

# ACTUARIAL CONFERENCE

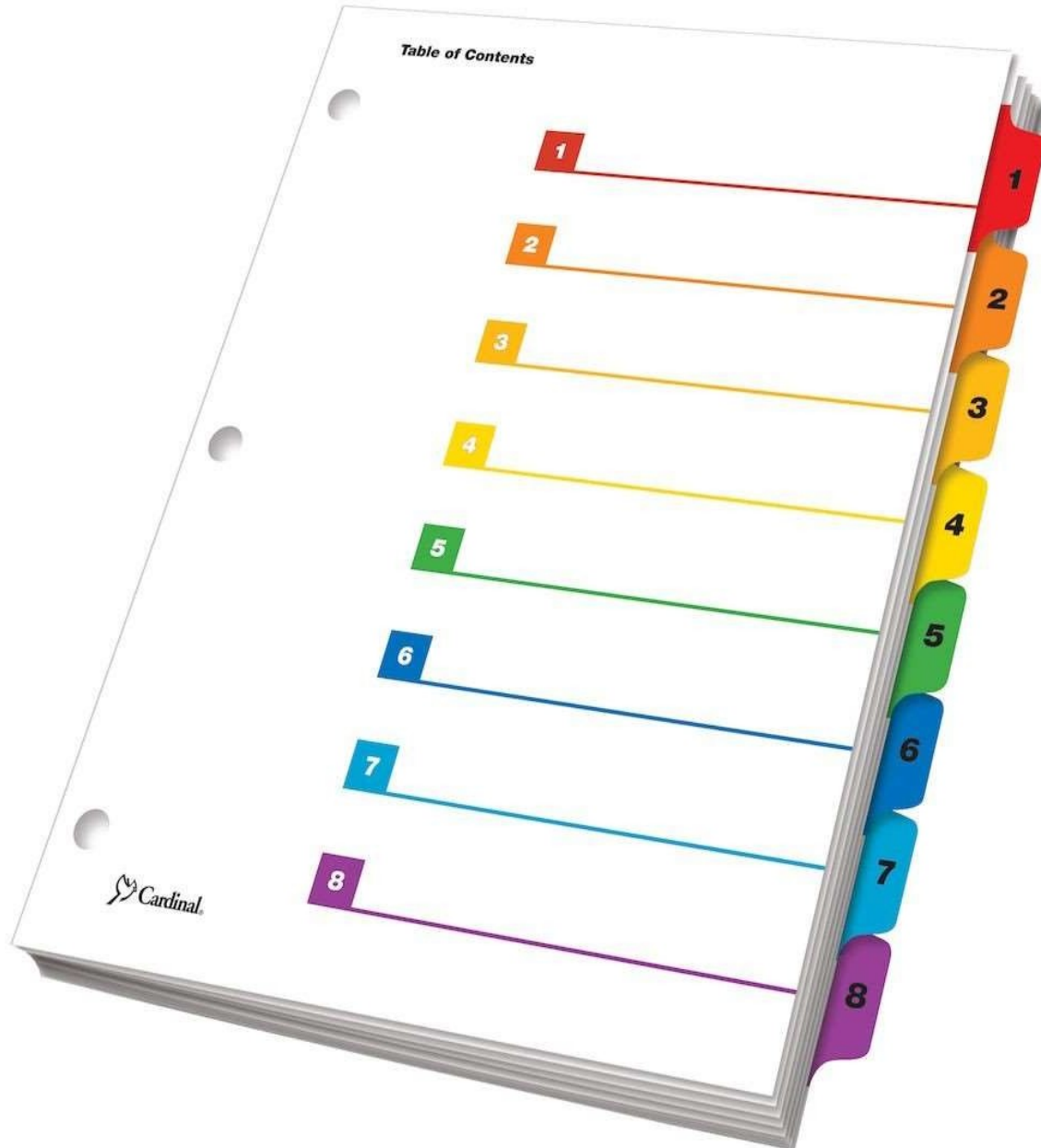
2018

**Underwriting in GI – Has it remained art for the past 100 years or has it developed in science**

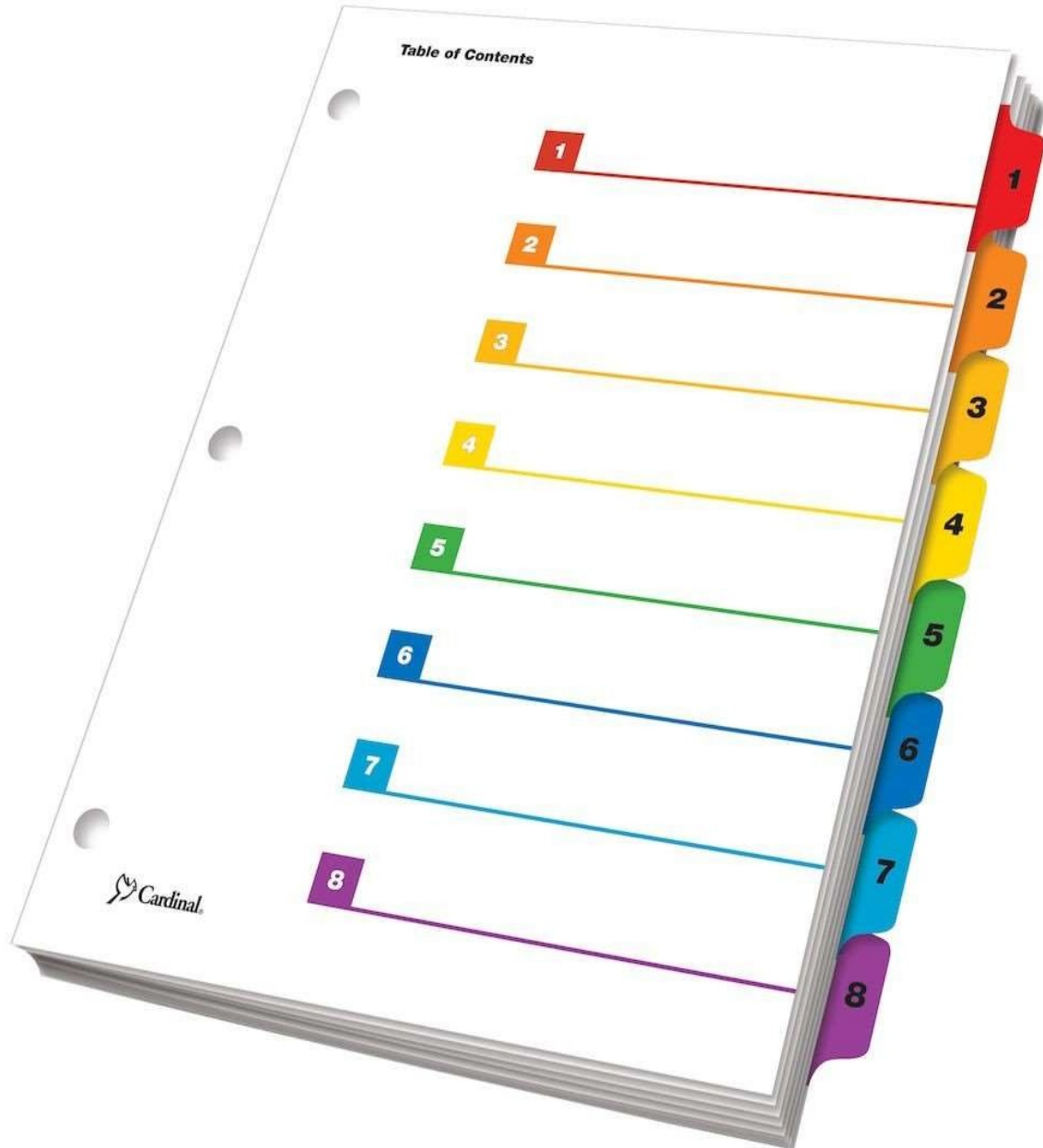
**SASIKUMAR ADIDAMU**

Chief Technical Officer

BAJAJ ALLIANZ GENERAL INSURANCE CO. LTD.



1. History Of General Insurance Industry in India
2. Risk Management and Underwriting
  - Role of Underwriter
  - Evolution of Underwriting
3. Evolution of Technology in Underwriting
4. Underwriting – Art or Science ?



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# History Of General Insurance Industry in India

1800

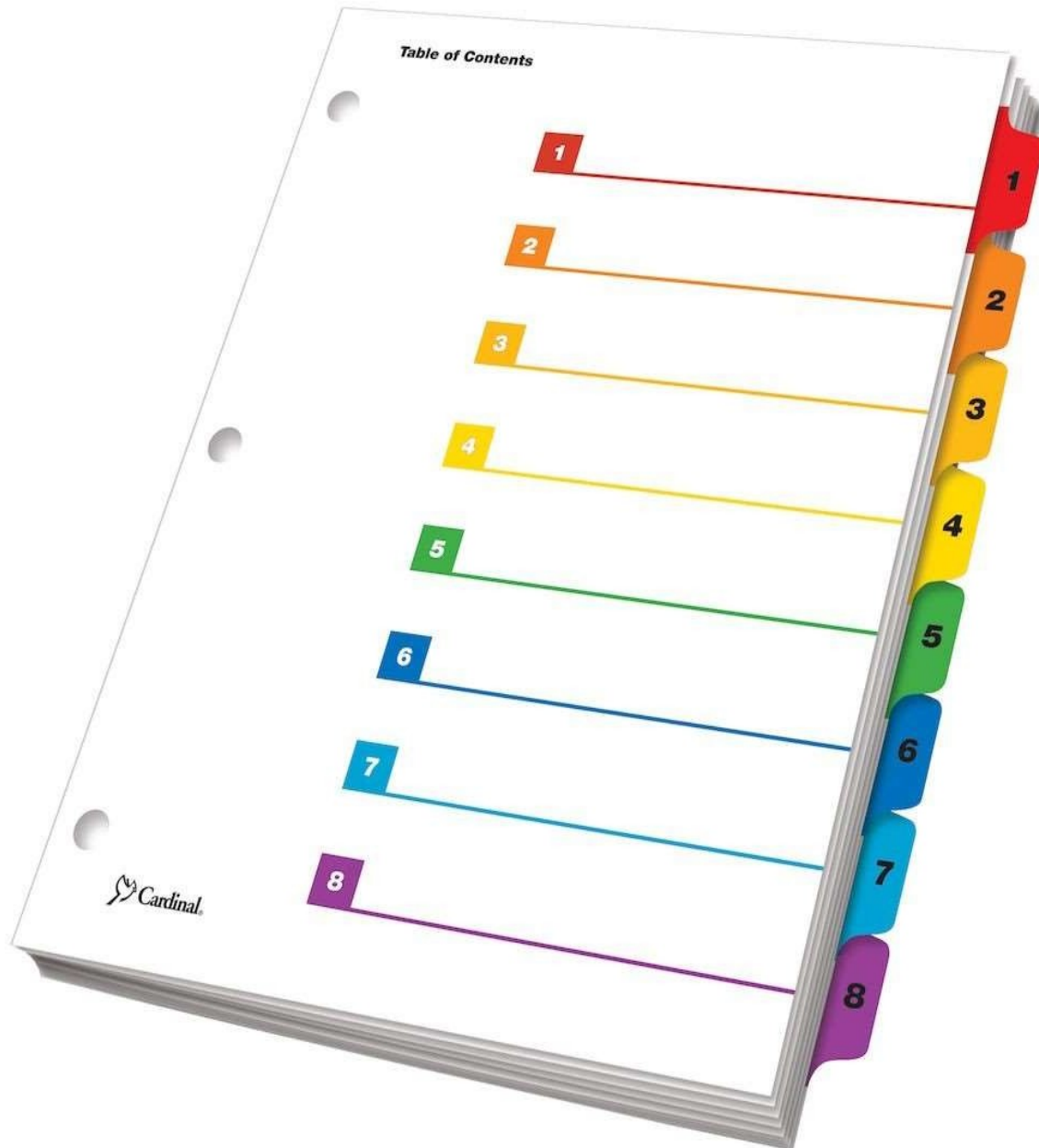
- 1850 – Triton Insurance – 1<sup>st</sup> company to write General Insurance
- Fire Insurance Agents Association formed - 1882 : Bombay Association ; 1888 : Calcutta Association ; 1896 : Madras Association

1900

- 1900 – Introduction of Local tariffs
- 1905 - Fire Insurance Agents Association Dissolved and Fire Insurance Association emerged
- Birth of Insurance Companies – 1906 : National Insurance Co. Ltd. ; 1919 : New India Assurance & 8 other Insurance companies ; 1938 : United India Insurance Co. Ltd. ; 1947 : Oriental Insurance Co. Ltd. ; 1972 : General Insurance Company
- Various Acts were passed followed by Amendments – like Motor Vehicle Act , Insurance Act , General Insurance Business Nationalisation Act

2000

- 2000-05 - NIA, NIC, OIC & UII became individual PSU insurers with GIC becoming the sole Indian Reinsurer . Then , other private insurers (Life and Non-life) and stand-alone health insurers also emerged
- 2006-08 – Detarrification . Led to intense competition
- 2013-17 - New business opportunities by way of Crop Insurance and RSBY etc.
- 2018 – Era of Artificial Intelligence – Machine Learning, Block-chain technology has dawned



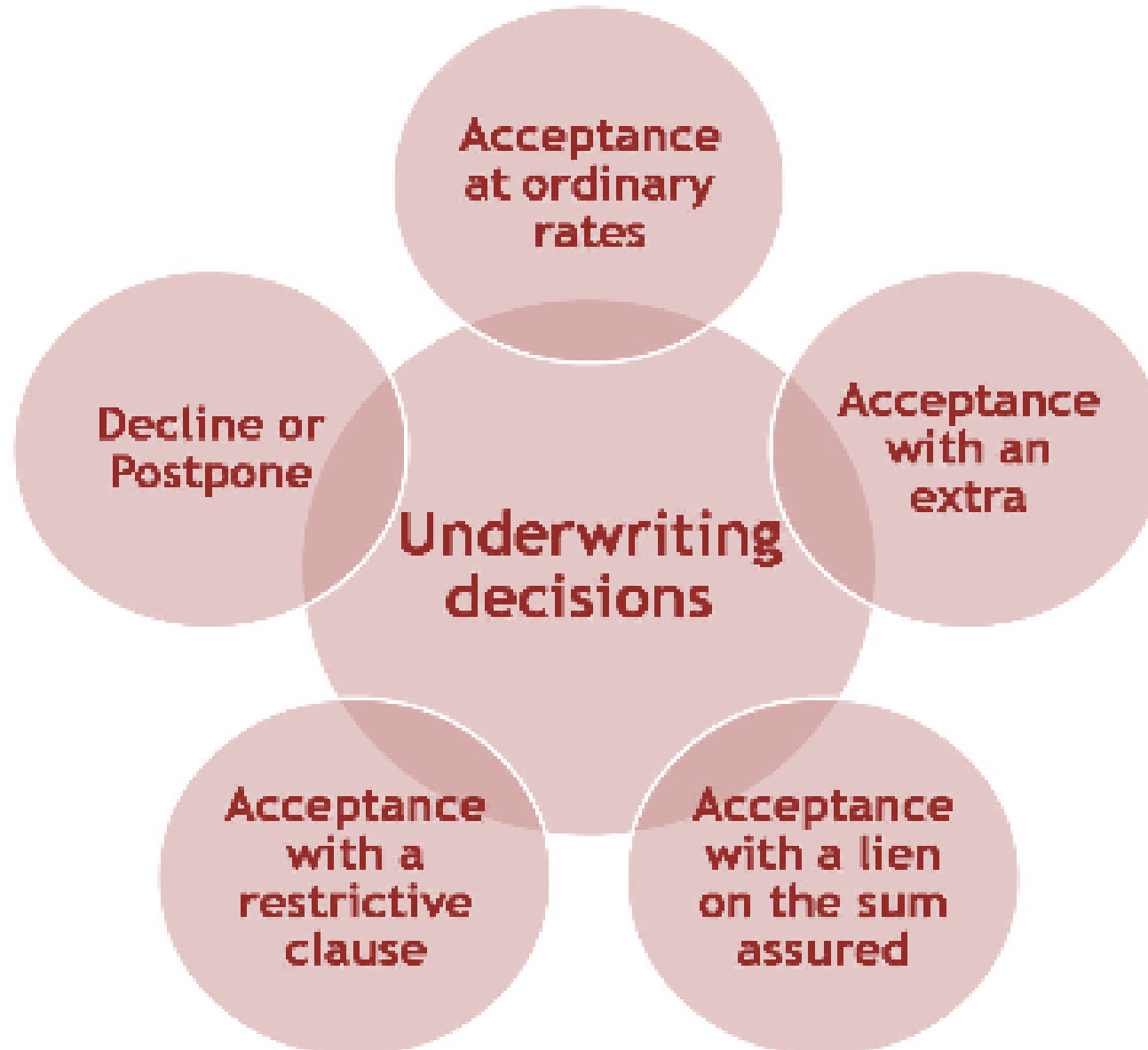
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# Risk Management



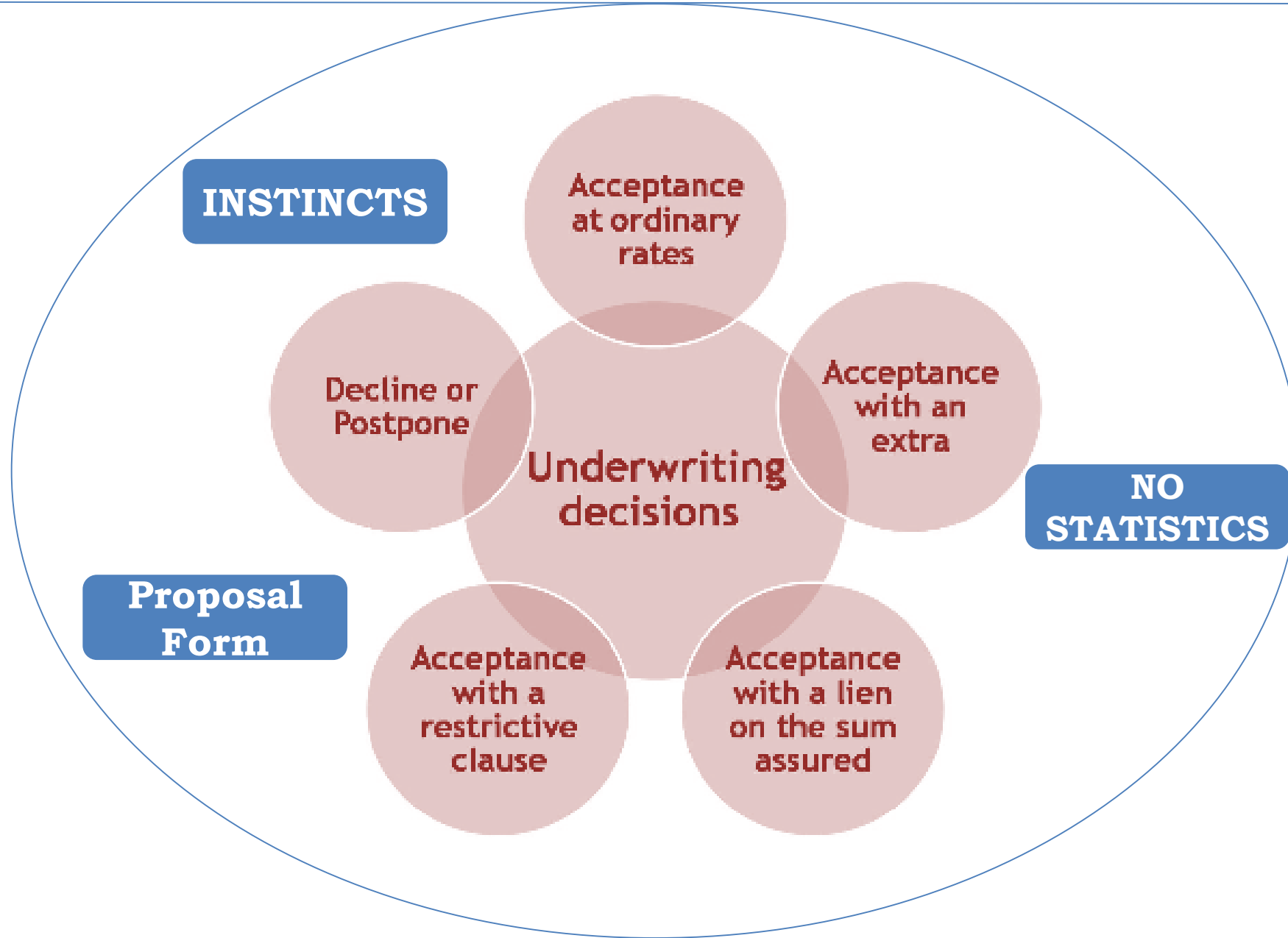
In Short Underwriting is – Identifying a Risk and Transferring the risk

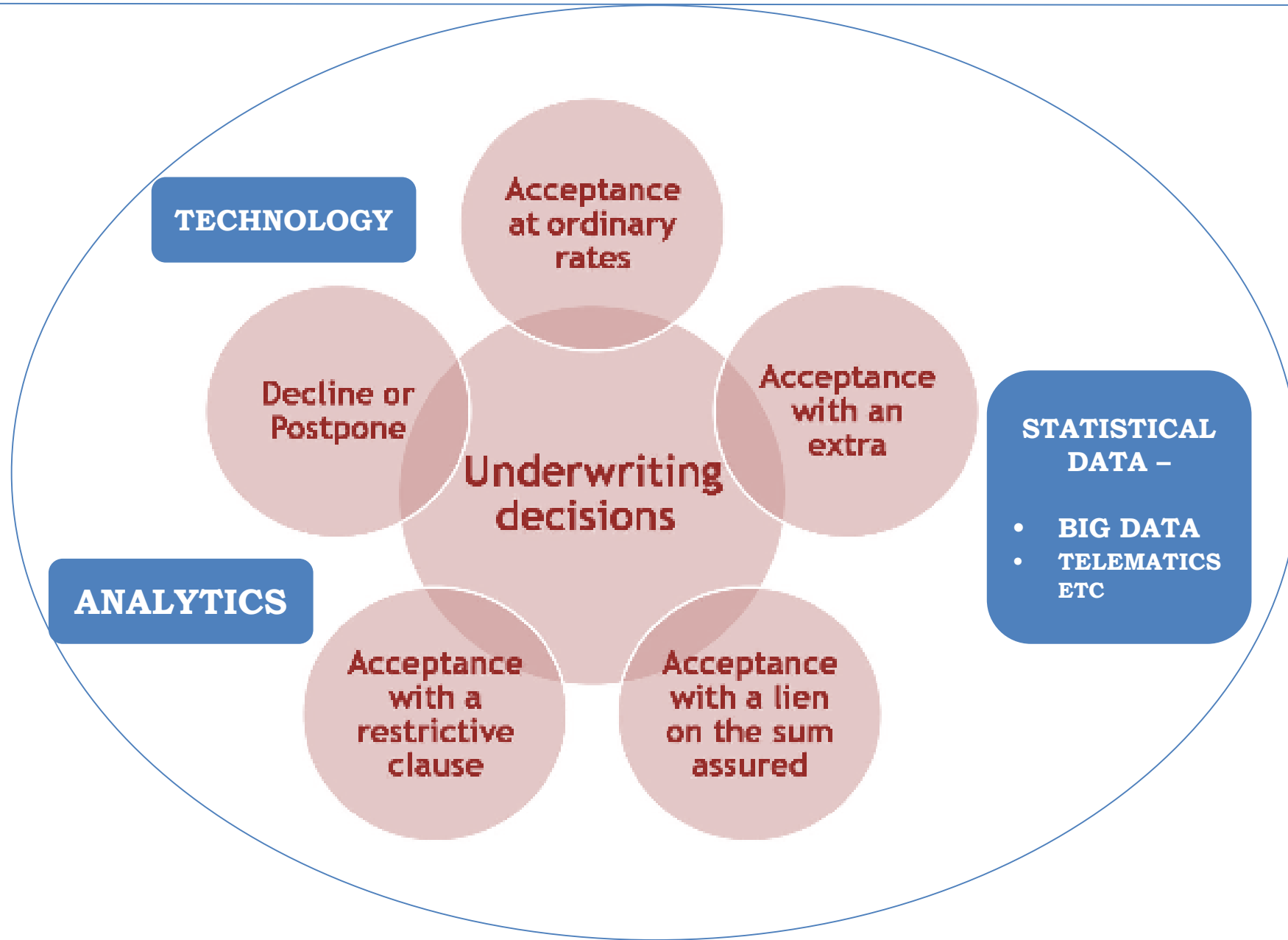
Underwriters are the professionals who evaluate and identify , evaluate and analyze the risks and establish Pricing, Terms and Conditions for insurable risks





# Basis Of Underwriting – ART – THEN





# Insurance Product Spectrum : Big-Data to No-Data Problem

**emerging risk:**  
no data, cold start



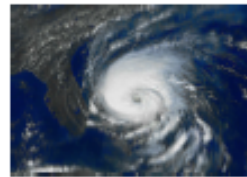
**large risk:**  
small, highly  
heterogeneous data



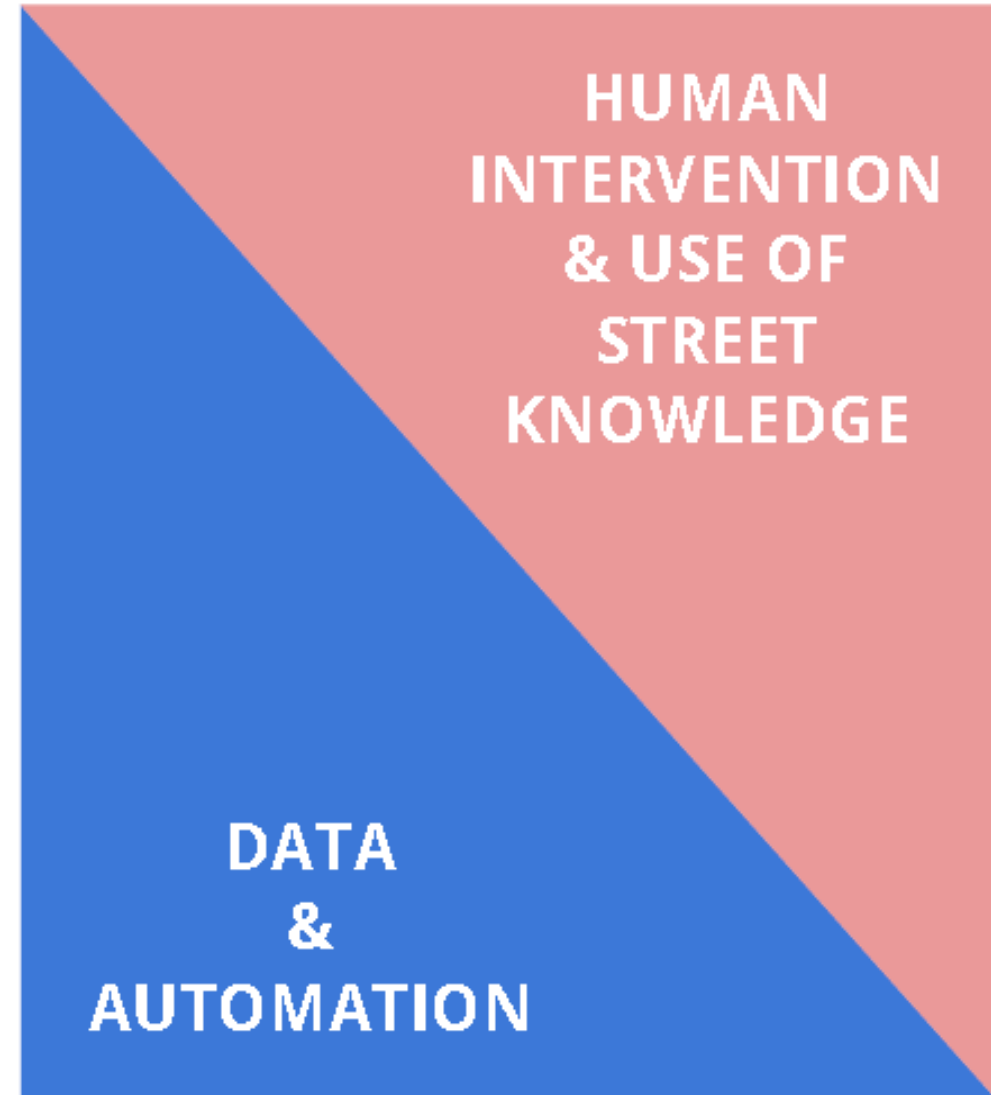
**commercial underwriting:**  
statistical benchmark,  
anchoring → UW adjustments



**property (home)  
insurance:**  
large, changing data



**personal auto:**  
large, homogeneous data



UNDERWRITERS

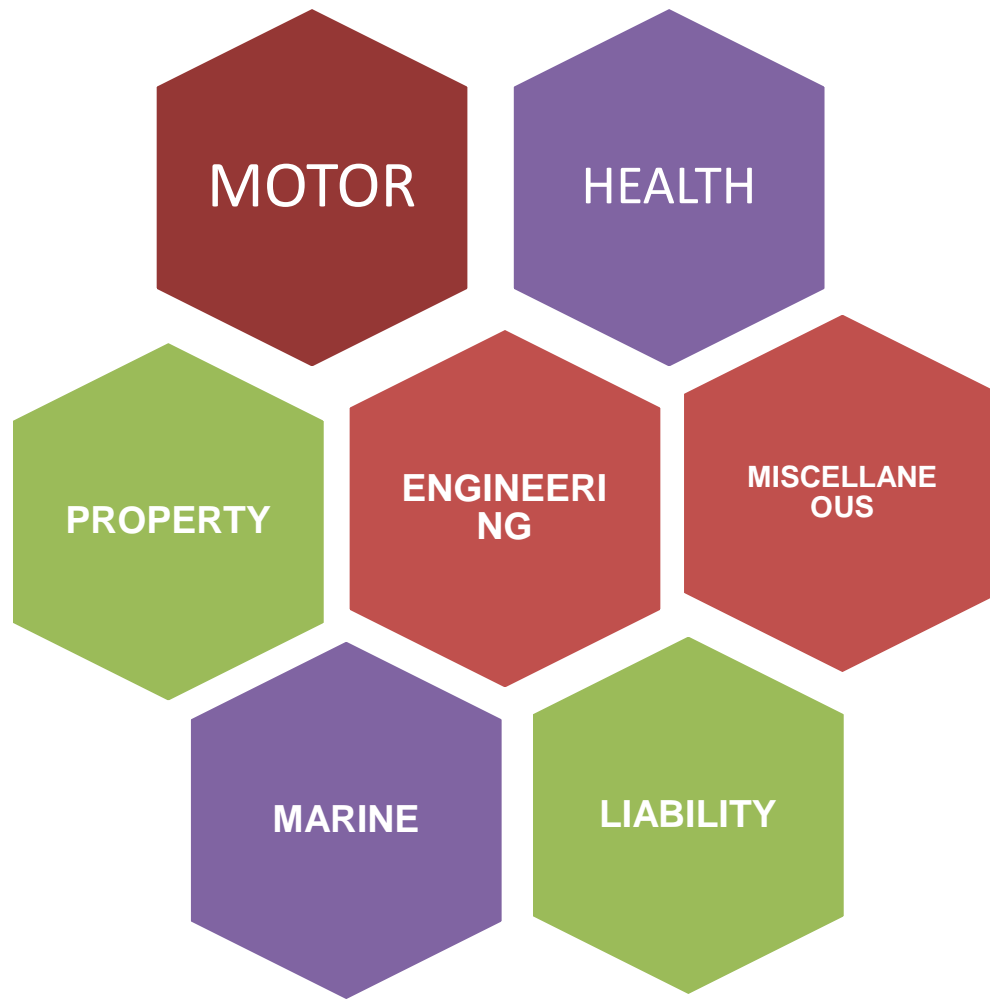
ACTUARIES

DATA IS NOT CAPTURED

POOR DATA QUALITY

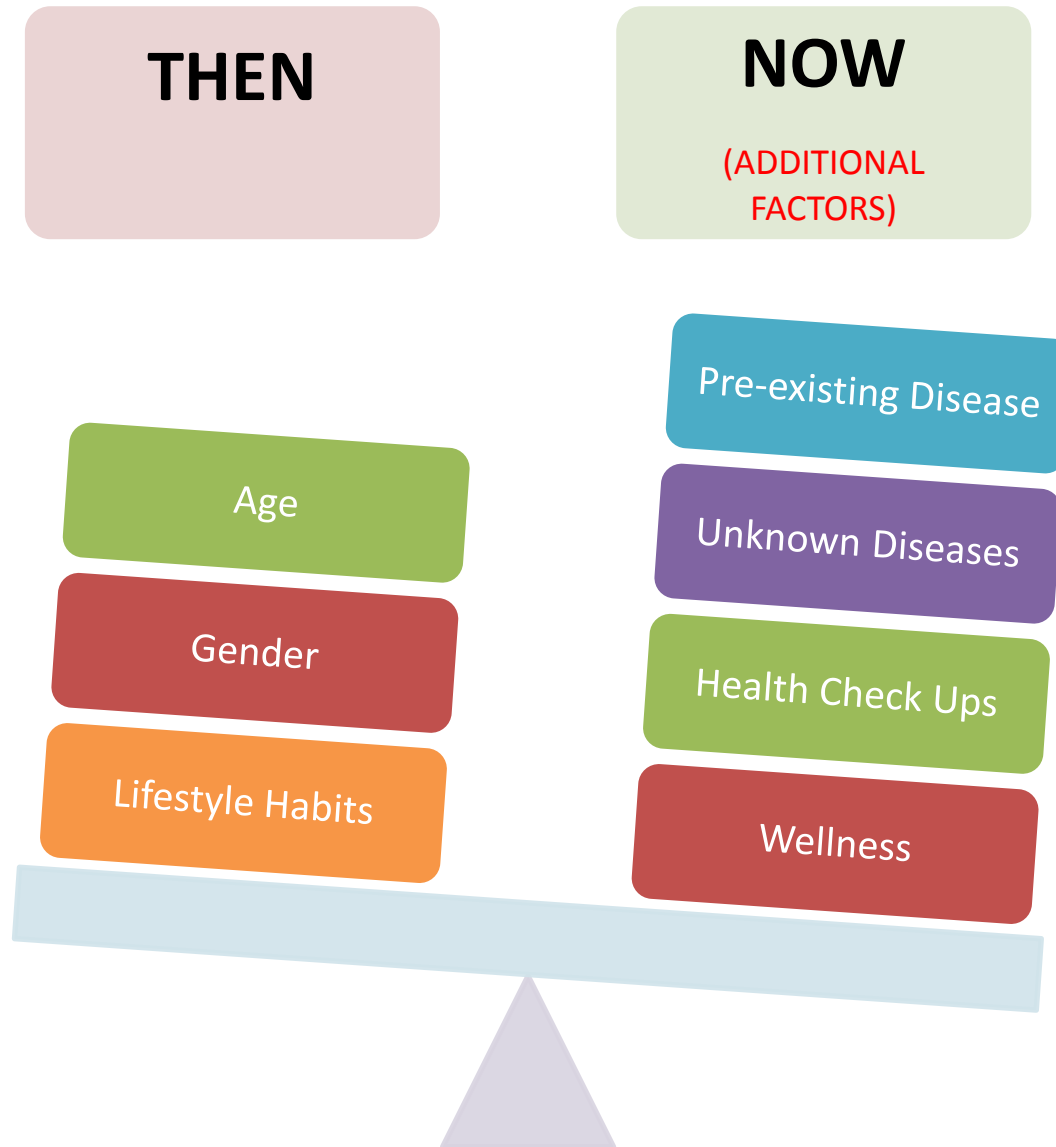
UNSTRUCTURED DATA

NO UNIQUE IDENTIFICATION CONNECTION  
BETWEEN STRUCTURED AND UNSTRUCTURED  
DATA



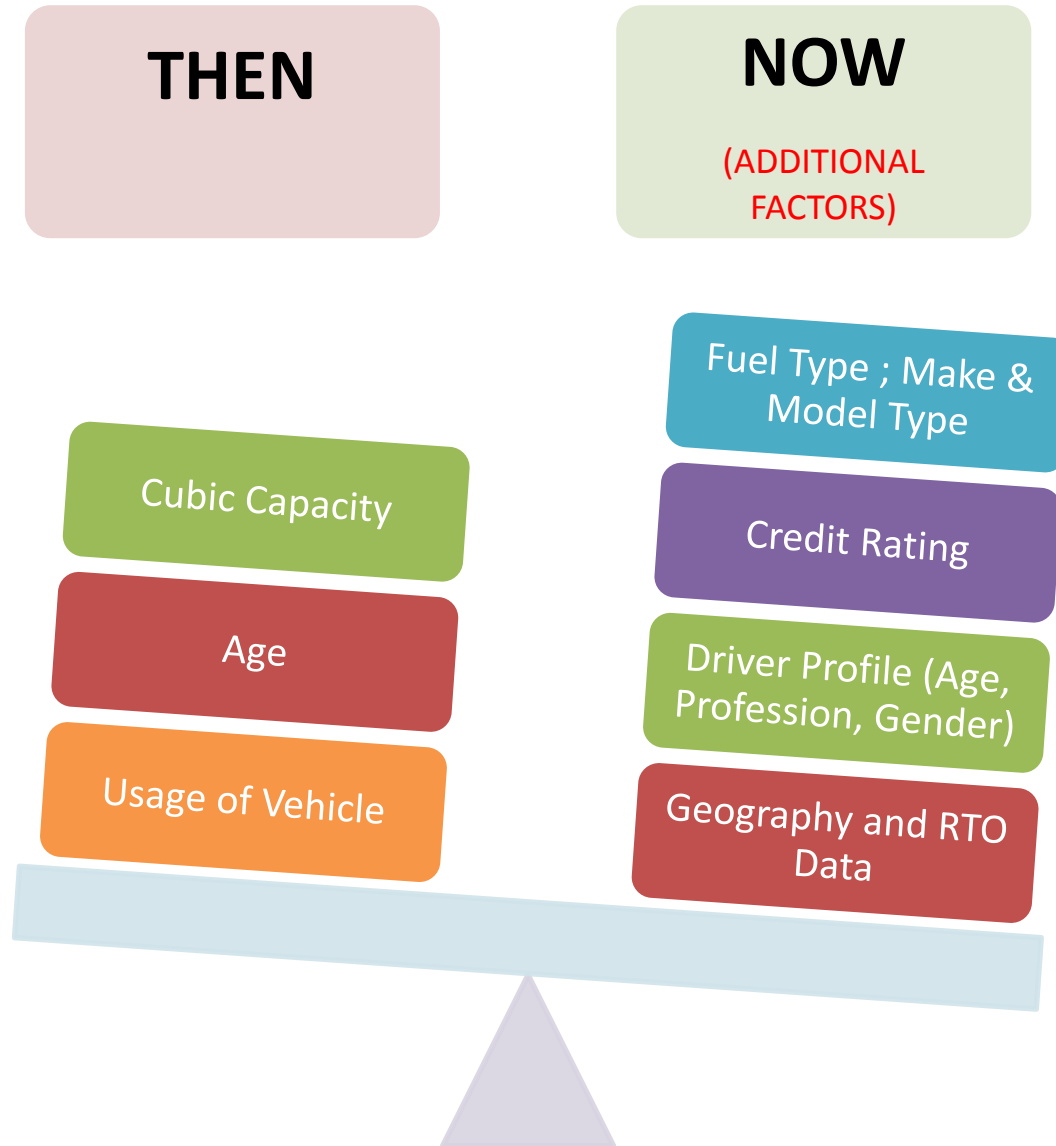
**Various Lines Of Business**

# Evolution of Underwriting Factors

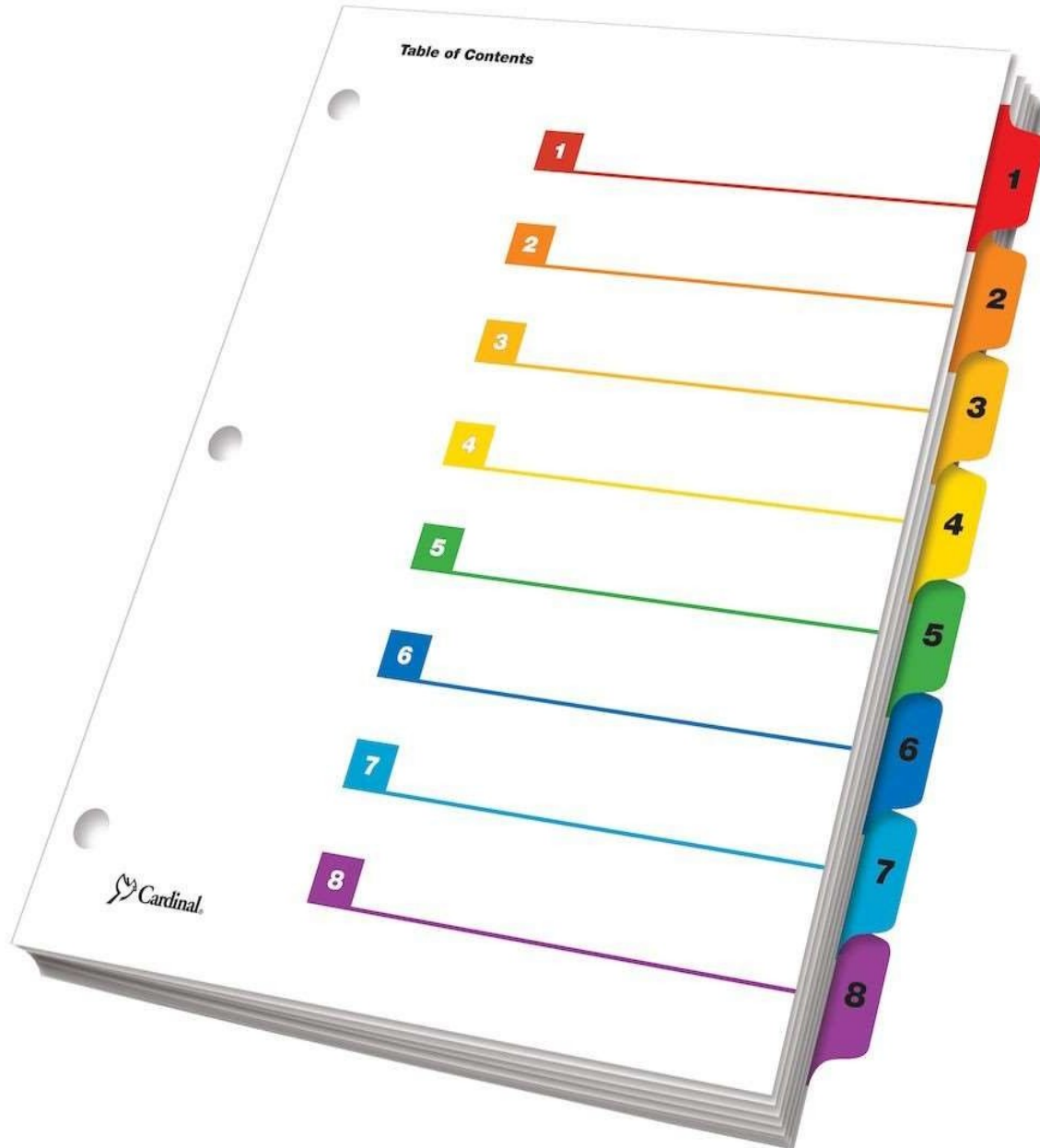


**Illustration** : Evolution of **Health** Insurance Underwriting

# Evolution of Underwriting Factors



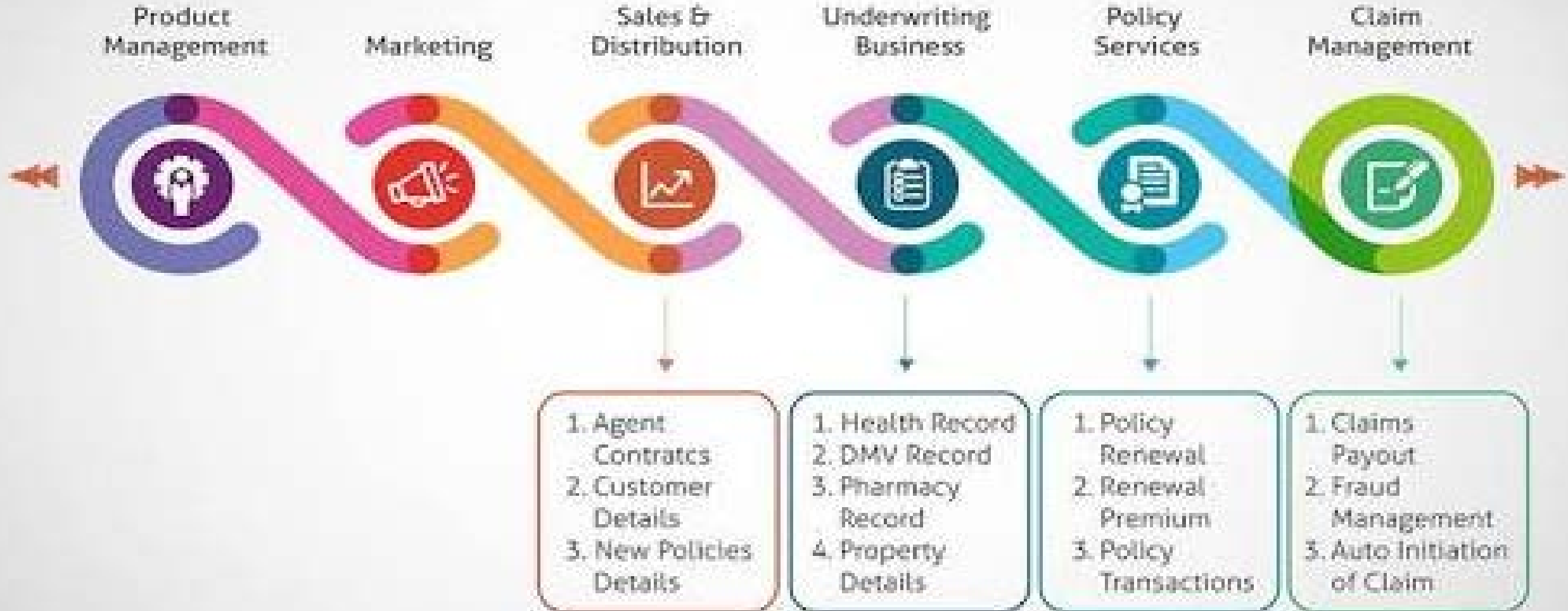
**Illustration** : Evolution of **Motor** Insurance Underwriting



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## Applicability of Blockchain across Insurance value chain

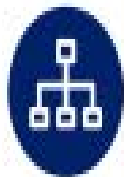




**Artificial Intelligence & Analytics**  
Cognitive capabilities that can augment or replicate human thinking



**Advanced Robotics**  
Next generation robotics/automation technologies to work with humans



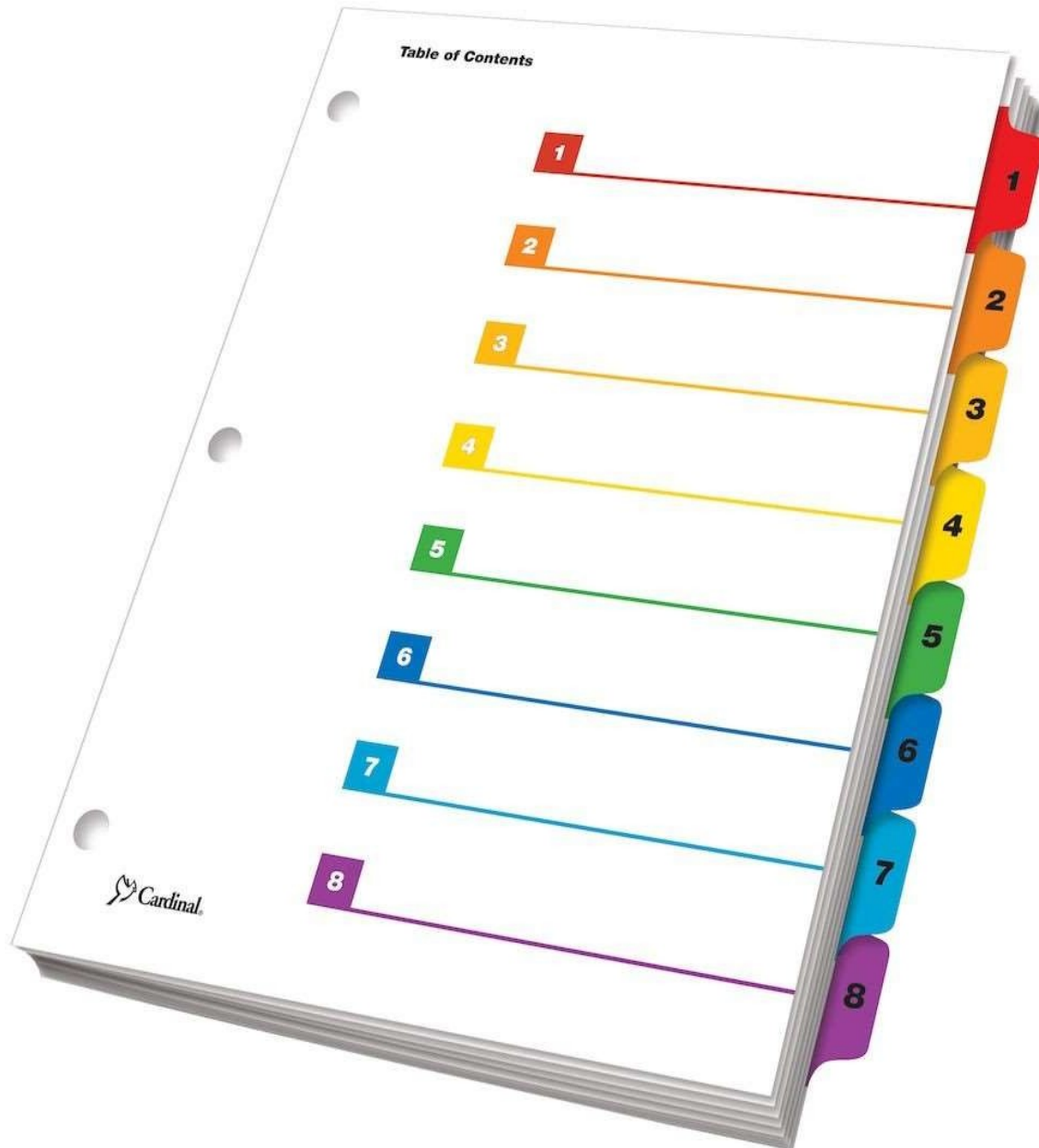
**Networks & Sensors**  
Increased speed, declining costs of computation, networking, and sensing

**Sharing Economy**  
An economic model that focuses on community and sharing



**Digital Currency Economics**  
Crypto-currency, mobile payments, and other economic innovation





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# TYPES OF BUSINESS

**RETAIL**  
**(MORE SCIENTIFIC AND DATA DRIVEN)**

**COMMERCIAL**  
**(MORE INSTINCT DRIVEN- ART)**

# Underwriting – Art or Science ?

- ❑ With more information available from both traditional and non-traditional sources – underwriters can now access lengthy histories and view a more dynamic and complete picture of proposals .
- ❑ Equipping underwriters with tools to access and analyze this additional information is enabling the development of accelerated solutions via a more frictionless, consumer-friendly process.
- ❑ Moving forward, big data, insurance analytics, and the availability of non-traditional data are leading the underwriters into the augmented reality era: streams of information continuously collected and subsequently feeding algorithms and machine learning tools that convert that data into immediate, actionable insights. The result will be multi-dimensional, interactive, and predictive view of risk that will change the way we look at underwriting.

***Underwriting is both Art and Science , complemented by Discipline***

THANK YOU