



CYBECO

Supporting cyberinsurance from a behavioral choice perspective.

Project concept. 740920. Digital Security

Who  
When



# Cyber risk. The context

---

- Increasingly relying on ICT:
  - Cars, planes, medical systems, investing platforms, ...
  - Critical infrastructure, voting systems, ...
- Increasingly interconnected systems:
  - 10000 M devices connected to Internet
- Variety of attackers:
  - Countries, cybercriminals, internal actors, ...
- Increasing variety, and number, of threats:
  - Virus, Worms, Trojan-horses, Spyware, APTs, Ransomware, ...
- Increasingly sophisticated, technologically but also socially.
- Response times tend to be excessive.



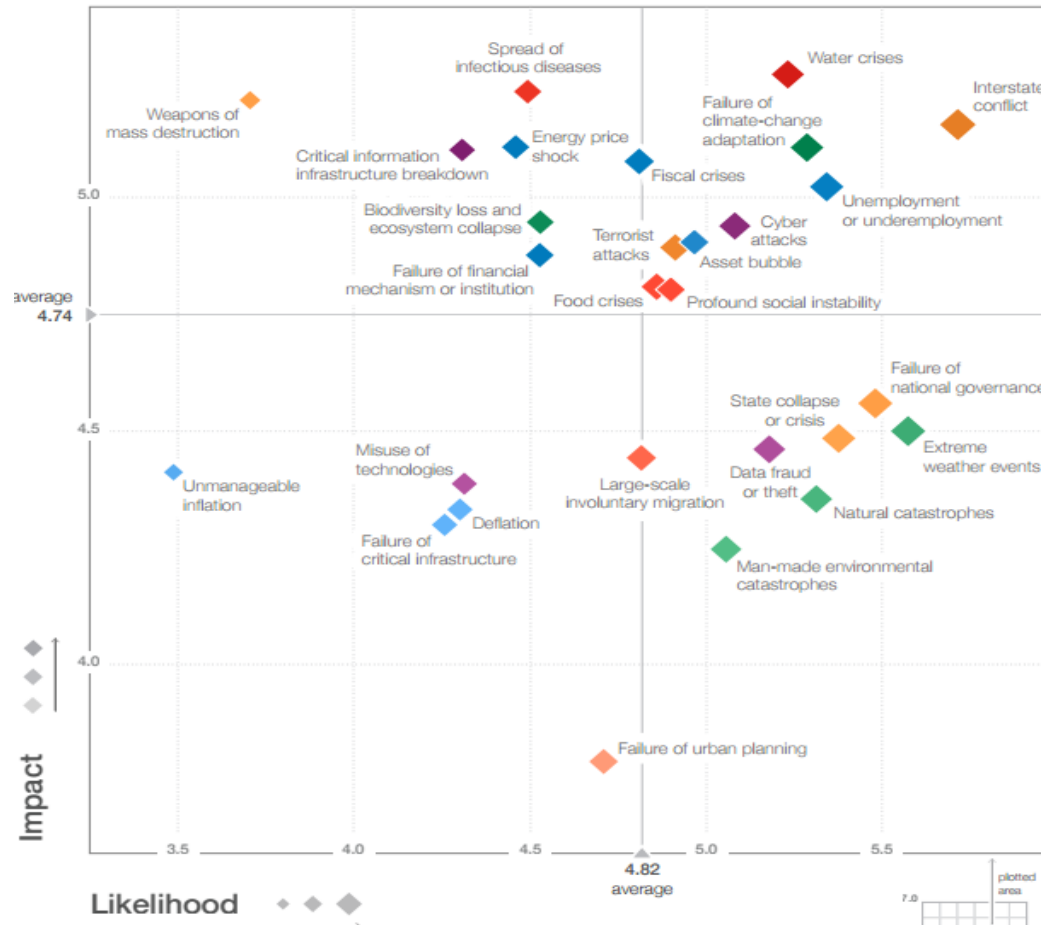
# Cyber risk. The context

---

- Response times tend to be excessive.
- Cause immense damage:
  - Economic, environmental, health, ...
  - Competitive intelligence, national security, reputation,...
- Basic tools for cyber risk management



# Cyber risks. The context



World Economic Forum. Global Risks Map for 2017

# Cyberinsurance.

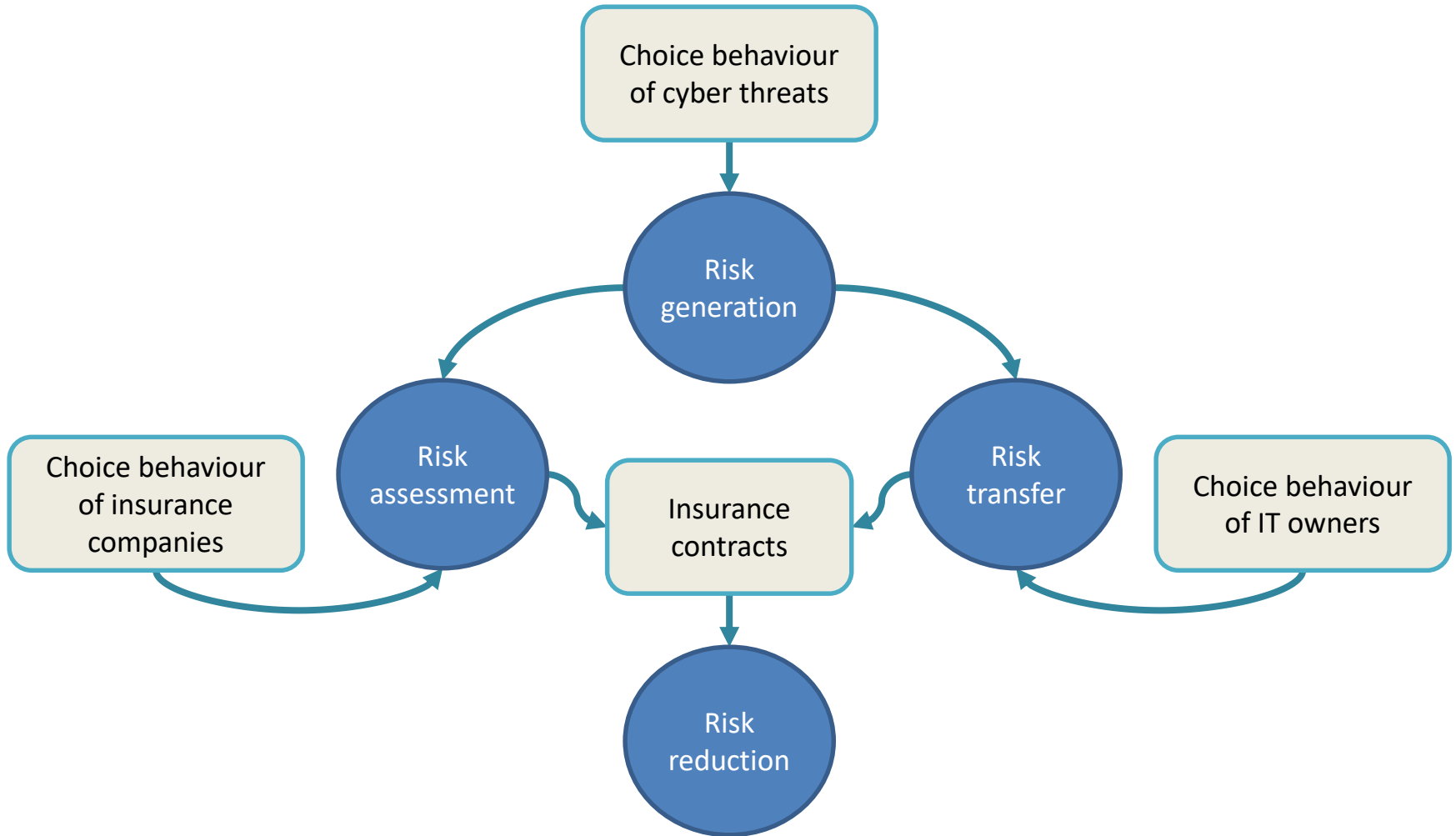
## Context and challenges

---

- Relatively recent products, Comparatively small market. Development of cyberinsurance products.
- Potentially enormous global costs. Accumulation problems. Network effects.
- Data scarce, specially for losses. Companies not disclosing data breaches.
- Lack of cybersecurity data. Structured expert judgement, Behavioural experiments.
- Modelling intentionality in cybersecurity.
- Moral hazard problems. Incentives for improving cybersecurity at large. Role of reinsurers.
- Valuing information assets, reputation,... multi-attribute utility theory.
- Decision support tool for cybersecurity investments.
- Policy nudges in cybersecurity. Policy recommendations.



# CYBECO. A high level view

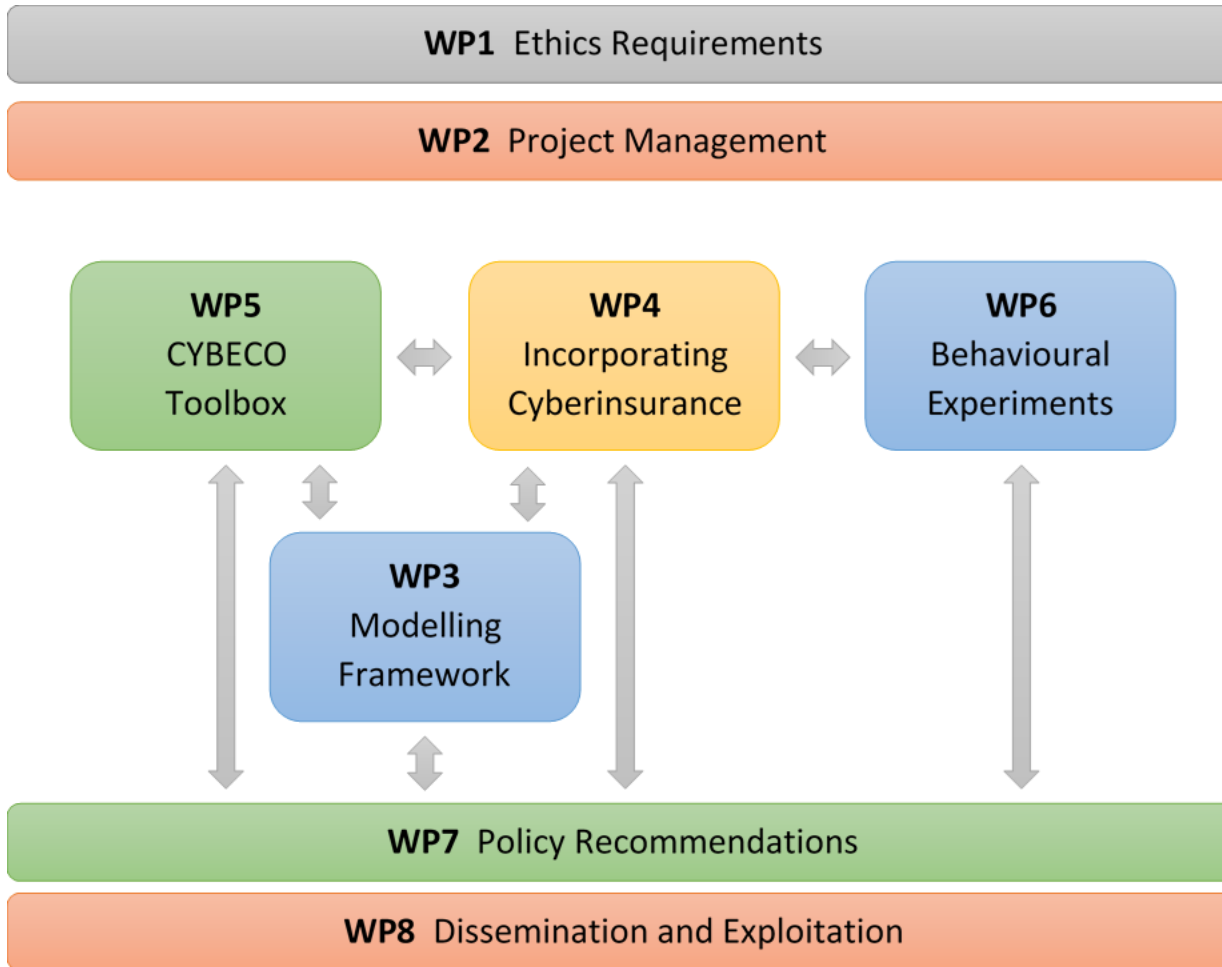


# CYBECO. The partners

---



# CYBECO: Structure





# CYBECO: Phases

---

Phase	Months	Main Emphasis
1	M01 – M12	Methodological developments for cybersecurity risk management and cyber insurance
2	M05 – M12	Prototype development
3	M05 – M18	Design and performance of experiments
4	M18 – M24	Improve modelling framework and tool
5	M18 – M24	Determine policy recommendations and prepare exploitation plan



# CYBECO: Expected impact

---

- Improved societal understanding of, and solutions to, cybersecurity failures.
- Improved risk-based information security investments.
- Increased social resilience to cybersecurity risks.
- Advances in cybersecurity economics models.





---

[www.cybeco.eu](http://www.cybeco.eu)

Twitter: @CYBECO\_project

Linkedin: [www.linkedin.com/company/cybeco](http://www.linkedin.com/company/cybeco)

Project Manager: Nikos Vasileiadis  
n.vasileiadis@trek-development.eu



Co-funded by  
the European Union

