



Society of Actuaries in Ireland

Enterprise Risk Management Forum

2nd May 2019

Disclaimer

The views expressed in this presentation are those of the presenter(s) and not necessarily those of the Society of Actuaries in Ireland or their employers.

Agenda

- ERM Committee update (Bridget MacDonnell)
- Risk Management in a Digital World (Darko Popovic)
- Emerging risks and hot topics session (Billy Galavan)
- Finger food and drinks



Society of Actuaries in Ireland

ERM Committee update

Bridget MacDonnell



ERM committee members

Eric Brown
(chair)

Gareth
McQuillan

Miriam
Sweeney

Jason
Wiebe

Bridget
MacDonnell

Don
Browne

Jean
Rea

Eamonn
Phelan

Billy
Galavan

Patrick
Meghen

Laura
Power

Darragh
McHugh

Bryan
O'Higgins

Find us on LinkedIn!



SAI ERM Committee - Objectives 2019/2020

Group	Objectives
Risk	Consider Emerging risks and hot topics and continue to run the CRO circle
Communications	Develop a communication strategy and increase awareness of ERM amongst members
Learning	Organise learning opportunities and promote awareness of risk management courses
Research	Consider areas for research and publish using appropriate communication channels – e.g. LinkedIn.
Regulation	Influence consultations and consider need for ERM ASPs or IANs
Relationships	Develop links with risk management associations and other parties



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“Risk Management in a Digital World” Working Party

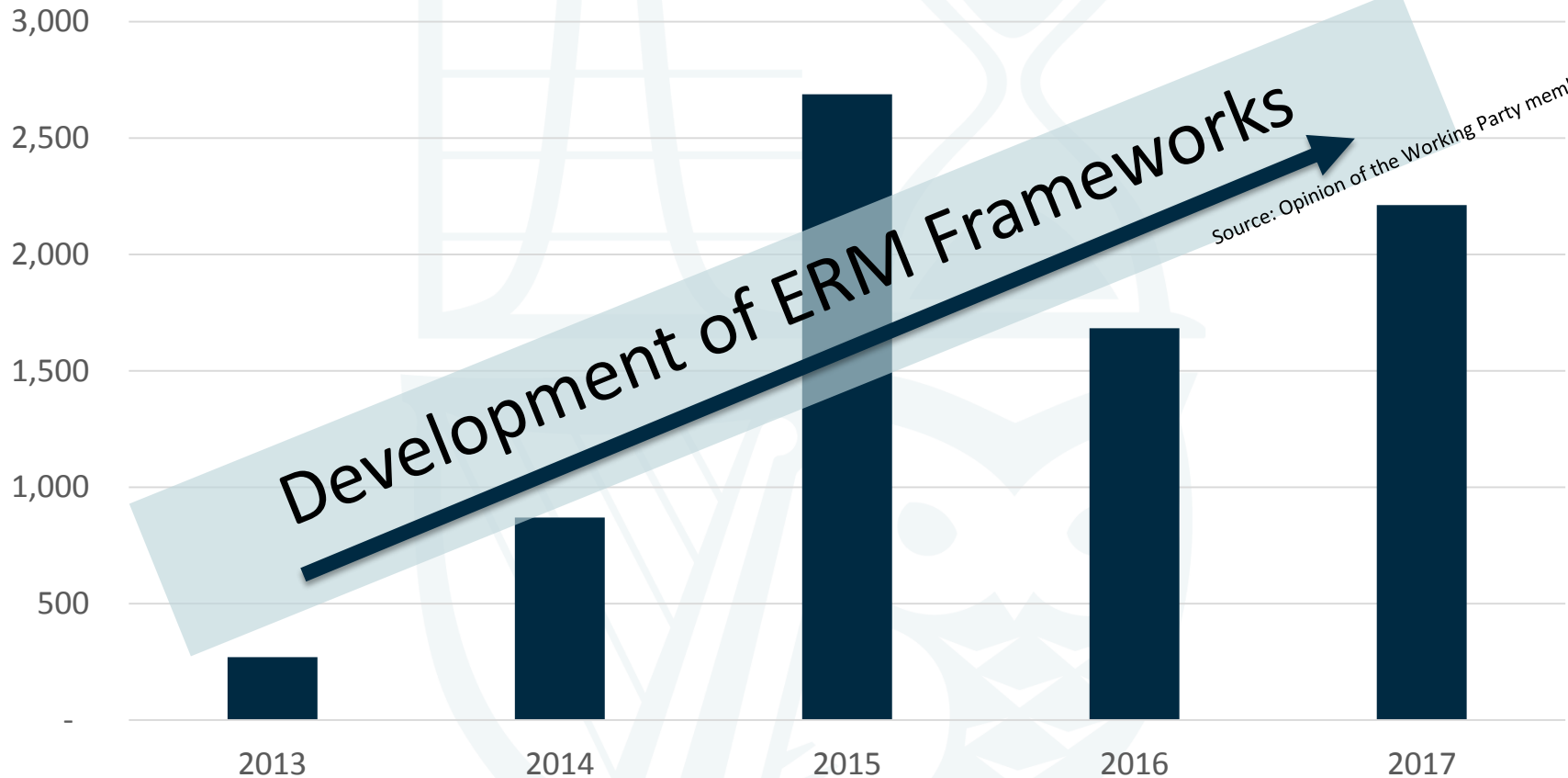
Darko Popovic

Introduction

- Institute and Faculty of Actuaries UK
- “Risk Management in a Digital World” Working Party
- WP members:
 - Darko Popovic (Chair): Senior Manager, Crowe Consulting
 - Carole Avis: CRO L&G Insurance & General Insurance
 - Daniel Bruce: Partner, Crowe Consulting
 - Matthew Byrne: Chief Actuary, NFU Mutual
 - Visesh Gosrani: Director of Risk & Actuarial, Cyence
 - Zhixin Lim: Senior Manager, HSBC
 - Jools Manning: Head of Strategic Risk, Just
 - Richard Purcell: Technical & Innovation Lead, Hymans Robertson
 - Weihe Qin: Financial Risk Manager, Lloyds Banking Group

Scope and Objectives

InsurTech funding volumes (\$m) for all stages of investment



Source: Opinion of the Working Party members!

Source: The Data Centre

What we set out to do

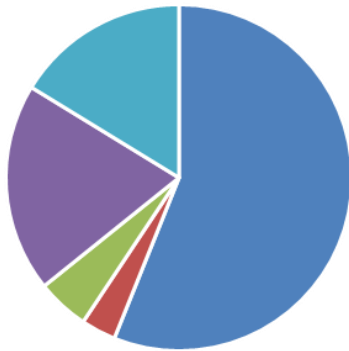
- Focus on risk management in the context of InsurTech
- Understand the current approach and views in this space:
 - Carry out a broad industry survey
 - Conduct interviews with relevant industry participants
 - Present interim conclusions
- Develop practical tools for insurers:
 - Develop an overview of a typical lifecycle of an InsurTech project
 - Create a checklist for risk management considerations in the context of InsurTech solutions
 - Produce a final report

Survey Overview

- Survey focus:
 - The views and general understanding of InsurTech
 - The current activity of insurers in relation to InsurTech, including their capability in assessing emerging risks from new technologies
- The survey was open to all interested parties and advertised:
 - Through IFoA member emails
 - At the IFoA's GIRO and Life Conferences
 - At the ABI's "Data, Tech and Cyber" conference
 - Through ORIC International
- Overall we received 124 responses

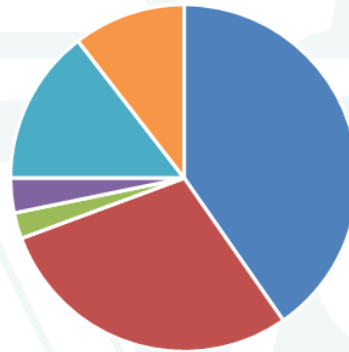
Profile of Survey Respondents

Company background



- Insurance Company
- Investor
- Other
- Start-up
- Consultancy

Primary area of work



- Life Insurance
- Health and Care
- Finance and Investment
- General Insurance
- Pensions
- Enterprise Risk Management

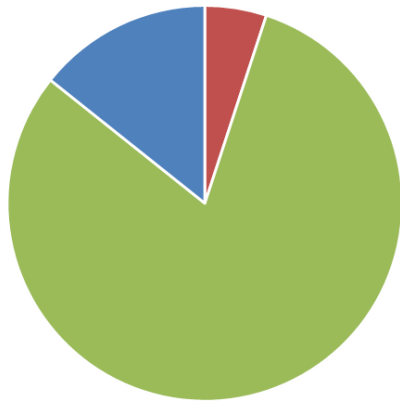
Role responsibilities



- Product development
- Strategy
- Fund-raising
- Valuation and Capital Modelling
- Pricing
- Risk Management
- Reserving
- Other

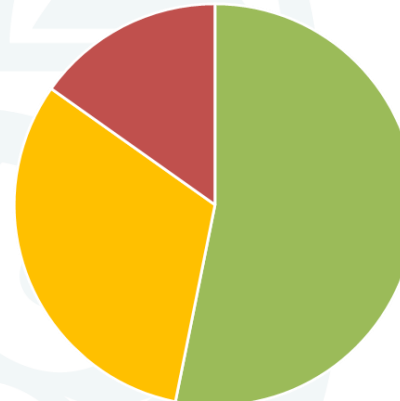
InsurTech can add significant value

InsurTech has ramifications for whole industry....



- Niche field for tech experts
- Broad area with ramifications for whole market
- Don't know

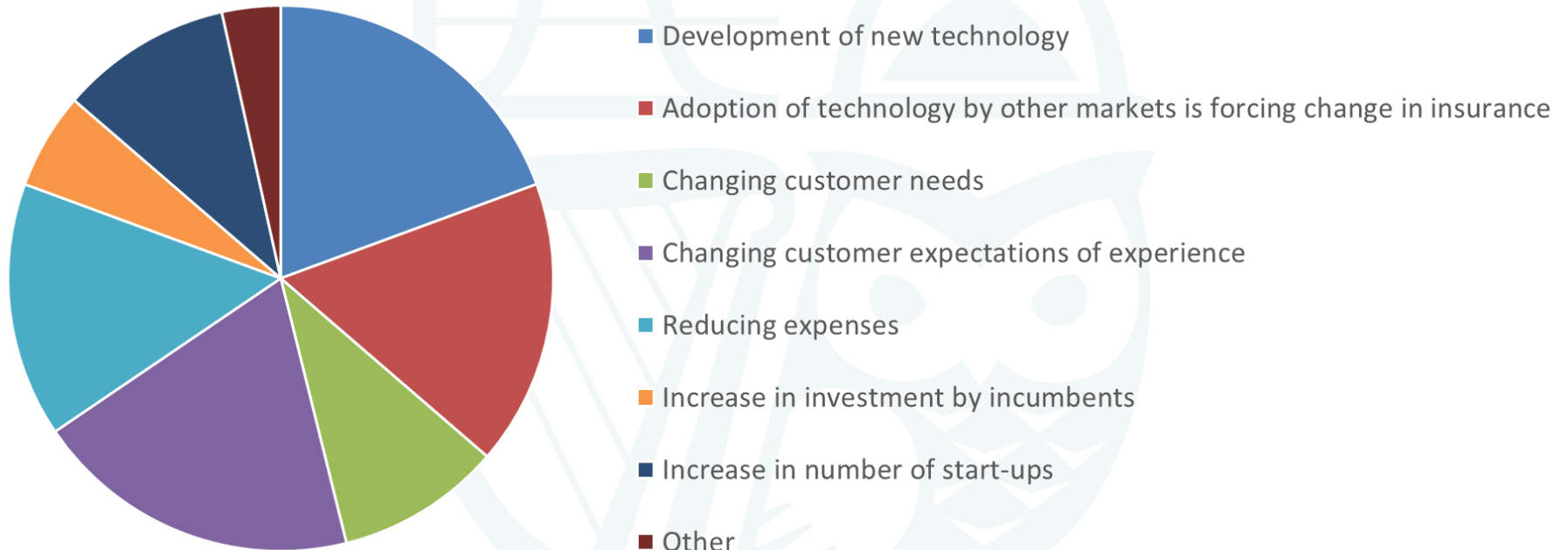
...and can add significant value to insurers in helping deliver the business strategy



- Could play a vital role
- A moderate role
- Limited or no role

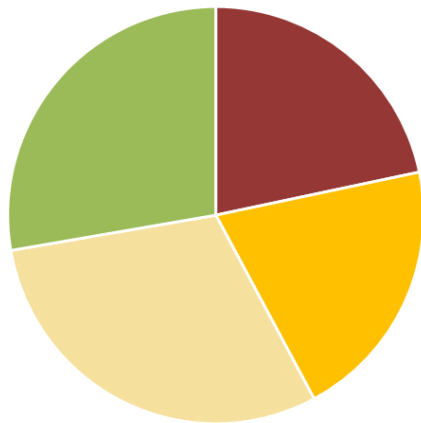
Drivers of development and adoption

New technology, and changing consumer needs and expectations are the key drivers of InsurTech:



What are insurers doing?

Most are engaging in InsurTech in some way...



■ No activity currently

■ No activity but observing the market

■ Actively looking at opportunities

■ Fully active in developing/investing in opportunities

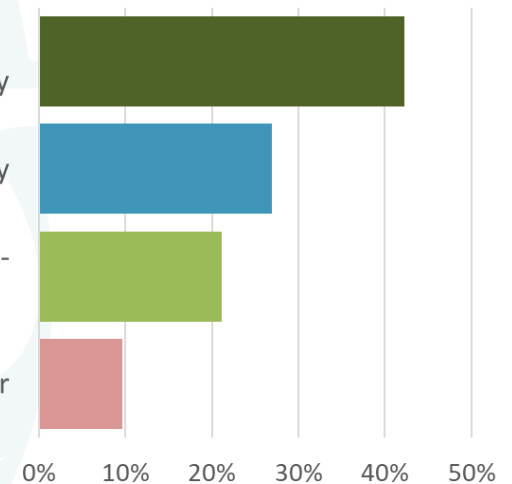
...through a variety of strategies:

Both internal ideas and partnering/investing externally

Develop new ideas internally

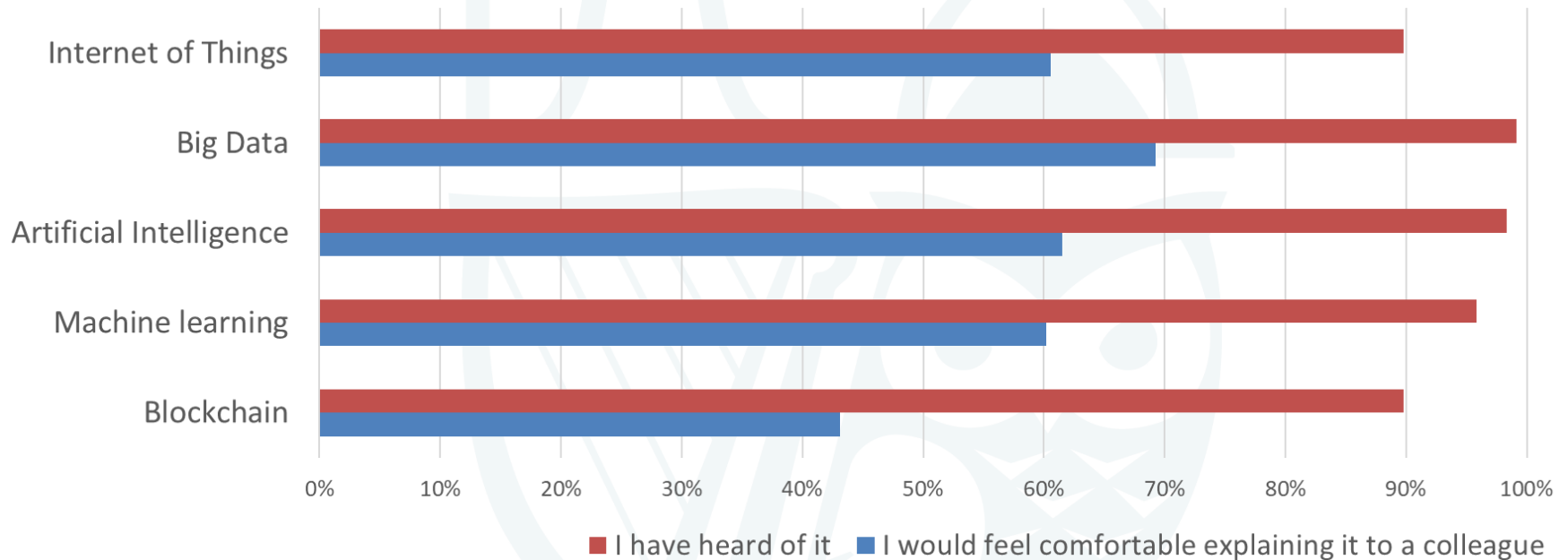
Invest in and partner with start-ups

Neither



Understanding of new technologies

Respondents indicated a high level of awareness of new technologies and innovations, but showed a lack of confidence and understanding of these items:



What are the key risks?

Respondents believe insurers recognise the key risks.....

**Cyber
Risk**

**Expenses
and timing
risks**

**Lack of
understanding of
concepts and
technologies**

Reputational Risk

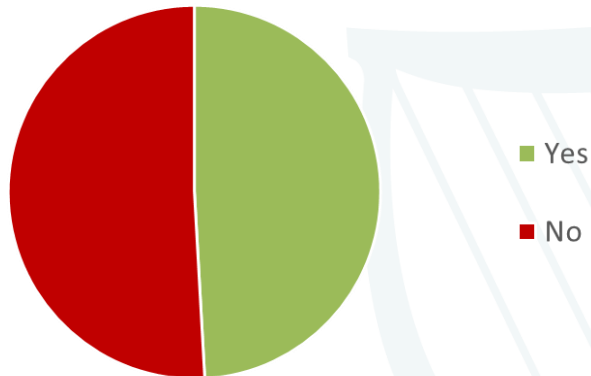
**Data
Privacy**

**Conduct
Risk**

Are existing ERM Frameworks suitable?

...but say insurers have gaps in their existing risk frameworks and risk management skills:

Do you believe your company's existing risk management framework is suitable for assessing and managing all of these risks?



Do you have the right skills to assess risks emerging from InsurTech?



Survey conclusions

High value: Embracing InsurTech opportunities can add significant value to insurers

Mixed approach: Insurers are at various stages of development and are adopting different strategies

Skills gap: There is good awareness, but low understanding of new technologies

Evolve risk frameworks: Risk management frameworks are not suitable and need to evolve

Interviews with industry participants

- We interviewed senior stakeholders within in the insurance industry:
 - Helping us to understand the industry sentiment and approach to risk management in practice when considering InsurTech opportunities
- Focus of questions:
 - Trends and opportunities
 - Key drivers
 - Key risks and how to manage them
 - Lessons learnt and any concerns
- Key points arising:
 - Drivers of the growth of InsurTech
 - Key emerging risks
 - Relevance of existing ERM Frameworks
 - Management of broader threats to business models and strategy

Mini case studies

Trend areas:

Customer facing
vs. back office

Insurers vs. Start-ups:

Capital, customers,
infrastructure and
ideas

Upside vs. Downside:

Risks of success
as well as failure

FS Sector:

Banking vs.
Insurance

Some interesting quotes...

- “Industry is mainly focused on the financial risks, much less so on conduct risks. When does a price comparison site become an “advisor”, for example, in the regulator’s eyes?”
- “If customers are unhappy with the current product / service then the market is ripe for disruption”
- “Trend seems to be that people are asking money for undeveloped ideas, which seems to suggest a bubble forming. However, some of the underlying technologies, e.g. Blockchain, tracking device as few examples, have great potential”
- “The current framework is not unsuitable, but is certainly not optimised, if that were ever possible. I would argue the framework is not optimised for digital world because we are not in it, yet. “

Guide for risk considerations during the innovation journey

Background

Financial
Risk

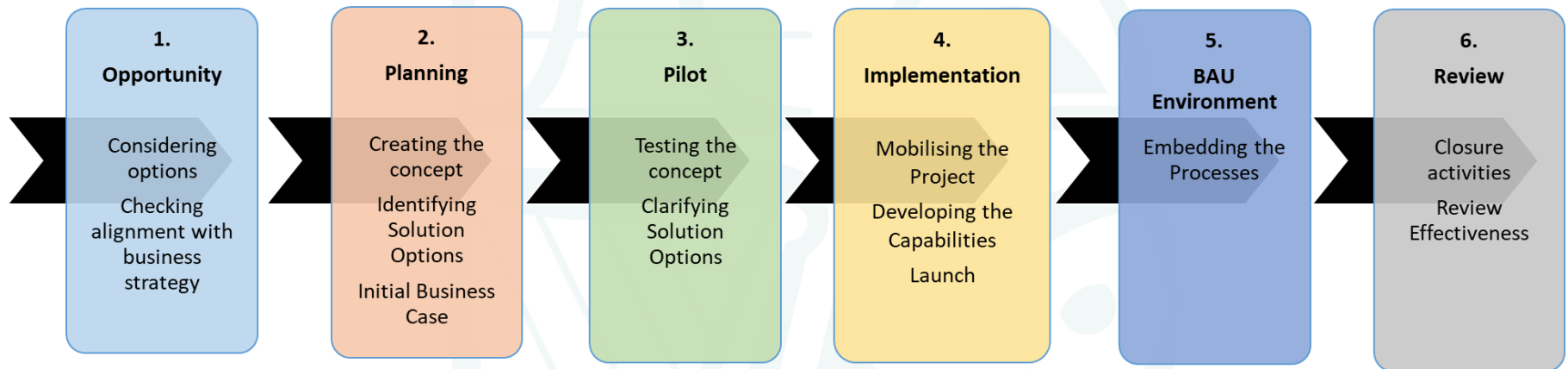
Insurance
Risk

Operational
Risk

Strategic
Risk

- What are regulators focusing on?
- Where are firms losing money?
- Where does digital innovation fit?

Timeline for digital projects



Checklist for digital solutions

ERM Framework Component		InsurTech Stages					
		1. Opportunity	2. Planning	3. Pilot	4. Implementation	5. BAU Environment	6. Review
Strategy & Business Planning	Business Strategy & Business Plan	█					
	Risk Strategy & Objectives	█					
Risk Governance & Standards	Board / Board Risk Committee		█				
	Senior Management		█				
	Roles and Responsibilities			█			
	Risk Appetite			█			
	Policies				█		
Risk Management Processes	Strategic Risk Management			█	█	█	
	Financial Risk Management			█	█	█	
	Operational Risk Management			█	█	█	
	Stress Testing & Scenario Analysis				█	█	
	Change Processes				█		
	Training & Communication				█		
	Risk Management Effectiveness						█
Risk Reporting & Communications	Risk Reporting & ORSA				█	█	
	Management Information				█	█	
	External Communications			█			

Example 1: Strategy & business planning

ERM Framework Component		InsurTech Stages					
		1. Opportunity	2. Planning	3. Pilot	4. Implementation	5. BAU Environment	6. Review
Strategy & Business Planning	Business Strategy & Business Plan	[Active]					
	Risk Strategy & Objectives	[Active]					
Risk Governance & Standards	Board / Board Risk Committee	[Active]					
	Senior Management	[Active]					
	Roles and Responsibilities			[Active]			
	Risk Appetite			[Active]			
Risk Management Processes	Policies				[Active]		
	Strategic Risk Management			[Active]	[Active]	[Active]	
	Financial Risk Management			[Active]	[Active]	[Active]	
	Operational Risk Management			[Active]	[Active]	[Active]	
	Stress Testing & Scenario Analysis				[Active]	[Active]	
	Change Processes				[Active]		
	Training & Communication				[Active]		
Risk Management Effectiveness						[Active]	
Risk Reporting & Communications	Risk Reporting & ORSA				[Active]	[Active]	
	Management Information				[Active]	[Active]	
	External Communications			[Active]			

Example 1: Strategy & business planning

Business Strategy & Business Plan

1. Do you have previous experience of delivering digital solutions? What lessons have been learned?
2. What capability do you have to develop IP in house vs partner with external firms (partners can help to reduce timescales and risk)? Which approach is more aligned with strategic objectives? i.e. is owning the IP key to business?
3. Does your firm work with any accelerators or wish to start its own? An internal accelerator can help to stretch your own staff and provide them with opportunities which equally benefit the organisation.

Risk Strategy & Objectives

1. Is the digital opportunity in line with the firm's risk strategy & objectives?
2. Has a high level assessment been undertaken to identify the key risks arising from the digital opportunity, including new risks introduced and/or changes to existing risks?
3. Does your firm have clear and rigorous decision-making processes to follow when choosing a digital opportunity?

Example 2: Change process, training & communication

ERM Framework Component		InsurTech Stages					
		1. Opportunity	2. Planning	3. Pilot	4. Implementation	5. BAU Environment	6. Review
Strategy & Business Planning	Business Strategy & Business Plan						
	Risk Strategy & Objectives						
Risk Governance & Standards	Board / Board Risk Committee						
	Senior Management						
	Roles and Responsibilities						
	Risk Appetite						
	Policies						
Risk Management Processes	Strategic Risk Management						
	Financial Risk Management						
	Operational Risk Management						
	Stress Testing & Scenario Analysis						
	Change Processes						
	Training & Communication						
	Risk Management Effectiveness						
Risk Reporting & Communications	Risk Reporting & ORSA						
	Management Information						
	External Communications						

Example 2: Change process, training & communication

Change Processes

1. Are leaders prepared to manage their functions' transitions to greater digitisation?
2. How can your firm empower leaders to adjust processes and technology investments to respond quickly to new developments?
3. What challenges are there to processing new information and making decisions?
4. What criteria are required to consider whether to change course if necessary?

Training & Communication

1. What gaps, if any, exist in staff competencies and skills required to drive a digital strategy?
2. What training needs to be developed and delivered?
3. Is there the necessary skills and expertise in-house or is external expertise required?

What next for the Working Party?

Digital Risk Appetite

- Form views and recommendations to assist actuarial practitioners, and other interested parties, in defining and developing the digital risk appetite of an organisation.

Blockchain

- Assist actuarial practitioners, and other interested parties, in the developing emerging uses for blockchain to manage data, for the purposes of insurance related activities

Education and Training

- Identify current CPD and training opportunities, and identify where the knowledge of relevant concepts amongst actuaries falls short of the widespread awareness of the concepts
- Develop recommendations for addressing these gaps

Thank you!

Report and Guideline published online – please take a look:

- <https://www.actuaries.org.uk/practice-areas/risk-management/risk-management-research-working-parties/risk-management-digital-world>

Working Party commencing Phase II – call for members



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Questions



Comments

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Risk Management / Digital World Questions

1. Is the “Digital World” much different to your company’s current operating environment, or do you think a big change is coming for insurers in this respect?
2. What do you think are the greatest opportunities and challenges for insurers arising from new technologies, tools and techniques?
3. While Digital has been the focus today, are there other ways that you believe (re)insurers may need to change their ERM framework?
4. Are there any areas you believe should not be digitalised?
5. The presentation talks about risks when undertaking digital initiatives. Do you think there are any risks associated with not undertaking digital initiatives and if so what are they?
6. Do you think risk functions have sufficient skills and experience for a “Digital World”?

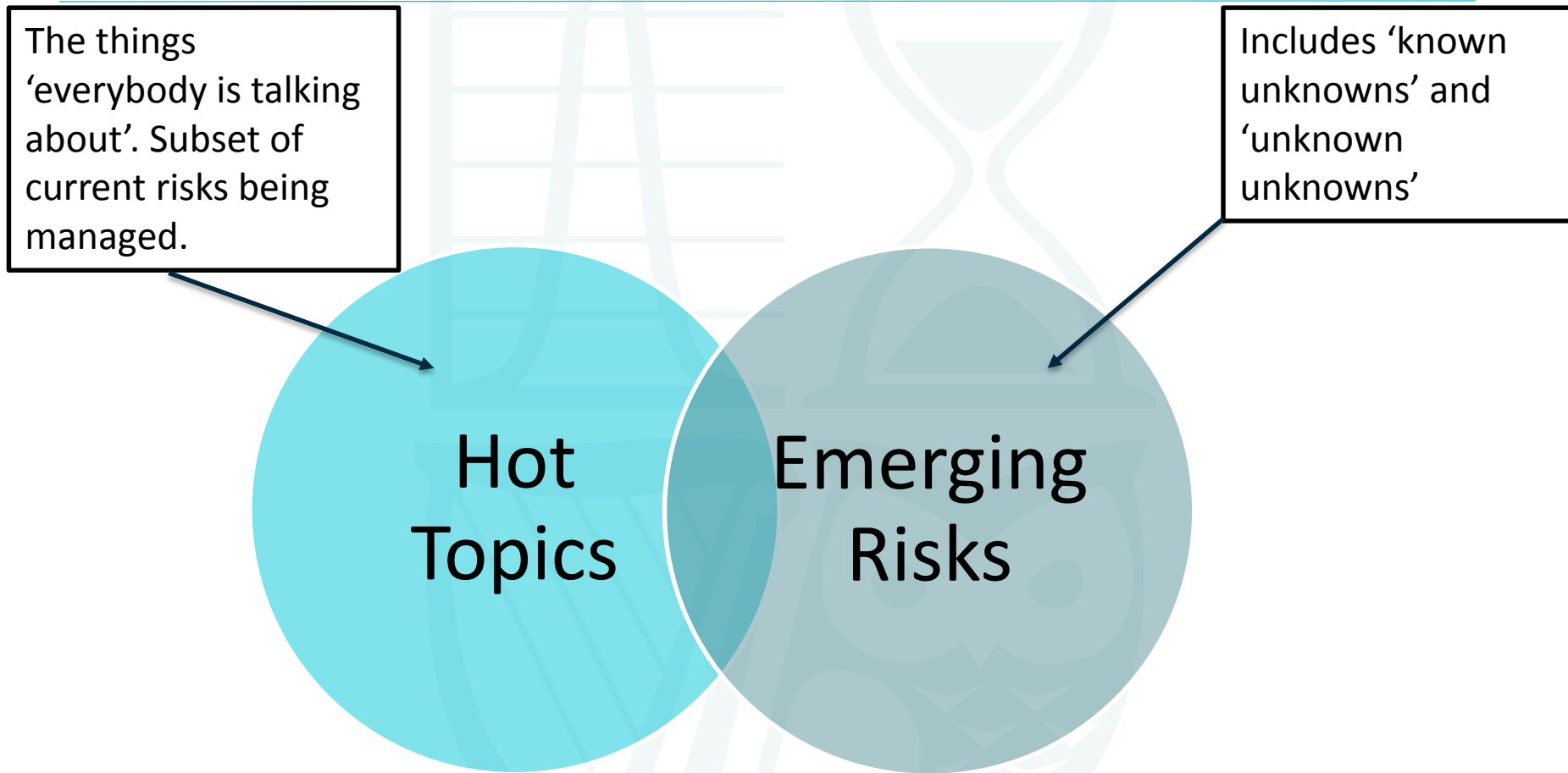


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ERM Forum
Hot Topics & Emerging Risks

Billy Galavan

Hot Topics vs Emerging Risks



Emerging Risks: “those issues that **have not manifested themselves** sufficiently to be managed using the tools commonly applied to more developed exposures... those risks an organization has **not yet recognized** or those which are known to exist, but are **not well understood**.”

– Source: https://www.rims.org/resources/ERM/Documents/EmergingRisk_ERMweb.pdf

Hot Topics

Insurance (Life and GI)

IFRS17

Recovery & Resolution planning

National Guarantee Schemes

Insurtech

Solvency II Review

Pensions

Auto-Enrolment & Pension Roadmap (incl. Tax Relief)

Supervision of institutions for occupational retirement provision (IORP II)

Master trusts

Pan-European Personal Pension Product (PEPPs)

Health Insurance

Risk Equalisation

General Insurance specific

Insurance Fraud and Cost of Insurance

Ogden, PPOs

Governance and Risk Management

Risk Culture, Senior Executives Accountability Regime, Behaviour and Culture at retail banks (“Dear CEO” Letter on Fitness and Probity)

Developments in Consumer Protection

Diversity and Inclusion (D&I)

GDPR

Cyber Risk

Climate Change / Sustainability

Capital and Risk Optimisation

Brexit

CRO Forum Emerging Risks Initiative Risk Radar 2018

Source: https://www.thecroforum.org/wp-content/uploads/2018/05/CRO-ERI_Emerging-Risk-RadarTrends_Apr2018_FINAL.pdf

TRENDS:

Ageing and Health

Changing Consumer Behaviour

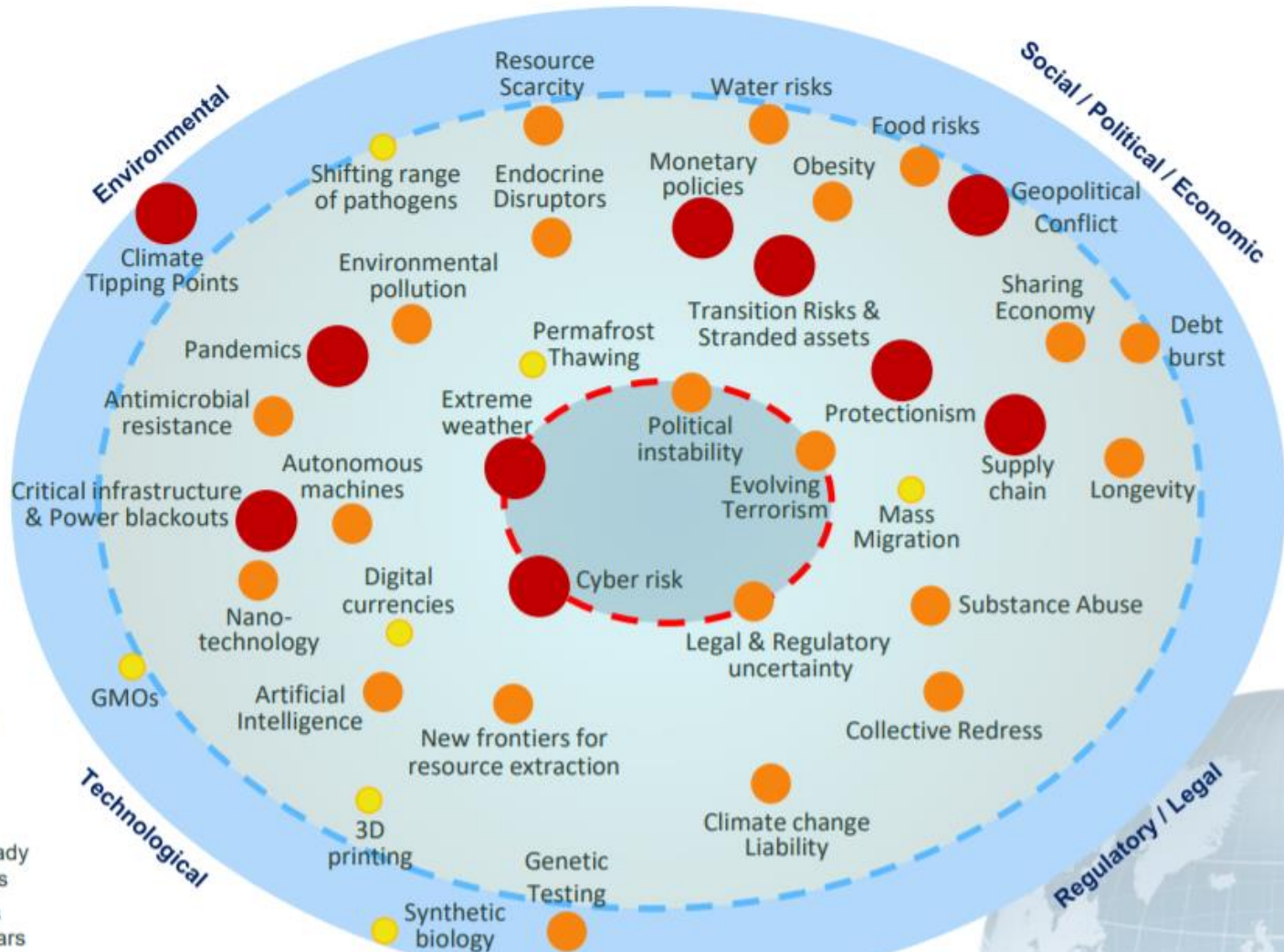
Economic Instability

Environment and Climate

Shifting Geopolitical Landscape

Technological Developments

Urbanisation and Demographic Change



Key

Impact Assessment:

Bullet size corresponds to expected impact of risk

- Risk category: High
- Risk category: Medium
- Risk category: Small

Time Horizon:

- Significant impacts already seen in insurance claims
- First significant impacts expected within 1-5 years
- First significant impacts expected within 5-10 years



"Well he certainly does a very thorough risk analysis."

Template for Emerging Risk Assessment

Emerging Risk Template

Risk Title	
Risk Description	
Triggers	

Impact Rating	High	Medium	Low	
Time Horizon (Years)	0 - 1	1 - 5	5+	
Category	Environmental	Technological	Legal / Regulatory	Social / Political / Economic

	Consequences	Potential Actions
Profession		
Industry		
Society		

Hot Topics and Emerging Risk – More Info

- [actuaries.ie/press&publications/Updates From The Practice Committees/Jan 2019](https://actuaries.ie/press&publications/Updates/From%20The%20Practice%20Committees/Jan%202019)
- [Recent Qualifiers' 'Current Topics 2018' paper presented on 13th March 2018](#)
- [CRO Forum Emerging Risks Radar 2018](#)

Emerging Risks & Hot Topics – Table Exercise

1. What do you currently see as the most important:
 - i. emerging risk?
 - ii. hot topic?
2. Outline a good way of identifying:
 - i. emerging risks.
 - ii. hot topics.
3. How to differentiate between ‘new’ and ‘evolving’ emerging risks?
4. When to remove an emerging risk / hot topic from the list?
5. What emerging risk or hot topic do you think is subject to the greatest uncertainty at present? What is the most “out-there” item on your emerging risk list?
6. Would you like to see the ERM committee set up a hot topics register?