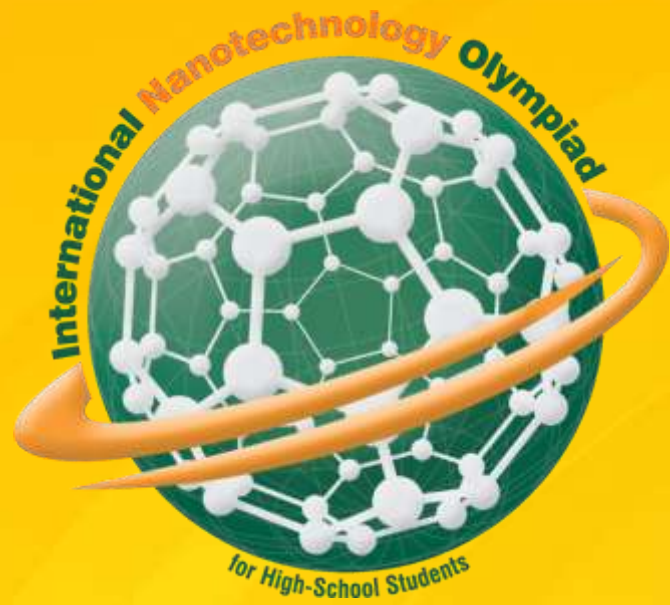
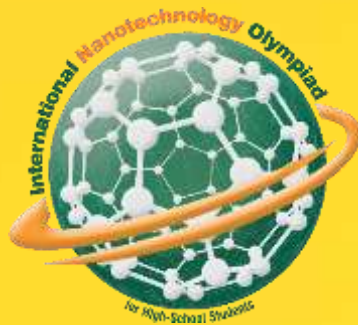




Development of **Sustainable Business Model**



Introduction

The International Student Olympiad in Nanotechnology is a prestigious competition designed to foster scientific talent and innovation among students. This event consists of two main phases:

A multiple-choice exam to assess foundational knowledge in nanotechnology.

The second phase, which focuses on completing a **Sustainable Business Model Canvas**.

This presentation introduces you to the second phase of the Olympiad. You will learn about the structure of the business model canvas and explore a sample of how to complete it effectively.

It is important to note that this section carries significant weight in the final evaluation—**30 out of 100 points**—and is assessed based on four key criteria:

- * **Scientific accuracy**
- * **Creativity and innovation**
- * **Content development**
- * **Presentation quality and completeness of the canvas**

A thorough and well-crafted submission in this phase can greatly enhance your overall score and showcase your ability to apply scientific knowledge in a practical and innovative context.



Sustainable Business Model Canvas

Only red sections must be fully completed

KEY PARTNERS



Who are Key Partners?
Who are our key suppliers?
Which Key Resources are we acquiring from partners?
Which Key Activities do partners perform?

KEY ACTIVITY



What Key Activities do our Value Propositions require?
Our Distribution Channels?
Customer Relationships?
Revenue Streams?

KEY RESSOURCES



What Key Resources do our Value Propositions require?
Our Distributions Channels?
Customer Relationships?
Revenue Streams?

VALUE PROPOSITION



What value do we deliver to the customer?
Which one of our customers' problems are we helping to solve?
What bundles of products and services are we offering to each Customer Segment?
Which customer needs are we satisfying?

CUSTOMER RELATIONSHIPS



What type of relationship does each of our Customer Segments expect us to establish and maintain with them?
Which ones have we established?
How are they integrated with the rest of our business model?
How costly are they?

CHANNELS



Through which Channels do our Customer Segments want to be reached?
How are we reaching them now?
How are our Channels integrated?
Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?

CUSTOMER SEGMENTS



For whom are we creating value?
Who are our most important customers?

COST STRUCTURE

What are the most important costs inherent in our business model?
Which Key Resources are the most expensive?
Which Key Activities are the most expensive?



REVENUE STREAMS

For what are our customers really willing to pay?
For what do they currently pay?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?



ECO-SOCIAL COSTS

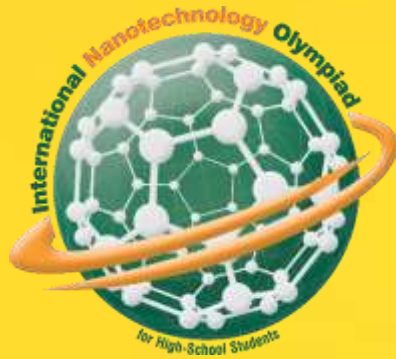
What ecological or social costs is our business model causing?
Which Key Resources are non-renewable?
Which Key Activities use a lot of resources?



ECO-SOCIAL BENEFITS

What ecological or social benefit is our business model generating?
Who are the beneficiaries? Are they potential customers?
Can we transform the benefits into a Value Proposition? If yes, for whom?





Sustainable Business Model Canvas

Only these four sections must be fully completed

VALUE PROPOSITION

What value do we deliver to the customer?
Which one of our customers' problems are we helping to solve?
What bundles of products and services are we offering to each Customer Segment?
Which customer needs are we satisfying?

REVENUE STREAMS

For what are our customers really willing to pay?
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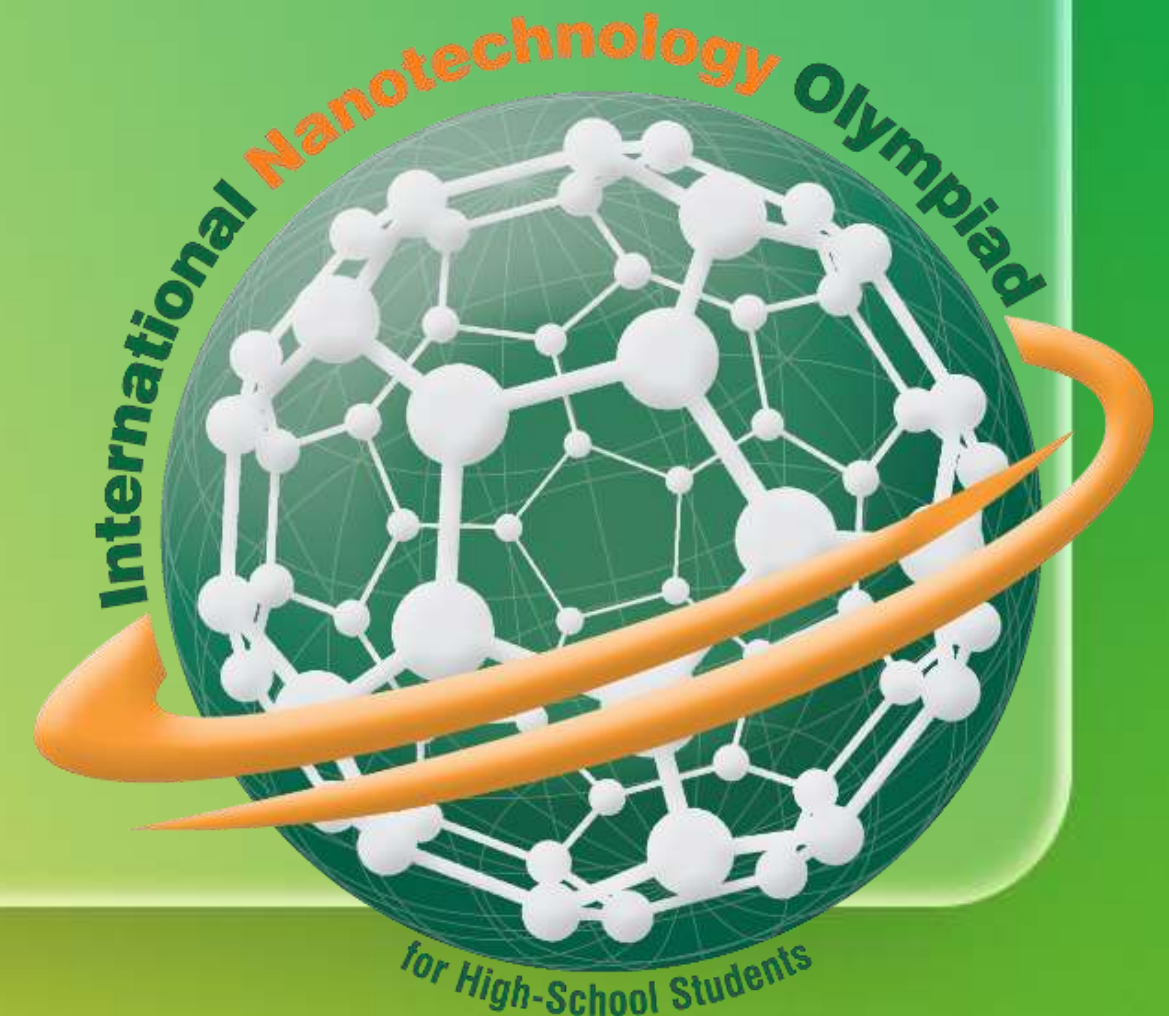


Sustainable Business Model Canvas

Students are required to prepare **a five-minute video** in which they clearly and convincingly present and defend their scientific idea. In addition, they must complete a Sustainable Business Model Canvas that thoroughly outlines the feasibility and practical implementation of their proposed solution.

This canvas must specifically address the following components:

- * Value Proposition
- * Revenue Streams
- * Eco-Social Costs
- * Eco-Social Benefits



Sustainable Business Model Canvas



Evaluation of this section is based on a detailed scoring rubric that includes:

The scientific depth of the proposal

The level of innovation and creativity

The quality of content presentation and video production

The completeness and accuracy in filling out the Sustainable Business Model Canvas

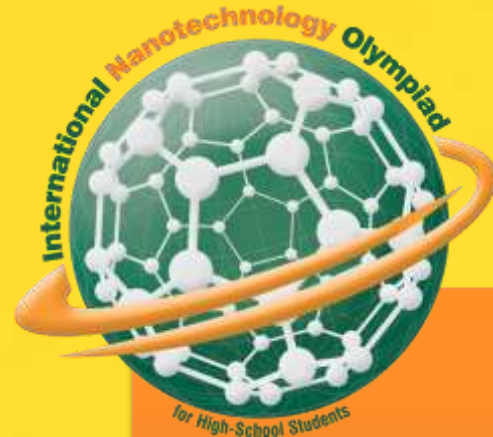
Evaluation Criteria	Points
Scientific merit & technology	10
Creativity & innovation	10
Presentation & content	5
Business model structure	5

This section accounts for **30% of the final score**, playing a key role in assessing students' scientific, analytical, and entrepreneurial capabilities. The remaining **70% is determined by a multiple-choice exam** that evaluates theoretical knowledge and cognitive skills.



**Let's Have
an EXAMPLE!**

Sustainable Business Model Canvas of A Bio-nano Fertilizers Based on Chitosan for Supporting Sustainable Agriculture Practices



VALUE PROPOSITION

Bio-nano fertilizers made from chitosan by utilizing oil palm waste in supporting to improve soil nutrient, food production and increase community livelihood.

REVENUE STREAMS

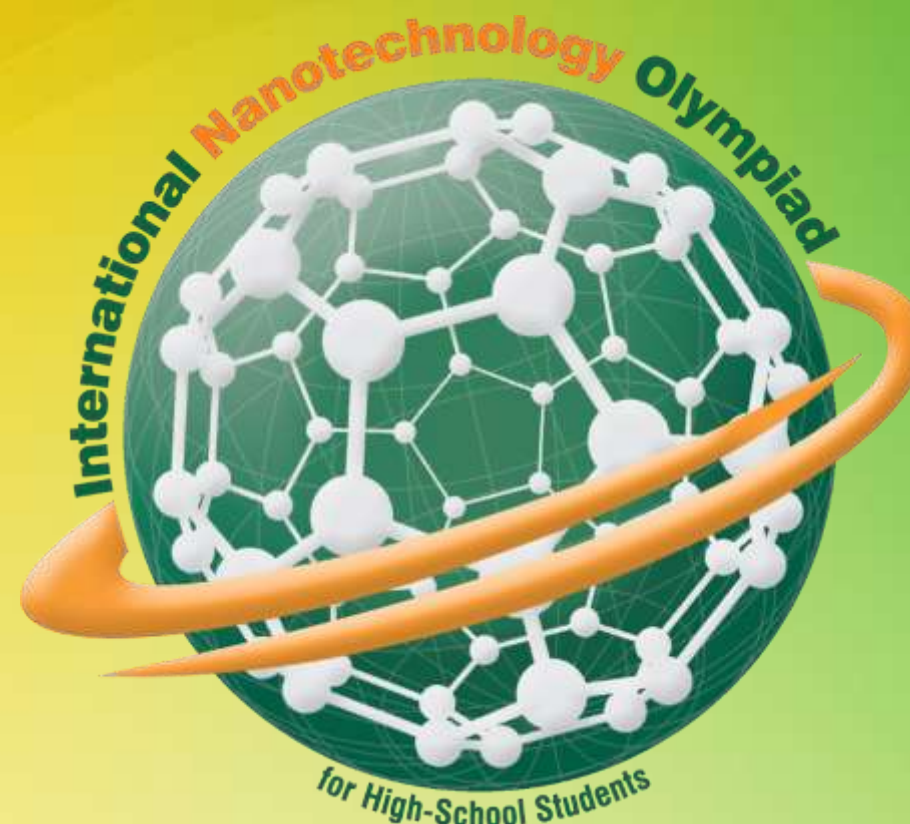
- Bio-nano fertilizer sales
- Procurement
- Royalty
- Training and services

ECO-SOCIAL COSTS

*

ECO-SOCIAL BENEFITS

- Increased community livelihood
- Reduced palm oil waste
- Increased soil nutrient
- Increased food production



References

- Developing a Sustainable Business Model For Bio-Nano Fertilizers to Enhance Peatland Agriculture and Environmental Sustainability, VL - 6, DO - 10.17358/brcs.6.1.163, JO - Business Review and Case Studies
- <https://businessmodelcanvas.guru/en/sustainable-business-model-canvas/>