Overview of key findings of FG-DPM on data processing and management to support IoT and Smart Cities & Communities.

RISK MANAGEMENT IN DPM

ITU-T FG DPM WG4

Nathalie Feingold, NPBA, Switzerland

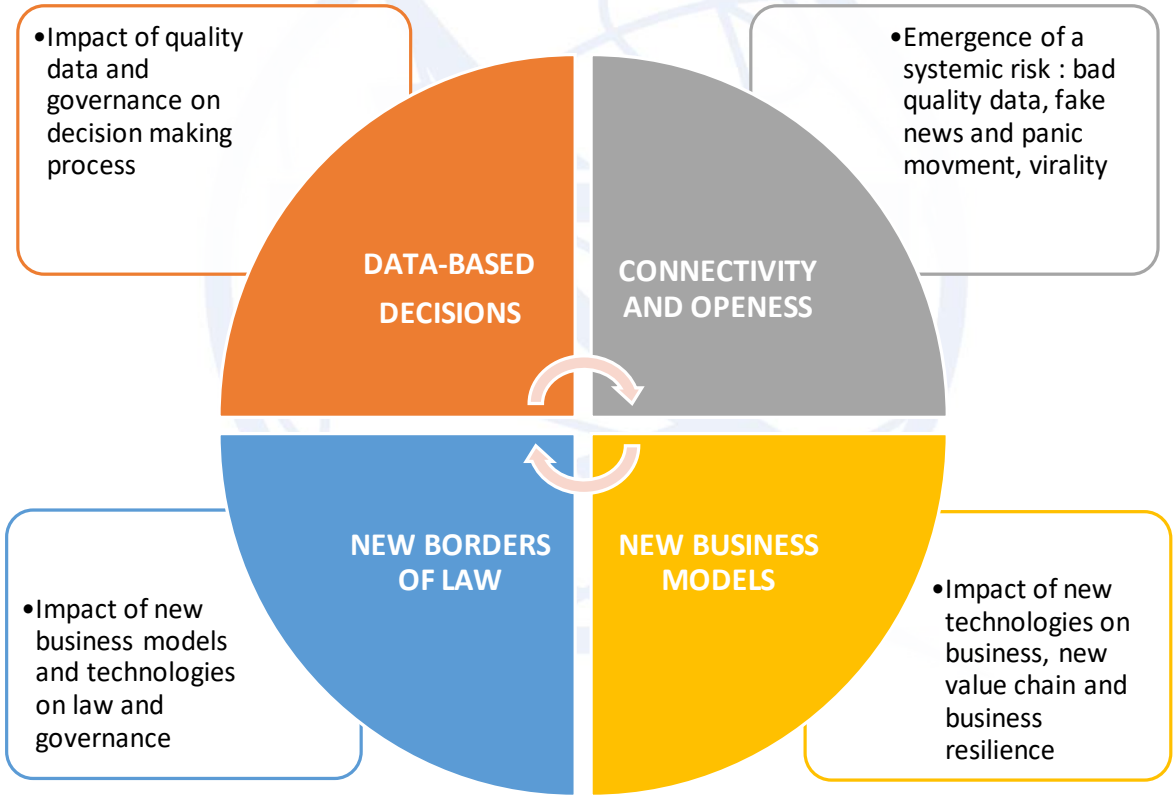
GENEVA July the 19th 2019

Data processing and management generates uncertainty

Risks include

- Security
- Privacy
- And also other risks generated by a new paradigm

Risk evolution due to new paradim



Source : Nathalie Feingold, NPBA

Risk management can ensure a safe development of cities

- Existing standards and methodologies could be adapted to the specific needs, contexts and complexities of cities, communities and projects…
- …taking into account the Governance challenges generated by DPM in IoT and smart cities : data heterogeneity, plurality of stakeholders, applications, processes and tools involved…

Risk management framework

* Terminology from ISO31000:2009 /new version ISO31000:2018

Source : Nathalie Feingold, NPBA

At a « micro » level, each project/city should be able to (1/4):

- Identify the different risks and threats that can appear at short, medium and long term
- Best practice : Regularly evolve the list of risks and threats

At a « micro » level, each project/city should be able to (2/4):

- Analyse and assess the impact of each identified risk
- Best practice : improve risk assessment (likelihood and magnitude) through the collection and analysis of loss data

At a « micro » level, each project/city should be able to (3/4):

- Evaluate the ability of the project/city to bear the risk or not, determine the risk tolerance
- Best practice : work on Risk Appetite, ensure that the maximum risk a project/city can/wants to take is well articulated and communicated

At a « micro » level, each project/city should be able to (4/4):

- Treat each risk and threat by providing an adapted answer regarding the ability of the project/city to bear the risk or not
- Best practice : develop the knowledge about usual risk answers and foster the development of innovative solutions

At a « macro » level, ecosystems and organizations should be able to (1/3):

- Forecast and manage risks at 360° and provide quick answers
- Best practice : Global risks management, such as systemic risk, suppose an ability to capture the big picture of the global activity through an efficient capacity of reporting, data interoperability and data aggregation

At a « macro » level, ecosystems and organizations should be able to (2/3):

- Evaluate the ability of the Ecosystem/organization to bear the risk or not, determine the risk tolerance
- Best practice : work on Risk Appetite, ensure that the maximum risk an Ecosystem/organization can/wants to take is well articulated and communicated

At a « macro » level, ecosystems and organizations should be able to (3/3):

- Facilitate risk management though actions and governance
- Best practices :
  - Digital education and development of a data and risk culture
  - Data minimization to reduce significantly the related risks
  - Fluent communication between heterogeneous systems and players
  - Foster collection of loss data at a global level
  - Overall coordination of risk management to ensure a common understanding of the risks at ecosystem level

CONTACT

Nathalie Feingold, NPBA, Switzerland

nathalie.feingold@npba.ch

+41 (0) 79 158 36 78


ITU