

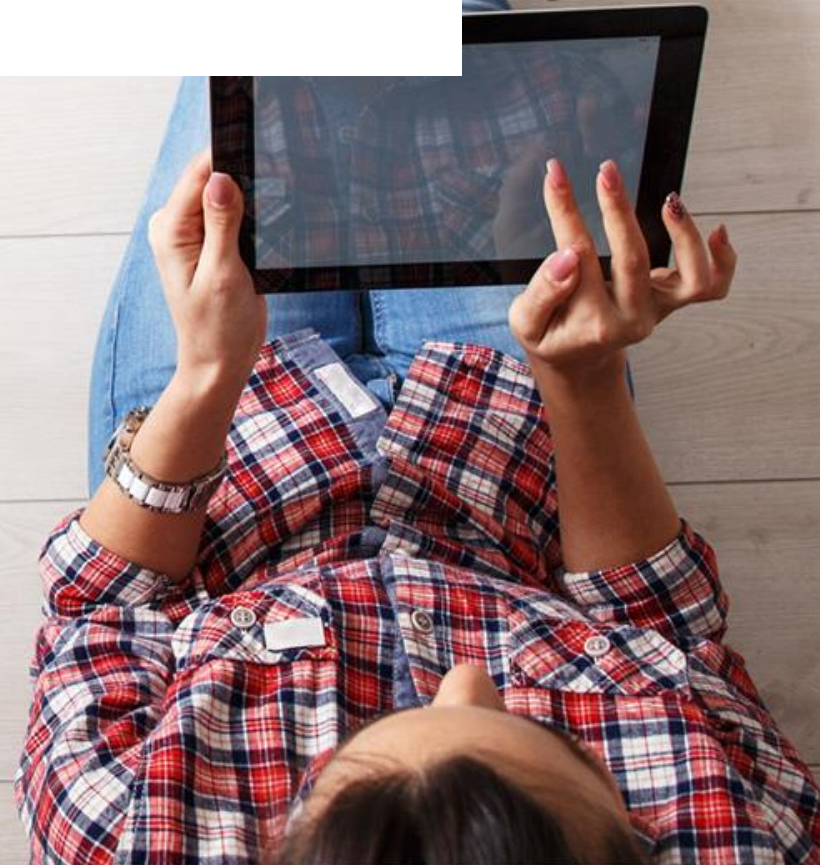
Role of technology in driving transformation of the insurance industry – catalyst, driver, incubator?

Ganesh Prakash

Head of Malaysia FSA, FSAT

Insurance Consulting and Technology

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Speaker introduction



Ganesh Prakash

Head of Malaysia FSA, FSAT

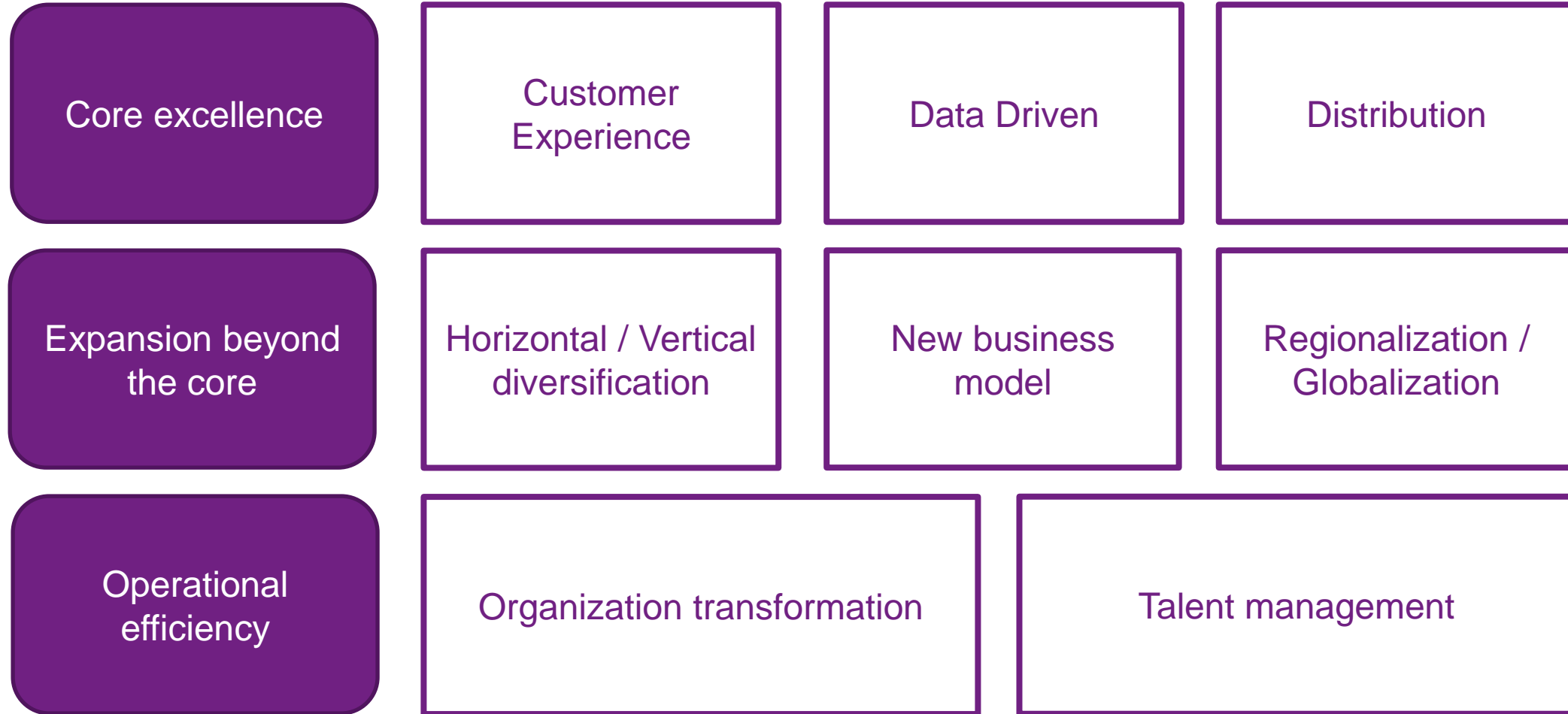
Insurance Consulting and Technology

- Ganesh is an experienced Actuary in the financial services industry, and has spent the majority of his career on the commercial side working across a wide spectrum of Actuarial work, from Product Development and Pricing, Financial Reporting and Valuation, Business Planning and Strategy as well as Risk and Capital Management.
- His experience has been gained across a host of ASEAN countries, Malaysia, Singapore, Vietnam and Thailand, working with various multinationals in various senior capacities. He is intimately familiar with the business and regulatory considerations under various regimes.
- He is also well versed in various international and local reporting and capital standards from Solvency II, IFRS 4 and 17, the regulatory reporting standards of Malaysia, Singapore and Thailand.

Content

- 1. FinTech trends**
- 2. FinTech applications in the insurance industry transformation**
- 3. How can insurers leverage FinTech to leap forward**

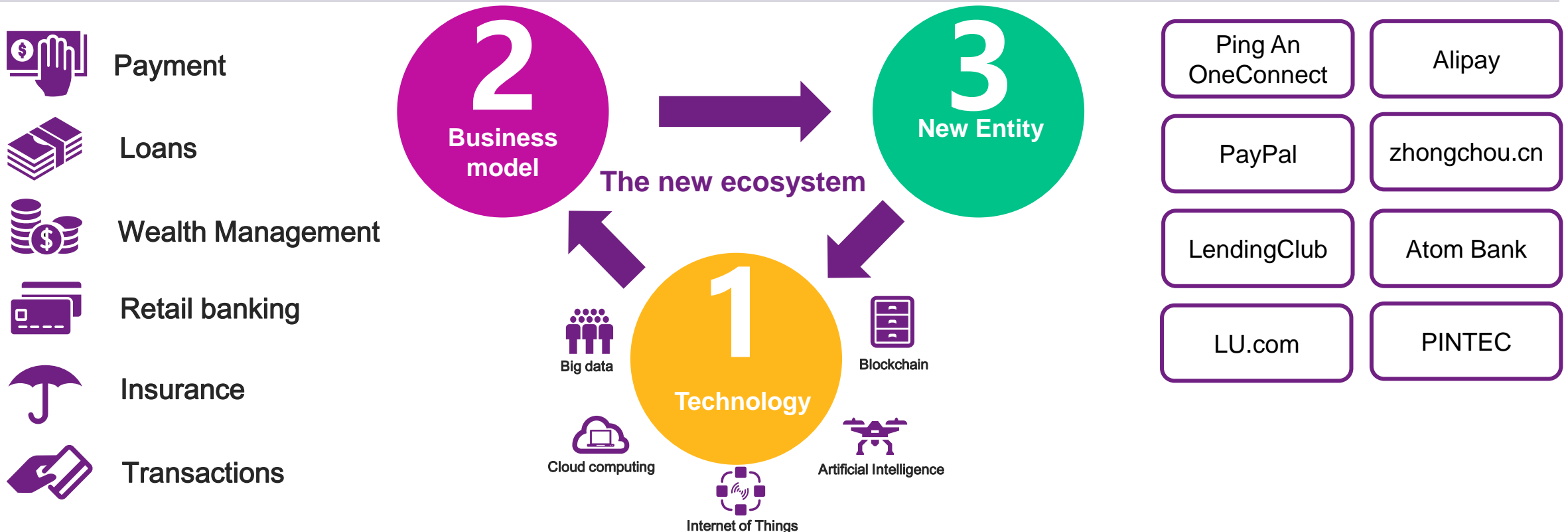
Technology is disrupting and transforming the insurance industry



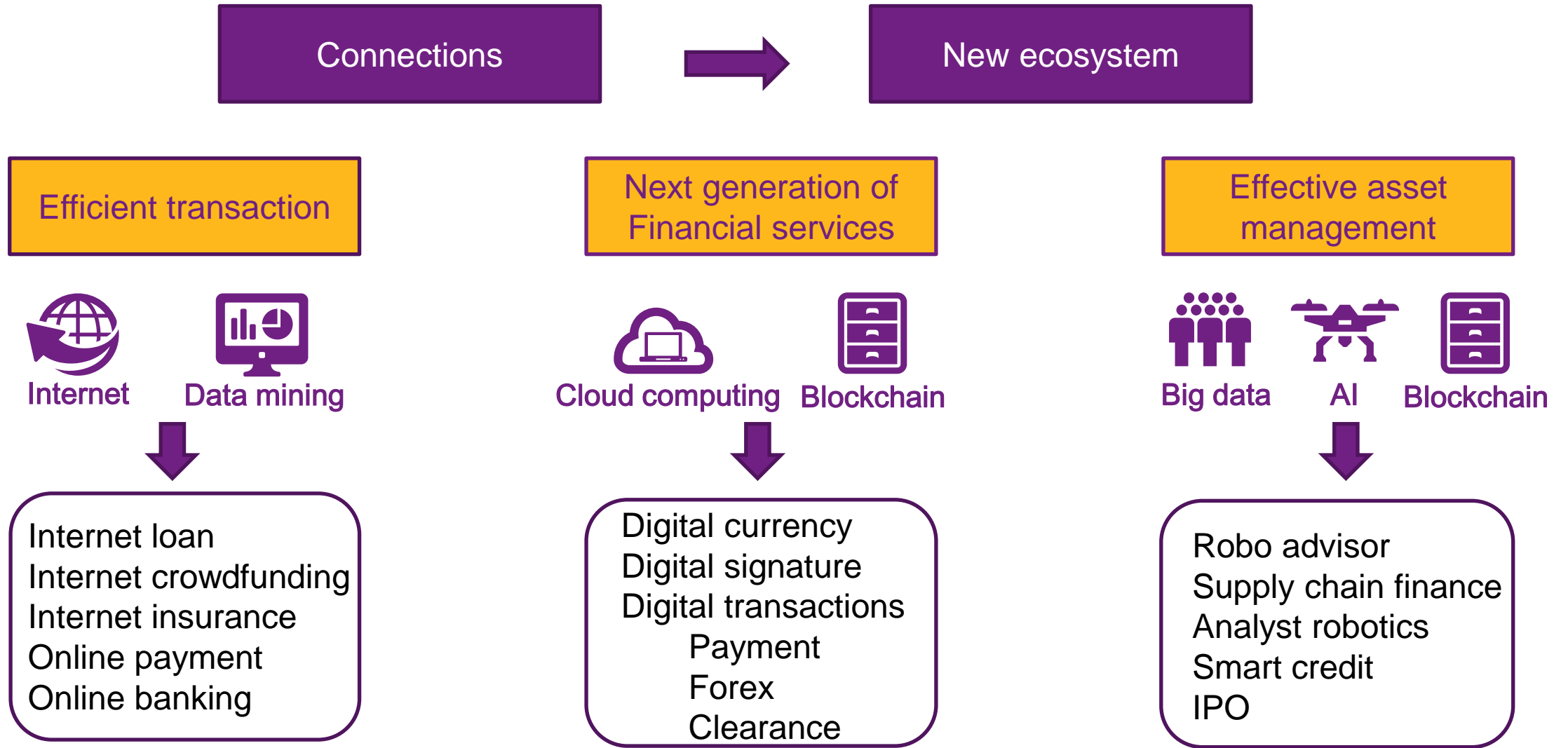
What is FinTech?

2 characteristics of FinTech as defined by FSB:

1. Fintech involves the use of innovative technologies for the provision of financial services.
2. Fintech has the potential to materially enhance, transform and/or disrupt business models, applications, regulatory oversight, processes or products.



FinTech 1.0 to 2.0



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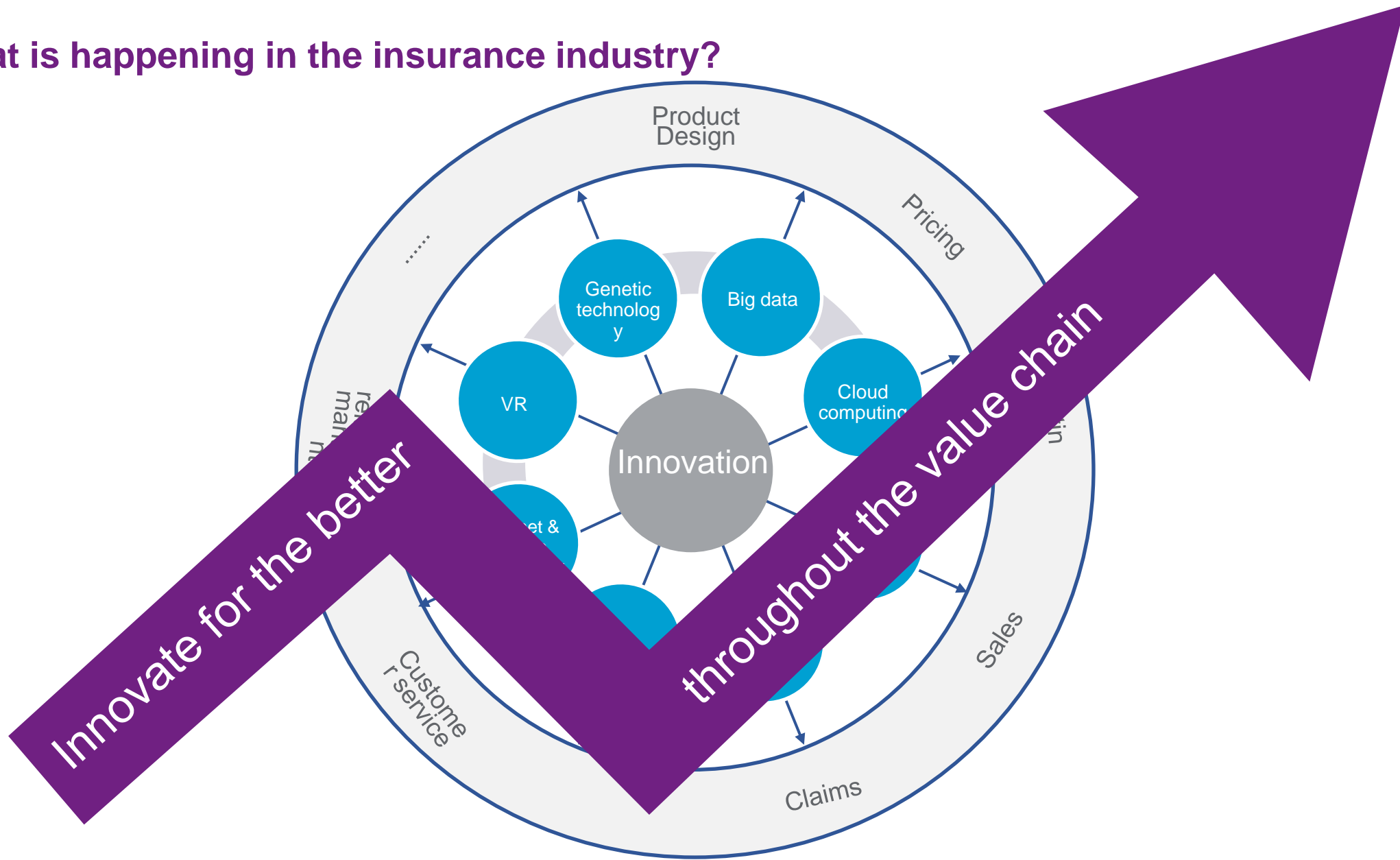
Applications

Early adoptors

Benefits

 Big data	Real-time pricing	Trov	Insurance on-demand
	Fraud detection	Allstate	Improve anti-fraud
	Closed Health Ecosystem	Vitality + Ping An Health	Cost control Improve customer loyalty
 AI	Intelligent insurance intermediary platform	Insurify	Cross-selling
	Robo advisor	Buyonic Insurance	Reduce staff cost
	Claim assessment	Fukoku Mutual Life Ant Financial	Improve efficiency Reduce cost
 IoT	UBI	Progressive State Farm	More competitive pricing
	UBI testing	Ping An Sunshine PICC P&C	Improve customer interface / experience
 Cloud computing	Quick policy processing	ZhongAn	Improve efficiency Shorten sales cycle
	Information infrastructure	Ping An CPIC	Improve information management
 Blockchain	Crypto token	Sunshine	Improve customer service
	Trading, clearance, credit check	Ping An (Group)	Reduce transaction cost
	BlockCloud	ZhongAn	Improve efficiency through smart contracts

What is happening in the insurance industry?



Big data

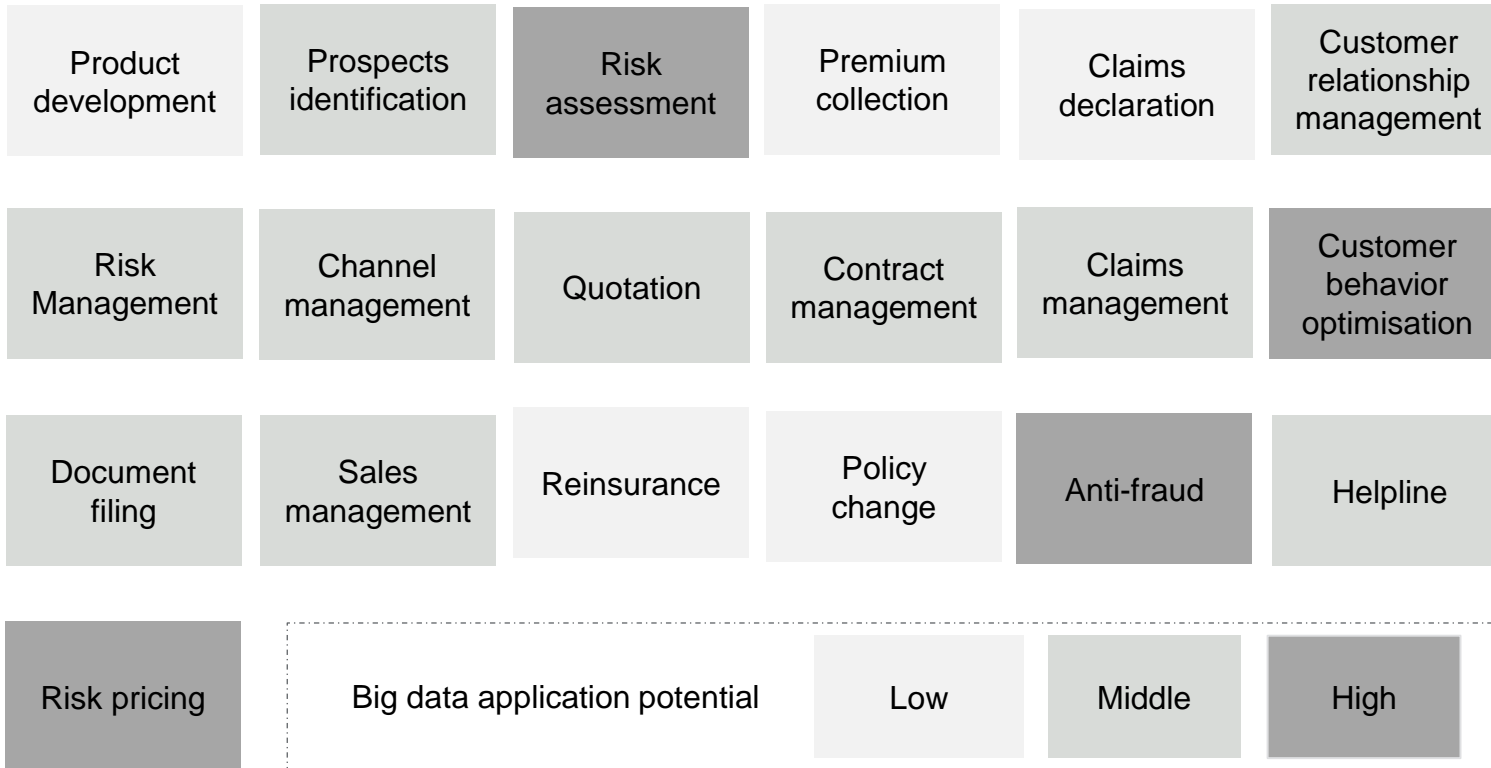
76% of corporations said
would increase adoption
and use of big data.

52% of corporations think
use of big data
will generate huge
business opportunities.

Only 23.5%
of corporations have a big data strategy.

Big data in insurance

Applications



Benefits



Big data – challenges and solutions

Challenges

Data acquisition

- Lacking real-time data
- Narrow coverage
- Corporate and customer service competing for client data

Data management

- Data quality / integrity
- Lack of effective quality control policy / process

Data application

- Talent shortage
- Hard to measure ROI

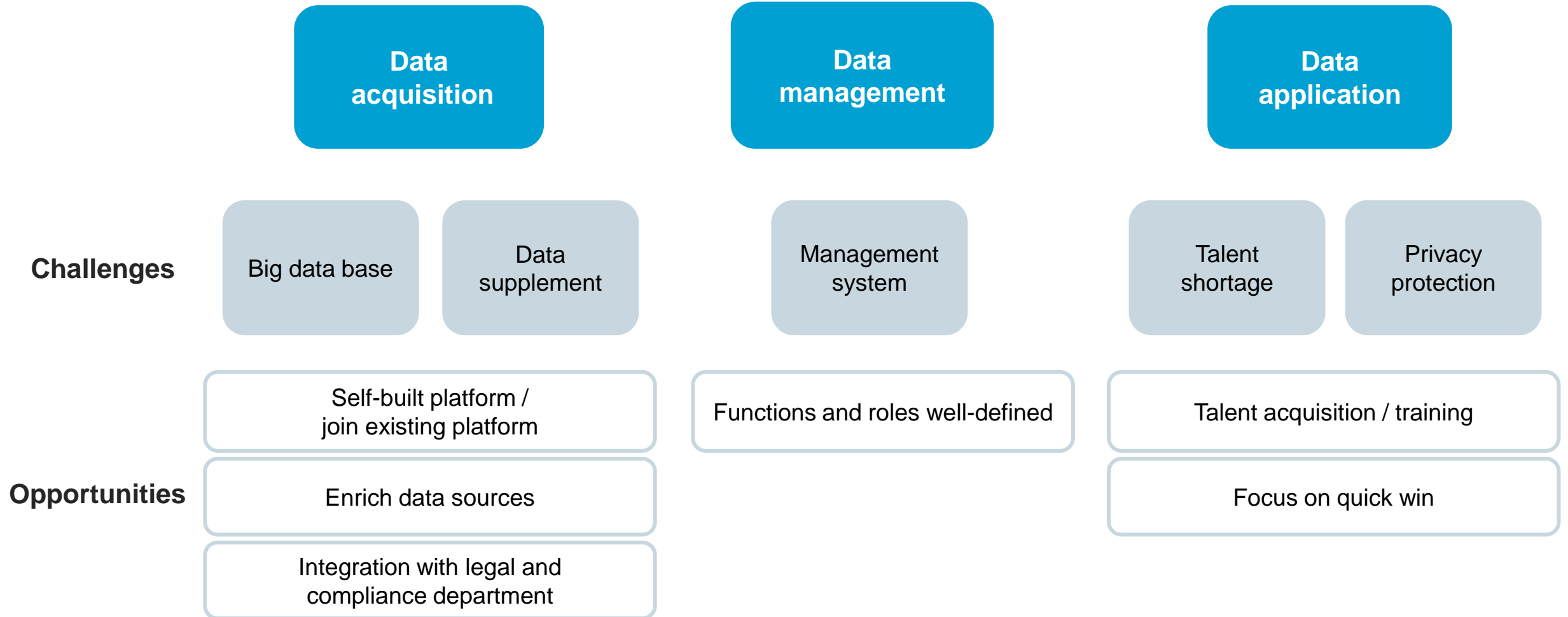
Solutions

- Widen the source of data
- Invest in effective data management
- Maximise usage of existing data, deepen mining and analysis
- Collaborate with legal department, add T&C to minimise legal barriers
- Strategic investment / M&A / resource swaps, etc

- Structure departments and roles for data management
- 2 main streams: management (back office), usage (front line)
- Effective data management – policy, process, QC, embedded in the IT system

- Integrate internal training and external acquisition
- Establish ROI assessment process

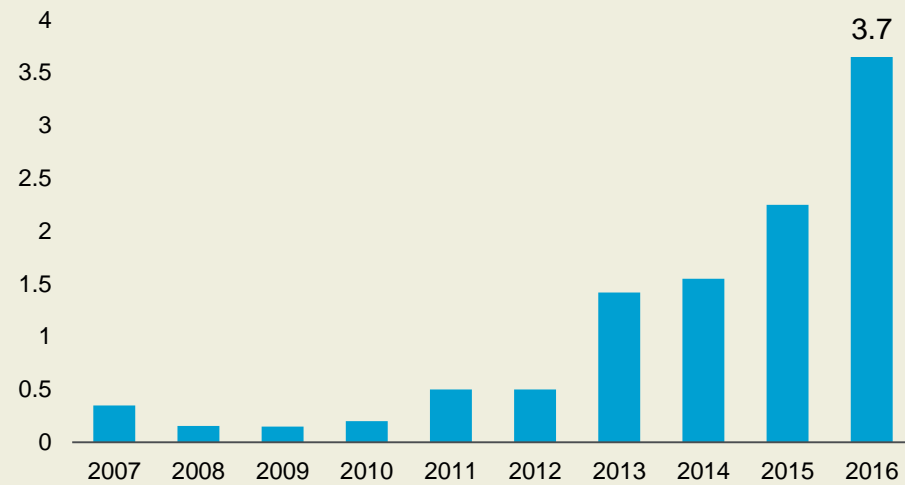
Big data – challenges and opportunities



Exponential growth and continuing

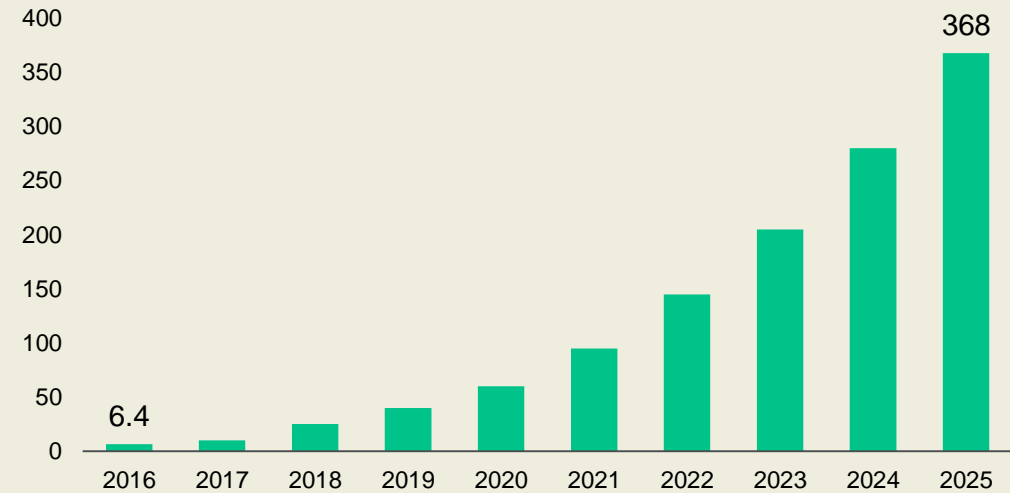
Funding in AI

Unit: USD ('00,000,000)



AI Market Size Forecast

Unit: USD ('00,000,000)



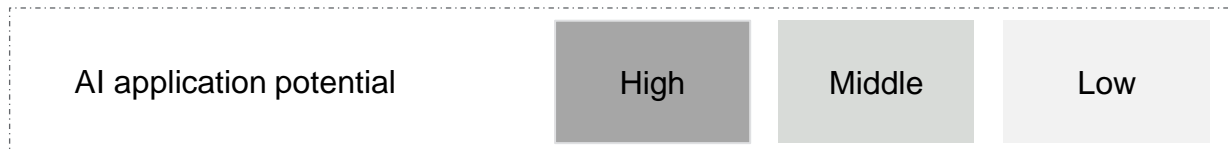
Source: Venture Scanner, Tractica

AI in insurance

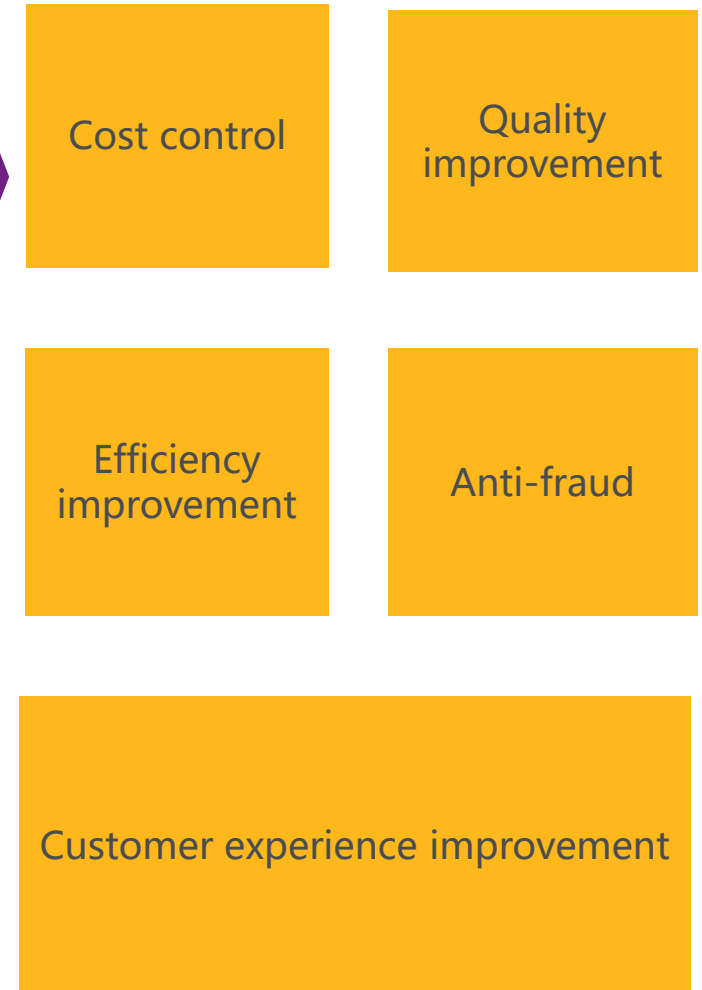
Applications



Competitive analysis	Potential customer interface	Price adjustment decision	Renewal	Risk warning	Intelligent customer interaction
Product and pricing decisions	Intelligent demand analysis	Intelligent underwriting	Policy changes	Intelligent claims	Intelligent service delivery
Regulatory & governance analysis	Intelligent product recommendation	Reinsurance	Customer enquiries	Anti-fraud	Customer behavioral intervention



Benefits



AI forecast

① AI has begun to penetrate into the insurance industry, but usage are scattered.

- Improving efficiency, reducing operating costs
- AI application in two key areas: sales and claims management

② In the long term, AI will penetrate into the full value chain, and transform the industry from a labour-intensive model to a more automated model.

- High potential in changing the labour-intensive model, replaced by AI
- Reduce labor costs, but need to re-structure the organisation, re-define the roles and responsibilities
- Corporate and government both need to consider talent management – training, skill set up-grading...etc

③ Insurers should closely monitor AI development, consider strategic investment or develop their own platform.

IoT – applications are expanding

Carrot
Rewarding
Insurance

Good driver = coupons



Pricing

Improve claims
management

Improve
profitability

Customer
service &
interaction

StateFarm + Medical monitoring

Tech device for real-time monitoring,
remote monitoring and alert



Allianz+Smart home

Tech device for real-time monitoring,
notification to policyholders' mobile
phones and Allianz when risk incidents
occur



Blue Shield+Wearable

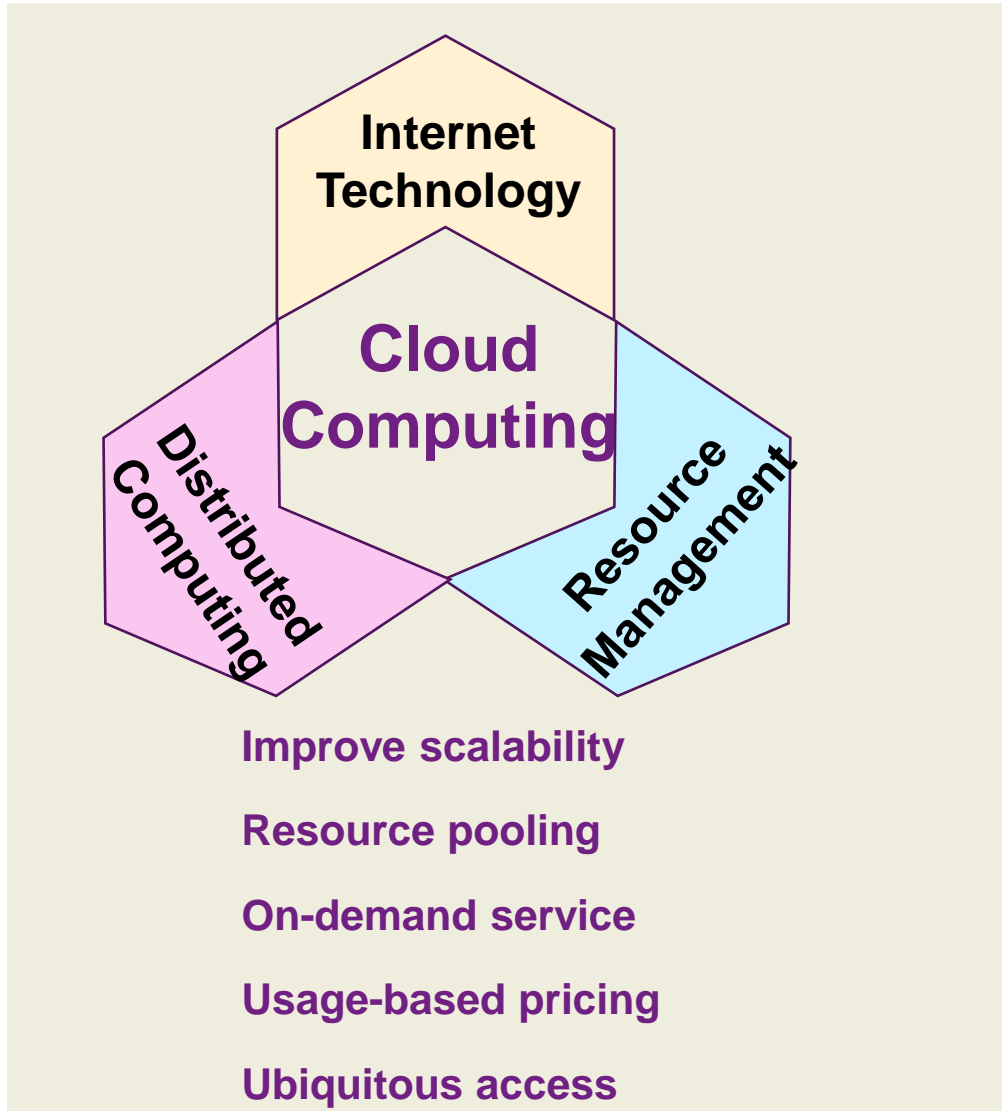
Track customer health data, reward
customers achieving health goals



Key finding:

- **Win-win situation between insurers and customers**
 - Improving customer experience, reducing premium
 - Improving risk management, increasing customer interactions, hence loyalty

Cloud computing – resource optimisation key enabler for ZhongAn



ZhongAn Cloud Computing

1
Quick and frequent transactions

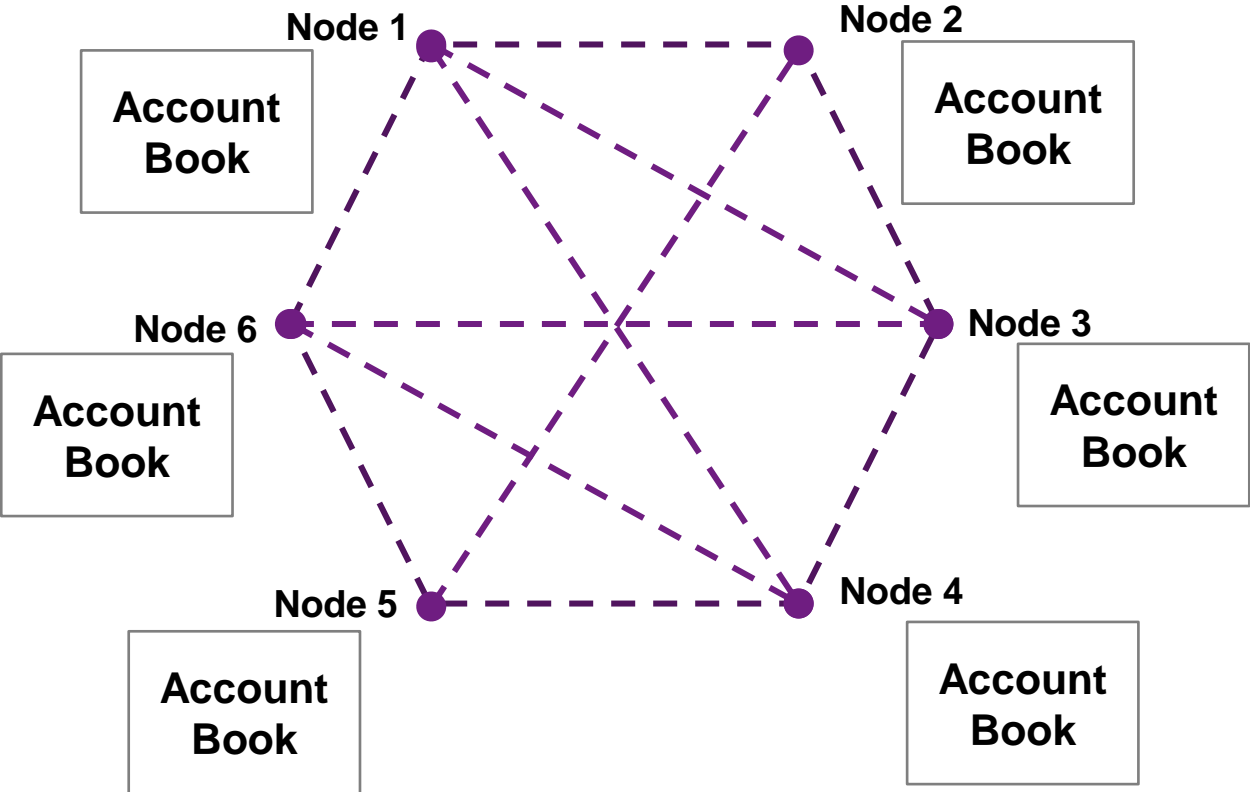
2
Strong connectivity

3
Massive volume

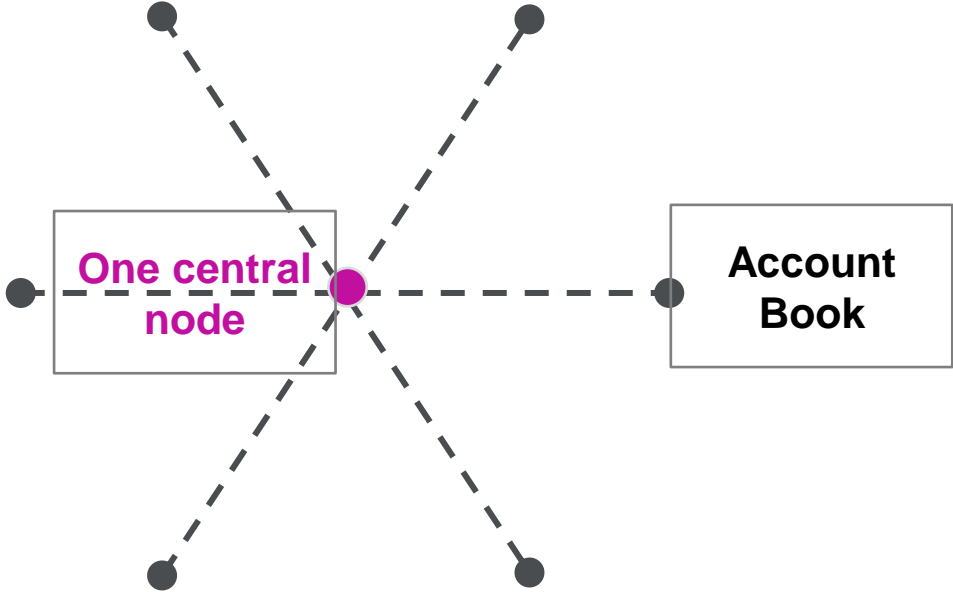
4
T+1
Asynchronous reporting

Blockchain

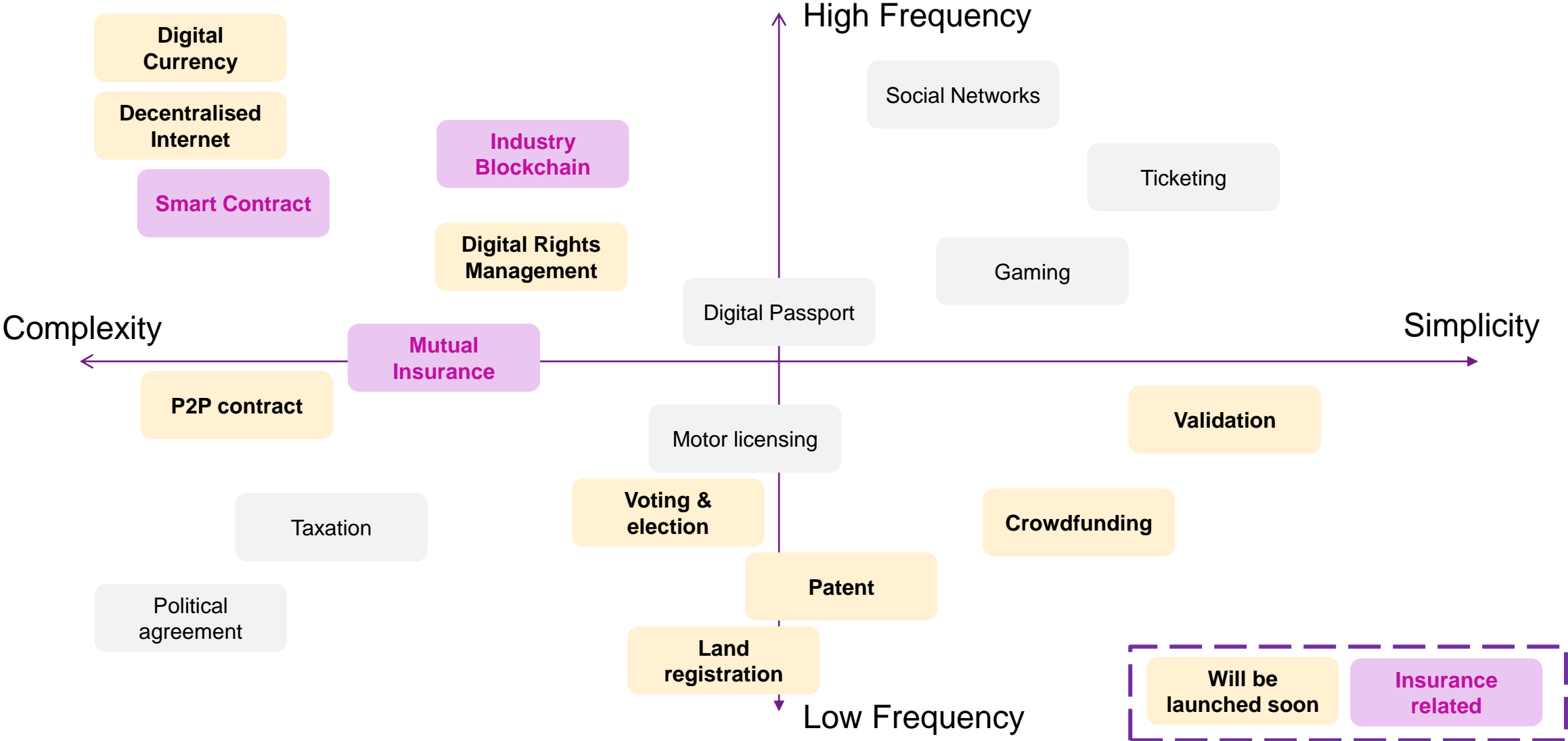
Digitised, decentralised public ledger



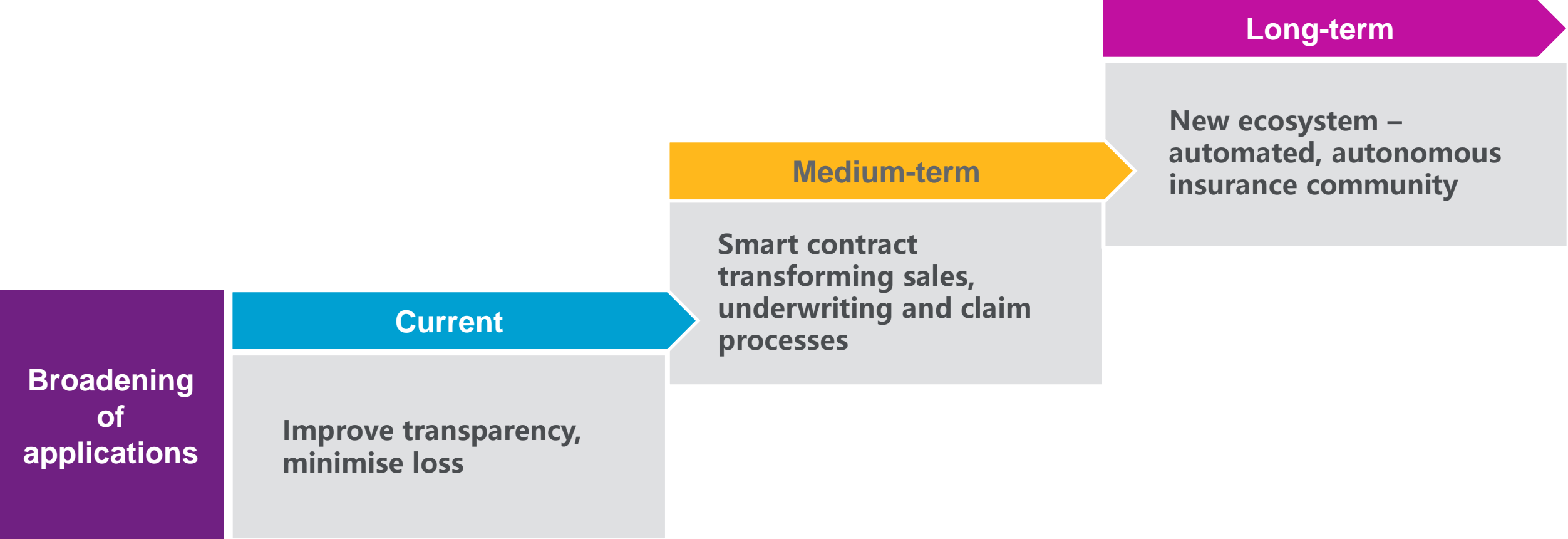
Traditional centralised accounting network (e.g. central bank)



Blockchain in application



Blockchain applications are expanding in the insurance industry



Blockchain opportunities

Insurers

- Explore Blockchain applications, adopt new technologies, matching skill set

Alliance with insurers

- Form alliance to consolidate and share data

Alliance with non-insurers

- Improve data accessibility
- Digitise currency across industries to maximise collaboration and mutual business growth

Case to watch: How much does ZhongAn worth?



From a traditional insurer's perspective

- Motor insurance tariff below guideline
- Underwriting loss
- Over reliance on shareholder business??

ZhongAn Insurance (including ZhongAn Technology)

Approx RMB 68 billion in value

Financial Index	Ping An	PICC P&C	CPIC	ZhongAn Online
ROE	10%	9%	5%	0.10%
P/E	16x	10x	28x	6380x

From a FinTech company's perspective



The ZhongAn 4 pillars



Technology disruption



Business model innovation



Big data

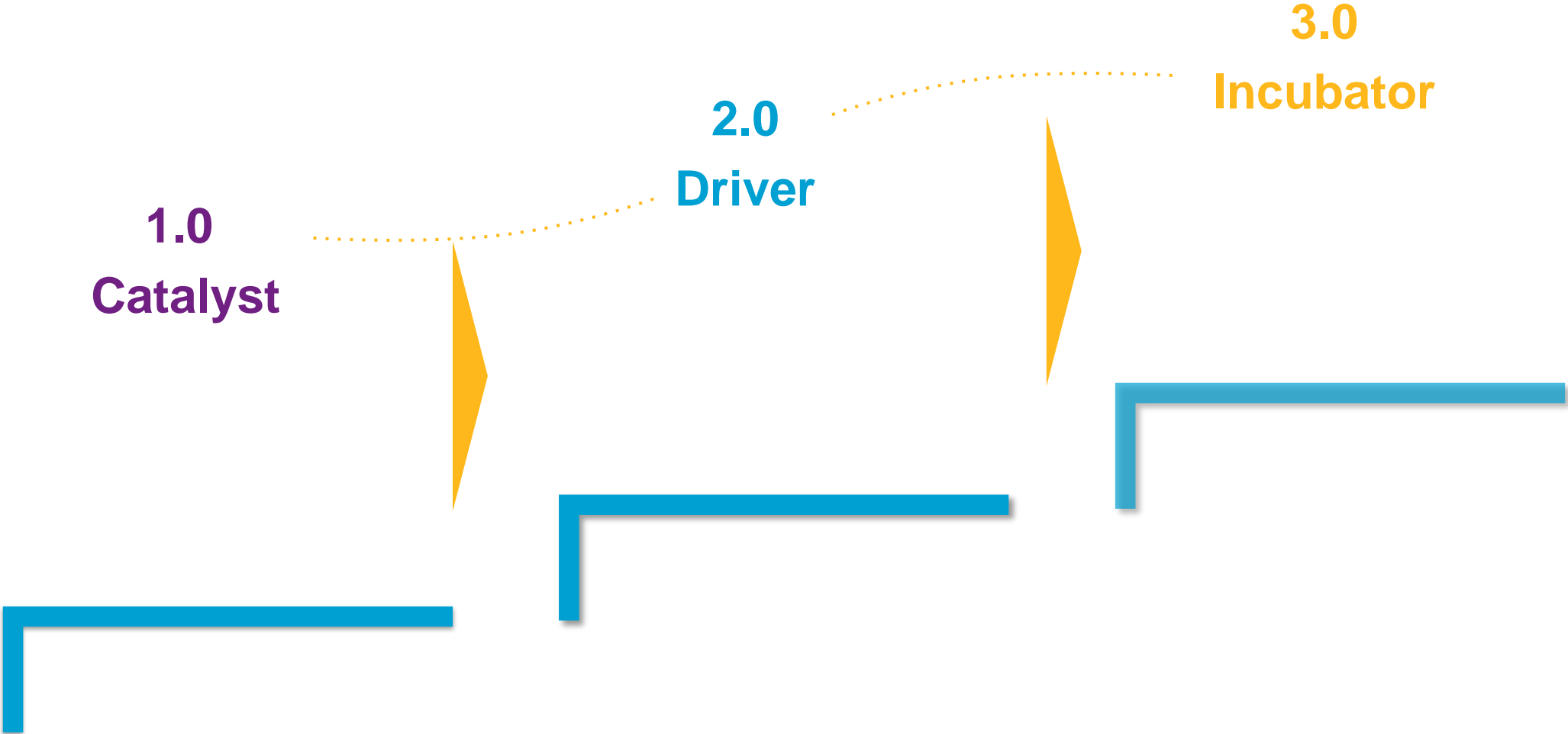


Customer experience

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Define the role of technology and how it will contribute to your vision



Financial institutions realise the importance of technology

Leading companies' positioning of technology gradually shifting from 'catalyst' to 'driver'

Citi

- In 2015, established **Citi Fintech department**, driving collaboration with FinTech companies
- Established **Citi Venture**, invested in 8 categories and a total of 23 FinTech companies in 5 years
- Introduced **Citi Accelerator**, launched Citi FinTech awards
- **Open up API**, promote Open Banking, set up Citi Developer to attract external developers

Ping An of China

Ping An Technology

- 4,000 IT experts
- RMB 7 billion yearly investment in AI technology, over 2,000 AI expert developers
- As of June 2017, applied for 1,458 patents in AI

Ping An's deep learning facial recognition technology up to a world-class level with over 100 applications

Number of calls
300 million+

Per minute processing
30,000

Daily recognitions
20,000

P&C

Issue time: 2hr -> **1min**

Banking

Online review: 5min -> **2s**

Loan

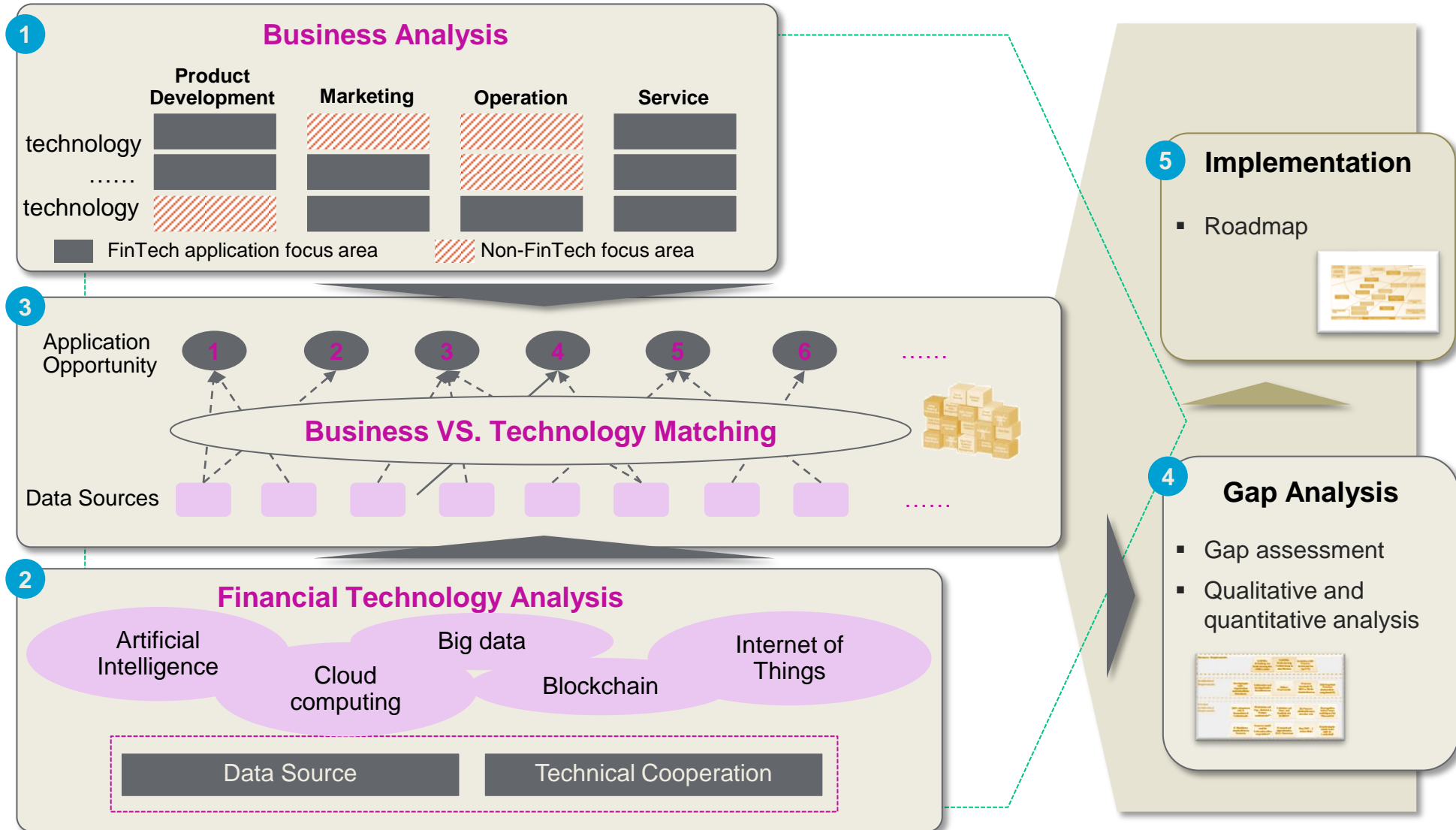
Daily business volume: 10k -> **50k**
Loan approval: within **5 minutes**

P2P

Account binding: 5min -> **1min**

From a tool to becoming an incubator

-> assess the value and risk -> prioritise and set your development roadmap



ZhongAn – 3 levels of applications

Catalyst

Goal 1:
Digitisation
upgrade

Driver

Goal 2: Leader in the
applications of new
technologies such as
blockchain, AI

Incubator

Goal 3: As an incubator for
innovation and business
development for both internal
operations and forming
external alliance

A

AI

B

Blockchain

C

Cloud
Computing

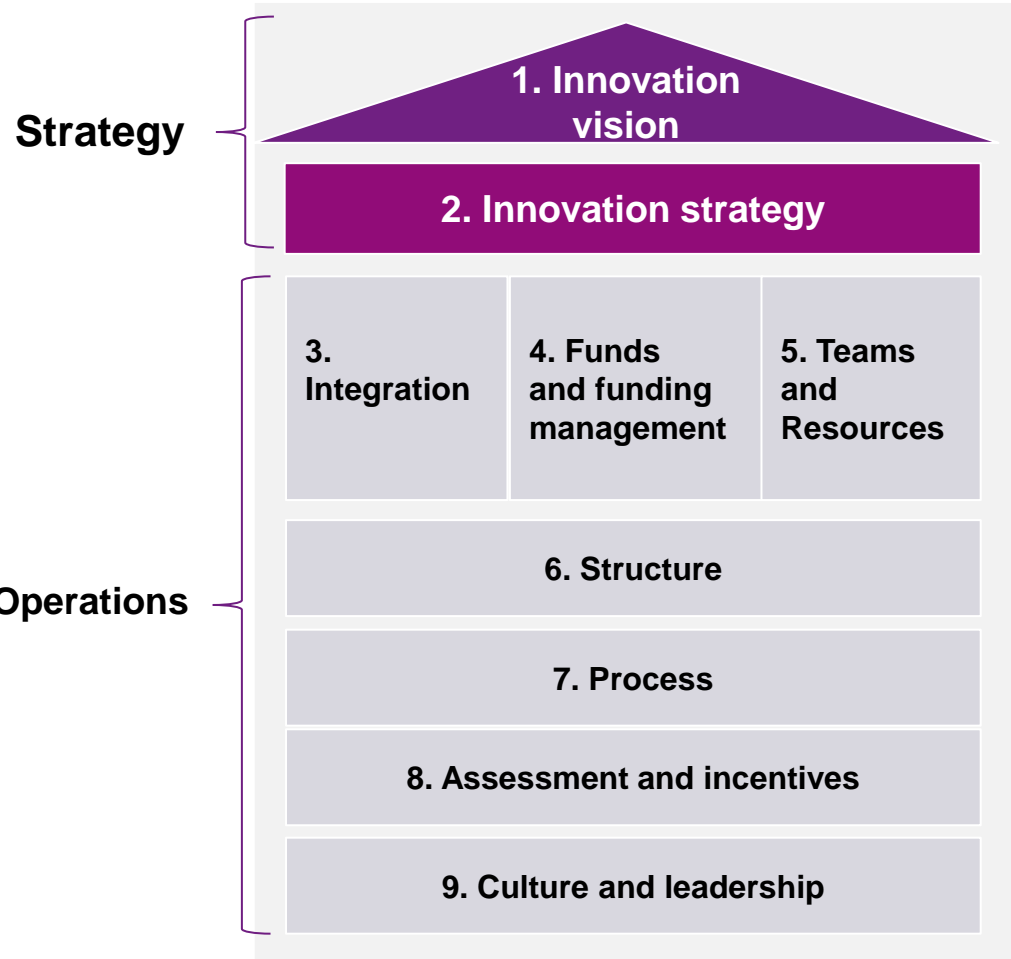
D

Big Data

ZhongAn – a complete ecosystem



Create a innovation system



	Module	Description
1	Innovation vision	<ul style="list-style-type: none"> Innovation vision and philosophy of the company
2	Innovation strategy	<ul style="list-style-type: none"> Goals Focus and priorities, scope Technology types and capabilities Increase success rate
3	Integration	<ul style="list-style-type: none"> Ideas management and implementations
4	Funds and funding management	<ul style="list-style-type: none"> Injection and withdrawal, consider social funding Innovation funding management
5	Teams and Resources	<ul style="list-style-type: none"> Build teams with optimal size and skill set Invest in necessary resources
6	Structure	<ul style="list-style-type: none"> Optimise structure (centralised / decentralised / mix) Clearly defined roles and responsibilities
7	Process	<ul style="list-style-type: none"> Design the processes
8	Assessment and incentives	<ul style="list-style-type: none"> Effective assessment, set tolerance of failure Effective incentive mechanism
9	Culture and leadership	<ul style="list-style-type: none"> Encourage entrepreneurship Empower innovation management teams, strengthen senior and middle level leadership

Implications to the actuarial profession

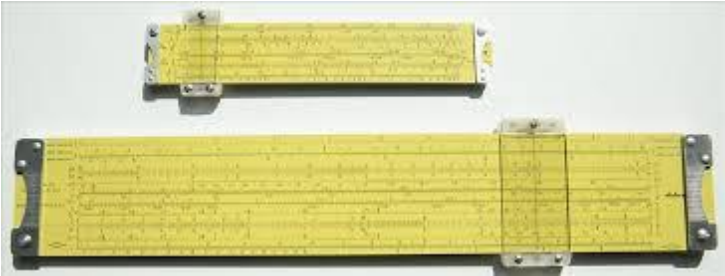
**Richer data,
higher precision,
automated / intelligent
platform**

**Improved efficiency
Lower cost**

**Routine / logistic work
replaced by technology**

**Actuaries need to be
multi-talented with strong
strategic and business
mindset**

Implications to the actuarial profession



Thank you

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