

Data Analytics and Industry Needs

Dickie Whitaker CE Oasis Loss Modelling Framework

Introduction

- Oasis Loss modelling framework, open source platform for weather and climate risks



Oasis LMF Ltd Members – 45 ↑

- ClimateKIC
- Lloyd's
- SCOR
- XL Catlin
- Validus
- Ren Re
- Hiscox
- TigerRisk Partners
- Cathedral
- Novae
- Zurich
- Liberty
- Aspen
- Aon Benfield
- Guy Carpenter
- Willis
- Partner Re
- Allianz
- Axis
- Amlin
- Tokio Millennium Re/Kiln
- Suncorp
- JLRe
- GenRe
- Swiss Re
- Beazley
- Trans Re
- Argo
- Ark
- Ascot
- Barbican
- Brit
- Canopus
- Chaucer
- Hardy
- Mitsui Sumitomo
- QBE
- R&Q
- W R Berkley
- XL
- Axa
- ANV
- Ace
- Markel
- Hannover Re

and more in the pipeline,



Big data and insurance

- “75% use big data techniques
- 1/3 think big data will transform the industry
- Less than a third have big data in Insurance strategy “

Really?

Data Analytics challenges

The data Transactions, Sensors, Documents, Social Networks, Weather, Events, Reviews, Identities, etc.

How many apply?

- **The analytical tools** Historical, predictive, streaming, text, machine learning, etc.
- **The systems** Scalable, cost-effective, reliable, fault tolerant, integrated, etc.
- **To solve new “big data” problems** What your real business needs, How to allocate resources optimally, how to manage risk in real time, how to find insight in a noisy set of sources, etc.

Being problem centric (not solution centric) is key.

Technical challenges of cat modelling

Challenge 1: data volumes

Lots of output data, if detailed risk characterization is required.

100,000 events in catalogue

*

100 samples per event

*

1,000,000 risks in insurance portfolio

*

10% hit rate **= 1 trillion simulated losses**

But, if analysis runtime is fast enough then analysis can be reran rather than output data persisted.

Associated Industry challenges

- Data capture, storage and transformation
- Moving large data files
- Creating standards to reduce duplication
- Opportunity for:
 - Machine learning?
 - Hadoop / Data Lakes?
 - +++

London market Target Operating model (TOM) to established.

Target operating model

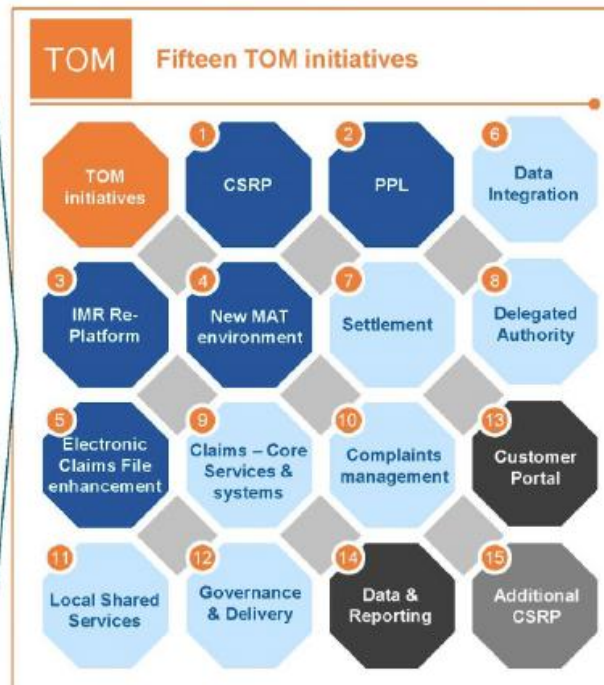
*“reduce...cost[s]...by delivering on infrastructure activities,
removing London specific processes and realising economies of shared service[s]”*

Project briefs have been developed for each of the initiatives required to deliver the TOM



Key messages

- A number of initiatives already exist in the London Market (e.g. CSRP, IMR Re-Platform, MAT) which the TOM programme will leverage
- 15 initiatives (9 new) were identified and detailed project briefs have been developed
- Existing initiatives have been reviewed against the future TOM requirements
- The next level of detail is now being specified with the communities
- Each initiative has been prioritised based on a defined framework
- As part of stage 2, we will explore ways to bundle the initiatives to be more closely aligned to the required services of the TOM



Conclusion

- We need to be careful what lens we use for data analytics.



- Industry is open to solutions to help solve problems
- Find a partner to really understand the business and the problem.

Big Data Makes Organizations Smarter, But Open Data Makes Them Richer- Gartner