Annual Conference Persatuan Aktuaris Indonesia 2019
Actuaries for the Industry 4.0
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Hotel JS Luwansa Jakarta

IFRS 17 & Industry 4.0

Nicholas Yeo Chee Lek FIA FASM FSA FSAS
Founder & Actuary | Nicholas Actuarial Solutions
+6 012 502 3566| www.n-actuarial.com

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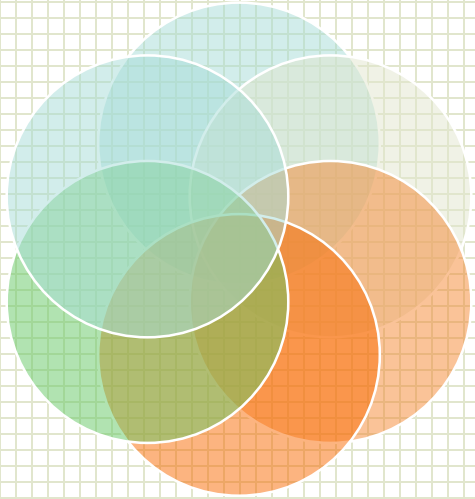
IFRS 17 Common Questions

What will happen when IFRS 17 is implemented?

Why IFRS 17 will be implemented?



How to implement IFRS 17?

Where will IFRS 17 be implemented?

Who needs to work on IFRS 17 implementation?

When will IFRS 17 be implemented?

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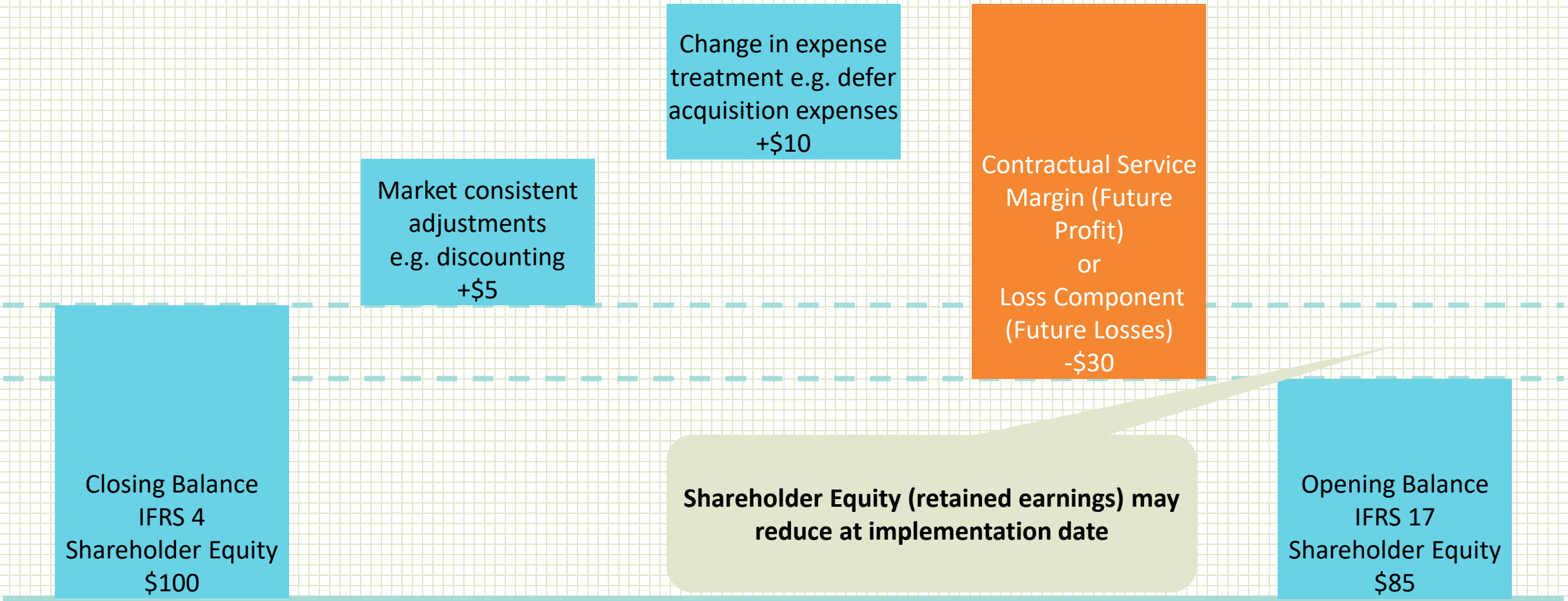
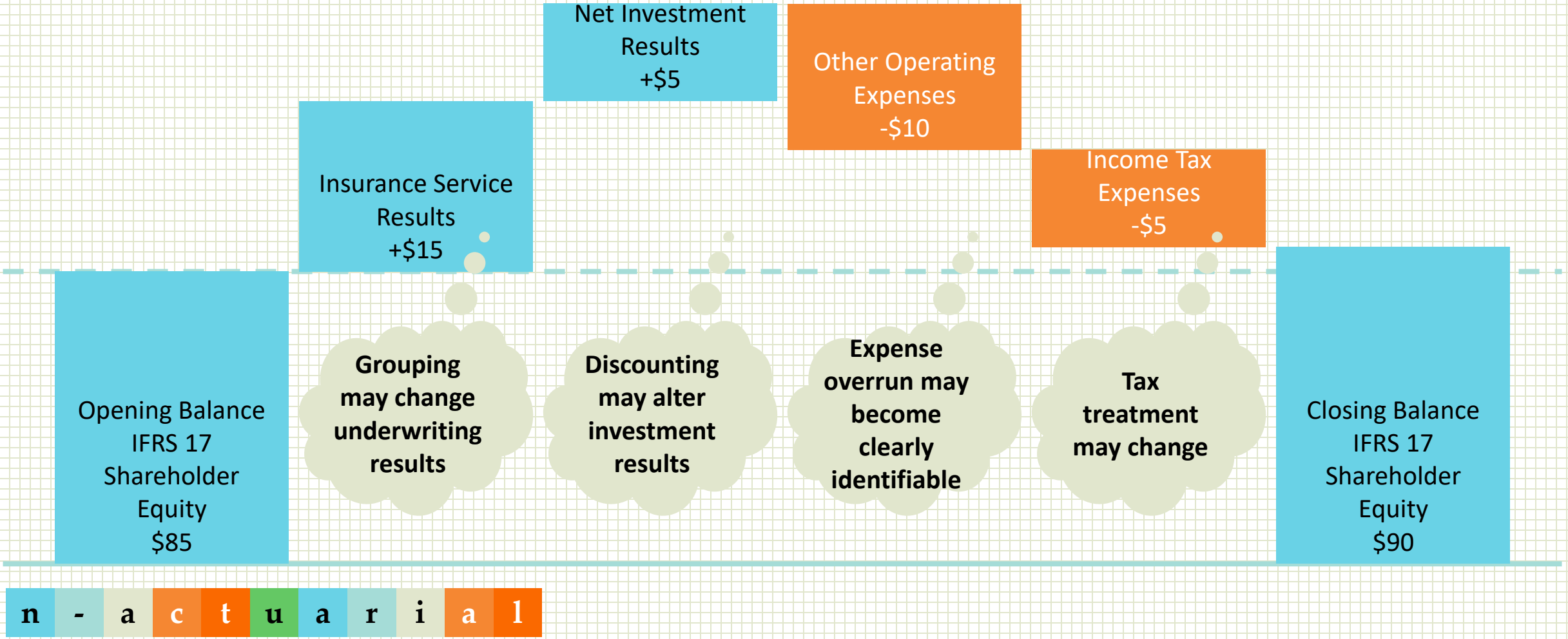
What will happen in Day 1?



What will happen in Year 1?



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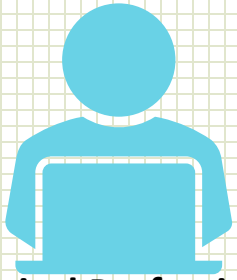
How to Implement IFRS 17?

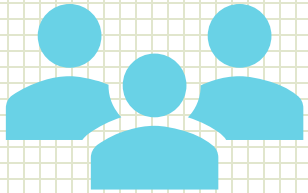
Models	Inhouse	Hybrid	Outsource
Inhouse Resources	Have significant inhouse resources across accounting, actuarial & IT.	Inhouse resources are available but insufficient to implement IFRS 17.	Unable or no intention to hire more resources for IFRS 17.
Requirement	Very strong & experienced project owner. Expand existing team.	Hands-on management team with strong understanding of IFRS 17.	Very strong & experienced project manager.
Use of Consultant	Minimal. Review & confirmation only.	Part of the implementation work, review & confirmation.	All implementation work, review & confirmation. Post implementation work remains outsourced.
Size of Company	Very large multinationals.	Medium to large sized insurers.	Small to medium sized insurers.
System Vendor	Directly contract with a system vendor.	Directly contract with a system vendor.	Included in outsourcing package.
Cost-effectiveness	Economies of scale.	Vary on a case-by-case basis.	Seamless collaboration.

Where we are now

Business Leaders
e.g. C-suite, Board of Directors
Runs & Drives the Business



Technical Professionals
e.g. Actuarial, Risk, Finance, Investment, Compliance
Execute Complex Technical Processes



Admin Staff
e.g. Operations, Support
Execute Simple Processes

Incumbent

Have "experience"

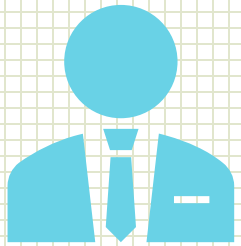
Quick fix

Expensive & limited

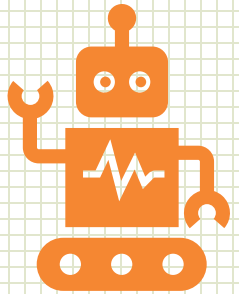
Hard to attract & retain

Biased judgment, make mistakes, cut corners

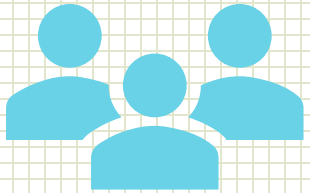
Where we should be



Business Leaders
Not Automatable



Cognitive Robots
Our Automated Solution



Admin Staff
Easily Automatable

Low, fixed cost

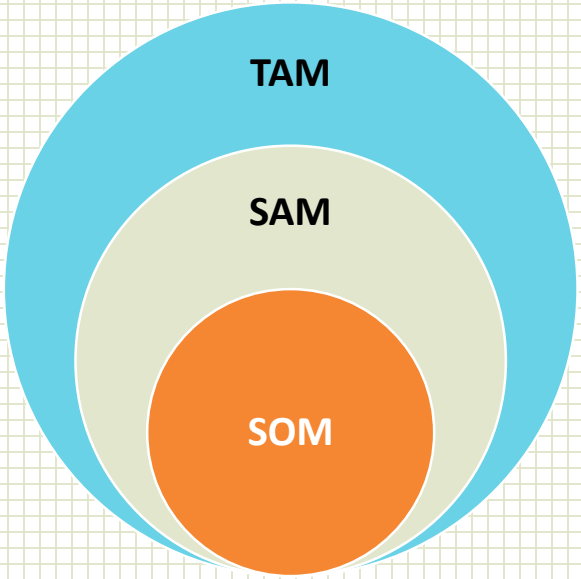
No bias, no mistakes, no cutting corners

No holiday, no resignation

Requires development & robust testing

Requires change

Business Case

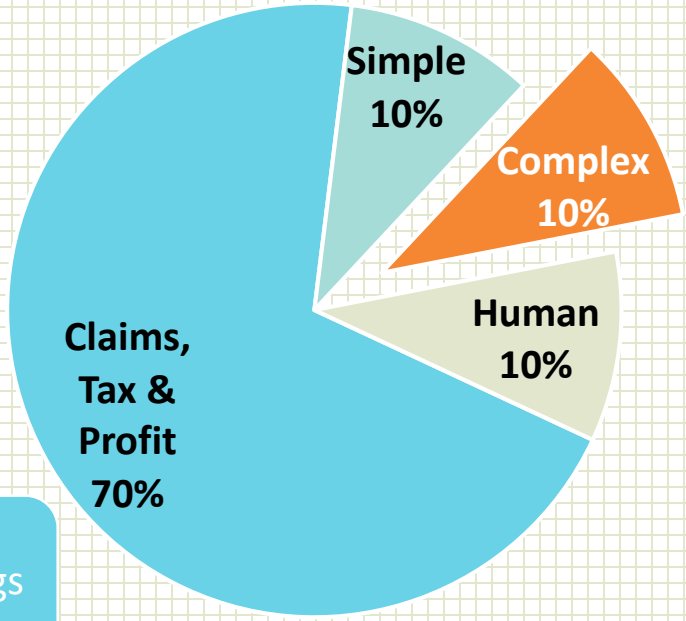


TAM Total Addressable Market
$250b (global insurance market $5t)

SAM Specific Addressable Market
$75b (Asia insurance market $1.5t)

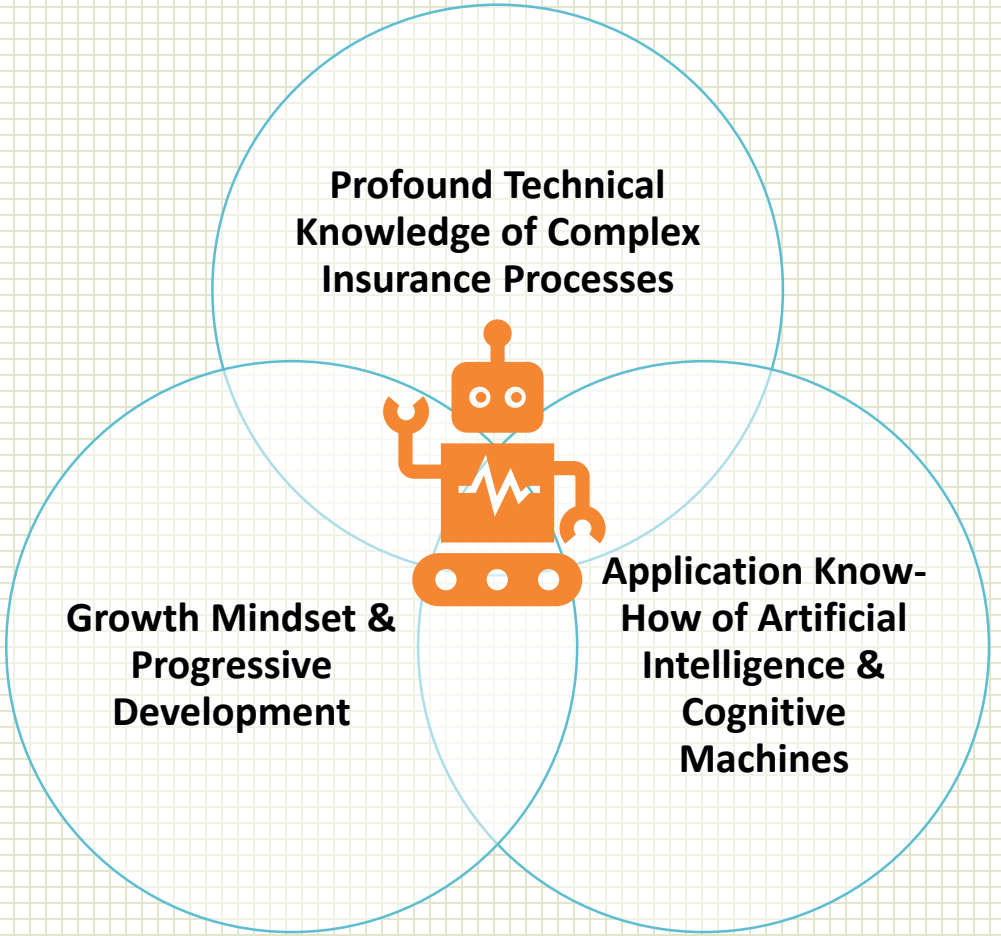
SOM Serviceable Obtainable Market
$1.5b (market share is 2%)

Composition of Insurance Premiums



Potential Savings 2.5% = Expense Ratio 30% × Complex Processes 33% × Auto-matable 50% × Cost Savings 50%

Our Technology



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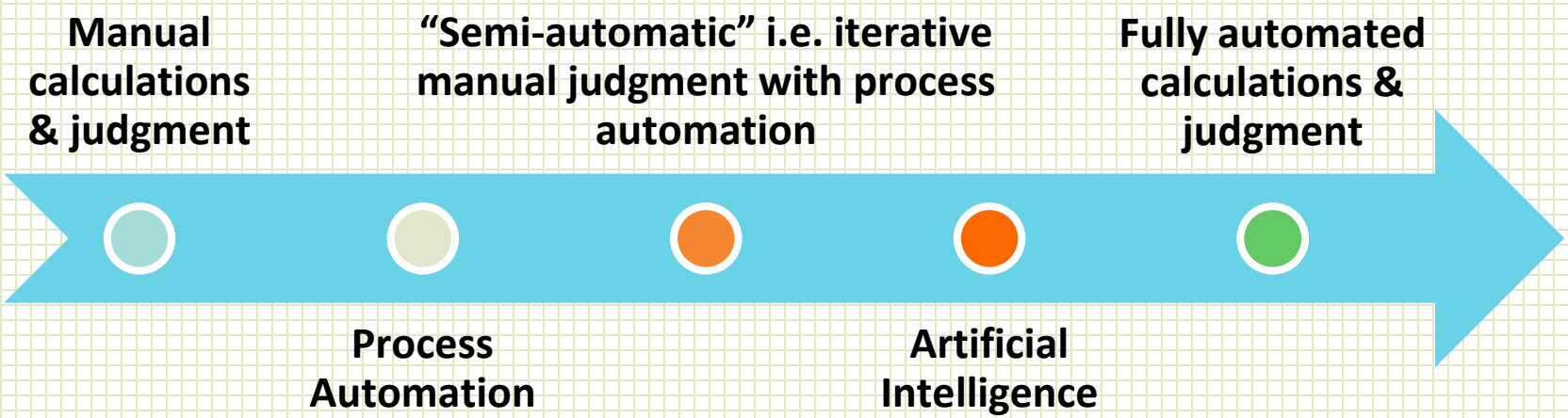
Evolution of Actuarial Work with Technology



IBNR Robot

Step 1 – Select Data
- Paid Claims or Incurred Claims
- Errors / Outliers

Step 2 – Select Method
- Link Ratio or BF Method
- Other Methods

Step 3 – Select Assumption
- Development Factor & Tail Factor
- Seed Loss Ratio

Step 4 – Decide Final Results
- Overall Actuarial Judgment

Executive Summary for Auto Class of Business (net of reinsurance)
XYZ Insurance Company as at 2014 Q3

Summary net of reinsurance results as at 2014 Q3	MYR '000
Case Estimates (A)	68,328
Best Estimate IBNR Liabilities (B)	34,876
Expected Claims Liabilities (C) = (A) + (B)	103,204
Standard Deviation (D)	3,257
75% Confidence Level Claims Liabilities (E)	105,388
Risk Margin (F) = (E) - (C)	2,184

The following methods were combined to estimate the optimum level of liabilities and its range.
The resultant weightage, mean, standard deviation and correlation matrix are as follows:

		Expected	Standard		Correlation Matrix		
MYR '000	Weight	Liabilities	Deviation	PLR	ILR	PBF	IBF
Paid Link Ratios	0%	81,213	5,507	100.0%	63.8%	25.1%	73.8%
Incurred Link Ratios	15%	104,882	2,831	63.8%	100.0%	0.0%	83.8%
Paid BF Method	0%	85,020	14,288	25.1%	0.0%	100.0%	33.7%
Incurred BF Method	85%	102,908	2,539	73.8%	83.8%	33.7%	100.0%

The following were the optimised parameters:
Age-to-age factors:

Development Period	1	2	3	4	5	6	Tail
Paid Link Ratios	2.353	1.317	1.099	1.045	1.032	1.004	1.002
Incurred Link Ratios	1.141	1.096	1.012	1.017	1.025	1.004	1.019

Seed loss ratios:

Accident Period	2008	2009	2010	2011	2012	2013	2014
BF Seed Loss Ratio	90.5%	92.2%	98.7%	98.7%	98.7%	98.8%	99.6%

The data provided to might not capture all uncertainties around the claims liabilities.
To allow for this, standard deviation was multiplied by a factor of: 129%

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Thank You

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