2014 EAAC IN TAIPEI TAIWAN

18TH EAST ASIAN ACTUARIAL CONFERENCE

12-15 October 2014

Taipei International Convention Center in Taipei Taiwan

Use the Force

The future of insurance in the Digital Age

Gavin Maistry, Mike Kwan

What if the price of failure = the loss of your livelihood?

Source: picture alliance, dpa

Farrier, flycoachman, gelder, hay collector, hind, horse-capper, hostler, jagger…

Sources: picture-alliance; HIP; Thorsten Eichhorst, ROBA Images

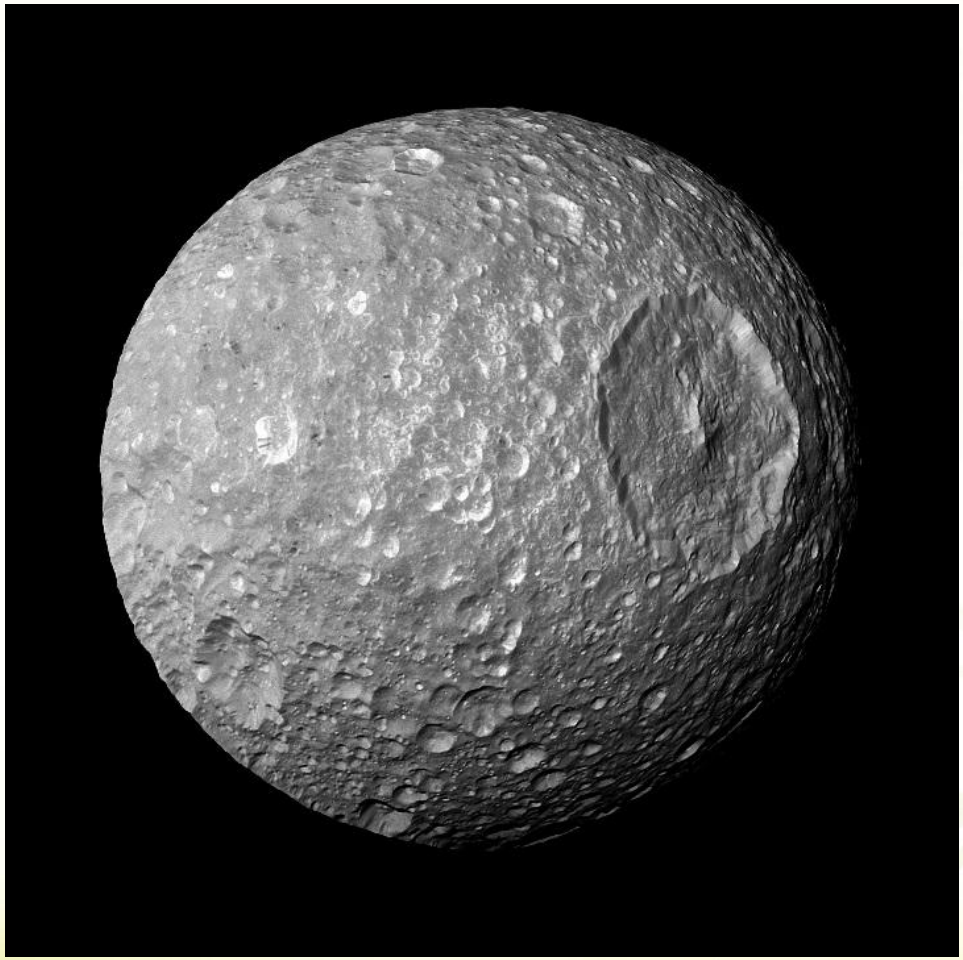
Every year…**1.24m** people die, **$600bn** car insurance spent

Sources: bkindler, istockphoto.com; Tatiana Popova, shutterstock.com

Wheel, Ownership, Driving licence Accidents, Insurance

Source: picture alliance, dpa

"A great disturbance in the Force, as if millions of voices suddenly cried out in terror and were suddenly silenced."



0.8 zettabyte data on earth in 2009

What is a zettabyte?

1,000,000,000,000	gigabytes
1,000,000,000	terabytes
1,000,000	petabytes
1,000	exabytes
1	zettabyte

Source: NASA, JPL-Caltech, Space Science Institute

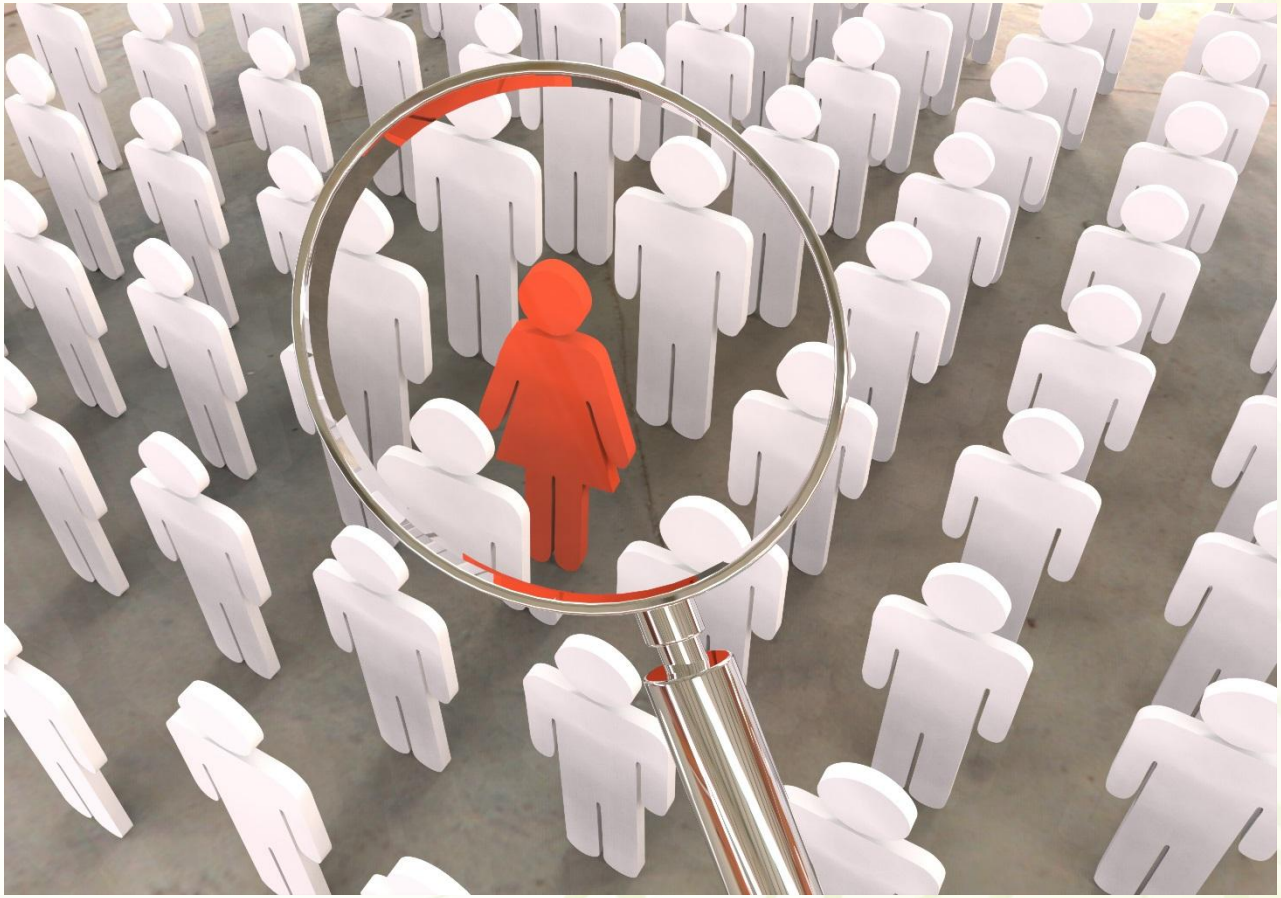
Pay As You Live™

Source: Hasloo Group Production Studio, shutterstock.com

“Impossible to see, the future is”

Source: Rafal Olechowski, shutterstock.com

Propensity to purchase trumps underwriting prediction



Source: Giovanni Cancemi, shutterstock.com

Select the right patient for the right health programme before the trend sets in

Source: Bikeriderlondon, shutterstock.com

Automated detection of claims that need immediate attention

Source: courtneyk, istockphoto.com

Optimised claims & Application processes

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Fig. 1: Automated and manual underwriting in comparison

Underwriting stage	Days	Industry norm	Target with 4th generation URE*
1. Base questions	1	14%	60%
2. Further questions	-	-	
3. Manual underwriting	31	52%	30%
4. Tele-underwriting	-	-	
5. Medical evidence	82	34%	10%
Average duration (norm)	52	100%	
Average duration (target)	18		100%

* Underwriting Rules Engine

The table illustrates how reducing the referral rate significantly accelerates average policy issuance time.

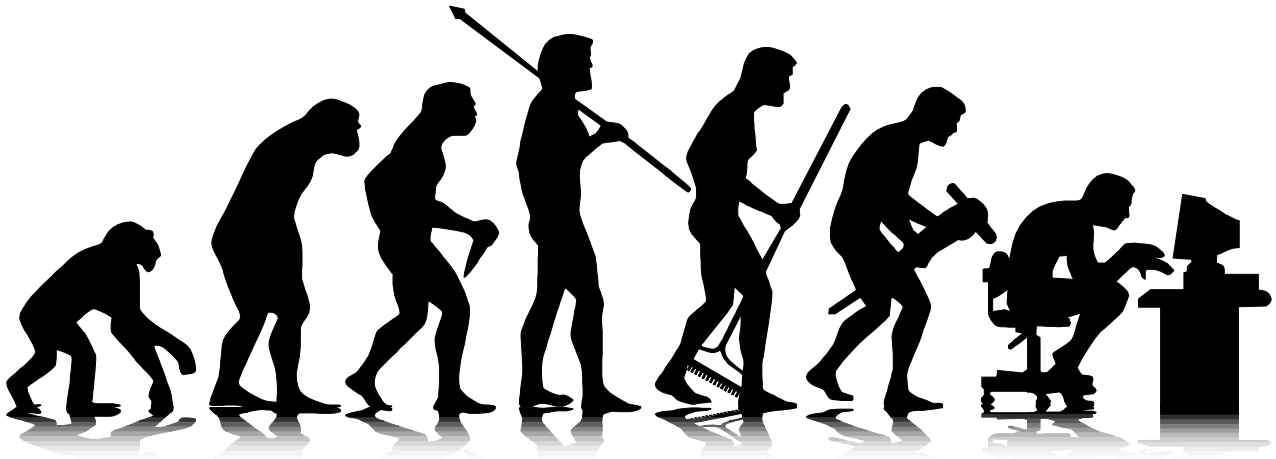
Fig. 2: New business leakage

Underwriting decision (in weeks)	Not-taken-up rate (in %)
1	9
2	12
3	12
4	16
5	24
6	23
7	25
8	27
9	31
10	36

Source: Munich Re

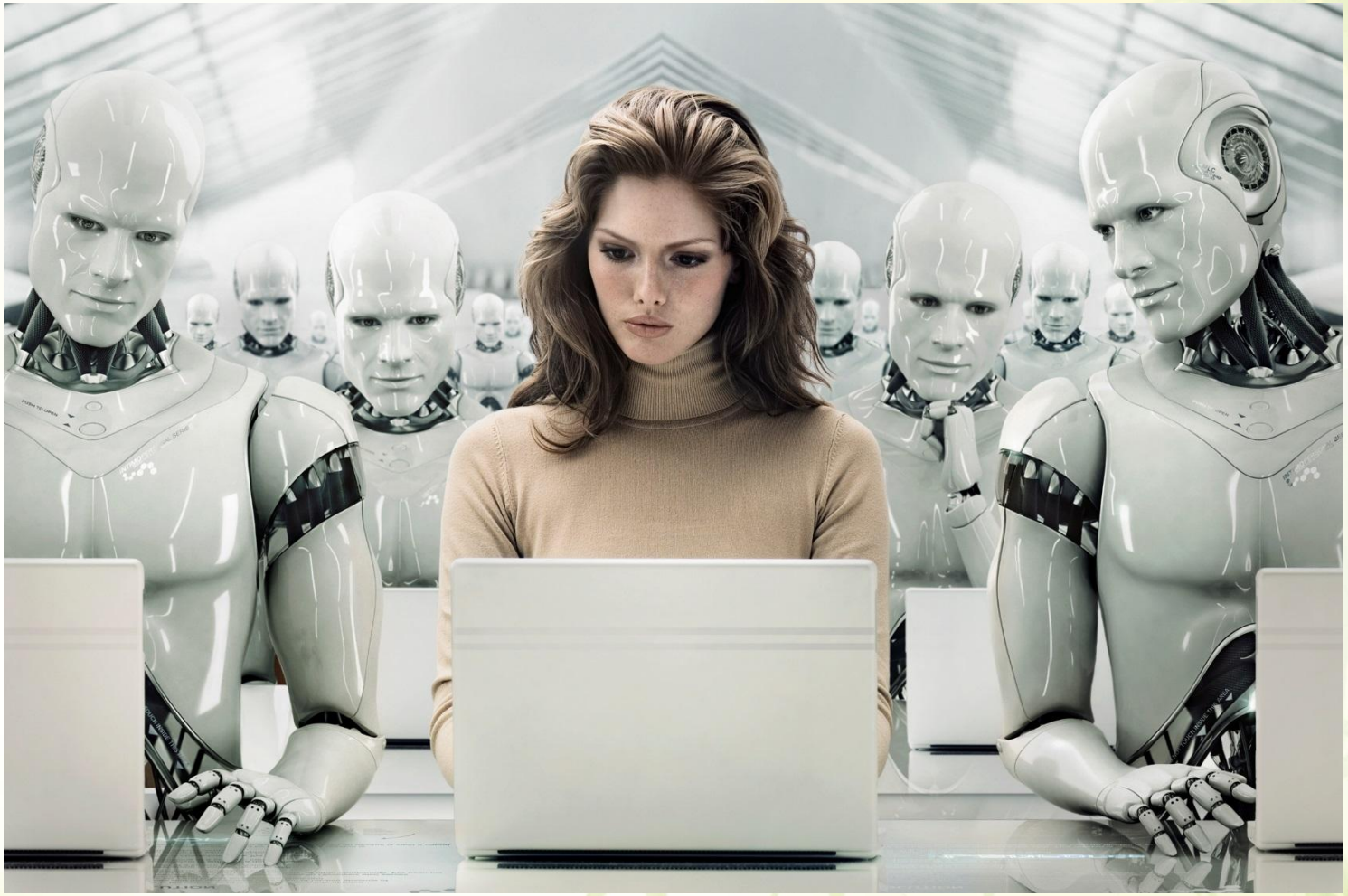
EAAC

To the future and beyond:
The 5th generation Actuary



Source: panco, shutterstock.com

Save the Actuary!

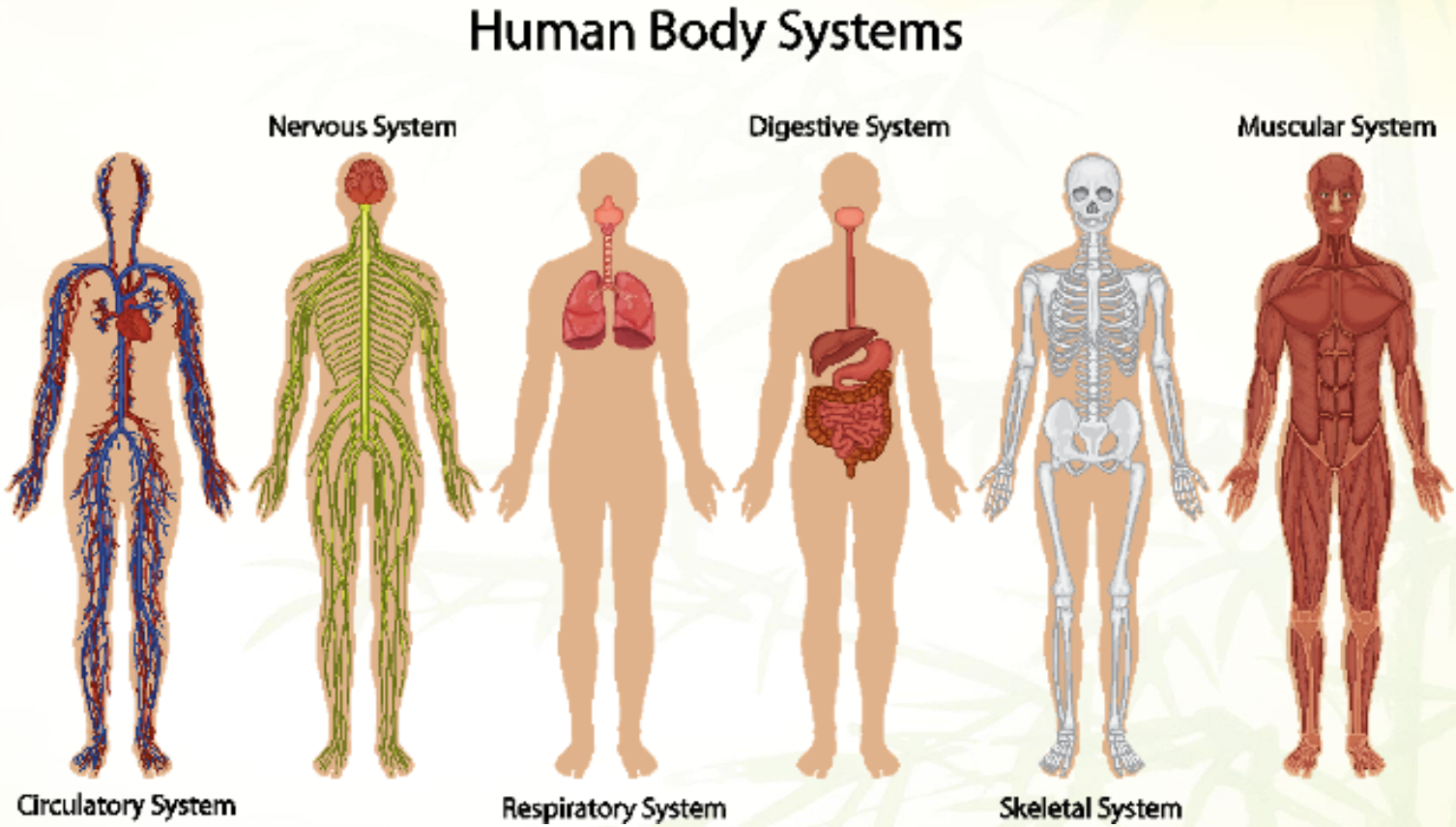


Source: Blutgruppe, Corbis

Exponential technologies: "Faster, smaller, cheaper"

Source: Ray Kurzweil and Terasem Foundation

Assess impact of regenerative medicine on future mortality



Source: Matthew Cole, shutterstock.com

To move from Sickcare to Healthcare

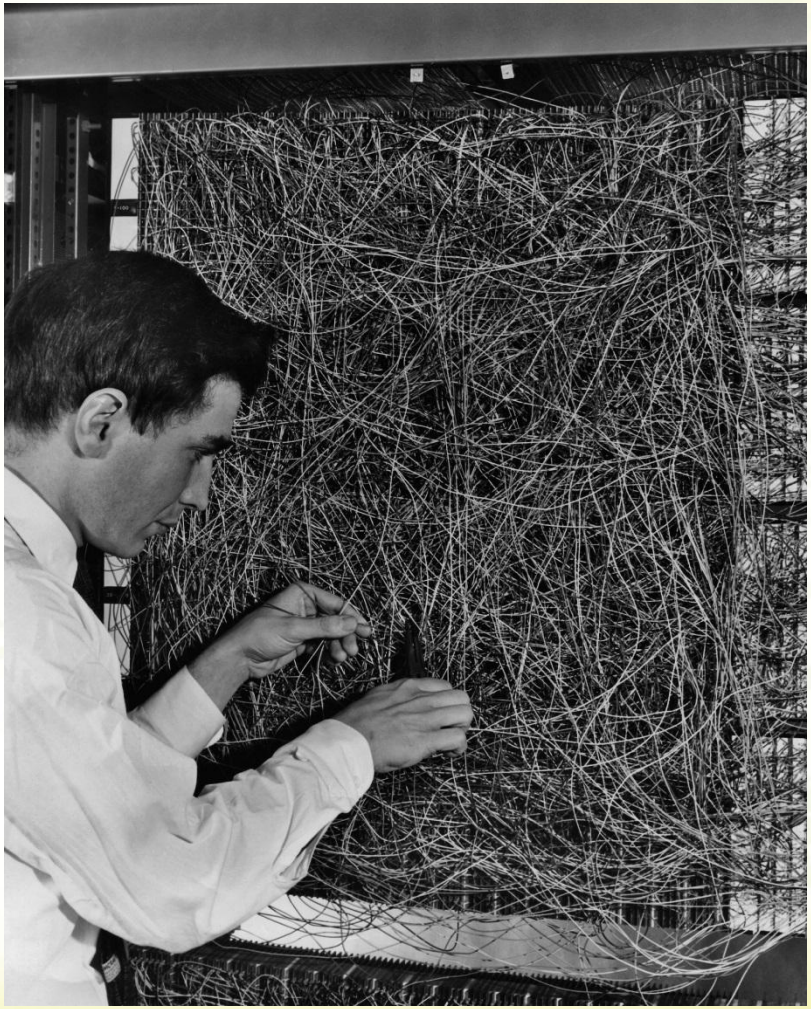
The Healthspan Imperative

A film about America's next great priority

NARRATED BY MARTHA STEWART

Source: healthspancampaign.org

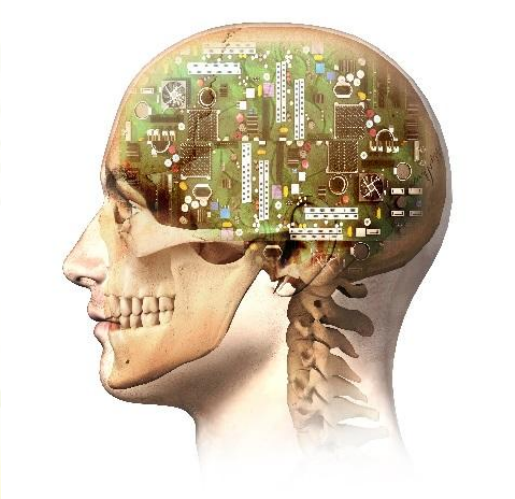
Deep learning: Feed enough data into networked computers & they will eventually learn to make sense of it



Source: Frederic Lewis, Getty Images

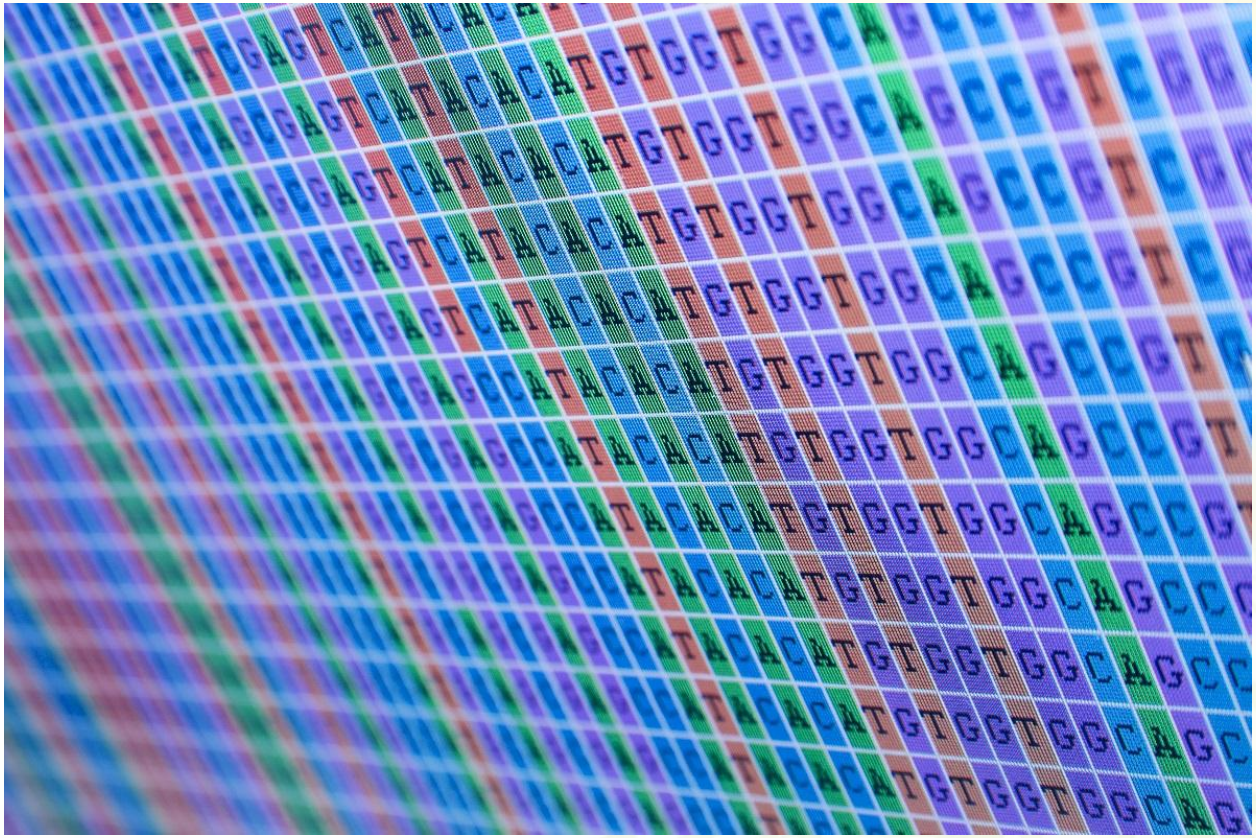
Must-have: actuarial Intelligence Amplification (IA) tools

Cheating scandal – Borislav Ivanov speaks out



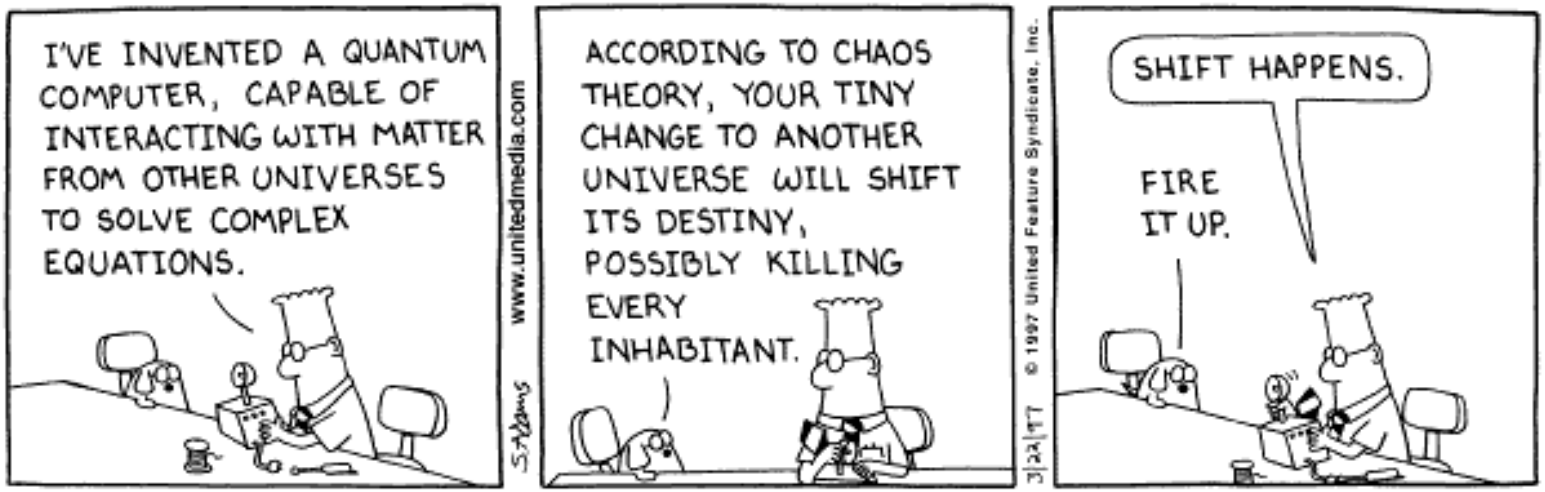
Sources: Jim Gardner; NASA, JPL-Caltech; corbis; leonello calvetti, shutterstock.com

Can Google solve…Death?



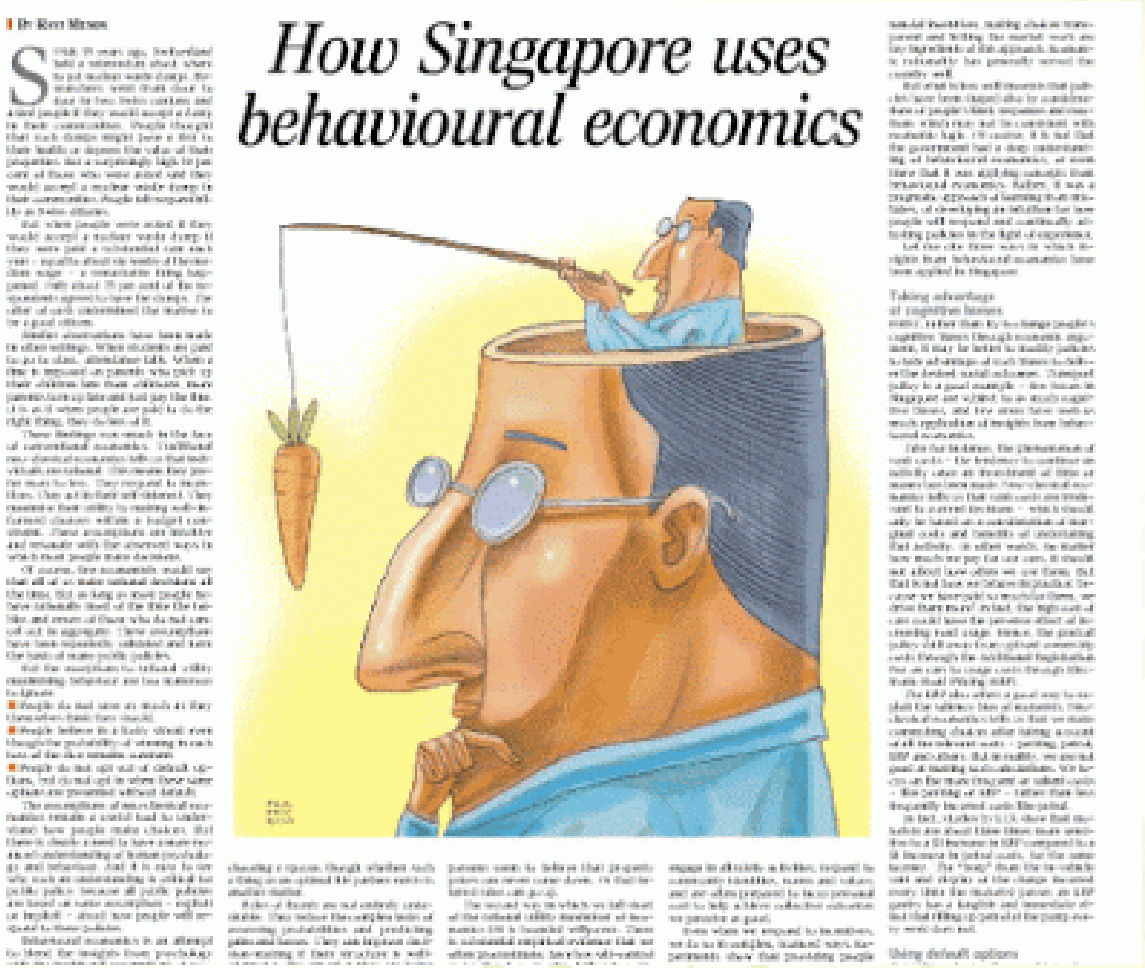
Source: taraki, shutterstock.com

Complex computational problems solved with Quantum Computing



Source: dilbert.com

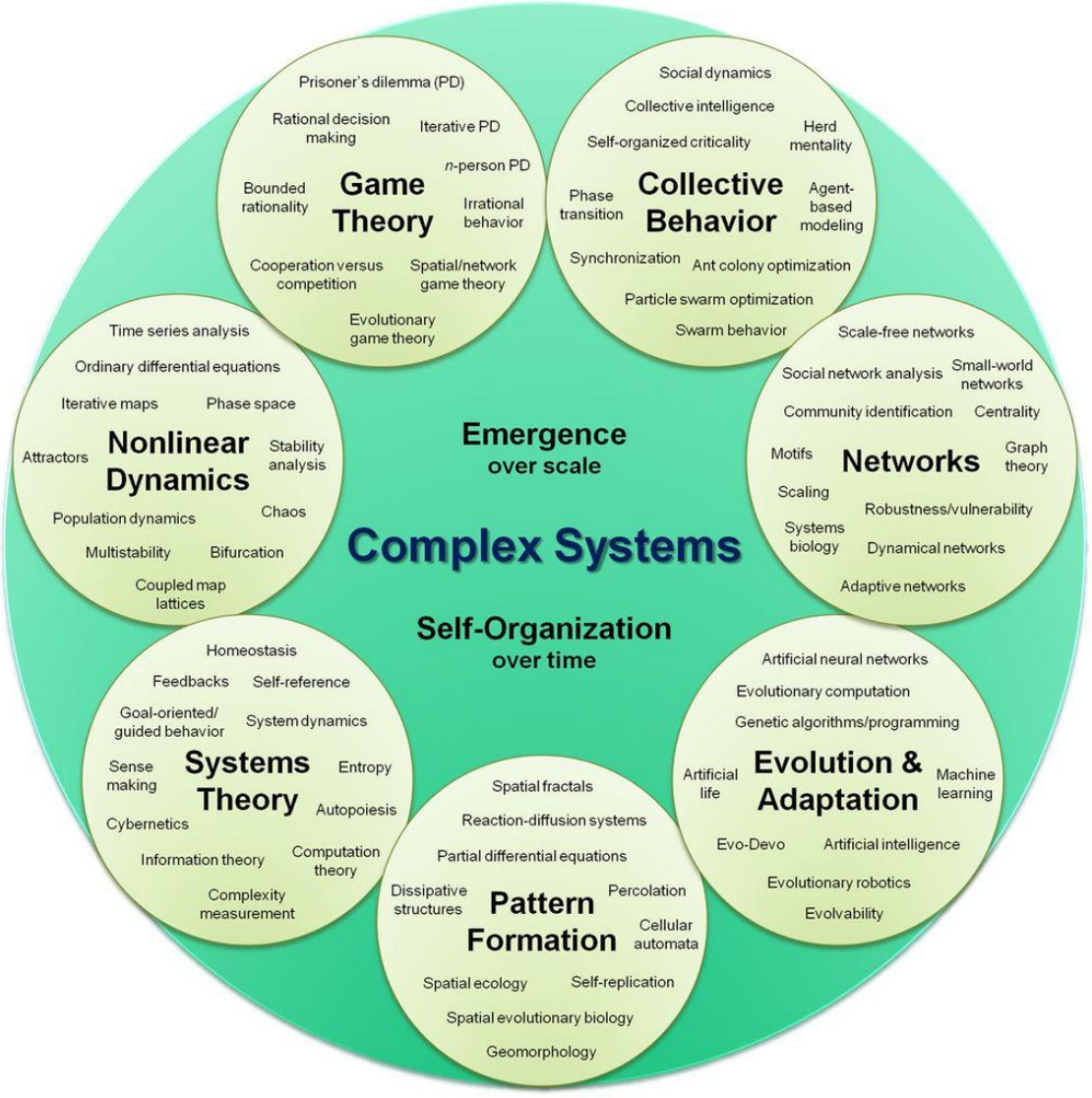
Interpersonal skills and the single Actuary



How Singapore uses behavioural economics

Source: The Straits Times

Insurance markets are complex systems ripe for complexity science

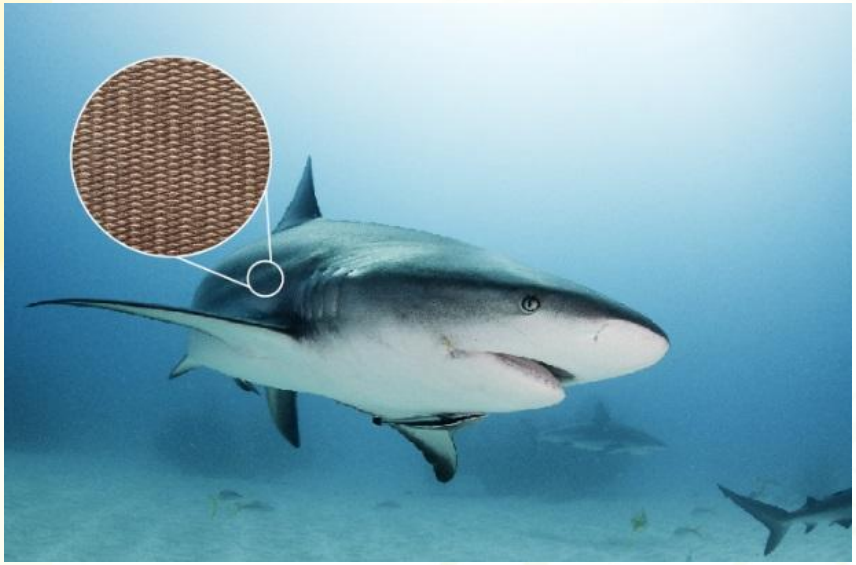


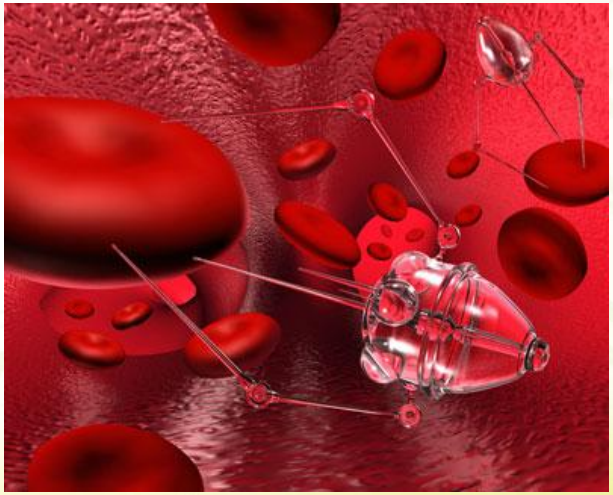
Source: Hiroki Sayama, D.Sc. - Created by Hiroki Sayama, D.Sc., Collective Dynamics of Complex Systems (CoCo) Research Group at Binghamton University, State University of New York

Evolutionary theory applied to finance

Source: Claudio Divizia, Fotolia

The death of Cancer (Insurance)





Sources: andersphoto, Shane Gross, shutterstock.com; Plainpicture, Ragnar Schmuck; Billyfoto, Dreamstime.com

The engineering bottlenecks to automation

Source: glasbergen.com

Who drives the Life company of the future?

Source: Trinette Reed, Blend Images.Corbis

Can actuaries survive the Digital Age?

"There must be some mistake. According to our actuary tables I'm going to live to 83."

Source: John Morris, Cartoonstock.com