



# OECD PROJECT ON LEVERAGING EMERGING TECHNOLOGIES FOR RISK ASSESSMENT AND RISK REDUCTION

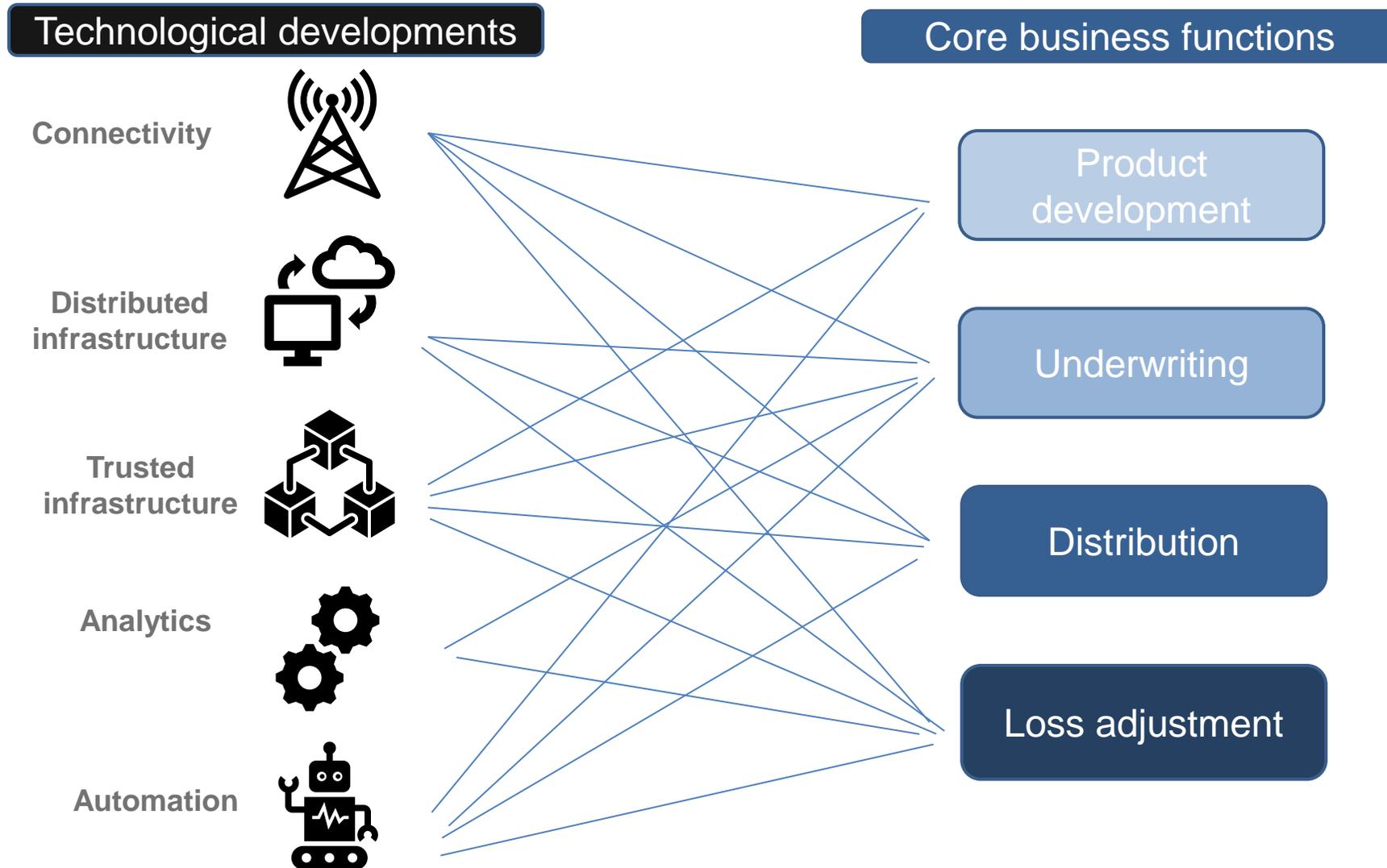
OECD-ADBI-IRDAI Roundtable on Insurance  
and Retirement Savings in Asia

25 May 2023

Leigh Wolfrom, Policy Analyst, OECD



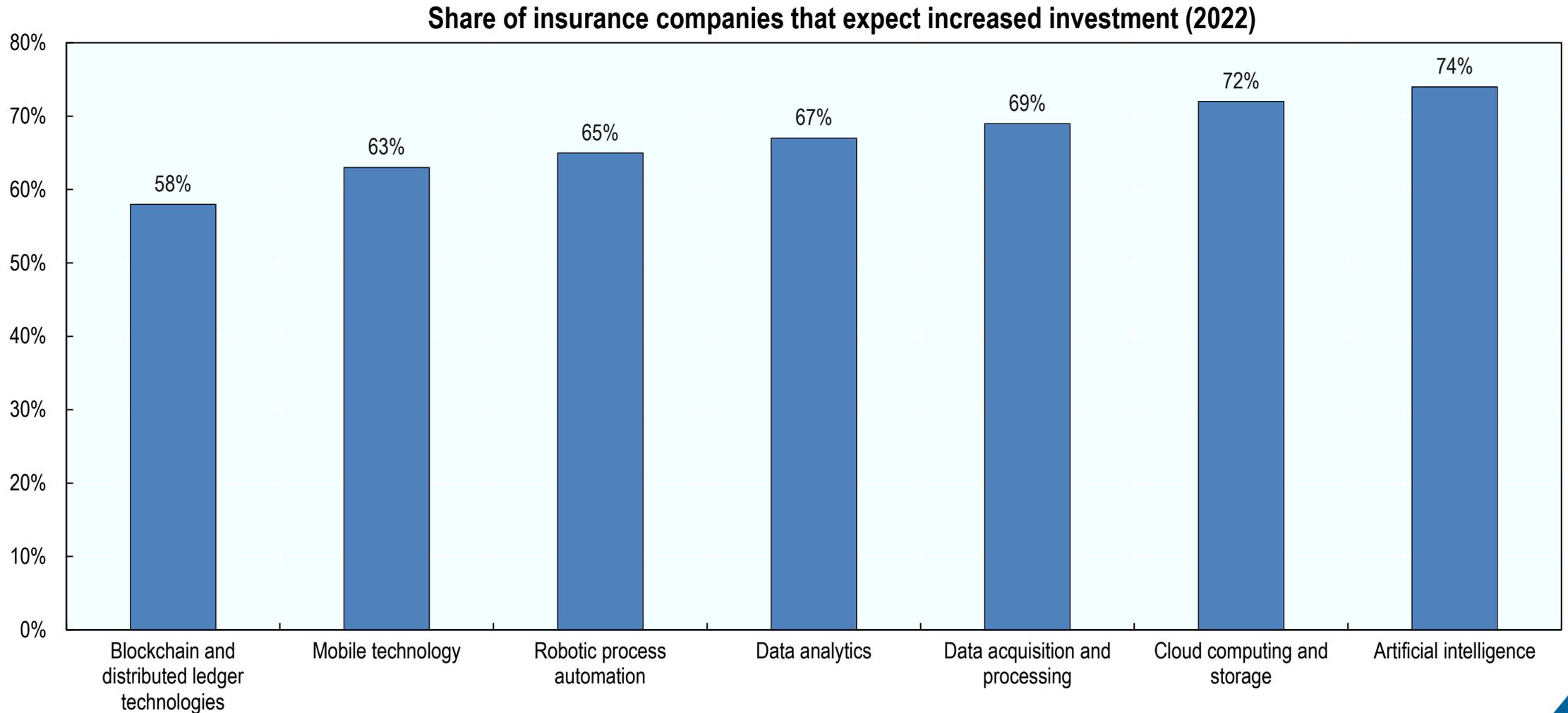
# Applications of technology developments across insurance business functions



Source: Technological development categories adapted from “How top tech trends will transform insurance” (McKinsey & Co)

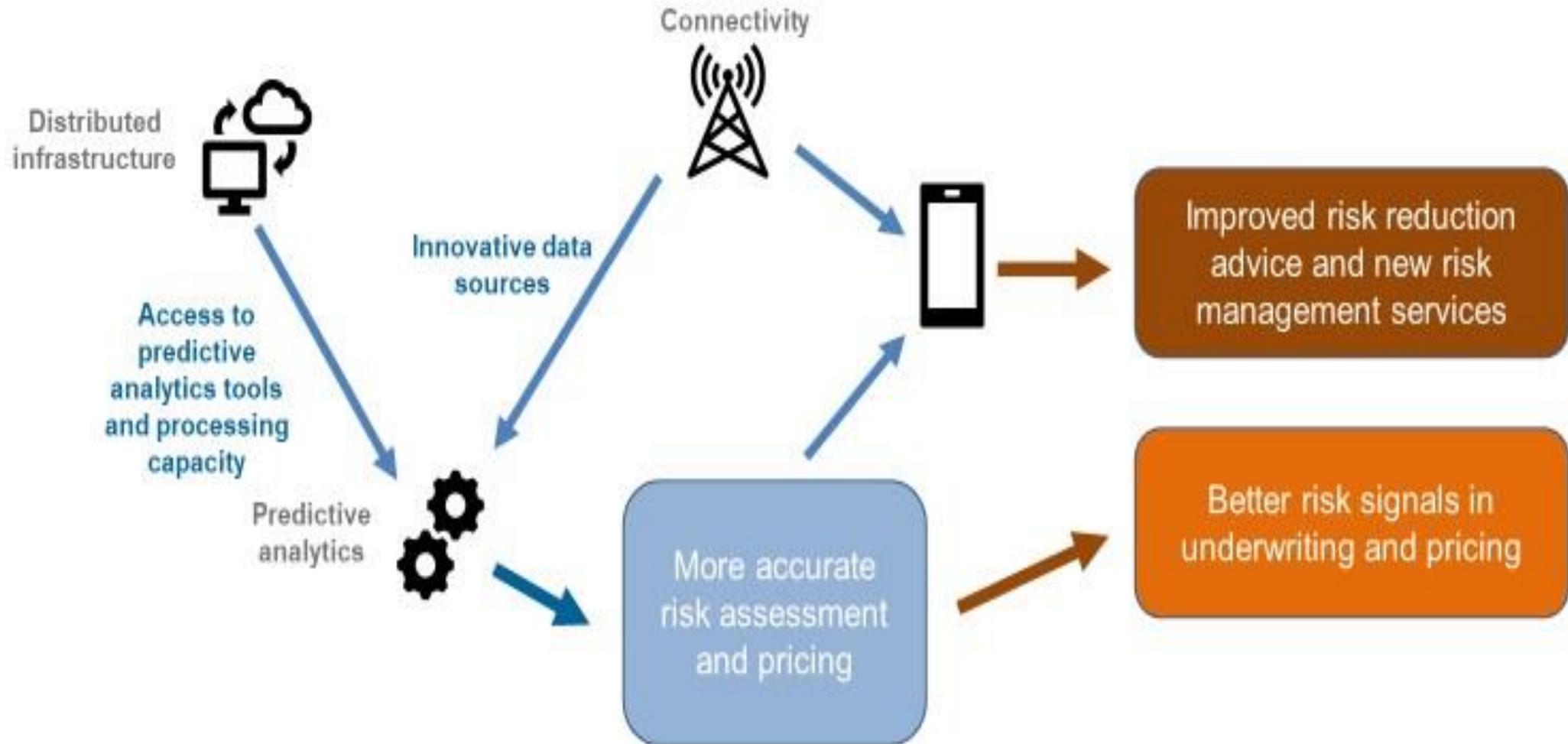


# Types of emerging technologies receiving increased investment





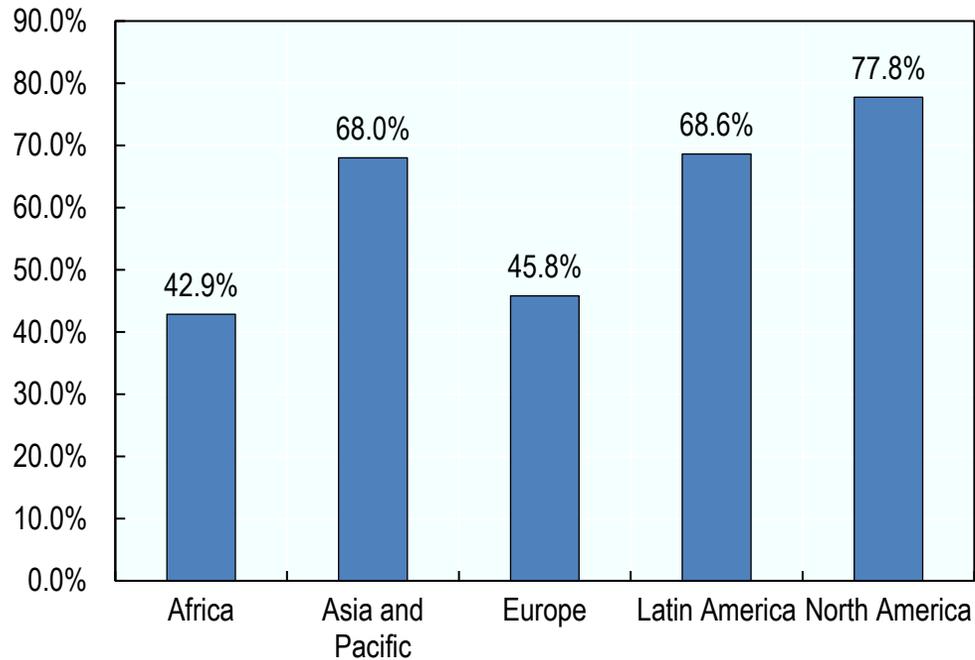
# Potential applications of technology for encouraging risk reduction





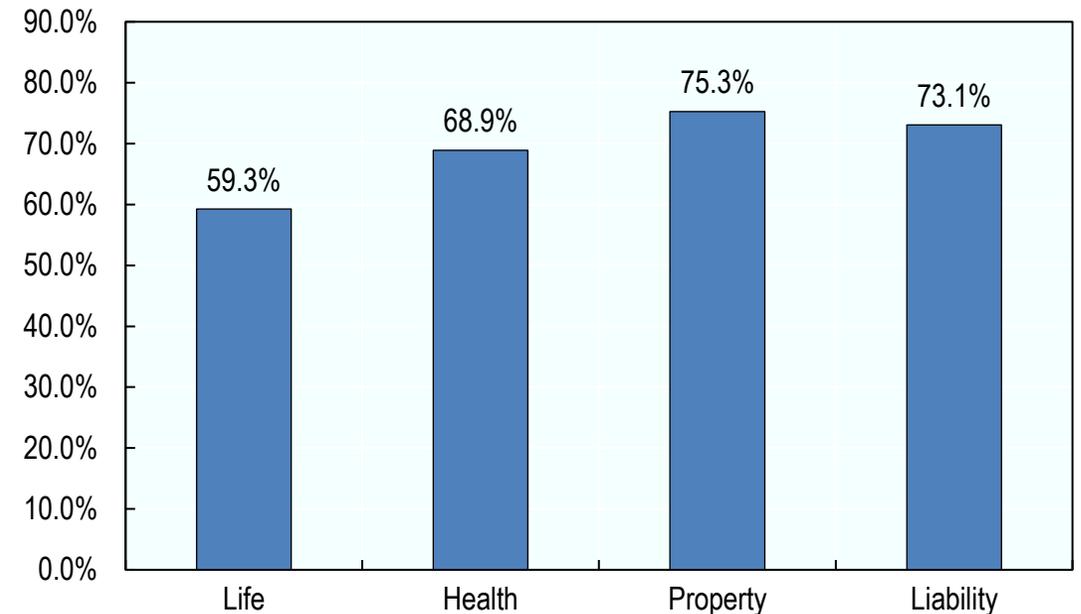
# Collection of innovative data sources

Share of companies examining or applying innovative data sources by region



The use (or planned use) of innovative data sources appears to be more common in North America, Latin America and Asia and the Pacific.

Share of companies by examining or applying innovative data sources by primary lines of business

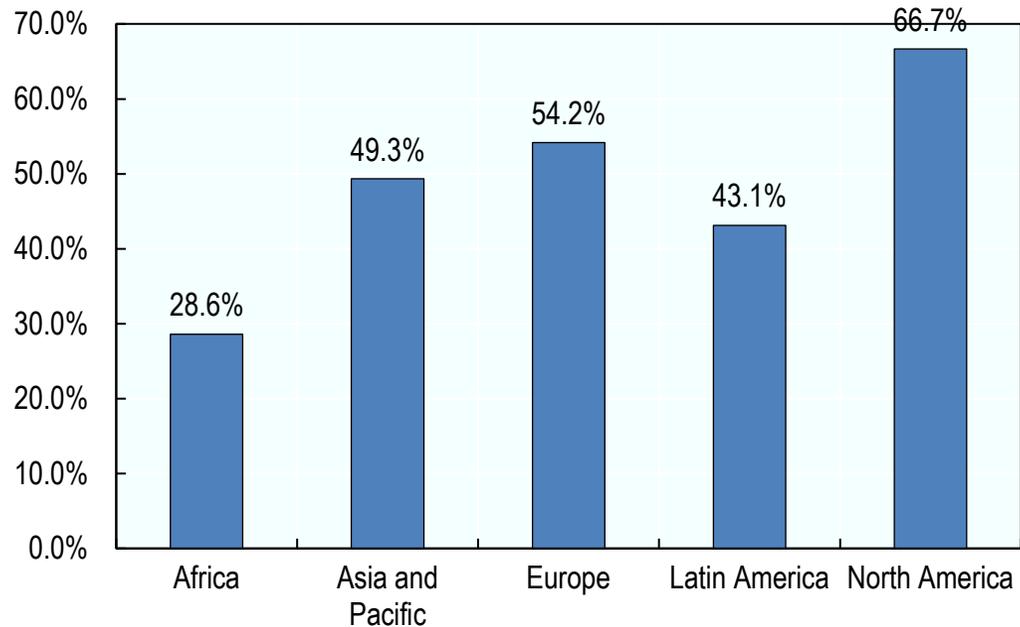


The use (or planned use) of innovative data sources appears to be slightly more common in Property and Liability lines



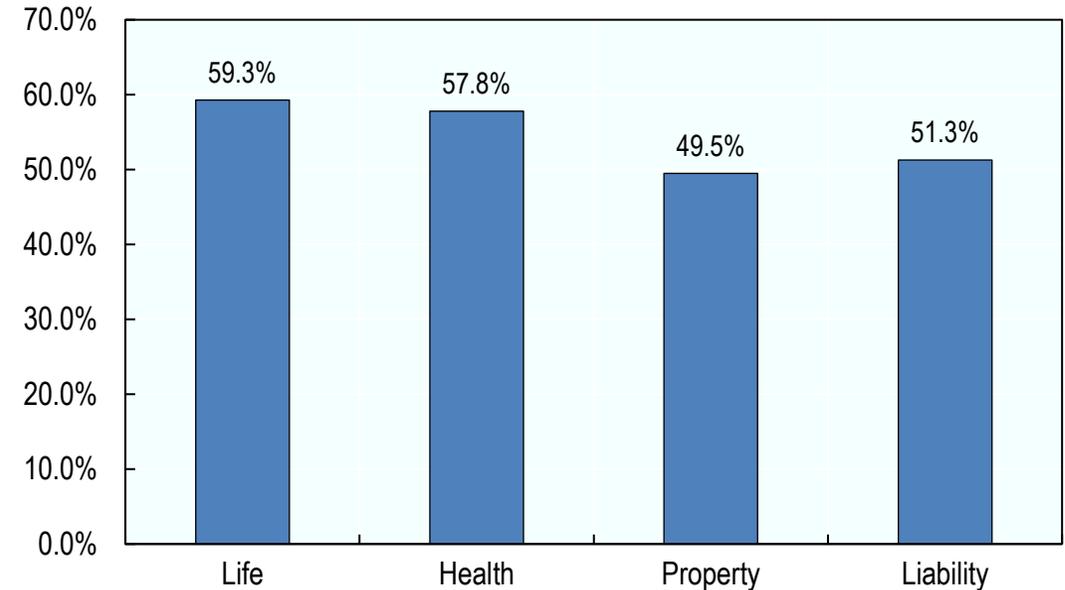
# Application of predictive analytics

Share of companies examining or applying predictive analytics by region



The use (or planned use) of predictive analytics appears to be more common in North America, Europe and Asia and the Pacific.

Share of companies examining or applying predictive analytics by line of business

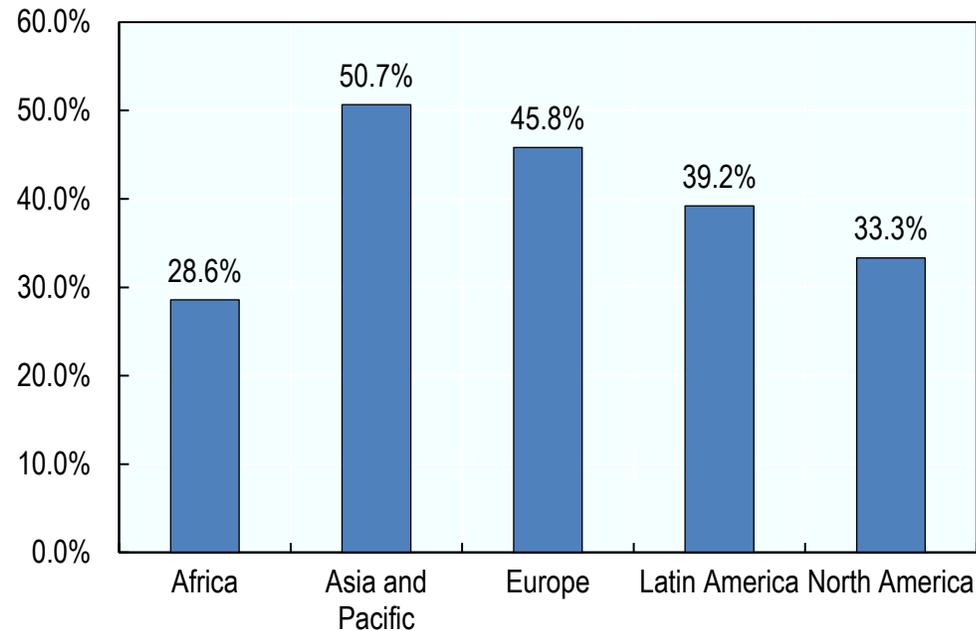


The use (or planned use) of predictive analytics appears to be slightly more common in Life and Health lines



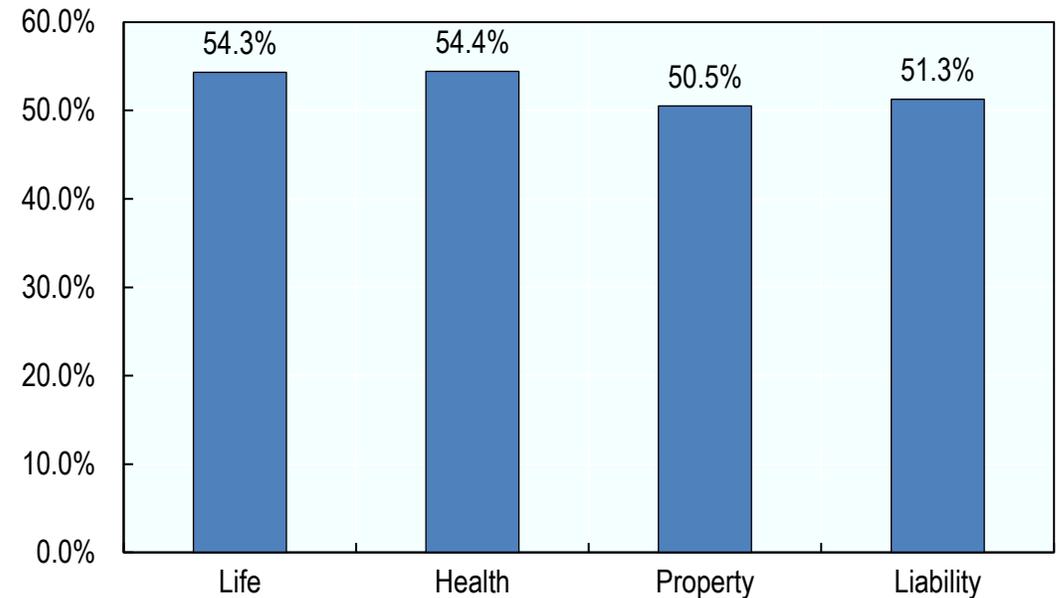
# Offering of dedicated smartphone apps

Share of companies examining or applying dedicated smartphone apps by region



The offering (or planned offering) of dedicated smartphone apps appears to be more common in Asia and the Pacific and Europe.

Share of companies examining or applying dedicated smartphone apps by line of business

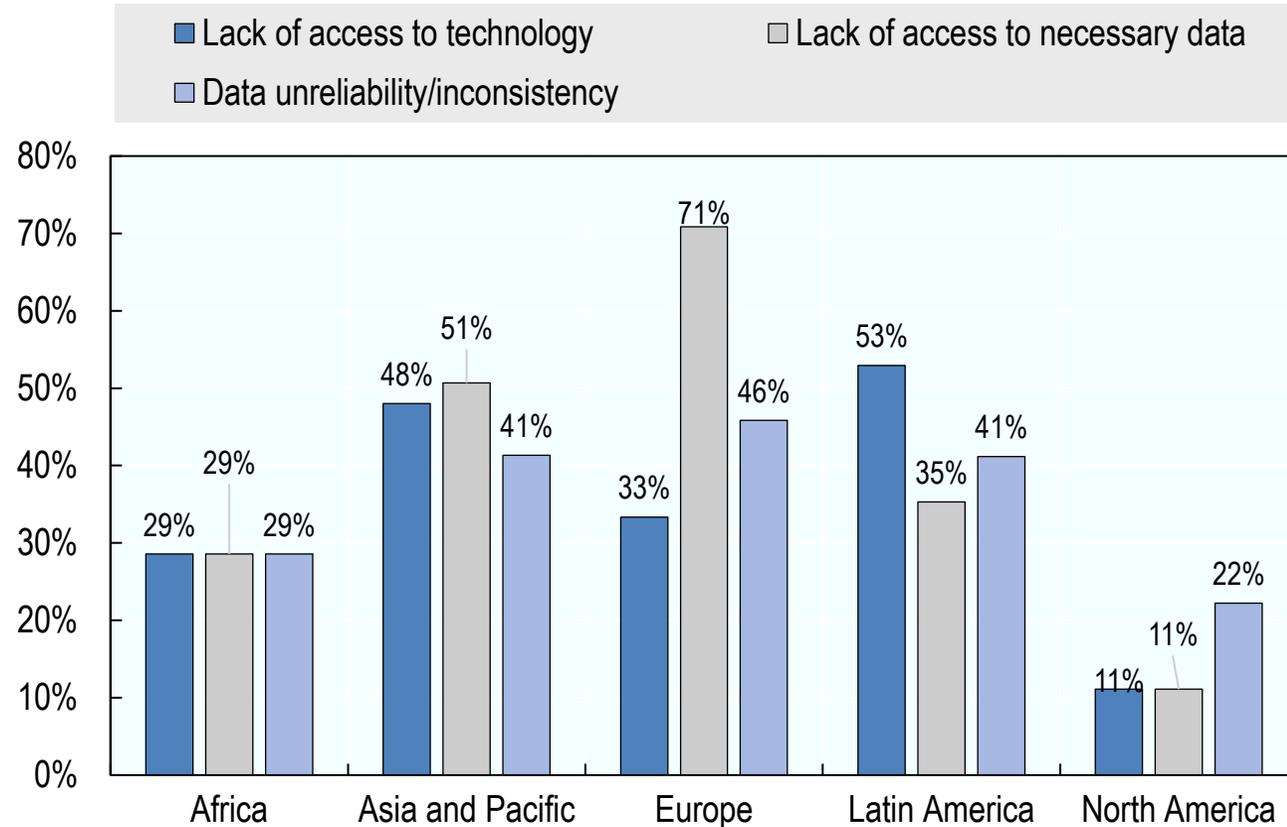


The use (or planned use) of predictive analytics appears to be slightly more common in Life and Health lines



# Challenges to technology adoption

Challenges in access to technology and reliable data by region

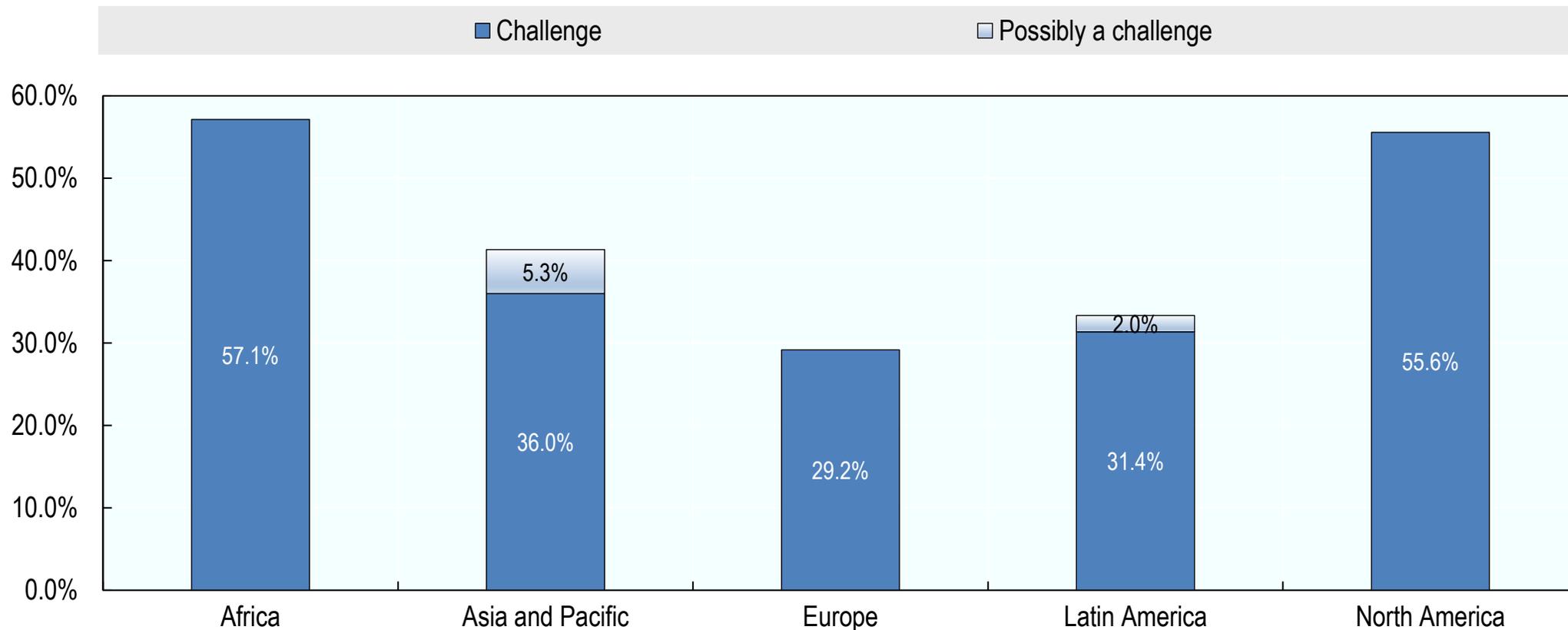


Industry respondents identified some challenges – including access to technology and (reliable) data



# Regulation/supervision as a challenges to technology adoption

- Approximately 35%-38% identified regulation or supervision as a potential challenge (not restricted to insurance regulation/supervision)

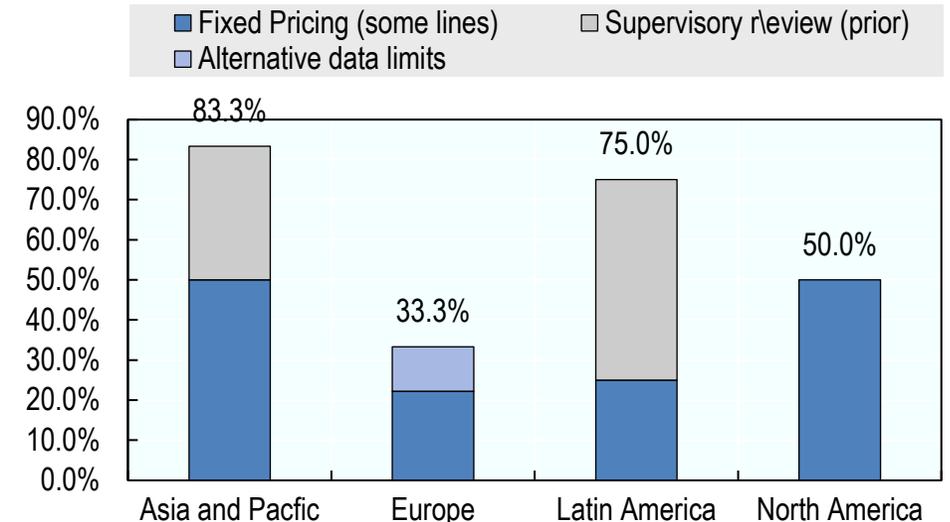




## Potential regulatory/supervisory challenges

- Pricing and form oversight could impact the utility of collecting/using innovative data and apply predictive analytics (e.g. fixed pricing/criteria) or the ability to collect/use innovative data, apply predictive analytics, offer risk reduction services/products (depending on supervisory acceptance)
- Some countries insurance legislation or regulation may impose restrictions on collecting/using data not included in policyholder coverage applications for insurance or in offering risk mitigation services (non-insurance business)
- Other countries identified privacy legislation/regulation as a limiting factor (as well as anti-discrimination requirements)

Potential limitations to applying emerging technologies to underwriting and pricing (by region)





# Creating an enabling environment for application of emerging technologies

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- Many respondents indicated that regulatory or supervisory adaptations had been made to support innovation
- Regulatory sandboxes (testing of new approaches – 14 countries) and innovation hubs (contact points for addressing regulatory requirements – 10 countries) are common approaches across survey respondents – some jurisdictions have both
- Identified benefits include:
  - Improved understanding among regulators/supervisors of technology and potential risks
  - Improved ability to identify potential regulatory or supervisory impediments to technology adoption



## Addressing risks from the application of emerging technologies in insurance

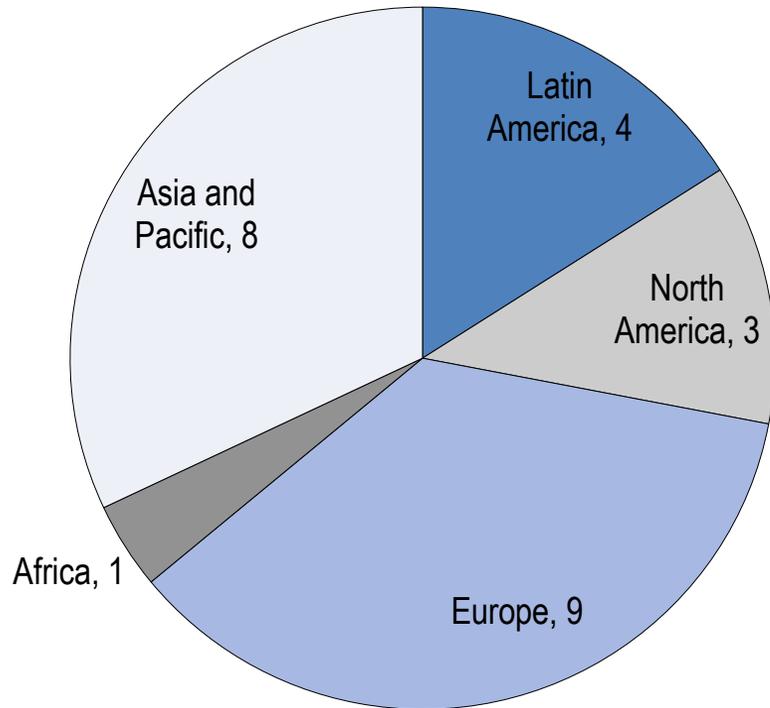
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- Many respondents indicated that regulatory or supervisory adaptations had been made to address risks (particularly operational risk management, including cyber and outsourcing risks)
- A few jurisdictions have specific guidance or requirements related to the collection, use and protection of personal information by insurance companies
- A few jurisdictions have developed specific principles or guidance related to the use of artificial intelligence (or predictive analytics) in insurance underwriting and many are examining the implications of the use of artificial intelligence in insurance

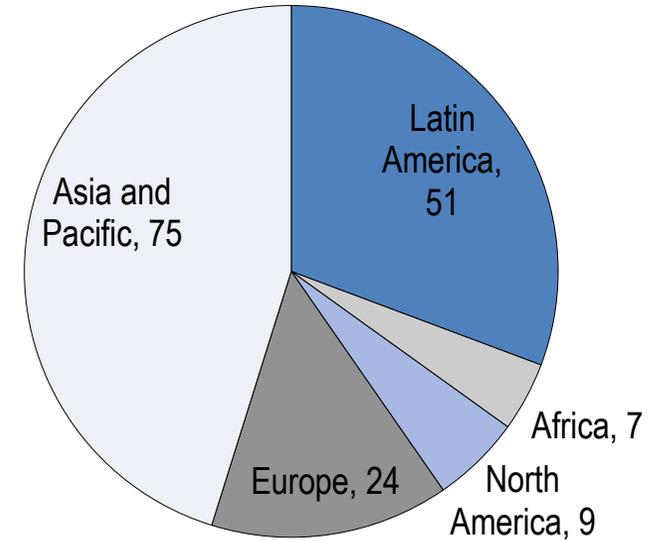


# Annex: Overview of questionnaire respondents

Geographic breakdown (regulator responses)



Geographic breakdown (industry responses)



Breakdown by line of business

