The “Common Ontology” between ICD 11 and SNOMED CT

medical plausibility vs. ontological soundness

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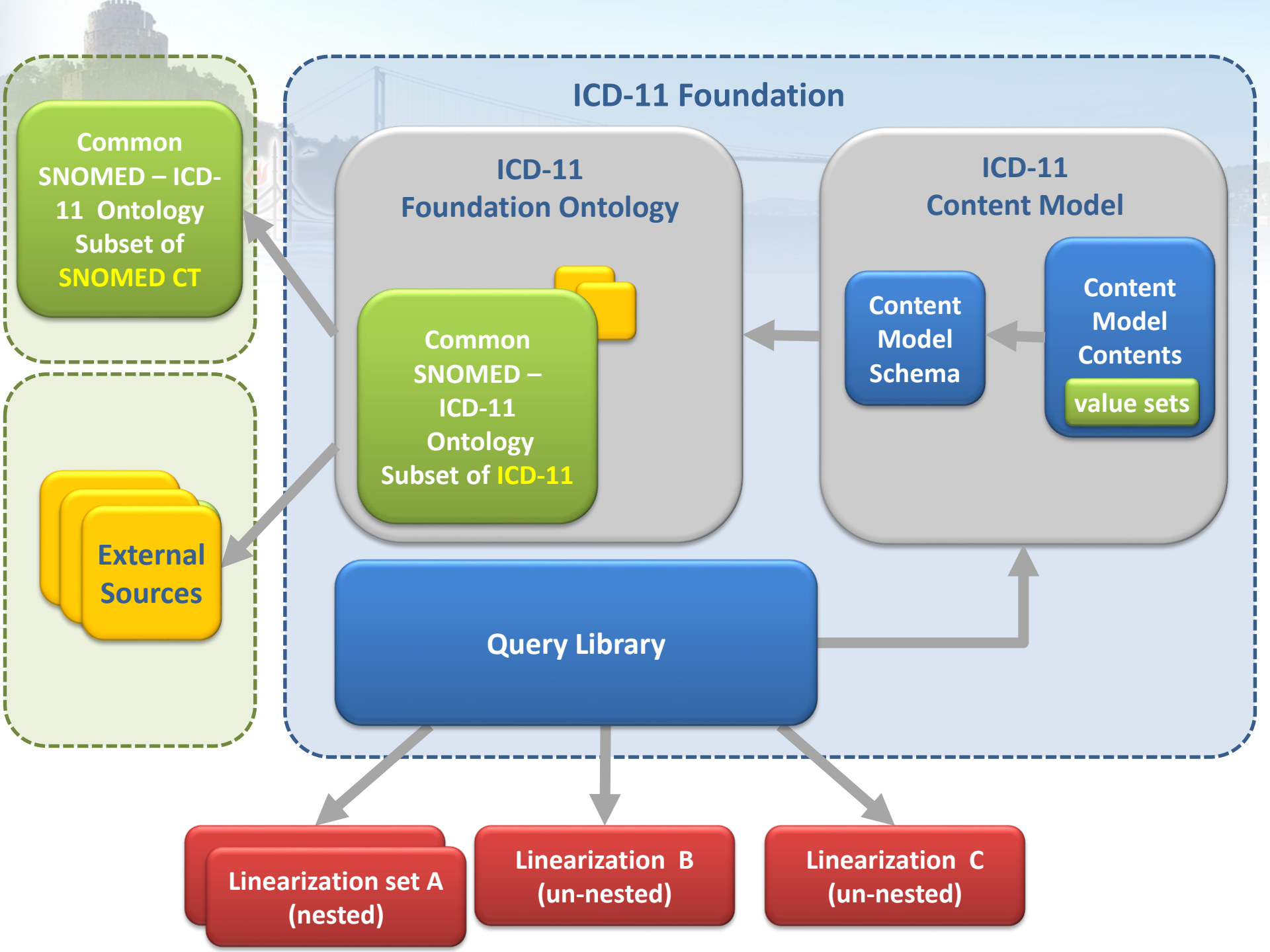
ICD-11 – SNOMED CT harmonization

- Background:
  - ICD: Classification maintained by WHO, currently under revision → ICD-11
  - SNOMED CT: Ontology-based clinical terminology maintained by IHTSDO (International Health Terminology Standards Development Organisation)
- Large content overlap between ICD and SNOMED CT disorder / findings hierarchy
- Joint Advisory Group (WHO and IHTSDO), based on institutional agreement:
  - Synergistic and not antagonistic terminology development
  - Jointly develop a common ontological basis for both ICD-11 and SNOMED CT
  - Maximum of interoperability between ICD and SNOMED coded data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Common SNOMED – ICD-11 Ontology Subset of SNOMED CT
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Linearization set A (nested)
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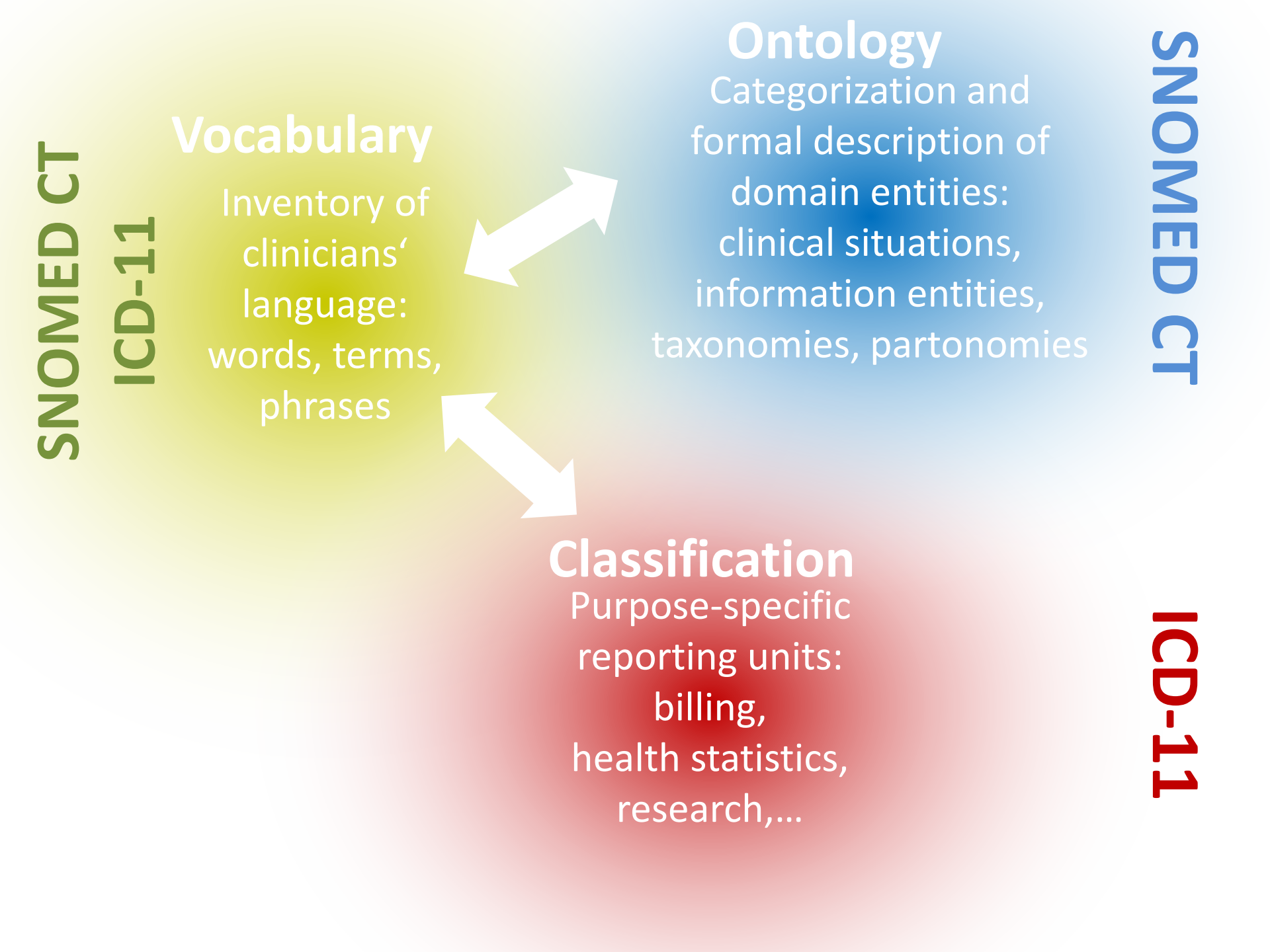
Inventory of clinicians‘ language: words, terms, phrases

Categorization and formal description of domain entities: clinical situations, information entities, taxonomies, partonomies

Purpose-specific reporting units: billing, health statistics


SNOMED CT
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Vocabulary
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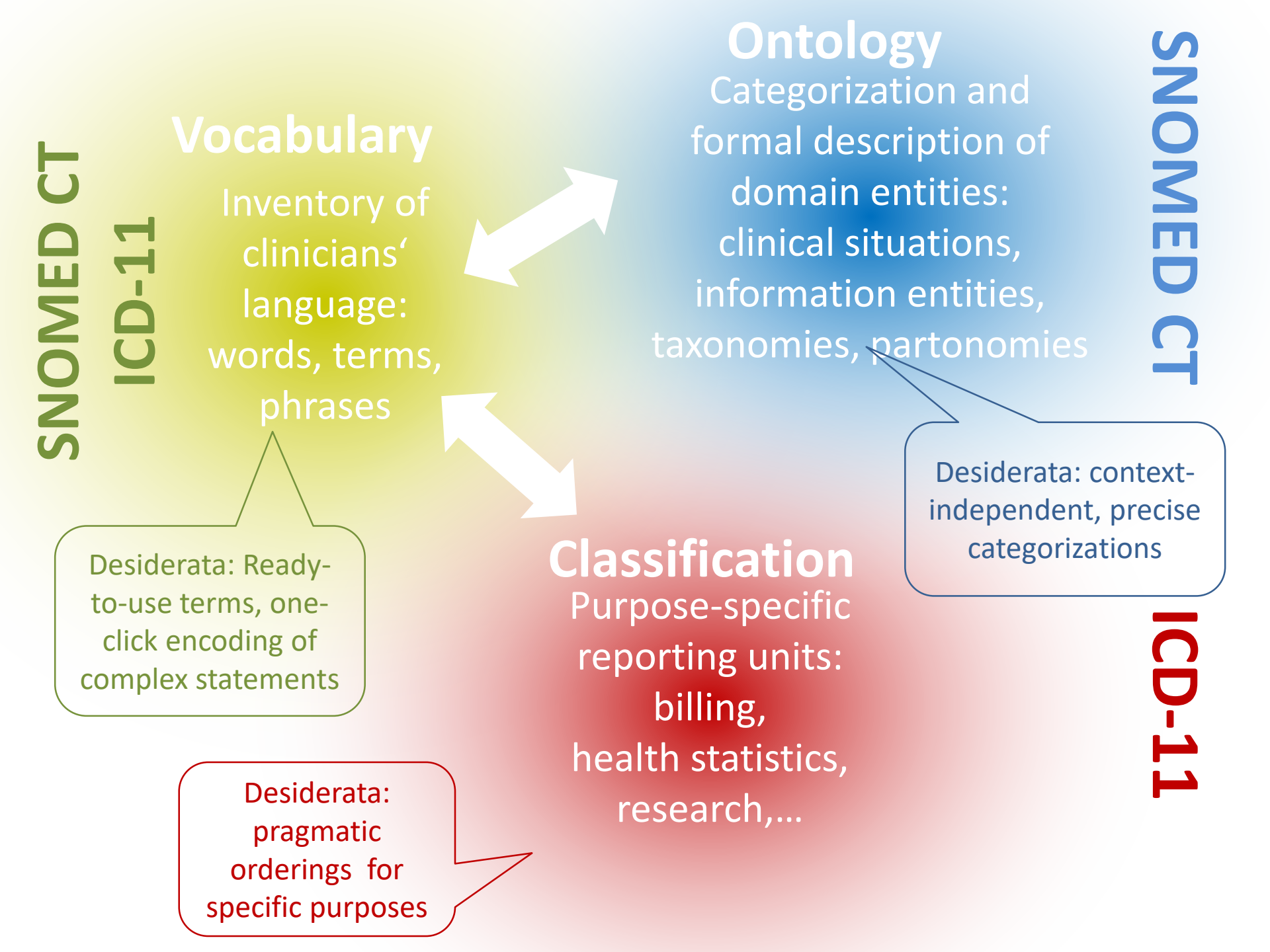
SNOMED CT
ICD-11
Vocabulary
Inventory of clinicians' language: words, terms, phrases
Desiderata: Ready-to-use terms, one-click encoding of complex statements
Ontology
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SNOMED CT
Desiderata: context-independent, precise categorizations
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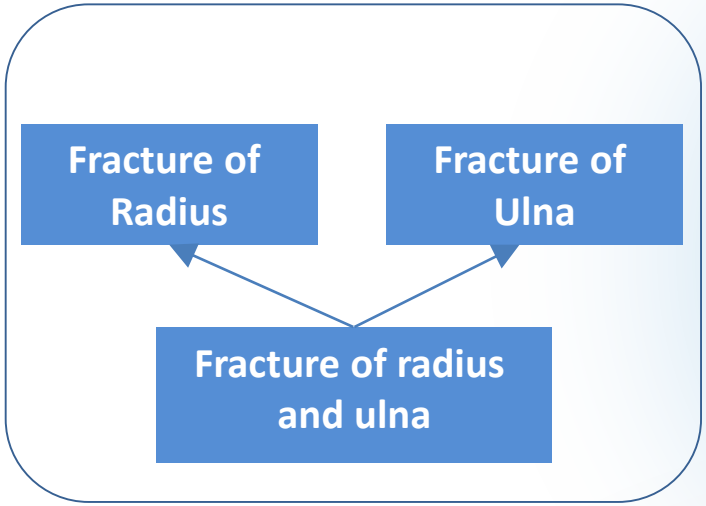
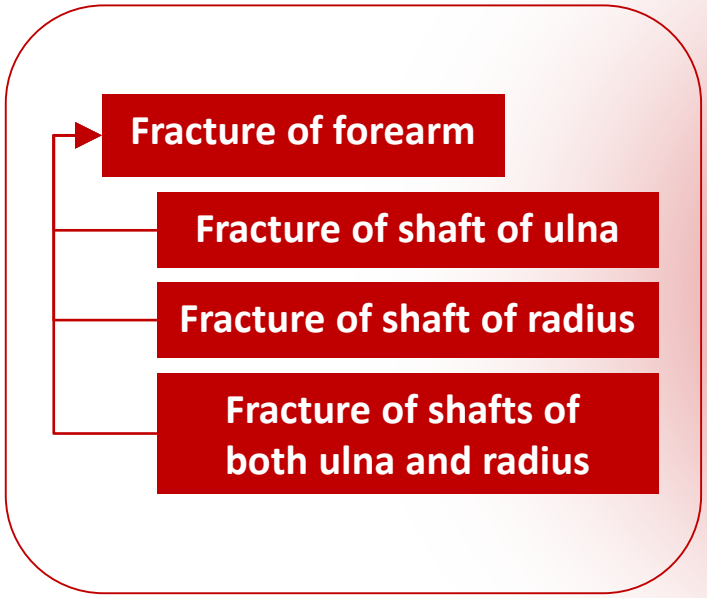
Purpose-specific reporting units: billing, health statistics, research,…
ICD-11
Desiderata: pragmatic orderings for specific purposes



SNOMED CT Findings/Disorders and WHO – IHTSDO Common Ontology

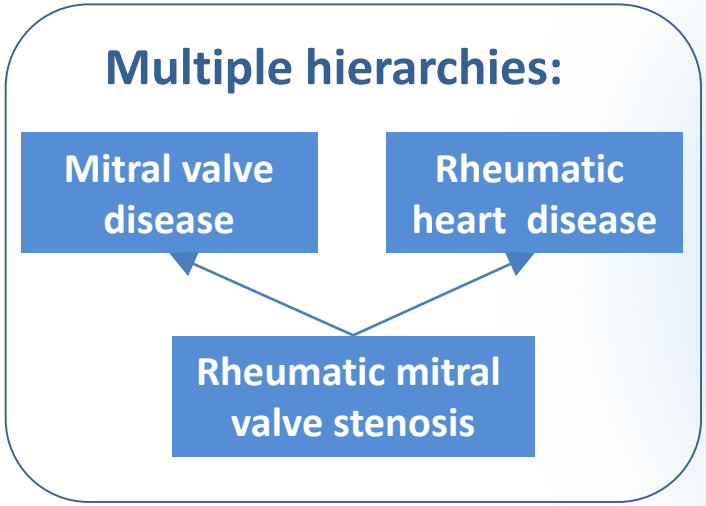
Formal taxonomies of clinical situations

(life periods in which one or more clinical conditions are present)



ICD-11 Linearizations

Hierarchical orderings of reporting units into disjoint “classes”



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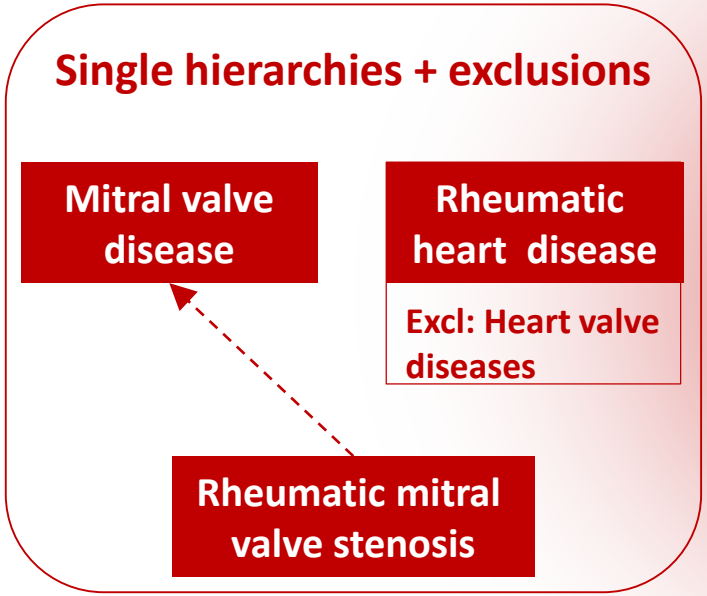

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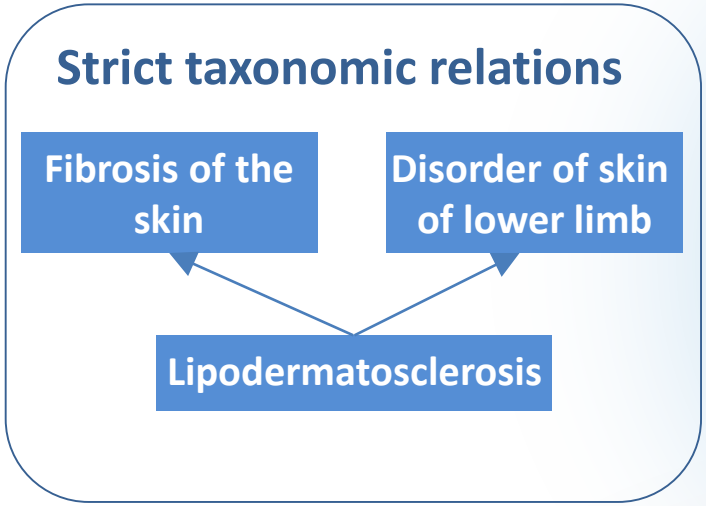

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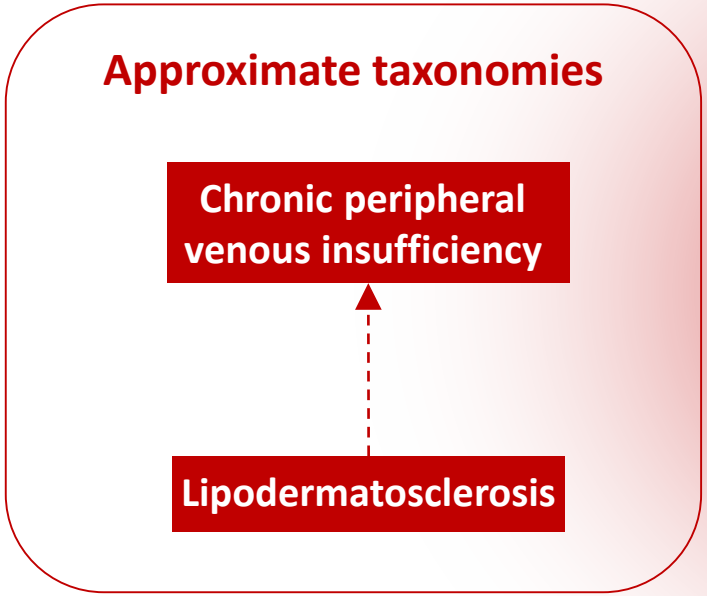

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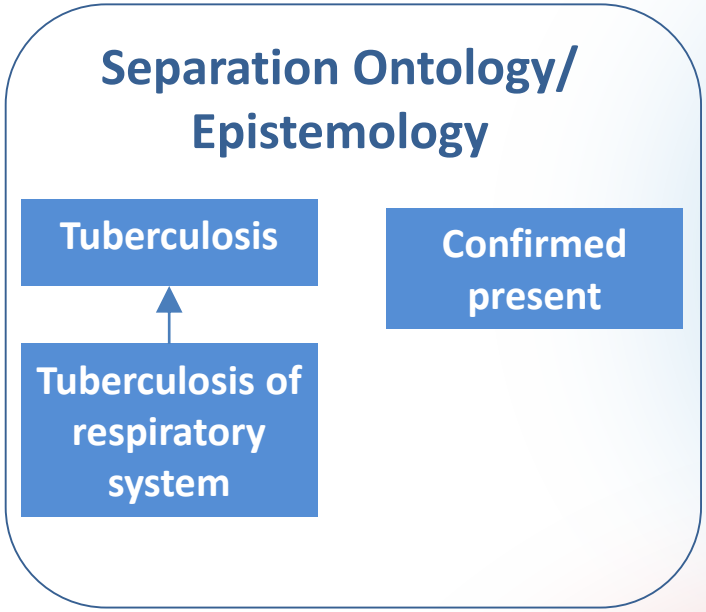

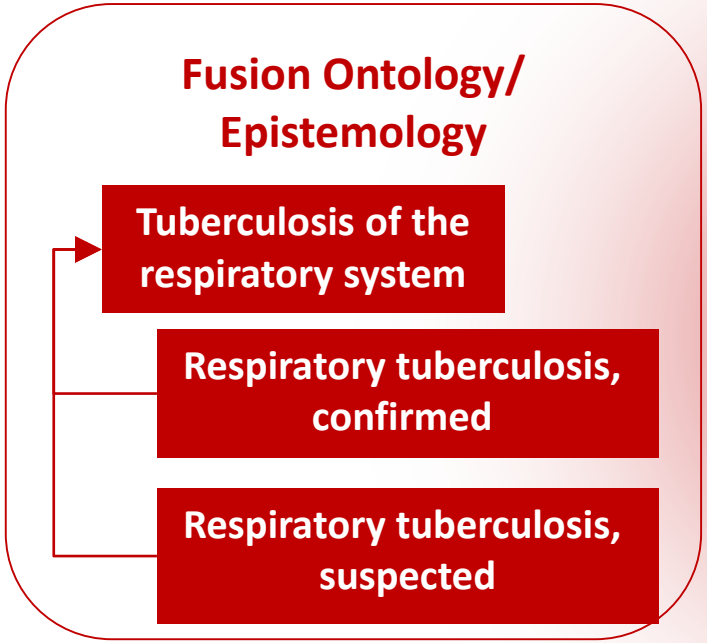

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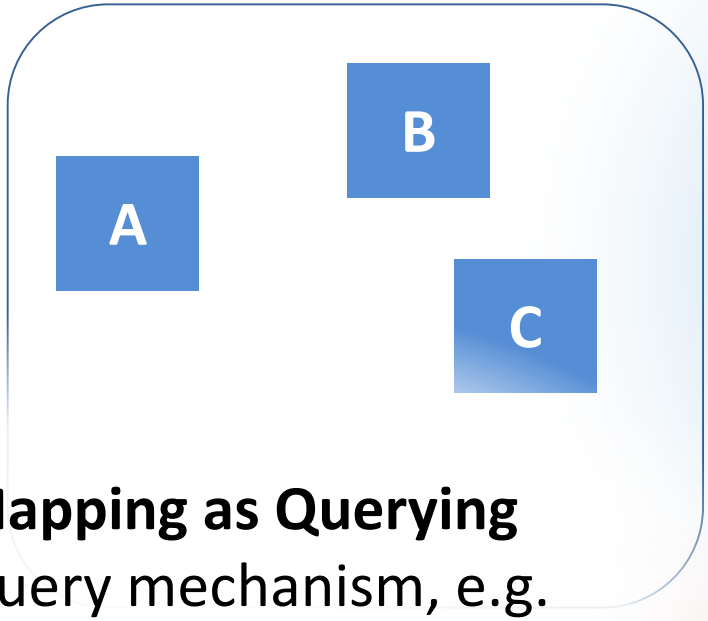


Mapping as Querying

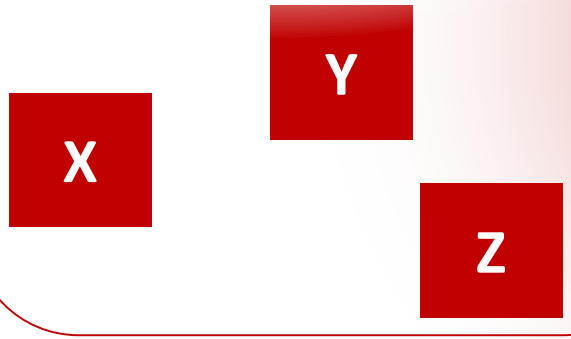
Query mechanism, e.g.

X = select A minus select B

Y = select A and B

Z = select A and (rel C)

…



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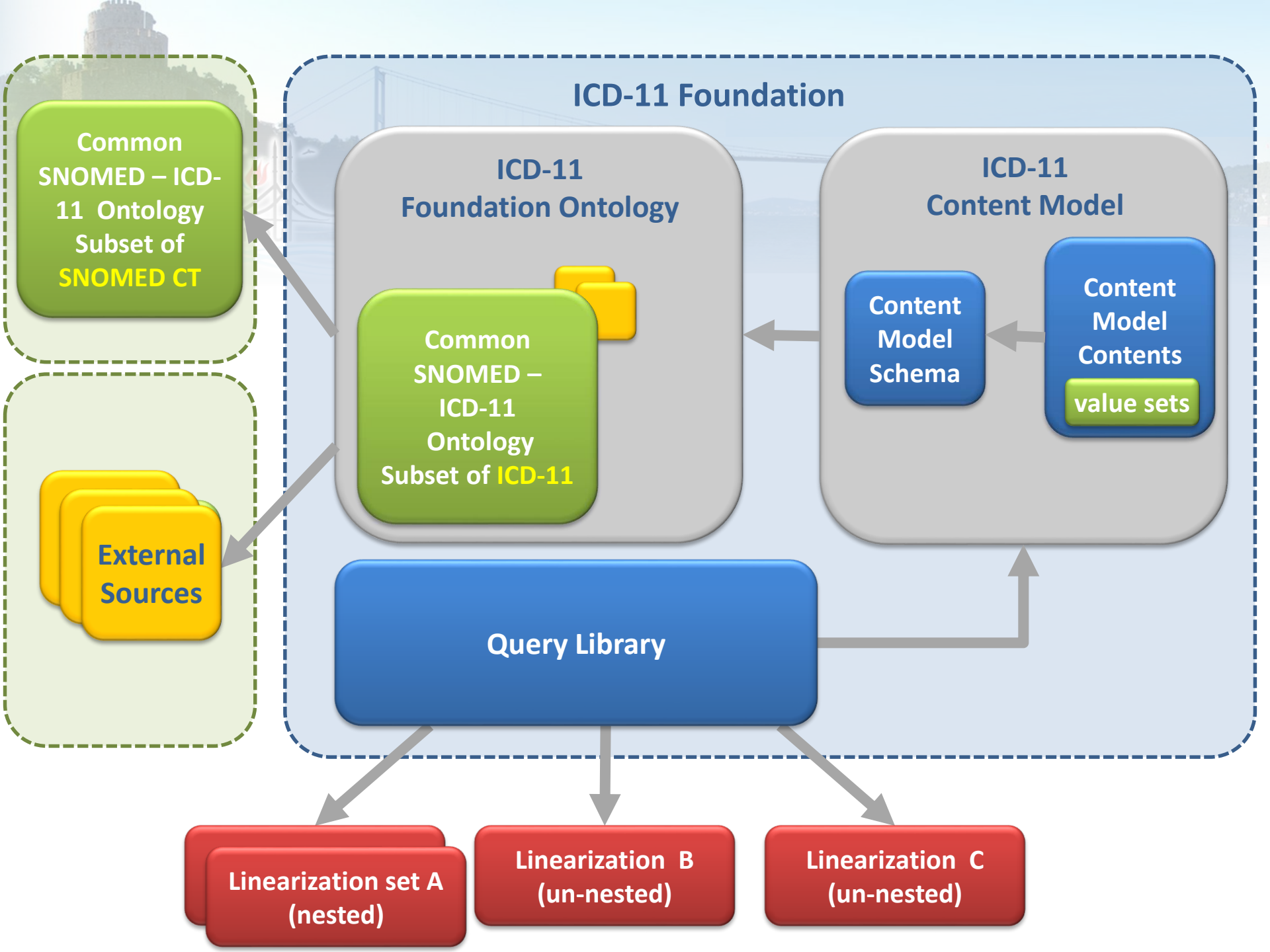
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