# Semantic Technologies in Multilingual Business Intelligence

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What is Business Intelligence?



What is Business Intelligence?





recognition of



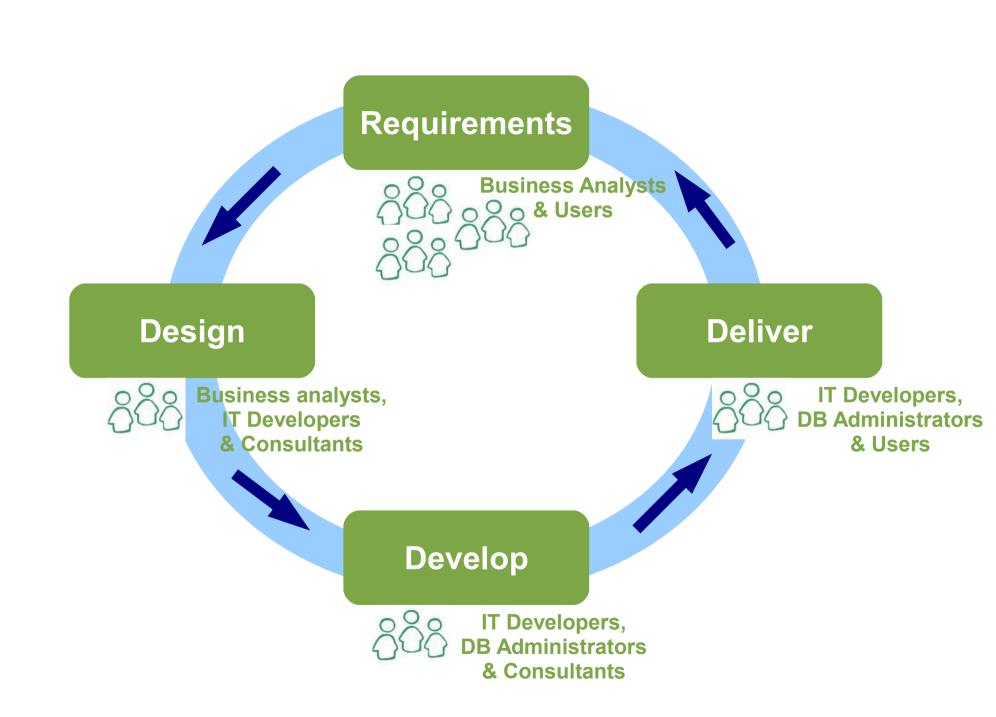


• patterns • inclinations • exceptional conditions



#### Traditional BI

20k datatypes • 60k functions • over 100k data elements



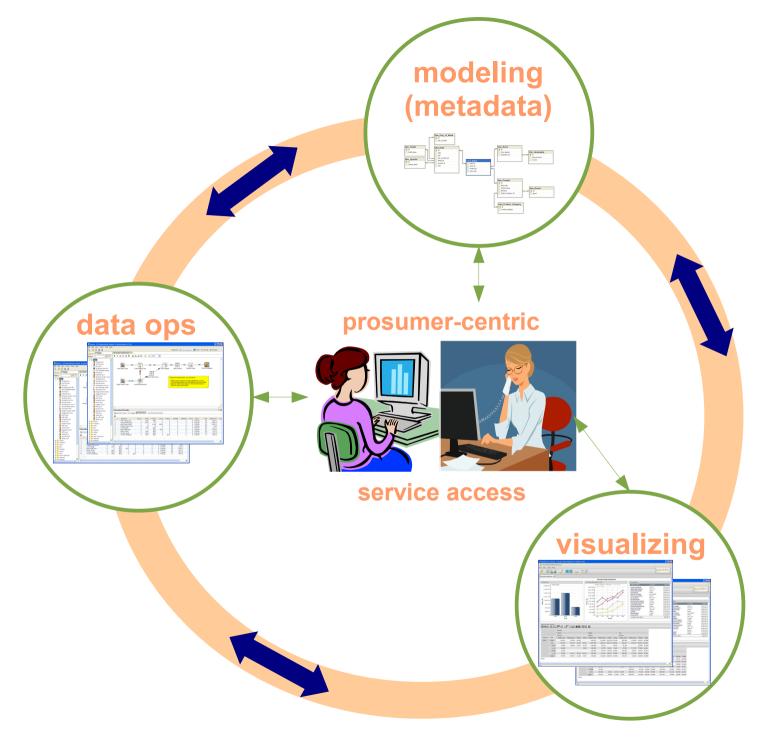


Too many people • too few iterations • too slow • too expensive

# Emerging BI

new dynamic data resources • online algorithms • agility

• open source software developments • browser-based access • interoperability • real-time



fast • many iterations • cost effective

### Necessity of multilingual BI

- multilingual data real-time analytics sentiment analysis
  - interoperability with LT standards to bridge and mesh with applications

# Monolingual language issues

#### Parent is exactly one level Parent may be more than one level above Child above Child Skip-Level **Balanced** All Leaves at Microsoft uses the term Bottommost "Ragged Balanced" Level Oracle Essbase uses the term "Ragged" for any hierarchy where parent may be more Can be modeled than one level above child by Level-Based table Leaves at Unbalanced Ragged Dissimilar Sometimes referred to Oracle Essbase uses the as "Parent-Child" or term "Ragged" Levels "Value-Based," though Oracle OLAP uses the term Controversial but implementation dependent "Ragged Skip" Often modeled controversial by Parent-Child table

Derived from a Blog.

Regular structure

Irregular structure

## Linkage of different ecosystems

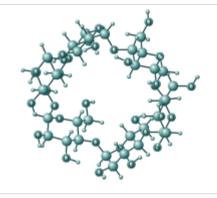


Each ecosystem has its own standards...

XMLA • BPMN • UML • Six Sigma • Unicode • ...

ITS • XLIFF • MLF • TMX • TBX • SRX • GMX • Unicode • ...

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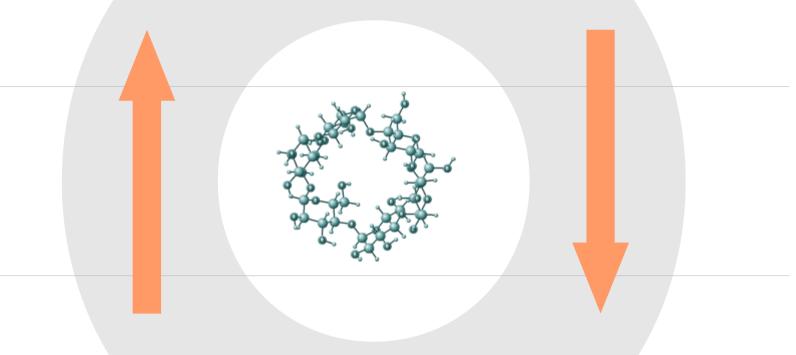
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XMLA • BPMN • UML • Six Sigma • Unicode • ...

... • protocols • serialization • lossless interchange • ...

ITS • XLIFF • MLF • TMX • TBX • SRX • GMX • Unicode • ...

#### Business / Process Intelligence Ecosystem



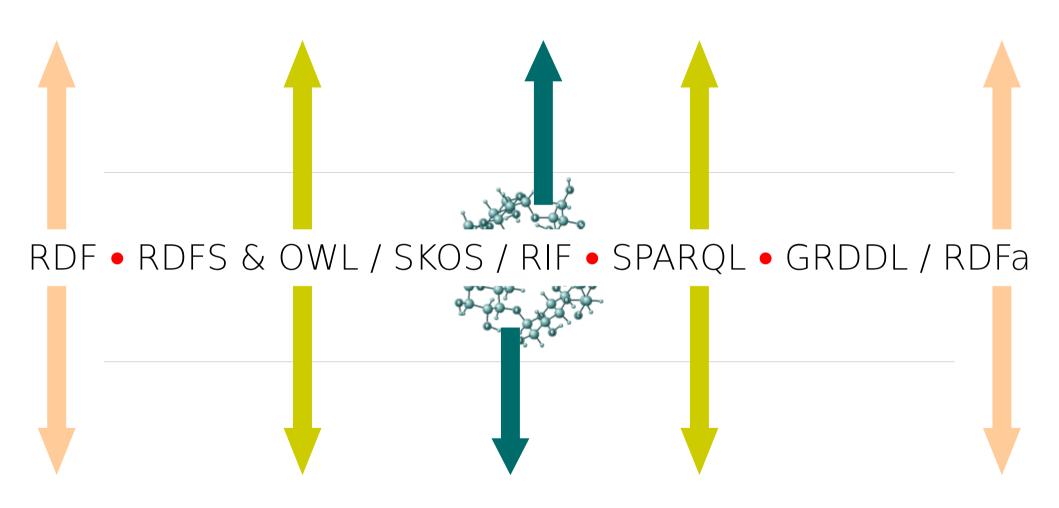
Multilingual Language Resources Ecosystem

Bridging the gap...

... with semantic technologies

to fulfill the linkage in quasi real-time

data • modeling / term / rules • query / inference • extract



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How do communities (inter-)act?

- trust in own standards
- fear for complexity increase
- lack of reference implementation
- outpaced by technology
- lack of exchange between solution providers
- uncertain involvement of buyers / customers

What is missing?

- common mindset for change
- exchange between communities
- joint reference implementations with strong commitment to interoperability
- self-adapting and self-learning technologies

And there is one more thing ...

Join the interoperability discussion at http://interoperability-now.org

Thank you for your attention!