

## INTERNATIONAL NATURAL SCIENCES TOURNAMENT

Global young scientists' team competition

November 7–11, 2024 Yerevan, Armenia

## WHAT IS INST?

#### International Natural Sciences Tournament (INST)

is an interdisciplinary team competition where students solve applied scientific problems in the fields of chemistry, physics, biology, medicine, and engineering.

- Chemistry
- Physics
- Biology
- Medicine
- Engineering













The idea of INST is to create a science show where ideas can be presented and evaluated from different points of view.

### WHY IS INST DIFFERENT

- The tasks vary each year and span multiple scientific disciplines.
- There is no single answer: nearly all proposed solutions to a given problem can be considered correct.
- Participants are encouraged to defend their ideas in front of other students and industrial experts.
- The nature of the tournament fosters global connections among young scientists.
- Students expand their professional network in contact with reallife problems and companies.

### EXAMPLES OF PREVIOUS PROBLEMS

#### **Glycol (2015)**

#### CLARIANT

Glycols form the base of heat transferring fluids used in food factories for cooling products during the manufacturing process. These coolants have a long, though finite, service life. After some time, due to the deterioration of operational properties, the user is confronted with the problem of utilization. Currently, methods of combustion and microbial decomposition are used for this purpose. Each of them has its own weaknesses and harms the environment.

The volume of the coolant, which has to be recycled simultaneously, depends on the production capacity and typically is tens of tons.

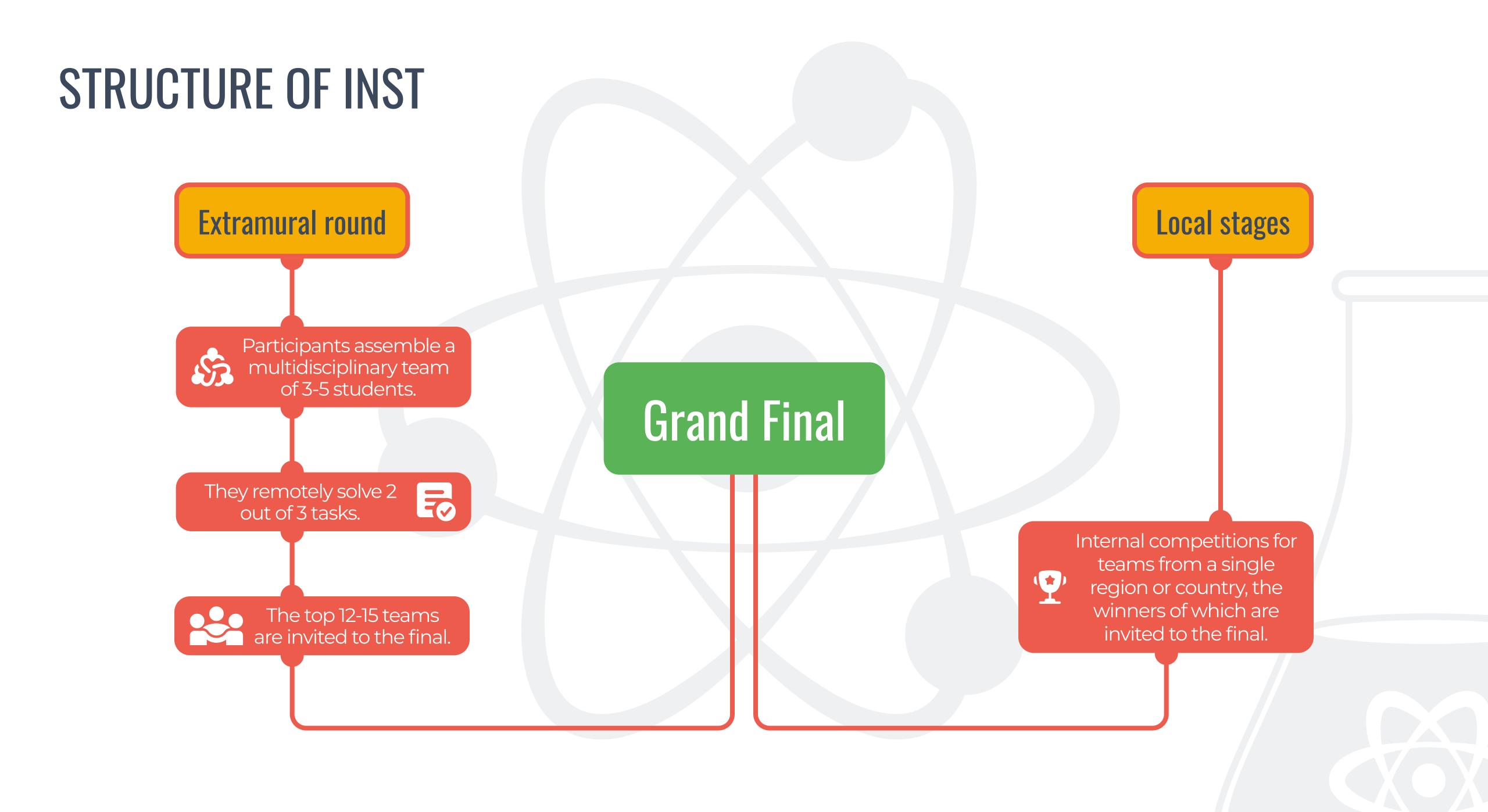
Propose an economically feasible method of disposing glycol-containing heat transferring fluids, which will improve the technology of handling this type of waste and reduce the negative impact on the environment compared to the already known approaches.

#### Sunken Franken (2020)

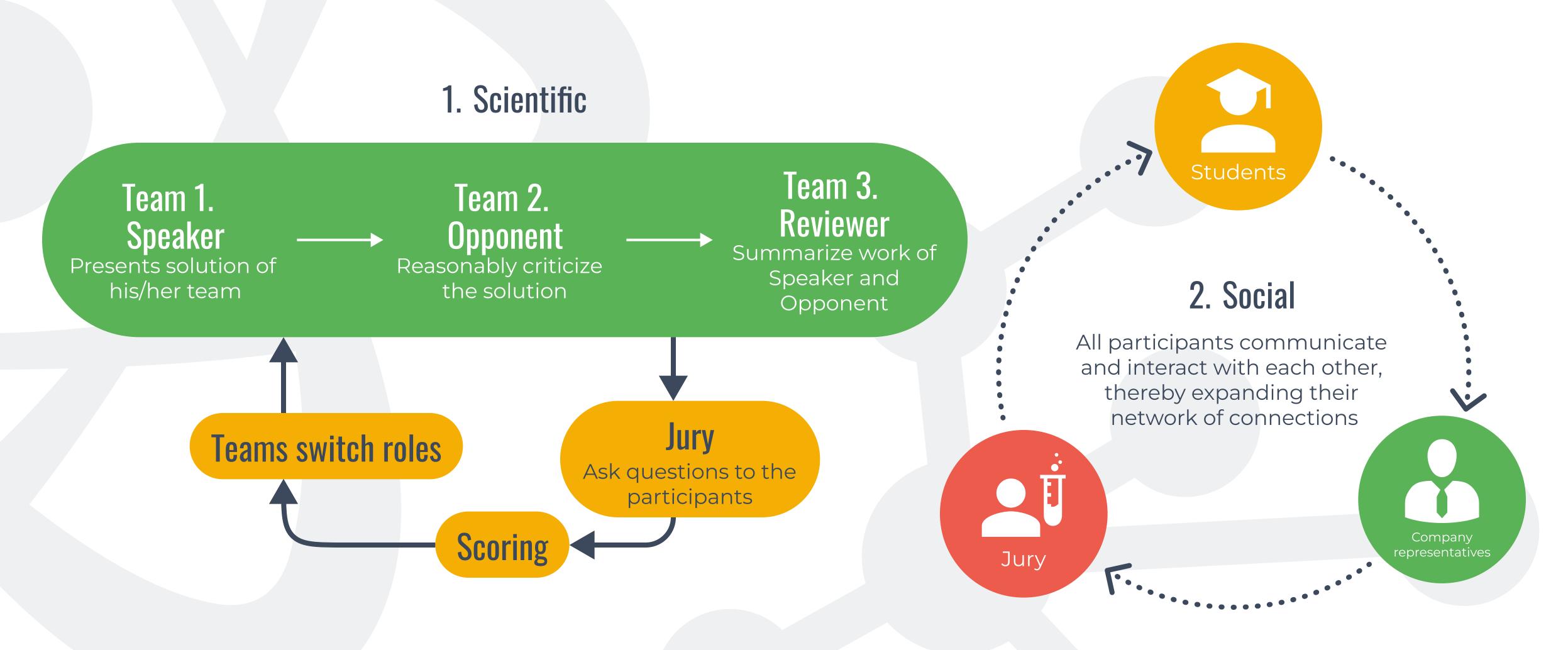
The oil tanker "Franken" lies on the bottom of the gulf of Gdansk and the Baltic Sea is in ecological danger due to the fuel on broadside of the tanker. The existing approaches to deal with this problem such as defueling or lifting the ship are rather expensive and technically complicated. Suggest another method and compare it with the existing methods.

### The masks (2021)

The coronavirus pandemic makes millions of people all around the world wear protective masks. However, the masks are used not only for protection from viruses and bacteria but also from toxins, various types of dust, etc. Suggest a mask model with an indicator that would change any noticeable for anyone characteristic in case of any mask dysfunction. The indicator mask model has to be safe in usage.



## GRAND FINAL STRUCTURE



## HISTORY OF GRAND FINAL

Yerevan, **Armenia** November 7–11, 2024 Saint-Petersburg, Warsaw, Agra, **75-100** students Russia India **Poland** 30-40 scientists of 75 students 70 students 84 students the scientific industry 2010-2015 **NEW 2024** 2018 2020 2021 2016 2019 Online Novosibirsk, Tallinn, Russia **Estonia** 60 students 80 students 52 students

# GEOGRAPHY OF THE TOURNAMENT PARTICIPANTS



We reached more than 25 nations over the 13 years of INST

## JOIN INST AS A PARTNER

- Connect with brilliant young scientists from around the world.
- Enhance your HR brand among potential future employees.
- Propose a case for solving to gain fresh ideas.
- Receive additional targeted exposure in industry and tech media.

## SPONSORSHIP OPTIONS

	<b>Sponsor</b> from 1400 EUR	Partner from 2800 EUR	Prime partner from 4550 EUR
Logo of your company on INST official website (www.scitourn.com)			
Logo of your company on all the printed materials of XIII INST			
Leaflets of your company in the handout packages for participants			
Series of interviews for your company with participants in special area			
Place for exhibition stand	2 days	Whole period	Whole period
Company representatives as jurors	3 persons	Unlimited	Unlimited
Case from your company			
Presentation from your company	30 min (one)	1 hour (two)	1 hour (two)
E-mailing information about your company through the database of our participants			
Establishment of own nomination and Partner's prize			
1-2 publications about your company in mass media			

### PREVIOUS PARTNERS AND SPONSORS









Article in AsianScientist (Singapore)



















"Selvita - The global mission of the INST is to give students the possibility to believe in themselves and come up with the idea that their knowledge can change the world. The local mission of the INST is to change educational system to a better way, to help everyone present their ideas clearly, and defend them correctly."

### WHAT OUR COMMUNITY SAYS



Yuliya Orekhova, Chem Team (2014, St Petersburg University)



INST introduces you to a world of science tournaments, new friends, adrenaline-filled debates, innovative problem-solving, and the inspiring belief that every challenge has a solution, with the ability to convince others that your solution is the best.



**Mohammed Shabbir Rampurwala**, **Erudite (2015 University of Mumbai)** 



INST for me it's something more than a science tournament, spreading wings and building relationship across the globe like a family. It's a great platform to showcase your talent and scientific skills in various aspects.



**Chantelle Booysen, UFS** (2019, University of the Free State)



My team thoroughly enjoyed participating and applying our knowledge in the various INST challenges. INST provides an open platform to share and counter-argue ideas scientifically and constructively while connecting with follow scientists across the globe. The tournament promotes critical thinking, creativity, problem identification and communication - four skills that can advance the career of a young academic.



Gabriel Kam Mao Quan, KiasuNUSPS (2016, National University of Singapore)



During the tournament, I picked up new scientific knowledge (especially from the other disciplines) while reviewing my own. INST has boosted my interest in interdisciplinary science and helped me appreciate its usefulness. We also got to experience other cultures—there was a cultural exchange time where the different teams shared about their country and culture.