



Lighting the way ahead

Market Event



Welcome

Agenda

08:30

Breakfast Meet & Greet

09:00

Welcome Address from Pool Re CEO, Tom Clementi

09:05

Keynote Address, Tom Hurd CB OBE

09:20

Transition to Treaty

09:50

Protect Duty Panel and Q&A with Audience

10:40

Closing Address



Tom Clementi

Chief Executive Officer, Pool Re



Tom Hurd CB OBE
Former Director General, Office
for Security and Counter-Terrorism



Transition to Treaty



Scheme Modernisation

Steve Coates ACII

Chief Underwriting Officer



Introduction



The current scheme





The (Re)Insurance landscape

Changes since 1993

Terrorism is a distinct class

Pre-1993 terrorism didn't exist as a separate insurance class

Capital

Global reinsurance capital no longer growing due to factors such as Covid and unmodelled losses

Volatility

Catastrophe underwriters re-evaluating appetites - withdrawals from Cat Risk. PVT market suffering from Ukraine

COVID19

Demonstration of what both a tail and an unprecedented event could look like. Issues around risk manifestation and perfect correlation, similar characteristics to cyber

CBRN/Cyber

Covid illustrated what a biological pathogen could do. The potential for unprecedented cyber losses remains

Insurance market

Insurance and distribution channels changed significantly, as have products and the way they are bought and sold

Regulatory

Regulators more demanding and greater scrutiny of products and propositions

HMT Review of Pool Re 2020/21



The Review covered a variety of issues

The Unlimited Guarantee

Whether the scheme remained fit for purpose

Should changes be made to key rules such as cede all business and all or nothing?

Could scheme penetration be improved?

Pool Re status as an ALB (Arms Length Government Body)

Key outcomes

We convinced HMT that capping the guarantee would be catastrophic

The scheme rules reaffirmed

Framework Agreement signed with HMT reflecting Pool Re status as ALB

Pool Re to work on proposals over next 3 years aimed at modernising the scheme framework

In agreeing to continue with the unlimited guarantee, HMT stipulated that Pool Re must continue to return terrorism risk to the private market

Pool Re to work with HMT and Members to improve penetration



Challenges may lie ahead



Benefits of a catastrophe treaty model



Extent of reinsurance cover



Retention/attachment point



Method of delivery



Pricing



Ease of change



Challenges that need addressing



In progressing towards a catastrophe treaty type mechanism, there are a number of issues we need to address.



Legal and competition issues



Pricing



Pricing mechanism



Pool Re organisation



Regulatory challenges



Risk and reward



Flexible Member retentions



Bifurcated structure



A treaty model that would facilitate conventional terrorism risk being privatised

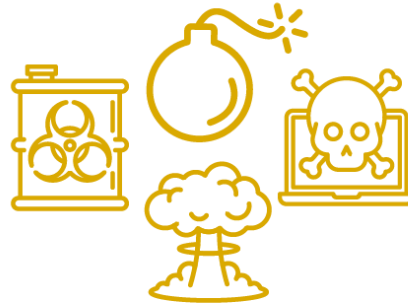
Although there is private market capacity for conventional terrorism risk, no appetite exists for non-conventional terrorism. If we want to return risk to the market, we must recognise this.



Currently, Members risks are reinsured under a single retention for any type of terrorism claim



Does not reflect Members appetite or capacity



Splitting risk types allows us to reflect Member appetite



Conventional retentions can be increased without similar increases to non-conventional



There is a wide spectrum of appetite for terrorism risk



Many Members may not have ability to retain more terrorism risk



We have intimated the possibility of a buy-down facility

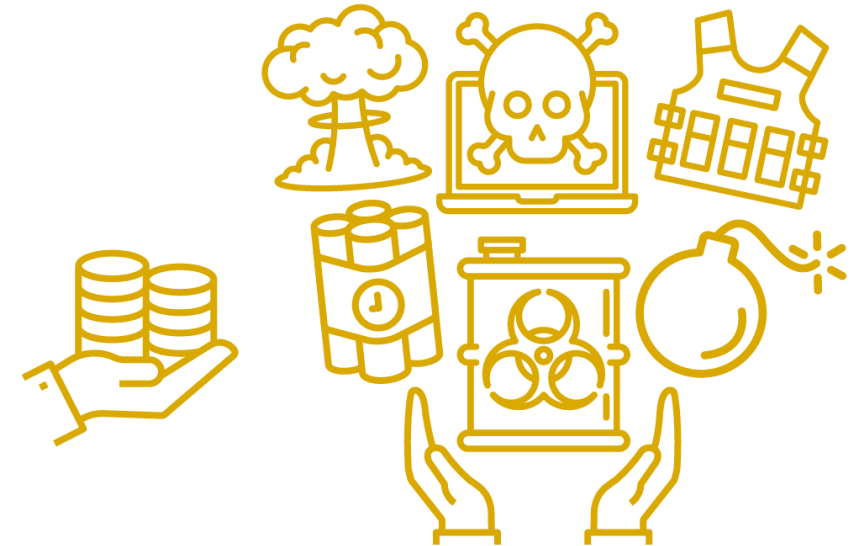


Buy-down facility



Protect your retained risk

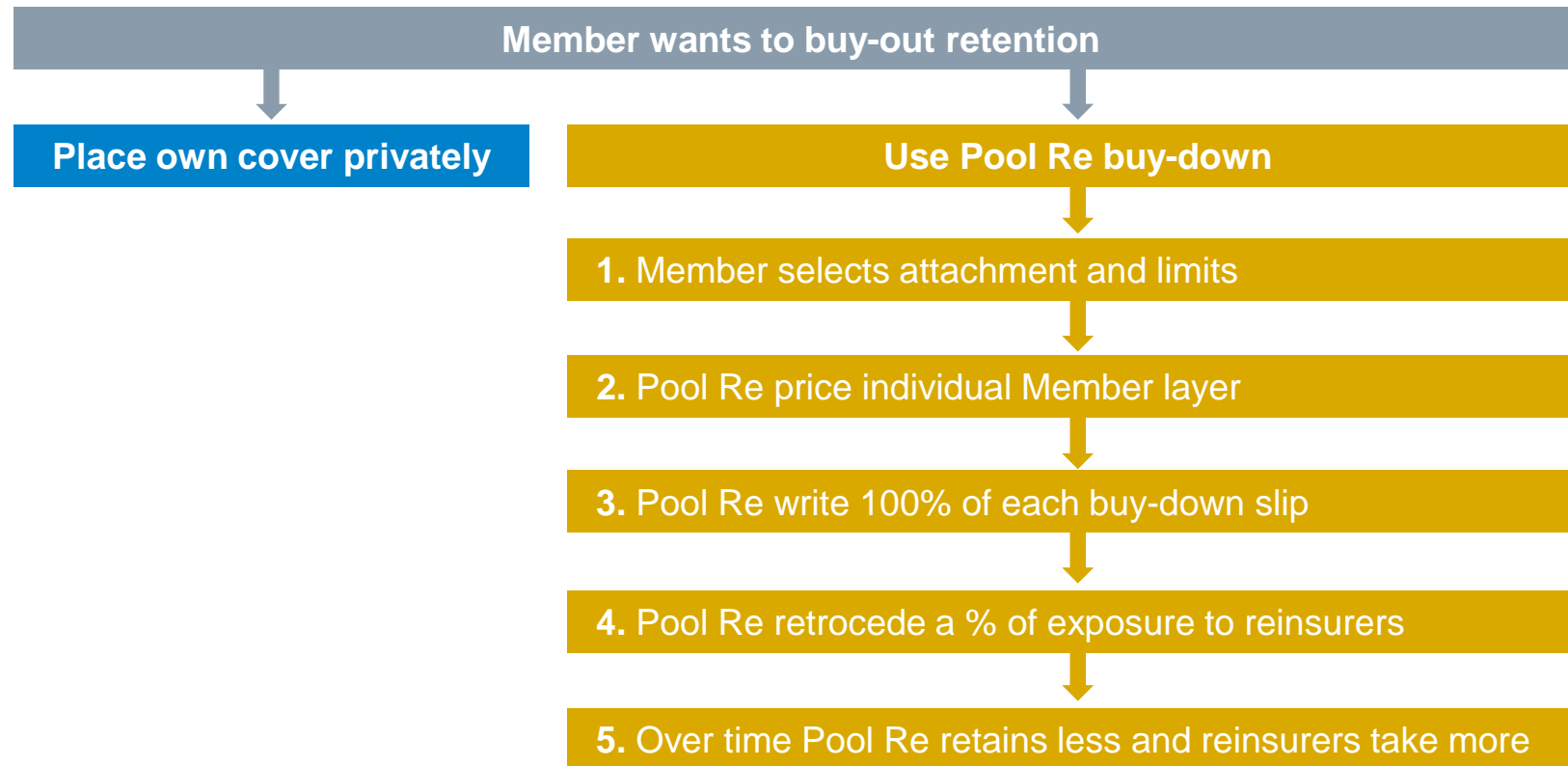
- Through the consultation we are assessing Member desire for such a facility. We are also liaising with Guy Carpenter on likely structure
- Objective would be to provide equal access for Members to buy reinsurance to protect their retained risk
- This could be a short or medium term facility until sufficient private capacity is available
- The structure of such a facility is still to be designed as is the way it might integrate with the main treaty
- One structure might be for the buy-down treaty to function as a Risk XL and the main treaty as a CAT XL
- Pool Re could retain 100% of this facility or retrocede some of all of it to the private market



Buy-down facility



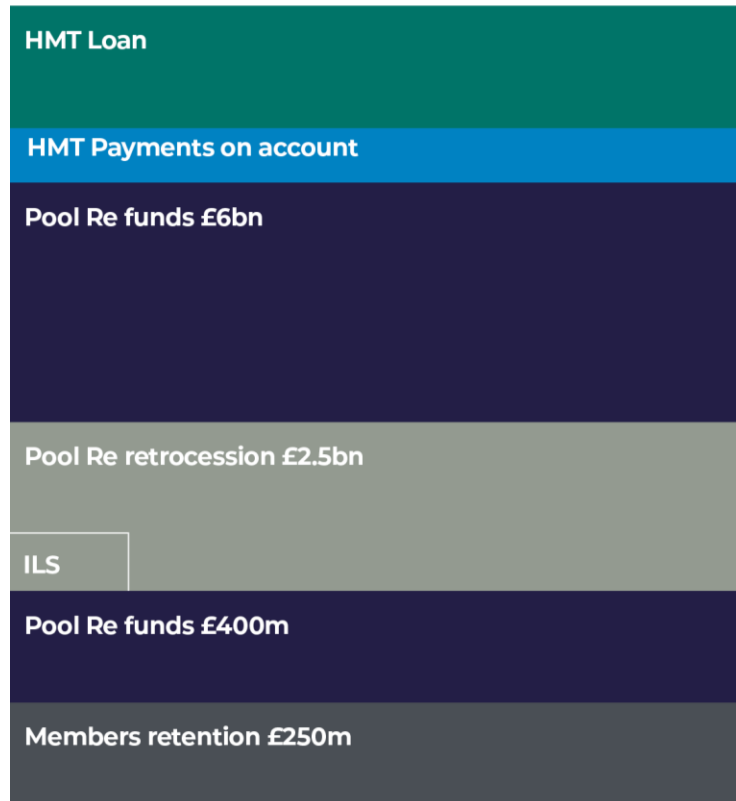
Via Pool Re Transformer



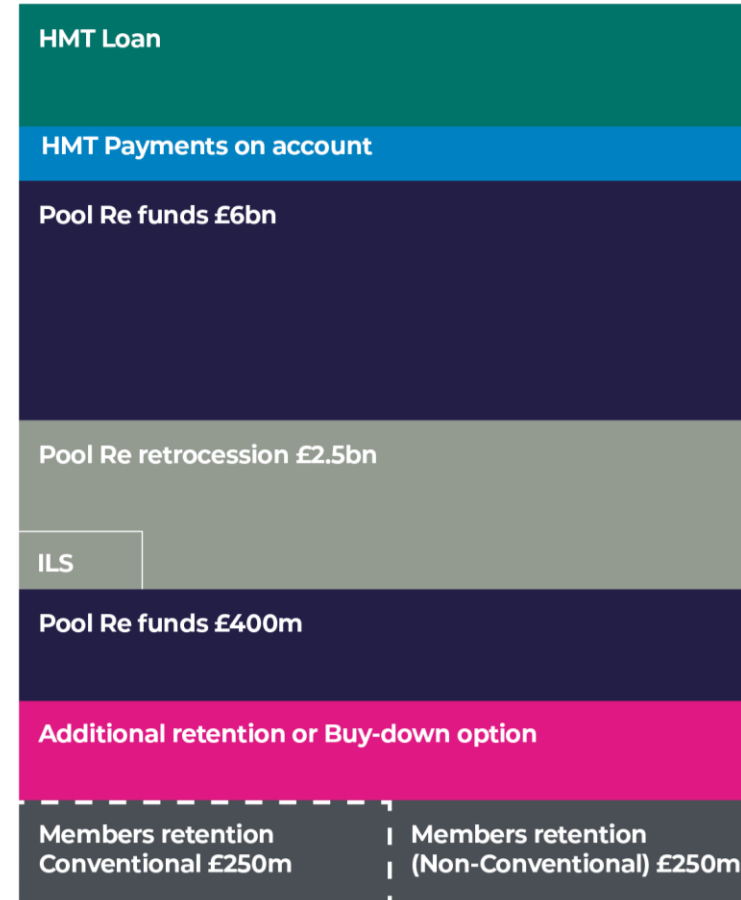
(Re)Insurance Structure



Present and future



Now



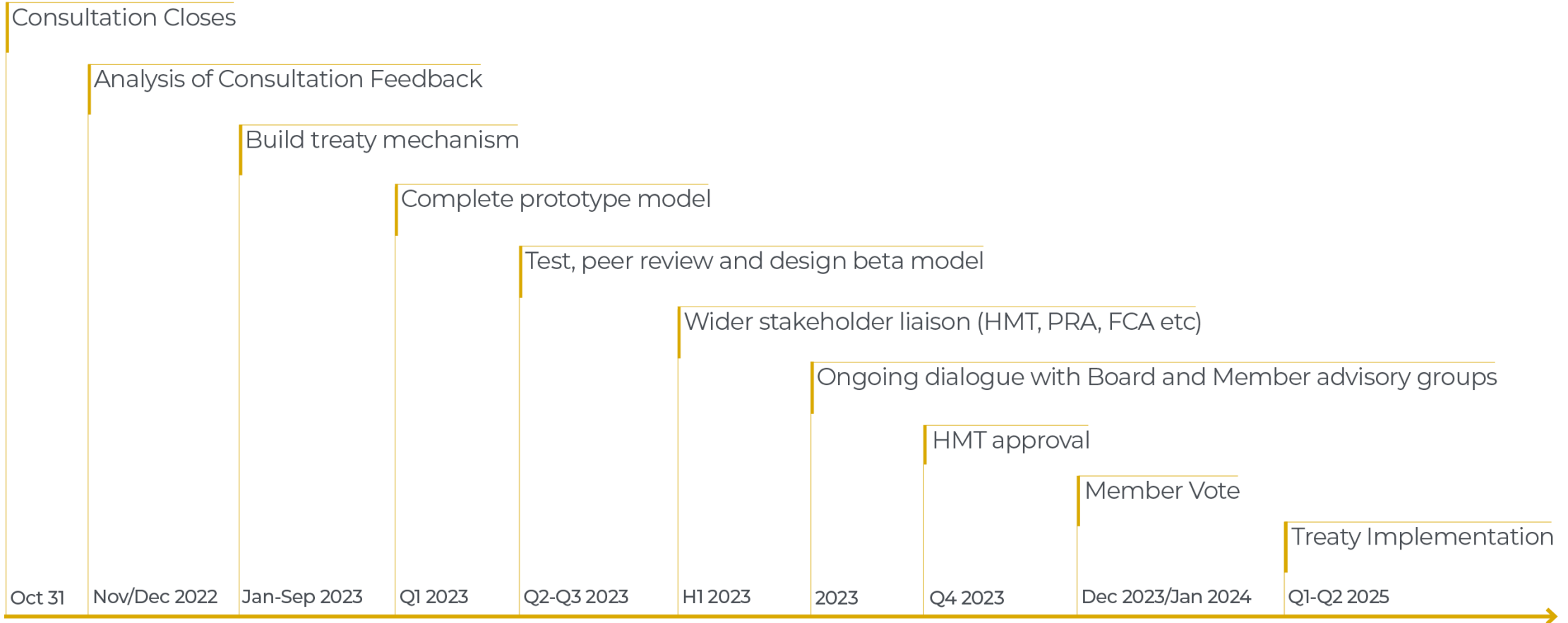
Future



Timeframe



Pulling it all together





Terrorism Modelling

Steve Burr

Chief Actuary



Terrorism Modelling



Our journey

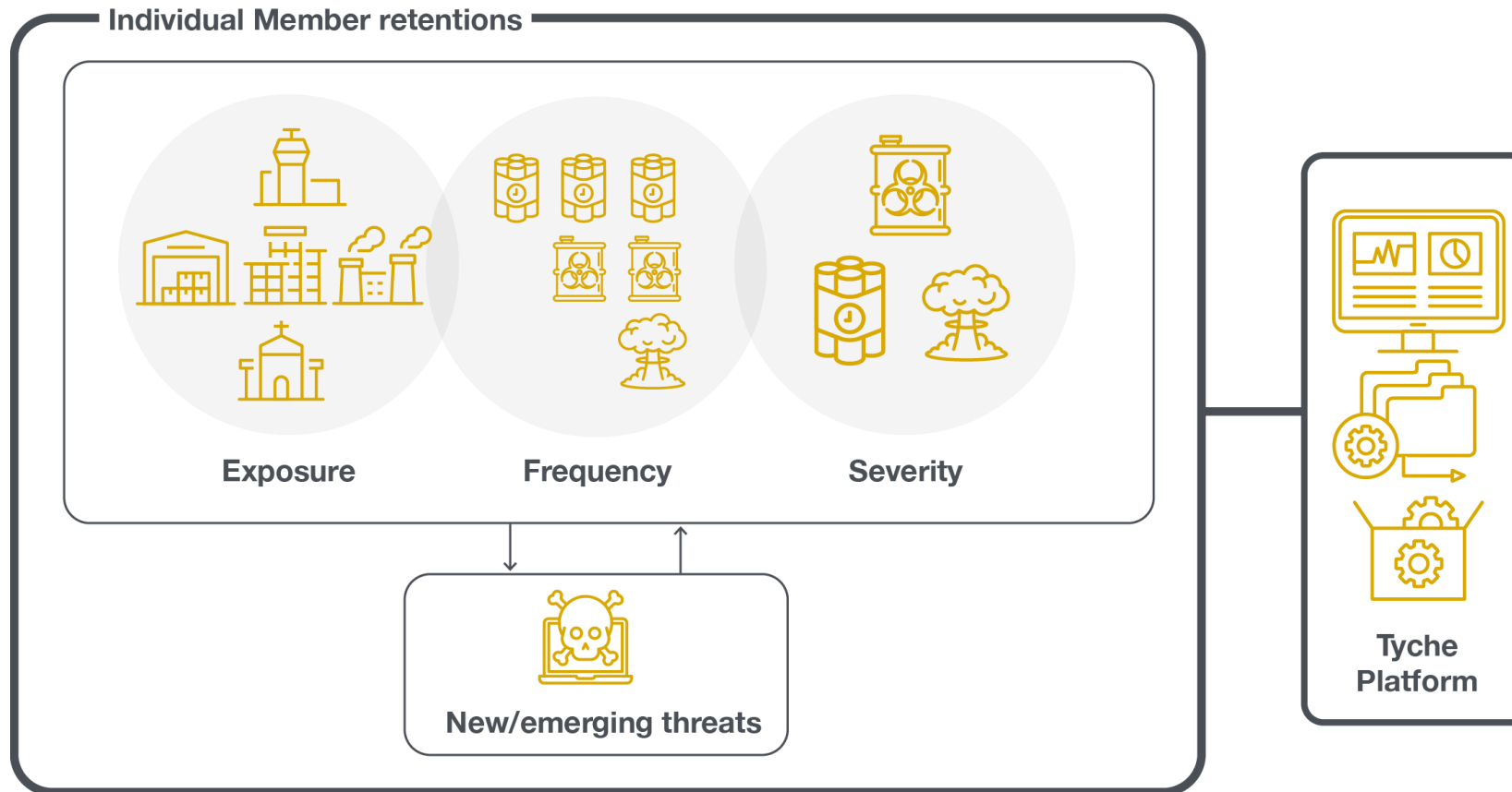
2015	2017	2018	2019/20	2021	2022	2023
Nuclear Report and Modelling	Pool Re developed first modelling frame work Conventional blast detailed modelling using CFD CBRN Modelling	Actuarial Framework/ Platform (Tyche)	Academic collaboration CBRN scenarios (3 each) World's first 'pure' terror bond Only 2nd deal under new PRA regime No independent verification agent - relied on Pool Re Model 4(2); Small £75m placement Investors were able to buy into our assumption derivation and modelling approach	Layer analysis for HMT negotiations Start of Tyche combined model	Close to Beta Treaty Pricing Model (22Q4/23Q1)	Development and refinement scenarios Other assumptions e.g. decontamination costs



Our modelling framework



Exposure based catastrophe model, frequency and severity by threat



Our modelling framework



Exposure



Annual collection 2m+ rows of data



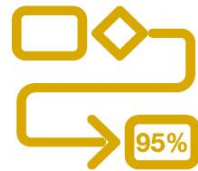
£2.2 Tr exposure



450k postcodes, 2 million front doors



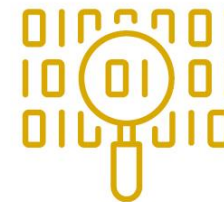
120+ active ceding members



95% exposure at full PCU



Downloadable tool



Extensive scrubbing



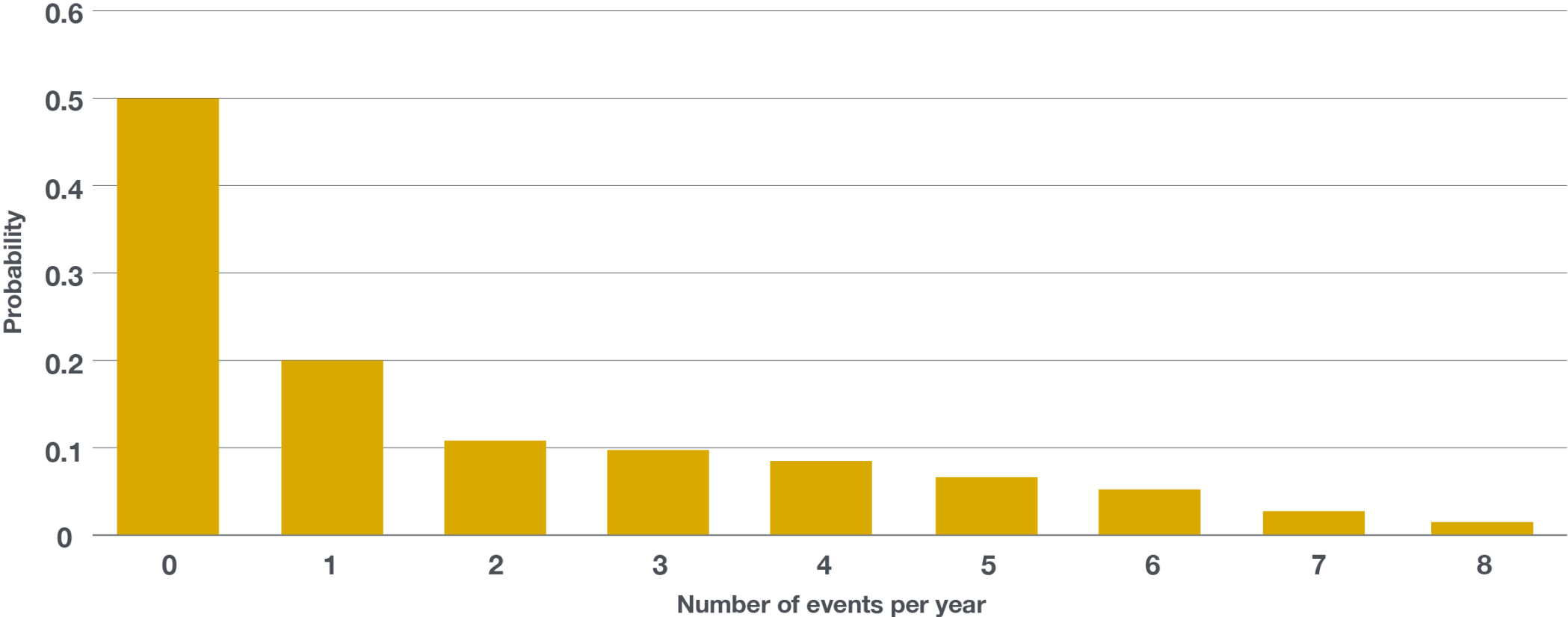
Geocode for visualisation



Our modelling framework



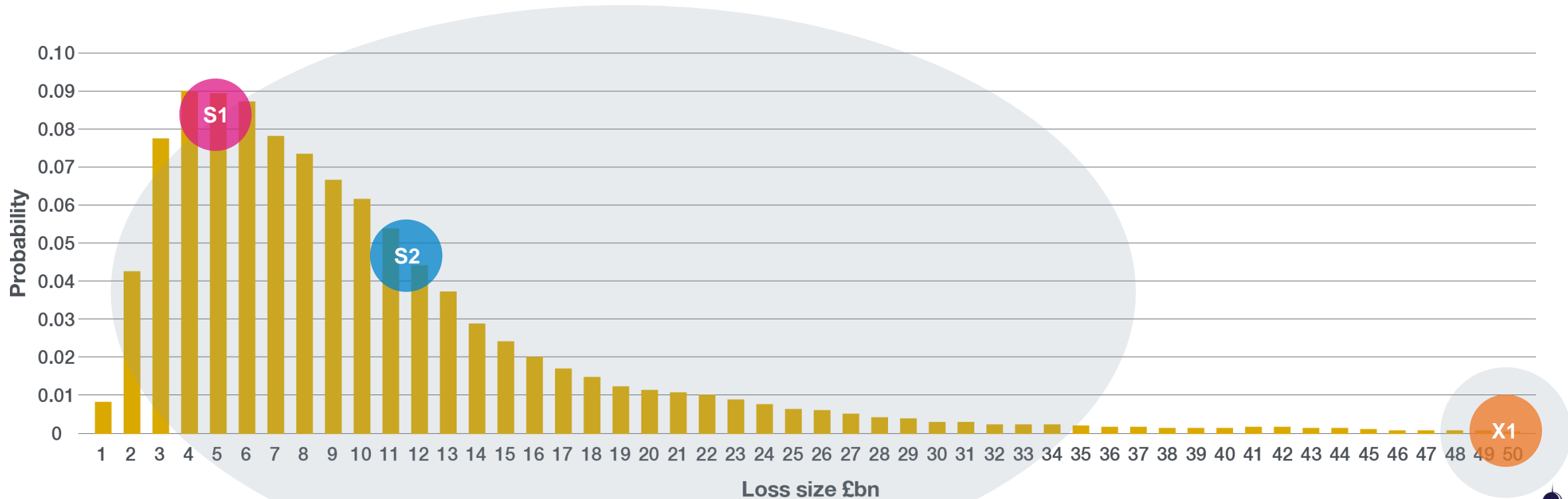
Illustrative frequency distribution for threat



Our modelling framework



Severity distribution for a particular threat and location



Our modelling framework

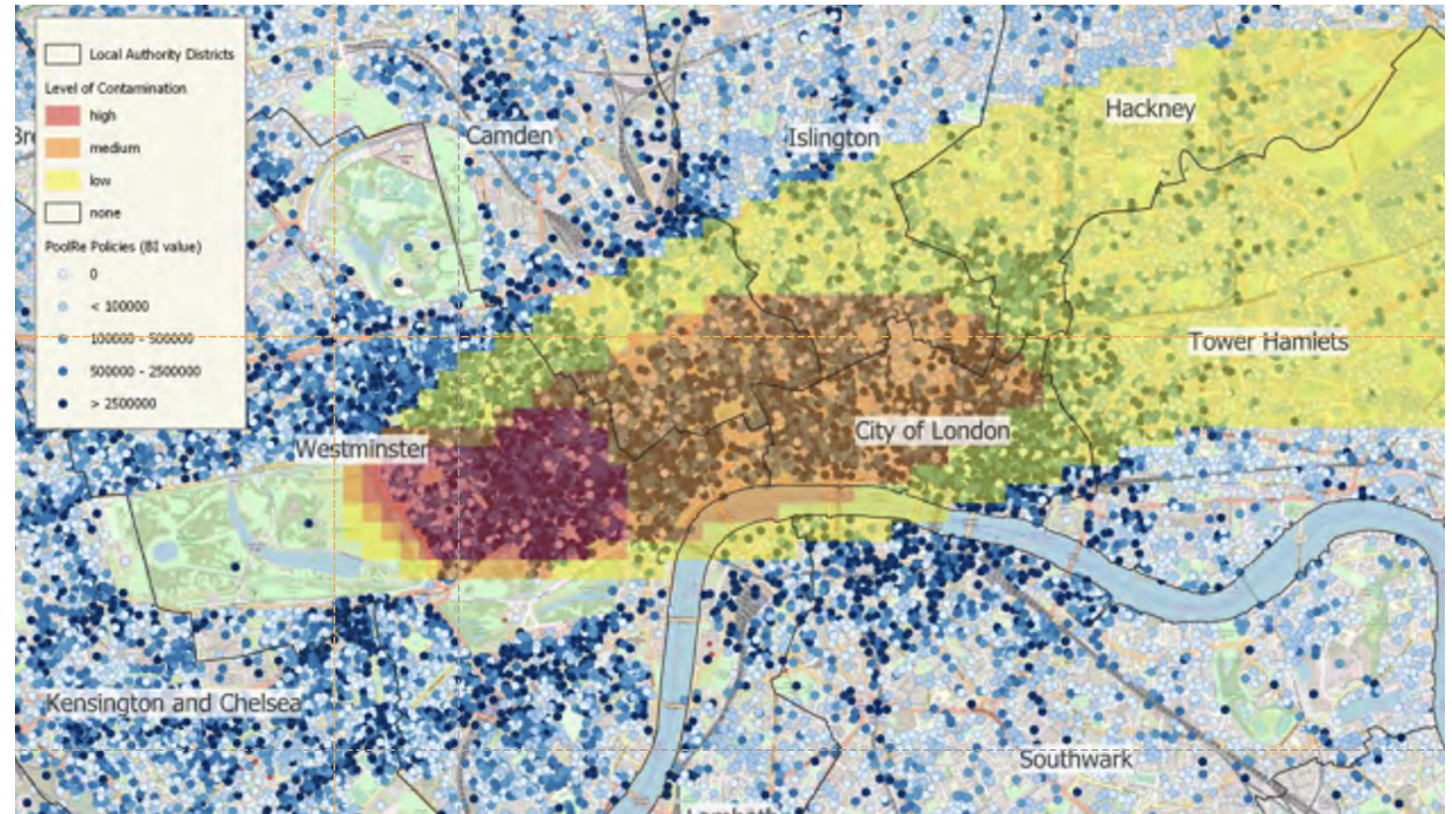


Example scenarios (S1, S2, X1)

Detailed scenario narrative:

- Likely perpetrators
- Sourcing
- Event characteristics

=> Loss estimations 2bn, 29bn and 65bn



Pathogen quality	Time to discovery	Area impacted	Longest decontamination time	Longest business shut down time	Return to customer traffic norm
Weaponised	3 days	327.3 km ²	7 months	14.5 months	20.5 months

Our modelling framework



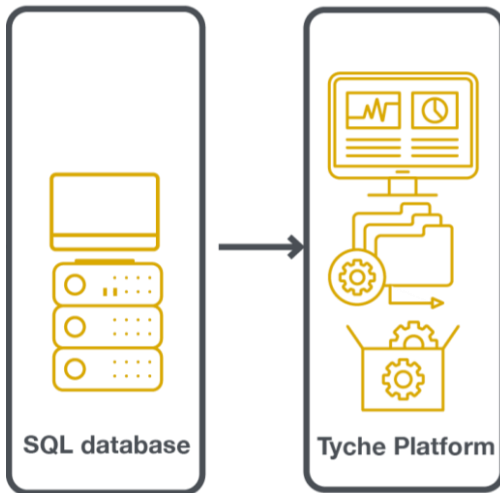
Simulation - creating the Event Set



New Combined Model



Pulling it all together



- Trivial to apply retentions against bifurcated portfolio
- Loss by Member, by policy, by risk, by threat
- Form basis of Treaty price
- Precise delivery mechanism of Treaty price still undecided

Current retention (m) 10.0

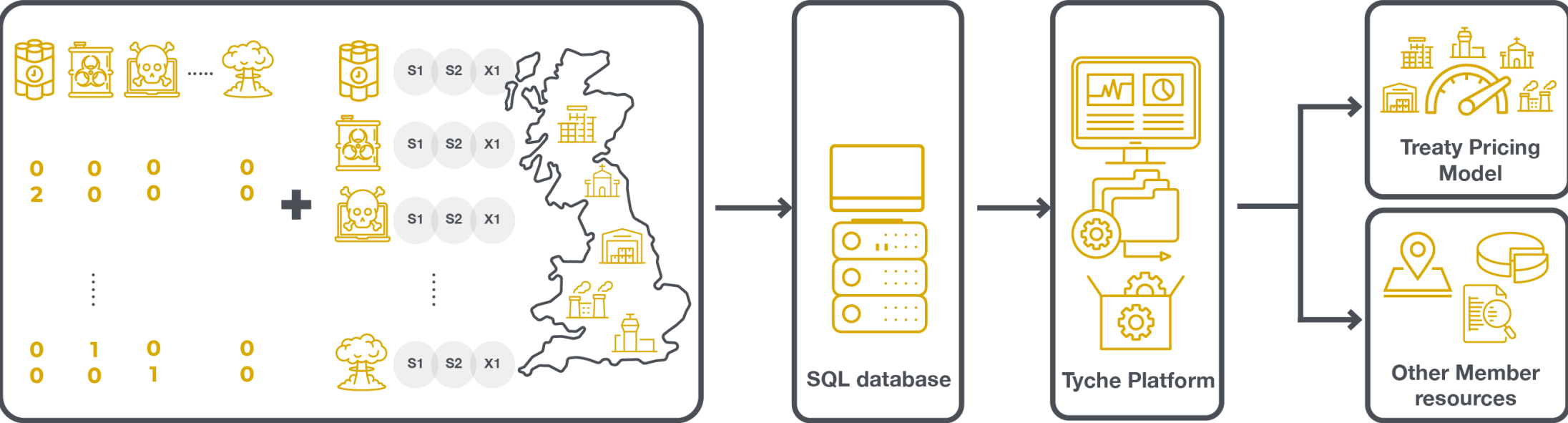
		x1.0	x1.25	x1.5	x2.0	x2.5	x3.0	x4.0
		Conventional						
		10.0	12.5	15.0	20.0	25.0	30.0	40.0
Non-conventional	x1.0	10.0	11.5					8.0
	x1.1	11.0						
	x1.25	12.5						
	x1.5	15.0						
	x1.75	17.5						
	x2.0	20.0						
	x2.25	22.5	9.5					5.0



Our modelling framework



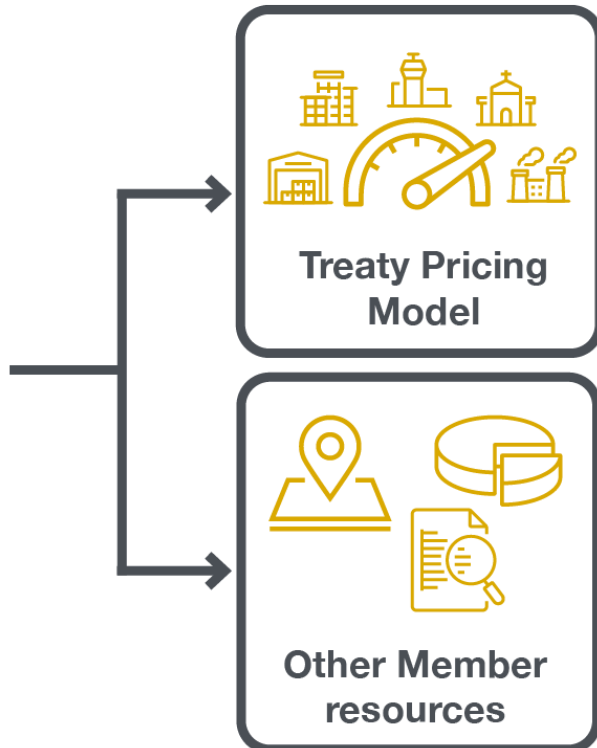
Treaty pricing



Have your say



Shape the future you want to see



- Premium implications under different retention options
- Exceedance probability curve of retained loss
 - split by threat/combined
- Precise delivery mechanism of Treaty price still undecided
- Beyond Treaty pricing
 - Tools to price the retained risk in more detail
 - Visualisation of exposure
 - Shape files following events



Protect Duty Panel



Chair

Ed Butler CBE DSO
Chief Resilience Officer,
Pool Re



Panel

Figen Murray OBE
Leading Protect Duty
Campaigner



Panel

Tom Hurd CB OBE
Former Director General
for Office for Security and
Counter Terrorism



Panel

Steve Harrison
Head of Casualty and
Accident & Health,
RSA UK Specialty



Panel

Steve Coates
Chief Underwriting Officer,
Pool Re





Closing remarks

Angela Knight CBE

Chair of Pool Re



**Thank you
for attending**