



TASK ACTUARIAL CONVENTION

THE NEXT FRONTIER—
ACTUARIES BEYOND
BOUNDARIES



Sustainability in practice

How actuaries can translate sustainability uncertainty into resilient business decisions

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#TASKConvention2026

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Sustainability is affecting cash flows, claims, asset values, and the resilience of operations and communities

1

Value at risk

Protect assets, earnings
and operations

2

Energy strategy

Balance reliability, cost
and transition

3

Supply chains

Manage dependencies
and disruption

4

Finance, credits, and incentives

Prioritise resilient
investment

5

Regulatory change, data, and technology

Turn uncertainty into
decision-useful insight

The actuarial opportunity: translate long-term uncertainty into financial choices

Five pressures, five actuarial questions

Pressure

African context

Decision question

Physical disruption

Flood, drought, heat and infrastructure interruption

How might frequency, severity and correlation change?

Energy strategy

Reliable, affordable and lower-carbon energy

What is the risk-adjusted value of alternative pathways?

Supply chains

Agricultural inputs, transport routes and essential goods

Where are the dependencies and concentration points?

Finance, credits, and incentives

Competing needs for adaptation, development and transition

Where will limited capital create the greatest resilience value?

Data and regulation

Evolving requirements and data gaps

What is decision-useful despite uncertainty?

Which of these is already affecting your organization's results, even if it is not currently described as sustainability?

The actuarial translation chain



Not a single forecast, but a repeatable way to connect evidence, judgement and action.

Climate adaptation as a value decision

1

Protect value

- Reduce disruption and loss
- Protect operations and livelihoods

2

Create opportunity

- Develop new products and services
- Improve efficiency and market access

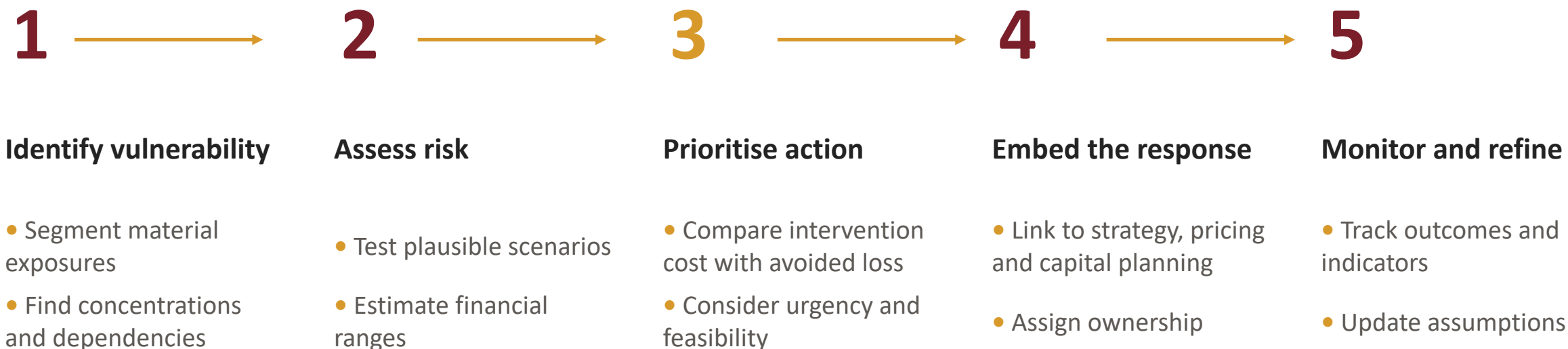
3

Address shared risk

- Coordinate public and private action
- Manage risks no organisation can solve alone

Actuarial question: Which intervention delivers the greatest avoided loss and resilience benefit?

Turning assessment into an adaptation plan



Proportional analysis can support decisions even when data is incomplete

Climate risk: single event, multiple impacts

Liabilities

- Claims and benefit outcomes
- Pricing and reserving assumptions
- Underwriting concentration

Assets

- Physical and transition exposure
- Asset impairment
- Long-term risk-adjusted returns

Operations

- Business continuity
- Claims capacity
- Suppliers

Correlation is key

Risk appetite and capital

Pricing and underwriting

Reinsurance and
investments

Product innovation

Resilience needs to extend across the value chain

Where SMEs can be exposed

- Physical disruption
- Supply and resource constraints
- Limited resilience finance

What financial institutions can do

- Segment portfolio exposure
- Link resilience to finance
- Develop risk-transfer solutions

Where actuaries contribute

- Proxy and scenario design
- Portfolio accumulation analysis
- Product and incentive design

An institution is not resilient if its customers and value chain remain vulnerable

Beyond climate risk

Translating nature dependency into financial risk

1 Where do we interact with nature?

Water

Availability and quality

Agriculture and soils

Productivity and land use

2 What do we depend on?

3 How could financial value be affected?

Fisheries and coasts

Natural assets and
livelihoods

Forests and ecosystems

Inputs, protection and
tourism

4 What action follows?

Understand dependency → quantify the pathway → support the decision

Five roles for actuaries

1

Risk translator

Connect sustainability
change to financial
outcomes

2

Scenario architect

Test plausible futures
and time horizons

3

Value quantifier

Compare potential loss,
intervention cost and
opportunity

4

Decision integrator

Embed insight into
pricing, capital,
investments and strategy

5

Trust builder

Strengthen assumptions,
controls and
communication

The next frontier is applying actuarial judgement to a wider set of decisions and organisations

What sustainability decision could benefit from actuarial expertise in your organisation?

Thank You.

11th Annual TASK Actuarial Convention · The Next Frontier: Actuaries Beyond Boundaries

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