



INNOVATION WITH INTERNET AND BIG DATA PERSPECTIVE OF PRODUCT DEVELOPMENT AND DISTRIBUTION CHANNELS

Nov 2017

Agenda

- Big Data and Analytics in Insurance
 - Robotics, RPA and AI in Insurance
 - Innovation in Product Development
 - P/C industry
 - Health Industry
 - Innovative Insurance companies
 - Innovation in Distribution Channels
 - Traditional channels
 - Emerging channels
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BIG DATA AND ANALYTICS IN INSURANCE

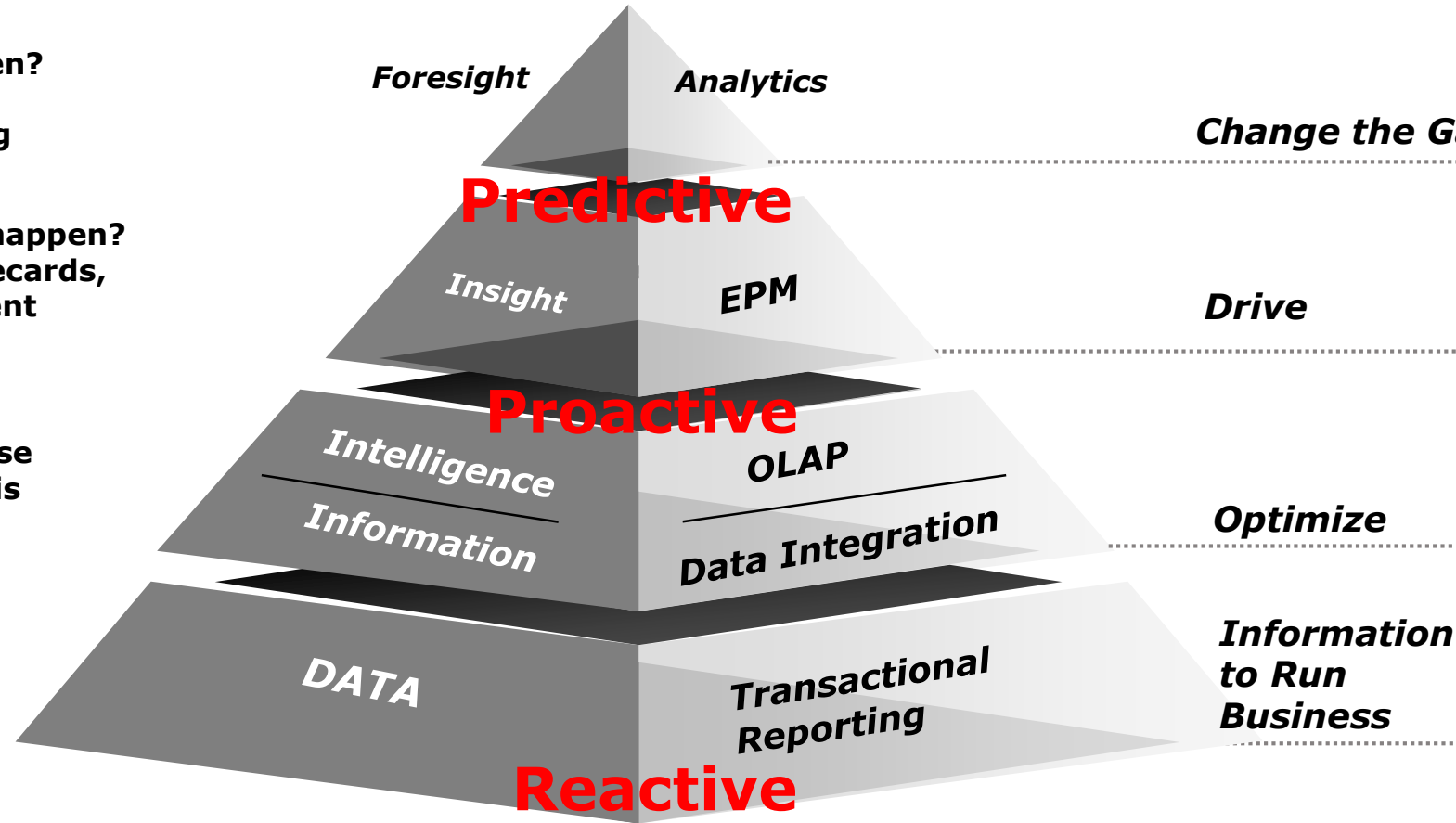
The journey of Insurance Analytics

What should happen?
Data Mining,
Predictive Modeling

How will I make it happen?
Dashboards & Scorecards,
Strategy Management

Why did it happen?
Integrated Enterprise
Information Analysis
and Delivery

What happened?
Siloed BI Apps



Change the Game

Drive

Optimize

*Information
to Run
Business*

Insurance Analytics so far



DATA MANAGEMENT AND REPORTING

- Data Gathering, Synthesis and Standardization
- Sales KPI reporting
- Product Uptake reporting
- Forecasting model maintenance
- Performance Visualization and Dashboards



SALES AND MARKETING ANALYTICS

- Market Mix Modeling
- Campaign Analytics
- Customer Satisfaction analytics
- Channel Productivity analysis
- Advertisement impact measurement



CLAIMS ANALYTICS

- Predictive Analytics
- Claims Customer Satisfaction Analysis
- Loss Ratio Analytics
- Industry Benchmarking



PRICING ANALYTICS

- Price / risk management
- Loss Modeling
- Pure Premium Models
- Price Optimization Management
- Actuarial analysis

Future of Insurance Analytics

Short Term Insurance

- Usage Based Insurance
- Applicability of Location Intelligence in Underwriting
- Combining live weather data with historic patterns to optimize catastrophe loss ratios

Life Insurance

- Automated Underwriting to speed up the process and eradicate errors
- Predictive Models Replacing Medical Test
- More Precise Risk Estimations using Big Data (e.g. clinical drugs, customer history)

Health Insurance

- Leveraging extensive data (demographic, policy, surveyor, provider etc.) to identify fraud
- Controlling cost overrun by healthcare providers using RFID / sensor techniques
- Online integration with retail, services providers, social media to understand customer behaviour

Insurance Analytics Success Stories

1. An American insurer leveraged **Telematics** Data received from devices to **Automate Quote and Bind** process via Web and Mobile.
2. An American insurer implemented **Predictive Analytics for Operations** instead of Pricing. This helped them track the time frame on each step of claims resolution and dependency matrix so that **TAT** can be improved .
3. A global life insurance leveraged the data from **Wearable Technologies** to **Underwrite Profitable Business** as Life Insurance Underwriting is one time Activity.
4. A leading insurer implemented Big Data and Analytics for **unstructured data** collected via **Worker Compensation Claims and Adjuster's Notes**. This helped them achieve better patient outcome and overall cost of coverage.
5. A global insurance leader has developed big data and analytics capability in the **commercial space** to underwrite profitable business by learning **government source of weather and geospatial data**.
6. A global **Re Insurance** giant uses Big Data and Analytics to streamline their Claims, Cyber Security and Fraud by **double check the data provided by Insurers**.
7. European **Health Insurance** believes that Big Data and Analytics **will save them approx. \$200 Billion / year** of leakage in **fraud and streamline health services** for patience

Adoption of Insurance Analytics

Becoming an analytics-driven organization

Analytics is part of carrier DNA and *synonymous* with pricing, underwriting, and claims

Organizational structure is “modern” and analytics driven; different functions are better integrated, silos are dissolved

Data-driven decision making is norm

Achieving scale

Center of excellence is in place, with dedicated resources, investment, and organizational commitment

Analytics is at scale with a pipeline of use cases, spans many domains and functions, and serves most or all business units

Analytics is still a function. It is *incremental* to core business approach

Capturing value

CEO support is clear. Business pulls for more analytics

Front line is heavily involved in model development. Focus is on adoption and usage

Analytics is subscale, not yet covering full breadth of businesses and domains

Building insights

Predictive and prescriptive models are developed, generating clear insights for business

Analytics is a function, not yet led by business or fully integrated into front line

Key take away

Analytics is a function led by business

Start small for early win and proving value

Ensure and invest in right resources

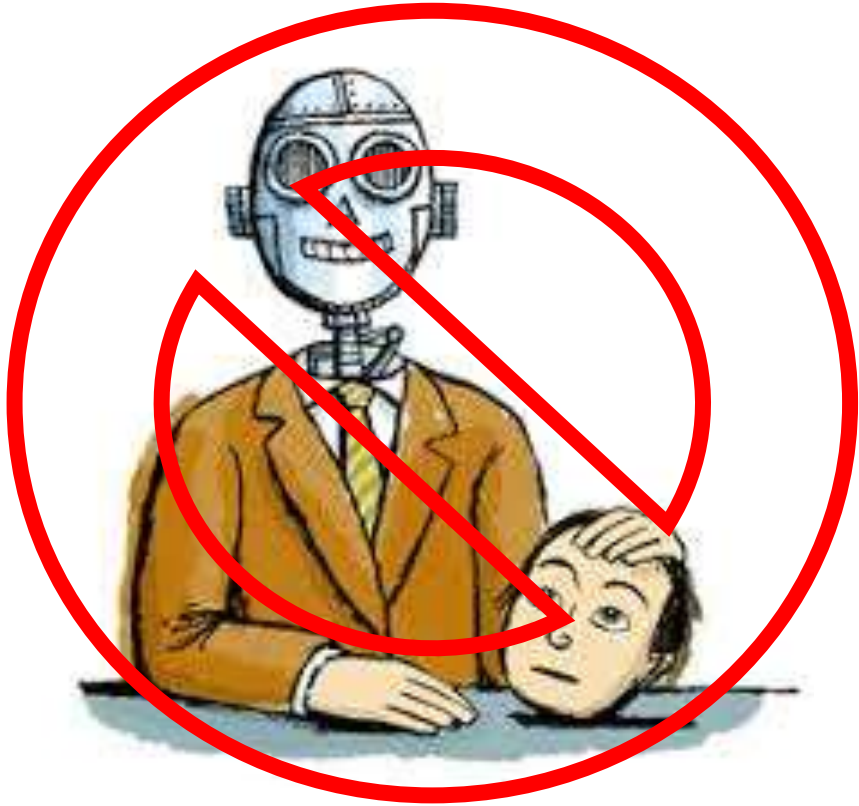
CEO / senior stakeholder support is required

Always keep security and governance top in mind

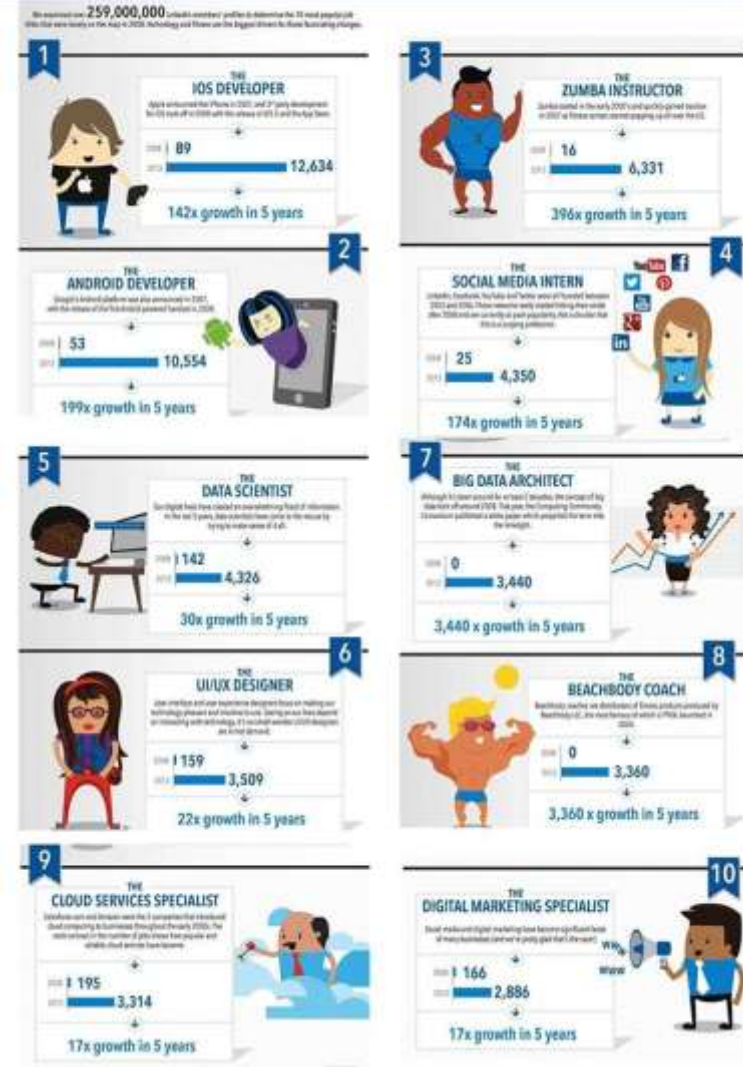
Build analytics culture, it should be adopted as DNA of organisation

ROBOTICS, RPA AND AI IN INSURANCE

Chill - Robots is not an alternative of Human Capital



10 Jobs that Didn't Exist 10 Years Ago!



IOS & ANDROID DEVELOPER

SOCIAL MEDIA ANALYST

DATA SCIENTIST

BIG DATA ARCHITECT

UI / UX Developer

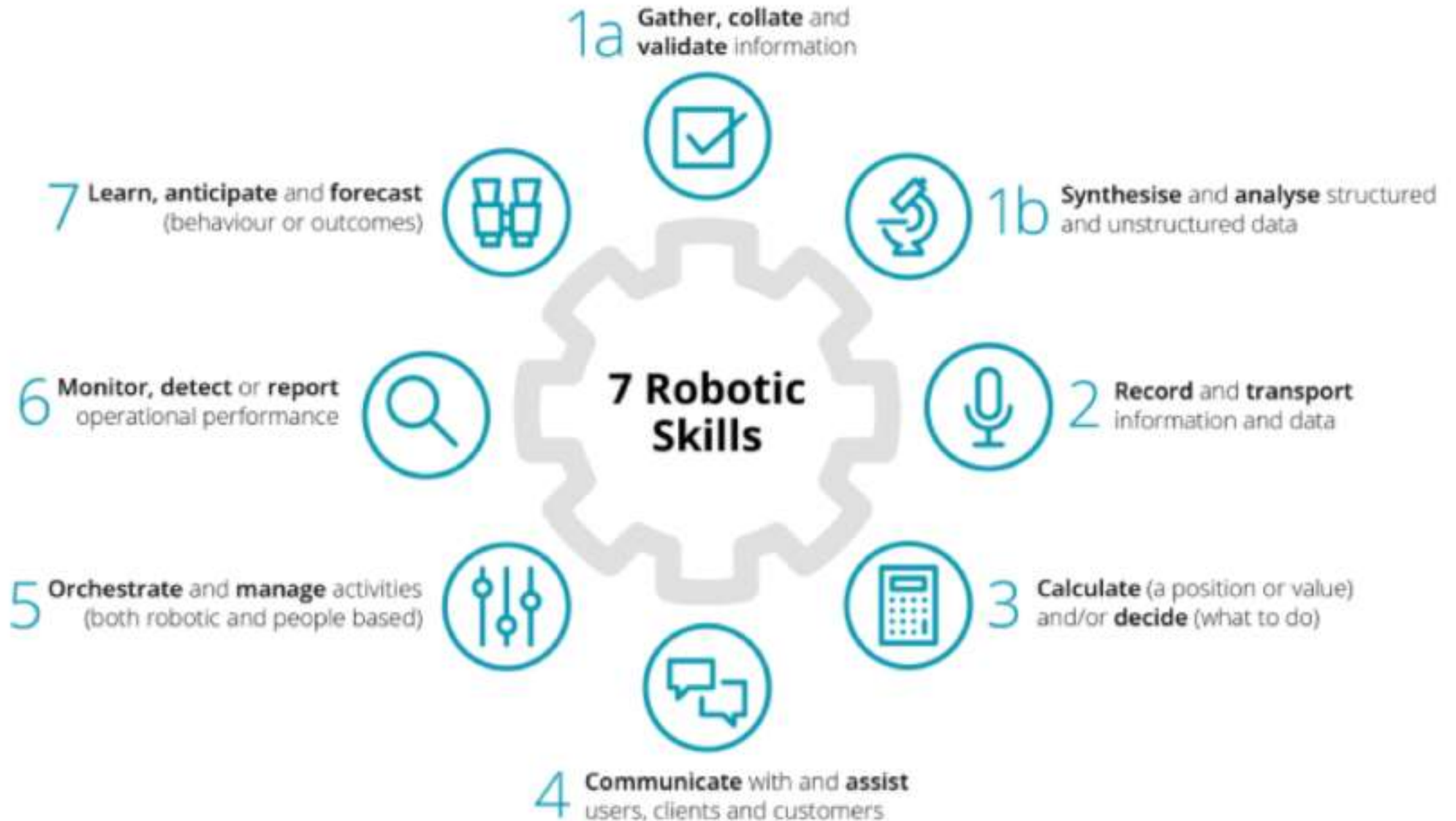
Cloud Services Specialist

DIGITAL Marketing Specialist









Telematics Experts

Location Intelligence Team

Jobs performed by Robots



Implementation of RPA in Insurance

Manual, expensive, error-prone process	Automated through RPA in 2 weeks
 <p>Tens of thousands of life insurance policies in suspense that need to be remediated</p>	 <p>Robots developed on an RPA platform within two weeks by a Digital McKinsey team</p>
 <p>Regulatory pressure on the client from multiple state regulators to bring policies out of suspense before the deadline</p>	 <p>Suspense-remediation activity automated & executed by robots Number of robots highly scalable (no additional training time/robot) Policy-conversion time for each policy reduced by 50%</p>
 <p>30+ individuals working on remediation on a daily basis; five to seven minutes of manual effort required to bring each policy out of suspense</p>	 <p>Skilled resources freed up to work on higher-value activities Human errors mostly eliminated</p>
 <p>3-4 weeks of training to bring a new individual onboard and make them productive</p>	 <p>80% reduction in process cost Tremendous improvement in process quality, logging, and auditability</p>

- Allow staff to focus on customers
- Eradicate human errors
- Improve Turn Around Time (TAT) and cost
- RPA is best solution for repetitive activities
- Fast Return of Investment (ROI)
- Machine Learning is highly scalable

Robotics, RPA & AI Use Cases

1. Generic document scanning and intelligent optical character recognition (OCR) solutions for processing paper documents
2. Voice authentication and processing with natural language interpretation
3. Managing claims validation and simplifying operations around claims management
4. Use data gathered through drones and vehicle sensors to pre-validate or pre-approve claims by verifying the claimant information and data;
5. Use social data to design fraud indicators that could predict to some extent the risk of a fraud from a given entity
6. Virtual brokers for tailored life and car driving insurance policies
7. Use of drone technology in the agricultural insurance
8. Analysis of legal contracts

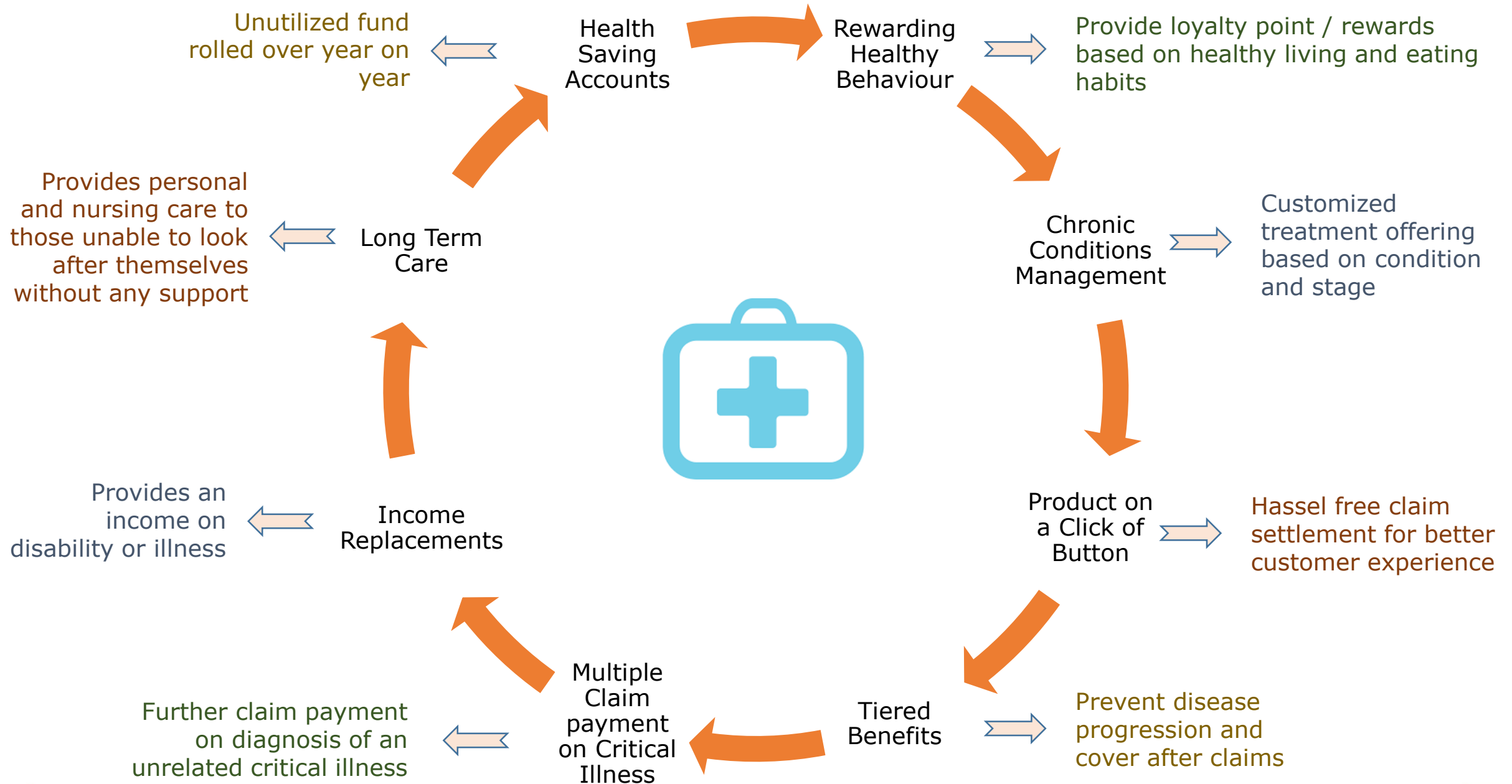


INNOVATION IN PRODUCT DEVELOPMENT

Innovative P/C Insurance Products in Global Market

Pay as you Park	Rates are based on how long the vehicle is <i>not</i> driven.
GreenMaker	A product liability policy for home or garage-based businesses that manufacture cosmetics, clothing, jewellery, toys, computers, or other products using primarily recycled, up cycled, natural or organic materials
Commercial Specific Liability	A low-cost option to the Commercial General Liability (CGL), the CSL lets business owners specify the exposures they want covered.
Vanishing Coverage	A multi-year package policy available to owners of high-end coastal properties and antique autos. The premium is lowered by the same amount the deductible is raised each year until the deductible reaches the policy limit or the premium hits zero, whichever happens first.
Home Based Interruption Protection	Covers loss of Internet connection, telephone service, HVAC and refrigerator. Key family interruption provision covers time lost due to family emergency, including injury, sickness, potty training accident, or the "Daddy, I'm bored" syndrome
Now Show Coverage	Handover insurance now covers damage caused by old pipes, leaky roof, frayed wiring or other conditions that did not get fixed on schedule as promised
Global Scoring	Policy that guarantees to convert its auto and home policyholders' credit scores to whichever foreign currency presents their financial history in the most favourable terms
Relationship Breakdown Coverage	Coverage is triggered after two lovers break up and remain separated for more than three months. Pays 50% of the cost of unreturned gifts including rings and other jewellery; moving expenses;
Homeworkers' Compensation	Injuries related to solitary worker syndrome (where individuals exhibit reduced social skills), excessive weight gain, unnatural pet attachment, and deterioration of driving skills.
Hoosier Daddy Policy	a policy that protects a family's income while the breadwinner is imprisoned for financial crimes

Key to innovate in health insurance products



Insurance Companies with Innovative Insurance Models

- Using **drones** to capture aerial images, the company flags up potential problems for properties and then files a report for their clients

BetterView Drone Insurance



- Offers cover for **pets, homes, gadgets & private health**. Bought by Many challenges consumers to reject the insurance production line by joining a site

Brought by Many



- Using the company's AI bot, it takes just **90 seconds to get insured**. The service is available on iOS, Android and for desktop.

Lemonade



- They aim to give bigger discounts on procedures by having a **smaller group of core providers that are close to where their customers live** and work.

Melody Health Insurance



- They have an app that enables users to correspond directly with their **doctors** and customer services reps are always available.

Oscar Health Insurance



- Their focus on micro-duration is different than a general life insurance policy since it is only enacted during **air travel**.

Sure On Demand Insurance



- It enables its users to choose which of their **belongings** to cover and for how long. The coverage granted and cost are extremely transparent & upfront.

Trov On Demand Insurance



- At Guevara you join a group with other **drivers**. By pooling part of your premiums together, your group can save up to 50% when no/less claims.

Guevara Peer to Peer Car Insurance



- GiveSurance is a funding platform that enables **charity** supporters to make recurring donations through their existing insurance payment systems

GiveSurance



- You can connect to your friends and receive up to 80% money back, every year, just as long as none of you breaks, loses or has their **phone** stolen.

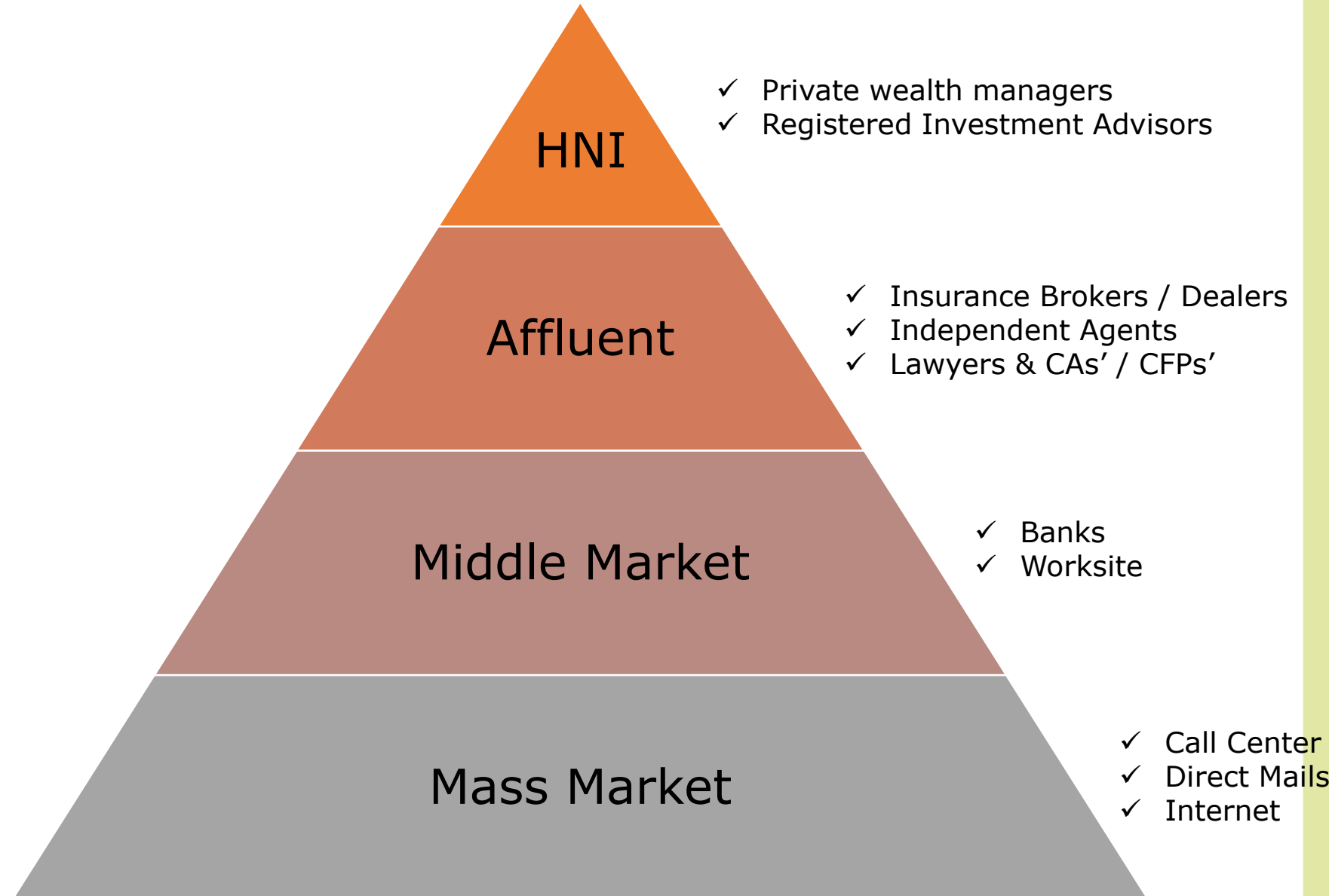
So Sure Phone Insurance



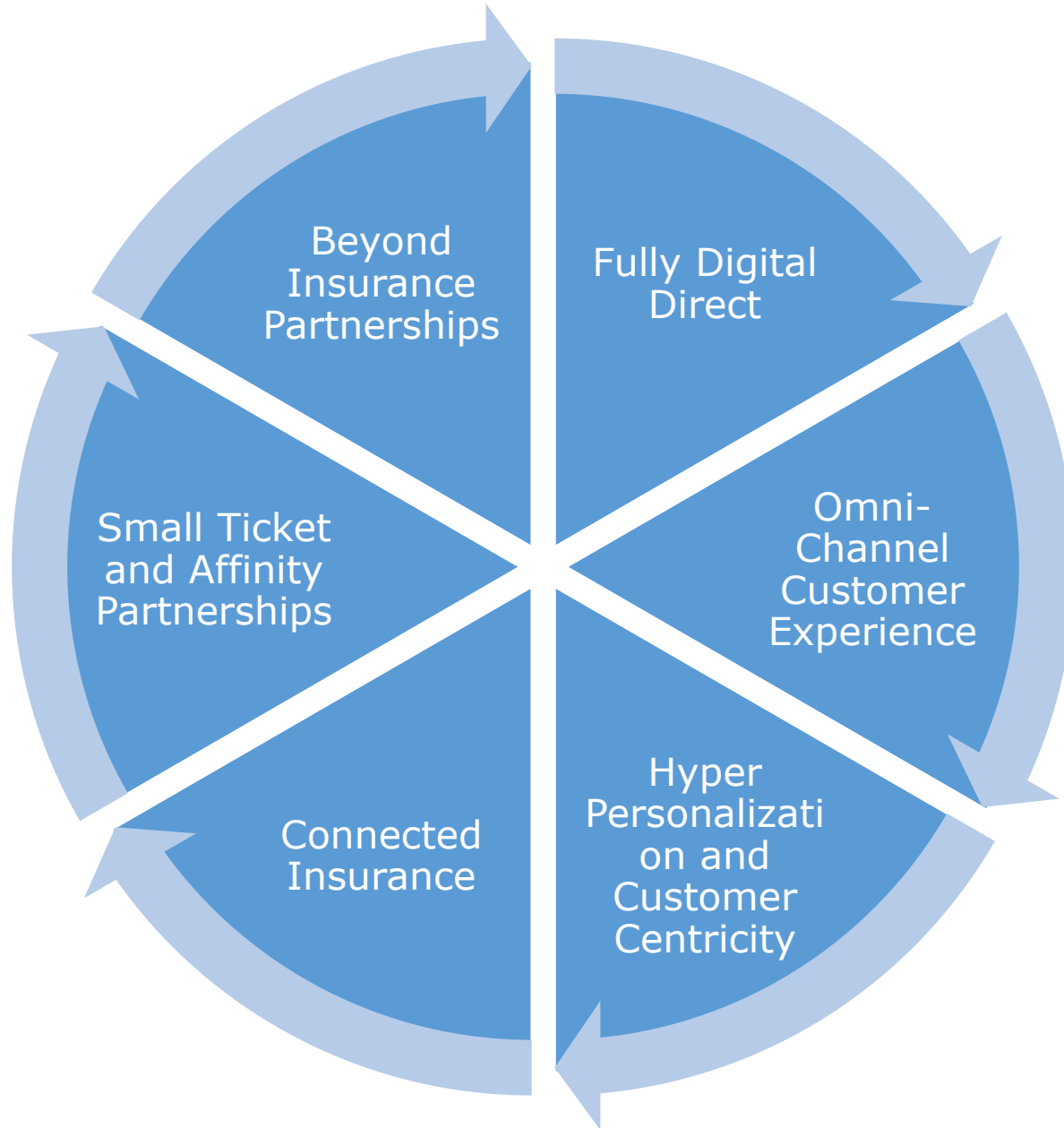
INNOVATION IN DISTRIBUTION CHANNELS

Traditional Insurance Distribution Channel

- Broker
- Individual Agents
- Corporate Agents
- Micro-Insurance
- Banc-assurance
- Cell Phone/PDA
- Kiosks
- Internet
- E-commerce
- Work Site Marketing
- Direct Marketing – INTERNET
- Islamic Insurance – Takaful
- Digital TV/Satellite Selling
- Supermarkets and other retail outlets
- Affinity Channels and Groups
- Insurance specific debit/credit cards
- Call Centres



Digital Transformation in Insurance Distribution



- Big insurers are adopting Omni Channel Customer Experience strategy to leverage their reach and scale to digital economy
- Nimble insurers target digital-only customers with a single direct distribution channel
- **Connected insurance offers carriers big opportunities to improve their distribution and broaden their products**
- Hyper-personalization lets insurers get close to customers to deliver great experiences and additional products and services

Conclusions

- Smart small and prove value is key to analytics
- Robotics are coming, it is better to adopt than ignore
- Insurance Products are becoming more and more innovative, it is important for insurance companies to provide relevant and transparent insurance policies to customers
- Important is to leverage digital channel and marry them to traditional methods for innovative distribution model
- Customer centricity and experience is the key for long term sustainability of insurance industry

Acknowledgements

- Sources of information:
 - In2IT Technologies
 - McKinsey
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 - Insurance Information Institute
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Thank You