



Institute
and Faculty
of Actuaries

Risk Management in a Digital World WP

Daniel Bruce

Darko Popovic



Contents

1. Introduction to the Working Party
2. Risk Management in a Digital World
3. Purpose of This Session
4. Overview of Working Party Outputs
 - Survey Results
 - Timeline
 - Checklist
5. Next Steps
6. Contact Details
7. Q&A

1. Introduction to the Working Party

- Background

- Significant development and enhancement of ERM Frameworks
- Increased focus and investment on digital opportunities
- Not clear whether risk management capabilities are being fully deployed to facilitate digital decision making

- Working Party members

- Daniel Bruce (Chair): Partner, Crowe
- Carole Avis: CRO L&G Insurance & General Insurance
- Matthew Byrne: Chief Actuary, NFU Mutual
- Vivesh Gosrani: Director of Risk & Actuarial, Cyence
- Zhixin Lim: Senior Manager, HSBC
- Jools Manning: Head of Strategic Risk, Just
- Darko Popovic: Senior Manager, Crowe
- Richard Purcell: Technical & Innovation Lead, Hymans Robertson
- Weihe Qin: Financial Risk Manager, Lloyds Banking Group

2. Risk Management in a Digital World

- Early decision taken to initially focus on InsurTech
- Hypothesis:
 - Insurance companies are not fully utilising risk management capabilities to facilitate InsurTech decision making
 - There are additional benefits to be gained from doing so, at appropriate times in the investment lifecycle
 - It would be helpful for the IFoA to provide guidance



We recognise the importance of not stifling innovation

2. Risk Management in a Digital World

- Phase 1:
 - Carry out an industry survey
 - Develop an overview of a typical lifecycle of an InsurTech project
 - Create a checklist for risk management considerations in the context of InsurTech solutions
 - Conduct interviews with industry participants
 - Produce a final report
- Subsequent phases
 - Currently under discussion
 - May broaden scope to other sectors or specific types of digital investment
 - May dive deeper into some of the areas that we touch upon in Phase 1

3. Purpose of This Session

- Share some initial phase 1 outputs
 - Survey
 - Timeline
 - Checklist
- Obtain feedback and thoughts
 - Time for Q&A at the end
 - Happy to discuss / receive comments afterwards

4. Overview of Working Party Outputs

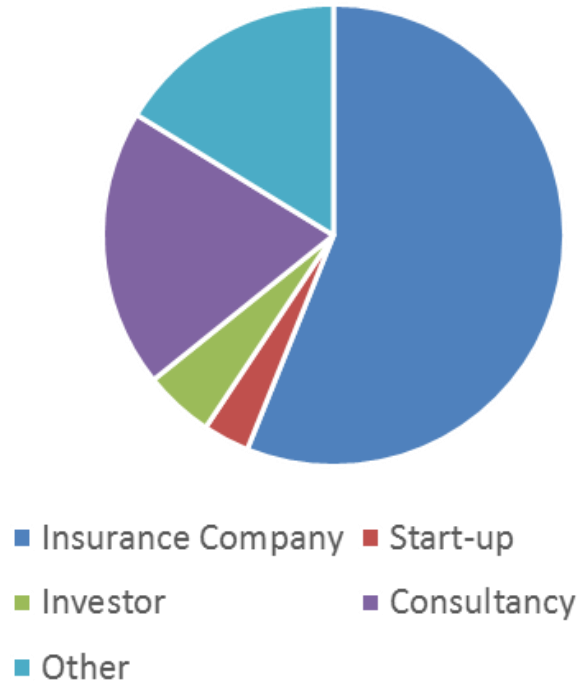
Survey Overview

- The Working Party carried out a survey from October to December 2017, to help assess:
 - 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:
 - 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, with 90% being IFoA members

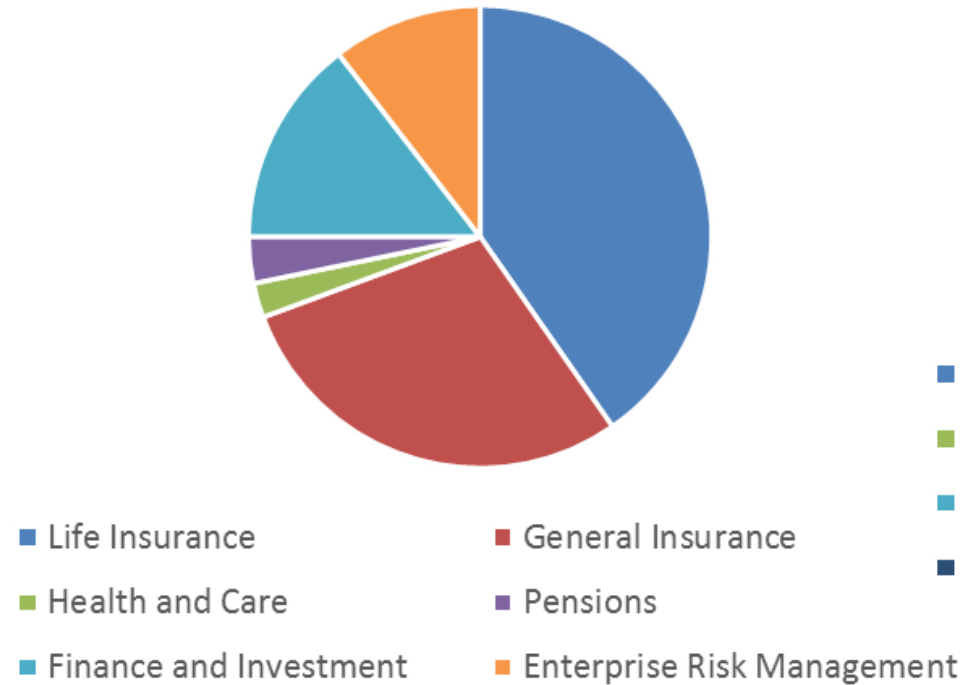
4. Overview of Working Party Outputs

Survey Overview

Company background



Primary area of work



Role responsibilities

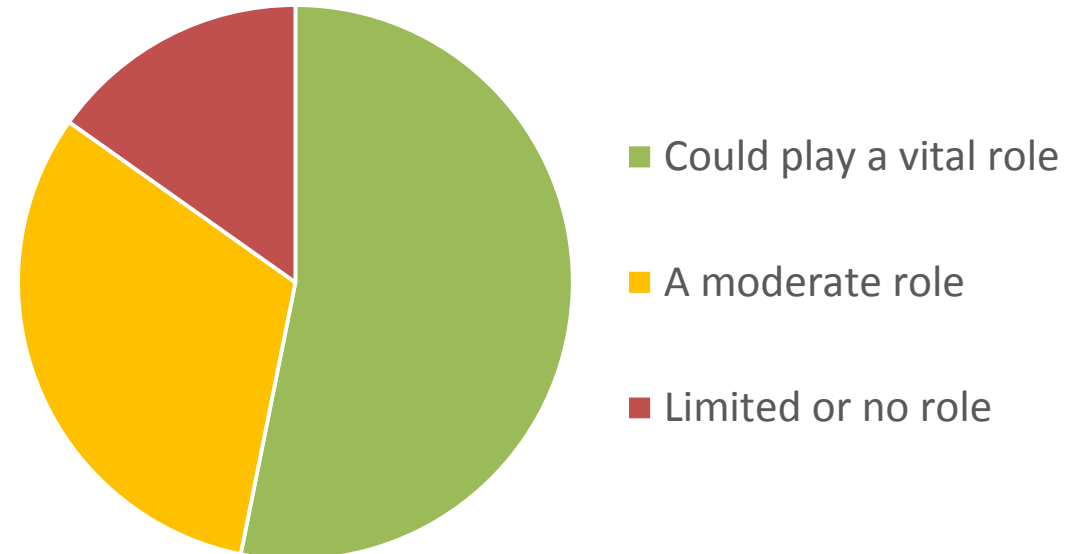
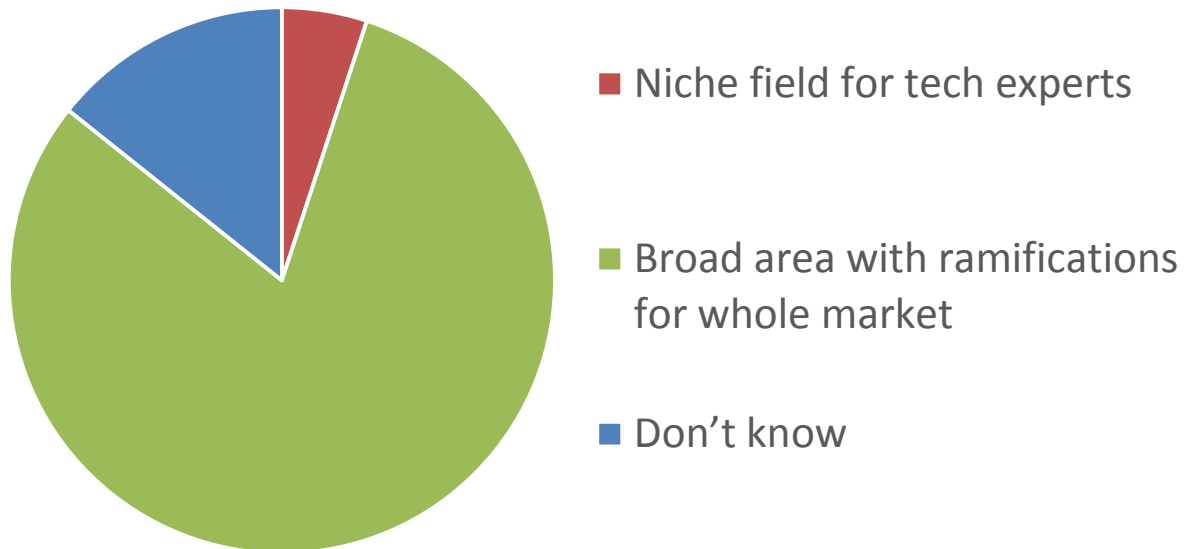


4. Overview of Working Party Outputs

Survey outputs: Views on trends and opportunity

- InsurTech has ramifications for whole industry....

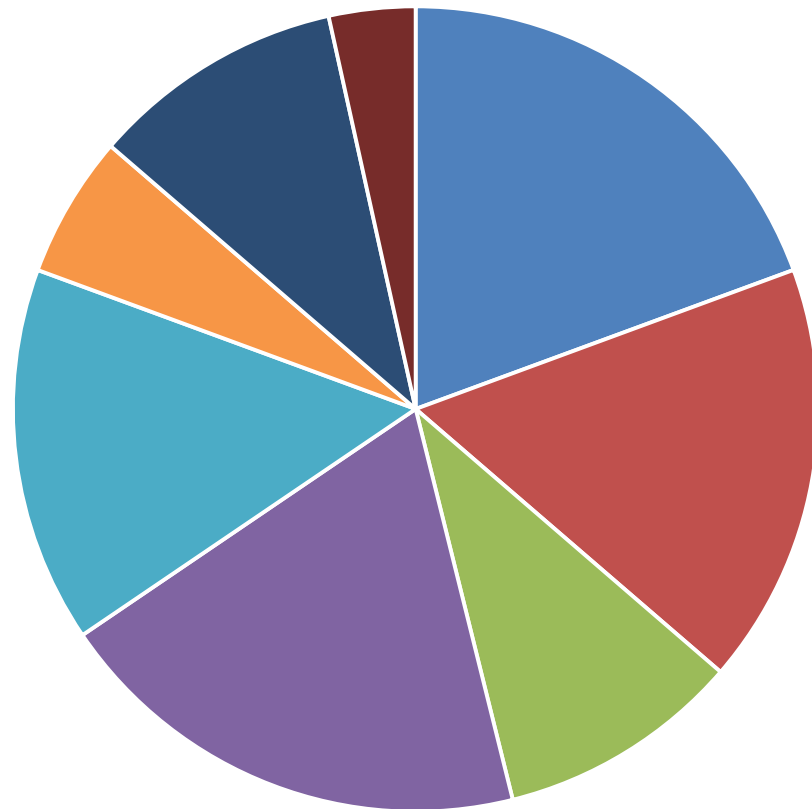
- ...and can add significant value to insurers in helping deliver the business strategy



4. Overview of Working Party Outputs

Survey outputs: Views on trends and opportunity

- New technology and consumer expectations are the key drivers of InsurTech:

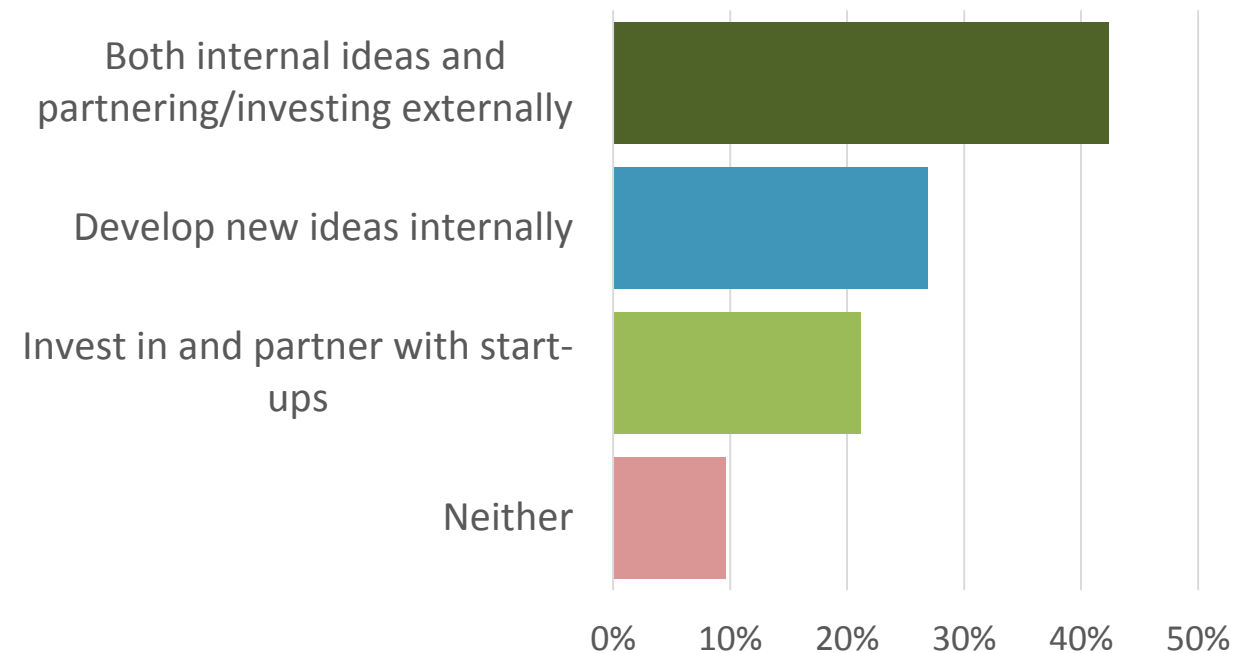
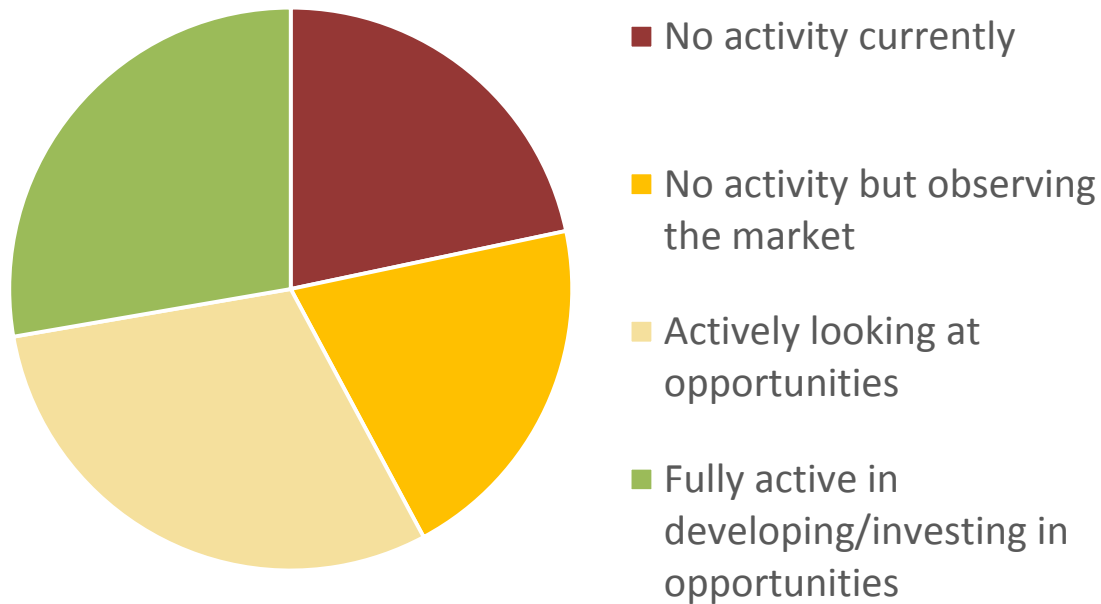


- Development of new technology
- Adoption of technology by other markets is forcing change in insurance
- Changing customer needs
- Changing customer expectations of experience
- Reducing expenses
- Increase in investment by incumbents
- Increase in number of start-ups
- Other

4. Overview of Working Party Outputs

Survey outputs: What are insurers doing?

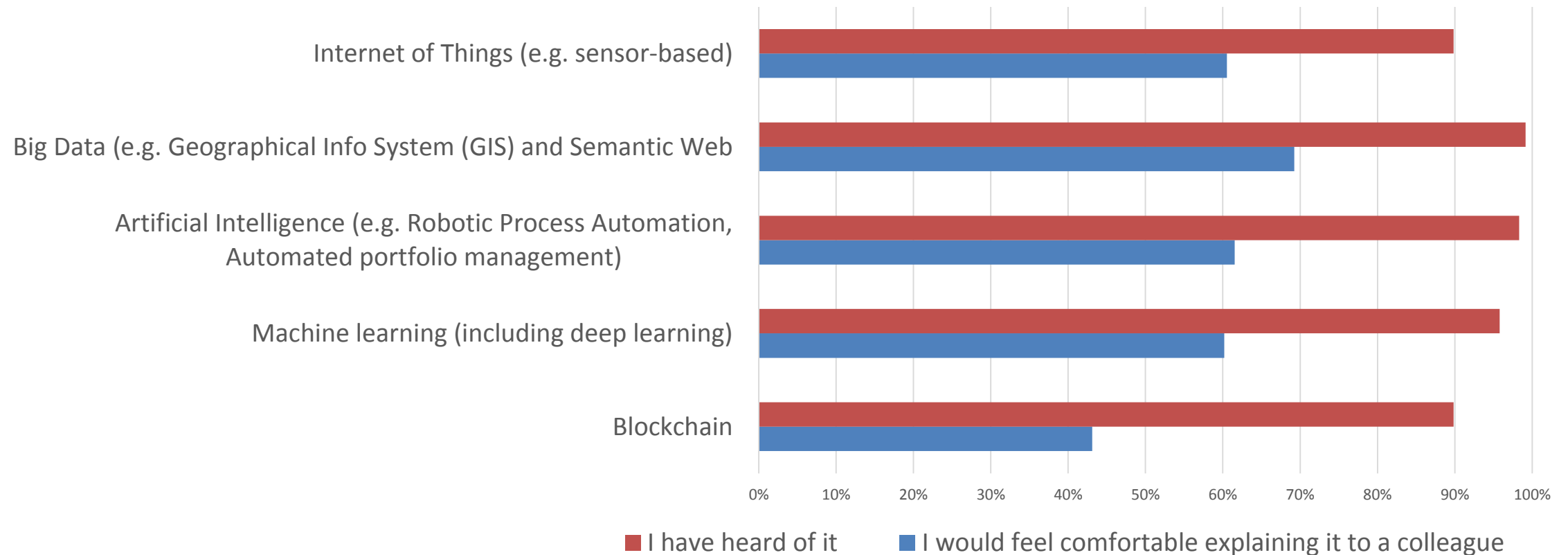
- Most are engaging in InsurTech in some way...
- ...through a variety of strategies:



4. Overview of Working Party Outputs

Survey outputs: Awareness and skills

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




4. Overview of Working Party Outputs

Survey outputs: Suitability of ERM Frameworks


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



**Cyber
Risk**



**Expenses and
timing risks
(i.e. investing
too much and
too early vs.
“missing the
boat”)**



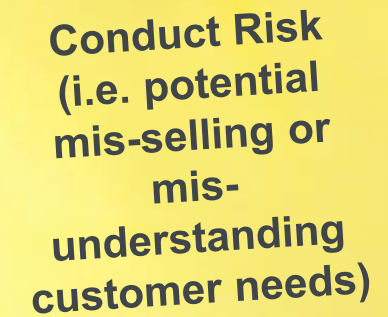
**Lack of
understanding
of concepts and
technologies**



**Reputational
Risk**



**Data
Privacy**



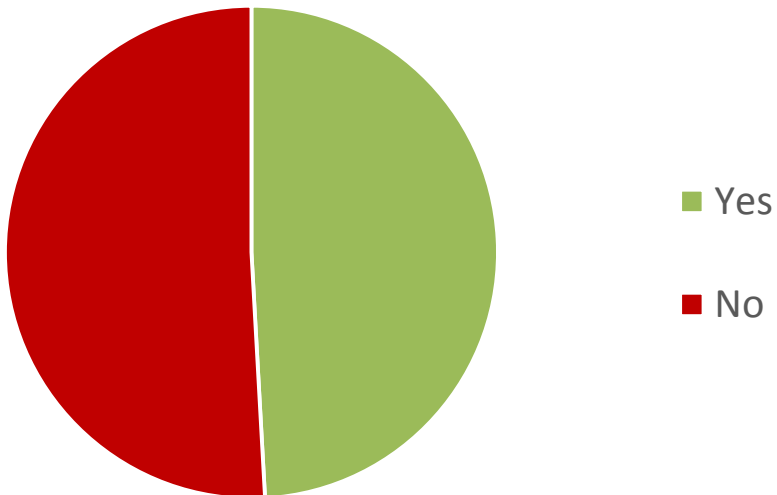
**Conduct Risk
(i.e. potential
mis-selling or
mis-
understanding
customer needs)**

4. Overview of Working Party Outputs

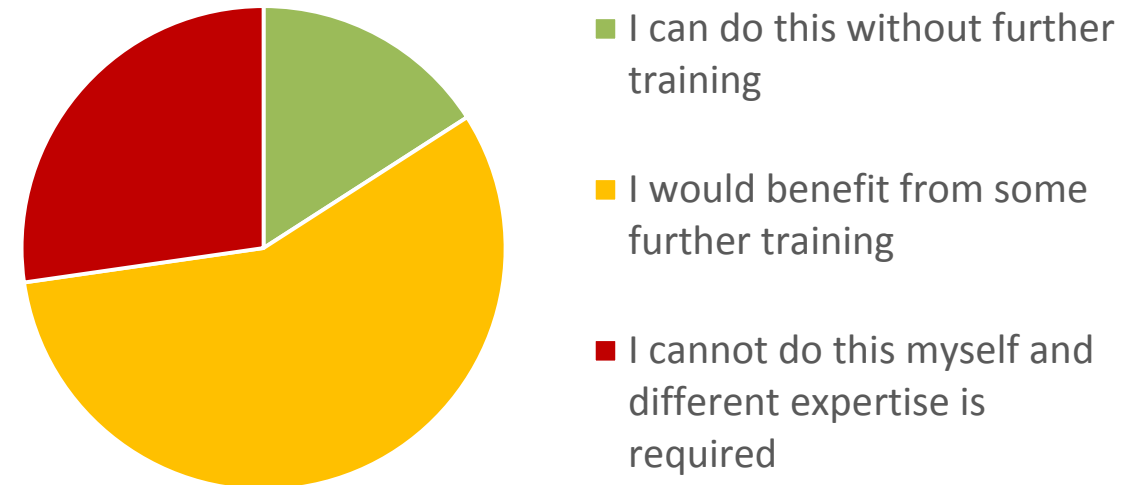
Survey outputs: Suitability of ERM Frameworks

- ...but say they 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?



4. Overview of Working Party Outputs

Working Party view on survey outcomes

- 1) Varied approaches across the sector in the context of exploring InsurTech opportunities and digital transformation projects
- 2) Existing ERM Frameworks may need some further development:
 - Created before the widespread emergence of InsurTech
 - Perceived gaps in the understanding and processes in relation to managing the risks of InsurTech
 - Closing this gap becoming increasingly important as InsurTech becomes even more prevalent
- 3) Identification of a skills gap, where the relative knowledge of concepts falls short of the widespread awareness of them

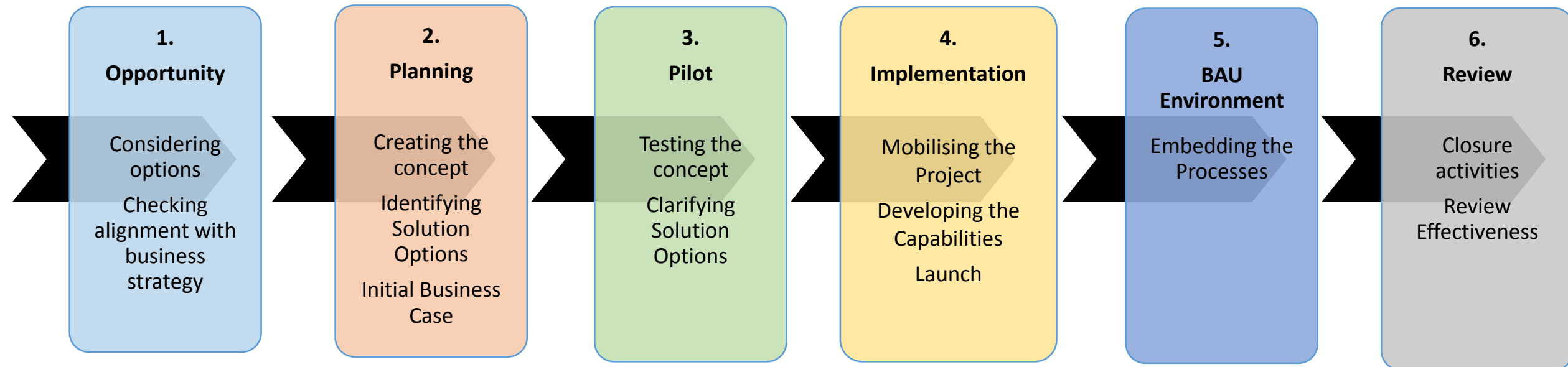
Looking forward, this suggests:

- Organisations will need to consider further developing their existing risk frameworks to more effectively cater for developments in InsurTech
- Individuals will need to improve their understanding of and expertise in InsurTech, in order to fully articulate and effectively manage the risks associated with InsurTech opportunities and propositions

4. Overview of Working Party Outputs

A Timeline for InsurTech Solutions

- A set of standard InsurTech implementation stages used during the lifecycle of planning, implementing, embedding and reviewing delivery of an InsurTech Solution is set out below:



4. Overview of Working Party Outputs

A Checklist for InsurTech Solutions

- The Checklist for Digital Solutions is set out below – this links an example Enterprise Risk Management Framework to the InsurTech implementation stages on the previous slide.

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						
Risk Management Processes	Policies						
	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						

4. Overview of Working Party Outputs

A Checklist for InsurTech Solutions (continued)

Considerations: 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?

4. Overview of Working Party Outputs

A Checklist for InsurTech Solutions (continued)

Considerations: Risk Management Processes

People & Organisation

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?

5. Possible Areas of Focus for Phase 2

- Look at specific risks associated with new innovations and technologies, expanding into RegTech and FinTech
- Consider the market, economic and social impacts of the digital revolution
- Develop innovation specific risk strategy and risk appetite framework & metrics
- Review the emerging digital risks
- Produce guidelines for setting up and managing a Digital Garage
- Develop training and education material for a range of stakeholders.

5. Next Steps & Contact Details

- Form conclusions and finalise report in Q2 2018...!
- Various presentations lined up during 2018
- Agree scope of Phase 2 and commence

Daniel Bruce

Partner, Crowe

Daniel.Bruce@crowehorwathgrc.com

Jools Manning

Head of Strategic Risk, Just

Jools.Manning@wearejust.co.uk

Questions

Comments

The views expressed in this presentation are those of invited contributors and not necessarily those of the IFoA. The IFoA do not endorse any of the views stated, nor any claims or representations made in this presentation and accept no responsibility or liability to any person for loss or damage suffered as a consequence of their placing reliance upon any view, claim or representation made in this presentation.

The information and expressions of opinion contained in this publication are not intended to be a comprehensive study, nor to provide actuarial advice or advice of any nature and should not be treated as a substitute for specific advice concerning individual situations. On no account may any part of this presentation be reproduced without the written permission of the IFoA.