# Electric failure at 10,000 feet below sea level

# TINKER XALLENGE

What solution can you come up with? Register your team and have a chance to win fantastic prizes! >>> www.tinkerxallenge.be

## TL;DR

Indian polar explorer is stuck in a submarine 10,000 feet below sea level. A technical problem threatens his mission and survival. There are some devices on board that could possibly help.Your team of up to 5 participants is asked to come up with a solution.

The competition starts in September'23 and ends in May'24.

Will you save the polar explorer's life, his mission, or something else?

All participating teams will win a prize. A special recognition will be given in different categories.

Register at www.tinkerxallenge.be





# How does this challenge work?

We understand the life of a student... can be busy. That's why we spread the course of this challenge neatly over the academic year. We deliberately keep the exam periods free, because of course we want you to pass at the end of the year.



This TinkerXallenge is a virtual quest, 10,000 feet below sea level. In this technical challenge, your team will work together to find a way to help Jatinder and/or his mission. What you come up with... is up to you.

Good luck! Team Tele

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# **Rules**



#### Start with the narrative

- What is the situation/problem?
- Describe the environment and devices . in the submarine, you may add your own items.

#### Three basic components will be provided and sent to you:

Board, display and power supply

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 $\checkmark$ 

Your team consists of a maximum of 5 participants, with at least 3 engineers.

The design must include at least the 3 basic components, and you may include ANYTHING else, as long as it fits within the context of the general narrative.

Extra points by adding Telerex's 4 competencies to your design.



Every design step must be logged and documented.



The end result includes your own narrative in which your design or solution helps the polar explorer.



#### You can earn points for:

- Creativity/storytelling
- Functionality of the solution
- Originality/innovativeness

#### Tip: Think about roles within your team!

- Product developer
- Technical expert
- Communication
  - responsible

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# How did we end up here?

**Dive\* into Jatinder's story** *\*sorry, we couldn't resist!* 

Jatinder Kumar Bajaj, an Indian polar researcher, embarks on a dangerous expedition to the Arctic region to unravel the mysteries of this frozen wilderness. The Arctic region is one of the least explored areas on earth, and the harsh climate, vast ice fields, and extreme isolation make it a challenging place to conduct research.

Jatinder's research focuses on a range of scientific disciplines, including oceanography, geology, and ecology. He studies the changing climatic conditions in the region and their impact on the Arctic ecosystem. He investigates the geological history of the Arctic region and explores the underwater environment, which has largely remained unexplored.

> Are you passionate about puzzles and hate loose ends? Work together with your team to create an ending! Register at www tinkerxallenge.be

Jatinder also seeks to understand the cultural and historical significance of the Arctic region. He works with local indigenous communities to learn more about their traditional knowledge and cultural practices, which have been shaped by the Arctic environment over thousands of years.

With his research, Jatinder hopes to shed light on the unique characteristics of the Arctic region and the important role it plays in the global ecosystem. He wants to inspire others to explore

Jatinder Kumar Bajaj

and understand this fascinating and vital region of the world.

During his last expedition, he became stranded in an old submarine due to an electrical malfunction. His situation is dire and it appears that his oxygen is running out. Jatinder sends an emergency message to technical experts who can quickly respond to his distress call. The harsh Arctic conditions, unpredictable weather patterns, and the fact that he is in a submarine make his rescue a race against time.

#### Who is Jatinder?

- A 39-year-old geologist and polar researcher
- Born in New Delhi, India
- Married to Anjali Patel
- Fan of yoga, the Beatles and tandoori

## The map!

In addition to a map of the area, Jatinder also sent us a photo of what we believe is the floor plan of the submarine.

From this, we can see that he still has access to the control room, the kitchen, and the sleeping cabin. There are likely still devices here that you can use to build a solution.





# Ready to take on this Tinkerxallenge?

Register at www.tinkerxallenge.be

## And the winner is...

Complete the challenge and have a chance to win an iPad for your whole team.



Each participating team wins at least something. Prizes will be awarded to the following winners:

- Best overall solution
- Funniest solution
- Most creative design
- Most spectacular failure
- Best presentation

### **Dearest diary**

Jatinder managed to send along a few scraps from his diary along with his distress call. He takes us ten thousand feet deep into the Arctic Ocean, offering an uncensored look into how he experienced the past few days. Below are a few of those fragments... To find out more about Jatinders story? Register at www.tinkerxallenge.be

#### T-minus 9

Today was a good day. I was able to witness one of the most amazing sights in the Arctic. I saw a group of walruses resting on an ice floe, and they looked so majestic and powerful. It was amazing to see these creatures up close and appreciate how unique and important they are to this environment. I'm grateful to have had this opportunity to witness their beauty firsthand. Tomorrow aI'll start my deep dive into the dark of the Arctic Ocean. I hope my vessel the TX-874 is a worthy submarine...



#### T-minus 8

Today was an incredible experience. I encountered a school of beluga whales, and they were so friendly and curious. They followed me for a while, and it was a rare opportunity to observe these magnificent creatures in their natural habitat. Their white skin stood out in contrast to the blue of the water, and it was a stunning sight. It's moments like these that make all the challenges of Arctic exploration worth it.

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's hard being away from home for so long. I miss my wife and parents back in India so much. I miss the warmth of the sun, the taste of Indian tandoori, and the sound of George Harrisons' weeping guitar. The Arctic is a beautiful and fascinating place, but there are times when I feel homesick and wish I could be back with my loved ones. I hope that this mission will be worth it in the end and that I'll be able to make them proud with my findings.

### T-minus 6

Verseen thinking a lot about how to build a tandoor oven in the submarine. I know it's not possible, but I can dream, right? The food on this expedition is simple and nourishing, but it lacks the flavor and spices of Indian cuisine. The thought of being able to cook my own food and recreate the taste of home brings me comfort and a sense of familiarity. Maybe one day I'll find a way to bring a bit of India with me on these expeditions.

# Curious about how it will end?

Sign up at www.tinkerxallenge.be Register at www.tinkerxallenge.be

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