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Use of Semantic Analytics for Contract Certainty

AIDA Europe Conference, Warsaw 12/13 April 2018
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International Insurance Programs

Contract Leakage

- Master policy and multiple local policies in different markets and jurisdictions

- Vulnerabilities
  - Centrally written program by single underwriter with limited knowledge of foreign wordings, jurisdiction and market practice (~130 countries)
  - Limited access to and analysis of foreign policy wordings (~40'000 contracts)

- Contract leakage
  - Passive leakage (misunderstanding of policy wordings)
  - Active leakage (deliberate modifications to wordings unknown to underwriter)

- Consequences
  - Invalid wording or un-intended cover
  - Coverage disputes
  - Impact on performance of single deal and book
  - License in jeopardy

- Underwriting leakage
  - Risk assessment inappropriate or incomplete
  - Pricing not risk adequate

International Insurance Programs

Scope of Coverage?

Contract Certainty Initiative

Project Objective and Approach

- Support underwriters in reviewing local policies which are unknown to the underwriter accountable for entire program

- Develop a **System** that allows the underwriters to identify the scope of coverage under local policies and match with master policy

- Identify **Key Leakage Indicators**
  - quantitative (e.g. limits, deductibles)
  - coverage related (e.g. pure financial loss, sudden & accidental pollution)
  - non-coverage related (e.g. policy holder)
  - general contract terms (e.g. cancellation provisions)

- Select a **semantic** approach (no shallow linguistics or key word based approach)
  - Morphological analysis, parsing, sentence and semantic analysis to provide a conceptual point of view
  - Document indexing creates a set of words, headwords, concepts, relationships, subjects and structures

- Apply **Cognitive Engine** supporting the System (vendor)

Contract Certainty Initiative

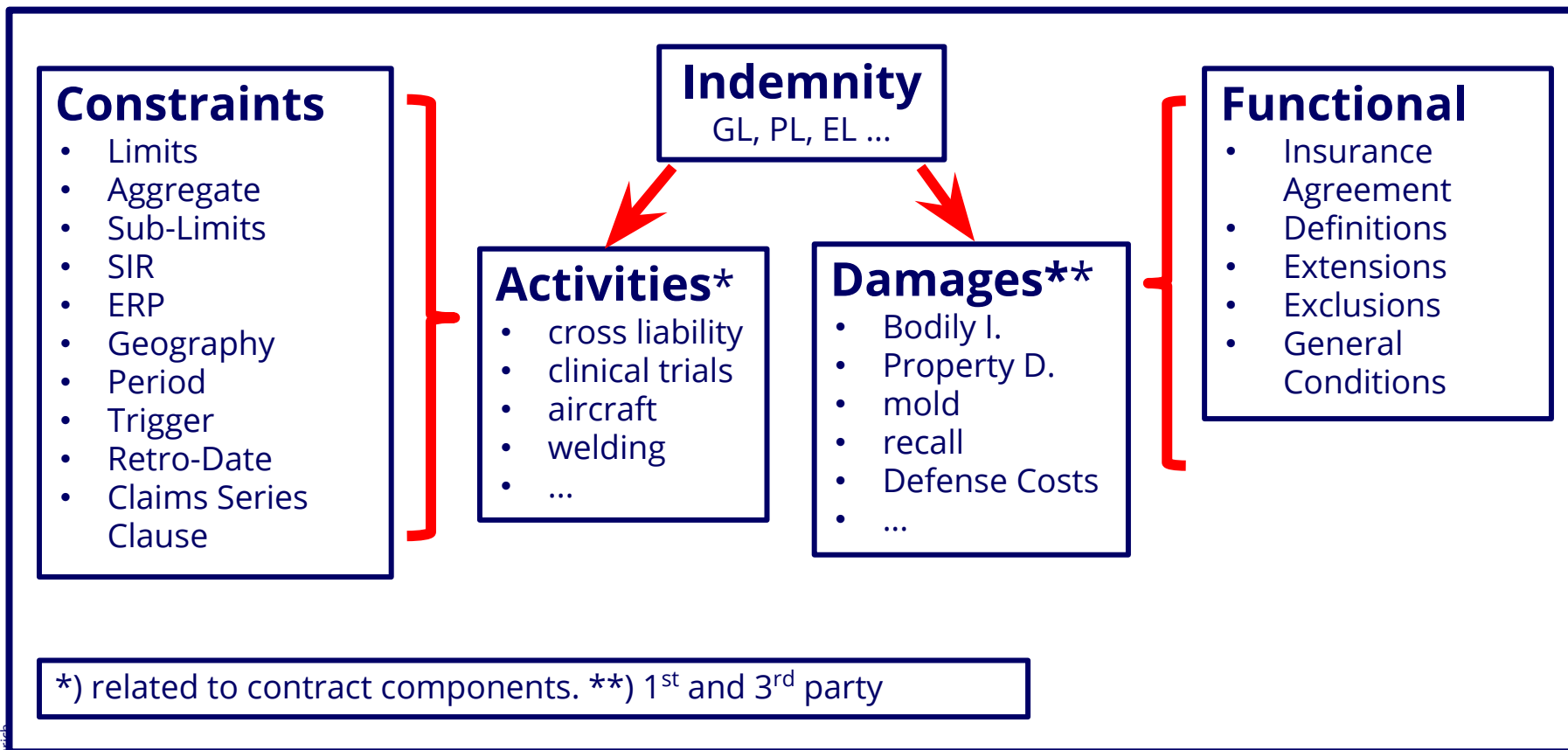Extent of Wording Review for Project

- Liability
  - GL and PL
  - English language
  - Single country
  - Standard wordings with minor modification in policy form
  - Few endorsements only
  - Review of local wordings and match with policy request system

- Financial Lines
  - D&O
  - PI
  - English language
  - All standard local wordings
  - Match local wordings with master policy
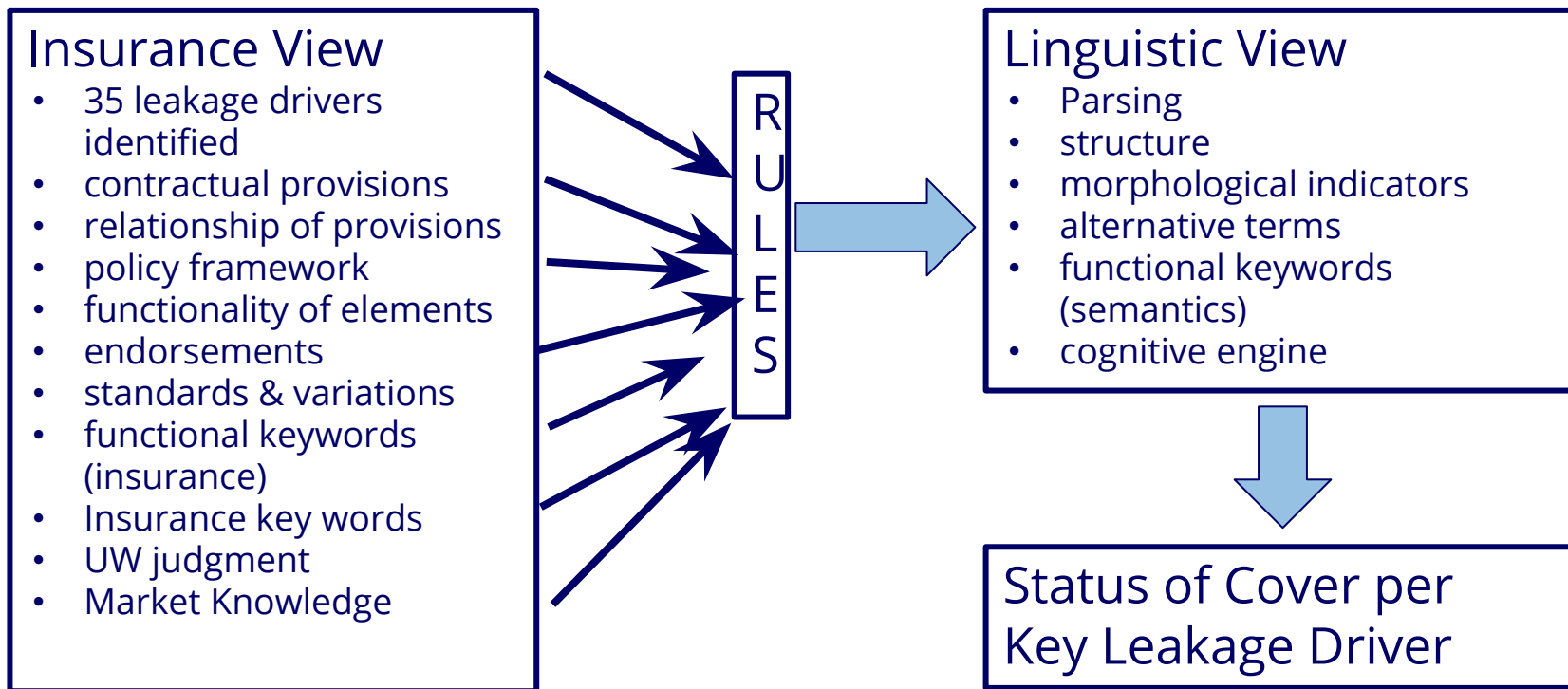
Contract Certainty Initiative

Insurance Contract Framework

- Insurance contracts from different jurisdictions show similar policy elements
- Identify "generic" policy elements and their functionality as part of contract and coverage

Indemnity
GL, PL, EL …

Constraints
- Limits
- Aggregate
- Sub-Limits
- SIR
- ERP
- Geography
- Period
- Trigger
- Retro-Date
- Claims Series Clause

Activities*
- cross liability
- clinical trials
- aircraft
- welding
- …

Damages**
- Bodily I.
- Property D.
- mold
- recall
- Defense Costs
- …

Functional
- Insurance Agreement
- Definitions
- Extensions
- Exclusions
- General Conditions

*) related to contract components. **) 1st and 3rd party

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Collaboration: Insurance and Linguistics

Insurance View

- 35 leakage drivers identified
- contractual provisions
- relationship of provisions
- policy framework
- functionality of elements
- endorsements
- standards & variations
- functional keywords (insurance)
- Insurance key words
- UW judgment
- Market Knowledge

RULES

Linguistic View

- Parsing
- structure
- morphological indicators
- alternative terms
- functional keywords (semantics)
- cognitive engine

Status of Cover per Key Leakage Driver

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Rules defining status of Cover

Rules have been defined from an insurance and linguistic perspective

- Excluded

- Excluded with Condition

- Covered

- Covered with Condition

- Partially Covered

Other non-coverage related policy elements

- Found

- Not found

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Lessons Learned

- Be realistic and manage expectations

- Senior contract capabilities in more than one jurisdiction

- Start with standard wordings / endorsements

- Daily, close work relationship with vendor / linguists

- Do not expect the vendor will do the job for you. This is a totally collaborative approach and a joint journey of trial & error

- Step by step approach – testing results and discussion with vendor

- Stick to the rules and extend and refresh when necessary with all parties

- Validate appropriateness of rules during each testing step

- Verify joint understanding

- Foresee assumptions been made at the vendor's side which could lead to wrong conclusions and working steps. Discuss own assumptions about vendor's understanding and actions.

- Documentation