



# Southeast Asia Disaster Risk Insurance Facility

PROTECT THE GREATEST HOME OF ALL:

**OUR COUNTRIES**

SEADRIF is a regional platform to provide ASEAN countries with financial solutions and technical advice to increase their financial resilience to climate and disaster risks.



# High-Level Implementation and Stakeholder Road Map

**Facilitator:** Benedikt Signer

**Speakers:**

Greg Fowler

Salvador Perez

# Objectives of the factsheets and webinar

- **Why** should governments develop a financial protection strategy for public assets?
- **When** can insurance be a good option for the financial protection of public assets?
- **Who** are the key stakeholders (both external and internal) that play roles in each stage of the insurance development process?
- **What** are the most important step-by-step considerations involved in the development of a strategy for public asset insurance?

## **INTENDED OUTCOME:**

Government officials to develop strong understanding of the steps required to design, develop, deliver and operate effective financial protection of public assets, particularly through risk transfer and insurance

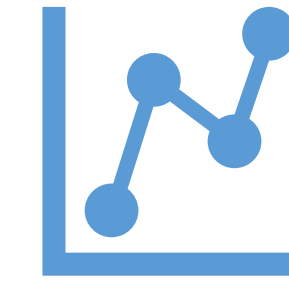
# Structure of Webinars



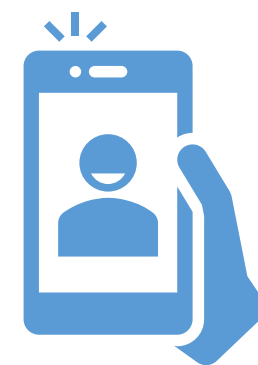
**90 minute webinar for each factsheet**



**Different guest speakers**



**Poll results will be included in final outputs**



**Live polls:  
Please participate**



**Please share questions  
via Q&A function**

- Roles and responsibilities for the government officials within an internal insurance program, the associated stakeholders, including auditing, compliance and governance, supervisory.
- Multi year aspects such as renewals and re-assessment of exposures.
- Review of procurement considerations
- Dealing with claims management
- Incorporating innovations and technologies



FACTSHEETS 7 and 8

- Development of an implementation roadmap for a public asset financial protection program
- How governments can agree objectives and build consensus around priorities
- How to develop internal governance and oversight functions, and ownership at each level of the insurance programme
- How risks are allocated across asset owners and operators



FACTSHEETS 1 and 2

Operations  
and  
Management

Policy,  
Institutions  
and  
Regulations

Access to  
domestic  
and  
international  
markets

Data,  
Information  
and  
Analytics

- Roles and options available to construction of cost-effective insurance, including common insurance structures and case studies, their pros and cons against considerations of budgets, risk appetites, and government priorities
- Introduction of pooling and mutualization of large scale public assets insurance programs
- Insurance/reinsurance concepts of retention, deductible and exclusion

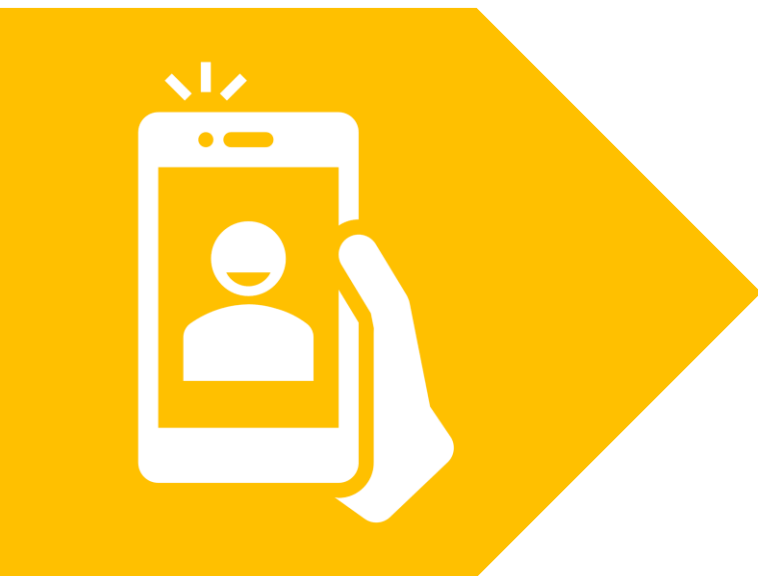


FACTSHEETS 5 and 6

- The importance and development of Public Assets Registries, and associated Enterprise Asset Management systems.
- How to assess and quantify asset exposure, sources of data, requirements for insurance transactions
- Introductions to the use of catastrophe analytics, burning cost / technical and market rates, tariff structures, risk based pricing methods, and underwriting.



FACTSHEETS 3 and 4



# Output from poll in last webinar

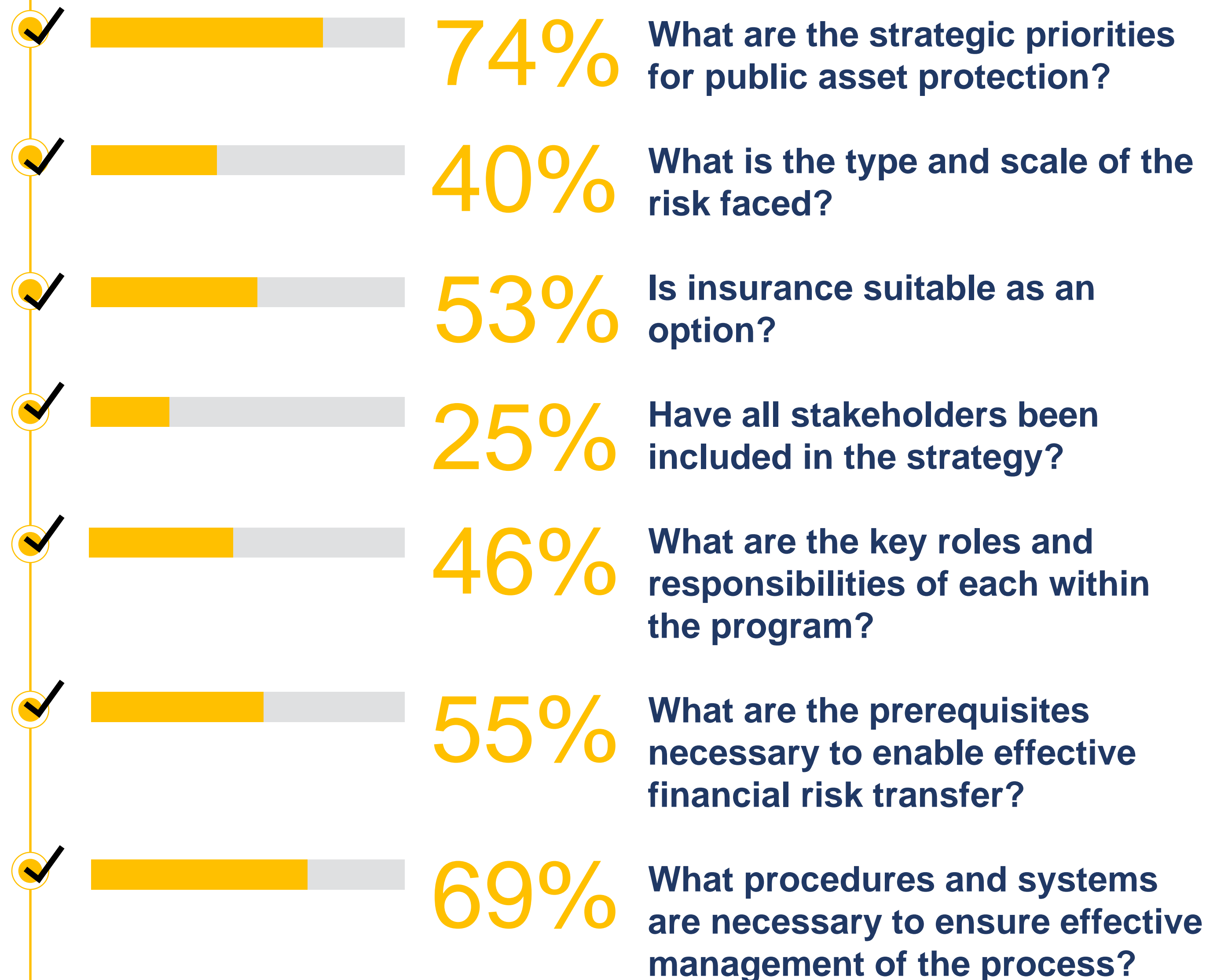
## SOME KEY QUESTIONS

These are some of the key questions we will cover in the series of factsheets and webinars.

Which of these are of interest to you? (select all that apply)



85 participants responded





**POLL (1):  
ROLES AND  
RESPONSIBILITIES**

What do you think your (current/potential) role(s) in a public assets financial protection programme would be? (select all that apply)

- Overall risk management strategy development and alignment  
Development of policy and legislative frameworks
- Budget and financial planning
- Assessment of evidence and options
- Provider of data, models and subject matter expertise
- Establishment/procurement of the risk transfer solutions
- Operational set-up or preparation of the risk transfer solutions

# Overview of a Financial Protection of Public Assets Program

Greg Fowler

Consultant, Crisis and Disaster Risk Finance, World Bank



# Public Asset Insurance Program Road Map

**Strategic alignment**  
Agree principles and alignment with government's overall risk management objectives



**Budget planning**  
Set the appropriate financial budget to cover costs of program



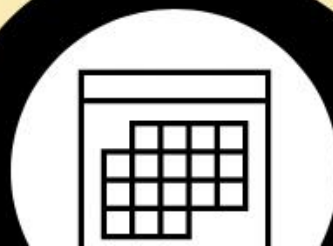
**Options assessment**  
Identify and assess options which balance trade-offs between risk retention versus risk transfer



**Set up of risk transfer solutions**  
Establish the risk funding mechanism, including procurement of the risk transfer solutions



**Annual service cycle**  
Planning, review and



**Legitimacy**  
Develop and support mandate through policy and legislative frameworks and direct ministerial ownership and accountability



**Evidence gathering**  
Develop understanding of the possible losses arising from the catastrophe exposure of public assets and existing financial protection arrangements

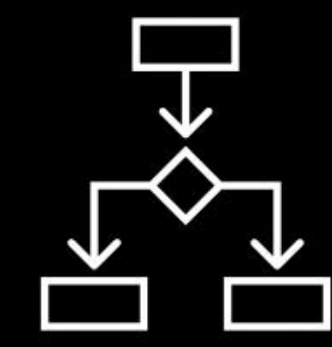


**Decision making**  
Select the preferred option for delivery



**Preparations and operationalization**  
Undertake recruitment, procurement, set-up of operational governance, IT systems, communications and training

DESIGN  
DEVELOPMENT  
DELIVERY



Checklist of major decision points

◇ Alignment with government's overall strategic objectives

◇ Confirmation of mandate to proceed with necessary legislative amendments

◇ Sign-off of budget with clear articulation of breakdown and scope

◇ Development of full evidence base and options

◇ Sign-off of preferred option and authorization to proceed

◇ Operationalization of the risk transfer and risk retention strategies



Critical Stakeholders

- Cabinet
- Ministry/Department of Finance

- Ministry/Department of Finance
- Government's legal office

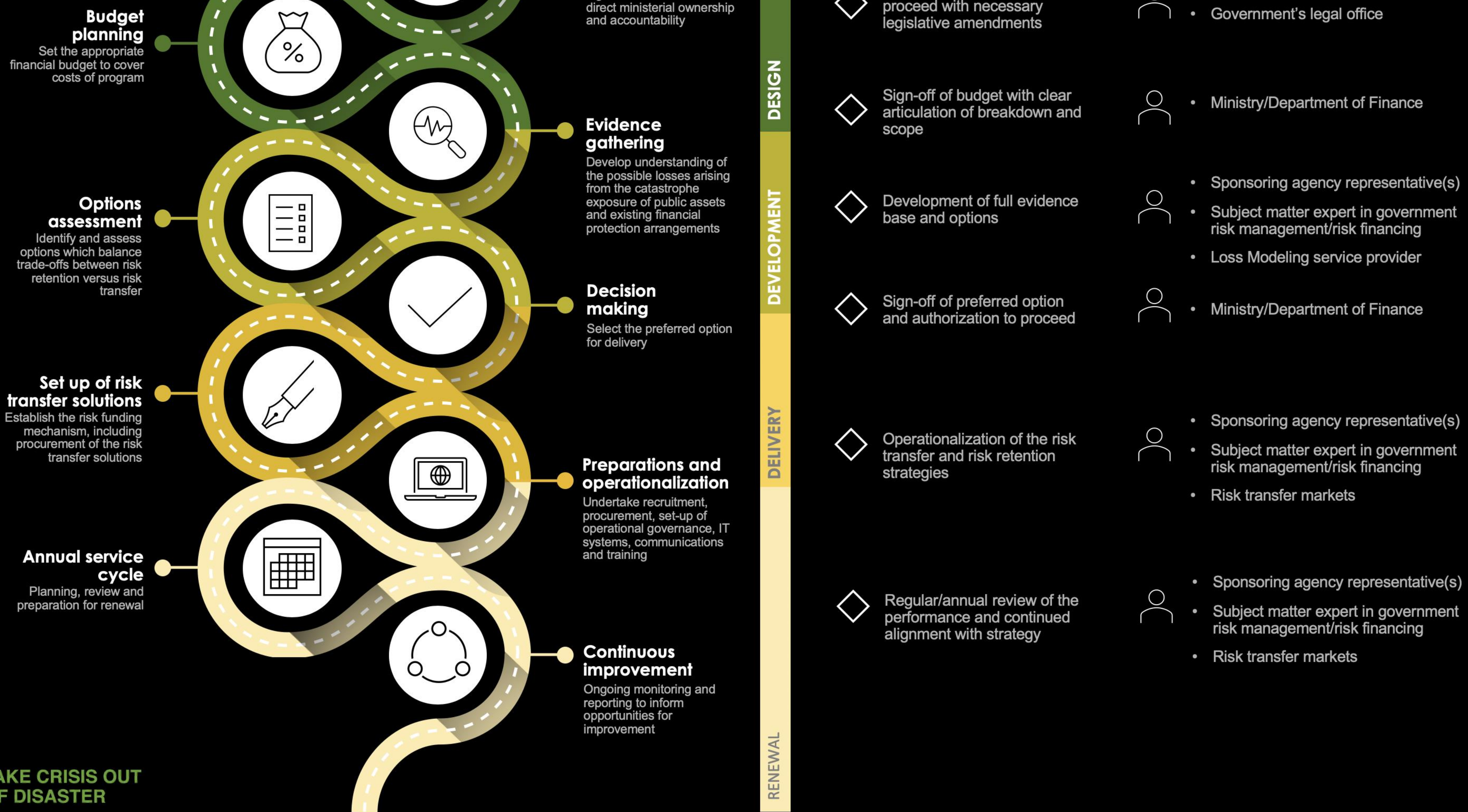
- Ministry/Department of Finance

- Sponsoring agency representative(s)
- Subject matter expert in government risk management/risk financing
- Loss Modeling service provider

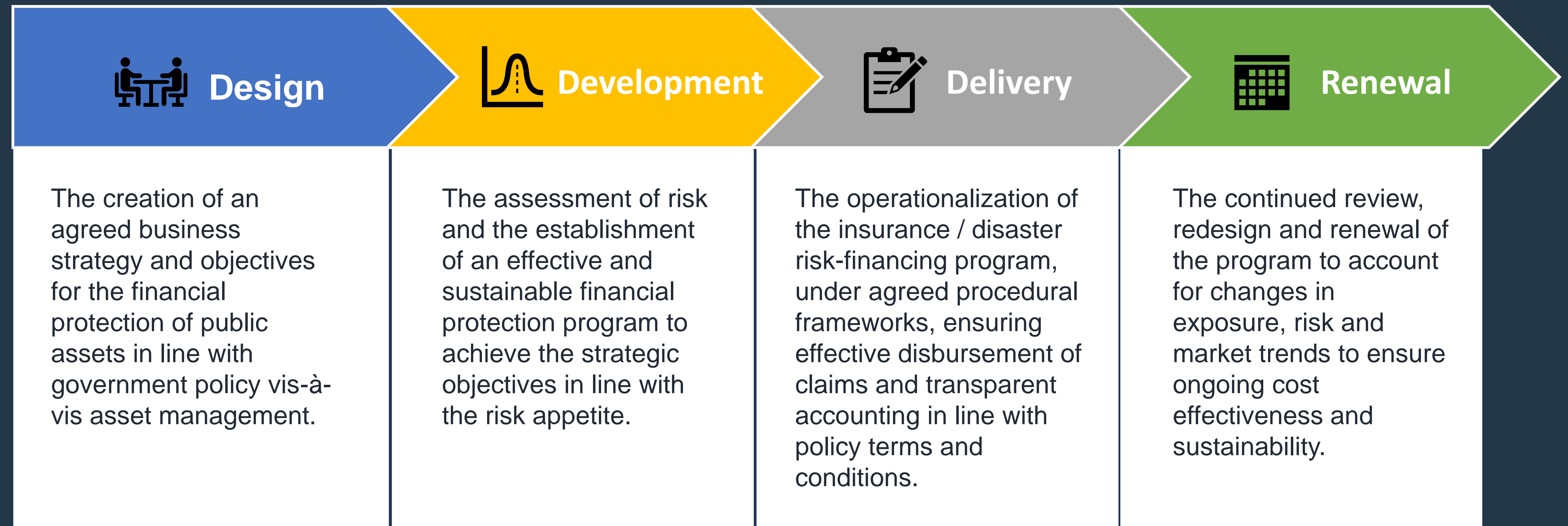
- Ministry/Department of Finance

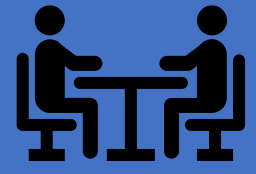
- Sponsoring agency representative(s)
- Subject matter expert in government risk management/risk financing
- Risk transfer markets

- Sponsoring agency representative(s)



# Stages in preparation and delivery of financial protection strategy





# Designing a risk financing strategy



## Strategic alignment

- Agree principles
- Define intended benefits



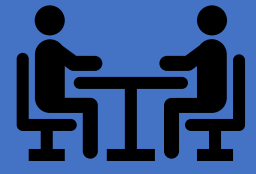
## Legitimacy

- Affirm mandate
- Develop legislative/regulatory instrument
- Agree operational base
- Develop strategic governance process
- Develop review process



## Budget planning

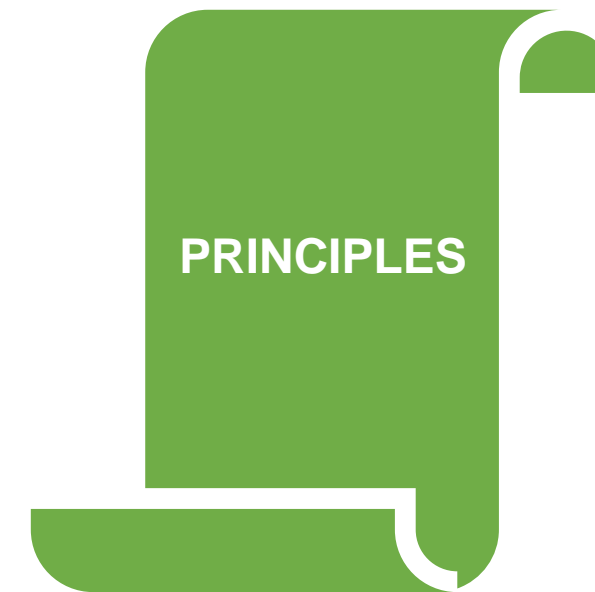
- Establish core financial strategies



# ⚙️ Strategic alignment

## Strategic Context considerations:

- Economic resilience
- Protecting both sides of the balance sheet
- Better financial management
- Improved understanding of whole of government challenges/risks
- More efficient national/subnational funding flows
- Holistic and consistent allocation of relief and recovery funding  
Improved allocation of expenditure on relief & recovery vs. mitigation
- Improved government & community incentives
- Improved linkages with social policy



## BENEFITS

Key Performance Indicators (KPIs)

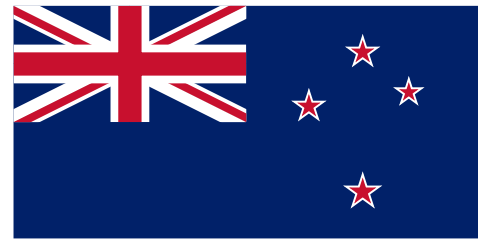
**Specific**

**Measurable**

**Achievable**

**Relevant**

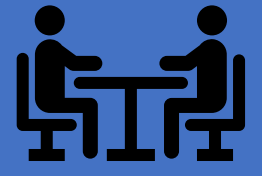
**Timebound**



## New Zealand Case Study: All of Government Risk Financing Principles

### Key guiding principles:

- **All of Government:**  
the primary goal is to achieve a better outcome for Government as a whole
- **Customer focus – stability and ease of transition:**  
the solution should maintain a focus on the agencies as customers
- **Risk management and data improvement:**  
the solution will facilitate excellence in risk management
- **Insurable risk financing and coordination:**  
the solution is a vehicle to pool, fund and coordinate the management of insurable risks. It is not an insurer.
- **Long term public value:**  
the solution will facilitate reduced costs over the long term
- **Equity:**  
The operations of the solution should be fair, and the treatment of different participating agencies transparent and defensible from an equity perspective
- **Simplicity and transparency:**  
Simple approaches and models, where adequate, will be preferred over more complex ones
- **Prudence:**  
where there is uncertainty, the solution should err on the side of caution



Design



# Legitimacy



Legislation



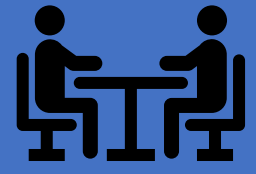
Regulation



Mandate



Operational  
location



# Financial and budget planning

- To what extent are the contingent liabilities associated with natural disaster impacts incorporated into government accounts?

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- If a program is set up in a way that it may experience a **surplus**, can these be accrued/accumulated over ensuing years on the basis this improves financial resilience over time?

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- If a program is set up in a way that it may experience a **deficit**, what is the role of central government to guarantee replenishment and/or manage losses above the capacity of the program?

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- If funds are to be accumulated within a program, what is the **investment protocol**?

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- Does legislation authorize the procurement and use of risk transfer through (re)insurance? If so, are there any restrictions on the choice of capital partners or intermediaries?

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- How will the operational solution be funded?

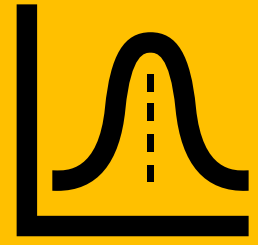
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- How will program implementation (e.g. the costs associated with delivery) be funded?

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- How will payouts flow to the asset owning / implementing unit following an eligible disaster event?





# Developing and structuring the risk transfer framework



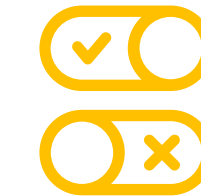
## Evidence gathering

- Confirm scope
- Collect data
- Conduct loss modelling
- Develop the funding gap equation



## Options assessment

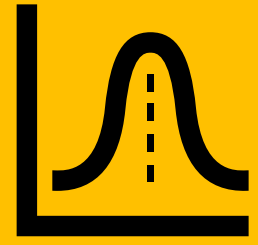
- Conduct assessment of drivers
- Assess degree of risk retention vs risk transfer
- Define services, roles and responsibilities
- Assess costs and contribution arrangements



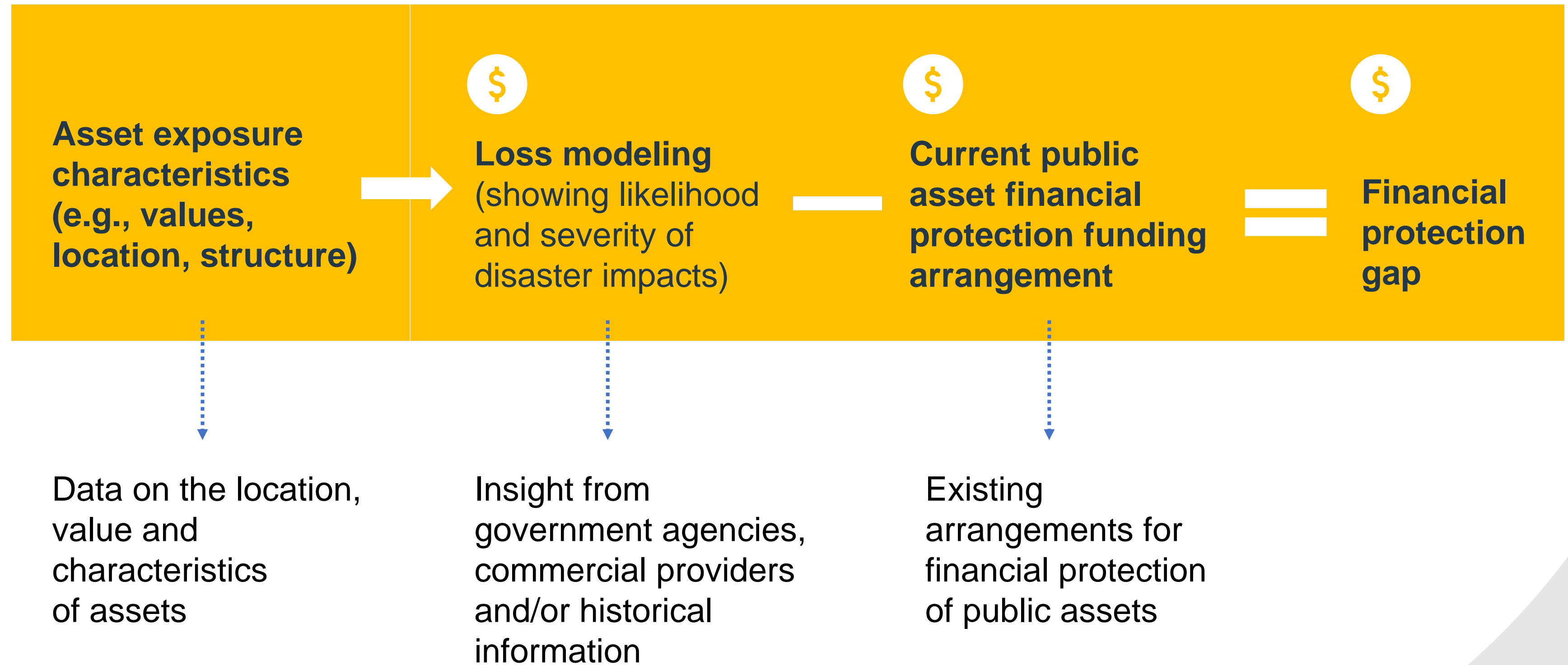
## Decision making and authorisation

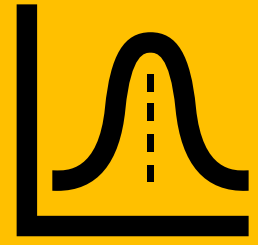
- Identify the preferred option of delivery
- Obtain required sign-off and authorisations



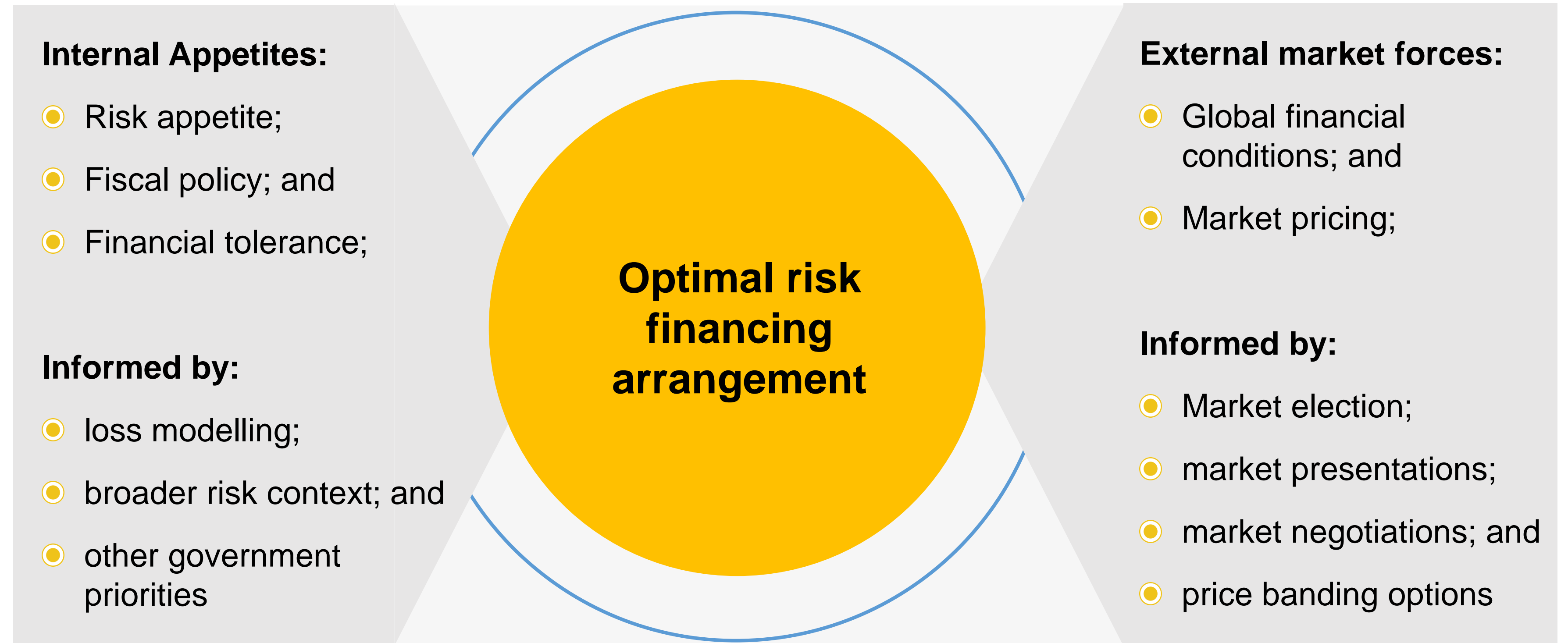


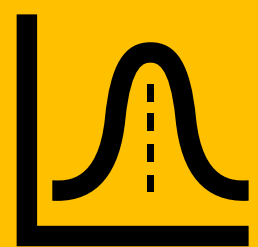
# Evidence Gathering



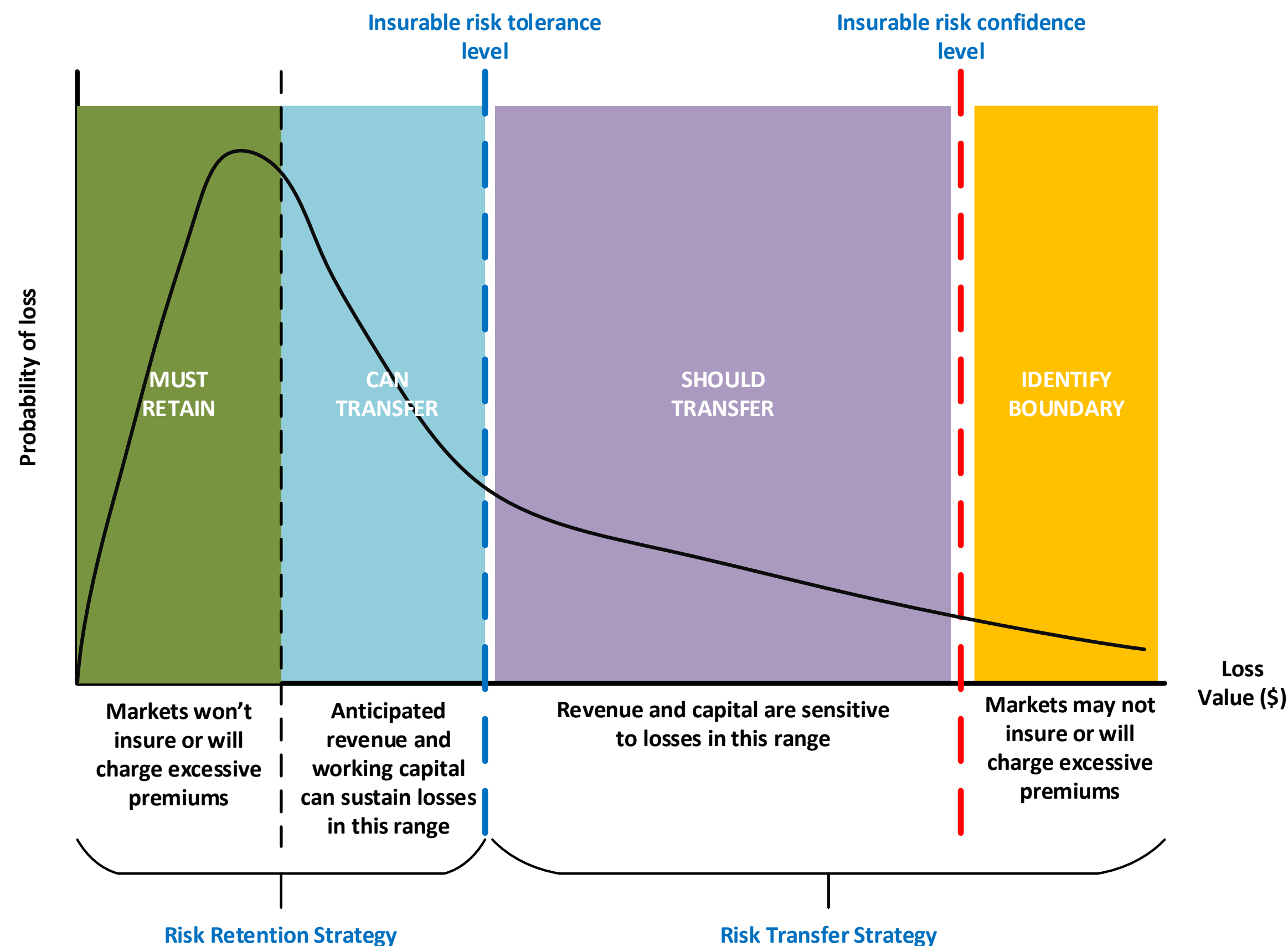


# Key influences



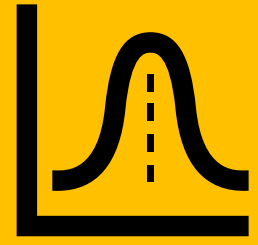


# Options assessment: Risk retention versus risk transfer



How much to retain?

How much to transfer?



# Options assessment: Roles and responsibilities

- Governance and oversight functions
- (Re)insurance broking (intermediary) services
- (Re)insurer services
- Claims Management Services
- Account Management Services
- Actuarial Services
- Risk Modelling Services
- Audit and Compliance Services

Develop  
and deliver  
in-house?

Outsource?

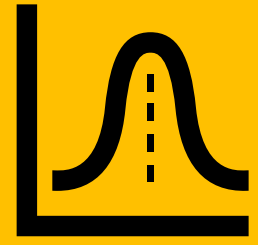


**POLL (2):  
ROLES AND  
RESPONSIBILITIES**

Which of these capabilities do you think may benefit from external support or greater capacity building?

(select top three)

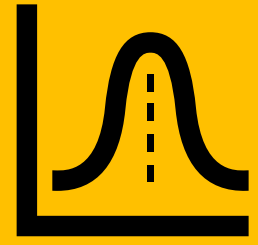
- Program management capability
- (Re)insurance broking (intermediary) capability
- Claims Management capability
- Account Management capability
- Actuarial capability
- Risk Modelling capability
- Audit and Compliance capability



# Options assessment: Cost assessment

- **Estimated cost of retained losses:** Cost of losses retained over a pre-determined period as per the Risk Retention Strategy (informed by loss modelling)
- **Estimated cost of Risk Transfer:** The cost of risk transfer fees and premiums over a predetermined period (accounting for prescribed terms and conditions of coverage)
- **Estimated cost of Administration:** The cost to maintain in-house services and/or contract outsourced services over a predetermined period



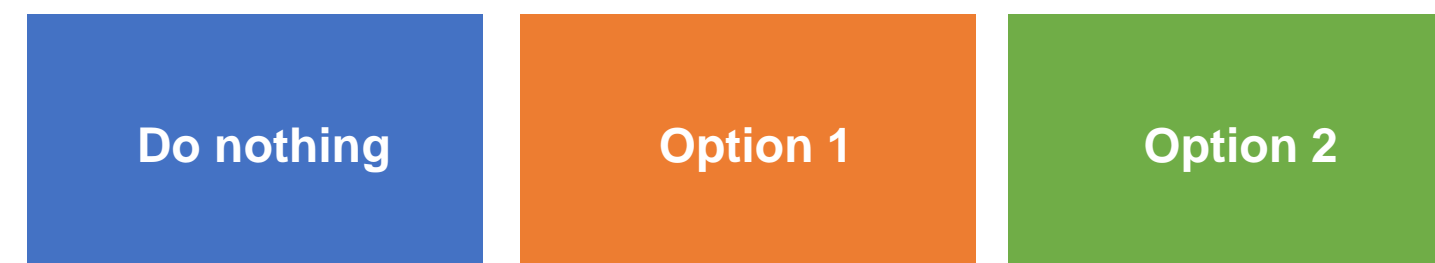


# Decision making

## Option characteristics

### Option description:

- Scope (Perils/assets/agencies)
- Vehicle (Standalone/business unit)
- Risk Retention strategy
- Risk Transfer strategy
- Service/Administration delivery strategy
- Cost (TCOR)
- Funding (allocation and implementation)

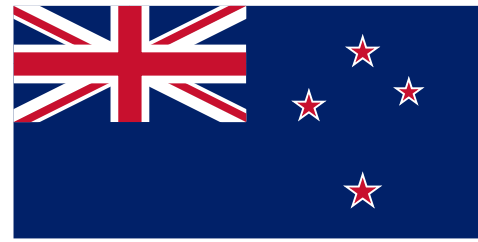


### Option attributes:

- Benefits (Hard benefits (Financial) and Soft benefits (Non-financial))
- Disadvantages (Hard disadvantages or costs (Financial) and Soft disadvantages or costs (Non-financial))
- Risks and Issues
- Constraints
- Dependencies





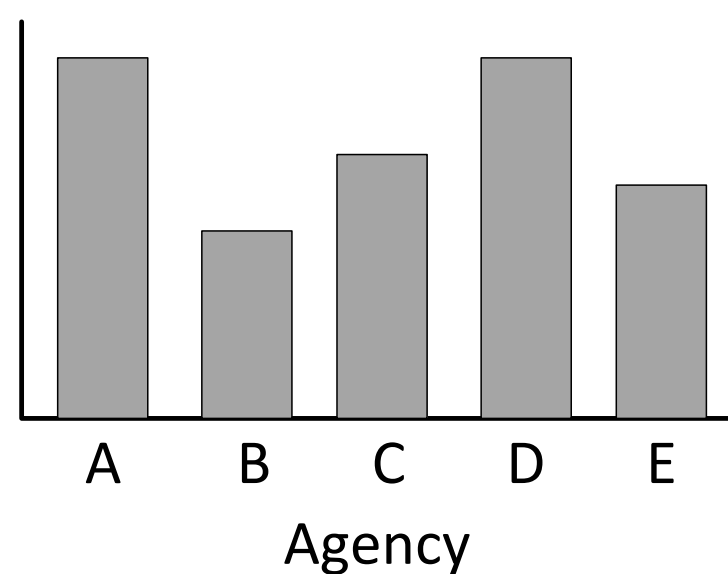


## New Zealand Case Study: Choosing between different options

### Option: Do nothing

Continue current practice of agencies managing their individual arrangements.

Representation:

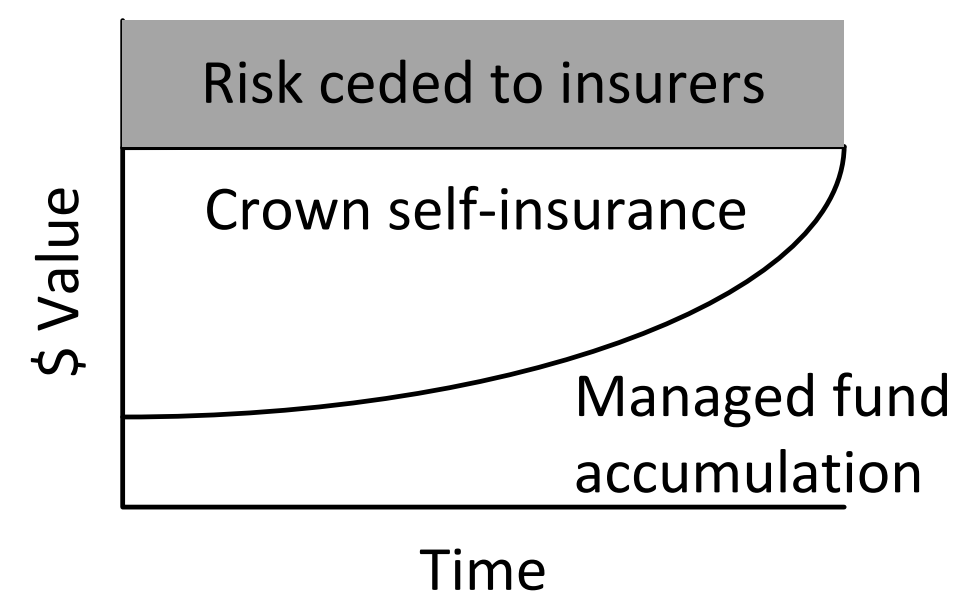


### Option: Partial self-insurance

Consolidate agency risk financing arrangements into an AoG solution, involving:

- Agencies paying a risk based contribution into a managed fund to cover expected losses;
- Crown self-insuring a layer of calculated risk within Crown's financial risk tolerance; and
- Ceding risk above Crown tolerance to the insurer market.

Representation:

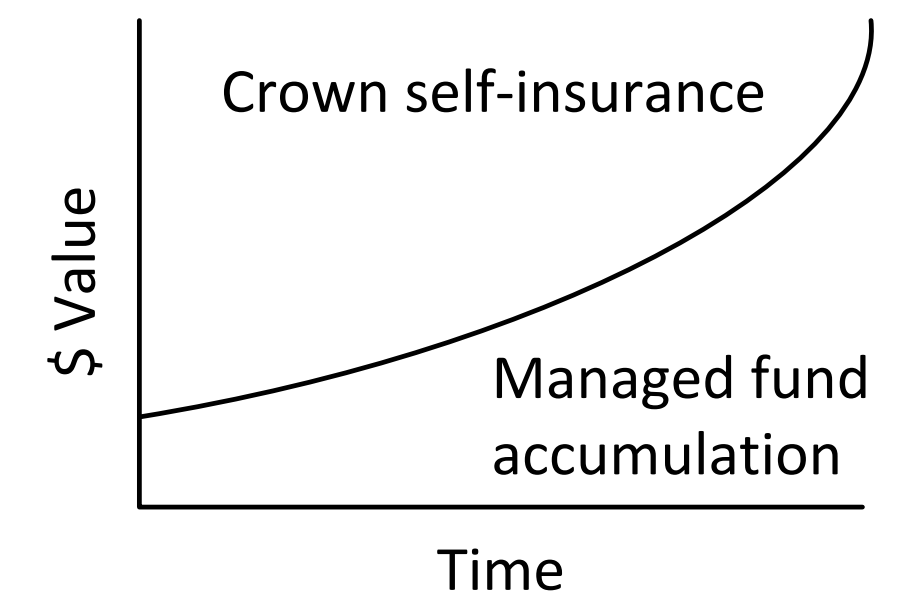


### Option: Full self-insurance

Consolidate agency risk financing arrangements into an AoG solution involving:

- Agencies paying a risk based contribution into a managed fund to cover expected losses; and
- Crown self-insuring the risk of exceptional losses (i.e. those losses exceeding the financial tolerance of the managed fund at a given point in time) without ceding risk to the insurer market.

Representation:





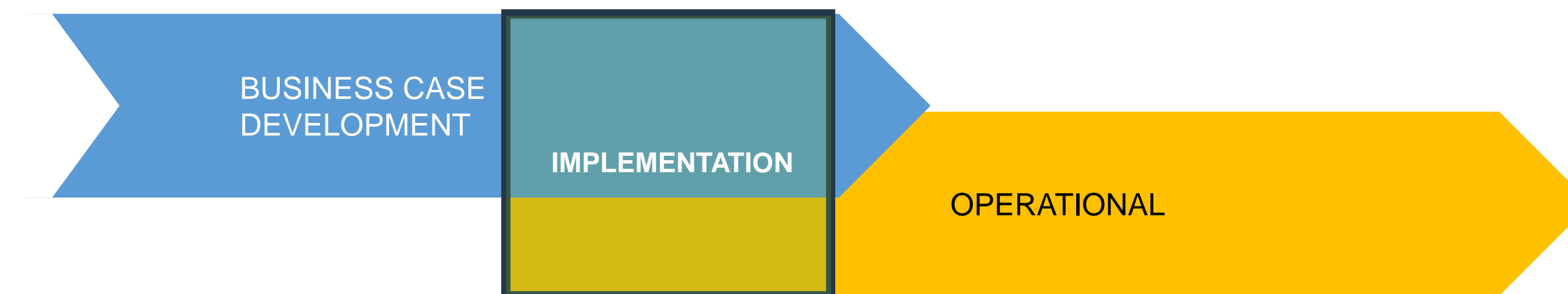
# Deliver the operational risk transfer mechanism

## Setting the risk financing solution

- Establish the risk retention solutions
- Establish the risk transfer solutions

## Preparing for the solution

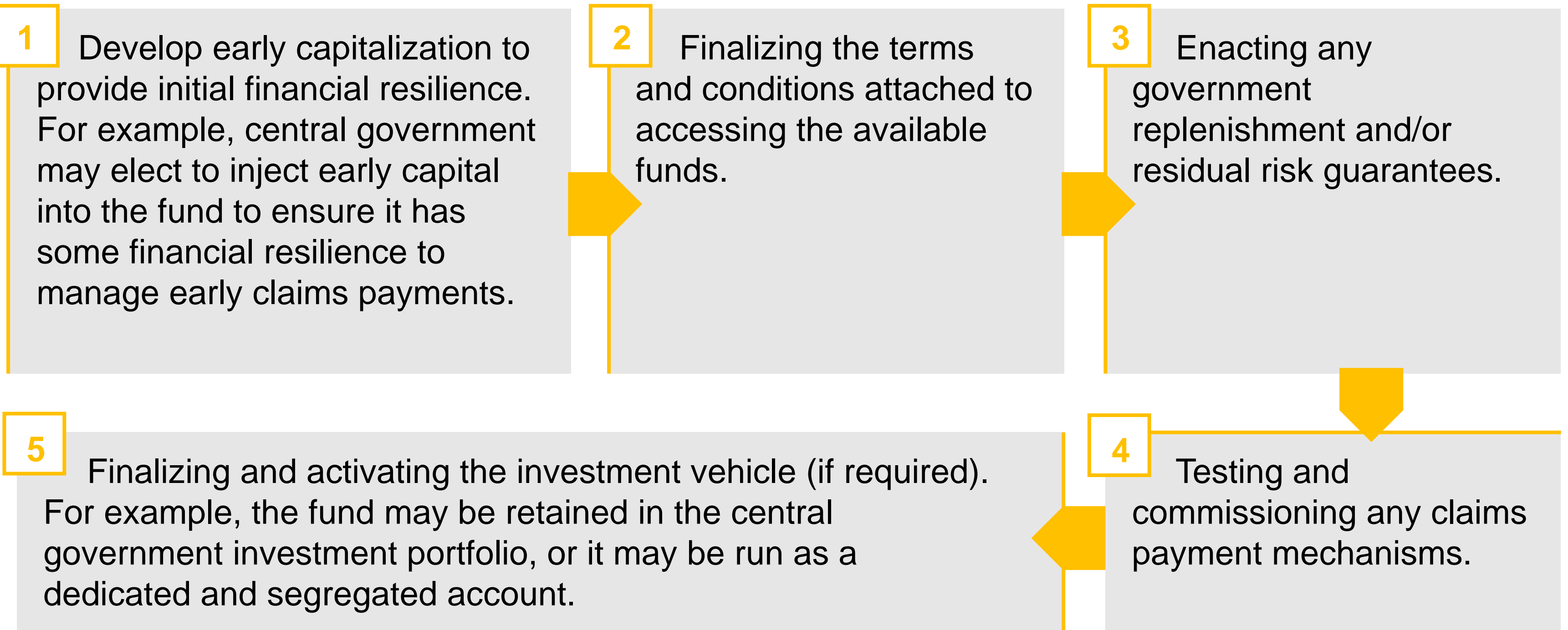
- Establish the operational governance
- Establish the functional architecture
- Establish the external engagement procedures including communications and onboarding of agencies





# Risk retention strategy

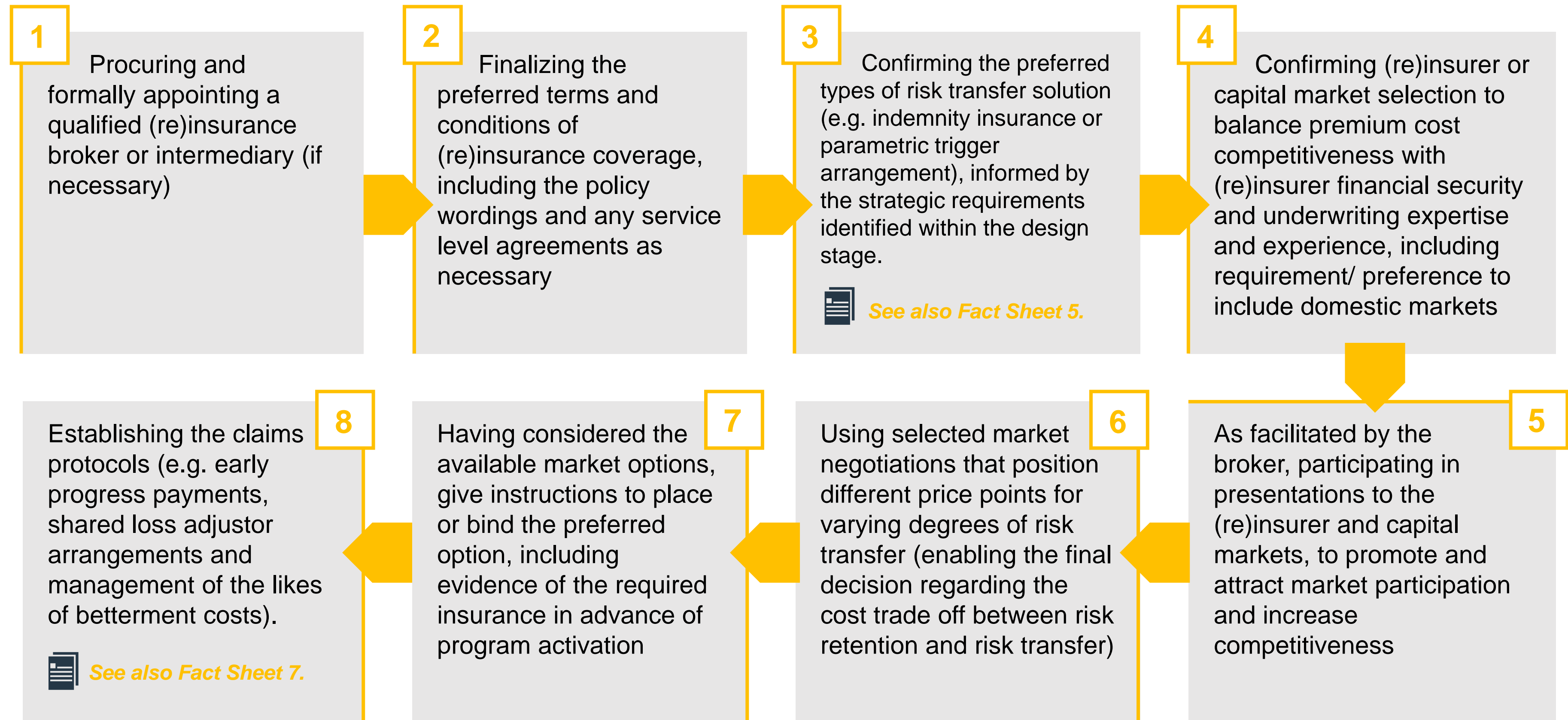
Key steps may include the following:





# Risk transfer strategy

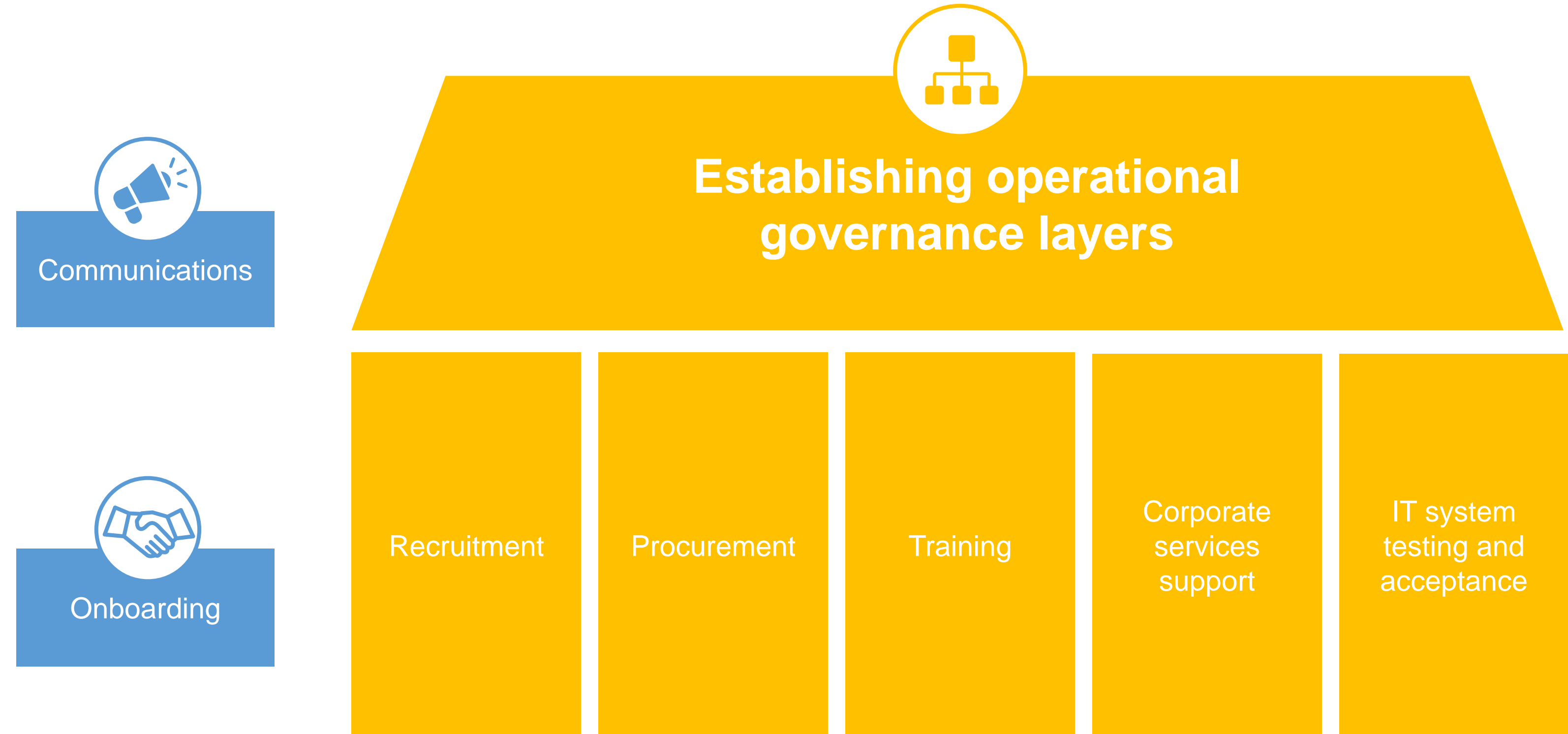
Key steps may include the following:





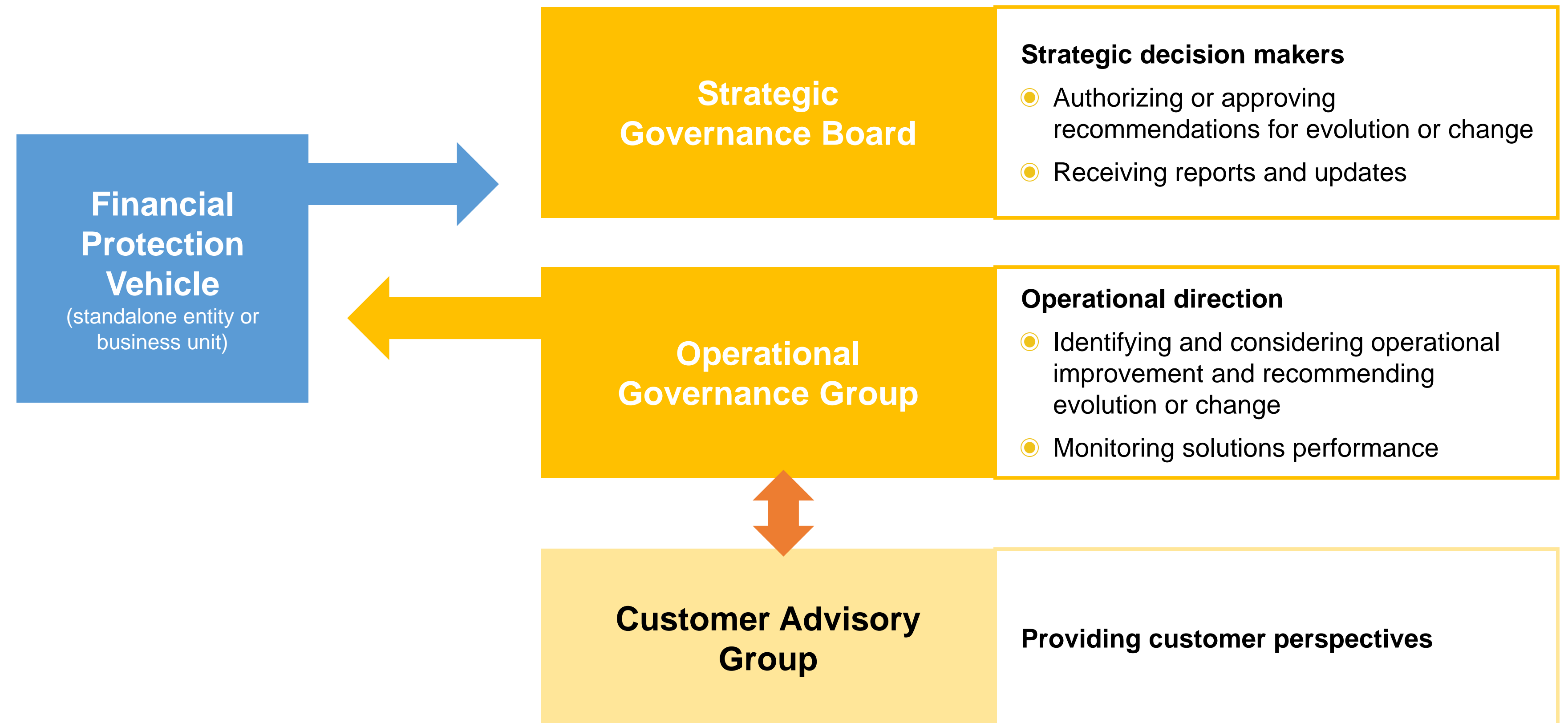
Delivery

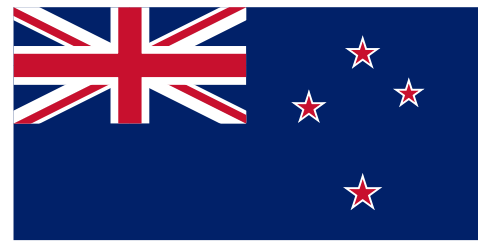
# Program architecture



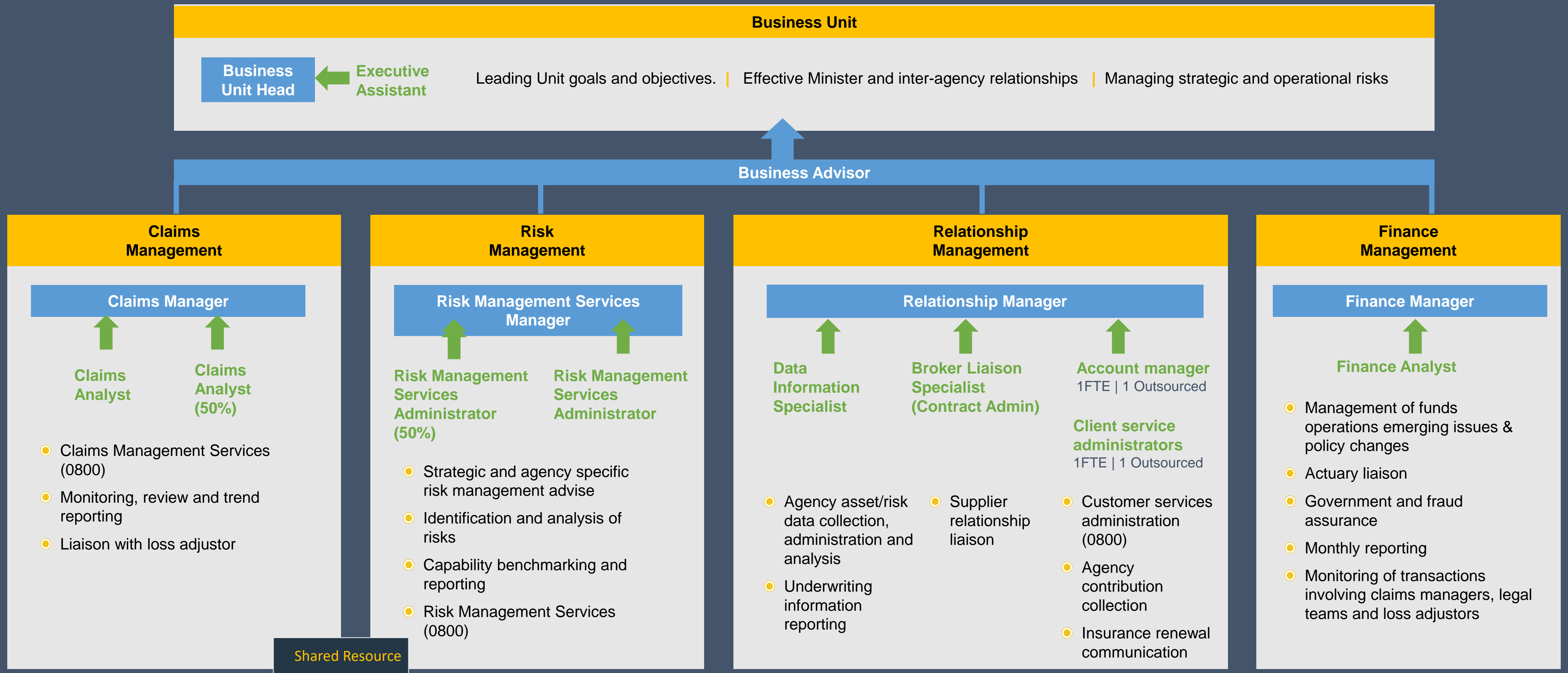


# Program governance





# New Zealand Case Study: Organizational structure





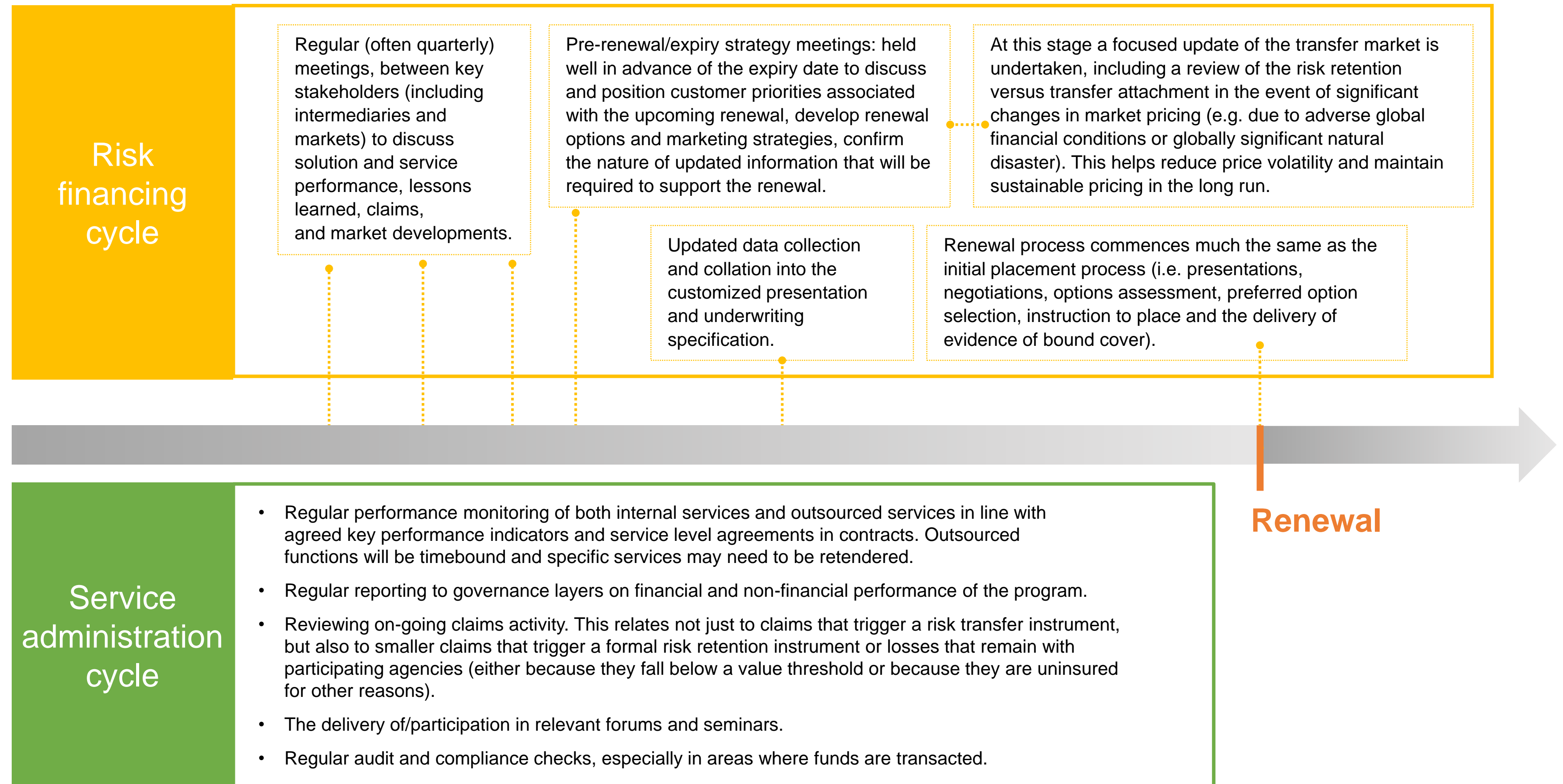
# Ongoing management of the insurance process

- Insurance contracts will typically cover a defined time period (usually 12 months)
- Renewal will require re-assessment of the risks
- Market conditions may change, capacity and price may vary
- Large scale losses may influence underwriting considerations
- Technological solutions may alter approaches taken – e.g. claims management systems, loss modelling and analytics
- Intermediaries and insurance partners may need to be consulted in advance of renewal
- Procedures should account for this, and adequate time given to ensure adequate cover is gained in time for inception of the next period



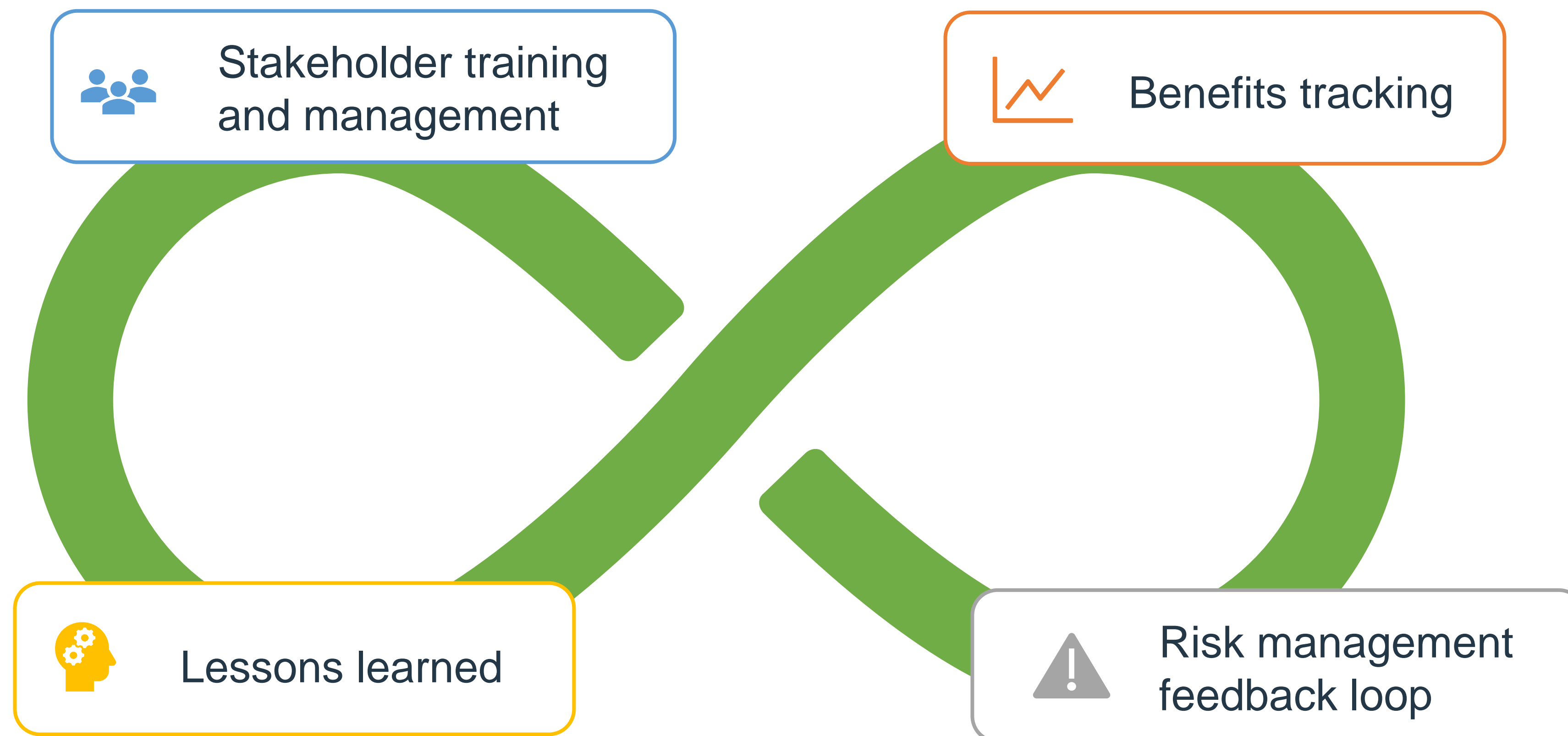


# Annual service cycle





# Continuous improvement



# Perspective from Mexico: FONDEN

Salvador Perez



## FONDEN: An example of insurance within a risk finance strategy



### Background

- **Impacts.** Big disasters affected frequently Mexican territory. In 1985 big earthquake implied a lot of dies and economical losses.
- **Budget reallocation:** government redirect original budget to repair the damage suffered by natural disasters and to attend the affected population.
- **Programs not fulfilled:** the infrastructure projects and social programs were affected.
- **Specific mechanism:** Mexican government began to design for the allocation of resources in advance for the attention of natural disasters.

### Strategic alignment

- **Ex ante resources:** disaster risk financing vision with the participation of national and subnational authorities.
- **Disaster response:** providing resources for the acquisition of aid supplies to respond to the immediate needs of the population affected by a natural disaster.
- **Recovery and reconstruction:** resources dedicated specifically for reconstruction actions.

*“Original budgets will not modify more.”*



## FONDEN: An example of insurance within a risk finance strategy



### Legitimacy

- **The Federal Budget Law:** 0.4% of the annual federal budget must be allocated to FONDEN.
- **FONDEN Trust:** specific financial instrument to manage resources for disaster response.
- **Operating rules:** set up full aspects to access the FONDEN resources. *Specific procedures, deadlines and entities responsible.*
- **Clear objective:** financing emergency expenses to relief affected population and post-disaster rehabilitation and reconstruction of public infrastructure.

### Budget Planning

- **Annual budget:** Transference USDM \$600 on average by Ministry of Finance to FONDEN Trust
- **Extra budget:** FONDEN may receive additional resources Excess revenues obtained from oil or extraordinary tax collections.
- **Accumulation:** Resources that are not used in years with fewer disasters can be added in the following years



# MEXICO: Evidence Gathering

## Data Gathering

- Geocoded inventory of public assets was developed.



## Cat Modeling

- Stochastic models of the main hazards that affect Mexico were developed.

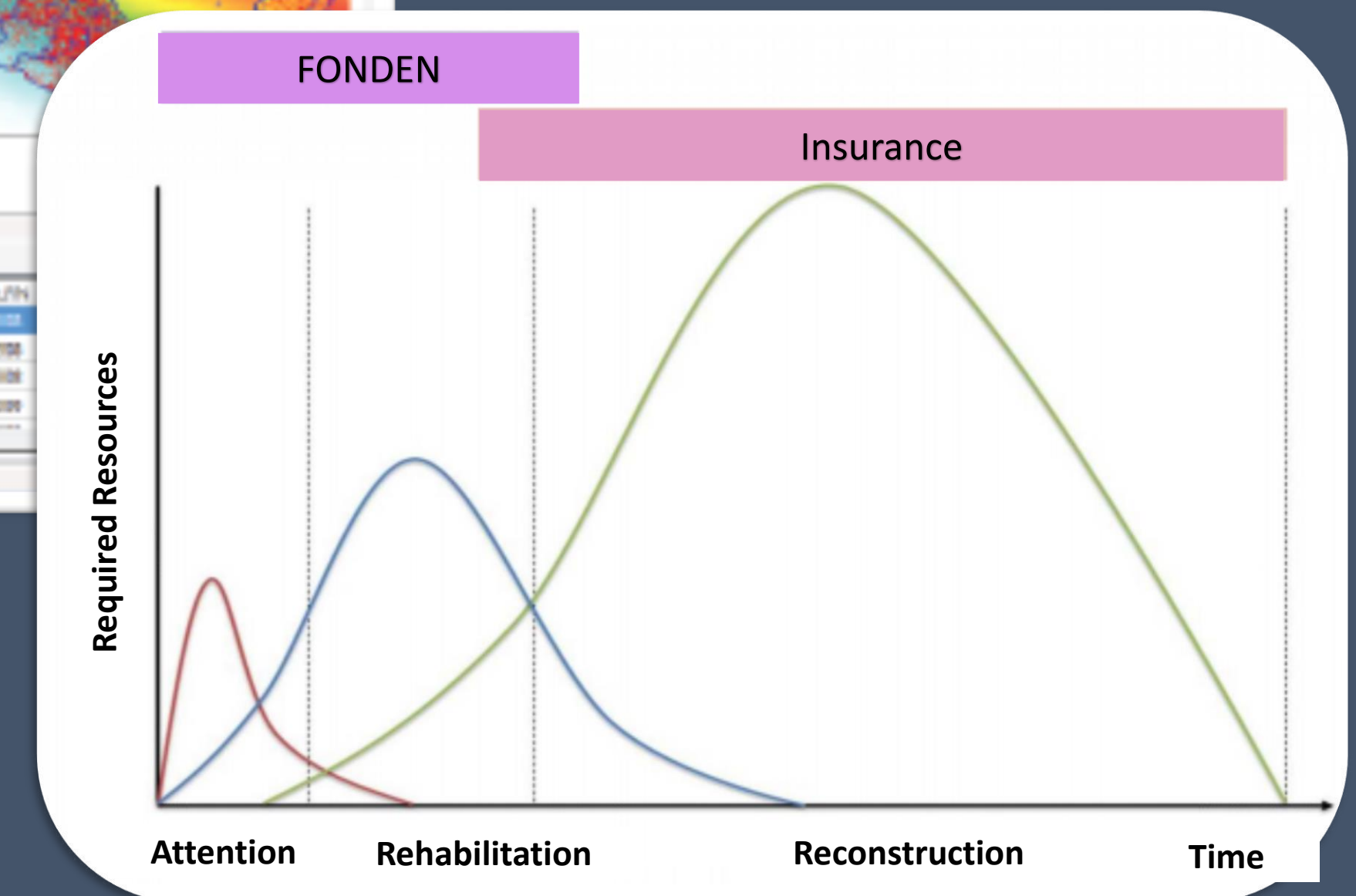
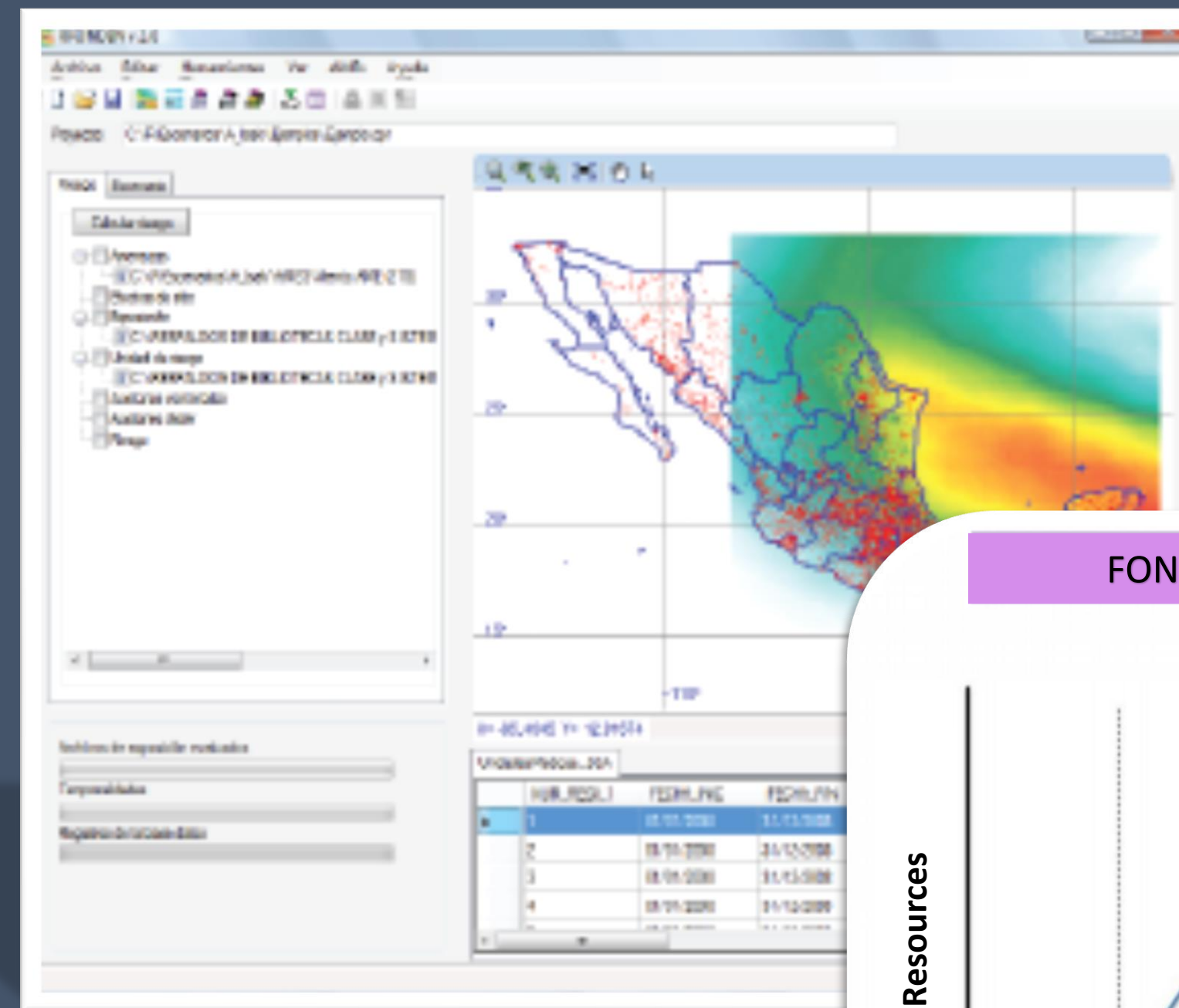




# MEXICO: Options assessment and Decision making

## Financial Modeling

- Allows defining the optimal levels of risk retention and transfer





## MEXICO: Set up of risk transfer solutions

The DRFI strategy of Mexico is based on:

### First losses

- By law, the line ministries must contract insurance schemes to protect their infrastructure as first responsibility. (*low risks*)

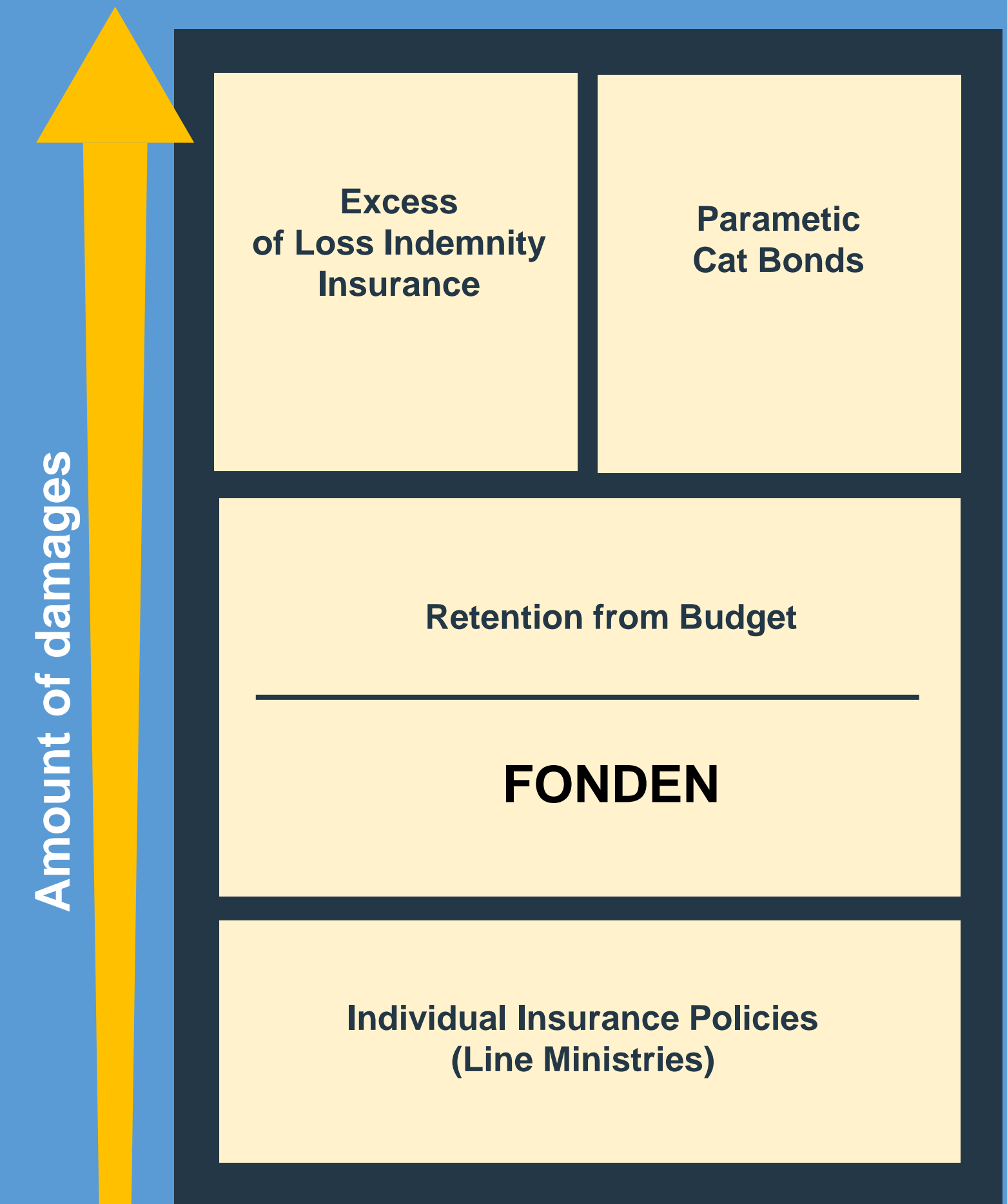
### Risk retention

- FONDEN acts as a mechanism to attend the first losses for cat risks.

### Risk transfer

- Since 2006, Mexico has issued catastrophic bonds focused on obtaining **resources for emergency**.
- Since 2011: XL Indemnity Insurance, which provides resources **focused on reconstruction** of damaged infrastructure.

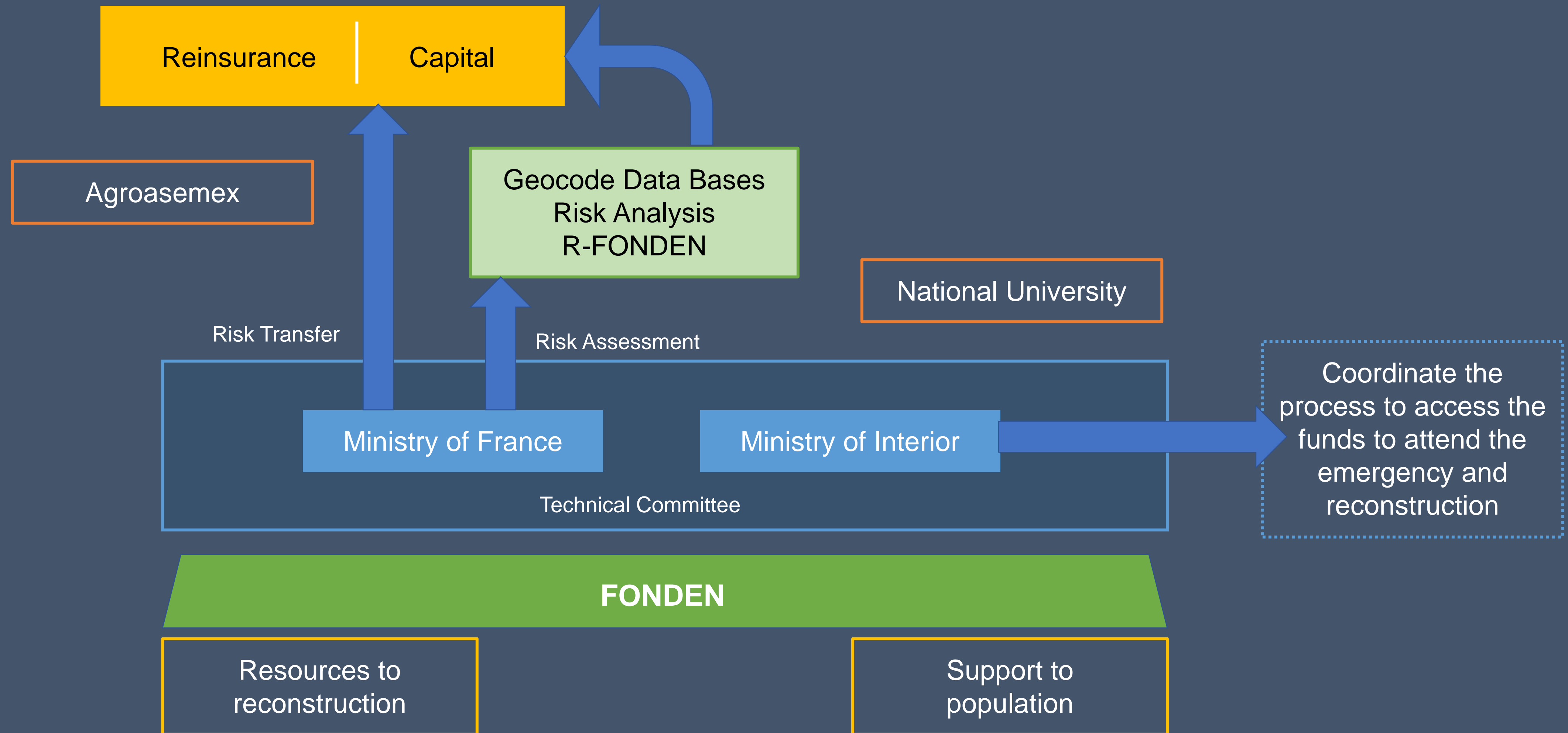
*Indemnities are managed by FONDEN Trust and the resources are used according with the operating rules.*







# MEXICO: Organizational Structure



# Final remarks and Q&A

Benedikt Signer



**POLL (3):  
FOCUS IN FUTURE  
FACTSHEET**

## Which of these are of interest within our factsheets on 'Data, Information and Analytics'?

(select top three)

- Developing public asset registries or inventories
- Using and interpreting catastrophe loss modelling
- Identifying data and information requirements for insurance transactions
- Understanding how different stakeholders in the insurance supply chain use your data
- Understanding how data can inform improved risk management decisions

# Questions and Answers



**USE THE Q&A  
FUNCTION**

Thank you



# SEADRIF

SOUTHEAST ASIA  
DISASTER RISK INSURANCE FACILITY



An ASEAN+3 Initiative  
In partnership with The World Bank

Disaster Risk Financing  
& Insurance Program





**FONDEN:**  
An example of insurance within a risk finance strategy

