



Cambridge Centre for Risk Studies
Advisory Board Research Showcase – 24 January 2017

Multi-Line Insurance Exposure Data Schema

Global Exposure Accumulation and Clash (GEAC)

Centre for
Risk Studies



UNIVERSITY OF
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Presentation Outline

- Aims and Objectives
- Consultation Project Timeline
- Review of Current Industry Practices
- Prioritisation of Lines of Businesses
- Consultation Document V0.1
- Proposed Key Principles



Aims and Objectives

- Define an open source exposure data standard for most significant lines of insurance business
- Provide a standard minimum set of exposure data fields, enabling:
 - Monitoring and reporting exposure enterprise-wide
 - Improve interchanges of data between market players
 - Accumulation risk model scenarios for a majority of lines of business
- Support clash model analysis for scenarios that impact multiple lines of insurance
- To make the Centre's research outputs more useful, standardized data schemas are vital
- Application of Schema is broad, expands beyond insurance

The Centre for Risk Studies will embrace the role of a data secretariat

Consultation Project Timeline

- Project is multi-year, with several milestones
- We expect to have three phases of schema development, addressing different lines of business in each phase
- Multiline Insurance Exposure Data Schema V1.0, Winter 2018

Upcoming Consultation Documents

- Consultation Document V0.1, Spring 2017
- Consultation Document V0.5, Summer 2017
- Consultation Document V0.9, Autumn 2017

Review of Current Industry Practices

Standards Applied to All Lines of Business



ACORD Standards



The British Standards Institution (BSI)



Lloyd's Target Operating Model



United Nations Economic Commission for Europe: XML Naming and Design Rules



International Organization for Standardization (ISO)



Xuber Xposure (Previously OpenXposure)

Property/Natural Catastrophe Data Standards



Risk Management Solutions (RMS)



AIR Worldwide



OASIS Loss Modelling Framework

Data Requirements for Modelling Liability



Arium Risk Architecture



Praedicat

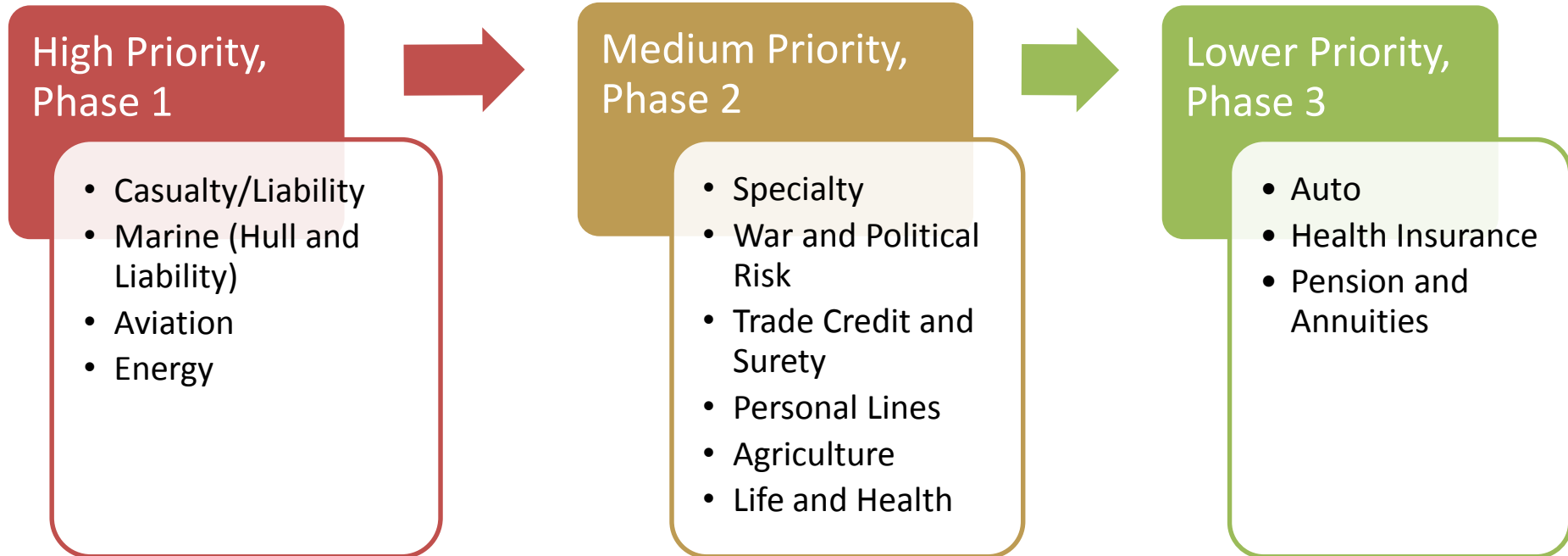
Data Requirements for Modelling Agriculture



AgRisk

Prioritisation of Lines of Businesses: Schema Development

Prioritisation is based upon industry discussions, the commonality of the line in accumulation and clash scenarios, and the premiums associated with each line of business.



Certain lines of business are considered to be well developed and will not have their schemas advanced. These include:

- Commercial Property
- Commercial Cyber

Scenario Loss Estimates Across Multiple Insured Lines



China-Japan Geopolitical Conflict Scenario

Insurance industry loss estimate

S1	S2	X1
\$40 Bn	\$90 Bn	\$150 Bn

Class	Line of Business	
Property		
	Personal Lines/Homeowner	4
	Personal Contents	4
	Commercial Combined	5
	Construction & Engineering	3
	Commercial Facultative	5
	Binding Authorities	3
Casualty		
	Workers Compensation	5
	Directors & Officers	4
	Financial Lines	4
	General Liability	4
	Healthcare Liability	5
	Professional Lines	4
	Professional Liability	3
Auto		

Class	Line of Business	
Marine & Specie		
	Cargo	5
	Marine Hull	5
	Marine Liability	3
	Specie	4
Aerospace		
	Airline	5
	Airport	4
	Aviation Products	3
	General Aviation	2
	Space	4
Energy		
	Downstream	1
	Energy Liability	4
	Onshore Energy & Power	5
	Upstream	3
Specialty		
	Accident & Health	5
	Aquaculture insurance	1
	Contingency - film & event	1

Class	Line of Business	
Life & Health		
	Life Insurance	5
	Health Insurance	5
	Income Protection	0
	Death & Disability	5
	Hospital Cover	5
Pension and Annuities		
	Standard Annuities	0
	Variable Annuities	0
	Enhanced Annuities	0
	Life Settlements	0
War & Political Risk		
	Kidnap & Ransom	0
	Political Risk	5
	Political Violence & Terrorism	0
	Product Recall	0
	Trade Credit	3
Agriculture		
	Multi-peril crop	3
	Crop hail	0

Impact on Insurance Claims

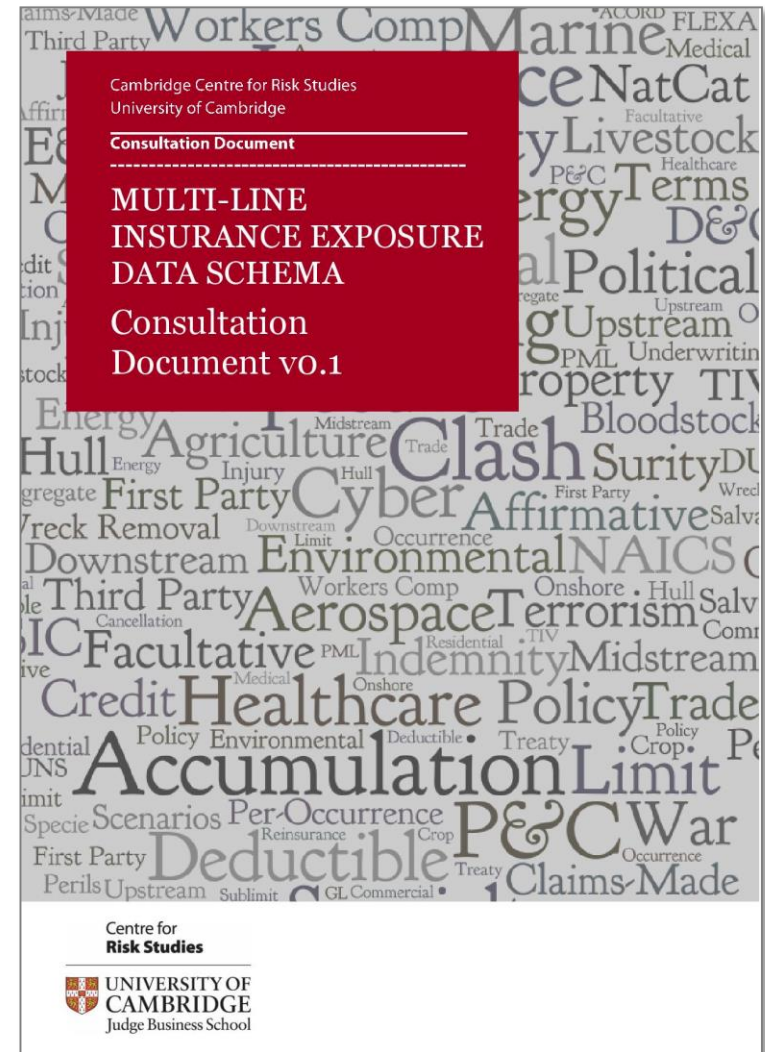
Decrease

Increase



Consultation Document V0.1

- Target Release: March 2017
- Review of current industry data standards
- Proposed key principles for schema design
- Confirmation of lines of business prioritization
- Opportunity for industry and market feedback



Proposed Key Principles for Schema Design

- a. Exposure and accumulation focus
- b. Simple as possible
- c. Aim for 80% capture
 - Broadly applicable as possible
- d. Separate risk objects from insurance coverage
- e. Hierarchical
 - Limit to three layers specification
 - Schema will remain high level
 - Vertical and horizontal connection (Coverages applicable under multiple headings)
- f. Extensible
- g. Use of ACORD components
 - Standards which are widely used across the industry
- h. Schema structured around coverage

Feedback and Thanks

We are actively looking for feedback and discussion pertaining to the Data Schema Project.

Comments are welcome relating to:

- Existing data standards and Schemas
- Proposed key principles for development
- Lines of business prioritisation

If you are interested in receiving a V0.1 Consultation Report, please send me an email.

Thank you for your attention.

Questions or Comments? Please don't hesitate to contact me.

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