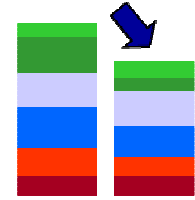


# Risk Management

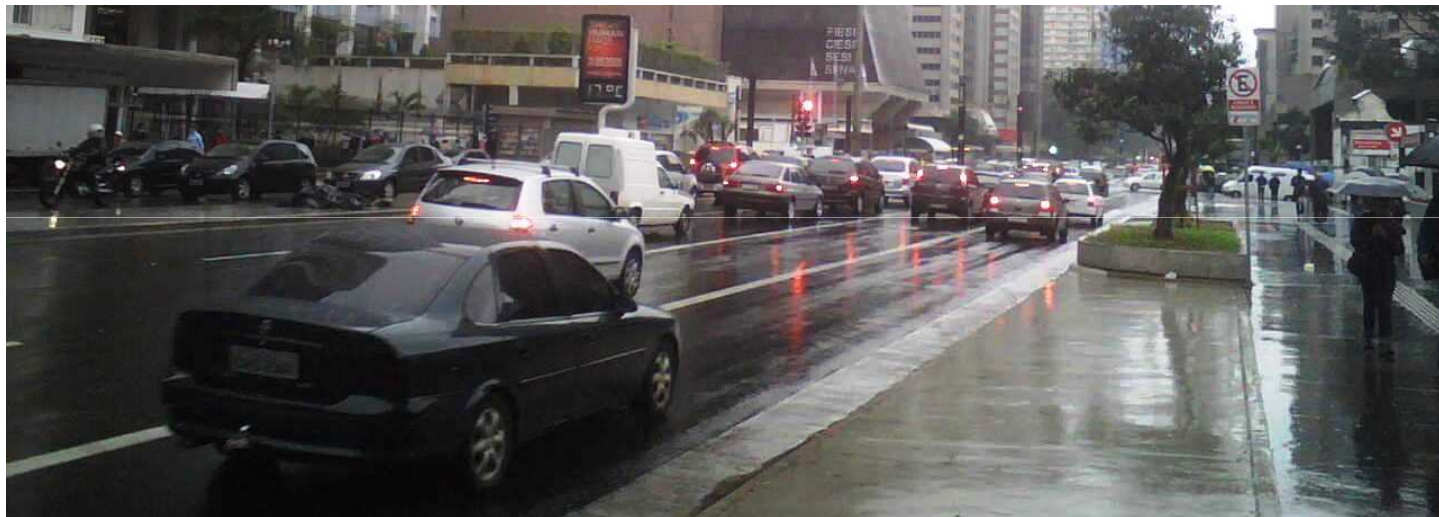
Fernando Goulart

Based on Donald Macrae's presentation

## We all do it

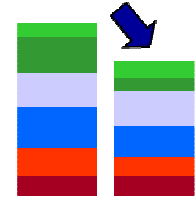


- We all do risk management every day – we just don't call it that.



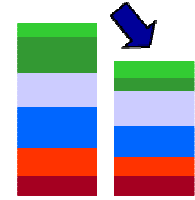
- But what we do by instinct and practice we can do better with systems and training.

# Managing Uncertainty



- ISO 31000, the classic international formulation of Risk Management, describes “risk” as “*the effect of uncertainty on objectives*”.
- It is about thinking about what might happen, both good and bad. It is about opportunity as well as about danger.
- It is about managing the future:
  - That can include trying to influence the future; or
  - Trying to be ready for what might happen.

# Managing the future?



*“Only Allah knows what tomorrow will bring”*

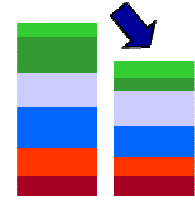
Chapter 31, verse 34

Sometimes, it can be a waste of resource to try to change what might happen. Risk management can be taken too far.



It is a perfectly justifiable approach to risk management to plan to mitigate the consequences after it happens instead.

# Hazard and Risk

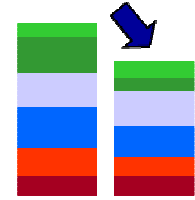


- A **hazard** is a source of potential harm.

- A **risk** is the possibility that the hazard will happen.

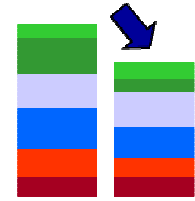
We often confuse the two by describing a hazard as a risk. That is, we refer to the danger we want to avoid as the “risk” when it is the hazard. The “risk” is how we manage to avoid it.

# Risk in Regulatory Systems



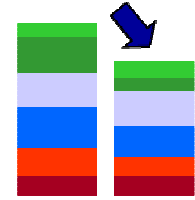
- Regulatory systems are often designed to reduce the risks to the public of death, illness or other damage. They work on the basis that if enough people do the right things, risks of damage are reduced, e.g. WTO SPS Agreement.
- Some regulations themselves mandate risk management by businesses, e.g. EU food safety or occupational safety. Businesses then have a legal obligation to apply risk management.
- Regulatory systems are implemented and enforced through a risk-based approach to inspection, targeting high risk businesses.

# WTO TBT vs SPS: Different Approaches



- Both the TBT and SPS Agreements require that trade measures taken by States should be “no more trade-restrictive than necessary”.
- Under SPS, every trade restriction has to be based on sound scientific evidence of a risk to the life or health of humans, animals or plants.
- Additionally, deviation from other international standards (Codex Alimentarius, IPPC or OIE) needs a risk assessment.
- Under the TBT, trade measures can be justified on the basis of “legitimate government objectives”, without express reference to risk.

# Applying Risk Management to Inmetro



Inmetro can apply risk management:

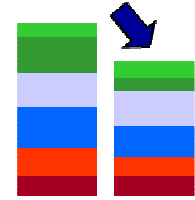
- As an organisation
- As a regulator
- As an enforcer

It can manage risks that are:

- Internal to the organisation
- External.

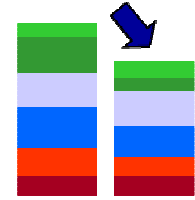


# The Risk Management Industry



- There is a whole industry of consultants, academics and organisations providing services related to risk.
- This has often complicated the picture as each new organisation finds a new angle on “risk”, in order to sell its services. Some are useful, some are just noise.
- There are many different models available and many different techniques and tools.
- But basically risk management is about asking a series of simple questions, in the right sequence. (It is the answers that are difficult, not the questions.)

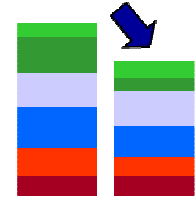
# Steps in Managing Risk



There are four classic steps in most approaches to risk management:

1. Identification – what problem are we trying to solve?
2. Assessment – is it going to happen and how serious will it be?
3. Treatment – what options do we have in how are we going to deal with it?
4. Management – dealing with it.

# Steps in Managing Risk



There are four classic steps in most approaches to risk management:

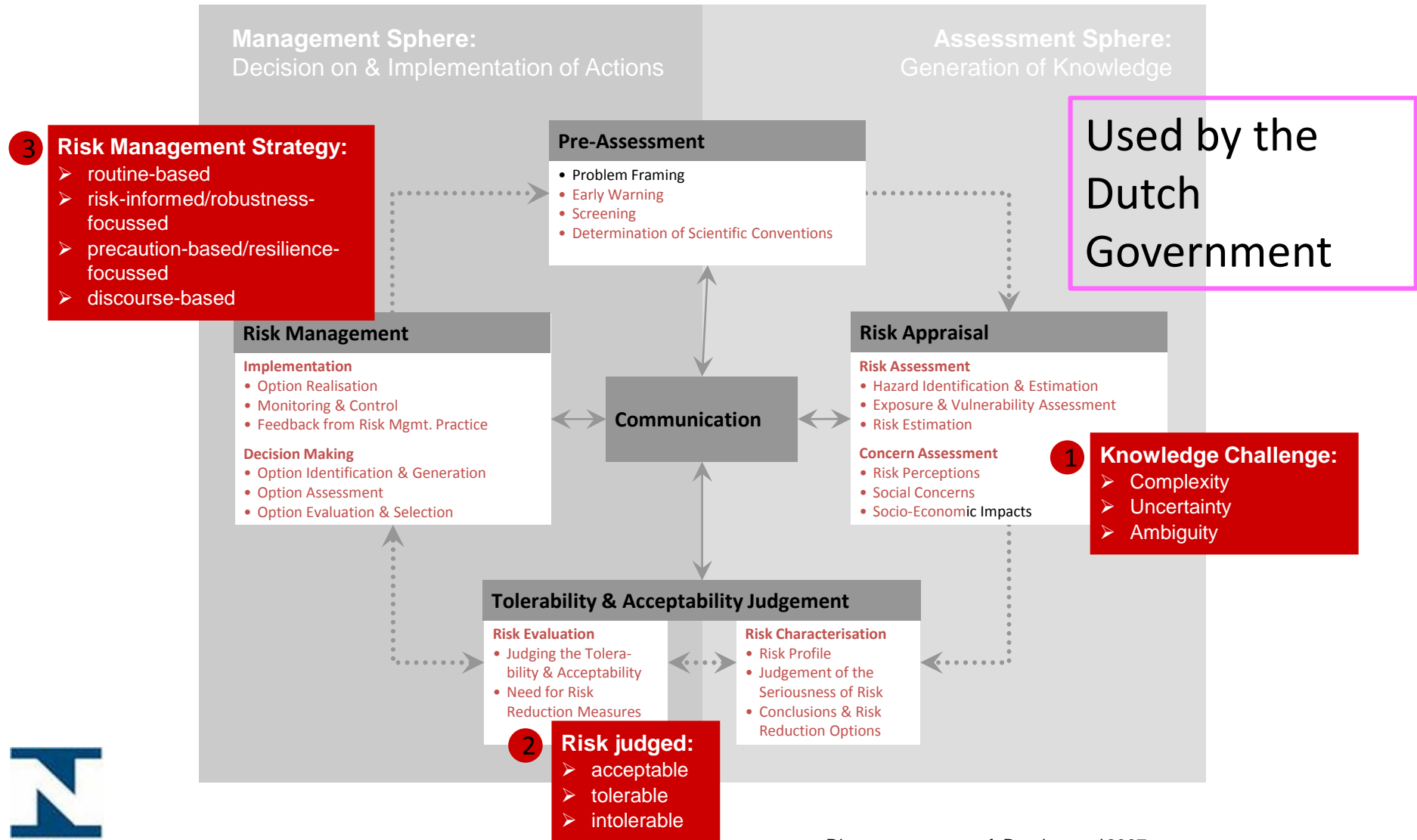
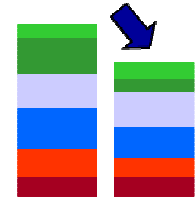
## Assessment Sphere

1. Identification – what problem are we trying to solve?
2. Assessment – is it going to happen and how serious will it be?
3. Treatment – what options do we have in how are we going to deal with it?
4. Management – dealing with it.

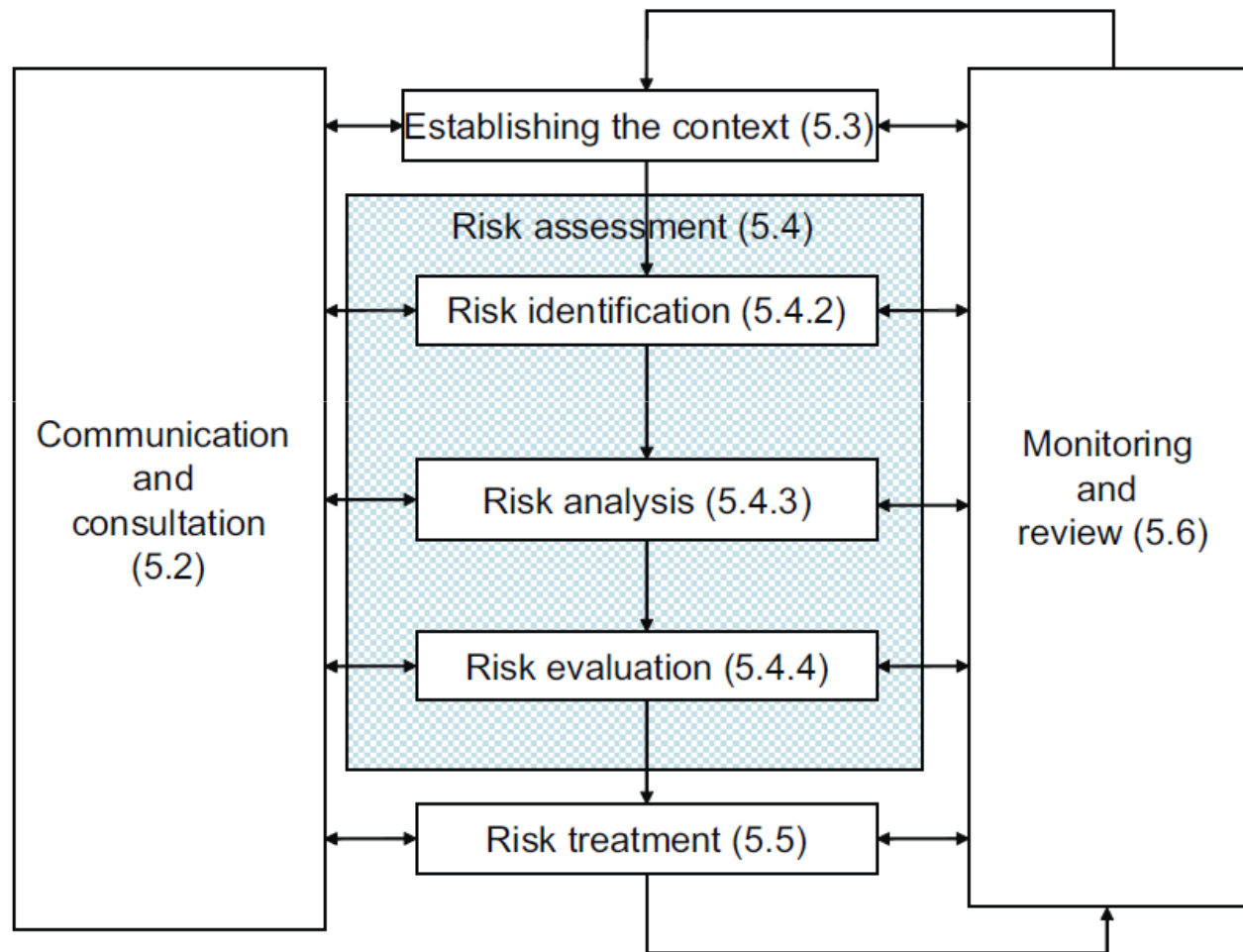
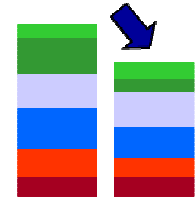
## Management Sphere

# IRGC framework

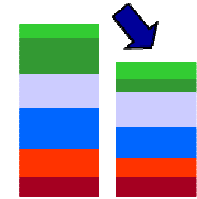
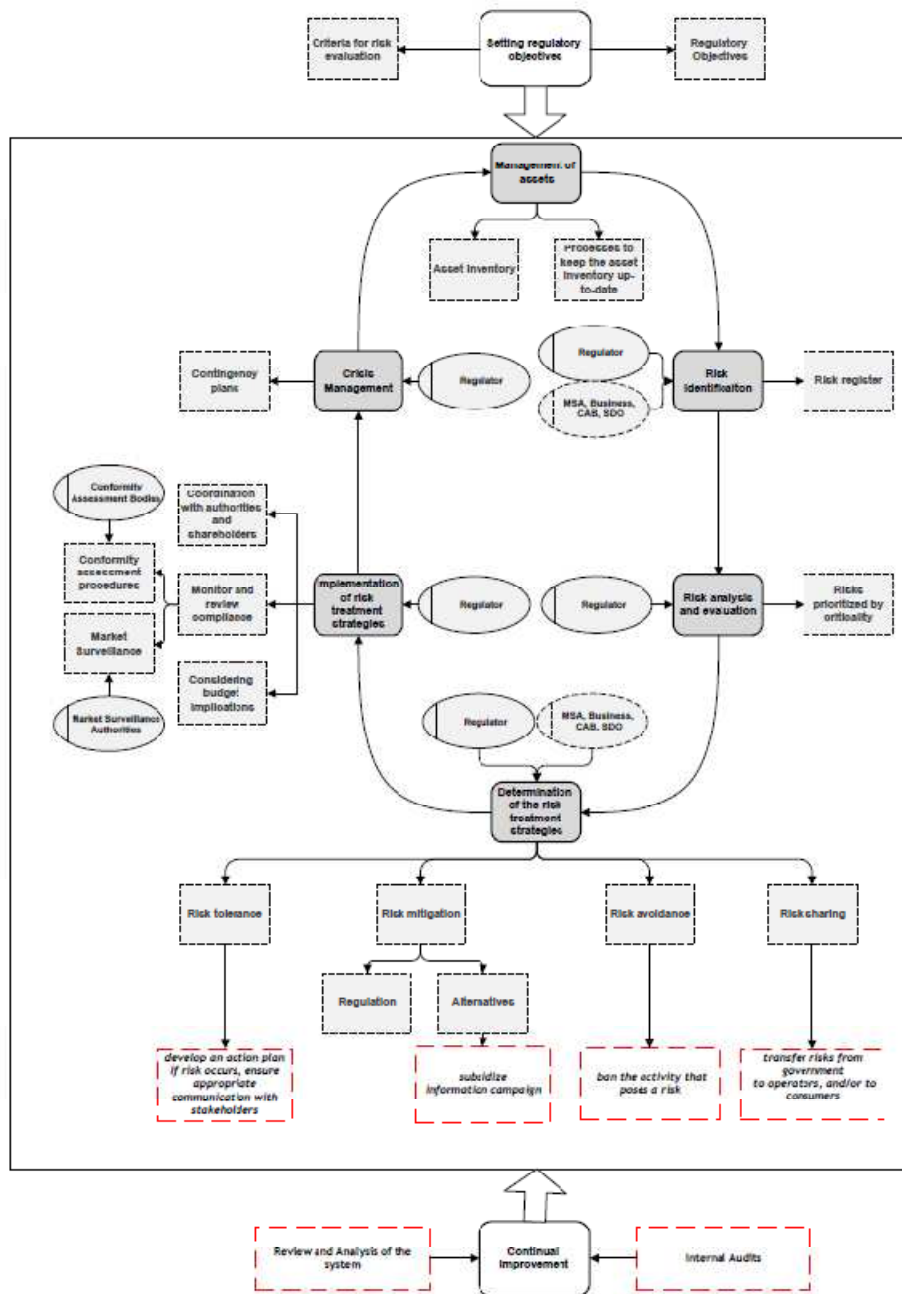
(International Risk Governance Council)



# The ISO 31000 Model



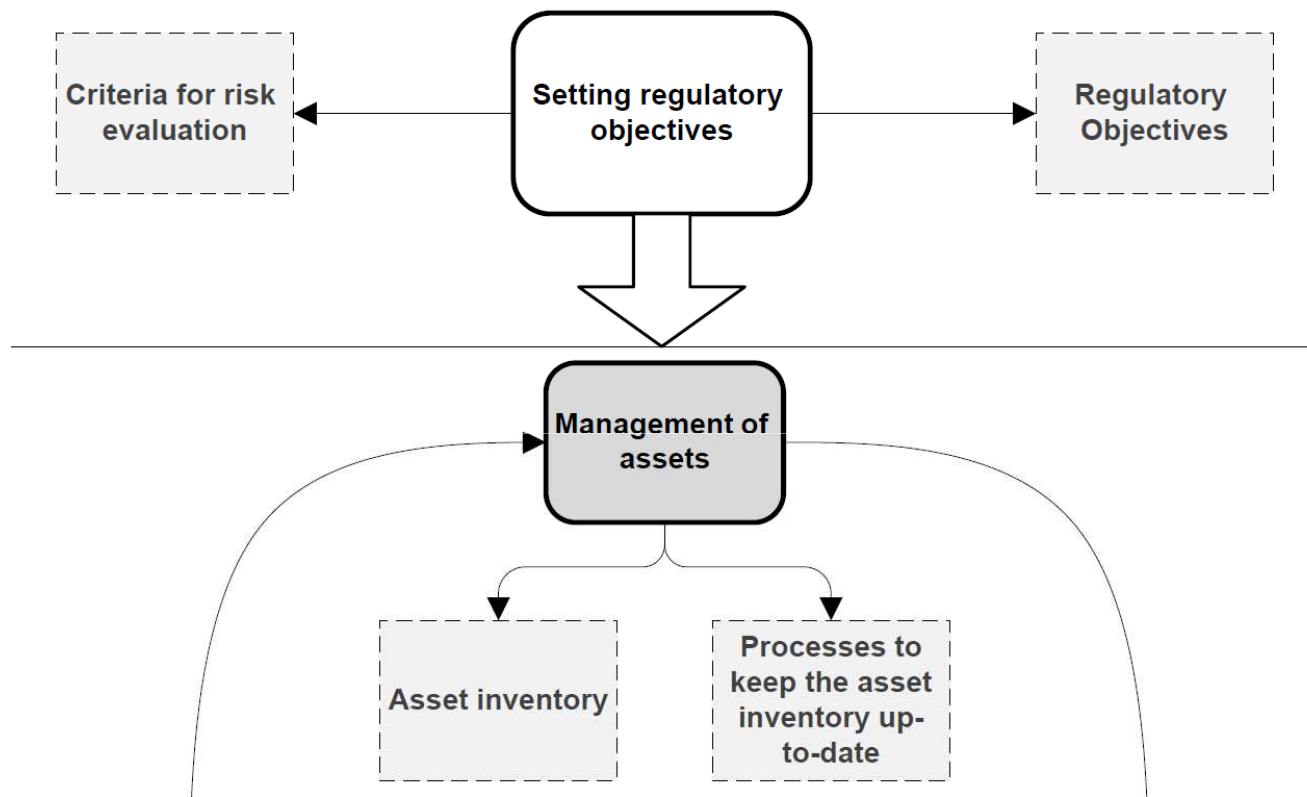
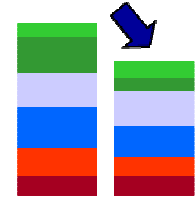
It starts by “establishing the context”, followed by Assessment then Treatment, with both Communication and Monitoring occurring all the time.



## The UNECE GRM Reference Model

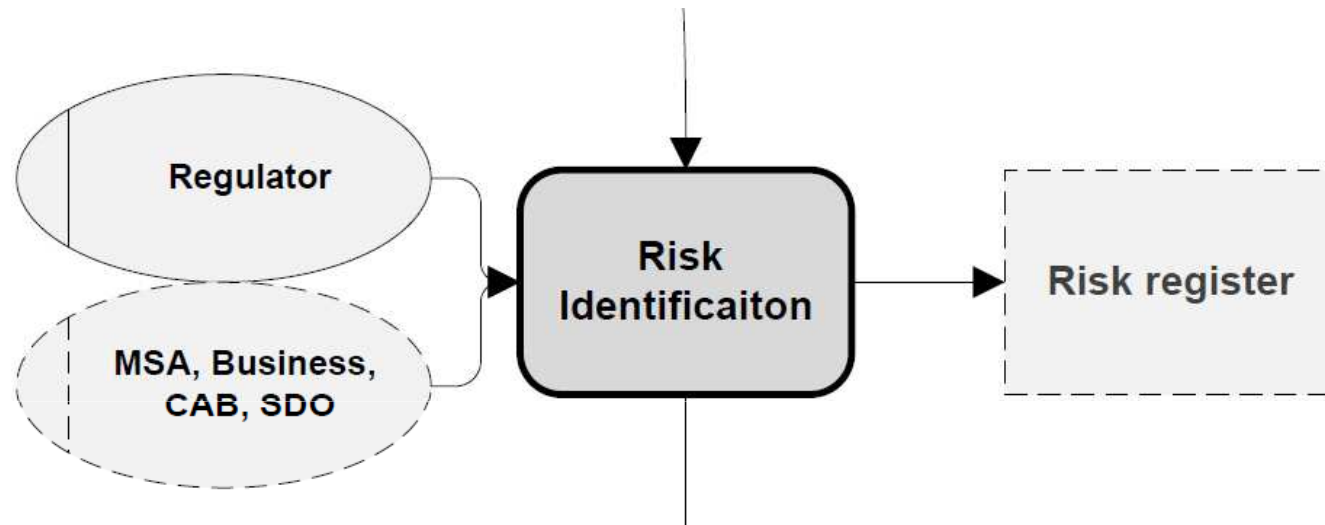
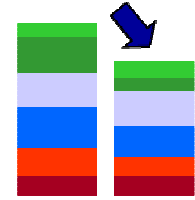
- Designed for regulatory frameworks.
- It adds:
  - Asset management
  - Crisis management

# The GRM Model, stage 1



This deals with identifying what is valuable to the organisation and needs to be protected. It is the first step in identifying risks.

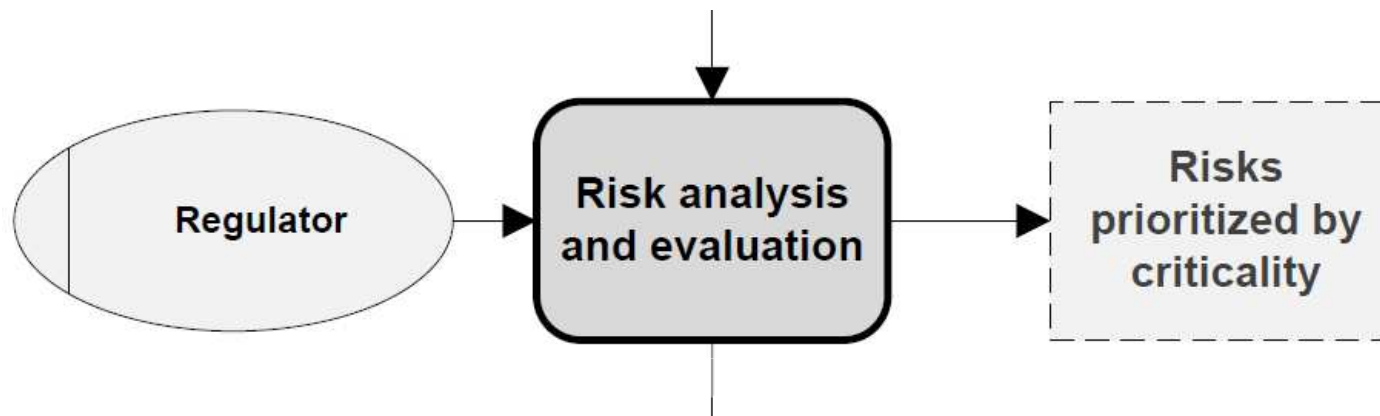
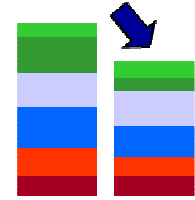
## Stage 2, Risk Identification



Risk identification is the most difficult part of managing risks because it includes the things you do not expect, as well as the big hazards that are obvious to you. You need to identify what you have been missing. So, start with what you want to protect.



## Stage 3, Risk Evaluation

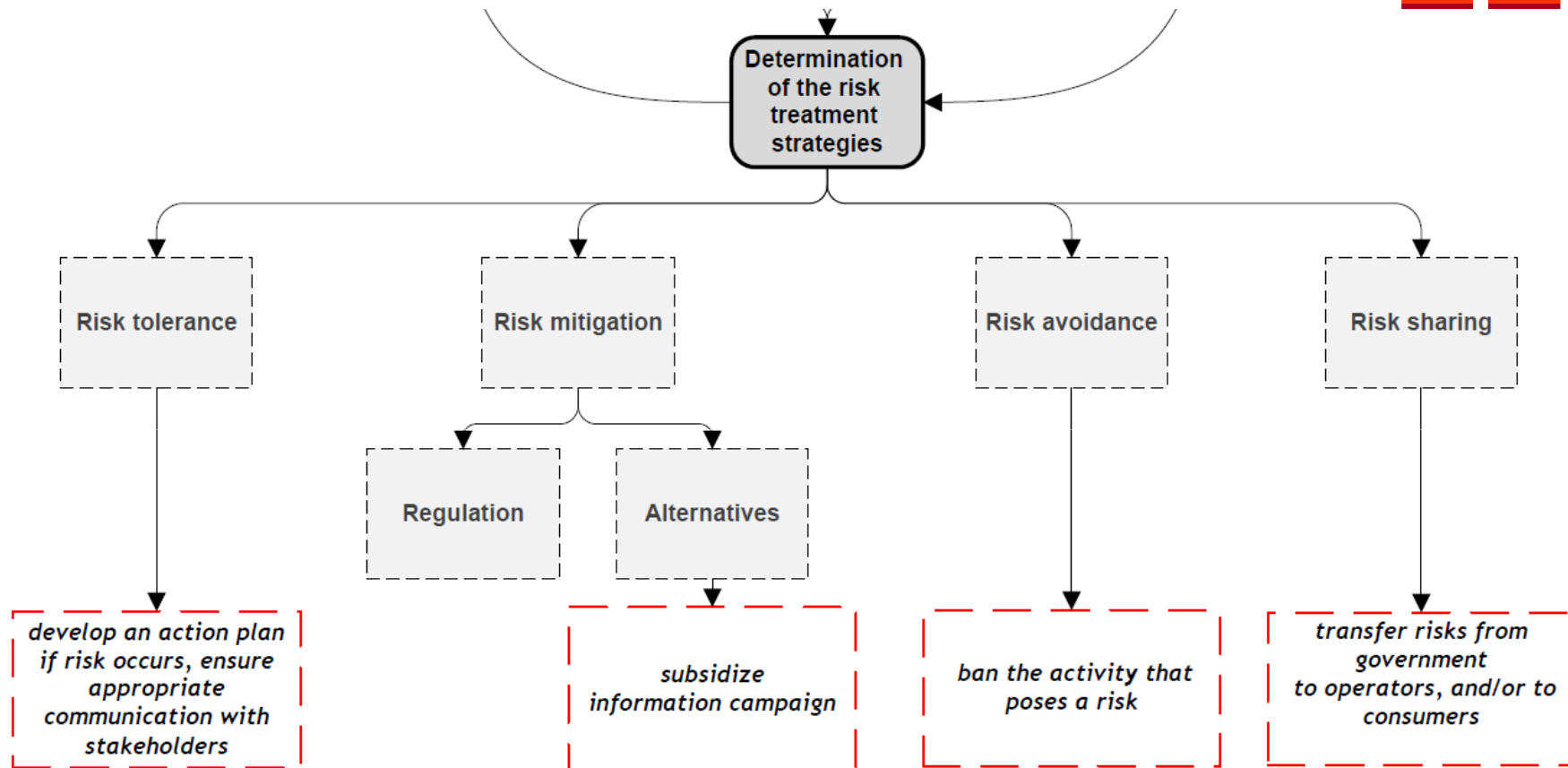
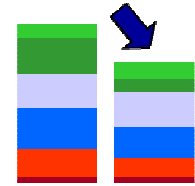


An asteroid may hit Rio and the consequences would be drastic.

But nobody worries about asteroids (unless they live in Siberia!).

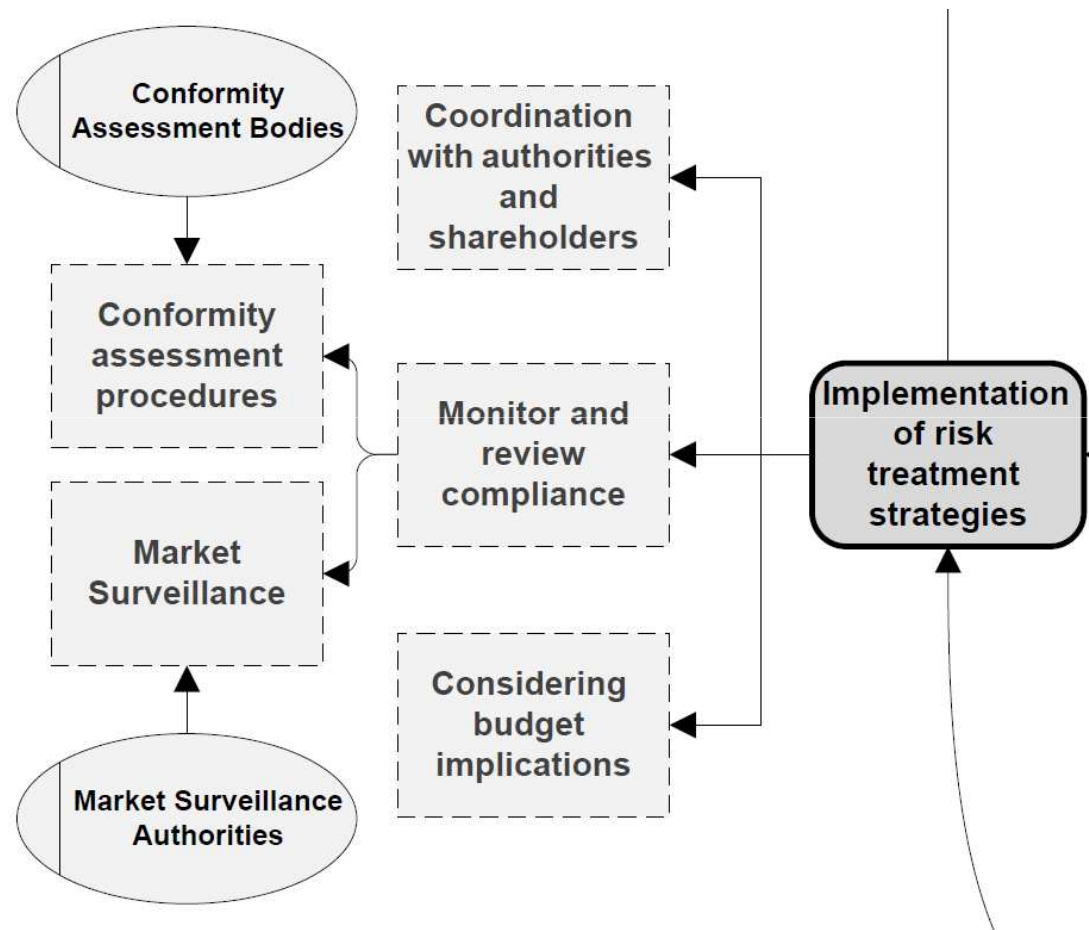
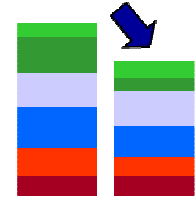
The probability and the consequences need to be evaluated.

## Stage 4, Risk Treatment Strategies



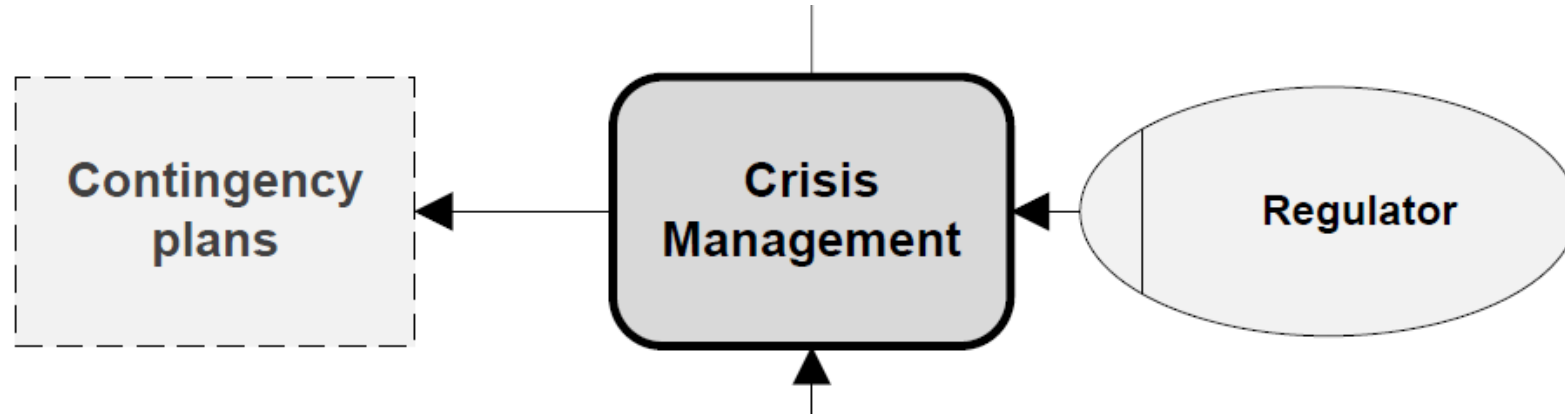
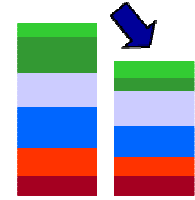
The four options - Tolerate, Mitigate, Avoid or Transfer

## Stage 5, Implementation



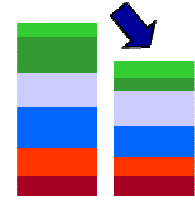
Implementation may involve a different approach to the regulatory function, guided by the risk analysis, e.g. increased safety levels may be justified or the levels may be relaxed.

## Stage 6, Crisis Management



If the risk treatment does not work and the risk materialises, there may then be a crisis in dealing with the consequences. The risk management system will have been applied in the hope of avoiding this but it may be wise to have contingency plans ready. These can also be designed as part of the Risk Treatment stage. If the strategy is to tolerate the risk, a contingency plan may also be needed.

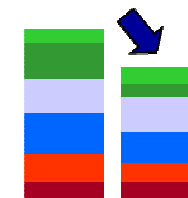
# Risk-based Enforcement



- Most academic and political attention has been paid to the creation of regulations rather than their enforcement but that is now changing.
- The World Bank's "Doing Business" annual study of 185 States against 10 criteria for business-friendly implementation.



- The UK and the Netherlands have also been investing in this area of regulation.



Brazil is 130 out of 185, a drop of 2 places since 2012.

Its indicator for “Trading Across Borders”, is 123.



Ease of Doing Business in

## Brazil

This page summarizes *Doing Business* 2013 data for Brazil. The first table lists the overall "Ease of Doing Business" rank (out of 185 economies) and the rankings by each topic. It also lists the economy's distance to frontier (DTF)\*\* measure. The rest of the tables summarize the key indicators for each topic and benchmark against regional and high-income economy (OECD) averages.

### ECONOMY OVERVIEW

[PRINT](#) [EXCEL](#)

REGION	Latin America & Caribbean	DOING BUSINESS 2013 RANK	DOING BUSINESS 2012 RANK	CHANGE IN RANK
INCOME CATEGORY	Upper middle income	130	128	↓ -2
POPULATION	196,655,014	DOING BUSINESS 2013 DTF** (% POINTS)	DOING BUSINESS 2012 DTF** (% POINTS)	IMPROVEMENT IN DTF** (% POINTS)
GNI PER CAPITA (US\$)	10,720	47.5	47.8	↓ -0.3

TOPIC RANKINGS	DB 2013 Rank	DB 2012 Rank	Change in Rank
Starting a Business	121	122	↑ 1
Dealing with Construction Permits	131	130	↓ -1
Getting Electricity	60	61	↑ 1
Registering Property	109	105	↓ -4
Getting Credit	104	97	↓ -7
Protecting Investors	82	79	↓ -3
Paying Taxes	156	154	↓ -2
Trading Across Borders	123	123	No change
Enforcing Contracts	116	120	↑ 4
Resolving Insolvency	143	139	↓ -4

### EXPLORE ECONOMY DATA

#### DOING BUSINESS RESOURCES



#### Law Library

[Search for business laws and regulations in Brazil](#)



#### Contributors

[See who contributed to Doing Business 2013](#)



#### Get all Data

[See historical data sets and trends](#)

#### ADDITIONAL TOPIC

» [Employing Workers](#)

#### ADDITIONAL DATA

» [Distance to frontier](#)

» [Entrepreneurship](#)

» [Good practices](#)

» [Transparency](#)

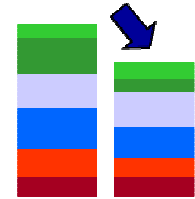
#### RELATED WEBSITES

» [Enterprise Surveys](#)

» [Investing Across Borders](#)

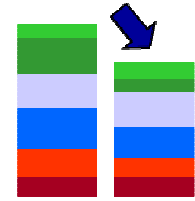
» [Women, Business & the Law](#)

## Brazil's score in detail



TOPIC RANKINGS	DB 2013 Rank	DB 2012 Rank	Change in Rank
Starting a Business	121	122	↑ 1
Dealing with Construction Permits	131	130	↓ -1
Getting Electricity	60	61	↑ 1
Registering Property	109	105	↓ -4
Getting Credit	104	97	↓ -7
Protecting Investors	82	79	↓ -3
Paying Taxes	156	154	↓ -2
Trading Across Borders	123	123	No change
Enforcing Contracts	116	120	↑ 4
Resolving Insolvency	143	139	↓ -4

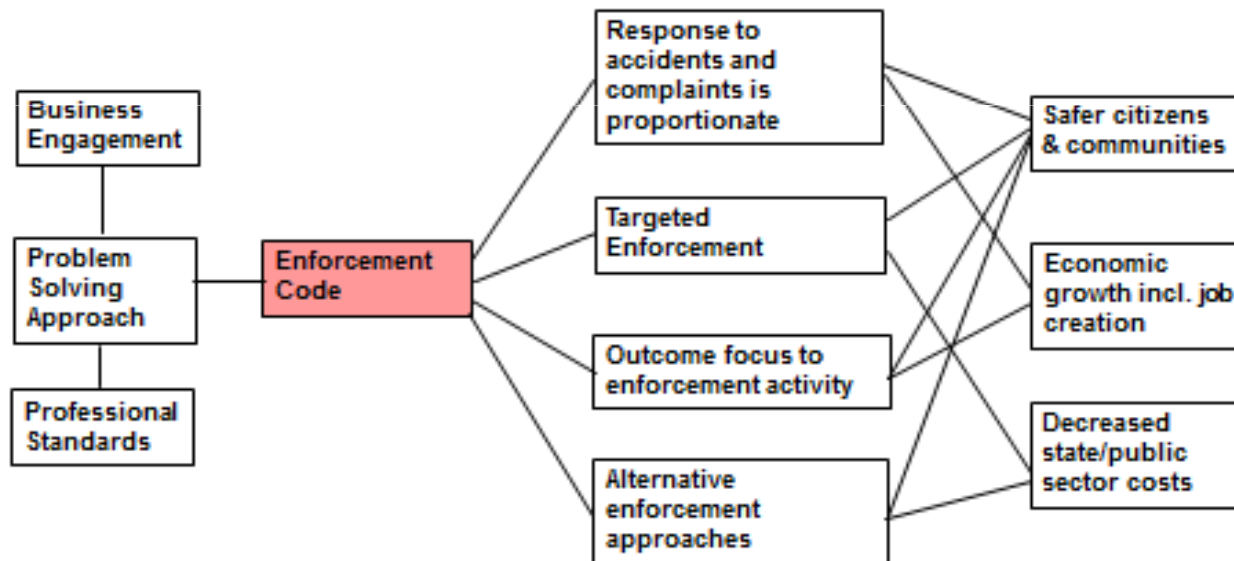
## The UK links this with Growth



20

**BIS** | Department for Business  
Innovation & Skills

**And improving delivery can lead to a  
triple-win on protection, growth and costs**

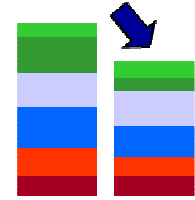


The UK has even created a new body to promote good practice – the Better Regulation Delivery Office.

**BRDO**  
Better Regulation Delivery Office



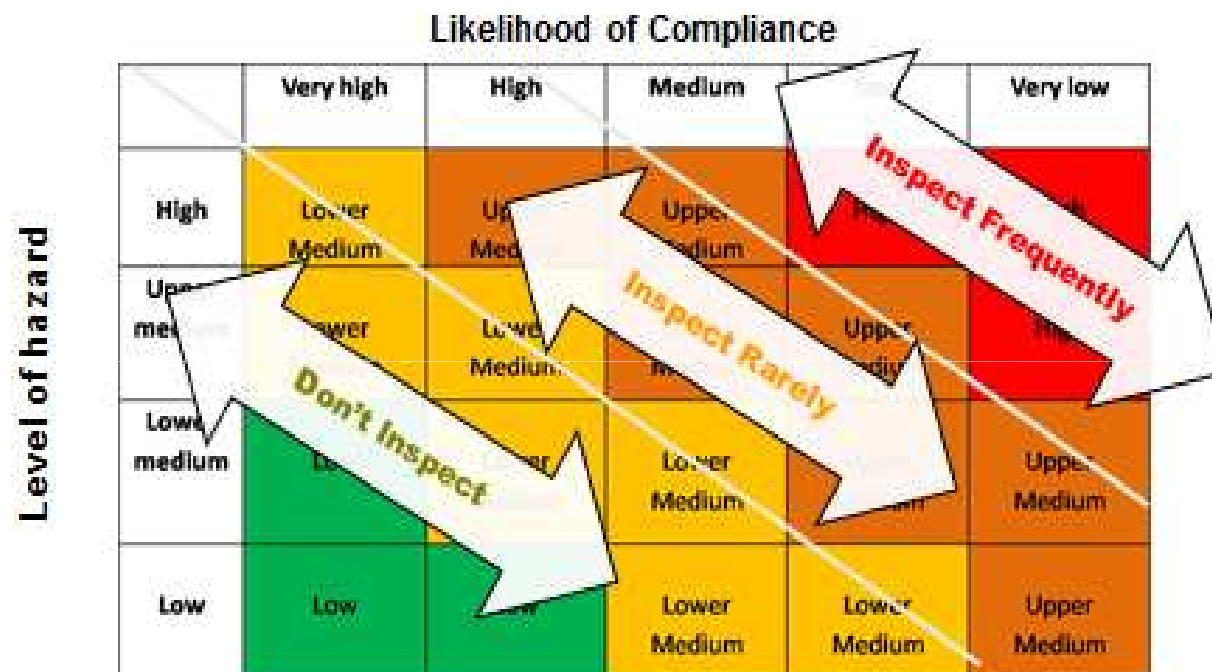
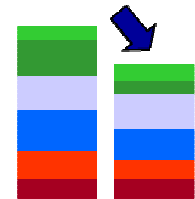
# Risk-based Inspection



- Risk criteria are designed, in order to identify the priorities for applying inspection resources. Businesses are classified as High, Medium or Low risk, which also decides how frequently they are inspected.
- The criteria relate to:
  - How dangerous the activity is, e.g. nuclear power station
  - How many people may be affected, e.g. major food manufacturer
  - The compliance record of the business.
- The inspection will be conducted on the basis of a checklist which prioritises violations, ignoring minor ones even if there are rules.

# Health and Safety Regulation - Targeting the Risks

## Applying Ratings in Prioritising Inspection



This is the same matrix the GRM model uses to evaluate risks but balancing level of hazard with probable compliance.

Health and Safety Executive

