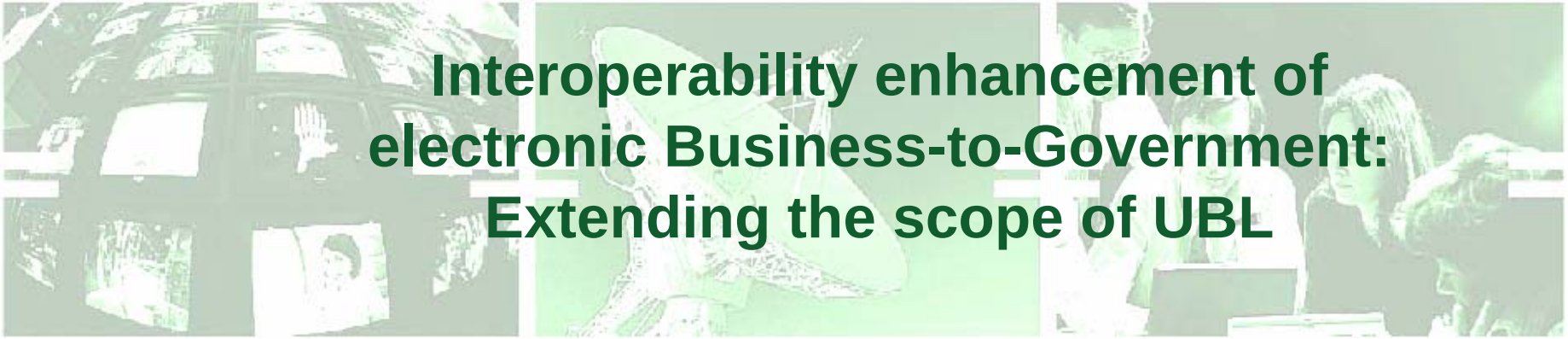
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Interoperability enhancement of electronic Business-to-Government: Extending the scope of UBL

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NTUA / BOC / SAP

November, 29th 2006

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Agenda

UN/CEFACT standards for modeling of governmental business information

Integrated GENESIS modeling approach

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Challenges in modeling of governmental business information

Number of standards

- Plethora of standards exists in business information modeling that all show different degrees of dissemination

Incomplete coverage

- No universal language exists that describes the semantics of governmental data in unambiguous terms

Silos

- Governmental authorities are focused on their proprietary requirements and defining their specific, inflexible business data models

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UN/CEFACT CCTS as solution to the business standards dilemma

UBL provides standardized document structures that can serve as templates

1 Reusability

Definition of data building blocks that reflect actual business requirements and can be reused

Extensibility **2**

In case exisiting artifacts are not sufficient, additional components can be created and published in the common library

Semantic-level, CCTS-compliant information modeling

4 Templates available

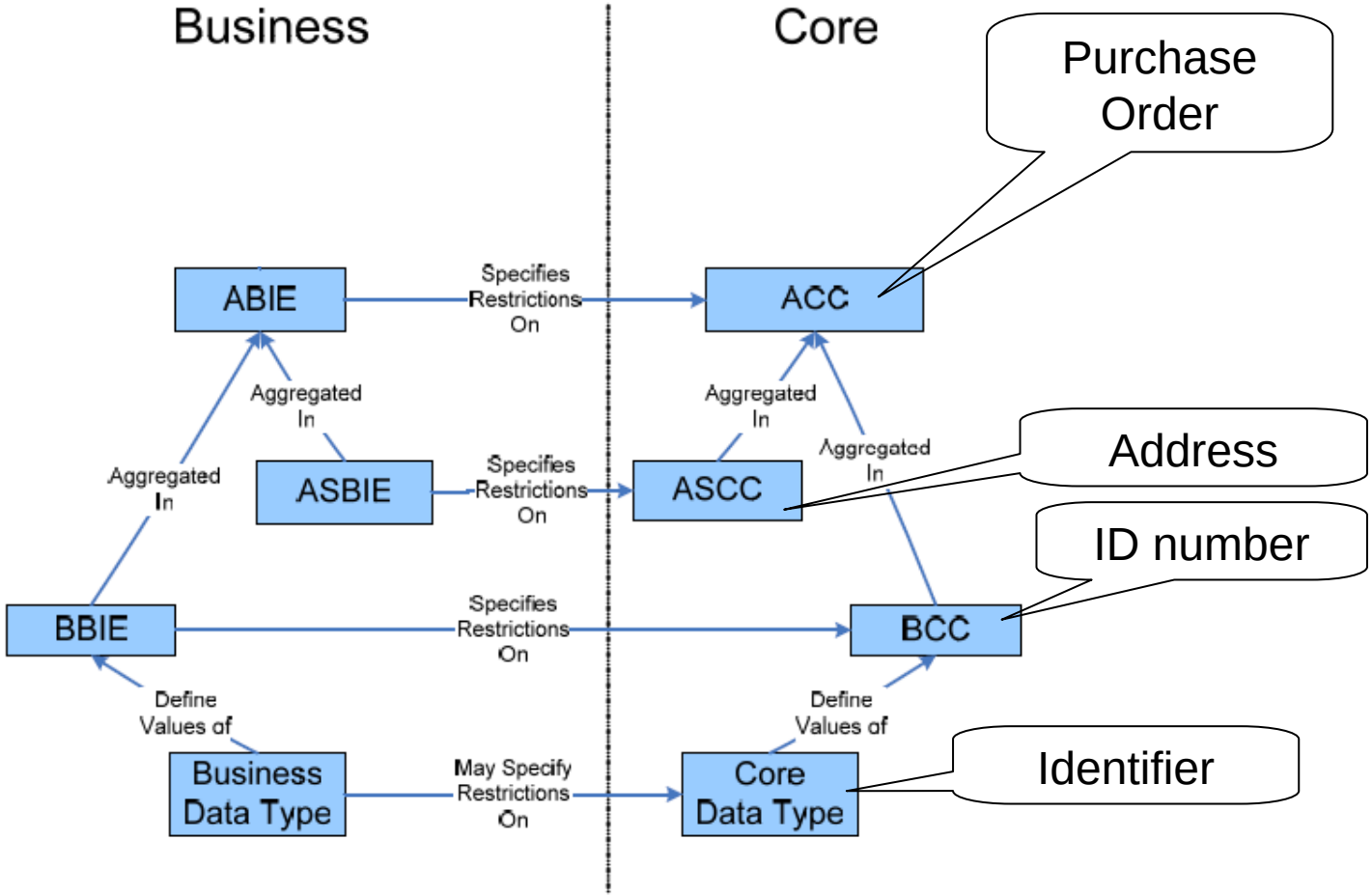
Business documents are always structured according to user context

3 Context-sensitivity

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Core Component based Business Information Modeling



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Multi-level modeling, Reuse and Standardized Notation

- Allow different levels of data to be gathered according to the skills of the parties involved
  - Three-View-Based modelling approach (private view, public view, collaboration view)
  - Unstructured documentation (“light” data description)
  - Structured documentation (“heavy” data description)
  - Specific scope (corresponding to the private view)
  - Generic scope (corresponding to the collaboration view)

- Reuse and extend existing information (e.g. UBL and CCL) within the modelling environment
  - Data repository

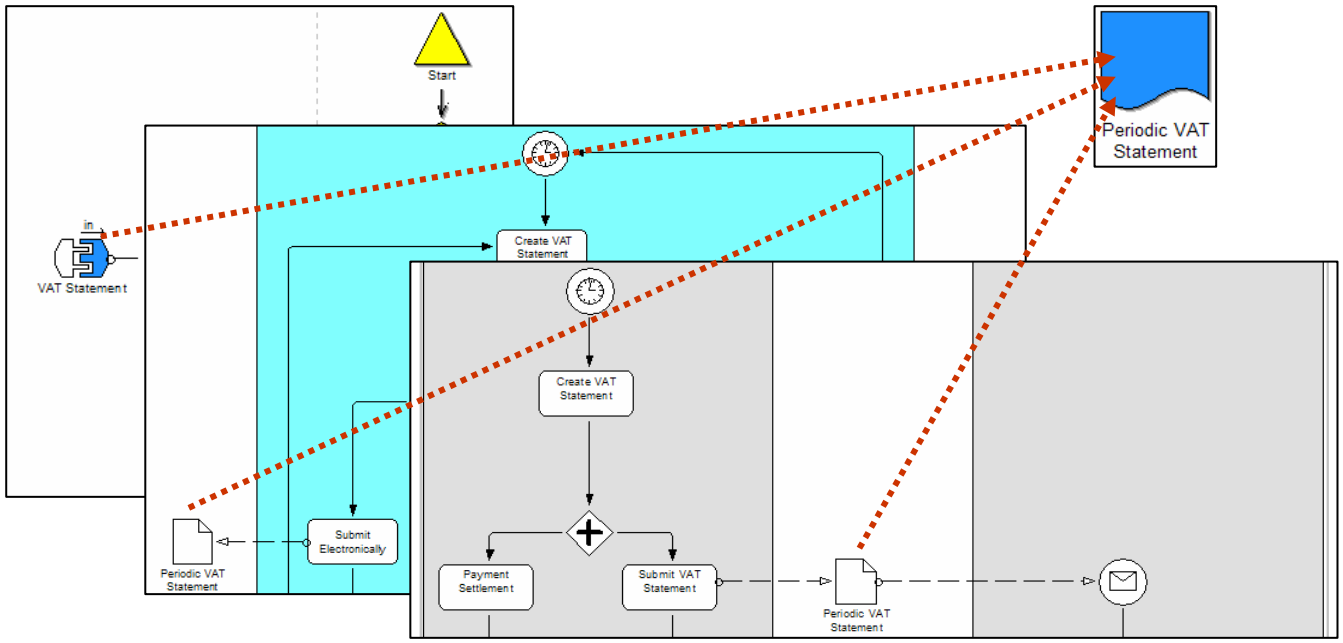
- Standardized (modelling) notation to allow exchange beyond the modelling environment
  - UN/CEFACT ISO 15000-5 compliant
  - XML interface

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Consistent Business Document integration into all different views

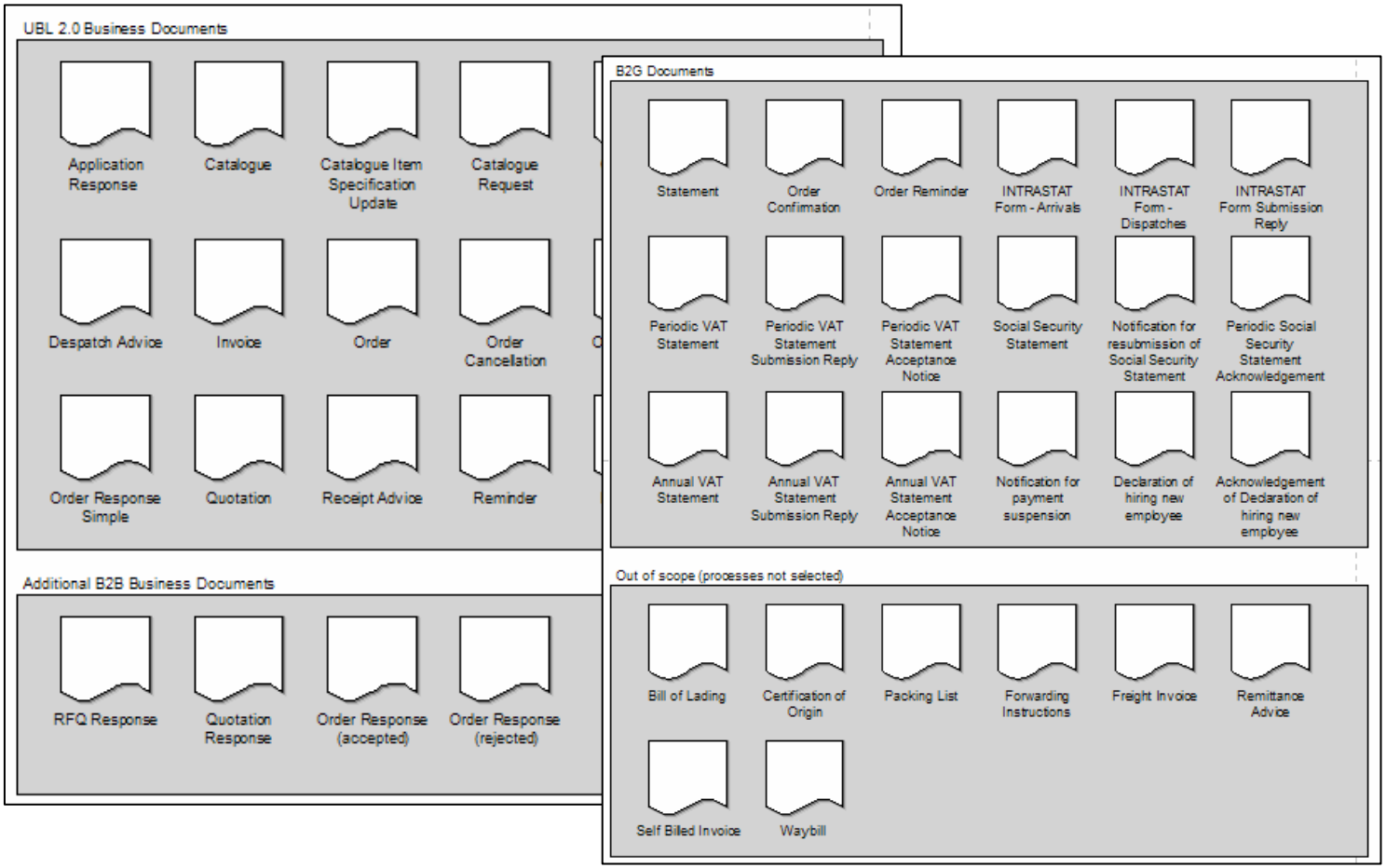
Once a data element has been identified within a process it is reused (and refined) within all view levels [⇢ = Inter Model Reference]



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Data Repository: Example (Generic Documents)



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Integrated Approach

1. Define specific business documents based on private view (Scope: single party)
   - Unstructured information

2. Refine specific business document based on public view (Scope: single party)
   - Structured information, aligned to UBL templates

3. Consolidate specific business documents into generic business documents based on collaboration view (Scope: all parties)
   - Structured information, aligned to UBL templates

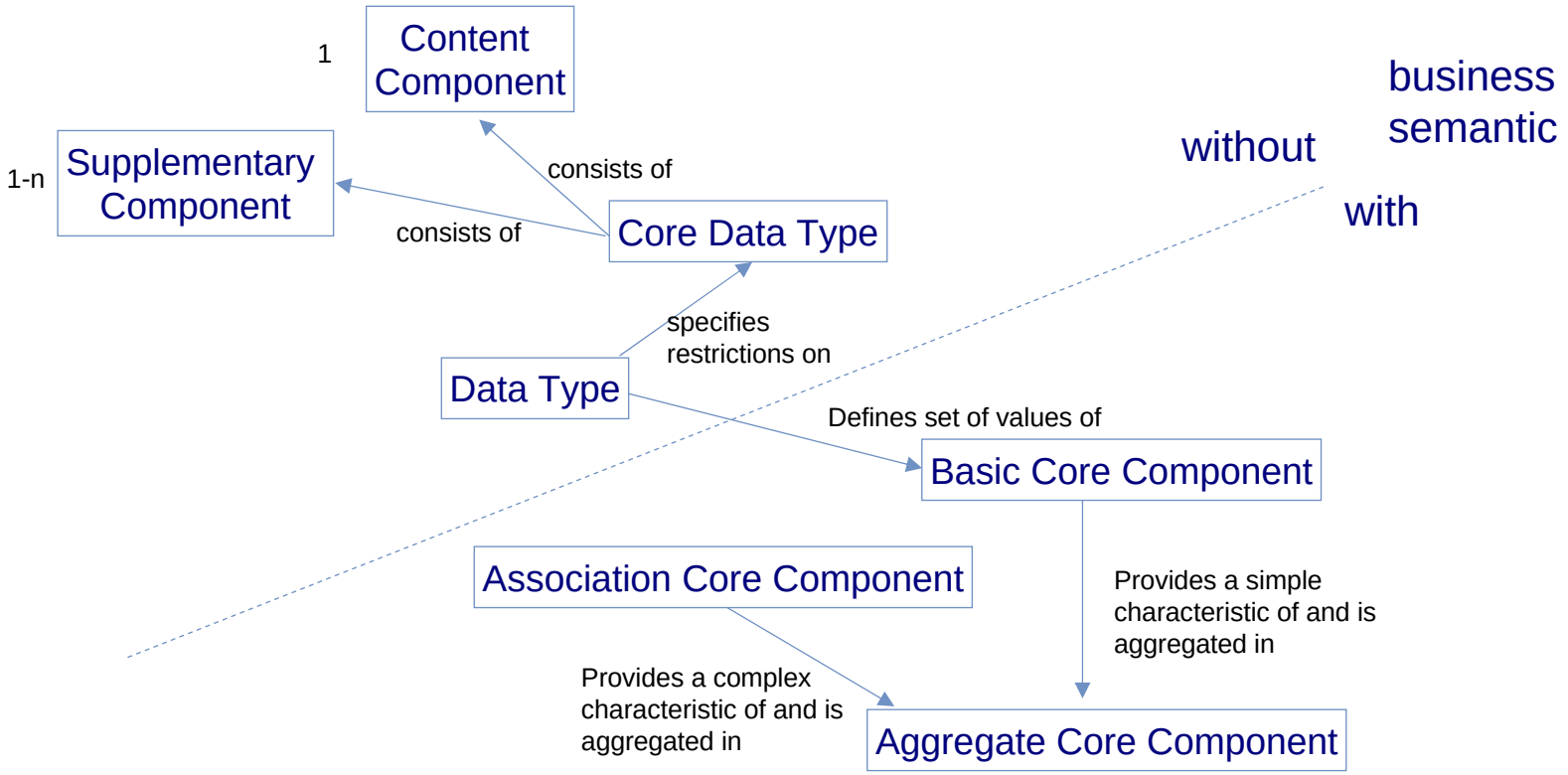
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Thank you for your attention!

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UN/CEFACT Core Component Technical Specification

Hierarchical composition of Aggregate Core Components (ACCs)



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Core Data Types as the Smallest Piece of Information

Context

Need for a standardized business data representation

Core Data Types

- UN/ CEFACT has established **21** so-called Core Data Types that can be used as atomic pieces of information

- **Major advantages**:

- Worldwide accepted standard facilitates global interoperability through a common understanding in a syntax independent manner
- Comprehensiveness: Almost every imaginable piece of information can be classified
- Easy to use: Pre-defined explanations serve as support for identifying the correct Core Data Type

- **Composition of Core Data Types**: Each CDT comprises one so-called Content Component (that carries the actual data value) and one or several so-called Supplementary Components (that impose further restrictions on the content Component)

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