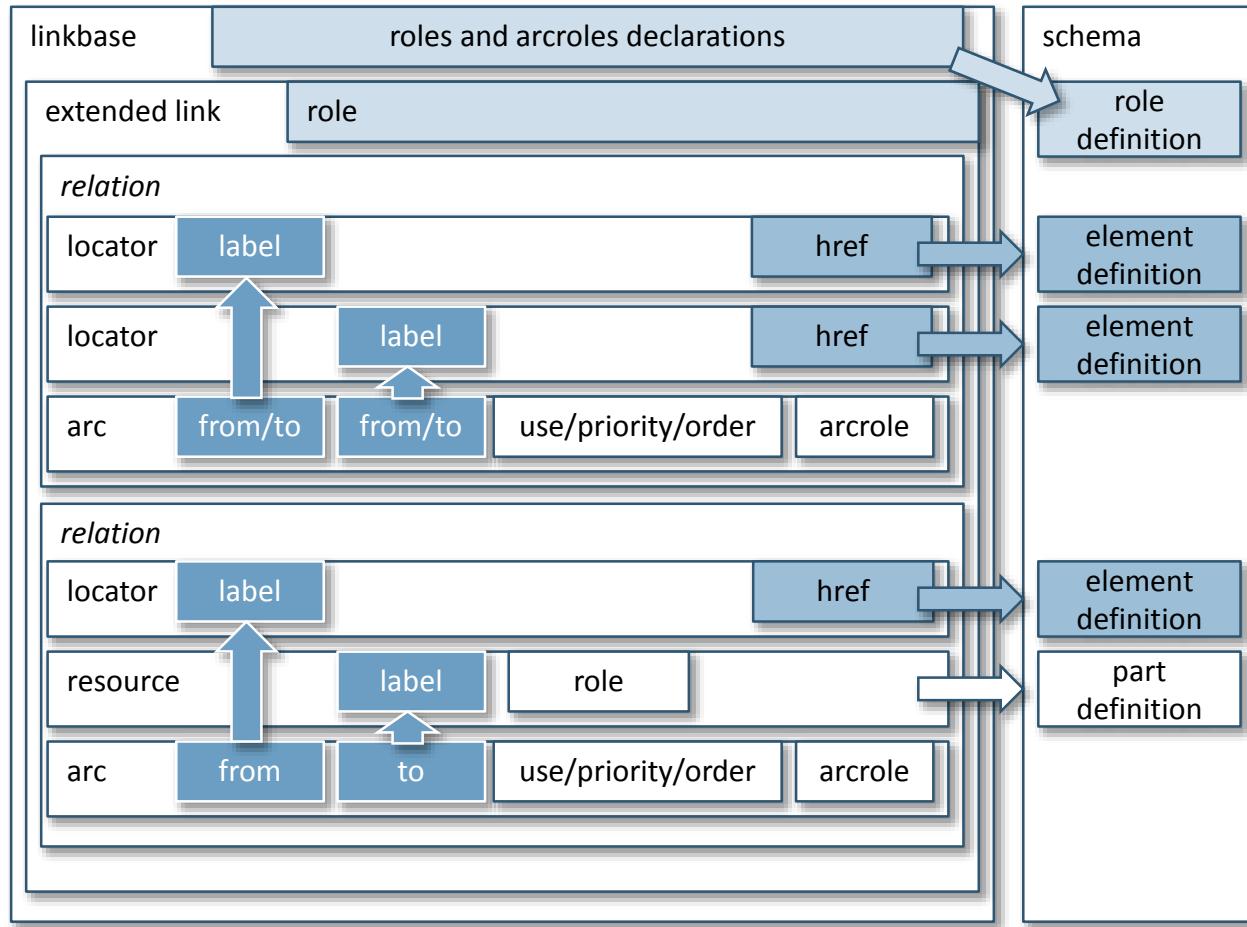
Additional information on business terms in linkbases:

- Inventories are translated into Polish as „Zapasy” and in German as „Vorräte”.
- Measurement method of inventories as defined by IFRSs is described by *IAS 2, paragraph 9*.
- Inventories are reported in *Statement of financial position* in a group of Current Assets and in notes in *Disclosures of current assets*.
- Inventories are sum of Raw materials, Merchandise, Production supplies, Work in progress, Finished goods and Other inventories.
- Inventories must be reported in the *breakdown for segments and geographical areas* where company operates.

- diverse kinds of sets of relations for different purposes (functions)
- additional documentation:
 - label (multilingual, contextual)
 - references (to legal acts, guidelines, ...)
 - generic (further customization)
 - relations (of different kinds and nature) between concepts:
 - presentation and definition (browsing of taxonomy)
 - calculation (aggregations)
 - generic (further customization)
 - dimensional information:
 - definition (data model)
 - any other
 - generic (further customization)

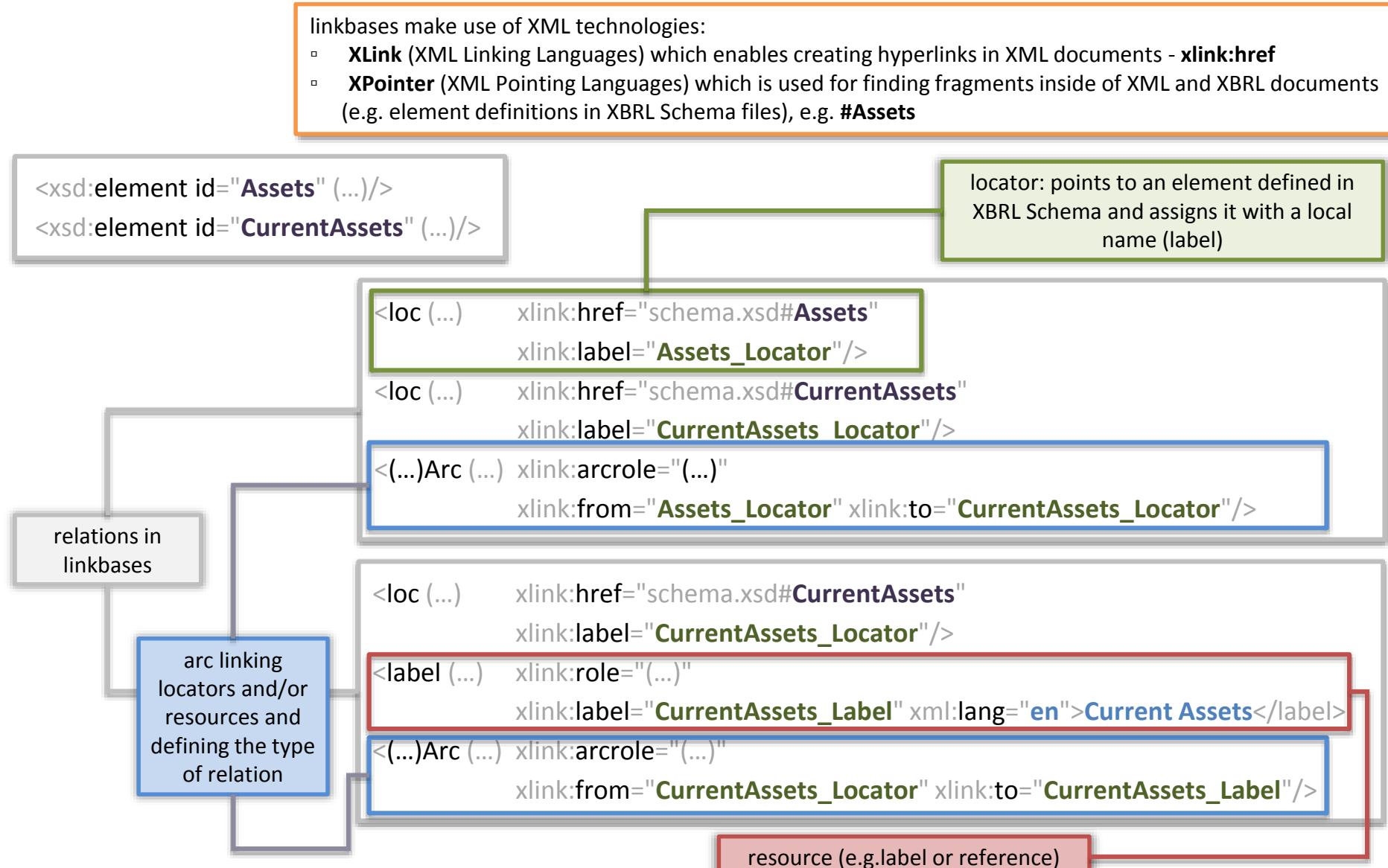


What constructs are used in Linkbases?

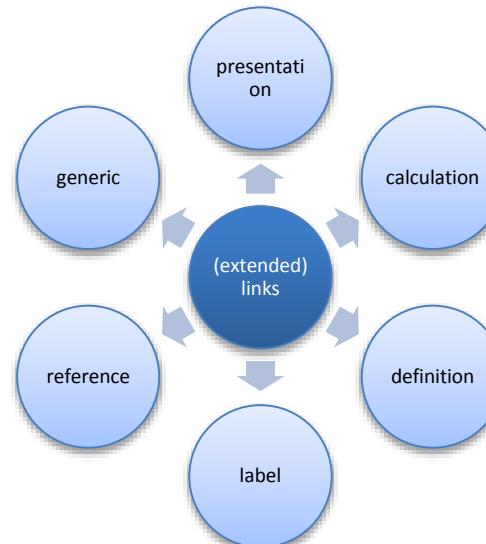


- **linkbase** – contains **relations** that are usually gathered in **sets**
- **extended link** – set of **relations** representing particular piece of a report (e.g. statement or disclosure) „named” by a **role**
- **relation** – consists of **two locators** or **one locator and one resource** or **two resources** and an **arc** which indicates the type of relation
- **locator** – points to an element defined in XBRL Schema file (*or to resource defined in another linkbase*) for which it is a local representation
- **resource** – a label, a reference, etc. of a particular type
- **arc** – connects two locators or a locator and a resource or two resources
- **arcrole** – describes the type of a relation
- **role** – characteristics/type of an extended link or a resource

How do Linkbases apply XLink?



What is Extended Link Role (ELR)?



Extended Link Role

- splitting linkbases in sections
- gathering relations that have something in common
- e.g.:
 - hierarchy of concepts in *Income statement*
 - labels to be used for concepts in *Balance sheet*
 - set of business rules applicable for a particular table (e.g. *CR-SA*)
 - ...
- XLink in XBRL results in graphs

Network: Presentation Lang: en

- [105000] Management commentary
- [110000] General information about financial statements
- [210000] Statement of financial position, current/non-current
- [220000] Statement of financial position, order of liquidity
- [310000] Income statement, by function of expense
- [320000] Inc

Network: Calculation Lang: en

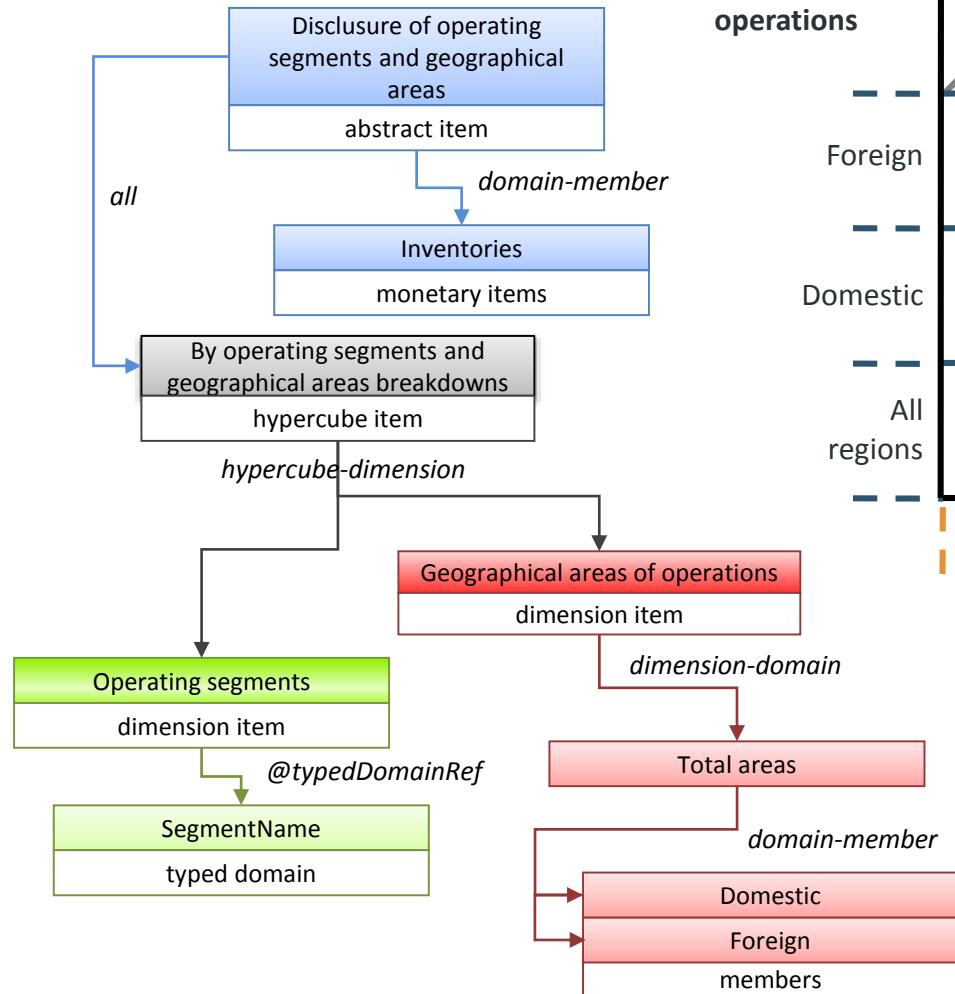
- [410000] Sta
- [420000] Sta
- [510000] Sta
- [520000] Sta
- [610000] Sta
- [710000] Sta
- [800100] No
- [800200] No
- [810000] No
- [811000] No
- [813000] No
- [815000] No
- [816000] No
- [817000] No
- [822100] Note
- [822390] Note
- [823180] Note
- [822100] No
- [822200] No
- [822390] No
- [823180] No
- [824180] Note
- [822450] Note
- [825100] Note
- [825500] Note
- [825900] Note
- [824180] Note
- [825100] Note
- [825500] Note
- [825900] Note
- [827570] Notes - Other provisions, contingent liabilities and contingent assets
- [825100] Note
- [825480] Note
- [825500] Note
- [825600] Note
- [825900] Note
- [826380] Note
- [827570] Note

Profit and loss statement (by nature)		
	Gross profit (loss)	
	+ Revenue from sales	
	- Operating costs	

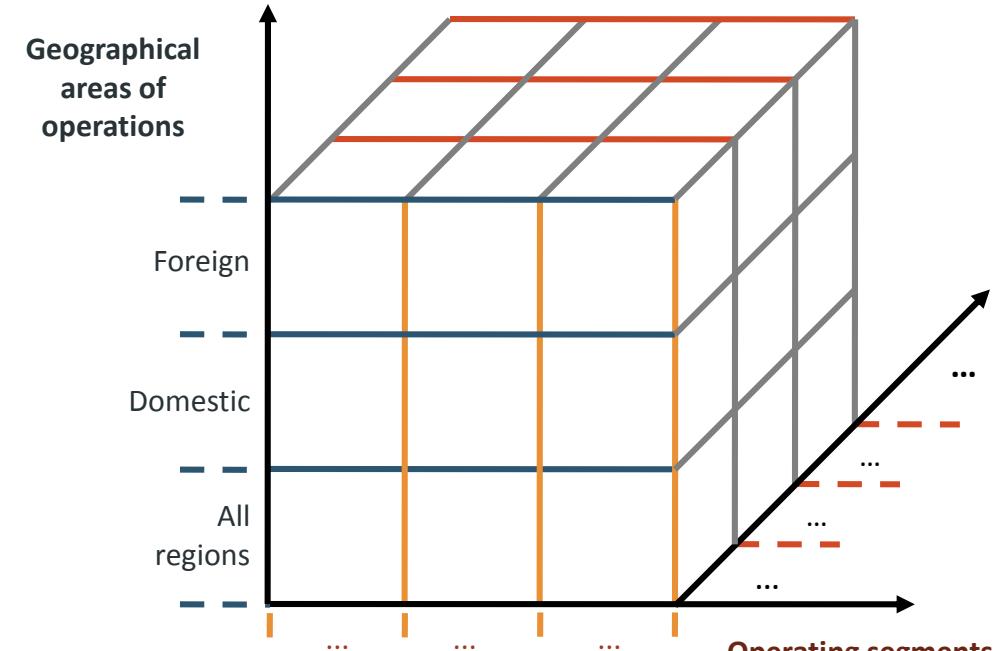
Profit and loss statement (by function)		
	Gross profit (loss)	
	+ Profit (loss) on sales	
	- Costs of sales	
	- Costs of administration	

How are the dimensions applied?

Disclosure of operating segments and geographical areas		
Areas	Segments	Inventories
Total	...	500
	...	400
	...	100
Domestic	...	270
	...	200
	...	70
Foreign	...	230
	...	200
	...	30



By geographical area and operating segment and ...



contextual information: entity, period, unit

What are the basic components of XBRL Formula?



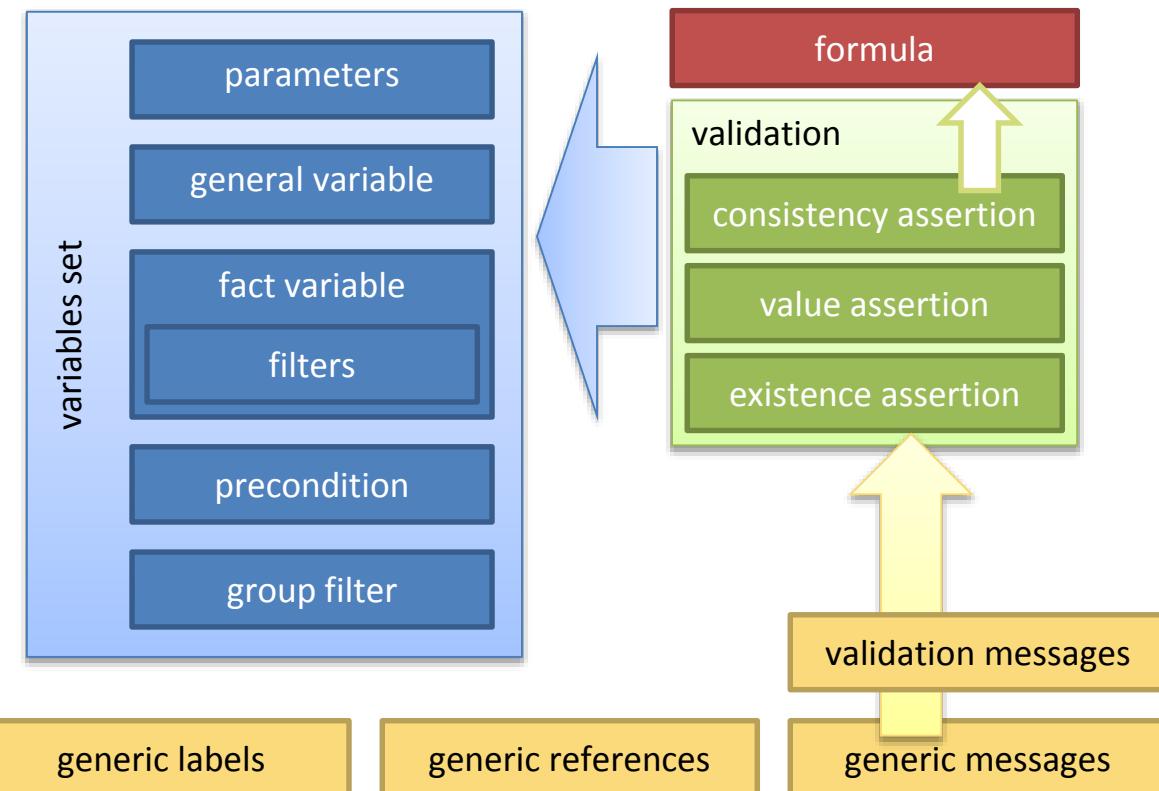
Querying and checking reported data

Declaration of rules
(XBRL linkbase)

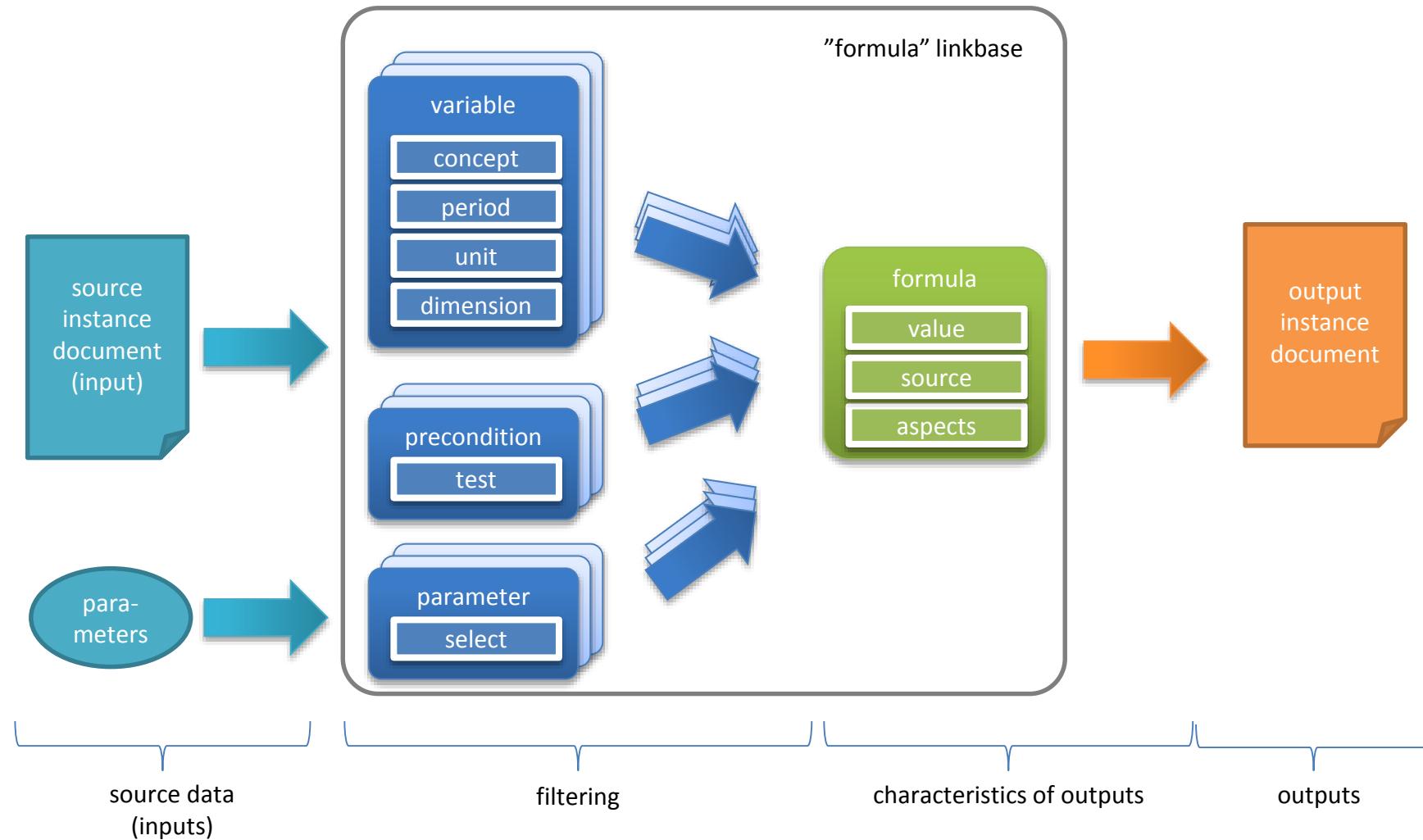


Query language:

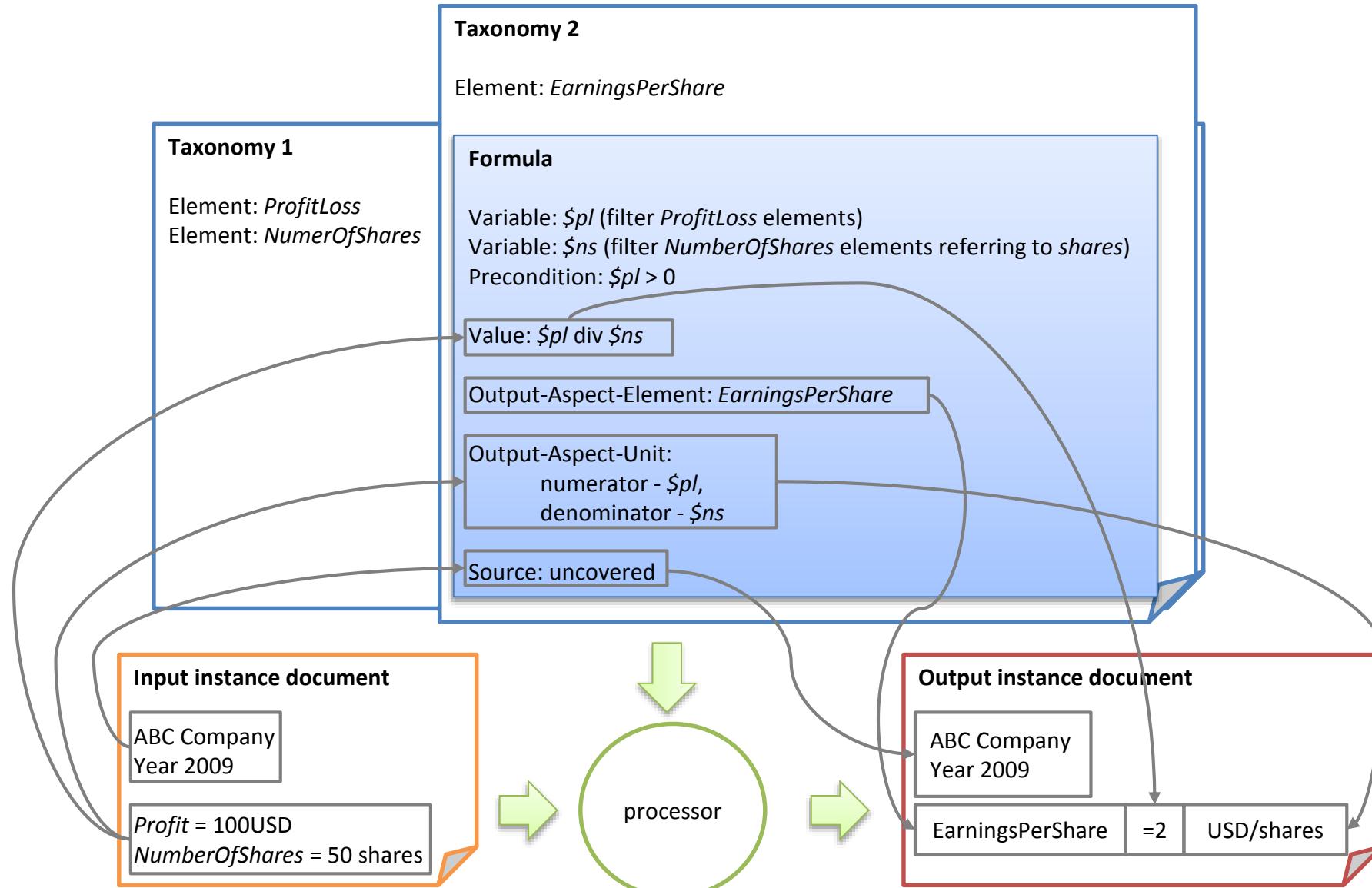
1. enables constructing queries involving one or many items and their properties
2. declarative (algorithms not needed)
3. returns output values in the same format as input values and allows modifying queried information (aggregate, count average, etc)



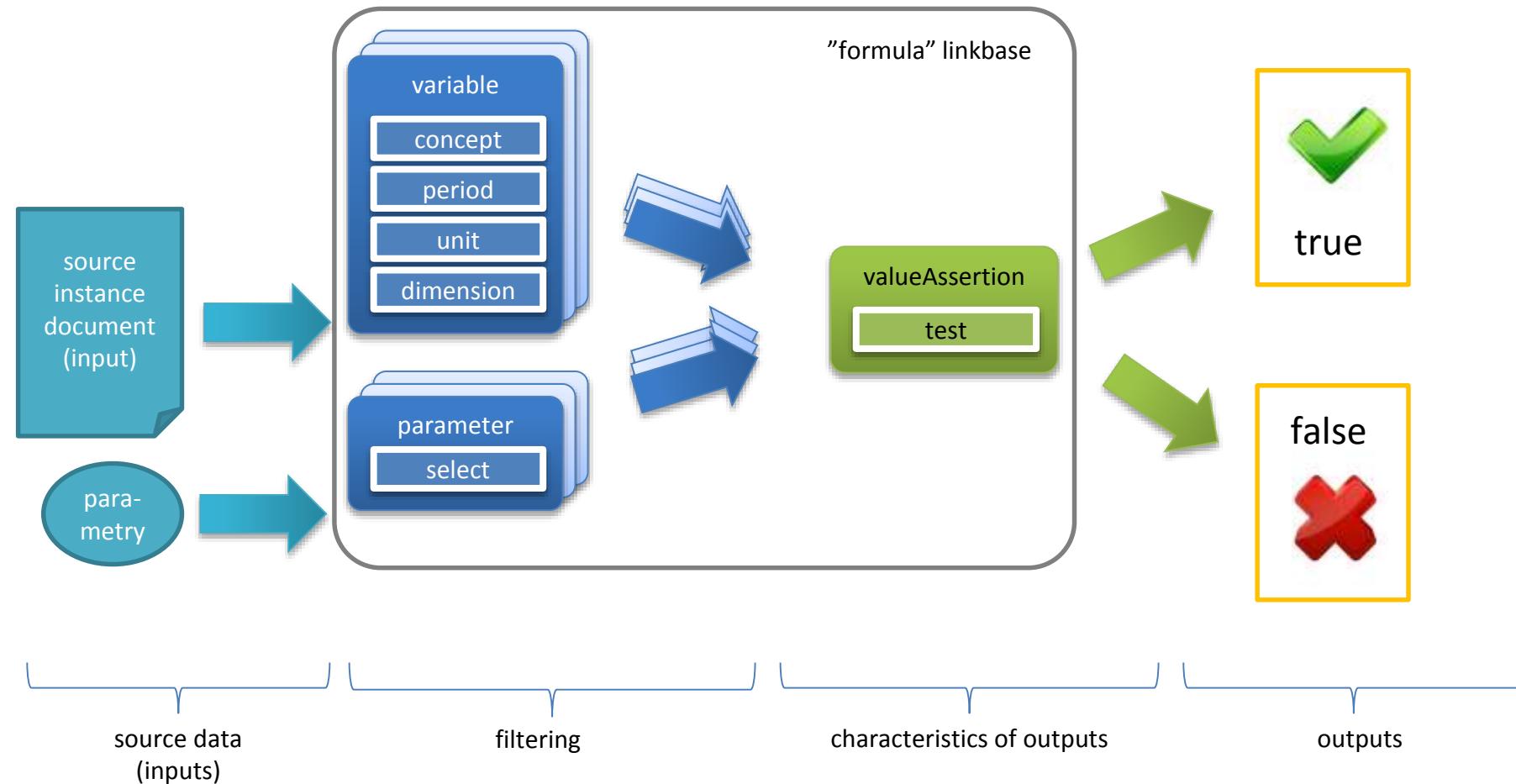
What is the principle of operation of XBRL formula?



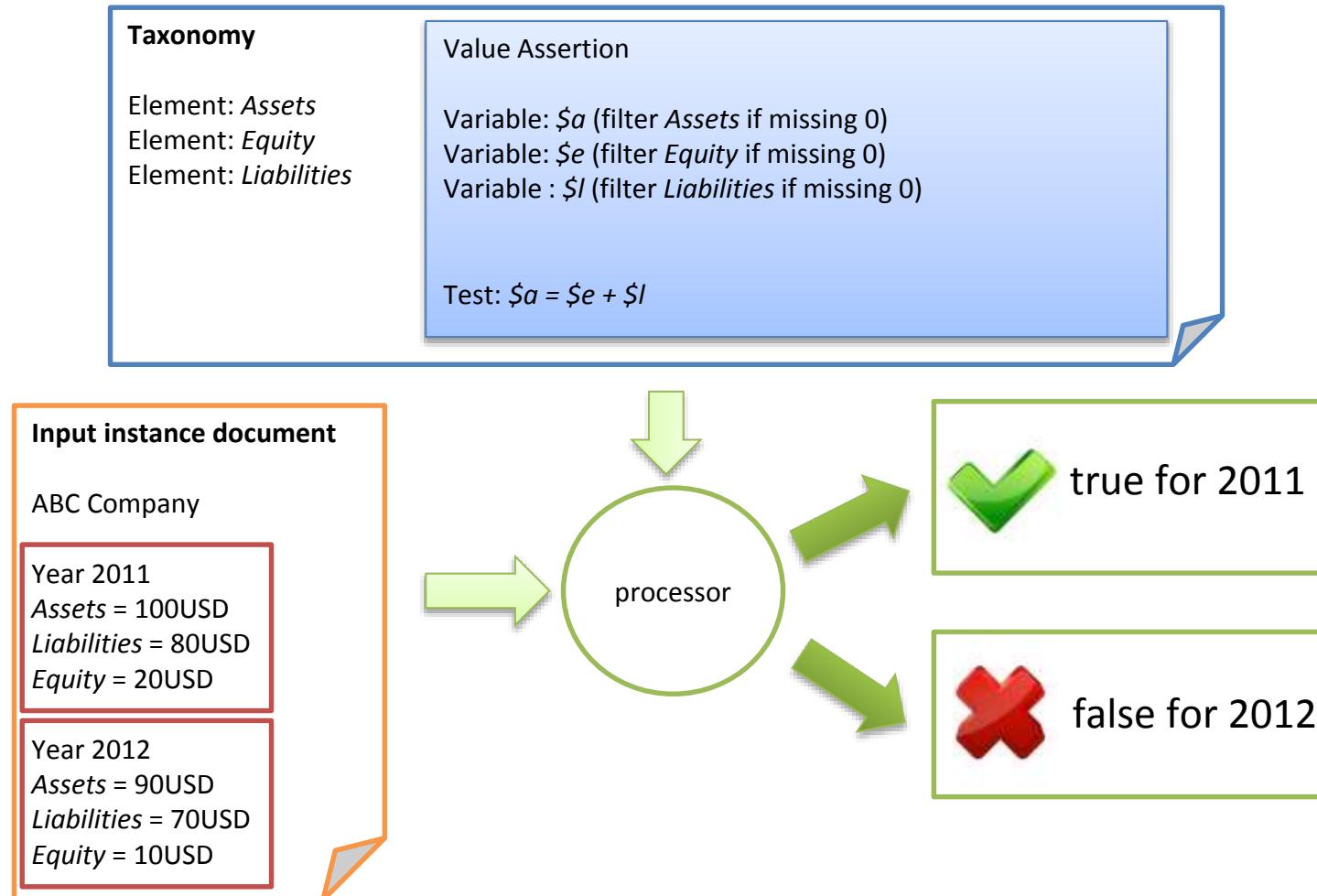
How does XBRL formula work?



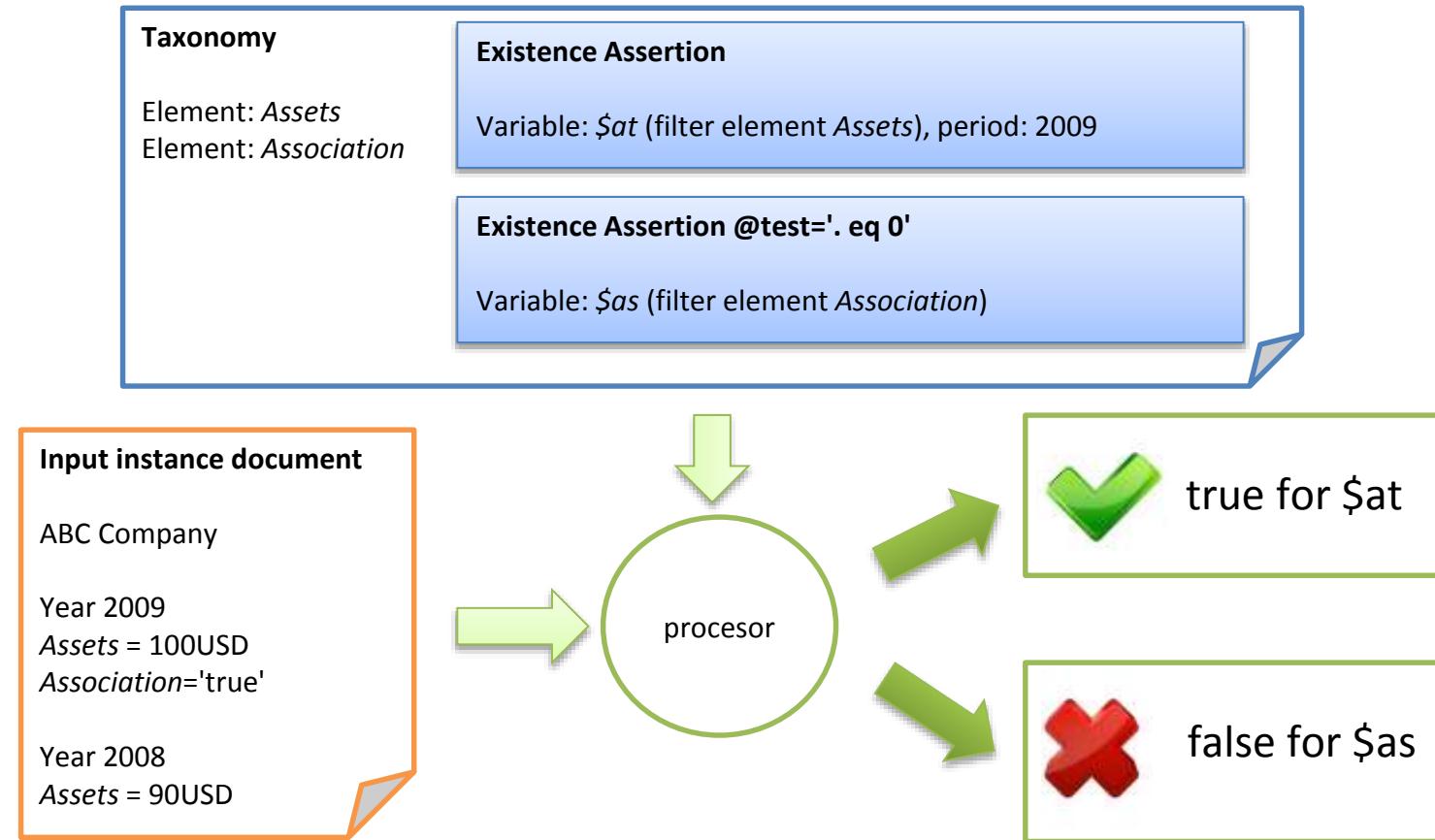
What is the principle of operation of XBRL value assertion?



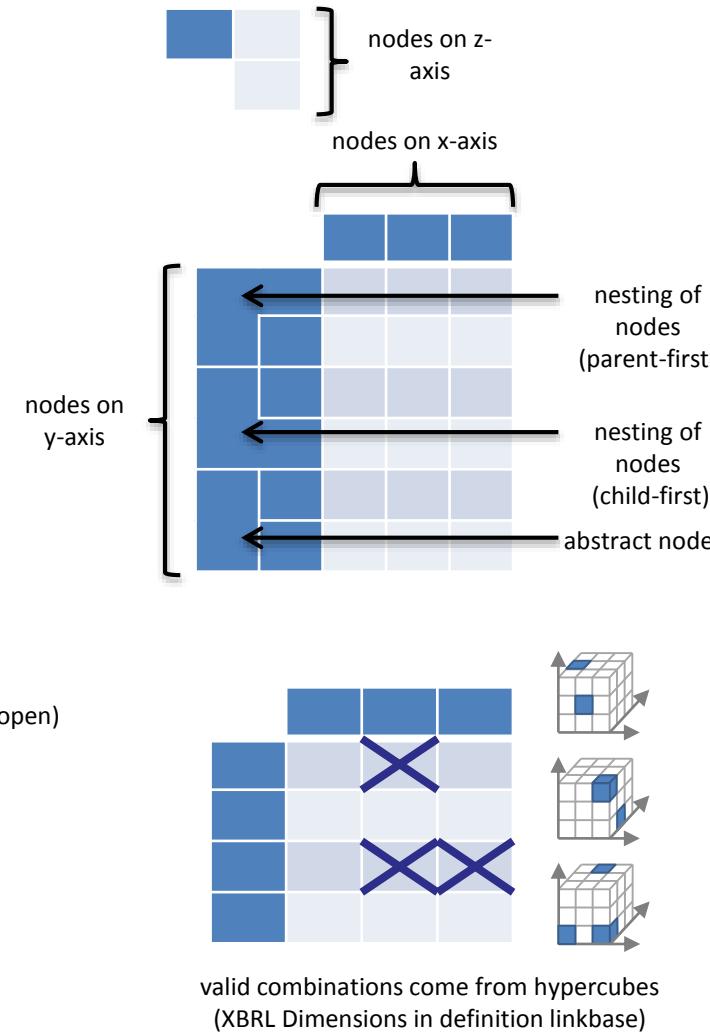
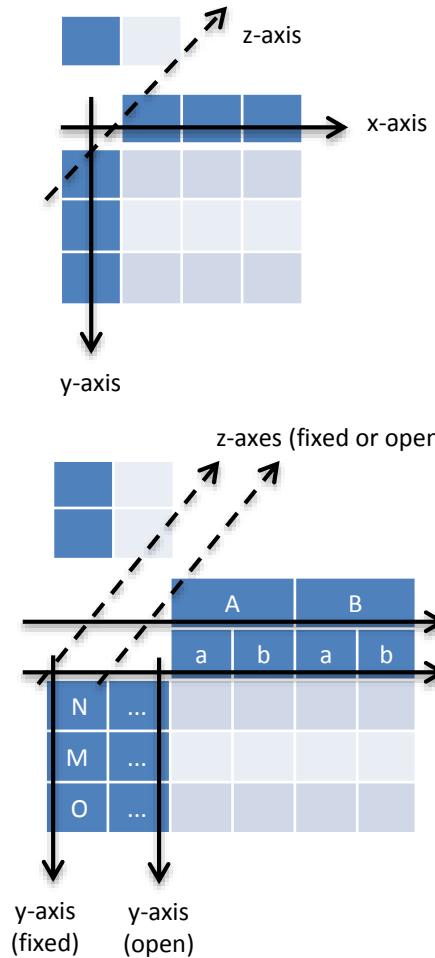
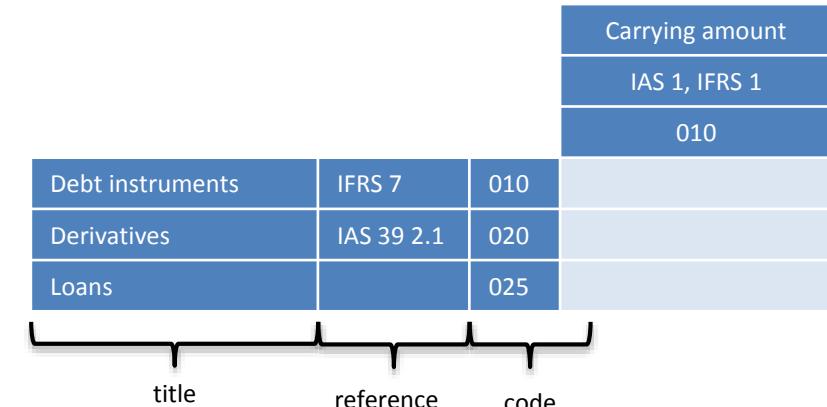
How does XBRL value assertion work?



How does XBRL existence assertion work?



How does the XBRL Table Linkbase work?

The diagram shows an XBRL table with three columns: **title**, **reference**, and **code**.

	Debt instruments	IFRS 7	010
Derivatives	IAS 39 2.1	020	
Loans		025	

The table is associated with three dimensions:

- Carrying amount:** IAS 1, IFRS 1, 010
- Debt instruments:** IFRS 7, 010
- Derivatives:** IAS 39 2.1, 020
- Loans:** 025

How does it look on an example?

Table properties:

Base terms:
Assets
Liabilities
Equity
Off-balance sheet
Exposures

Row properties:

Portfolios:
Total (...)
Fair value through P&L
Amortised cost
Categories:
Total (...)
Loans
Debt securities
Tangible and intangible
Other than (...)
Counterparty sectors:
All / Not-applicable
MFIs
Central Administration
Other general government
Non-MFIs and non-govnmt

EMU zone residence	
Impaired	Past due over 180 days
Measured at fair value through profit or loss	
Not measured at fair value through profit or loss	
Debt securities held	
MFIs	
Other than MFIs	
Loans	
Tangible assets	

Column properties:

Counterparty residences:
All / Not-applicable
EMU
Other than EMU (...)
Impairment status:

Impairment status:
All / Not-applicable
Impaired
Unimpended
Past due periods:

Past due periods:
All
< 180 days
≥ 180 days



EBA and EIOPA taxonomies

EBA EUROPEAN BANKING AUTHORITY

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Consultation

Consultation on XBRL Taxonomy (v2.1) related to remittance of supervisory data

Start date: 21/03/2014 | Deadline: 14/04/2014 | Status: Closed | Permanent link

The European Banking Authority (EBA) launched today a consultation on a revised version of its XBRL Taxonomy for supervisory reporting, which incorporates additional reporting requirements for asset encumbrance, non-performing exposures and forbearance. This consultation aims at ensuring that the data national competent authorities collect from credit institutions and investment firms is transmitted to the EBA in a uniform and consistent manner. The consultation runs until 14 April 2014.

The proposed document, which is based on the EBA's final draft Implementing Technical Standards (ITS) on asset encumbrance, forbearance and non-performing exposures and their related Data Point Models (DPM), presents the data items, business concepts, relations and validation rules described by the revised EBA Data Point Model(s) (DPM) on supervisory reporting in the technical format of an XBRL taxonomy.

Although primarily intended for use in data transmission between competent authorities and the EBA, authorities may choose to use the proposed XBRL taxonomy or a similar one for collecting data from credit institutions and investment firms in Europe.

Consultation process

Comments can be sent to the EBA by clicking on the "send your comments" button on the consultation page. Please note that the deadline for the submission of comments is 14 April 2014.

All contributions received will be published following the close of the consultation, unless requested otherwise.

Legal basis and background

The EBA has developed this taxonomy in accordance with Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 (Capital Requirements Regulation – CRR), and based on two supplementary ITS to the ITS and DPM on supervisory reporting.

Uniform data formats are necessary to enable the exchange of reported data regarding groups of credit institutions and investment firms, as part of the operation of the Single Rulebook aimed at enhancing regulatory harmonisation in the banking sector in the EU and facilitating a proper functioning of cross-border supervision. In this respect, this taxonomy will lead to greater efficiency in and convergence of supervisory practices across Member States, facilitating the supervisory process and allowing supervisors to identify

Related documents:
Consultation paper [PDF, 504.5KB]

Draft revised XBRL taxonomy [72, 3.955.8KB]
EBA architecture for XBRL representation of DPM [PDF, 809.9KB]

Data Point Model Database (updated 10/04/2014) [72, 5.963.8KB]

Data Point Model Documents (updated 10/04/2014) [2P, 10.429.7KB]

Description of DPM formal model [PDF, 694.8KB]

Related links:
News

Data Point Model and Taxonomies for Implementing Technical Standard (ITS) on Supervisory Reporting
Register of Insurance Undertakings
Register of IORPs
Database of pension plans and products in the EEA

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Find [\[X\]](#)

EU-WIDE REPORTING FORMATS

In this section you will find information about EIOPA's initiatives on the topic of EU-wide reporting formats.

January 2014

The documents in this section present the data modelling and XBRL taxonomy design, supporting the implementation of the Guideline on Submission of Information to National Competent Authorities, published on the 31st of October 2013.

Data Point Model

The consultation paper annexes describe detailed reporting requirements as inputs into the data modelling methodology known as "Data Point Modelling". This modelling produced a set of annotated templates available here: (zip).

XBRL Taxonomy

The Taxonomy supporting the Guideline on Submission of Information to National Competent Authorities is here: (zip).

Proof of Concept for MD Open Tables

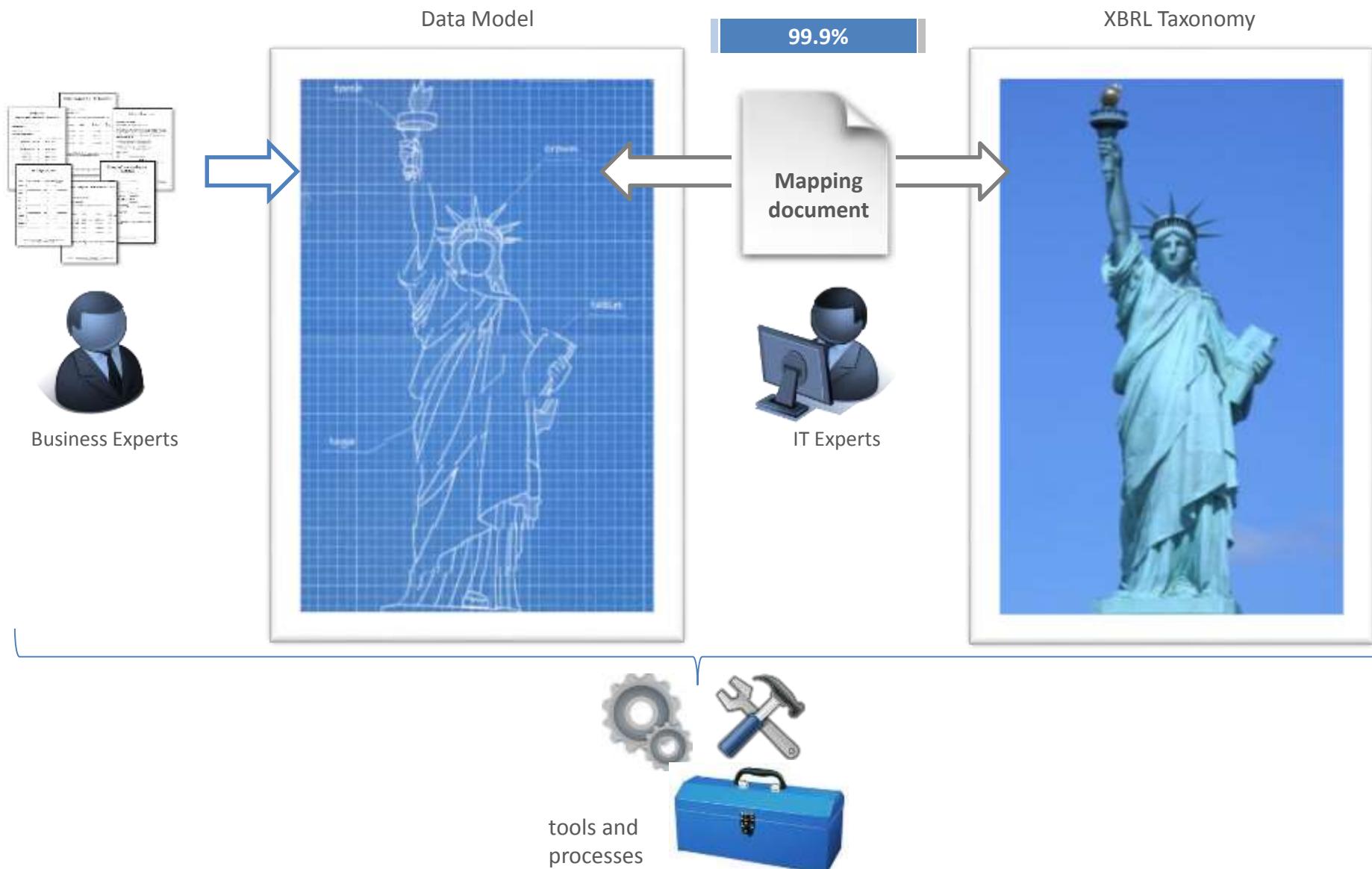
The Proof of Concept XBRL Taxonomy for MD Open Tables, derived from the same Data Point Model, is here: (zip).

The relevant documentation of the proposed approach for MD Open Tables is available here: (doc).

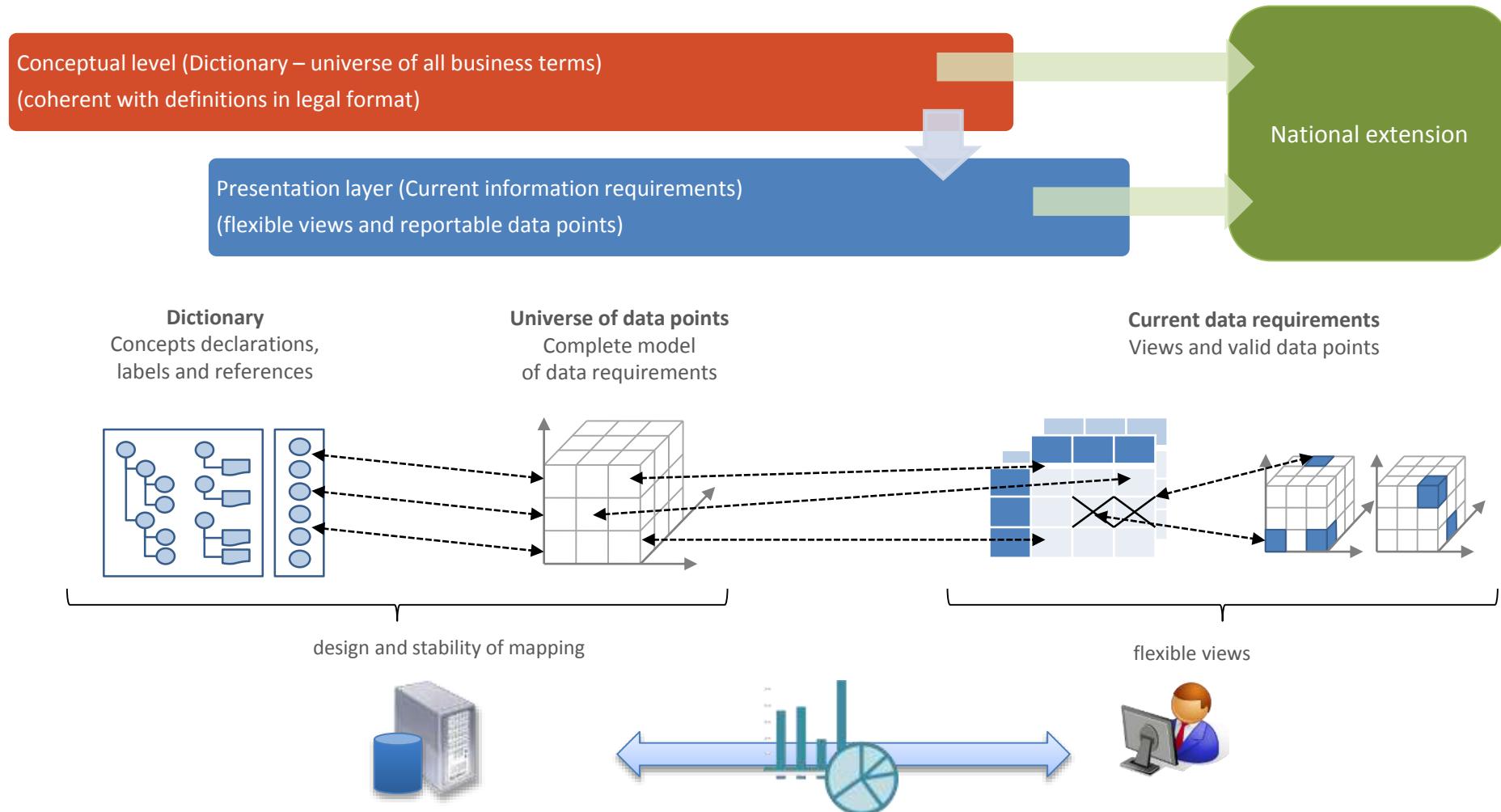
Disclaimer: the principles, rules and design approaches followed are still under consideration and are subject to further changes.

Please use the dedicated e-mail address: [xbrl\(at\)eiopa.europa.eu](mailto:xbrl(at)eiopa.europa.eu) to provide any useful feedback

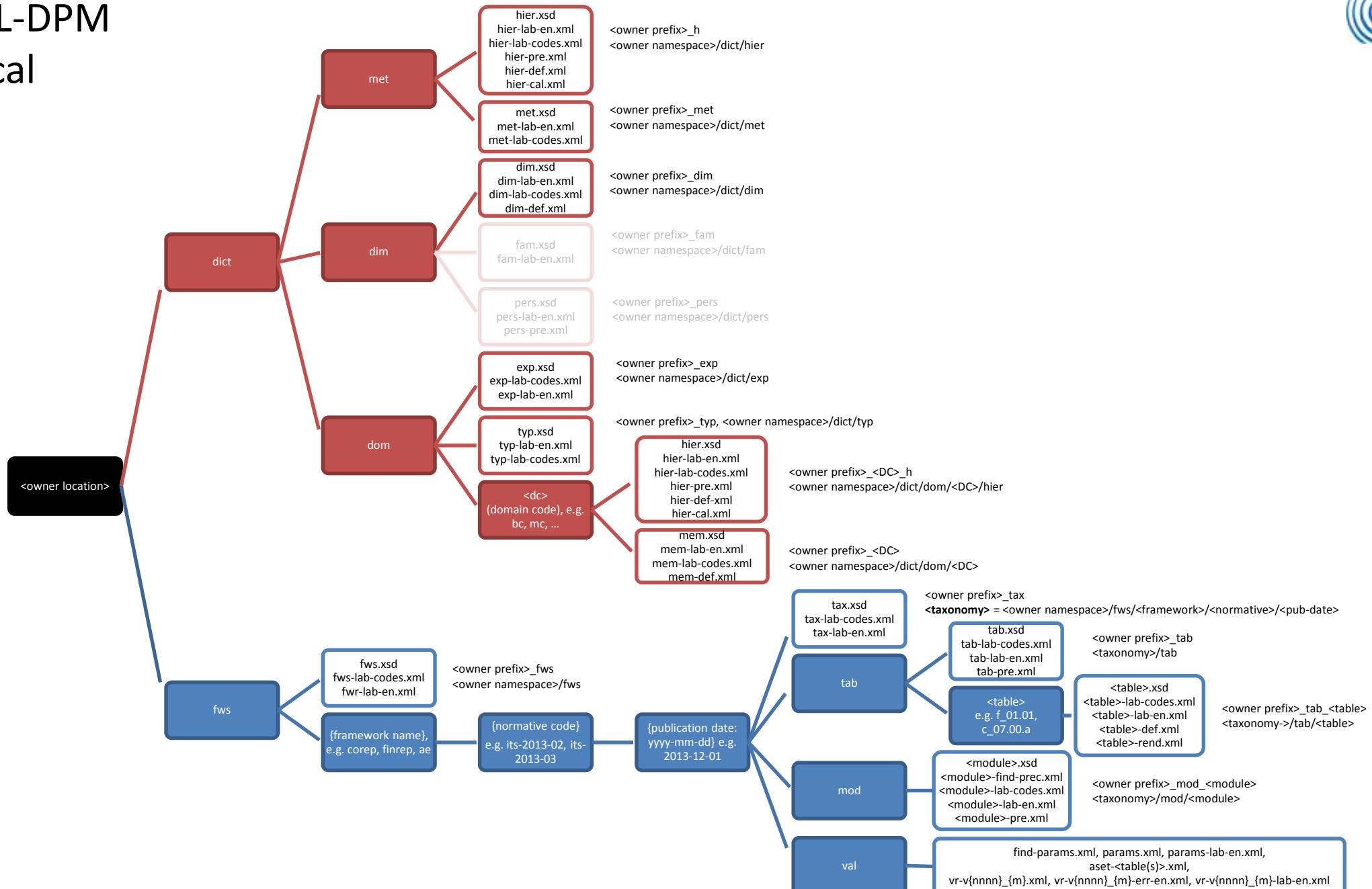
How does it translate to the technology?



What is the EBA/EIOPA DPM XBRL taxonomy conceptual structure?



What is the XBRL-DPM taxonomy physical structure?



How are the concepts declared?

Tables DTS Properties

- finrep_con_ifrs.xsd - schema
 - f_20.05.b.xsd - schema
 - f_04.05.xsd - schema
 - f_30.02.xsd - schema
 - f_01.01.xsd - schema
 - f_01.01-lab-en.xml - linkbase
 - f_01.01-def.xml - linkbase
 - dim.xsd - schema
 - mem.xsd - schema
 - mem.xsd - schema
 - met.xsd - schema**
 - met-lab-en.xml - linkbase
 - hier.xsd - schema
 - hier.xsd - schema
 - met-lab-codes.xml - linkbase

messages Concepts

Label	Name
Capital conservation buffer	x41
Capital ratio	x1
Capital ratio including Pillar II adjustments	x444
Carrying amount	mi53
Carrying amount (flow)	md64
Carrying amount [before restatement]	mi65
Carrying amount of Collateral obtained	mi66

```

<?xml version="1.0" encoding="utf-8"?>
<?taxonomy-version 2.1.0?> <!--(C) EBA-->
<xsschema targetNamespace="http://www.eba.europa.eu/xbrl/crr/dict/met"
  xmlns:eba_met="http://www.eba.europa.eu/xbrl/crr/dict/met" (...) />
<xssannotation>
  <xssappinfo>
    <link:linkbaseRef xlink:href="met-lab-en.xml" xlink:type="simple"
      xlink:arcrole="http://www.w3.org/1999/xlink/properties/linkbase"
      xlink:role="http://www.xbrl.org/2003/role/labelLinkbaseRef" />
    (...)</xssappinfo>
  </xssannotation>
  <xsselement name="mi53" id="eba_mi53" type="xbrli:monetaryItemType" substitutionGroup="xbrli:item"
    xbrli:periodType="instant" nillable="true" model:creationDate="2013-09-18" />
  (...)</xssschema>

```

```

<?xml version="1.0" encoding="utf-8"?>
<?taxonomy-version 2.1.0?> <!--(C) EBA-->
<link:linkbase (...)>
<link:labelLink xlink:type="extended" xlink:role="http://www.xbrl.org/2003/role/link">
  <link:loc xlink:type="locator" xlink:href="met.xsd#eba_mi53" xlink:label="loc_eba_mi53" />
  <link:label xlink:type="resource" xlink:label="label_eba_mi53"
    xml:lang="en" xlink:role="http://www.xbrl.org/2003/role/label">Carrying amount</link:label>
  <link:labelArc xlink:type="arc" xlink:arcrole="http://www.xbrl.org/2003/arcrole/concept-label"
    xlink:from="loc_eba_mi53" xlink:to="label_eba_mi53" />
  (...)</link:labelLink>
</link:linkbase>

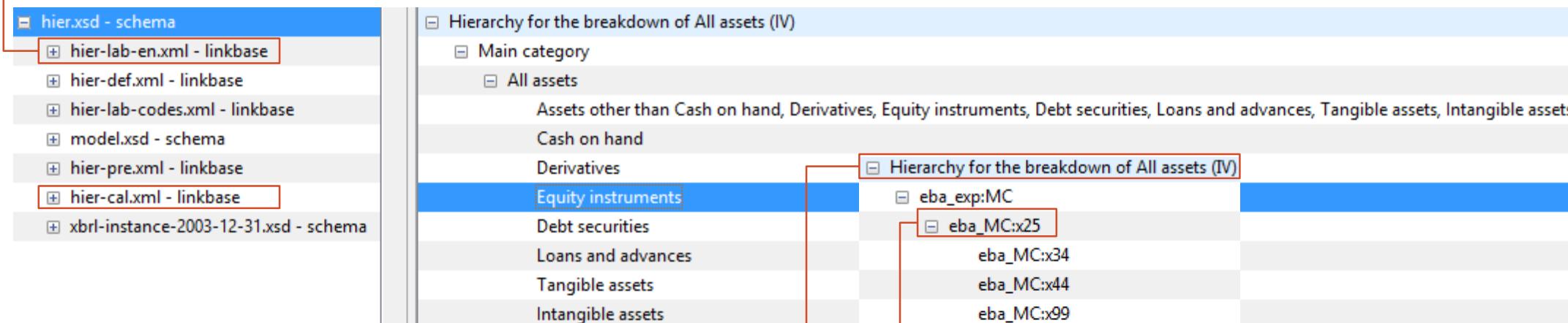
```

How are the hierarchies represented?

```

<link:loc xlink:type="locator" xlink:href="hier.xsd#eba_MC85" xlink:label="loc_eba_MC85" />
<label:label xlink:type="resource" xlink:label="label_eba_MC85" xml:lang="en" xlink:role="http://www.xbrl.org/2008/role/label">Hierarchy for the breakdown of All assets (IV)</label:label>
<gen:arc xlink:type="arc" xlink:arcrole="http://xbrl.org/arcrole/2008/element-label" xlink:from="loc_eba_MC85" xlink:to="label_eba_MC85" />

```



```

<?xml version="1.0" encoding="utf-8"?>    <!--(C) EBA-->
<link:linkbase (...)>
<link:roleRef roleURI="http://www.eba.europa.eu/xbrl/crr/role/dict/dom/MC/MC85"
  xlink:type="simple" xlink:href="hier.xsd#eba_MC85" />
(...)

<link:calculationLink xlink:type="extended"
  xlink:role="http://www.eba.europa.eu/xbrl/crr/role/dict/dom/MC/MC85">
  (...)

  <link:loc xlink:type="locator" xlink:href="mem.xsd#eba_x25" xlink:label="loc_eba_x25" />
  <link:loc xlink:type="locator" xlink:href="mem.xsd#eba_x130" xlink:label="loc_eba_x130" />

  <link:calculationArc xlink:type="arc"
    xlink:arcrole="http://www.eurofiling.info/xbrl/arcrole/complete-breakdown"
    xlink:from="loc_eba_x25" xlink:to="loc_eba_x130" weight="1" order="4" />
</link:calculationLink>
(...)

</link:linkbase>

```

How is declared the content and layout of tables?

F 01.01

Assets		
Carrying amount		
	17737	
	010	
Cash and cash balances at central banks	17738	010
Cash on hand	17739	020
Cash balances at central banks	17740	030
Other demand deposits	17741	040
Financial assets held for trading	17742	050
Derivatives	17743	060
Equity instruments	17744	070
Debt securities	17745	080
Loans and advances	17746	090

<http://www.eba.europa.eu/xb>

```


| F 01.01 Balance Sheet Statement |                                   |                         |
|---------------------------------|-----------------------------------|-------------------------|
| Columns                         |                                   |                         |
| ruleNode                        | breakdown-tree eba_a1.root        | eba_dim:BAS,eba_BA:x6   |
| ruleNode                        | Carrying amount                   | eba_met:mi53            |
| Rows                            |                                   |                         |
| ruleNode                        | breakdown-tree eba_a2.root        |                         |
| ruleNode                        | Cash and cash balances at centra  | eba_dim:MCY,eba_MC:x46  |
| ruleNode                        | Cash on hand                      | eba_dim:MCY,eba_MC:x44  |
| ruleNode                        | Cash balances at central banks    | eba_dim:MCY,eba_MC:x227 |
| ruleNode                        | Other demand deposits             | eba_dim:MCY,eba_MC:x227 |
| ruleNode                        | Financial assets held for trading | eba_dim:MCY,eba_MC:x104 |
| ruleNode                        | Derivatives                       | eba_dim:MCY,eba_MC:x99  |
| ruleNode                        | Equity instruments                | eba_dim:MCY,eba_MC:x130 |
| ruleNode                        | Debt securities                   | eba_dim:MCY,eba_MC:x60  |
| ruleNode                        | Loans and advances                | eba_dim:MCY,eba_MC:x469 |


```

```

<link:linkbase (...)>
<gen:link xlink:type="extended"
  xlink:role="http://www.eba.europa.eu/xbrl/crr/role/fws/FINREP/ITS-2013-02/2013-12-01/tabc/F_01.01">
<table:table xlink:type="resource" xlink:label="eba_tF_01.01" aspectModel="dimensional" id="eba_tF_01.01" />
<table:tableBreakdownArc xlink:type="arc"
  xlink:arcrole="http://xbrl.org/arcrole/PWD/2013-05-17/table-breakdown"
  xlink:from="eba_tF_01.01" xlink:to="eba_a1" axis="x" order="1" />
<table:breakdown xlink:type="resource" xlink:label="eba_a1" parentChildOrder="parent-first" id="eba_a1" />
<table:breakdownTreeArc xlink:type="arc" xlink:arcrole=
  "http://xbrl.org/arcrole/PWD/2013-05-17/breakdown-tree" xlink:from="eba_a1" xlink:to="eba_a1.root" order="0" />
<table:ruleNode xlink:type="resource" xlink:label="eba_a1.root" abstract="true" id="eba_a1.root">
  <formula:explicitDimension dimension="eba_dim:BAS">
    <formula:member>
      <formula:qname>eba_BA:x6</formula:qname>
    </formula:member>
  </formula:explicitDimension>
</table:ruleNode>
<table:definitionNodeSubtreeArc xlink:type="arc"
  xlink:arcrole="http://xbrl.org/arcrole/PWD/2013-05-17/definition-node-subtree"
  xlink:from="eba_a1.root" xlink:to="eba_c17737" order="1" />
<table:ruleNode xlink:type="resource" xlink:label="eba_c17737" id="eba_c17737">
  <formula:concept>
    <formula:qname>eba_met:mi53</formula:qname>
  </formula:concept>
</table:ruleNode>
(...)</gen:link>
</link:linkbase>

```

How are headers labelled?

F 01.01 Balance Sheet Statement [Statement of Financial Position]: Assets			
	Assets	Carrying amount	
		17737	
		010	
Cash and cash balances at central banks	17738	010	
Cash on hand	17739	020	
Cash balances at central banks	17740	030	
Other demand deposits	17741	040	
Financial assets held for trading	17742	050	
Derivatives	17743	060	
Equity instruments	17744	070	
Debt securities	17745	080	
Loans and advances	17746	090	

```

<link:linkbase ..>
<gen:link xlink:type="extended" xlink:role="http://www.xbrl.org/2003/role/link">

<link:loc xlink:type="locator" xlink:href="f_01.01-rend.xml#eba_tF_01.01" xlink:label="loc_eba_tF_01.01" />
<label:label xlink:type="resource" xlink:label="label_eba_tF_01.01" xml:lang="en" xlink:role="http://www.eurofiling.info/xbrl/role/rc-code">F 01.01</label:label>
<gen:arc xlink:type="arc" xlink:arcrole="http://xbrl.org/arcrole/2008/element-label" xlink:from="loc_eba_tF_01.01" xlink:to="label_eba_tF_01.01" />

<link:loc xlink:type="locator" xlink:href="f_01.01-rend.xml#eba_c17737" xlink:label="loc_eba_c17737" />
<label:label xlink:type="resource" xlink:label="label_eba_c17737" xml:lang="en" xlink:role="http://www.eurofiling.info/xbrl/role/rc-code">010</label:label>
<gen:arc xlink:type="arc" xlink:arcrole="http://xbrl.org/arcrole/2008/element-label" xlink:from="loc_eba_c17737" xlink:to="label_eba_c17737" />
<label:label xlink:type="resource" xlink:label="label_eba_c17737_1" xml:lang="en" xlink:role="http://www.eba.europa.eu/xbrl/role/dpm-db-id">17737</label:label>
<gen:arc xlink:type="arc" xlink:arcrole="http://xbrl.org/arcrole/2008/element-label" xlink:from="loc_eba_c17737" xlink:to="label_eba_c17737_1" />

</gen:link>
</link:linkbase>

```

```

<link:linkbase ..>
<gen:link xlink:type="extended" xlink:role="http://www.xbrl.org/2003/role/link">

<link:loc xlink:type="locator" xlink:href="f_01.01-rend.xml#eba_tF_01.01" xlink:label="loc_eba_tF_01.01" />
<label:label xlink:type="resource" xlink:label="label_eba_tF_01.01" xml:lang="en" xlink:role="http://www.xbrl.org/2008/role/label">F 01.01</label:label>
<gen:arc xlink:type="arc" xlink:arcrole="http://xbrl.org/arcrole/2008/element-label" xlink:from="loc_eba_tF_01.01" xlink:to="label_eba_tF_01.01" />
<label:label xlink:type="resource" xlink:label="label_eba_tF_01.01_1" xml:lang="en" xlink:role="http://www.xbrl.org/2008/role/verboseLabel">F01.01 Balance Sheet Statement [Statement of Financial Position]: Assets </label:label>
<gen:arc xlink:type="arc" xlink:arcrole="http://xbrl.org/arcrole/2008/element-label" xlink:from="loc_eba_tF_01.01" xlink:to="label_eba_tF_01.01_1" />

<link:loc xlink:type="locator" xlink:href="f_01.01-rend.xml#eba_a1" xlink:label="loc_eba_a1" />
<label:label xlink:type="resource" xlink:label="label_eba_a1" xml:lang="en" xlink:role="http://www.xbrl.org/2008/role/label">Assets</label:label>
<gen:arc xlink:type="arc" xlink:arcrole="http://xbrl.org/arcrole/2008/element-label" xlink:from="loc_eba_a1" xlink:to="label_eba_a1" />

<link:loc xlink:type="locator" xlink:href="f_01.01-rend.xml#eba_c17737" xlink:label="loc_eba_c17737" />
<label:label xlink:type="resource" xlink:label="label_eba_c17737" xml:lang="en" xlink:role="http://www.xbrl.org/2008/role/label">Carrying amount</label:label>
<gen:arc xlink:type="arc" xlink:arcrole="http://xbrl.org/arcrole/2008/element-label" xlink:from="loc_eba_c17737" xlink:to="label_eba_c17737" />

</gen:link>
</link:linkbase>

```

How are the hypercubes declared?

Dimension Relationships			Arrole	Context	Closed	Usable
http://www.eba.europa.eu/xbrl/crr/role/fws/FINREP/ITS-2013-02/2013-12-01/tabc/F_01.01.1						
<input type="checkbox"/> Carrying amount						
<input type="checkbox"/> model:hyp						
<input type="checkbox"/> Base						
<input type="checkbox"/> Base items						
Assets						
<input type="checkbox"/> Main category						
Main category						
Cash on hand, Loans and advances. On demand [call] and short notice [current account]						
<input type="checkbox"/> Accounting portfolio						
Portfolio						
Cash and cash balances at central banks						
<input type="checkbox"/> Counterparty sector						
Counterparty						
Not applicable/ All counterparties						

Dimension Relationships			Arrole	Context	Closed	Usable
http://www.eba.europa.eu/xbrl/crr/role/fws/FINREP/ITS-2013-02/2013-12-01/tabc/F_01.01.4						
<input type="checkbox"/> Carrying amount						
<input type="checkbox"/> model:hyp						
<input type="checkbox"/> Base						
<input type="checkbox"/> Base items						
Assets						
<input type="checkbox"/> Main category						
Main category						
Derivatives, Debt securities, Loans and advances, Equity instruments						
Derivatives						
Equity instruments						
Debt securities						
Loans and advances						
<input type="checkbox"/> Accounting portfolio						
Portfolio						
Financial assets held for trading						
Trading financial assets						
<input type="checkbox"/> Counterparty sector						
Counterparty						
Not applicable/ All counterparties						

F 01.01 Balance Sheet Statement [Statement of Financial Position]: Assets		Assets
		Carrying amount
		010
Cash and cash balances at central banks		010
Cash on hand		020
Cash balances at central banks		030
Other demand deposits		040
Financial assets held for trading		050
Derivatives		060
Equity instruments		070
Debt securities		080
Loans and advances		090
Trading financial assets		091
Derivatives		092
Equity instruments		093
Debt securities		094
Loans and advances		095



How does it look in the instance document?

```

<?xml version="1.0" encoding="utf-8"?>
<xbrl xmlns="http://www.xbrl.org/2003/instance"
      xmlns:eba_BA="http://www.eba.europa.eu/xbrl/crr/dict/dom/BA"
      xmlns:eba_MC="http://www.eba.europa.eu/xbrl/crr/dict/dom/MC"
      xmlns:eba_PL="http://www.eba.europa.eu/xbrl/crr/dict/dom/PL"
      xmlns:eba_dim="http://www.eba.europa.eu/xbrl/crr/dict/dim"
      xmlns:eba_met="http://www.eba.europa.eu/xbrl/crr/dict/met"
      xmlns:iso4217="http://www.xbrl.org/2003/iso4217"
      xmlns:link="http://www.xbrl.org/2003/linkbase"
      xmlns:xbrldi="http://xbrl.org/2006/xbrldi"
      xmlns:xlink="http://www.w3.org/1999/xlink">
<link:schemaRef
  xlink:href="http://www.eba.europa.eu/eu/fr/xbrl/crr/fws/finrep/its-2013-03/2014-03-31/mod/finrep_con_gaap.xsd"
  xlink:type="simple"/>
<context id="c-01">
  <entity>
    <identifier scheme="http://eba.europa.eu/lei">123456789</identifier>
  </entity>
  <period>
    <instant>2014-06-31</instant>
  </period>
  <scenario>
    <xbrldi:explicitMember dimension="eba_dim:APL">eba_PL:x20</xbrldi:explicitMember>
    <xbrldi:explicitMember dimension="eba_dim:BAS">eba_BA:x6</xbrldi:explicitMember>
    <xbrldi:explicitMember dimension="eba_dim:MCY">eba_MC:x130</xbrldi:explicitMember>
  </scenario>
</context>
<unit id="u-01">
  <measure>iso4217:EUR</measure>
</unit>
  <eba_met:mi53 contextRef="c-01" decimals="0" unitRef="u-01">120800</eba_met:mi53>
</xbrl>

```

F 01.01 Balance Sheet Statement [Statement of Financial Position]: Assets

	Assets	
	Carrying amount	
010		
Cash and cash balances at central banks		
Cash on hand	010	
Cash balances at central banks	020	
Other demand deposits	030	
040		
050		
Derivatives	060	
Equity instruments	070	120,800
Debt securities	080	
F 04.01 Breakdown of financial assets by instrument and by counterparty sector: financial assets held for trading		
	Assets	
	Carrying amount	Amount of cumulative change in the fair values attributable to changes in the credit risk
010		
Equity instruments	010	120,800
of which: at cost	020	
of which: credit institutions	030	
of which: other financial corporations	040	
of which: non-financial corporations	050	
Debt securities	060	
Central banks	070	
General governments	080	
Credit institutions	090	
Other financial corporations	100	

Financial assets held for trading



What are the filing indicators?

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Nazwa

find-params.xml

```

<variable:parameter xlink:type="resource" xlink:label="F_01.01" name="find:tF_01.01"
    select="find:fIndicators/find:filingIndicator[not(@find:filed) or @find:filed != false()] = 'F_01.01'"
    as="xs:boolean" id="F_01.01" />
<variable:parameter xlink:type="resource" xlink:label="F_01.02" name="find:tF_01.02"
    select="find:fIndicators/find:filingIndicator[not(@find:filed) or @find:filed != false()] = 'F_01.02'"
    as="xs:boolean" id="F_01.02" />
<variable:parameter xlink:type="resource" xlink:label="F_04.04" name="find:tF_04.04"
    select=" find:fIndicators/find:filingIndicator[not(@find:filed) or @find:filed != false()] = 'F_04.04'"
    as="xs:boolean" id="F_04.04" />
```

▲ T Taxonomy Assertions FINREP - FINREP 2014 / 2013-12-01

- ▷ T F_00.01
- ▷ T F_01.01
 - A v0050_h : \$a = \$b + \$c
 - A v0067_h : \$a = \$b + \$c
 - A v0069_h : \$a = \$b + \$c

▲ A v0067_h : \$a = \$b + \$c

- ▲ Affected tables
 - ▷ A F_01.01
 - ▷ A F_04.04
- ▷ Filters
- ▲ Variables
 - ▷ V \$a [0]
 - ▷ F MCY - Main category = 223 - Debt securities, Loans and advances
 - ▷ V \$b [0]
 - ▷ F MCY - Main category = 60 - Debt securities
 - ▷ V \$c [0]
 - ▷ F MCY - Main category = 469 - Loans and advances
- E \$a = \$b + \$c
- Preconditions
- ▲ Documentation
 - ▷ en
 - D v0067_h: [F 01.01 (c010)] {r180} = +{r190} + {r200...}
 - D v0067_h: [F 01.01 (c010)] {{r180}} = +{{r190}} + {...

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Nazwa

finrep_con_gaap-find-prec.xml

```

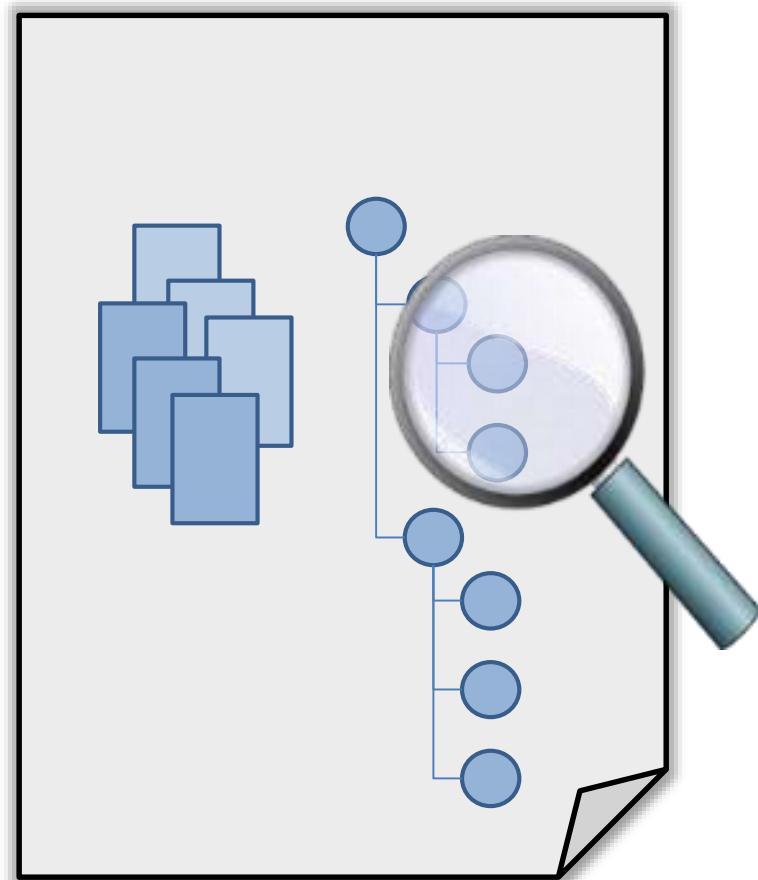
<variable:precondition xlink:type="resource" xlink:label="findPrec_2" test="$find:tF_01.01 or $find:tF_04.04" />
<link:loc xlink:type="locator" xlink:href="..//val/vr-v0067_h.xml#eba_v0067_h" xlink:label="loc_eba_v0067_h" />
<gen:arc xlink:type="arc" xlink:arcrole="http://xbrl.org/arcrole/2008/variable-set-precondition"
    xlink:from="loc_eba_v0067_h" xlink:to="findPrec_2" />
```



```

<find:fIndicators>
    <find:filingIndicator contextRef="c">F_01.01</find:filingIndicator>
    <find:filingIndicator contextRef="c" find:filed="false">F_04.04</find:filingIndicator>
</find:fIndicators>
```

Let's see how it works!



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Thank you! Questions?

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