

# Entreprise risk management

Foly Ananou, PhD

# Course objectives

- Master ERM fundamentals : understand the principles, frameworks, and benefits of ERM
- Analyse and measure risk: learn to identify risk, assess and quantify risks using qualitative and quantitative tools
- Understand the implementation of ERM and best practices

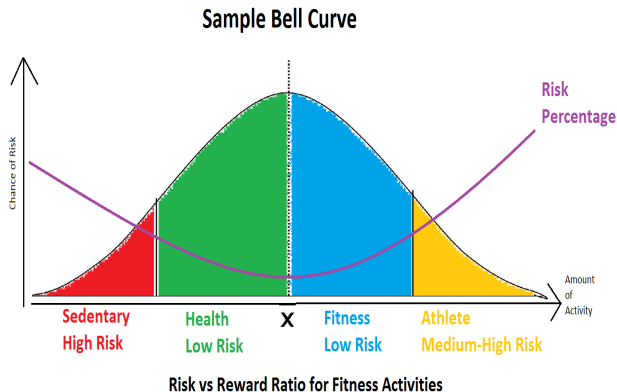
## ERM: fundamentals

# Understanding risk: preview

- Let consider the following situations:
  - You are in vacation in Cote d'Ivoire and decide to have an outdoor gathering with friends at the beach.  $\rightarrow$  What could possibly go wrong ? How likely could this happen ? if it does happen, will it be very harmful ? What can you do to prevent the event from happening or reduce the impact ?
  - You got it involve in a car crash  $\rightarrow$  Is it necessary someone fault or is it just one of those things that happen in life ?

# Understanding risk: a definition

- Berstein (1996) defines risk as the uncertainty around the outcome of a decision, process or event which can be negative (losses) or positive (benefits or opportunities).



# Understanding risk: key characteristics of risk

- Uncertainty : outcomes are not guaranteed or predictable
- Dual nature: risk is not only about threats or losses, it can also includes opportunities
- Measurable dimensions:
  - **exposure**  $\rightarrow$  what is at stake ?
  - **probability**  $\rightarrow$  how likely is it possible ?
  - **severity**  $\rightarrow$  how bad (or good) could it get ?
  - **time**  $\rightarrow$  how long ?
  - **correlation**  $\rightarrow$  can it escalate or drive other risks ?

# Understanding risk: categorization

- Can you identify the risk type in the following scenarios ? (let guess together)
  - A large international bank experiences a sophisticated ransomware attack that encrypts critical customers data and shuts down online banking services for almost 2W.
  - The government announces overnight that all cryptocurrencies transactions are banned taking effect immediately, forcing fintech companies to halt operations immediately.
  - **severity**  $\rightarrow$  how bad (or good) could it get ?
  - **time**  $\rightarrow$  how long ?
  - **correlation**  $\rightarrow$  can it escalate or drive other risks ?