



Institute
and Faculty
of Actuaries

Cloud Computing and Elevating Performance

Mark Brown (FIS) / Scott Woodrow (L&G)

10 November 2016



Institute
and Faculty
of Actuaries

Cloud Computing and Elevating Performance

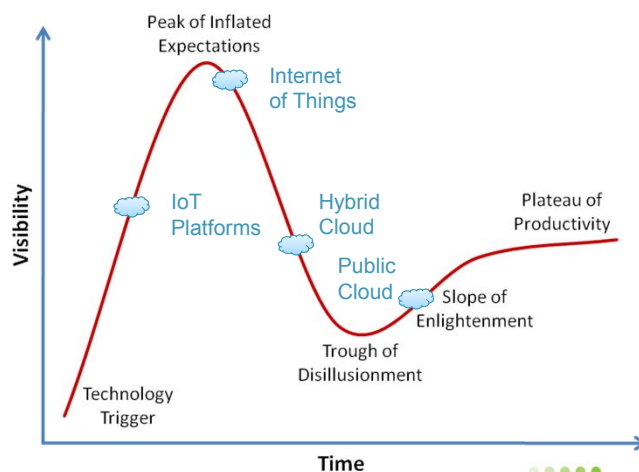
Implications of Cloud Computing

10 November 2016

What is Cloud?

- Someone else's data-centre
- Shared with other users (with protection)
- You only worry about the applications, not the hardware
 - IaaS, PaaS, SaaS, BPaaS
- Pay for usage, not ownership
- Anything from “own data-centre + marketing” to “pay-per-hour Amazon”

Where is Cloud in our consciousness?

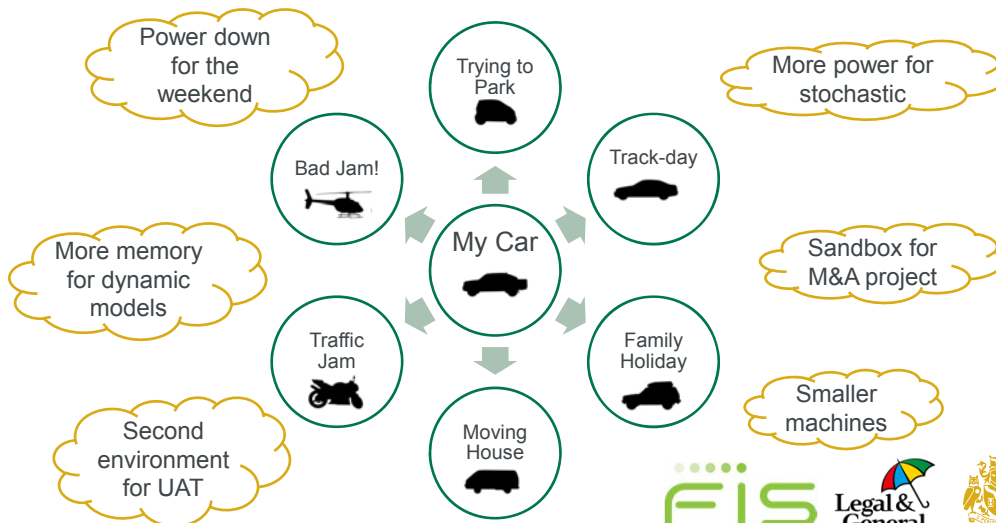


Gartner Hype Cycle
(2015)

Cloud Computing – it's obvious!



Imagine if we were talking about cloud



Aside: The tale of the silent actuary...

- Wow, cloud! Think what I could do with all that power. All those S-II models! Even better, no more Office 2007, no more rebooting every hour.
- Resolution did it, we can do it too. I'll talk to my boss
- Oh... it'll "never get approved".
- ...
- Reads the article in the company newsletter about IT's 35% cost-savings for "major systems" by using Google
- Curses as Office 2007 freezes again

The Business Case

- Reduced costs
 - TCO : 30-50% from downtime
 - CapEx to OpEx
- IT advantages
 - Agility
 - Cheaper, better DR
 - It's a fun project
- Current constraints

Your organisation has already gone "cloud"

- Office 365 / Outlook / OWA
- Conferencing – WebEx etc.
- CRM – Salesforce etc.
- HR – Workday etc.
- Travel – Concur etc.

The Internal Sell

- IT
- Legal
- Compliance / Regulators
- Data Protection
- Procurement
- Finance
- Cost pressure will drive your organisation into the cloud.
- The stakeholders can agree, given the necessary information, but it will take time
- The project will need an executive sponsor to get the necessary stakeholder investment.



10 November 2016

Aside: The tale of the reactive actuary...

- Wow, cloud! I never thought we'd do that. And I'm on the project team. I'll make our S-II modelling so much better and get us ready for IFRS 17
- Oh, ... it's just like testing a software upgrade. I thought it would be new and exciting. But hey, it does seem about 30% faster than before.
- Reads the article in the company newsletter about IT's 35% cost-savings for "major systems" by using Azure
- Curses as actuarial computing budget reduce by 35%



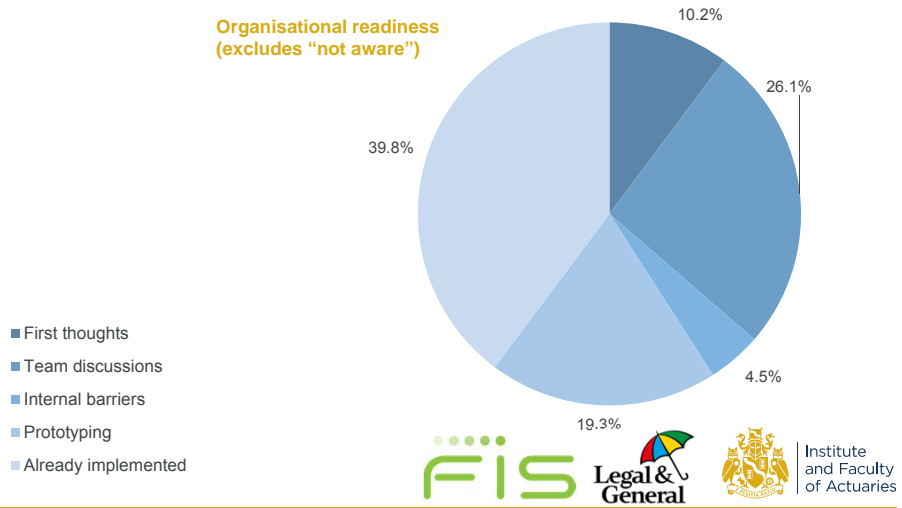
10 November 2016

10

It's not too late!

Original research – Raconteur/FIS
Data size = 500

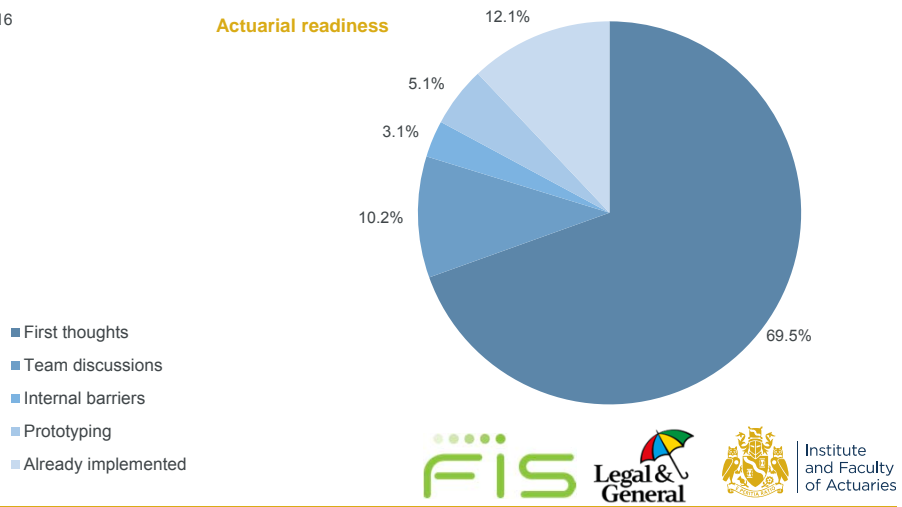
Organisational readiness (excludes "not aware")



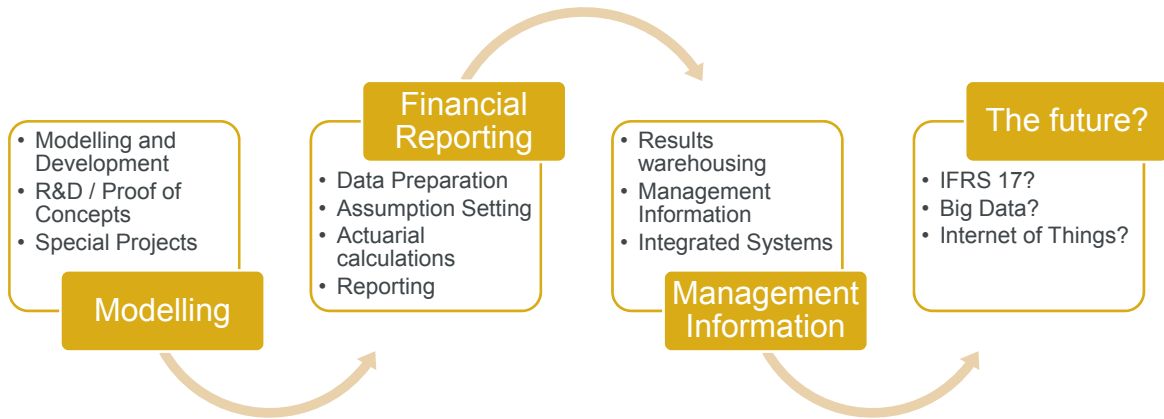
It's not too late!

FIS original research – YTD Nov 2016
Data size = 1319

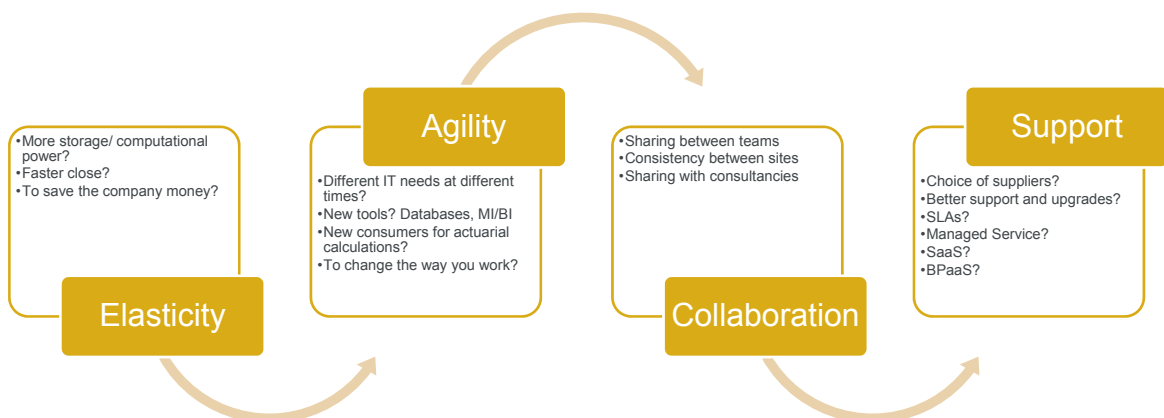
Actuarial readiness



What do you want in the cloud?



What do you want from cloud?



The Internal Sell - Revisited

- IT and IT Operations
- Legal
- Compliance / Regulators
- Data Protection
- Accountants / General Ledger
- New Consumers – sales, support, etc.
- Procurement
- Finance
- Cost pressure will drive your organisation into the cloud.
- The stakeholders can agree, given the necessary information, but it will take time
- The project will need an executive sponsor to get the necessary stakeholder investment.



10 November 2016

Get involved !



10 November 2016

16

Aside: The tale of the proactive actuary...

- Wow, cloud! We could do so much with that.
- We could do so much more than just save money.
- Engages with business and suppliers to transform actuarial environment
- Delivers cost-savings and enhanced functionality
- Comes to the Life Convention to talk about it...



10 November 2016

17



Cloud Computing and Elevating Performance

Legal & General's story

10 November 2016

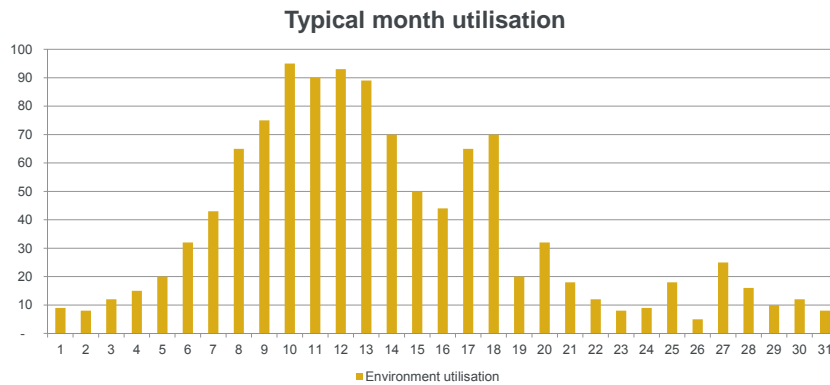
Background

- Actuarial modelling run in traditional data centre environment.
- Environment sized to (historic) peak usage.
- Significant costs in running the environment.
- Limitations in scaling the environment size.
- Actuarial model results on critical path for QRT acceleration.

The Project

- Initiated project with aim to significantly enhance flexibility of actuarial environment and significantly reduce costs.
- Does actuarial modelling fits a cloud use case?

Environment usage



The implementation challenges

- IT security (how secure is the cloud?).
- Insufficient knowledge within the organisation of cloud solutions.
- Which cloud should we use? What configuration?
- Internal governance.
- Fear of change.
- Movement of significant volumes of data between on premise and cloud environments

Moving forward

- Test the security (penetration testing).
- Managed services - find someone to help!
- Research cloud providers and their security.
- Run proof of concept.
- Early engagement of key stakeholders.
- Minimise movement of data (review your data flow).

Post implementation

- Hooray we are in the cloud!
- 80/20 rule – optimisation of environment isn't complete when you go live.
- Regular review of environment performance.
- Changes to the environment are quick (hours not weeks).
- Scalable environment leads to acceleration benefits.
- Significant cost savings but word of caution - costs are harder to understand!



Institute
and Faculty
of Actuaries

Cloud Computing and Elevating Performance

Key Themes

10 November 2016

Get involved !



Institute
and Faculty
of Actuaries

10 November 2016

26

Crib Sheet

- Know what you want, above and beyond cost savings
- Don't accept that this is just an IT project
- Regulators view moving to any external cloud as “outsourcing”, treat it as such
- Get a senior sponsor, if you're first there's a lot of barriers to face
- Engage with your stake-holders early – you can't push past them at the end
- Change takes effort – maximise the benefits achieved

Ready for the Future?

- The Actuarial Crystal Ball
- What's certain
 - Faster, cheaper, bigger, better ► reporting, business understanding, regulatory needs
 - BigData, Internet of Things ► providers with improved underwriting based on real risks, highly flexible products, social implications (GP alerts)
 - Getting from cheap to affordable
 - Non-life will innovate, life will follow
 - Early adopters have short-term significant advantage, but must keep moving
- Bespoke personal insurance? The end to pooled risk?

Questions

Comments

The views expressed in this [publication/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 [publication/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 [publication/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 [publication/presentation] be reproduced without the written permission of the IFoA [*or authors, in the case of non-IFoA research*].



Institute
and Faculty
of Actuaries