INTRODUCTION TO XBRL/iXBRL IN THE CONTEXT OF THE EUROPEAN SINGLE ELECTRONIC FORMAT

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INTRODUCTION TO THE STANDARD
WHAT DOES THE XBRL STAND FOR, WHAT IS XBRL USED FOR AND SINCE WHEN?

XBRL
THE BUSINESS REPORTING STANDARD

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

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

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

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

public, open, free standard

initial requirements – standard for:

- describing information requirements in order to...
- ...transfer it between different systems

additional requirements:

- advanced validation (mathematical/logical rules, error messaging)
- visualization/rendering (e.g. tax forms, tables, reports)
- versioning of definitions (dictionaries) in time/space
- „drill-down“ of information (XBRL Global Ledger)
HOW IS XBRL GOVERNED AND DEVELOPED?

- 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 banks, registers, securities regulators, statistical and tax offices

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, ...)

more on:
- https://www.xbrl.org
  - The Standard
  - The Consortium
  - Members

- Requirements
- IWD
- PWD
- CR
- REC
WHAT ARE THE XBRL AND UNDERLYING TECHNICAL SPECIFICATIONS?

documents describing fundamental technical definition of how XBRL works

- specifications
  - recommendations - XBRL 2.1, Dimensions 1.0, Formula 1.0, Inline XBRL, Table linkbase, Versioning, Extensible Enumerations, ...
  - conformance suits (tests for compliance and compatibility)
  - Abstract Model (UML diagrams) and Open Information Model: XBRL in JSON, XML, CSV, SQL, ...
  - other: registries, collaboration, etc.
- technical files (XML Schema)
HOW DOES THE XBRL ARCHITECTURE LOOK (COMPONENTS AND RELATIONS)?

- Taxonomy consists of schema and linkbases.
- Schema contains declarations of various artefacts (business terms, types of relations, etc.).
- Linkbase contains relations between artefacts defined in schema files or/and links them to other artefacts.
- Extension taxonomy is one or more schema files declaring artefacts required in description of information requirements but missing in the extended taxonomy plus linkbases linking the extension and extended artefacts.
- DTS is a set of taxonomy (schema and linkbase) files linked together and accessible through a specific entry point(s).

- Instance document references taxonomy file (or files).
- Instance document contains facts that provide values for concepts defined in the taxonomy and refer to contexts identifying reporting entity, period and further describing data according to the dimensional breakdowns.
- Numeric facts refer to a unit (identifying the measure) and contain information on precision of their measurement.
- Facts may link to footnotes containing additional descriptions/explanations of fact values.
WHAT IS XBRL SCHEMA AND LINKBASES?

file extension .xsd, root element - schema

contains definitions (mostly in a form of unstructured list) of concepts (items, tuples, dimensions, domain members) and their properties

refers to or includes linkbase files which in turn may refer to definitions of concepts in schema

contains namespace declaration:
• solves name conflicts and ensures uniqueness
• targetNamespace attribute sets a namespace (surname) for all elements and attributes declared in a schema
• takes form of URIs (Unique Resource Identifiers)
• reused namespaces are declared with prefix: xmlns:prefix="namespace" (prefix is used instead of namespace when referencing a concept)

<xs:schema
targetNamespace="http://eiopa.europa.eu/xbrl/
xmlns:xsi="http://www.w3.org/2001/XMLSchema"
xmlns:xbrli="http://www.xbrl.org/2003/instance">

<xs:element name="x1" xbrli:periodType="instant" ... />
taxonomy may consist of many schema files importing each other (modularization)
**WHAT KINDS OF BUSINESS CONCEPTS ARE DEFINED IN XBRL SCHEMA FILES?**

| Item: financial term that represents an observation, i.e. a fact carrying a value, e.g. Inventories = 1200400.56 EUR |
| A company must report amount of inventories as of a balance sheet day. |
| Inventories must be grouped and disclosed with their value according to LIFO or FIFO valuation method. |
| Company must disclose their operations for domestic and foreign markets and split their operations according to operating segments. |

| tuple: represents compound facts i.e. groups of information, e.g. Inventories Valuation (a tuple) comprises of items: Group of inventories, Valuation method, Value of a group of inventories reported sequentially as many times as needed |

| dimensions a breakdown or a property that may consist of explicit list of members or be restricted by a type e.g. Geographical areas of operations dimension with explicit members All regions, Domestic and Foreign Operating segments dimension with typed domain SegmentName |

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### Inventories valuation

<table>
<thead>
<tr>
<th>Group of inventories</th>
<th>Valuation method</th>
<th>Value of group of inventories</th>
</tr>
</thead>
<tbody>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inventories valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>All regions</td>
</tr>
<tr>
<td>...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating segments</td>
</tr>
<tr>
<td>Inventories</td>
</tr>
<tr>
<td>...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Foreign</th>
</tr>
</thead>
<tbody>
<tr>
<td>...</td>
</tr>
</tbody>
</table>

---

**item**: financial term that represents an observation, i.e. a fact carrying a value, e.g. Inventories = 1200400.56 EUR

**tuple**: represents compound facts i.e. groups of information, e.g. Inventories Valuation (a tuple) comprises of items: Group of inventories, Valuation method, Value of a group of inventories reported sequentially as many times as needed

**dimensions**: a breakdown or a property that may consist of explicit list of members or be restricted by a type e.g. Geographical areas of operations dimension with explicit members All regions, Domestic and Foreign Operating segments dimension with typed domain SegmentName
item (not tuple or dimensional construct): a simple fact containing a value

unique identification (for computers not humans) of each item for reference from instance document or other files

expected value:
- monetary (number referring to a currency ISO 4217 code)
- decimal or integer (including min and max range)
- text (certain length, enumerated list, pattern for post code, etc.)
- date (plus time interval)
- etc.

instant = stock (for particular date), e.g. assets, liabilities, ...
duration = flow (for period), e.g. revenues, costs, expenses, ...

needed for allowing different time periods within a report (e.g. revenues for last year and last quarter)

accounting balance nature (credit/debit) indicating the required sign, e.g.
- costs are “debit” = reported as a positive figure (and subtracted from revenues),
- credit are “credit” = reported as a negative figure (and added to revenues),

Important for items such as „adjustment of …“

Balance sheet

reportable term or a header (abstract= "true")

Inventories

<xsd:element
  substitutionGroup="xbrli:item"
  name="inv" id="ifrs_inv"
  type="xbrli:monetaryItemType"
  xbrli:periodType="instant"
  xbrli:balance="debit"
  abstract= "false"
  (other attributes)/>
HOW TO DECLARE DIMENSIONS, MEMBERS AND HYPERCUBE?

- Geographical distribution broken down by operating segments

```
<xsd:element substitutionGroup="xbrldt:dimensionItem"
    name="geoOperAreas"(...) />

<xsd:element substitutionGroup="xbrli:item"
    type="nonnum:domainItemType" name="allRegs"(...) />

<xsd:element substitutionGroup="xbrli:item"
    type="nonnum:domainItemType" name="dmstc"(...) />

<xsd:element substitutionGroup="xbrli:item"
    type="nonnum:domainItemType" name="frgn"(...) />

<xsd:element id="segName" name="segName"
    type="xsd:string"/>

<xsd:element substitutionGroup="xbrldt:dimensionItem"
    name="opSegs"
    xbrldt:typedDomainRef="#segName"(...) />

<xsd:element substitutionGroup="xbrldt:hypecubeItem"
    name="mrktAndOpSeg"(...) />
```

- example item – a fact containing a value

- hypercube

- value of typed domain

- typed dimension

- primary item – a fact containing a value

- explicit dimension

- domain members

- typed dimension

- domain members

- typed domain

- value of typed domain

- typed dimension

- primary item – a fact containing a value

- explicit dimension

- domain members
WHAT ARE THE 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)**

**Technically:**

- start and end with `<link:linkbase>` tag
- linkbases may be „embedded in” XML Schema file or instance document (report); not recommended (decreases extensibility and flexibility as well as possibility of modularization – division into files has secondary priority)
- if separate file then it’s extension is: `.xml`
WHAT IS THE RELATION BETWEEN CONCEPT DECLARATION AND A FACT?

**Taxonomy**

Element definition:
```
<element
  id="ifrs_ProfitLoss"
  name="ProfitLoss"
  type="xbrli:monetaryItemType"
  substitutionGroup="xbrli:item"
  xbrli:periodType="duration"
  xbrli:balance="credit"
  nillable="true" />
```

**Context**
```
<context id="ABC_20100101_20101231">
  <entity>
    <identifier
      scheme="http://nasdaq.com/ticker">
      ABC
    </identifier>
  </entity>
  <period>
    <startDate>2014-01-01</startDate>
    <endDate>2014-12-31</endDate>
  </period>
</context>
```

**Unit**
```
<unit id="U-USD">
  <measure>iso4217:USD</measure>
</unit>
```

**Fact**
```
<ifrs:ProfitLoss
  contextRef="ABC_20100101_20101231"
  unitRef="U-USD"
  decimals="0">
  6611000
</ifrs:ProfitLoss>
```
WHAT IS AN XBRL INSTANCE DOCUMENT?

XBRL instance document is a business report in an electronic format created according to the rules of XBRL specifications and the referenced DTS

referring to XBRL taxonomy files from instance documents
- depends on taxonomy modularisation (entry file or a set of files): schemaRef/linkbaseRef
- absolute/relative reference

declaration of namespace prefixes (preferably canonical), contexts, units, facts:
WHAT IS THE IDEA BEHIND INLINE XBRL?

**TRANSFORMATION**
a normative stylesheet strips out the XHTML from irrelevant parts and provides a valid XBRL Instance document (no checks against DTS)

**VALIDATION**
XBRL Instance document is validated against a taxonomy

**MAPPING/STORAGE**
data is mapped to a data based where it is stored and available for further analysis

```xml
<td class="rightalign">
  <ix:nonFraction name="ifrs:Revenue" contextRef="e2010" precision="5" unitRef="USD" scale="6" format="ixt:numcommadot">
    $43,623
  </ix:nonFraction>
</td>
```

**resulting XBRL**
```xml
<ifrs:Revenue contextRef="e2010" unitRef="USD" precision="5">43623000000</ifrs:Revenue>
```
INLINE XBRL SPECIFICATION

Inline XBRL 1.1

Elements:
- ix:continuation
- ix:denominator
- ix:exclude
- ix:footnote
- ix:header
- ix:nonFraction
- ix:nonNumeric
- ix:numerator
- ix:tuple
- ix:references
- ix:relationship
- ix:resources
- ix:hidden
- ix:footnote
- ix:fraction
- ix:header
- ix:nonFraction
- ix:nonNumeric
- ix:numerator
- ix:tuple
- ix:references
- ix:relationship
- ix:resources
- ix:hidden
- ix:footnote
- ix:fraction

Attributes:
- arcrole
- contextRef
- continuationFrom
- decimals
- escape
- footnoteRole
- format
- fromRefs
- id
- linkRole
- name
- precision
- order
- scale
- sign
- target
- title
- toRefs
- tupleID
- tupleRef
- unitRef

THE NONFRACTION ELEMENT

LENNAR CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
November 30, 2016 and 2015

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>2016 ($)</th>
<th>2015 ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>$1,050,138</td>
<td>893,408</td>
</tr>
<tr>
<td>Restricted cash</td>
<td>5,977</td>
<td>13,505</td>
</tr>
<tr>
<td>Receivables, net</td>
<td>106,976</td>
<td>74,538</td>
</tr>
<tr>
<td>Inventories</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finished homes and construction in progress</td>
<td>3,951,716</td>
<td>3,957,167</td>
</tr>
<tr>
<td>Land and land under development</td>
<td>5,106,191</td>
<td>4,724,578</td>
</tr>
<tr>
<td>Consolidated inventory not owned</td>
<td>121,019</td>
<td>58,851</td>
</tr>
<tr>
<td>Total inventories</td>
<td>9,178,926</td>
<td>8,740,596</td>
</tr>
<tr>
<td>Investments in unconsolidated entities</td>
<td>811,723</td>
<td>741,551</td>
</tr>
<tr>
<td>Other assets</td>
<td>651,028</td>
<td>699,222</td>
</tr>
<tr>
<td></td>
<td><strong>11,904,768</strong></td>
<td><strong>11,022,820</strong></td>
</tr>
</tbody>
</table>

Rialto

Lennar Financial Services

Lennar Multifamily

| Total assets | **15,861,781** | **14,944,508** |

(1) Under certain provisions of Accounting Standards Codification (“ASC”) Topic 810, Consolidations, (“ASC 810”), the Company is required to separately disclose on its consolidated balance sheets the assets of consolidated variable interest entities (“VIEs”) that are owned by the consolidated VIEs and liabilities of consolidated VIEs as to which there is no recourse against the Company.

As of November 30, 2016, total assets include $558.3 million related to consolidated VIEs of which $13.7 million is included in Lennar Homebuilding cash and cash equivalents, $0.2 million in Lennar Homebuilding receivables, net, $52.2 million in Lennar Homebuilding finished homes and construction in progress, $106.3 million in Lennar Homebuilding land and land under development, $121.0 million in Lennar Homebuilding consolidated inventory not owned, $4.6 million in Lennar Homebuilding investments in unconsolidated entities, $13.9 million in Lennar Homebuilding other assets, $213.8 million in Rialto assets and $2.5 million in Lennar Multifamily assets.
THE FOOTNOTE ELEMENT

Lennar Corporation and Subsidiaries
CONSOLIDATED BALANCE SHEETS
November 30, 2016 and 2015

<table>
<thead>
<tr>
<th></th>
<th>2016 (i)</th>
<th>2015 (i)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Dollars in thousands, except shares and per share amounts)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ASSETS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lennar Homebuilding:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>$1,050,138</td>
<td>$893,408</td>
</tr>
<tr>
<td>Restricted cash</td>
<td>5,977</td>
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<tr>
<td>Inventories</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finished homes and construction in progress</td>
<td>3,951,716</td>
<td>3,957,167</td>
</tr>
<tr>
<td>Land and land under development</td>
<td>5,169,101</td>
<td>4,724,578</td>
</tr>
<tr>
<td>Consolidated inventory not owned</td>
<td>121,019</td>
<td>58,851</td>
</tr>
<tr>
<td>Total inventories</td>
<td>9,178,926</td>
<td>9,740,596</td>
</tr>
<tr>
<td>Investments in unconsolidated entities</td>
<td>811,723</td>
<td>741,551</td>
</tr>
<tr>
<td>Other assets</td>
<td>651,028</td>
<td>609,222</td>
</tr>
<tr>
<td>Lennar Financial Services</td>
<td>11,804,768</td>
<td>11,072,820</td>
</tr>
<tr>
<td>Lennar Multifamily</td>
<td>1,276,210</td>
<td>1,505,500</td>
</tr>
<tr>
<td>Total assets</td>
<td>15,361,781</td>
<td>14,419,500</td>
</tr>
</tbody>
</table>

(1) Under certain provisions of Accounting Standards Codification ("ASC") Topic 810, Consolidations, ("ASC 810") the Company is required to separately disclose on its consolidated balance sheets the assets of consolidated variable interest entities ("VIEs") that are owned by the consolidated VIEs and liabilities of consolidated VIEs as to which there is no recourse against the Company. (See footnotes)

As of November 30, 2016, total assets include $258.3 million related to consolidated VIEs of which $12.3 million is included in Lennar Homebuilding cash and cash equivalents, $0.2 million in Lennar Homebuilding receivables, net $55.2 million in Lennar Homebuilding finished homes and construction in progress, $108.5 million in Lennar Homebuilding land and land under development, $121.0 million in Lennar Homebuilding consolidated inventory not owned, $4.6 million in Lennar Homebuilding investments in unconsolidated entities, $13.9 million in Lennar Homebuilding other assets, $213.8 million in Rialto assets and $8.3 million in Lennar Multifamily assets.
THE RELATIONSHIP ELEMENT

LENNAR CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
November 30, 2016 and 2015

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>2016 (1)</th>
<th>2015 (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lennar Homebuilding:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
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<td>Investments in unconsolidated entities</td>
<td>811,723</td>
<td>741,551</td>
</tr>
<tr>
<td>Other assets</td>
<td>651,028</td>
<td>609,232</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>11,994,769</strong></td>
<td><strong>11,072,820</strong></td>
</tr>
</tbody>
</table>

| **Rinto** | | |
| Rinto Financial Services | 1,726,210 | 1,565,590 |
| Lennar Multifamily | 526,131 | 415,352 |
| **Total assets** | **15,361,781** | **14,419,509** |

(1) Under certain provisions of Accounting Standards Codification (“ASC”) Topic 810, Consolidations (“ASC 810”) the Company is required to separately disclose on the consolidated balance sheets the assets of consolidated variable interest entities (“VIEs”) that are owned by the consolidated VIEs and liabilities of consolidated VIEs as to which there is no recourse against the Company.

As of November 30, 2016, total assets include $336.3 million related to consolidated VIEs of which $13.3 million is included in Lennar Homebuilding cash and cash equivalents, $0.2 million in Lennar Homebuilding receivables, net, $4.2 million in Lennar Homebuilding finished homes and construction in progress, $198.3 million in Lennar Homebuilding land and land under development, $121.0 million in Lennar Homebuilding consolidated inventory not owned, $4.5 million in Lennar Homebuilding investments in unconsolidated entities, $115.6 million in Lennar Homebuilding other assets, and $51.8 million in Rinto assets and $4.5 million in Lennar Multifamily assets.
THE NONNUMERIC ELEMENT

LENNAR CORPORATION AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies

Basis of Consolidation

The accompanying consolidated financial statements include the accounts of Lennar Corporation and all subsidiaries, partnerships and other entities in which Lennar Corporation has a controlling interest and VIEs (see Note 15) in which Lennar Corporation is deemed the primary beneficiary (the "Company"). The Company's investments in both unconsolidated entities in which a significant, but less than controlling, interest is held and in VIEs in which the Company is not deemed to be the primary beneficiary are accounted for by the equity method. All intercompany transactions and balances have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ("GAAP") requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

Revenue Recognition

Revenues from sales of homes include the homebuyer's initial and continuing involvement with the new home's earnings process. See Homeowner's Receivable and Lennar Mortgage in Note 15 for further discussion regarding the use of the completion of construction milestone for Lennar Mortgage's receivables and sales at the completion of construction milestone for the homebuyer.
WHERE TO FIND EXAMPLES OF INLINE XBRL?

http://www.ifrs.org/XBRL/Resources/Pages/2017-Illustrative-Examples-in-XBRL.aspx

https://www.sec.gov/Archives/edgar/data/920760/000162828017-000327/index.htm

Example 1:
Illustrative financial statements for SMEs (Small and Medium-sized Entities)
This example represents a full set of illustrative financial statements for SMEs which have been tagged using XBRL. The notes have been tagged using both stock tagging and detailed tagging.

Example 2:
Statements of Financial Position, Comprehensive Income, and Changes in Equity
This example represents how the requirements in IAS 1 (IES) to present the Statements of Financial Position, Comprehensive Income, and Changes in Equity might be met using detailed XBRL tagging with the use of XBRL footnotes.

Example 3:
Statement of Cash Flows
These examples represent how the requirements of IAS 7 to present the Statement of Cash Flows and segment information for cash flows might be met using detailed XBRL tagging.
WHAT ARE THE IMPLEMENTATION APPROACHES FOR A PREPARER?

creation of an XBRL/iXBRL report may be achieved in multiple ways with various involvement of filers’ human and financial resources and with use of a variety of existing off-the-shelf tools, customised solutions or services

selection of an approach by a filer depends among others on:
• the type of information requirements being exchanged (amount of data, frequency, transformations, etc.),
• legacy systems involved in preparation of data to be included in a report (number of systems involved, etc.),
• requirements of the recipient and the infrastructure it provides.

approaches for filers in terms of production of XBRL reports:
• outsourcing of the XBRL report creation process to a specialised third party,
• use of form-based solution offered by a recipient or a third party,
• adding XBRL tags to a report created in other common format (e.g. MS Word, MS Excel, PDF) using off-the-shelf third party tools,
• integrating production of XBRL reports in the existing systems of a filer using in-house resources or comprehensive disclosure management solutions available on the market.
<table>
<thead>
<tr>
<th>Approach</th>
<th>Benefits</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outsourcing</td>
<td>• comprehensive support of knowledgeable third party experts</td>
<td>• low control over tagging (limited to review)</td>
</tr>
<tr>
<td></td>
<td>• only basic taxonomy knowledge required to review the tagging</td>
<td>• limited possibility to reduce the cost of subsequent filings</td>
</tr>
<tr>
<td></td>
<td>• low risk of not meeting reporting obligations</td>
<td>• additional effort at the end of the reporting process and lack of internal</td>
</tr>
<tr>
<td></td>
<td>• no major investment required on filer side</td>
<td>capabilities or possibility to leverage the benefits of structured data</td>
</tr>
<tr>
<td></td>
<td>• minimal impact on the existing processes</td>
<td></td>
</tr>
<tr>
<td>Annotating reports with XBRL</td>
<td>• limited investment</td>
<td>• requires familiarity with XBRL and the toolkit</td>
</tr>
<tr>
<td></td>
<td>• control over result</td>
<td>• additional (potentially time consuming) effort at the end of the reporting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>process with limited benefits outside of the reporting context</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• may require additional audit of external party to review correctness of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>tagging</td>
</tr>
<tr>
<td>Integrated</td>
<td>• comprehensive approach</td>
<td>• significant upfront investment (cost and time)</td>
</tr>
<tr>
<td></td>
<td>• cost-saving in mid to long term when subsequent reports may</td>
<td>• potentially high level of complication in implementation</td>
</tr>
<tr>
<td></td>
<td>be produced semi-automatically</td>
<td>• potentially more detailed knowledge on XBRL and taxonomies required</td>
</tr>
<tr>
<td></td>
<td>• control over the process and result</td>
<td>(unless integration is performed by external consultants)</td>
</tr>
<tr>
<td></td>
<td>• enhanced reporting in other contexts (internal or external)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• additional analytical possibilities based on structured data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• potentially existing solutions applied by a filer may become</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XBRL enabled and support the process</td>
<td></td>
</tr>
</tbody>
</table>
HOW DOES A PROCESS OF TAGGING MAY LOOK IN PRACTICE?

Load a taxonomy (open preloaded) and load a report in .doc, .xls, .pdf (converting to .doc)

Define general information (entity, periods, units, etc.)

Match taxonomy concept (extend if allowed/needed also in relations)

Tag concept, dimensions, period, unit, etc. in the report

Generate an iXBRL file and validate

<table>
<thead>
<tr>
<th>€ millions, unless otherwise stated</th>
<th>2015</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total revenue</td>
<td>20,793</td>
<td>17,566</td>
<td>16,815</td>
</tr>
<tr>
<td>Cost of cloud and software</td>
<td>-3,313</td>
<td>-2,557</td>
<td>-2,370</td>
</tr>
<tr>
<td>Cost of services</td>
<td>-3,313</td>
<td>-2,716</td>
<td>-2,660</td>
</tr>
<tr>
<td>Total cost of revenue</td>
<td>-6,626</td>
<td>-5,272</td>
<td>-5,031</td>
</tr>
<tr>
<td>Gross profit</td>
<td>14,167</td>
<td>12,288</td>
<td>11,784</td>
</tr>
</tbody>
</table>
affects:
· taxonomies (extensions in open reporting project, e.g. Edgar Filing Manual of US SEC)
· instance documents (in open or close reporting scenarios)

aim:
· define rules that limit the flexibility of XBRL in the construction of XBRL instance documents
· provide additional guidelines related to the filing of data in general or specific cases

levels:
· MUST (obligatory)
· SHOULD (less important/impacting or some stakeholders have specific cases)
· MAY (nice to have)
XBRL/iXBRL IN THE CONTEXT OF ESEF
IFRS TAXONOMY

- created by the IFRS Foundation
- releases
  - at minimum each year as a new version updated to reflect the current set of standards published in the IFRS Bound Volume
  - potentially a few interim versions published during the year
- content:
  - four files defining financial concepts for:
    - the full IFRS application,
    - application of the IFRSs by Small and Medium Enterprises [SMEs],
    - the Management Commentary [MC] and
    - deprecated (i.e. no longer applicable in the most current version) elements.
  - each of these components provides a number of relationships for labels, references, presentation purposes and dimensional breakdowns and a set of entry points
  - formulas identify additional documentation and may serve validation purposes
- standard based (i.e. standard by standard: IAS 1, IAS 2, ... IFRS 1, IFRS 2, ...) in folders and relationship structure
- declares sections of a financial statement defined by the standards in form of:
  - hierarchies of concepts - parent concepts providing context to the (usually) more specific concepts identified as children of that concept
  - tables (sometimes not fully defined)
  - breakdowns applicable for any hierarchy or table
only FULL_IFRS (i.e. not SME nor MC)

automated production based on the IFRS taxonomy and additional input

structure
• import IFRS taxonomy elements, labels and documentation, references, ...
• recreate relations based on the IFRS taxonomy
  • legal reasons (IFRS copyrights for modifications, ...)
  • operational reasons (e.g. endorsement or removal of standards)
  • technical reasons – modification

modifications comparing to the IFRS taxonomy
• ESMA owner (www.esma.europa.eu) in path, namespaces, roles, etc.
• limited number of files and simplified naming convention (e.g. remove repeated date component)
  • esef_cor.xsd/esef.xsd
  • imports IFRS concepts
  • defines ESMA extension concepts (guidance elements, ...)

• refers labels (standard and documentation)
• entry point to be used by filers for their extension schema
• esef_all.xsd/esef.xsd
  • defines roles and refers to linkbases (presentation, calculation, definition, ...),
  • entry point to be used by filers for browsing ESES taxonomy (as a reference)
• esef_pre.xml, esef_cal.xml, esef_def.xml, esef_lab.xml, esef_gen.xml
  • relationships (in ESEF linkbases, counterparts of IFRS linkbases)
  • application of guidance concepts and any other ESMA extension concepts,
  • opening hypercubes: enables adding dimensions where not mentioned explicitly in the taxonomy (as a reference only as filers would be expected to create hypercubes for their reports)
    • some hypercubes may remain closed (for certain line items) to identify the desire not to
    • tagging rule may constrain the set of dimensions to be applied in such cases (e.g. to those in application)
• esef_for.xml (formulas providing additional documentation on relations between taxonomy concepts; to be added when available for 2017 version)
selected sections of the report (e.g. PFSs, parts of a few important notes) must be tagged in detailed and completely i.e. every single value must be tagged individually

filers must use ESMA ESEF taxonomy concepts (IFRS Taxonomy concepts) wherever possible

in case there is no concept found to tag a piece of data a filer defines an extension concept which:

• must be a primary item unless differently envisaged by the base taxonomy (e.g. in case of classes of equity in statement of changes in equity or some classifications in selected notes)

• must be anchored (in a dedicated placeholder) against the closest base taxonomy concept (used in their filing or not); preferably not an abstract (header) concept but a similar data type, balance attribute, period type, etc. (detailed guidance to be defined) with a specified mechanism (e.g. general-special standard XBRL 2.1 arcrole)

filers must use provided placeholders (abstract concepts) as a starting points to resemble their specific structure of in the presentation linkbase and include this information also in corresponding calculation linkbase and definition linkbase (if needed)
ANCHORING EXTENSION CONCEPTS

- can be very simple
  - extension concept more general than a base taxonomy concept
  - extension concept very similar to a base taxonomy concept but different enough
  - extension concept more specific than a base taxonomy concept
  - extension concept with no relations to any base taxonomy concept

- or very complex
  - consists of
  - is part of
  - combines in full or partially

Non-current assets
- Goodwill
- Prepaid pension and postretirement benefits
- Other assets, noncurrent

Prepaid pension cost
- Prepaid pension and postretirement benefits
- Prepaid expense other, noncurrent
ANCHORING EXAMPLE
THANK YOU!