Stock & Storage
An Underestimated Risk?

14 September

Andreas Siebert
Head Geospatial Solutions
Munich RE

CHALLENGES FOR THE MARINE CARGO BUSINESS

Focus on stock & storage

Source: Munich Re, Andreas Siebert, 2007

Marine & Property: Analogies?

- Yes, we are all agreed that in Marine everything is different!
- However: on second thoughts Marine Cargo insurance includes several coverage elements that have a clear overlap with Property business
- Pure storage in transit covers have changed to
  - extended warehousing (static storage)
  - stock throughput related storage
  - logistics related storage (allocation & distribution)

RECENT LOSS EXAMPLES

New Zealand – Coolstore fire

- Location: New Zealand, Tamahere
- Warehouse: Coolstore owned by local specialist operator
- Type: EPS coolstore; refrigerant: LNG
- Cargo interest: Cheese
- Cause of loss: fire, lasted 7 days
- Casualty: 1 fireman killed, 7 injured in the initial explosion of the refrigerant
- Insured losses: property damage: 3 m USD; “cargo” damage: 23 m USD
- Special cover feature: Cheese was in store for up to 2 years as it matured – all the while covered under the cargo policy!

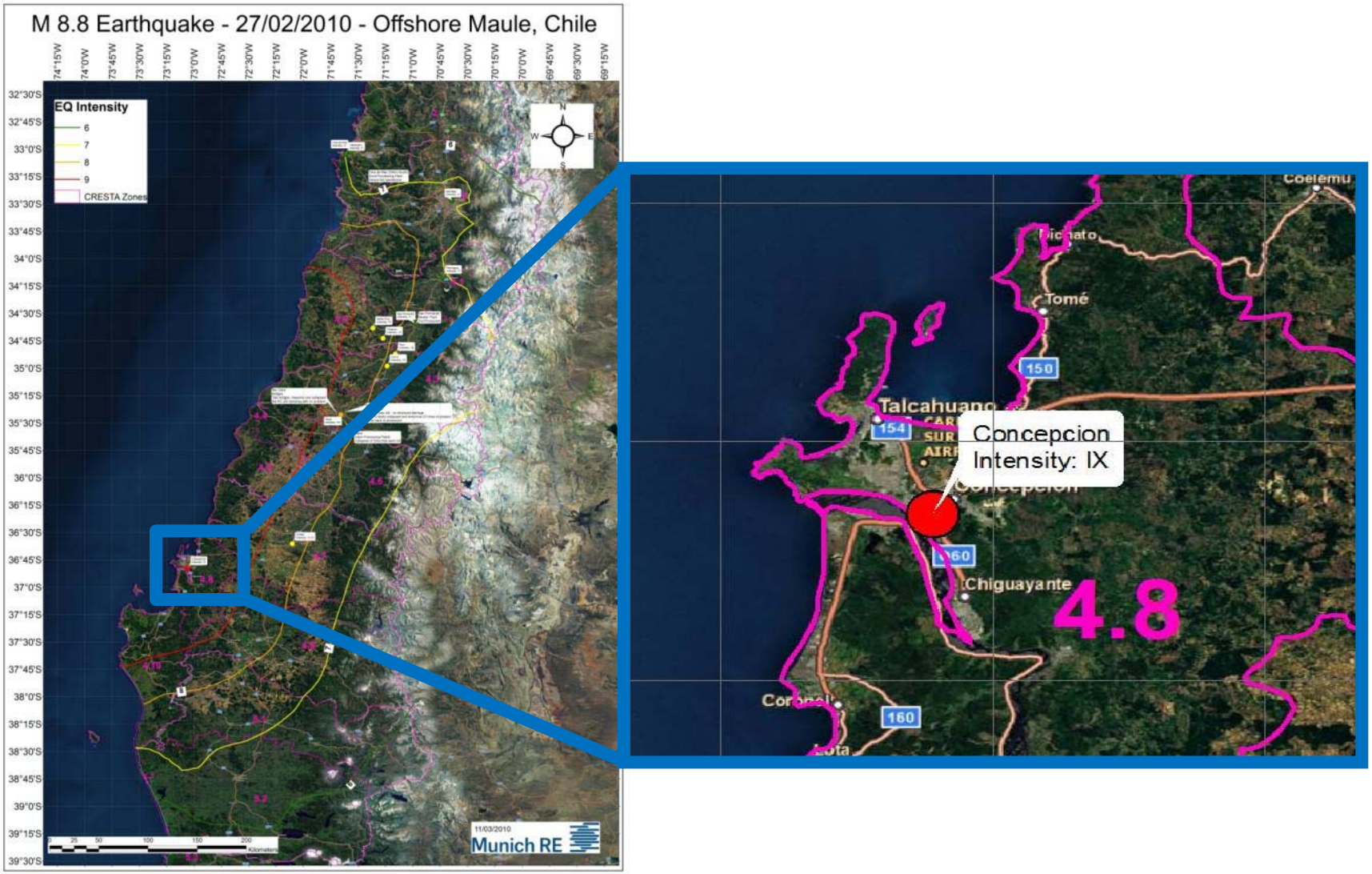
Australia – Storage depot for groceries

- Location of loss: Australia
- Cargo interest: groceries and other content
- Cause of loss: hailstorm broke the roof – roof with asbestos
- Problem: Entire contents of the warehouse have been condemned (no one is able to guarantee any of the contents are not contaminated by asbestos)
- Casualty: no
- Insured losses: property damage: 2 m USD; destroyed stock: 54 m USD
- Special cover feature: Property policy, but cover was also broked as a marine cargo risk, generating keen interest among the Cargo underwriting community.

Chile – Storage depot for technical products

- Location of loss: Chile
- Cargo interest: sensitive technical products in warehouse
- Cause of loss: Earthquake (27th of February, 2010) and secondary effects
- Casualty: no
- Insured losses: property damage: low; destroyed stock: total loss
- Special feature: although the warehouse “survived” the disastrous earthquake, the pallets failed and the value goods have been destroyed!

Earthquake and Tsunami, Feb. 2010 in Chile



Talcahuano: Typical tsunami loss

Source: Munich Re - RMS Recon Trip, March 2010

Talcahuano: Typical earthquake/tsunami loss

Source: Munich Re - RMS Recon Trip, March 2010

Talcahuano: Typical warehouse loss

Source: Munich Re - RMS Recon Trip, March 2010

Content is highly vulnerable to earthquakes

Source: Munich Re, Andreas Siebert, 2007

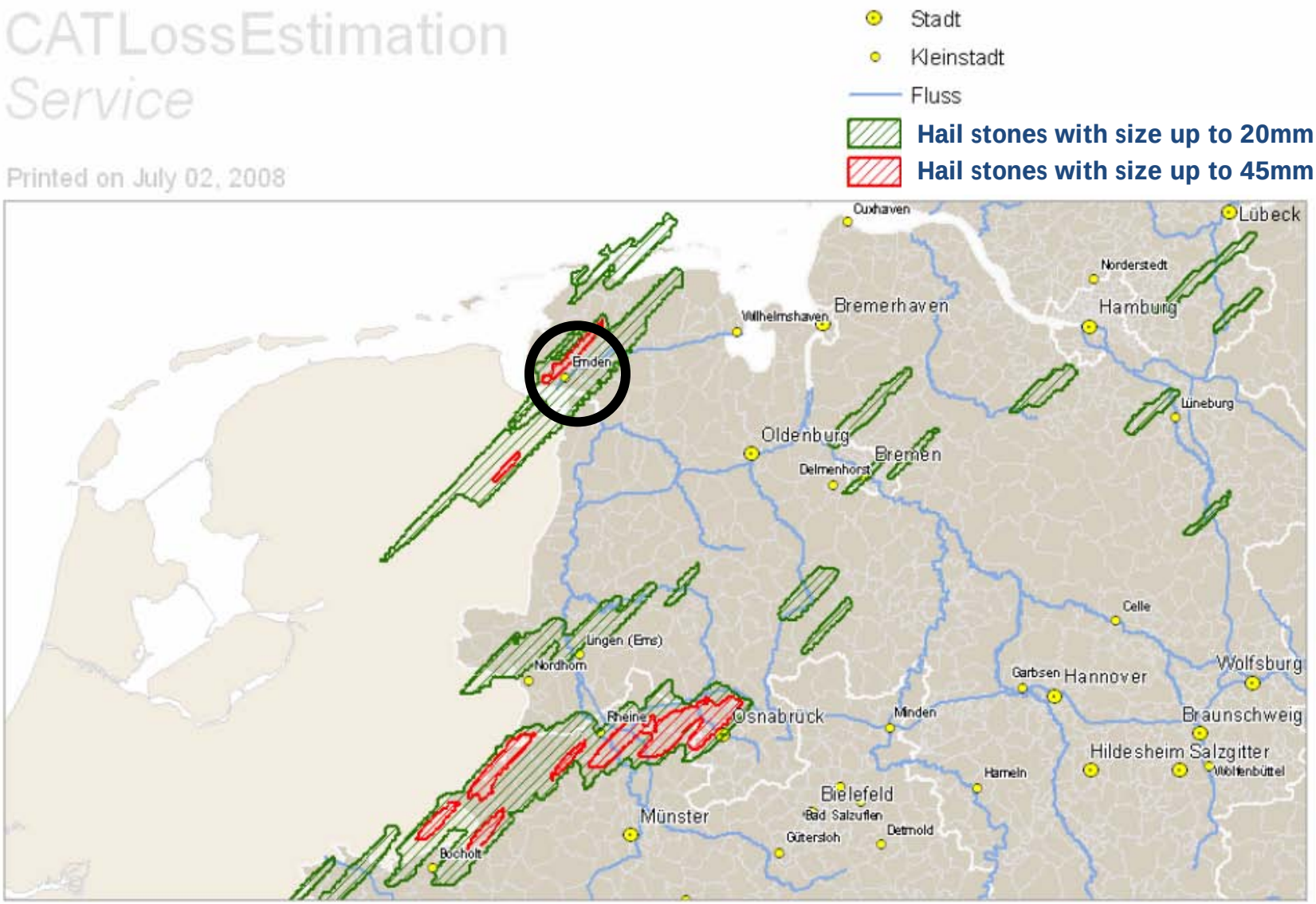
Germany – Vehicle Storage depot

- Location of loss: Germany, Emden
- Cause of loss: Hailstorm (22nd of June, 2008)
- Cargo interest: vehicles
- Casualty: no
- Insured losses: destroyed stock: 35.000 cars, approx. 108 m USD
- Special feature: typical “unexpected” accumulation loss in a low hailstorm hazard area!

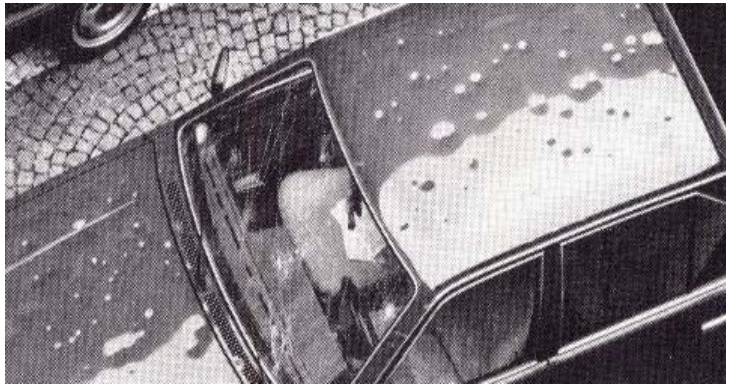
Marine Accumulation Scenarios
High exposures in harbours (car storage areas)

Source: Google Earth, 2010

Emden – Meteorological situation in June 2008



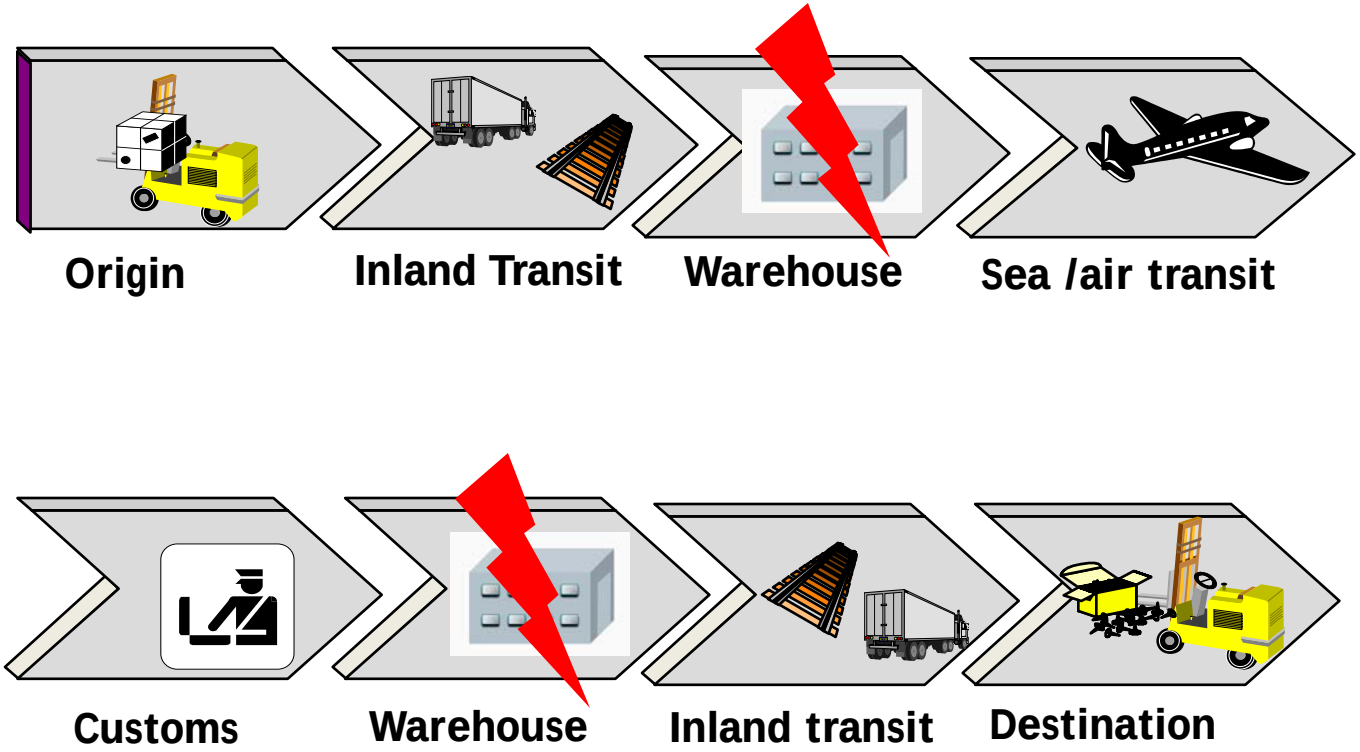
Emden – Hailstorm loss (35.000 cars affected)



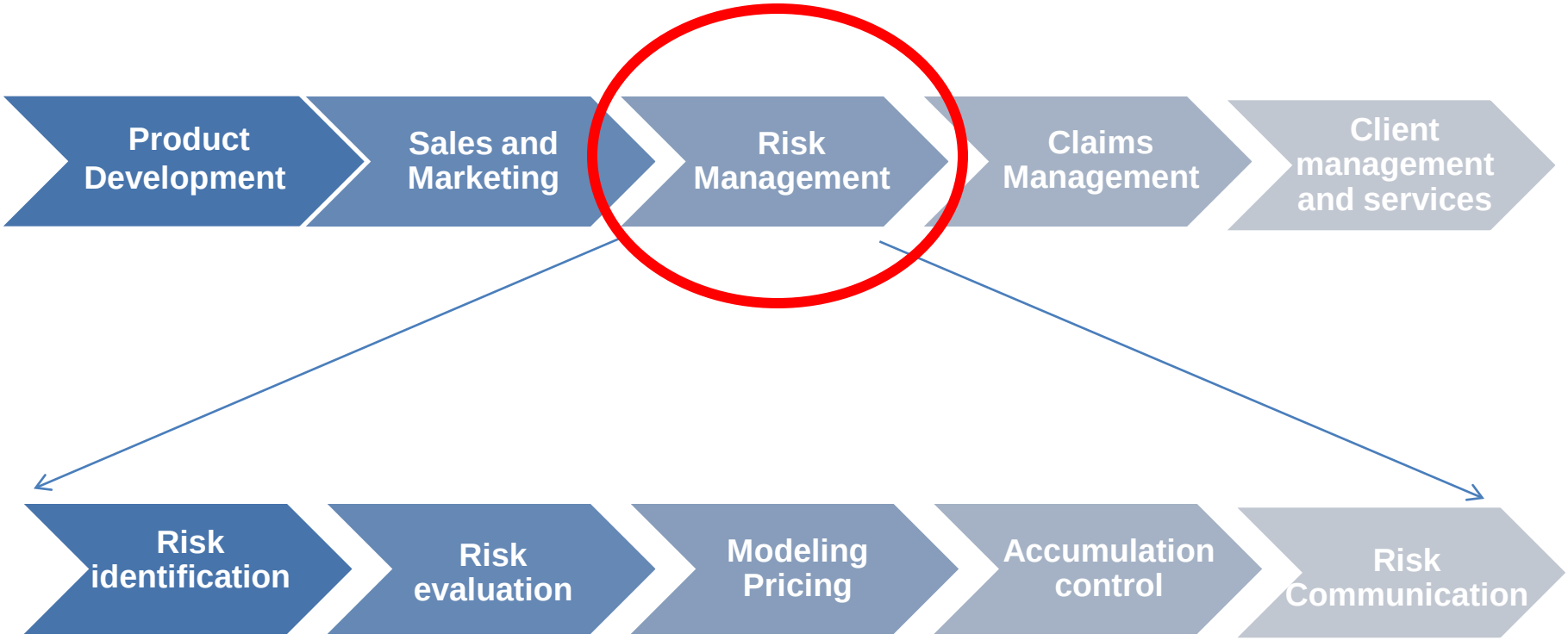
Sources: Munich Re

LESSONS LEARNT

Definition of the transit chain



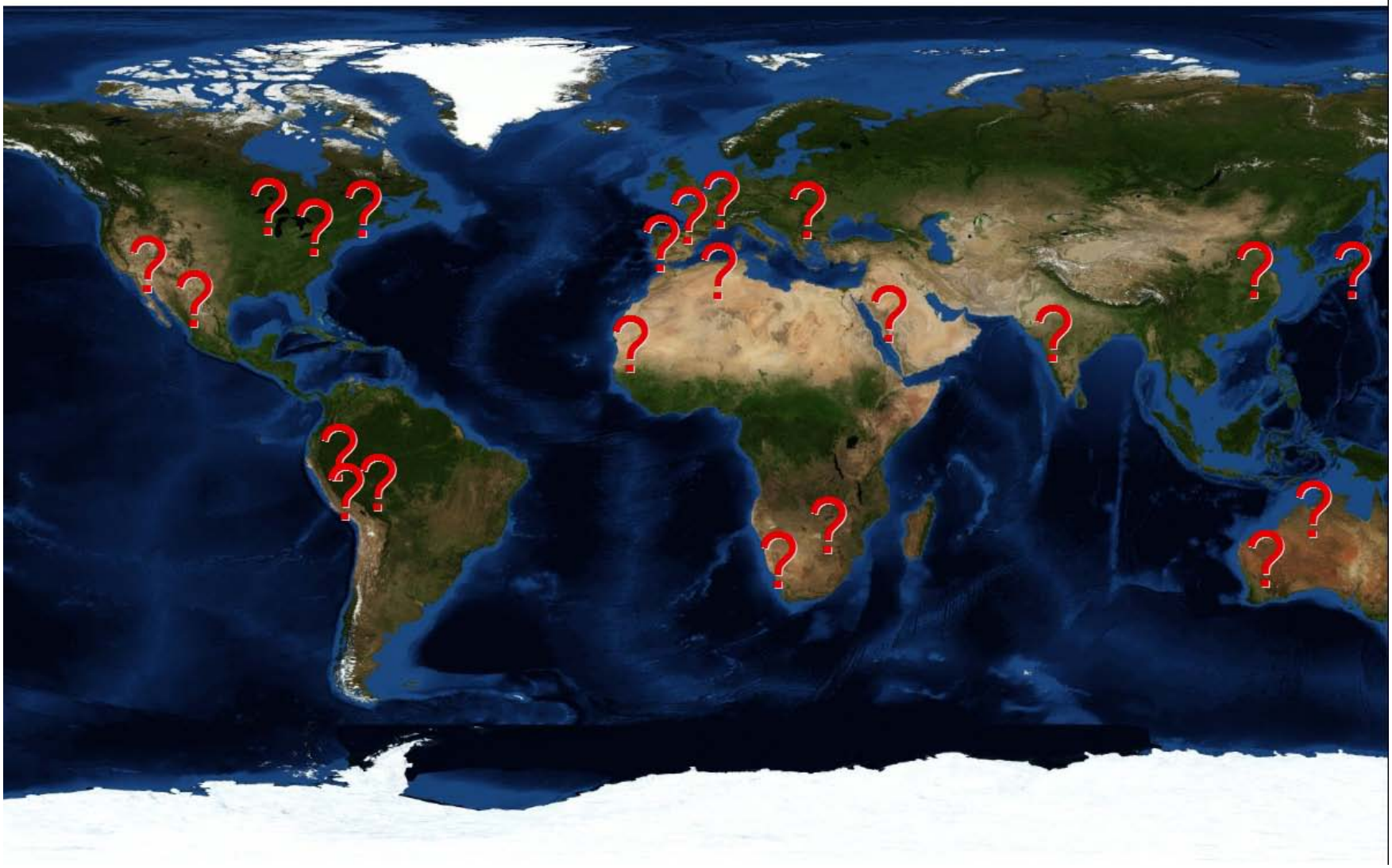
Value chain in the insurance industry



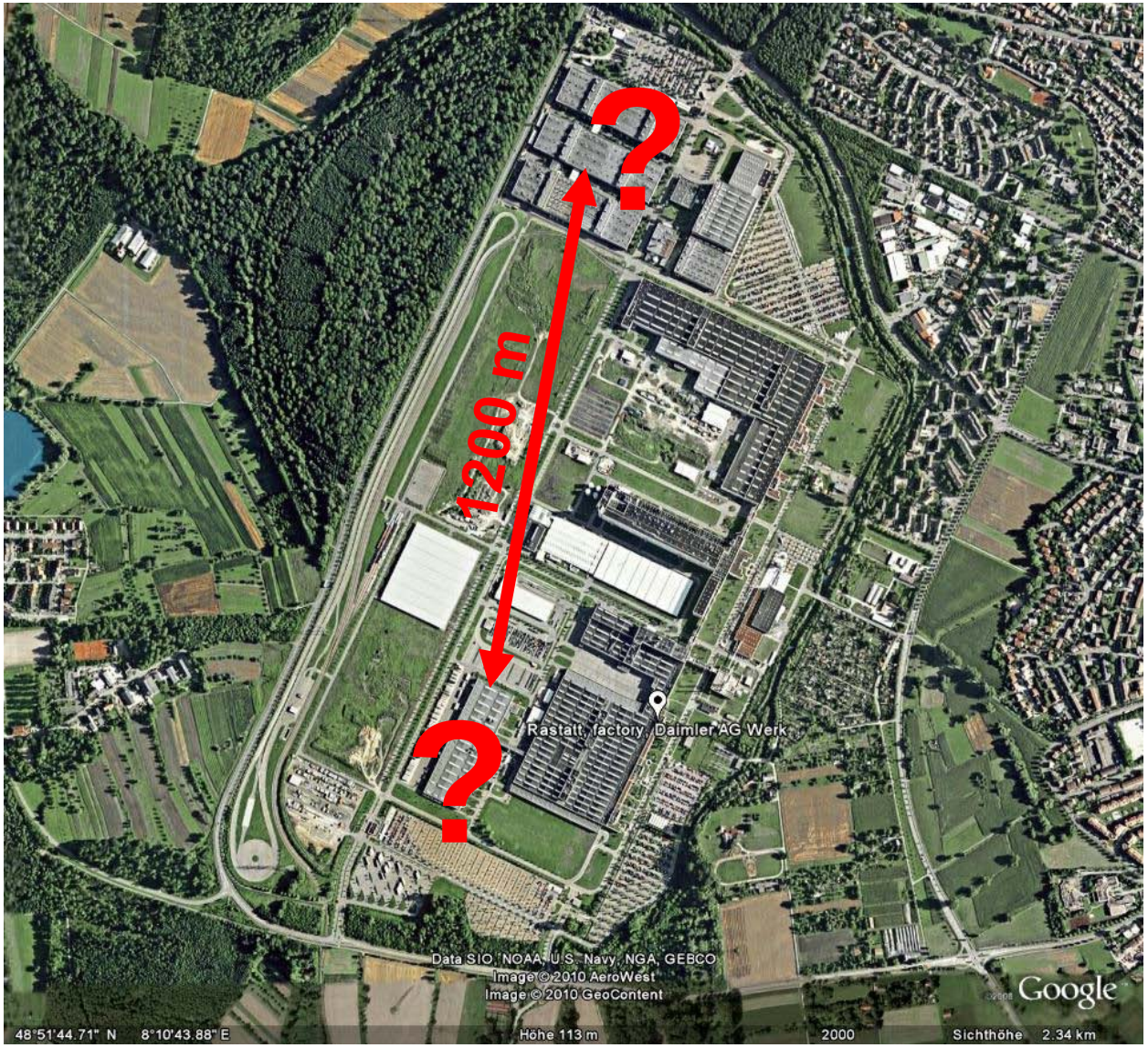
Risk management process
Comparison Property and Marine (Cargo)

Risk management workflow	Property Buildings & Content	Marine Cargo Content	Marine Cargo Storage Buildings
Risk identification	Good ✓	Good ✓	Poor ⊘
Risk evaluation	Good ✓	Good ✓	Insufficient ⊘
Modelling	Sophisticated ✓	Poor ⊘	Not possible ⊘
Accumulation control	Good ✓	Where possible ?	Not done ⊘
Pricing	Ok ✓	„Difficult“ ?	Difficult ?

Unknown risk locations (global scale)



Unknown risk locations (local scale)

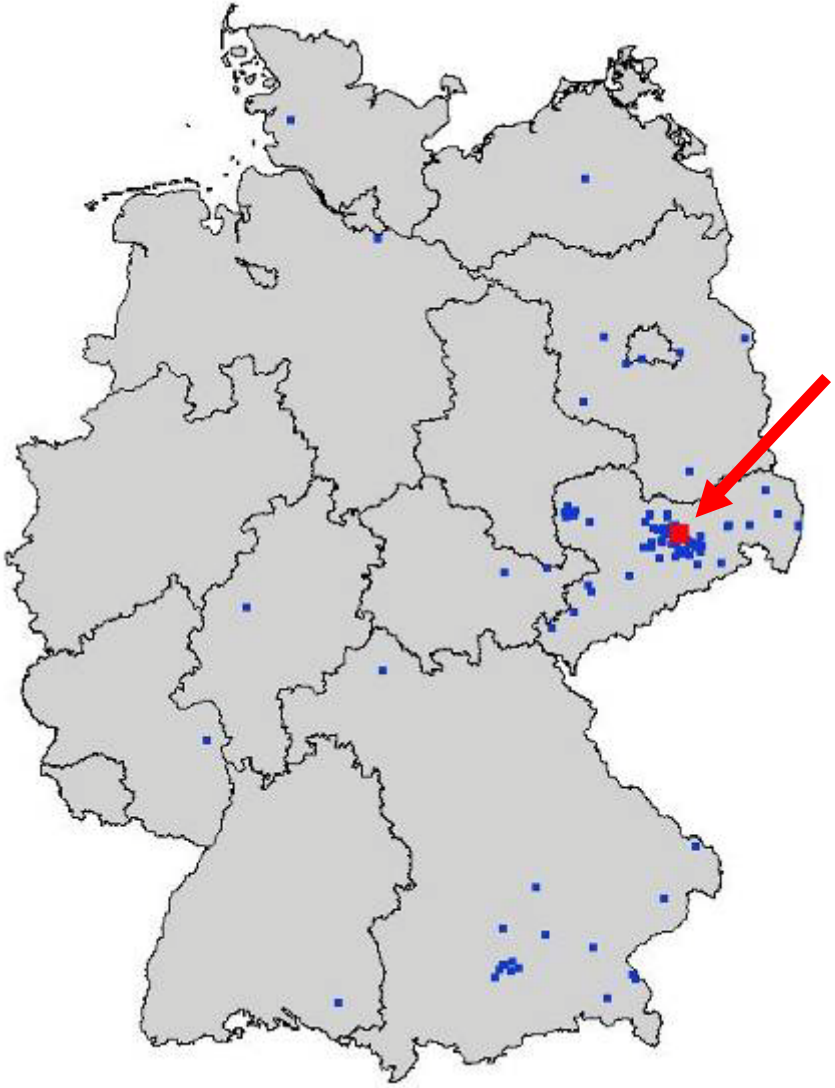


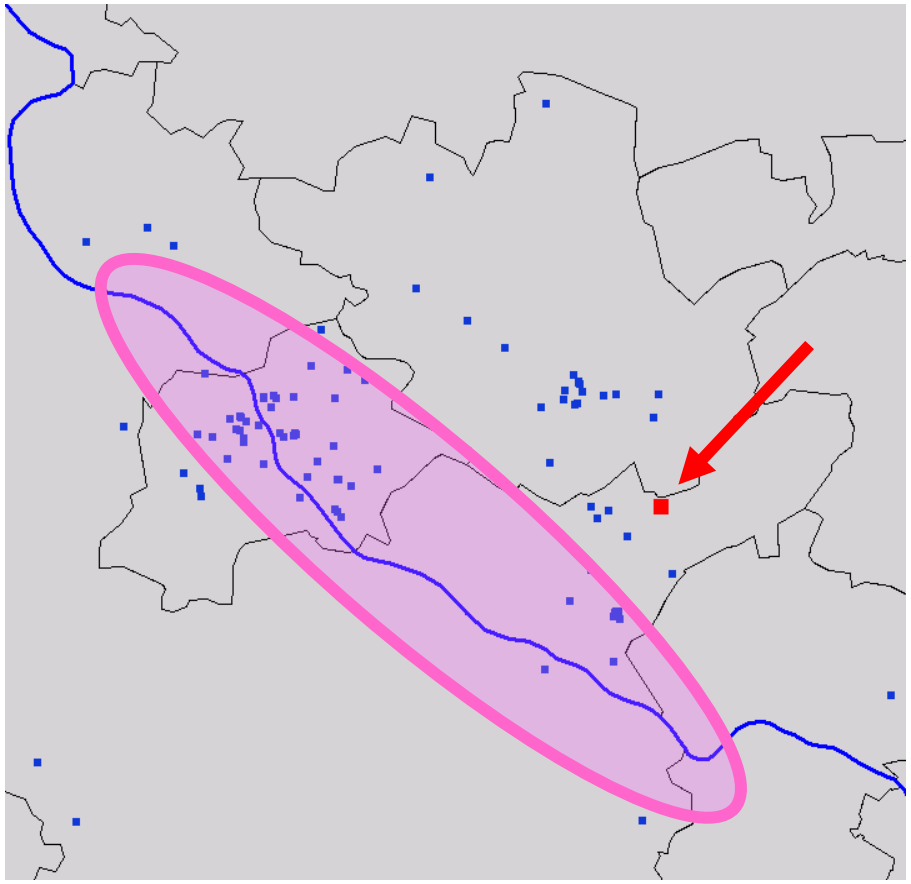
Source: Google Earth, 2010

Unknown accumulation
One mailing address, but many locations

Aggregated

Single risks





Unknown accumulation
One warehouse, several addresses

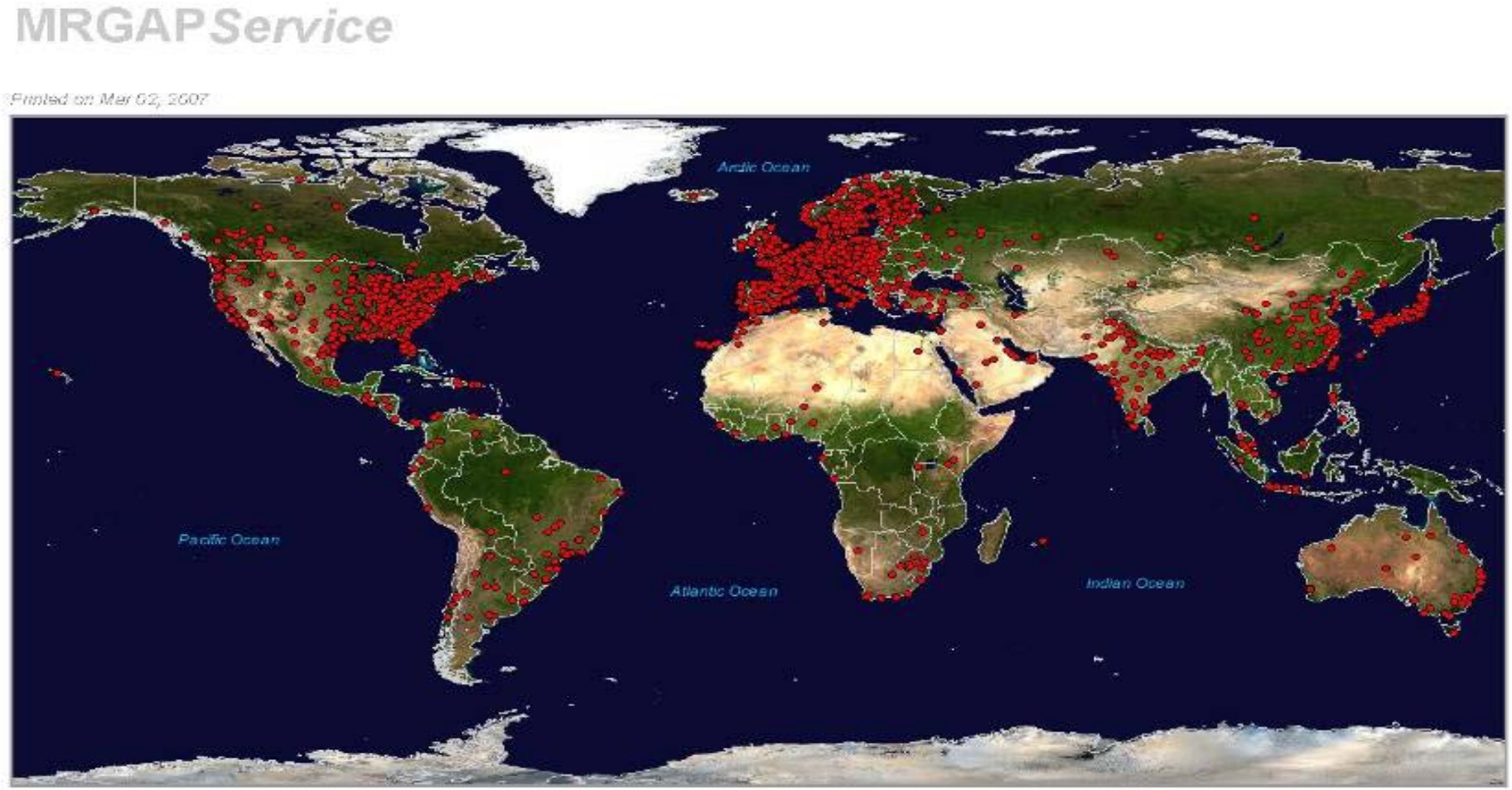
Source: Google Earth, 2010

Lessons learnt

- YES, Stock and storage risks are underestimated!
- Highly exposed to fire and natural perils
- Potential impact of warehouse quality often not sufficiently taken into account or even ignored
- What is often missing or to be improved in Marine Cargo risk management:
  - Systematic capturing of risk locations
  - Non-homogeneous data make risk assessment difficult or impossible
  - This leads to poor risk modelling and pricing capabilities
  - Unreliable accumulation control processes

CONSEQUENCES AND SOLUTIONS

Requirements for risk modeling: geocoded risks



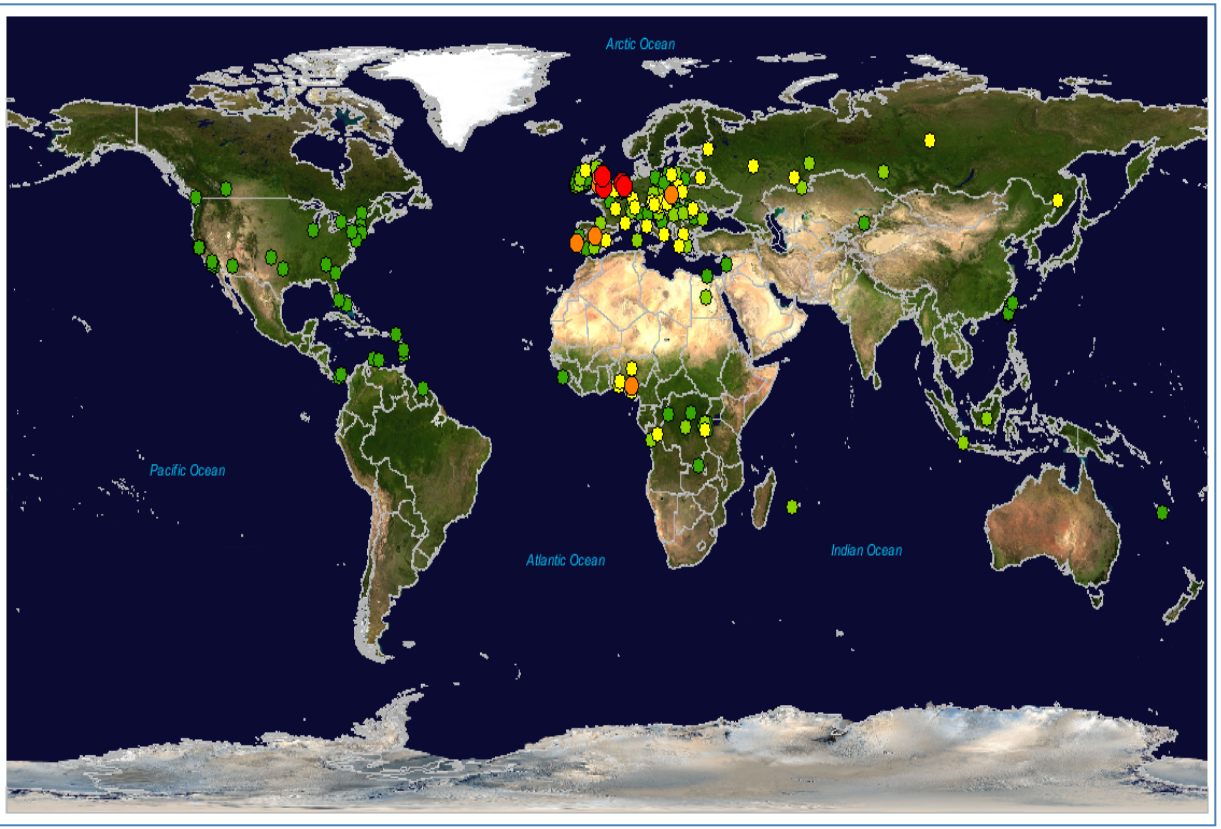
Risk locations are available! Ask for them!

Source: Google Earth, 2010

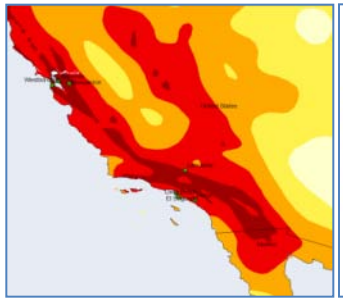
Use all sources for a holistic risk assessment

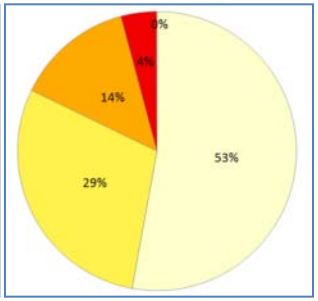
Source: Google Earth, 2010

Geocoded risks allow a better risk assessment



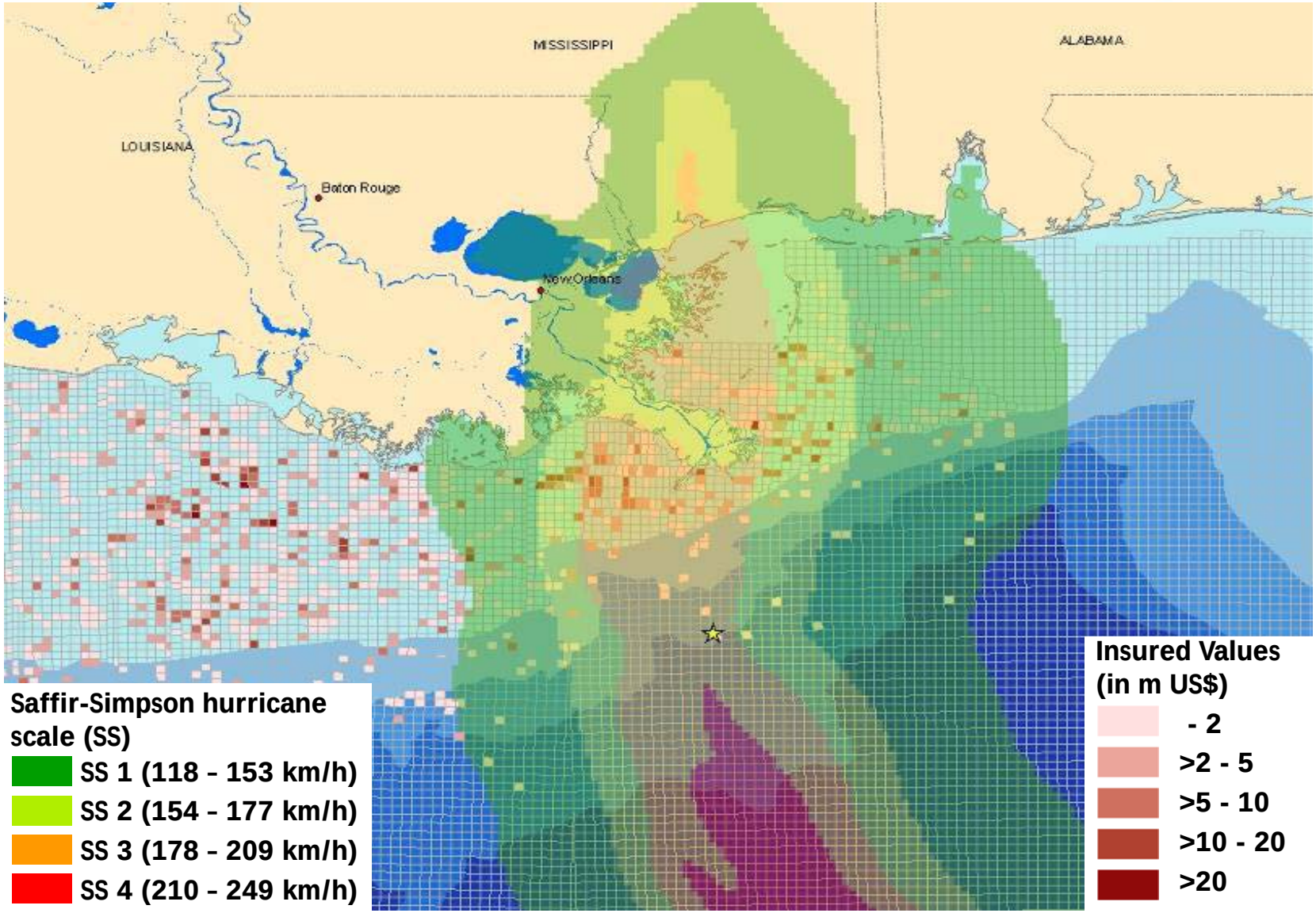
Quantitative analysis of exposed risk locations





EQ	Locations	Sum PD TSI	Loading
Zone 0	120	7.163.044.720	0
Zone 1	70	3.970.989.382	50
Zone 2	43	1.849.545.546	100
Zone 3	17	556.629.741	500
Zone 4	4	7.922.628	1000
Sum	**254**	**13.548.132.017**	

Geocoded risks allow a better risk modeling



Consequences and solutions

- Talk to the insured, there is much more risk information available, than we expect
- Get broker to obtain relevant information
- Make use of free available data sources
- Have a 360° risk management view for a holistic risk assessment

You must occasionally act like a Property underwriter, to be a successful Marine underwriter!

Thank you!

14 September

Andreas Siebert
Head Geospatial Solutions
Munich RE

Backup

Die GPS Koordinaten für das Hotel Helmhaus lauten:

47°22'08.29" N

8°32'39.26" E