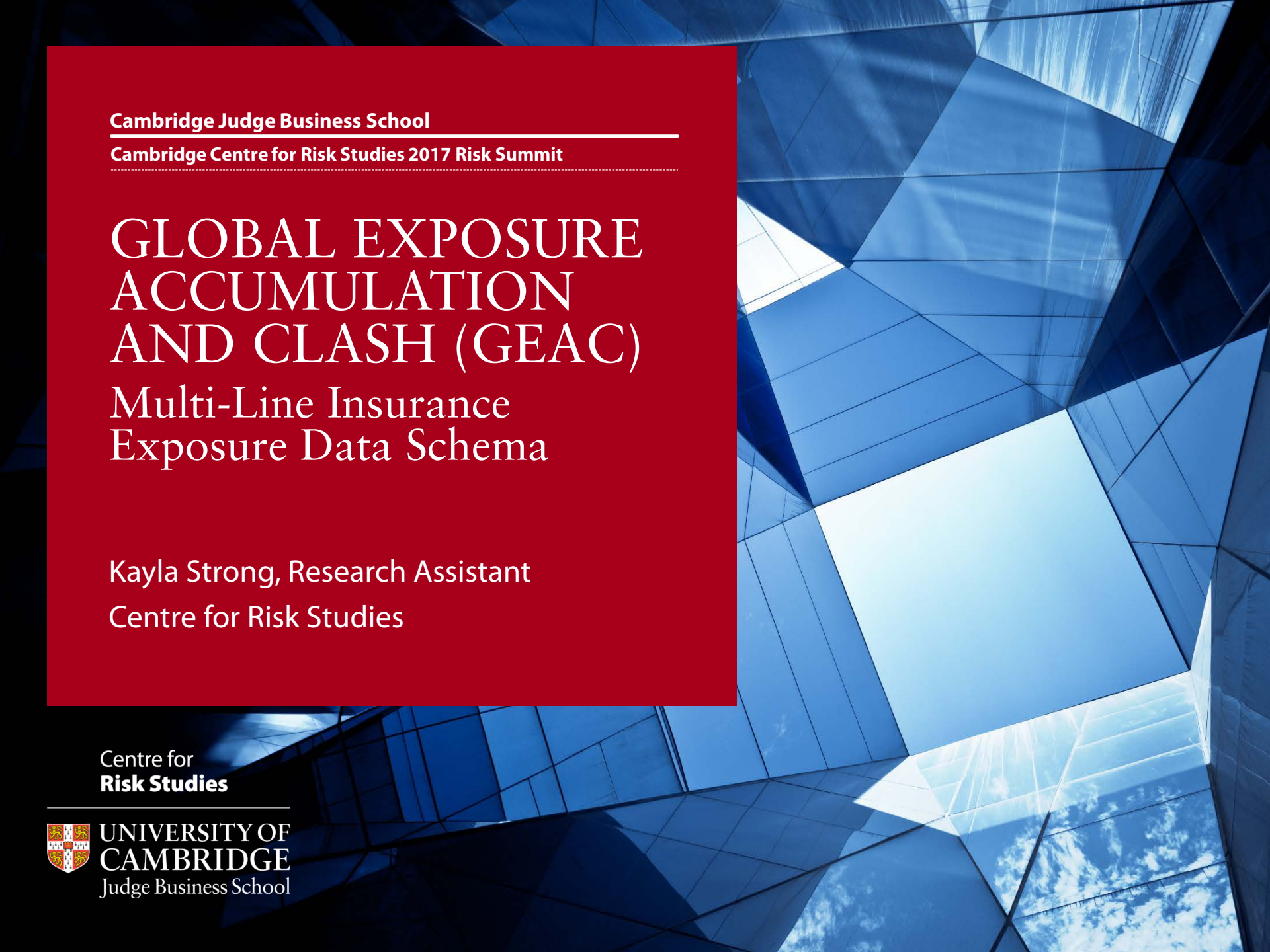


Cambridge Judge Business School

Cambridge Centre for Risk Studies 2017 Risk Summit

GLOBAL EXPOSURE ACCUMULATION AND CLASH (GEAC)

Multi-Line Insurance Exposure Data Schema

Kayla Strong, Research Assistant

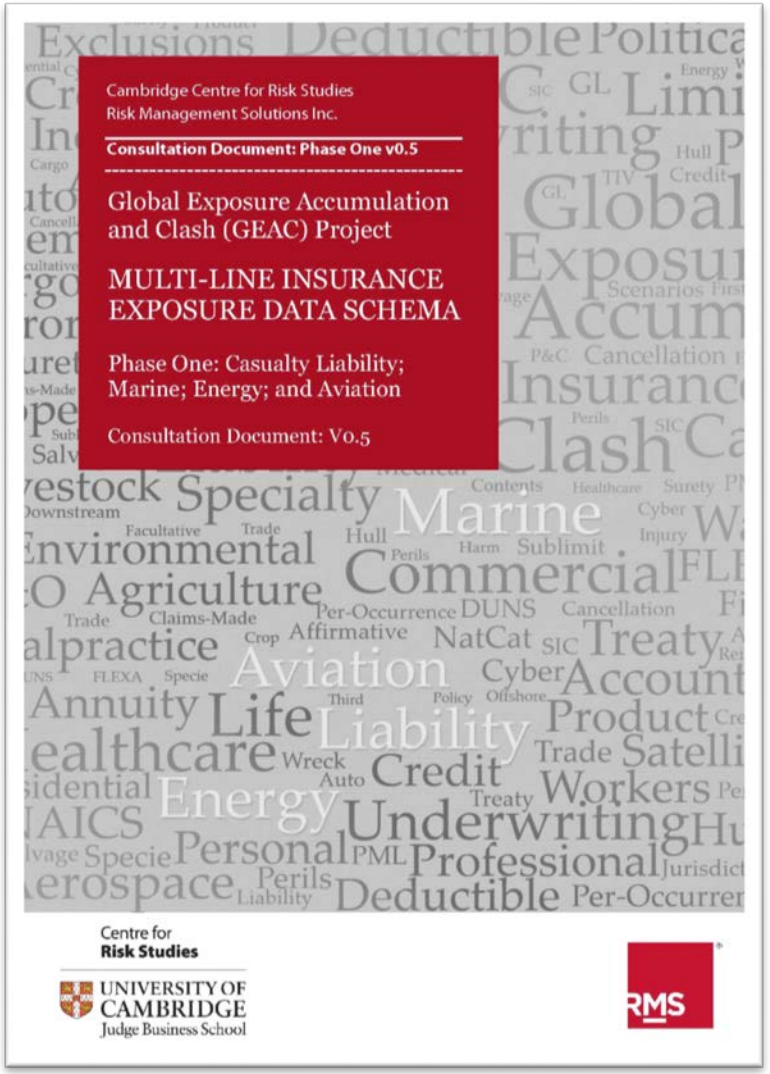
Centre for Risk Studies

Centre for **Risk Studies**

UNIVERSITY OF CAMBRIDGE
Judge Business School

Project Overview

- 2016 - 2018 project to develop a Multi Line Data Schema:
  - A Multi Line Data Schema for promotion as a data standard
  - A published open source schema and report
- Coordinated by Cambridge Centre for Risk Studies with support from RMS
  - Schema also to be implemented on the RMS(one) platform
- Development of a number of clash scenarios that demonstrate proof-of-concept for scenario overlays
  - Scenario Development Workshop: September 6th.
- Built on success from Cyber Insurance Exposure Data Schema, 2016



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 insurance industry participants to:
  - Provide a comprehensive and standardized framework for monitoring and reporting exposure enterprise-wide
  - Improve interchanges of data between market players
  - Apply accumulation risk model scenarios for a majority of lines of business
  - Support clash model analysis for scenarios that impact multiple lines of insurance.
  - Enable a new generation of models and risk analytics.
- Aid in the development of a more unified industry

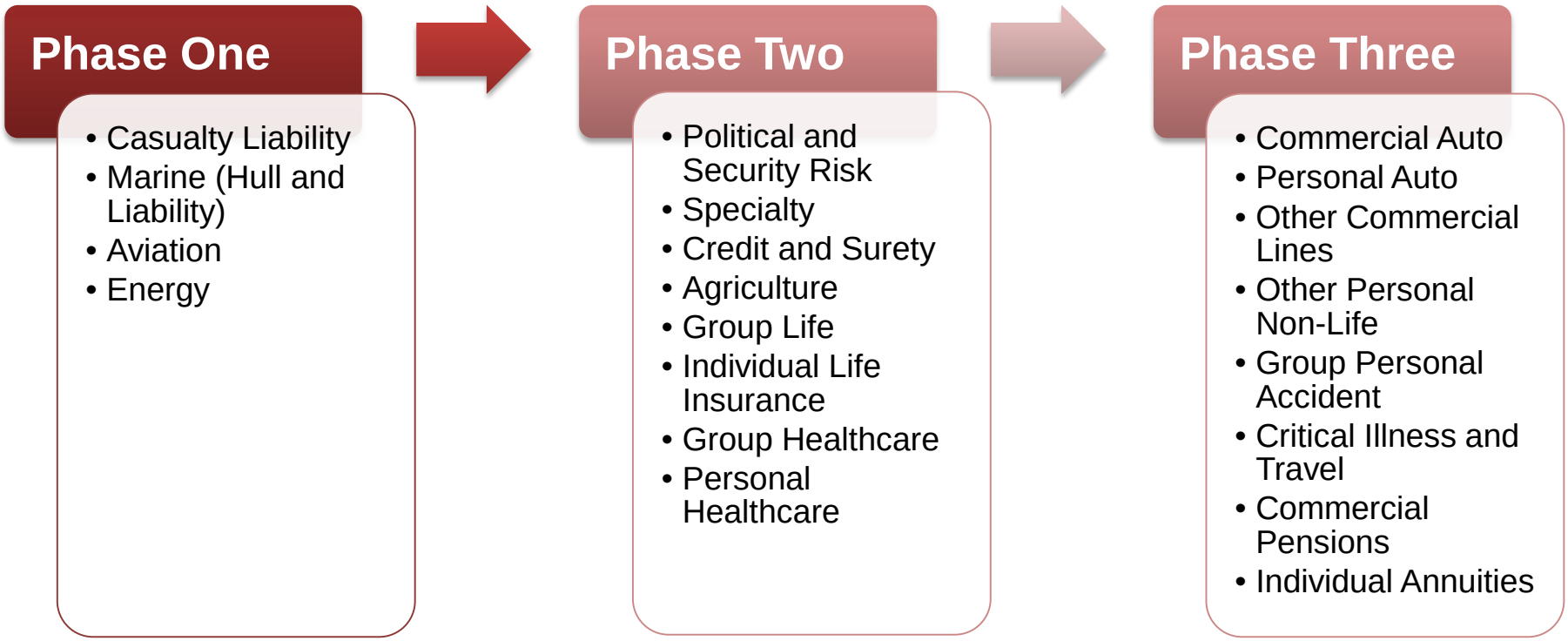
The Centre for Risk Studies will embrace the role of a data secretariat

Current Market Issues Being Addressed in This Initiative

- Lack of agreement in insurance product terminology and classification
  - Difficulty for exposure modelling, Lloyd's reporting, PRA reporting
- Absence of consistent taxonomy
  - Liability, Casualty
- Difficulty to model accumulation and multi-line clash in complex loss events.
- Difficulty identifying high value single location aggregation risk (Concentrations of multiple insureds on same risk)
- Difficulty identifying Single policyholder aggregation risk

Hurricane Katrina; 2005. New Orleans and Metairie
Image Courtesy of the US Coast Guard

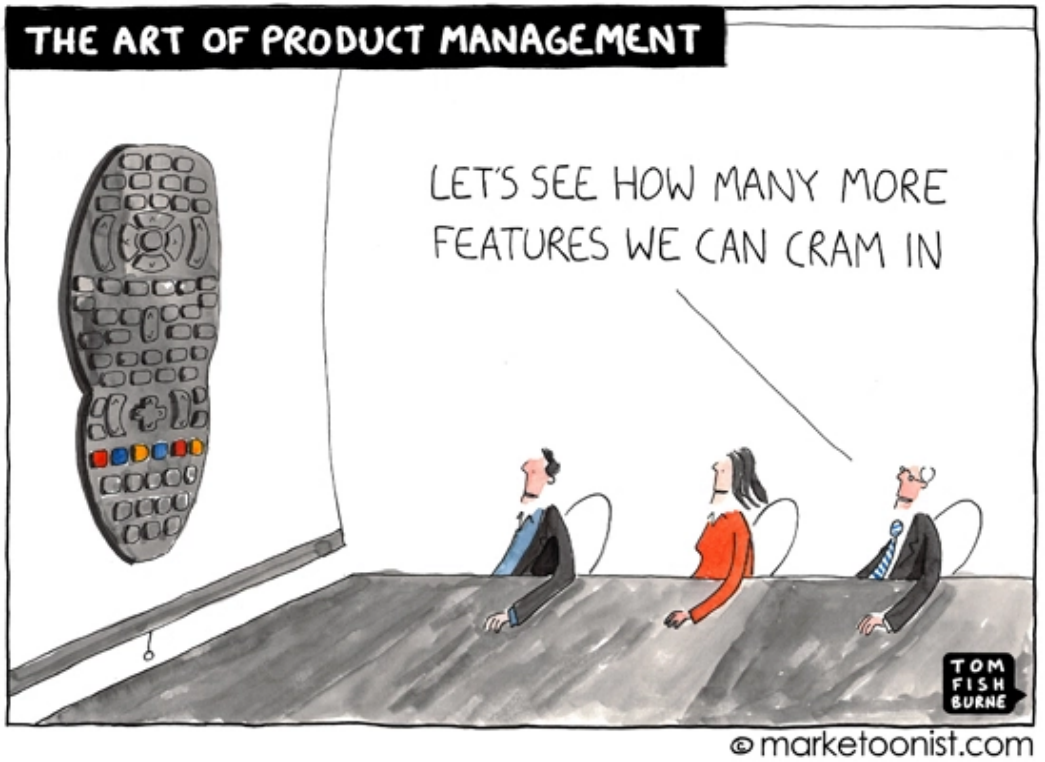
Prioritization of Lines of Businesses



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

Schema Development Principles

- Exposure and accumulation focus
- Separate risk objects from insurance coverage
- Hierarchical
- Extensible
- Use of existing standards where ever possible.
- Schema structured around coverage
- Simple as possible
  - Aim for 80% capture
  - Broadly applicable as possible



Keeping it Simple
Image courtesy of Tom Fishburne Marketoonist.com

Schema Design

- Divide into manageable blocks of information
- Series of dictionaries
- Identification of similarities and patterns across different classes of insurance.
- Separating risk objects from insurance coverage
    - i.e. Oil Rigs Vs. Business Interruption
- Incorporate common practice for as much of the market as possible
    - Identify translations and equivalences in terminology and concepts.
- Exercise in anthropology

Building the Schema in Manageable Blocks of Information
Image courtesy of Business Circle, AT&T
https://bizcircle.att.com

Example: Energy Schema, Oil Production Rig

- **Type of Insurance:** Upstream
  - Subtype: Exploration & Production
- **Asset Type:** Oil Production Rig
- **Asset Attributes:** For Asset Type: Oil Production Rig
  a) Reference in third party database providing attributes for this asset type
  b) Geocode Latitude & Longitude Coordinates
  c) Number of Employees on Site
  d) Air Gap (clearance of platform from sea surface)
  e) Building Age
  f) Construction Type
- **Coverage Type:** Liability
  - Subtype: Offshore Pollution Liability
- **Causes of Loss Included (Perils):** Human Action (Non-Elemental)
  i. Terrorism
  ii. Warfare
  iii. Crime
  iv. Property Damage
  v. Fidelity & Liability
  vi. Riots, Strikes and Civil Commotion
  vii. Cyber
- **Causes of Loss Exclusions:** Gross Negligence

Atlantis Deepwater Oil and Gas Platform; Gulf of Mexico
Image Courtesy of Off Shore Technology, http://www.offshore-technology.com

Schema Progress to Date

- Phase One
  - In Progress
  - Structure and dictionary subjects identified
  - Dictionaries currently being populated
  - Expected V0.9 completed Fall 2017
- Phase Two
  - In Progress
  - Structure identified
  - Expected V0.5 Completed Fall 2017
- Phase Three
  - Structure identified
  - Expected V0.5 Completed Winter 2018

Images Courtesty of (From top to bottom) GE, https://www.ge.com/digital/ ; ADNIC, http://www.adnic.ae/; Daily Mail, http://www.dailymail.co.uk; Melksham Insurance, http://www.melkshaminsurance.co.uk

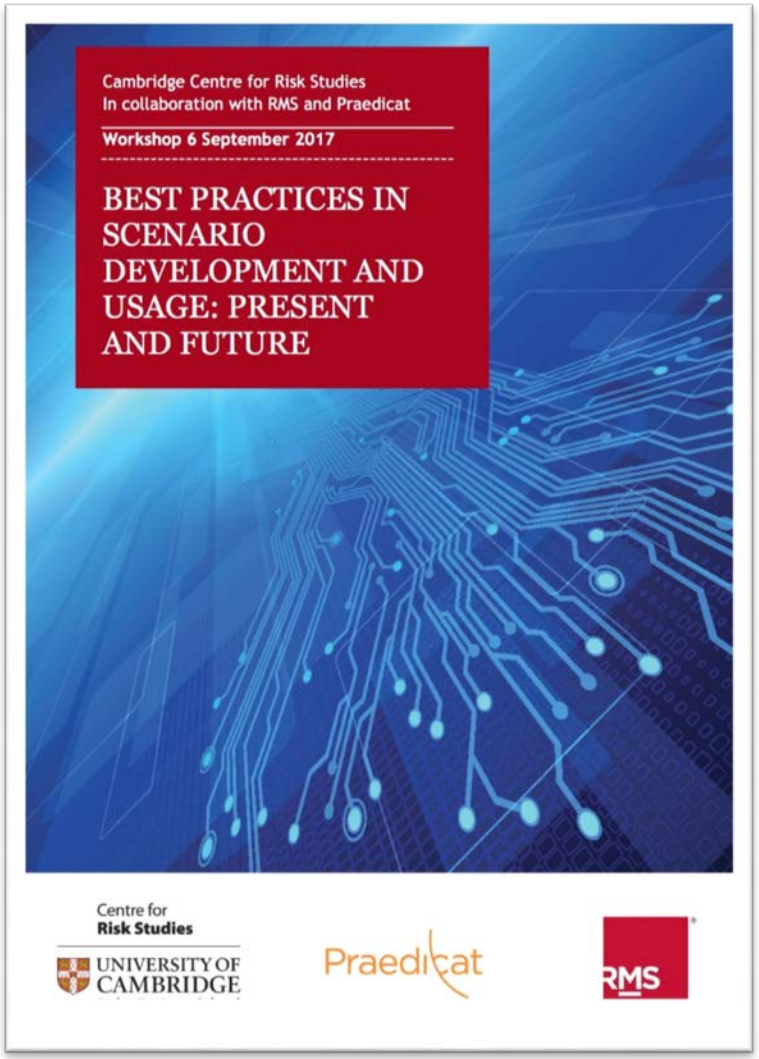
Next Steps

Upcoming Publications

- Multi line Insurance Exposure Data Schema V1.0 (Open Source Report), 2018
- Scenario Development Best Practice Guide (Open Source Report), 2018
- Using Scenarios in Insurance Business (Open Source Report), 2018

Upcoming Events

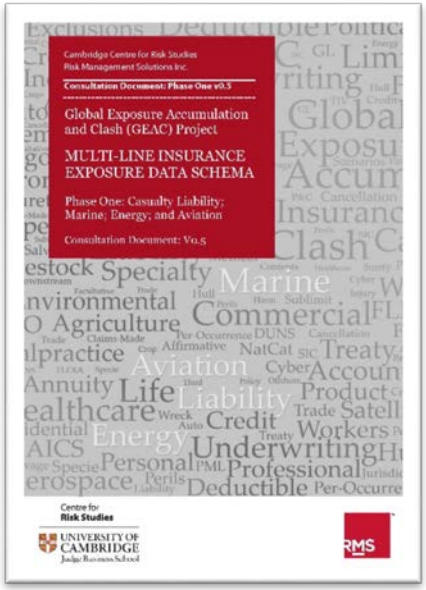
- Scenario Development Workshop, September 6th 2017
- GEAC Fall Workshop, September 27th 2017



Feedback and Thanks

We are actively looking for feedback pertaining to the Data Schema Project – Please don't hesitate to contact if you would like to find out more.

Thank you for your attention.



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