

Upper Ontologies for Specifying Context

Ontology Summit 2018

Introductory Session 17 January

Track B

Track B : Upper Ontologies for Specifying Context

- Track Co-champions:
 - Mike Bennett
 - David Whitten
- Blog Page
 - Not there yet...

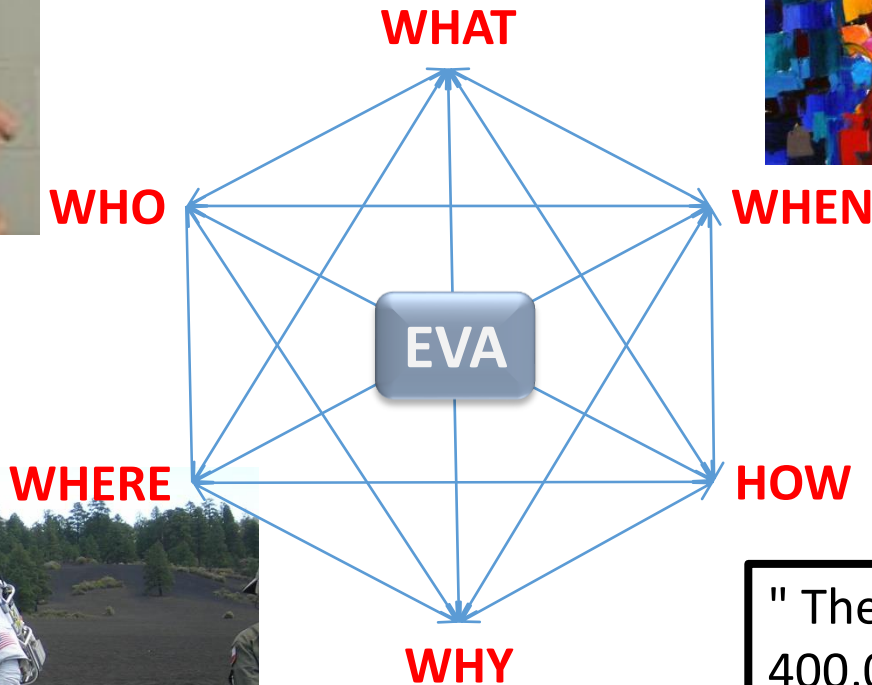
Motivations

Objective

- The objective of this Ontology Summit 2018 track is to understand:
 - The role of upper ontologies in providing or using context
 - Upper ontology partitions that explicitly define a kind of context
 - Disposition of other model content that may be considered as the context for something, in the, erm, context of upper ontologies.



Scope



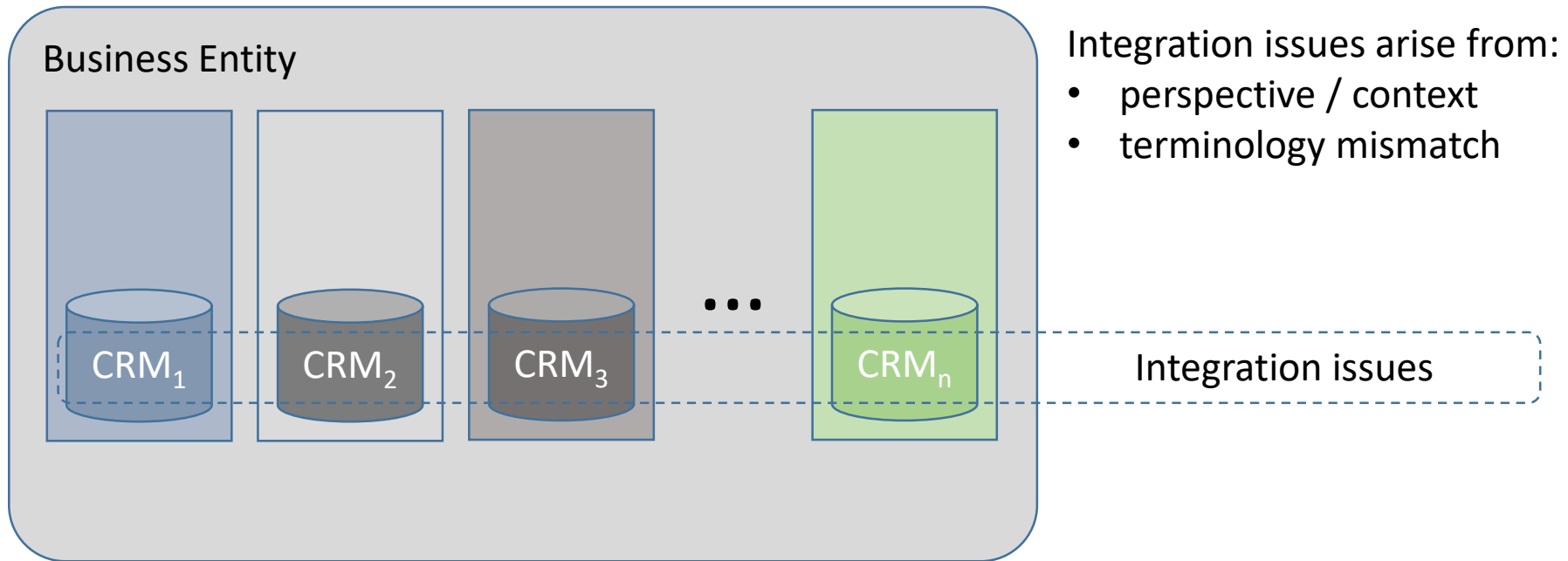
" The FAA predicts 400,000 to 2.3M licensed Part 107 remote pilots by 2020"

- FAA Air Traffic Organization
Policy: Order JO 7200.23

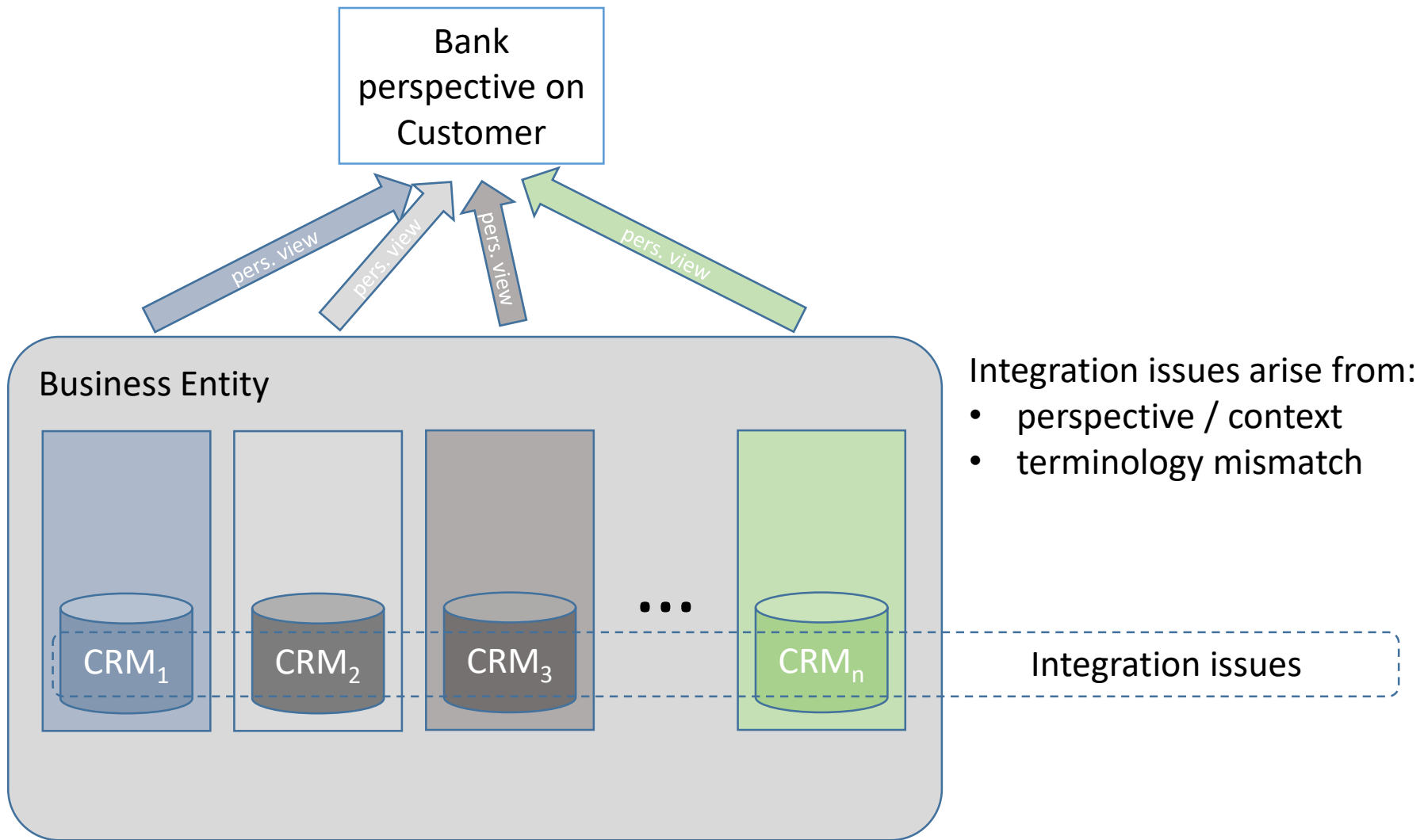
Why we Need Context

- “Meaning is context”
- Dictionaries: the meaning (referent) of a word or term is sensitive to the context in which it is used
- Ontologies: should deal with that formally
- Desired end point: there should be nothing in the ontology for which it can be said that the ‘meaning’ of that item is itself dependent on context
 - If that is the case the ontology is still just a dictionary
 - Therefore: ontology must contain within it all the material relating to context

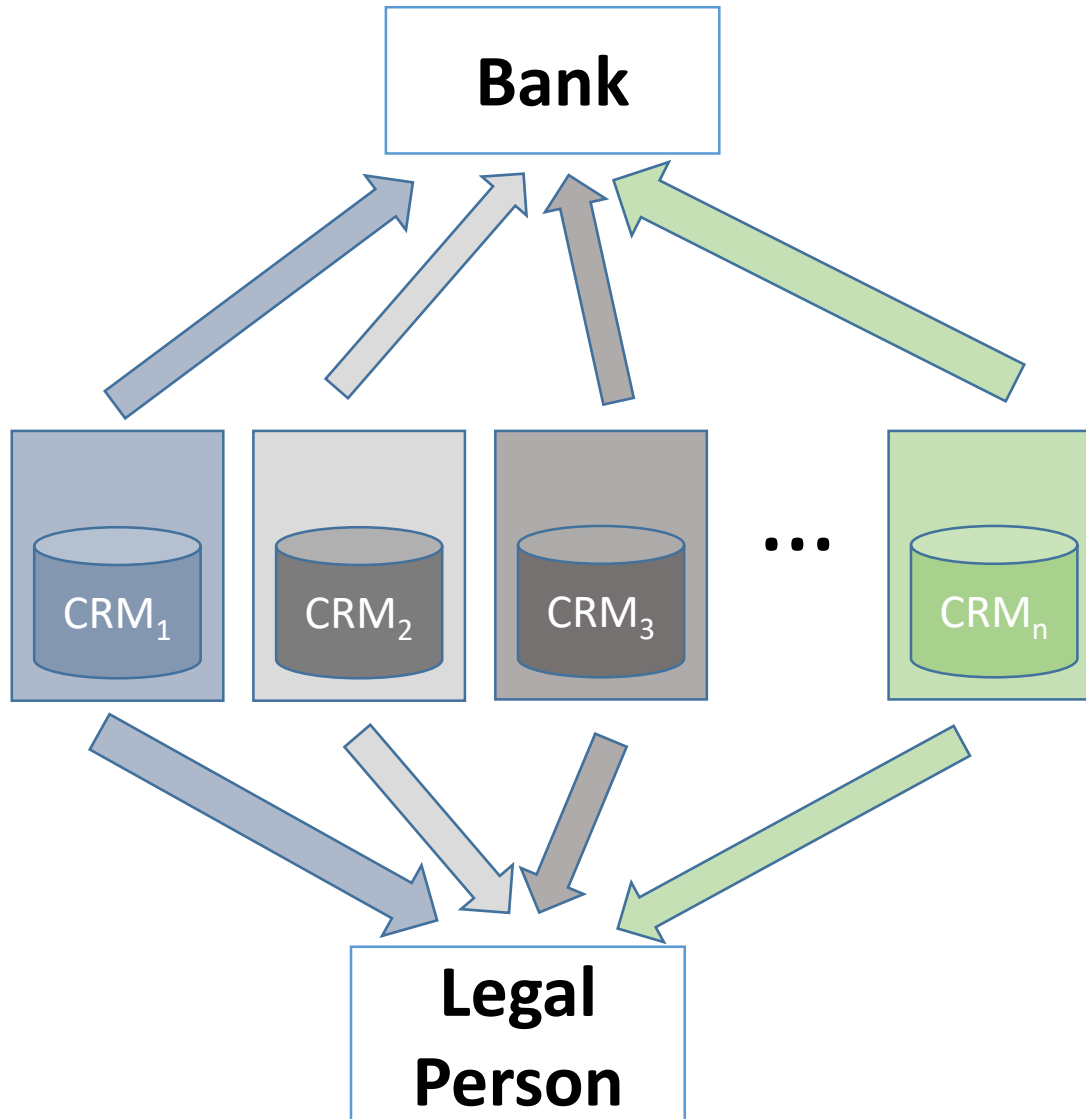
Context-dependent data stores



Context-dependent data stores



What is the Context?



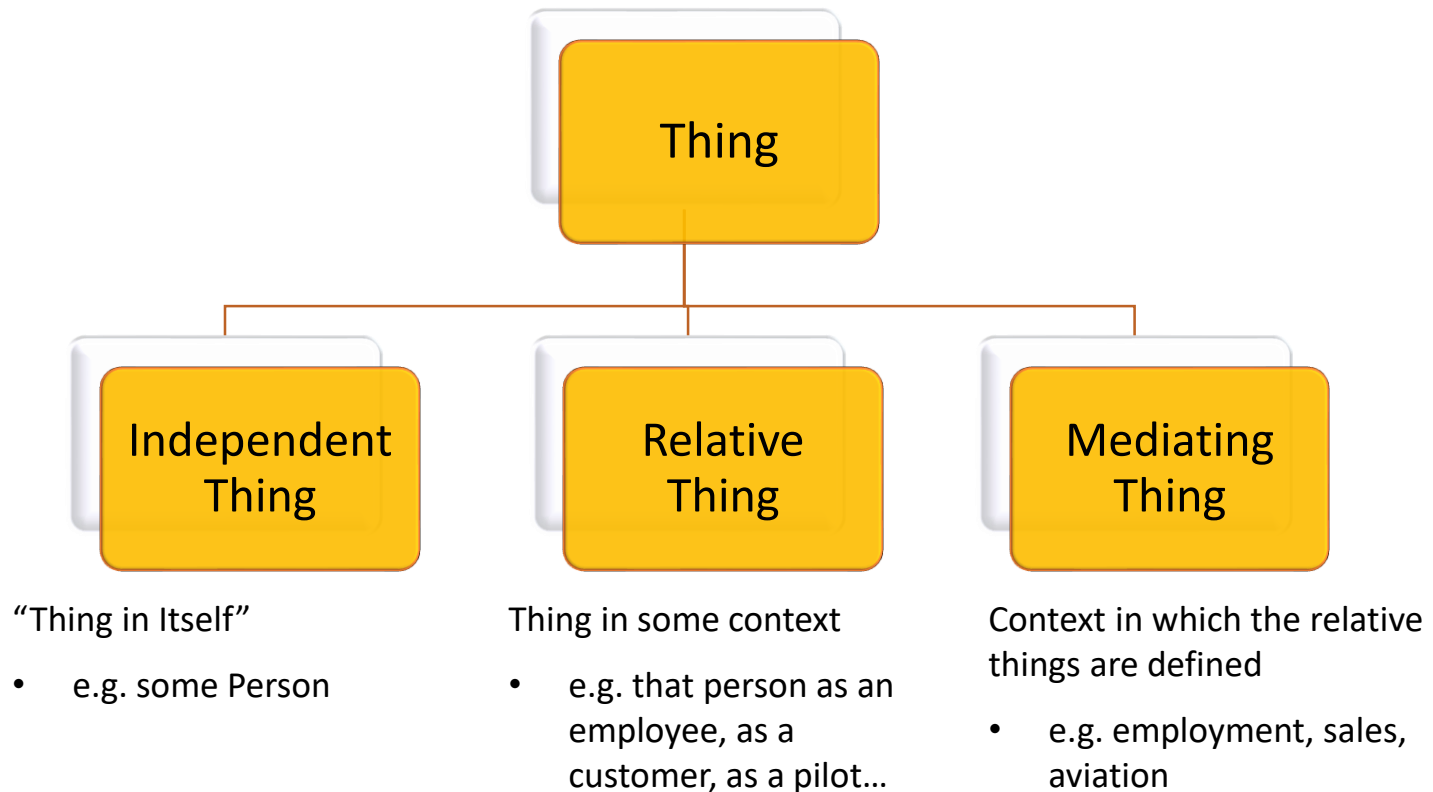
There are various points at which the bank interacts with a given person (customer for various products)

Context examples in Upper Ontology

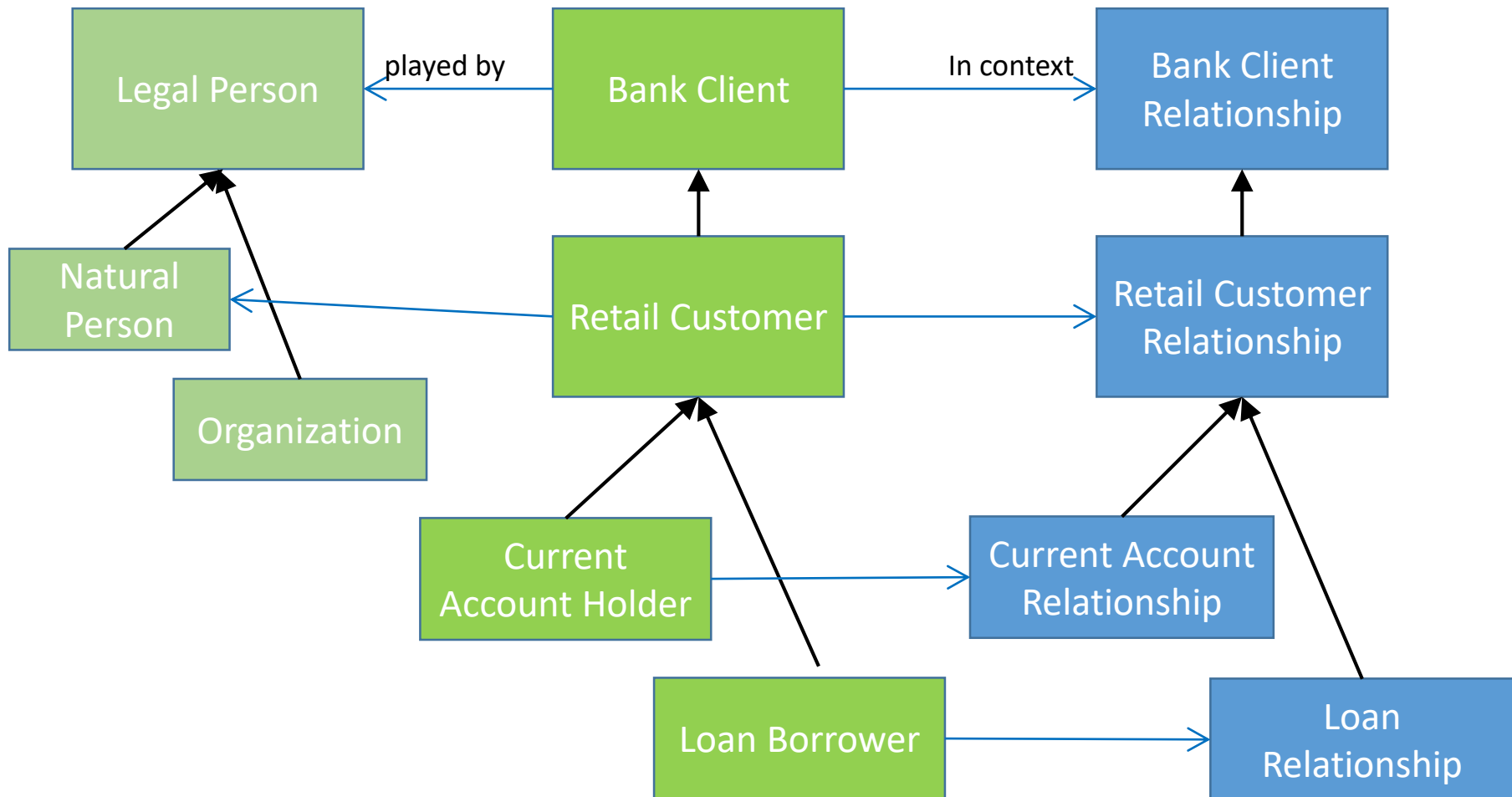
- Sowa: KR Lattice defines Independent, Relative and Mediating Thing
 - Relative: contractually defined thing (teacher, parent, asset, catalyst, resource etc.)
 - Mediating: another name for [this kind of] context
- BFO: Dependent Continuant is defined in context of Thing
 - Here, the context may be anything

KR Lattice: 'Relatives' Partition

- Everything which may be defined falls into one of three categories:



Hierarchy of Contexts: Customer



Session Ideas and Motivations

- Hear from the leading TLOs on how they view or handle context
- Get someone in from ISO TC37 to talk about this
- Structure
 - Usual: 2 or 3 speakers + discussion
 - Panel? E.g. convene and interview TLO leaders as distinct from presentations?
- Case Studies: get some practical experience on how context is handled in real applications
- Theory: Hope to hear about:
 - BFO, DOLCE, GFO, YAMATO, UFO, OntoUML/SMIF, who else?
 - Lessons from Cyc, SUMO etc.?
 - Context inclusion versus microtheories

Presentations

Session 1: 07 Feb

- Try and get an overview of how Context is seen and handled in TLOs
- Depending on availability, either a panel or 2 or 3 invited speakers

Session 2: 14 March

- Practical implications
- Case studies and / or pragmatic solutions to contextual problems, that use upper ontologies.

Questions?