



**POLICY ANSWERS**

# INNOVATION MANAGEMENT IN THE BLUE ECONOMY

**Workshop 2: Managing risk in innovation and  
developing innovative organisations and teams**

**24th May 2023 Istituto Italiano di Cultura a Tirana**

**Final Agenda and Advanced Reading**





## Workshop 2 Managing Risk and Developing Innovative organisations and teams

9.00	<b>Registration</b>
9.15	<b>Welcome, introductions and briefing</b>
	<p><b>Session 1: Understanding, assessing, minimising and managing risk</b></p> <ul style="list-style-type: none"> <li>Analysing risk through the Ansoff Product Market Matrix</li> <li>Ansoff worked examples</li> </ul> <p><b>Case study 1 and group exercise: Product Market matrix for a pilot shrimp farm</b></p> <p>Feedback and discussion</p>
10.45-11.00	Coffee
	<p><b>Session 2: Risk in the context of Internal and external environments</b></p> <ul style="list-style-type: none"> <li>Constructing a powerful and action oriented SWOT</li> </ul> <p><b>Case study and group exercise: SWOT for 'Sea Fungi for oil spill clean-up'</b></p> <ul style="list-style-type: none"> <li>Understanding and applying PESTLE analysis</li> </ul> <p><b>Case study and group exercise: PESTLE for 'Sea Fungi for oil spill clean-up'</b></p> <p>Feedback and discussion</p>
12.30-13.30	Lunch
	<p><b>Session 3: Developing Innovative organisations and teams</b></p> <p><b>Content:</b></p> <ul style="list-style-type: none"> <li>The innovative mind-set and culture</li> <li>Encouraging organisations to think more innovatively</li> <li>Using self-assessment tools and health-checks</li> </ul> <p><b>Group Exercise: Creating an innovative organisation/ Developing a health check/ Using diagnostic tools</b></p>
15.00-15.15	Coffee
	<p><b>Session 4: Developing a Strategic Roadmap</b></p> <p>Introduction to the Strategic Roadmap tool</p> <p><b>Case study Inobiostar Lithuania</b></p> <p><b>Group Exercise: Developing a Strategic Roadmap for the Sea Fungui spinoff Inobiostar.</b></p>
	<p>Roundup and discussion.</p> <p>Briefing future workshops for POLICY ANSWERS</p>
16.30	<b>END</b>



### Case Study 1: Pilot Baltic Shrimp Farm

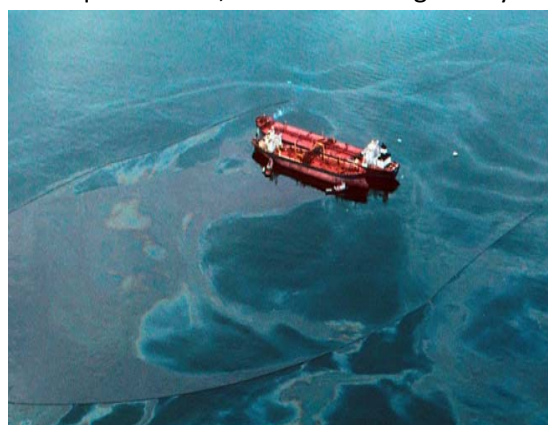
Researchers at the Marine Institute, University of Klaipeda, set up a 'model shrimp farm' using an EU grant. The pilot plant can produce a few kilos of shrimps twice a year. This original project proposal was based on the idea that there is a market for local shrimp production if enough entrepreneurs can be encouraged to set up their own small 'farm' and make a success of the technology.



Although the original project focused on shrimp, the technology is transferable to other sorts of shell fish.

### Case study 2: Fungi for oil spill clean-up

The Baltic Sea is one of the most polluted seas in the world. It is quite closed, the water changes very slowly - about 3% per year, so all the pollution is accumulated and remains for a long time. In addition, there is quite intensive shipping in the Baltic Sea, and one of the main cargoes transported is oil and oil products. There are a number of local oil terminals where spills can occur. In such an environmentally sensitive region, it is necessary to use only environmentally friendly solutions. Oil is one of the most common pollutants in the oceans. About 3 million tons of oil pollute the oceans every year. During the oil spill, all local businesses, including sailing, fishing, tourism, as well as industries that depend on fresh seawater, are stopped and cannot resume their activities until the water is cleared.



Researchers at the Marine Institute, University of Klaipeda have discovered an environmentally friendly fungi that can be used to 'eat up' oil spills. The idea is at TRL2 (very early stage – pre Proof of Concept).

Key points:

- Environmentally friendly
- Low cost
- Maybe possible to tailor the fungi for different countries to avoid the issue of invasive species.
- The species could possibly improve the overall quality of water.
- Dehydrated fungi are light and do not take up much space and so are cheap to transport and rehydrate.
- They store well (long life-time) and only need to be rehydrated for use (add water) so can be kept 'to hand' for when a spill occurs.



### Case Study 3 Inobiostar Lithuania

Spinoff company "Inobiostar", was founded in 2020 by **prof. Dr. Tatjana Paulauskienė**<sup>1</sup> – a research scientist from the Faculty of Marine Technology and Natural Sciences, Klaipėda University Lithuania. The deep-tech company is developing patented technology – licensed from Klaipėda University – that addresses marine pollution from oil spillages. The company's Mission could be expressed as 'To contribute significantly to the efforts of modern society to save the future'.

Oil is one of the most common pollutants in the oceans. About 3 million tons of oil pollute the seas every year. During an oil spill, all local businesses, including sailing, fishing and tourism, as well as industries that depend on fresh seawater, are stopped; they cannot resume their activities until the water is cleared. The Baltic Sea is one of the most polluted seas in the world. It is quite closed so the water changes very slowly - about 3% per year. This means that all the pollution is accumulated and remains for a long time. In addition, there is quite intensive shipping in the Baltic Sea, and one of the main cargoes transported is oil and oil products. There are a number of oil terminals close to Klaipėda where spills can occur. In such an environmentally sensitive region, it is critical to be able to use environmentally friendly solutions.

Existing sorbents soak-up the oil but the sorbent is then usually burnt – producing much CO2. Alternatively, chemicals can be used to make the oil fall to the bottom of the sea bed – where it and the chemicals remain.

Inobiostar is developing 2 main products. The first **InoBioTech Baltija** brings together straw, (a residue product from the agricultural sector), that can absorb oil, with an oil-degrading micro-organism from the Baltic sea that can 'eat' the oil. The result is a treatment method for oil spills in the Baltic Sea that has been testing in the local harbour to TRL8. The associated patent is making its way through the European Patent Office and the team hopes it will be granted in the next 12-18 months for Europe. The university will own the patent and maintain it. There will be a need to have the product certified based on its composite materials and properties. Sorbents themselves do not have a certification regime but it may be possible to have the CO2 footprint calculated, based on the Impact Forecast tool and included in the overall certification documentation. This would strengthen the competitive position.

The second product **InnoAerogel** is a waste paper-based material – highly efficient, biodegradable and reusable. It absorbs fuel, but not water and can be used to remove fuel spillage. The technology is currently at TRL 5. More lab testing is planned for autumn 2023. When the team will test the effect of adding immobilisation oil-degrading microorganism to the aerogels

The underlying technology has potential further applications in waste water treatment for dyes and in construction materials as insulation material. The company would need to secure more research funding to investigate these markets.

The market for oil spill sorbents is well developed and with many established players and products. The unique advantage for Inobiostar is the oil digesting element which is seen as breakthrough innovation. This removes the need to burn a sorbent once it is saturated. The product is also seen to have benefits from the sustainable and biodegradable nature of the sorbent itself (straw and paper).

Inobiostar has secured a number of national and EU grants to help develop the technology including a 40K national Blue Economy grant to take the technology to TRL8 with a requirement to start a company, 10K from "[Baltics & Slovakia ClimAccelerator 2021](#): Accelerator for climate-positive

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<sup>1</sup> See <https://lithuania.postsen.com/local/96353/Winner-of-the-V-Adamkaus-Prize-I-feel-uplifted-and-happy.html>





startups” supported by Climate-KIC .They will apply for a grant from Women TechEU<sup>2</sup>. This scheme offers grants, worth €75 000 each, to support the initial steps in the innovation process, and the growth of the company. It also offers mentoring and coaching under the European Innovation Council (EIC) Women Leadership Programme, and EU-wide networking opportunities. The company has also applied for 150K Euro from national funding which would be split between the University and the Inobiostar with 60K going to the company.

At the moment Inobiostar does not formally employ anyone on a salary. Prof. Dr. Tatjana Paulauskienė acts as CEO and much of the work is done by PhD students; this can lead to a ‘stop/start’ regime for the R&D.

The company is part of the local [Clean Tech cluster](#)<sup>3</sup> and [BlueInvest EU](#) community<sup>4</sup> (a European Commission initiative for start-ups that offers events and support services). Tatjana sees advantages if they can join the EIC accelerator programme<sup>5</sup>. This might yield grant funding of 2.5 Million as a 100% grant.

The first testing of the product in the local harbour was successful and the Port Authority were interested in buying the bio-activated sorbent as a commercial product with a first order of around 10 tonnes. To use the product regularly they would need access to larger quantities. This would require a significant scale up (minimum capacity of 400 t/year) and no large company has yet been willing to make the investment for technology that is unproven in the market. The company hopes to secure funding from the EIC accelerator to enable them to work with the university to set up a pilot plant to manufacture small quantities (1-10 tonnes/year ) and use them to create market pull for the product.

For more information see: <https://www.inobiostar.com/>

### Profile of the trainer Dr Lisa Cowey MBA



Lisa Cowey has over 30 years of experience in the field of research and innovation including direct experience of high-tech spinout, equity fund raising and successful trade sale with technology and knowledge based ventures in the UK, USA and Germany. For the last 13 years Lisa has worked extensively with PROs and SMEs across Europe to help them innovate through research commercialisation and new product development as well as through innovation management and organisational development.

She has worked in the Western Balkans since 2006. She was the Team Leader for the EU funded project 'EU4TECH PoC' and has worked for the RCC, World Bank and ETF for projects that span the region.

Lisa has a PhD in Physics from the University of Oxford, an MBA from Oxford Brookes University Business School and a Diploma in IP from Bournemouth University Business School IP Unit. She is also accredited by WIPO in the area of New Plant Variety Protection. She has recently completed courses with Oxford University Business School on ‘Blockchain Strategy’ and ‘AI for business’ aimed at business owners and leaders. For the last 3 years Lisa has delivered the innovation aspect of the ‘Blue Growth Leaders Academy’ for Klaipeda University in Lithuania.

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<sup>2</sup> See [https://eisma.ec.europa.eu/programmes/european-innovation-ecosystems/women-techeu\\_en](https://eisma.ec.europa.eu/programmes/european-innovation-ecosystems/women-techeu_en)

<sup>3</sup> See <https://cleantechlithuania.lt/en/>

<sup>44</sup> See <https://maritime-forum.ec.europa.eu/en/frontpage/1451>

<sup>5</sup> See [https://eic.ec.europa.eu/eic-funding-opportunities/eic-accelerator-0\\_en](https://eic.ec.europa.eu/eic-funding-opportunities/eic-accelerator-0_en)

