

Risk Management (RM) training for statistical organisations –*demo session*

Basic level

Overall objectives of basic RM training

- ▶ To provide trainees with
 - 1. fundamentals of RM**
 - a) what is risk, risk management etc.
 - b) importance of RM for statistical organisations
 - 2. steps of the RM process**
 1. identification, evaluation

Trainee learning outcomes

1. introduction to RM
gain basic RM vocabulary around words such as – risk, risk management...
2. understand the importance of RM for statistical organisations
3. understand and apply risk identification, description, rating / scoring

Agenda

- Introduction/ context, RM Guidelines for statistical organisations
- Risk, Risk Management, RM system/ framework
- Why RM is important in statistical organisations
- Statistical risk
- Common risk facing statistical organisation
- RM process
- Risk identification, description
- Risk hierarchy
- Risk evaluation

Introduction - context

- ▶ Variety of RM practices and maturities exist in statistical organisations
- ▶ There was a lack of organisation-specific guidelines to support best-practice RM implementation in statistical organisations
- ▶ Project commenced in 2014, under the statistical division of United Nations Economic Commission for Europe (UNECE) under their High Level Group for the Modernisation of Statistics (HLG MoS) under the Modernisation Committee on Organisational and Framework Evaluation (MCOFE), to develop comprehensive RM guidelines

Introduction - context

- ▶ Project driven by colleagues from Istat, in cooperation with experts from University of Rome “Tor Vergata”,
- ▶ Guidelines include section on Agile in RM prepared by the Task team on Risk Management in the context of Agile development
 - Team made up of colleagues from several statistical organisations including Istat, CSO Ireland, ONS, Eurostat, Stats Canada, ABS
- ▶ This team is developing training to support RM implementation aligned to the new guidelines

RM guidelines for statistical organisations

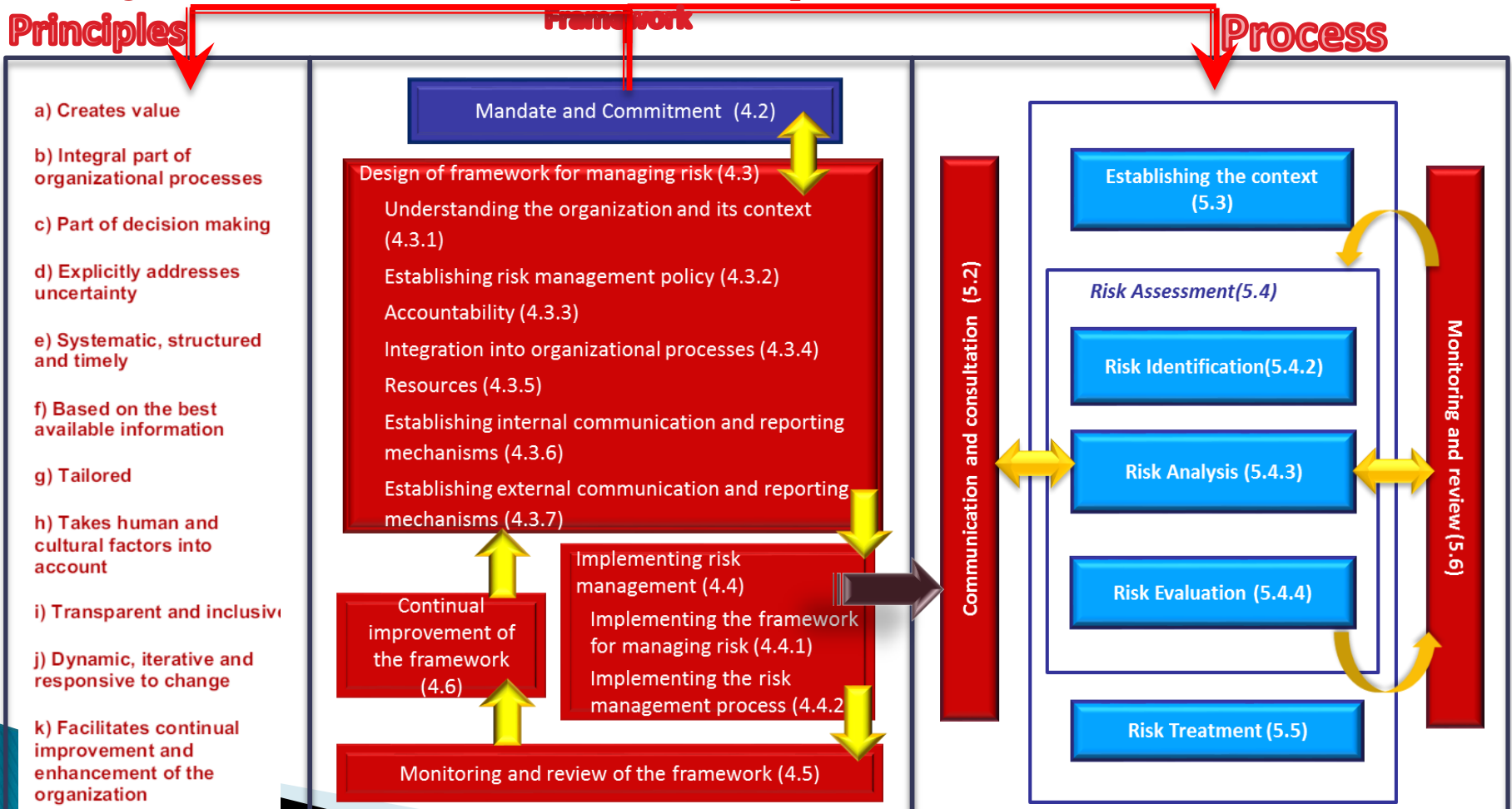
- ▶ Comprehensive RM guidelines to support best-practice RM implementation in statistical organisations – January 2017
 - involved several years work, - extensive surveying to establish existing good practices in statistical organisations
 - aligned to international RM standards (ISO 31000, COSO 1992,2004,2013) –
 - section on integrating Agile work practices and processes into RM
- ▶ Very valuable organisation-specific best-practice guidelines now available to statistical organisations
 - ▶ Can use these guidelines to guide their RM implementation
- ▶ Training now developed, aligned to guidelines, to further support and enhance best practice implementation

Risk Management

- ▶ coordinated activities to direct and control an organisation with regards to risk – Guidelines Glossary
- ▶ According to the ISO 31000 2009, the term *risk management* also refers to the system/ architecture (*see diagram on next slide*) that is used to manage risk. This system includes risk management principles, a risk management framework, and a risk management process.

The Risk Management System – ISO 31000:2009

According to the ISO 31000:2009, Risk Management refers to the *architecture used to manage risks*. This architecture includes *Principles, Framework, and Process*.



Risk Management process

- ▶ Organisations manage risk by identifying it, analysing it, measuring it, and then assessing whether the risk should be treated in line with the organisation's appetite for risk(s)
 - Common tool used is the Risk Register template
- ▶ During this process organisations communicate and consult with stakeholders, monitor and review the risk to make sure no additional treatment is needed

Importance of RM for statistical organisations

- ▶ Critical for statistical organisations to effectively manage their risks in order to achieve their objectives
- ▶ Establishing and safeguarding TRUST in official statistics is vital for statistical organisations – this trust takes much effort and dedication to build but can be quickly and easily lost especially if risks are not effectively managed
- ▶ Maintaining independence, producing high quality outputs, managing change are all key objectives that bring with them many risks
- ▶ Identifying and managing statistical risks is vital
 - so integration of RM and Quality Management is key – good Q Mgt. should support good RM and good RM should support good Q Mgt.

Statistical risk

- ❑ **Statistical risk** - *“the possibility that one or more of the production process components fail to meet the quality standard stated, so that statistical output quality or integrity is affected”*.
- ❑ Risk Assessment in **statistical areas** considers the issues that can **affect data quality** in a **statistical processing cycle** as well as managing stakeholder relationships, the impact of change programs and workforce capability.
- ❑ Risks are managed using the same framework at a Strategic, Operational and Project level across the organization. *Statistical risk can be recognized separately but in any case it should be integrated within the organizational risk framework.*

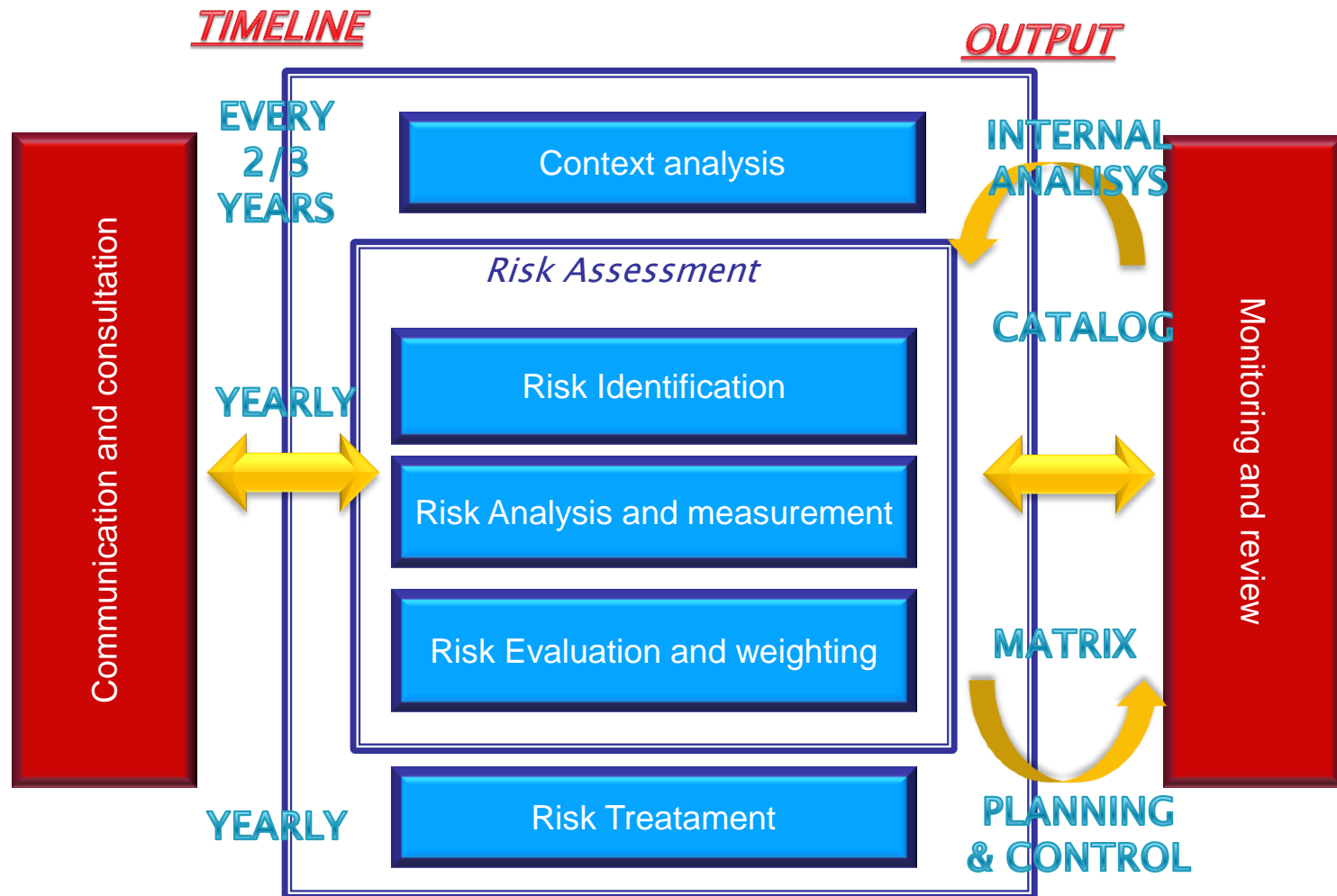
Common risk areas facing statistical organisations

- Attempted external interference in our statistics
- Dissemination of any poor quality statistics
- Loss of confidential data
- Breach of data protection laws
- Not meeting user needs and demands
- Risks in statistical processes – e.g. biased sample
- Failure to modernise our management practices
- Cyber attacks
- Poor communications
- Lack of resources

RM in statistical organisations

- ▶ The need is clear – statistical organisations face many risks – good news is
 - Comprehensive sector-specific guidelines now available
 - Full training programme (basic-intermediate-advanced) to further support implementation now available
- ▶ Integration of RM with *statistical quality management* and with *change management* vitally important to ensure effective RM implementation in statistical organisations

Risk Management Process



Source: Abstract from ISO 31000:2009

Risk identification

- ▶ Identifying the risks should be a formal, structured process that considers sources of risk, areas of impact, and potential events and their causes and consequences
- ▶ Impact on the achievement of objectives
- ▶ Lost opportunities

Risk Identification

Among the others, **specific risk areas include:**

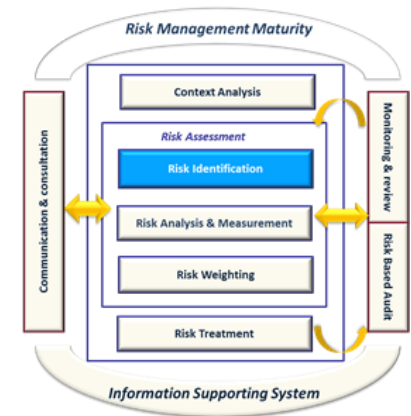
- **Health and safety risks;**
- **Fraud risks** (i.e., manipulation of any procedures for dishonest purposes; failure to comply with procedures and/or internal regulations; alteration of checks; etc.);
- **ICT risks** (i.e., security systems risks; business continuity; etc.)

Grouping similar kinds of risks into risk categories **helps to:**

1. *Allow consistent assessment;*
2. *Profile and report the consequences of actual and potential events;*
3. *Facilitate comparison across the organization;*
4. *Aggregate and map similar kinds of risk across the organization;*
5. *Allocate risk management responsibilities;*
6. *Build internal skills, knowledge and expertise throughout the organization.*

Risk identification techniques can include:

- a) **Evidence based methods**, for example checklists and historical data reviews;
- b) **Systematic team approaches** (i.e. structured or semi-structured interviews, Brainstorming, Delphi);
- c) **Inductive reasoning techniques** (i.e. preliminary hazard analysis, HAZOP, HACCP);
- d) **Scenario analysis** (i.e. root-cause analysis, scenario analysis as such, cause-consequence analysis);
- e) **Statistical methods** (i.e. Monte-Carlo analysis, Bayesian analysis).



Risk description

- ▶ It is very important to properly and fully describe risk
 - The actual risk event
 - The cause(s)
 - The consequence(s)/ impacts and where for the organisation these will be occur
- ▶ Clear understanding and describing of risks allows proper management / suitable treatment plans and mitigating controls to be put in place
- ▶ On the other hand poor / incomplete description of risks lead to poor risk management

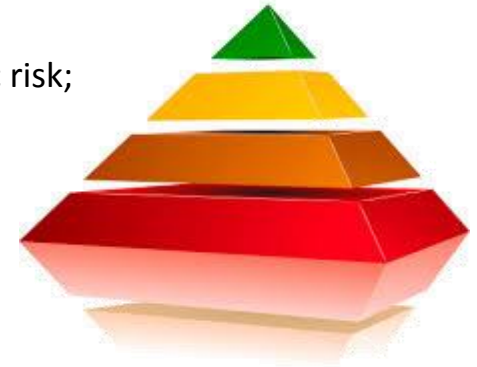
Describing risks in statistical organisations

- ▶ Risk event
 - Dissemination of poor quality labour market statistics (for any reason)
- ▶ Cause(s)
 - Sample not representative of all Nace sectors
- ▶ Consequence(s) - (depend on full detail of risk event)
 - unhappy users, need for communication to explain problem, strategic objective of producing high quality statistics not met, need for revision, loss of trust and reputational damage

Risk Hierarchy

Risk identification requires analyzing several issues:

- **Source/root cause event:** any activity having a potential to increase a specific risk;
- **Areas of impact:** dealing with categorization/prioritization of consequences;
- **Enablers:** the organizational features helping a risk-event to occur;
- **Events:** occurrence of a particular set of circumstances; and
- **Their potential consequences:** potential outcome of an event.



The risk management framework includes a **hierarchy of risks**:

- **Enterprise or so-called “corporate” risks are strategic** (i.e. can significantly impact on the organization);
- **Portfolio management risks are inherently related to the portfolio of projects as a whole**, and are managed by senior management. *Examples of portfolio risk are: affordability of the portfolio; lack of capability/capacity to implement the portfolio; lack of timely availability of skills and human resources;*
- **Project risks can impact on the projects’ objectives and outcomes**, and are managed by the project risk manager. *Examples of project risk are: project scope poorly defined, resources not available when required, quality requirements not clearly specified;*
- **Operational risks can impact on a program's objectives and/or outcomes**. *Examples of operational risk are: unsuitable skills mix, resources reduced due to budget cuts, outputs not delivered on time, poor quality outputs. They are managed by the program directors.*

Exercise 1

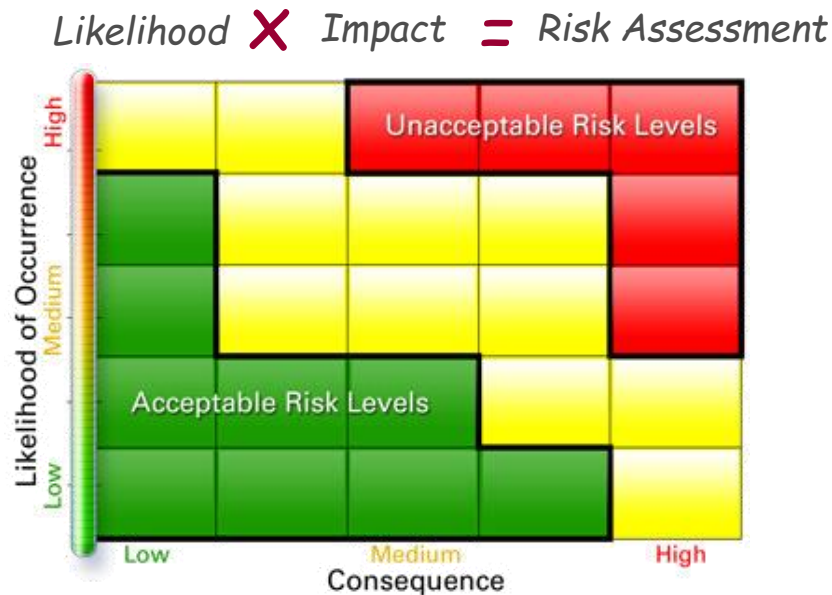
Divided in groups

Identify some significant risks for your organisation by completing the table as follows

Risk event	Cause	Consequence

Risk evaluation

- ▶ The organization should have a mechanism to rank the relative importance of each risk so that a treatment priority can be established.



Scoring likelihood

Example from CSO

Likelihood Scale		
Score	Likelihood	The probability of the risk occurring
1	Rare	Would only occur in exceptional circumstances
2	Unlikely	Will probably not occur in the next 12 months
3	Possible	Could occur at least once in the next 12 months
4	Likely	Likely to occur in the next 12 months
5	Almost certain	Almost certain to occur in the next 12 months

Scoring impact

Example from CSO

Impact Scale		
Score	Impact	
1	Insignificant	Little of no impact
2	Minor	Slight impact at statistical operation level
3	Moderate	Significant impact at operational level, issue with sample, IT support problem
4	Major	Significant impact at strategic level, risk of not be able to produce a high-priority statistic on time, risk of negative press with some impact on reputation
5	Catastrophic	Significant impact on reputation of the CSO – dilution of independence, issue with statistical objectivity/impartiality impacting negatively on trust of Office

Inherent and residual risk level

- ▶ Risk score = Likelihood * consequence
 - Without controls in place ? – inherent risk level
 - With controls in place ? – residual risk level

Exercise 2

- ▶ In the same groups used for exercise 1
- ▶ Try to assess each of the risks identified bz using 5 points scale for likelihood and impact

Risk register template

Risk category	Risk description (risk event, cause, impact)	Current treatment controls in place	Current risk score			Owner	Is the Risk Score in line with the Corporate Risk Appetite Statement	Additional treatment controls required	Target risk score
			L	I	R S				

Thank you!