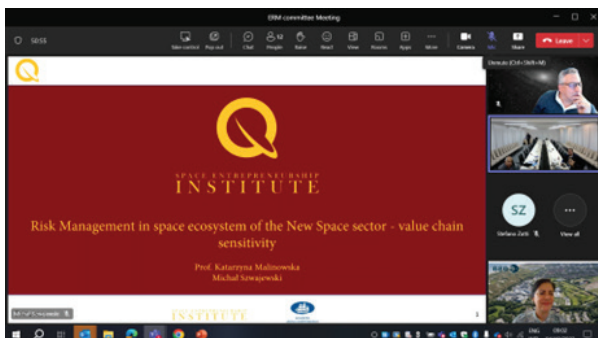


IAF ENTERPRISE RISK MANAGEMENT COMMITTEE (ERMC)

Introduction

The ERM committee meeting took place on 4 October both remotely and on site in Baku during IAC 2023.

It gathered a total of 16 participants (4 present on site, and 12 online) to discuss latest developments in the field of enterprise Risk Management. We were honoured to have a special keynote presentation by Prof. Katarzyna Malinowska and Michał Szwajewski, from the Space Entrepreneurship Institute.



Summary

This year a special focus was made on **Supply chain risk management**, and the main findings, comparing both Institutional and new space markets, are presented below

Institutional Space Market	New Space Market
Awareness of space issues	Low awareness of space issues
Well defined risks management approach	Not a mature approach to risk management
Knowledge about importance of the business continuity	Low awareness about the importance of know-how maintaining continuity in space business

Highlights

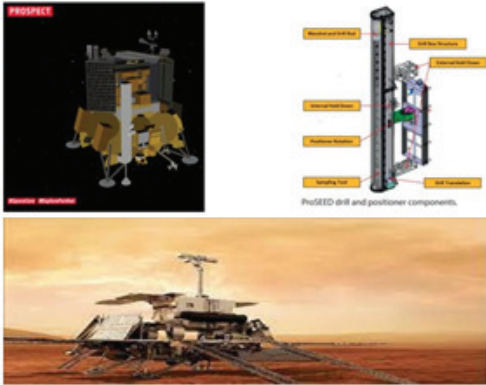
The topic of interest deals with **black swans** – which are unpredictable events, such as COVID-19 and international conflicts – and their impact on **business continuity**, both in the Institutional Space Market and the New Space Market, with a focus on **supply chain risk** sensitivity.

By comparing case studies as well as a review of pertinent literature (such as the “Managing black swan risk in the space sector - observations from lessons learned based on insurance and contract practice” work from IAC 2022), the summary of findings can be outlined as shown in the next paragraph.

The **Institutional Space Market** presents an awareness of space issues, a management of risks which is well defined as well as knowledge about importance of the business continuity. On the other hand, **New Space Market** (which fundamentally means the rise of private companies in the space sector) has low awareness of space issues, does not have a mature approach to risk management and presents low awareness about the importance of knowing how to maintain continuity in space business.

This is primarily seen through a few cases, such as ExoMars 2022, which relied on the cooperation between ESA and ROSCOSMOS and was interrupted in 2022 following the Russian invasion of Ukraine. In this framework, the rover was meant to be delivered by ESA and lander was meant to be delivered by the ROSCOSMOS. After the cooperation was halted, business continuation was maintained thanks to ESA’s new approach under Artemis, speaking to the strengths of the Institutional Space Market.

EXOMARS 2022 , PROSPECT



Failure of the launcher & bankruptcy.

Supply chain was interrupted,
 due to:

- Low risk acceptance
- No next financing rounds
- Loss of business continuity.

Rover was meant to be delivered by ESA and the lander was meant to be delivered by the ROSCOSMOS

The supply chain was interrupted, however:

- ESA supports the continuation and delivery of flight models (FMs)
- +
- New Approach under the Artemis – Business Continuity maintained.

On the other hand, Virgin Orbit and Kleos Space are used as case study to point out the challenges faced by the New Space Market, after they both had to file for bankruptcy, the former after the setback of a failed rocket launch and the latter because of a lack of continued funding. Overall, the bankruptcy determined a loss of business continuity.

Virgin Orbit / Kleos Space files for bankruptcy



Future Outlook

Risk management in the space sector is crucial for all types of space markets, but a special focus will have to be for the New Space Market, which is particularly sensitive to risks to the supply chain, leading to higher chances of loss of continuity which, on the other hand, the Institutional Space Market has managed to avoid so far.

Committee activities

The ERM committee will meet again both online and at the March 2024 Spring Meetings.

The prospect of having a special session at the IAC 2024 in Milan is under study, topics have been brought forward and new committee members have been welcomed at this session.