



FIRST

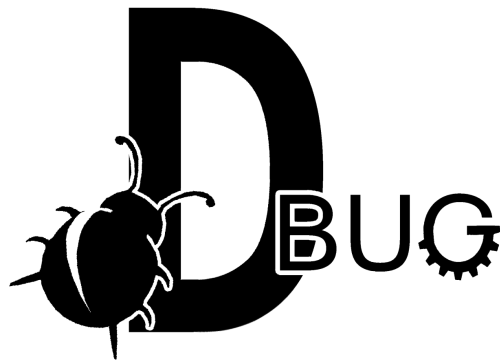
INNOVATION CHALLENGE



PRESENTED BY **Qualcomm**

The Innovation Challenge

FRC D-Bug #3316



FIRST
TECH
CHALLENGE
ROMANIA



NAȚIE
PRIN EDUCAȚIE

About the Presentors

- Members of D-Bug #3316, an Israeli FRC team from Tel Aviv.
- FLL team D++ alumni, the GIA runners up from the 2018 Hydrodynamics season (Plasticker)
- 2018-2020 FLL Israel Regional Champions

Einav

Segev

Rotem





What is the FIRST Innovation Challenge?



- The Innovation Challenge showcases the real-world, innovative solutions created by FIRST teams from around the world as part of their annually-themed Challenge.



What is the FIRST Innovation Challenge?



Through the *FIRST* GAME CHANGERS themed challenge, participating teams will:

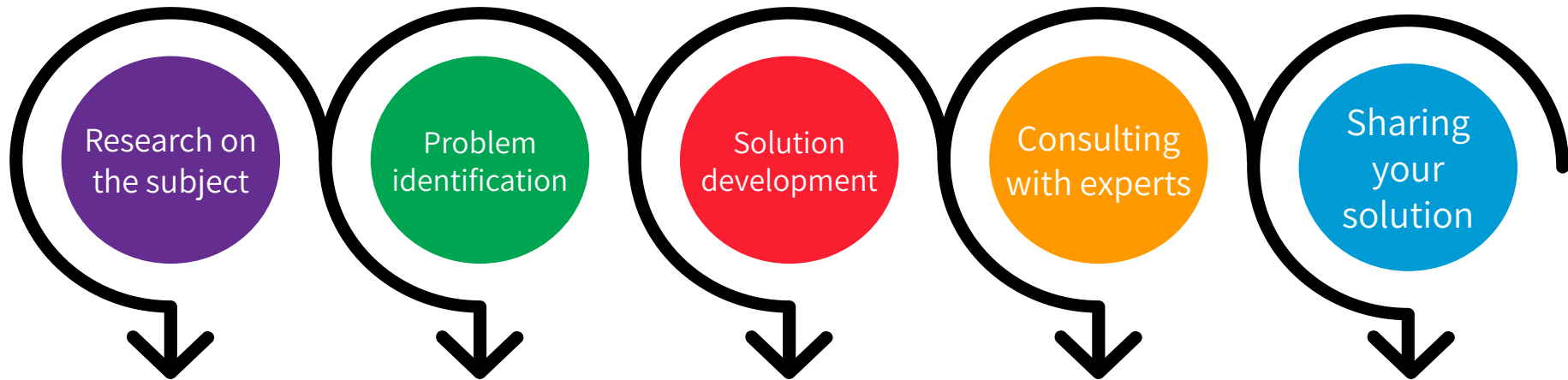
- **Identify a problem or opportunity** To help people keep, regain, or achieve optimum physical or mental health and fitness through active play or movement
- **Design a solution** to seize the opportunity or solve the problem.
- **Actualize their innovation** by creating a business model and developing a business pitch.
- **Advance their skills** by using technology in their solution development process and/or design.



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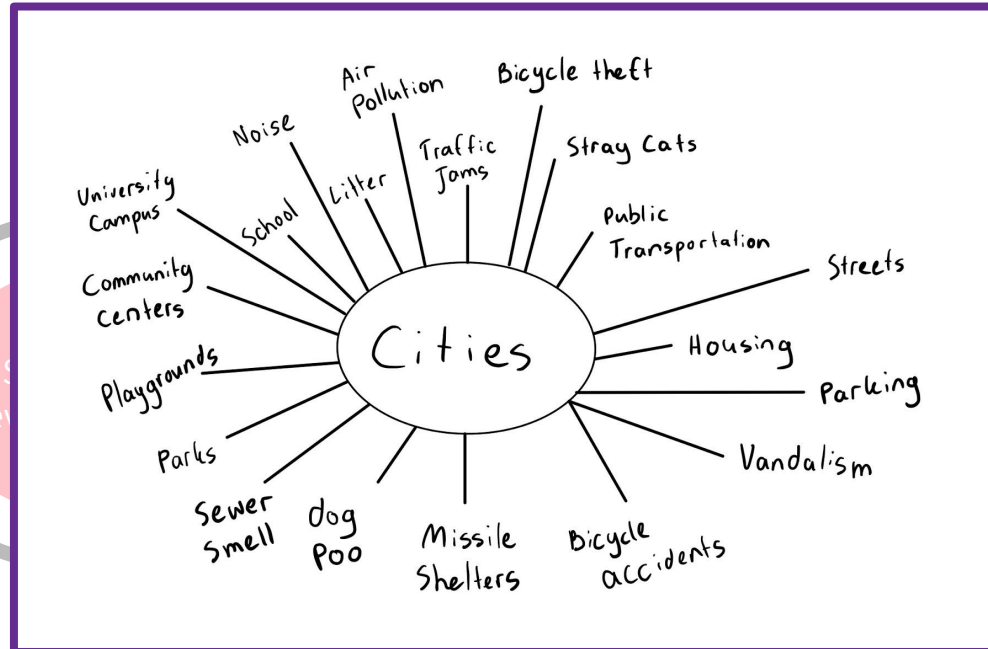
The Innovation Project Process



The Innovation Project Process - Research



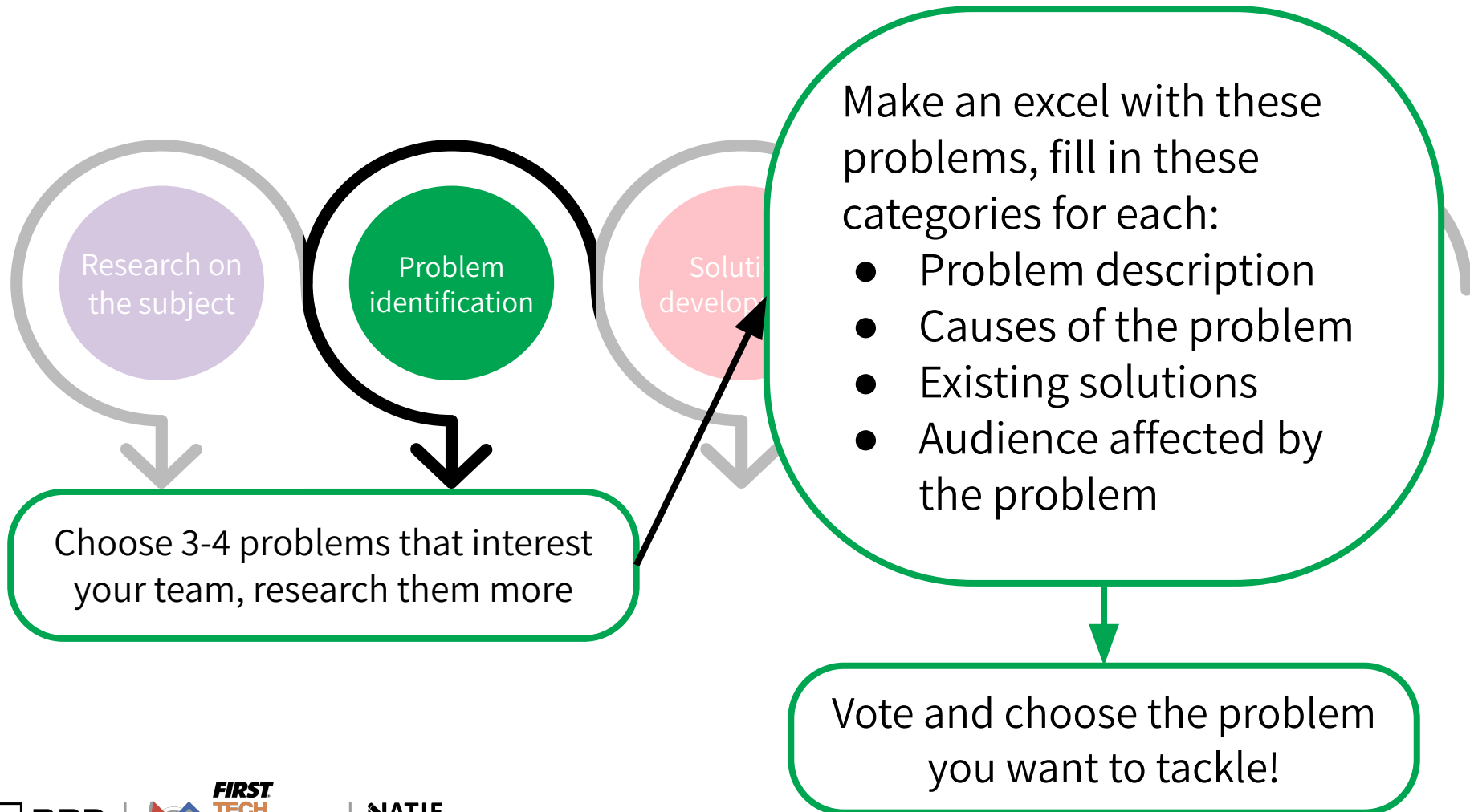
- Public Spaces
- Playgrounds too hot
 - Playground germs
 - Park trash
 - No parking spaces
 - Not accesible
 - Missile shelters



Research problems and topics related to the Innovation Challenge topic

Sort these topics into categories and research problems that arise from the topics that interest you

The Innovation Project Process - Problem

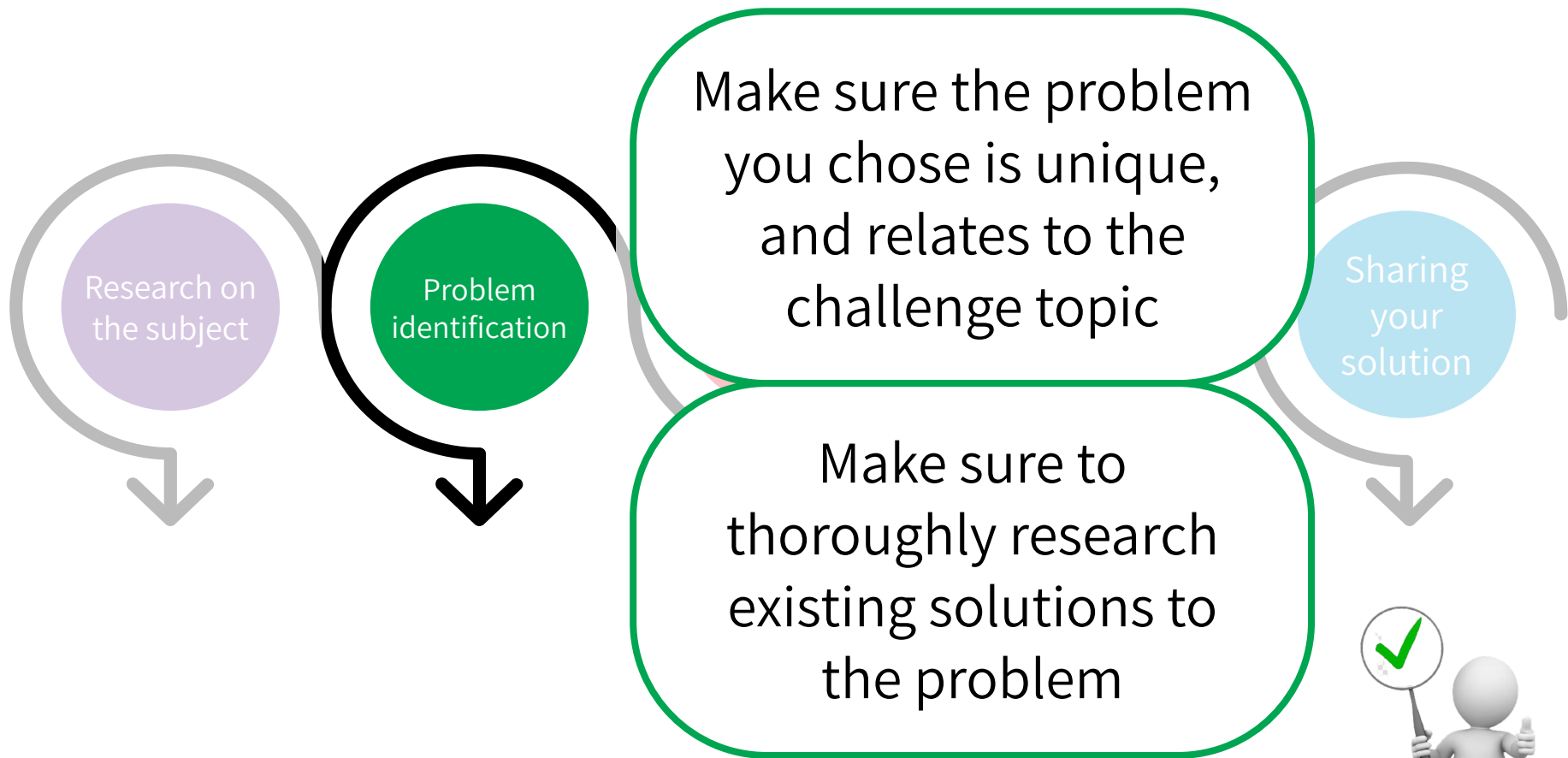


Make an excel with these problems, fill in these categories for each:

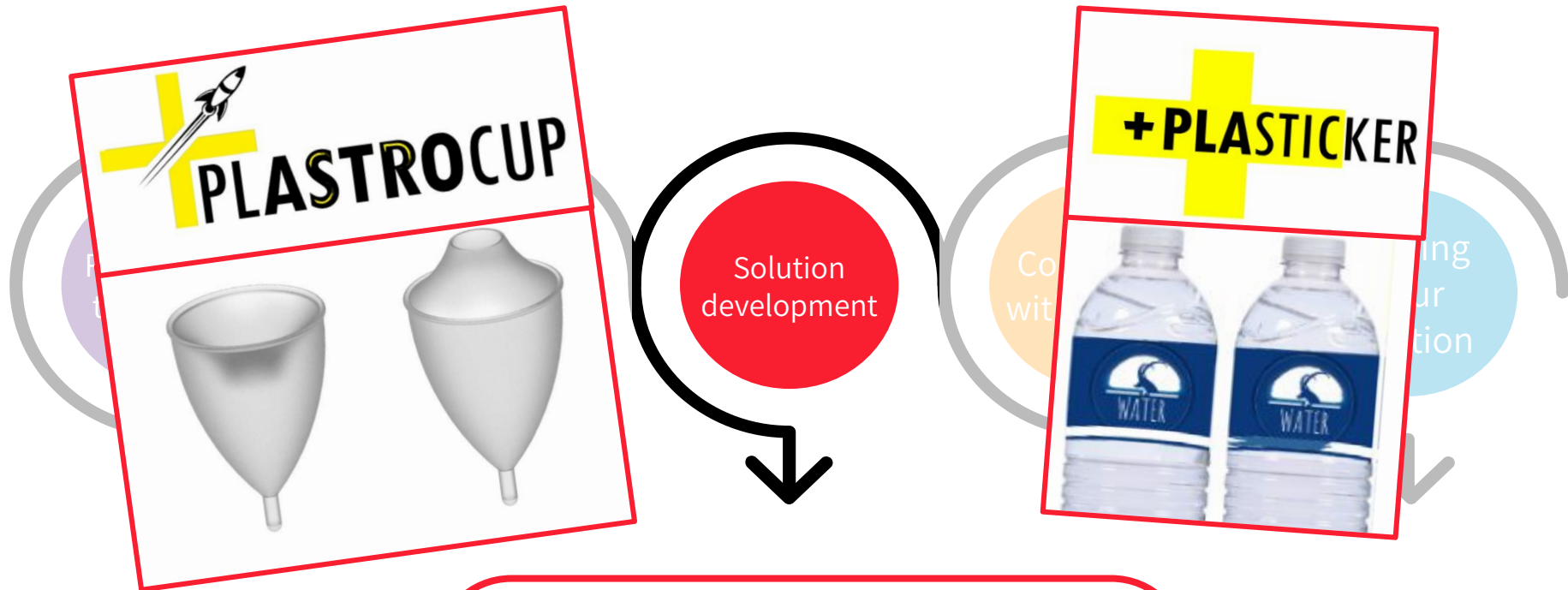
- Problem description
- Causes of the problem
- Existing solutions
- Audience affected by the problem

Vote and choose the problem you want to tackle!

The Innovation Project Process - Problem



The Innovation Project Process - Solution



Propose ideas, compare to existing solutions, check feasibility, **improve!**

Solution Design

- The design of your solution must be shown to the judges
- You may present a 2D or 3D representation of your design
- You might want to build a prototype or some sort of proof of concept
- When designing - account for reliability and user experience
- The use of technology in either the development of and/or the solution is required



The Innovation Project Process - ECN

- An Engineering Change Notice (ECN) is a document that documents design changes throughout the prototyping and life-cycle phases of a product
- Use it to track the improvements you made and the reasons for them, it shows your product's development over time



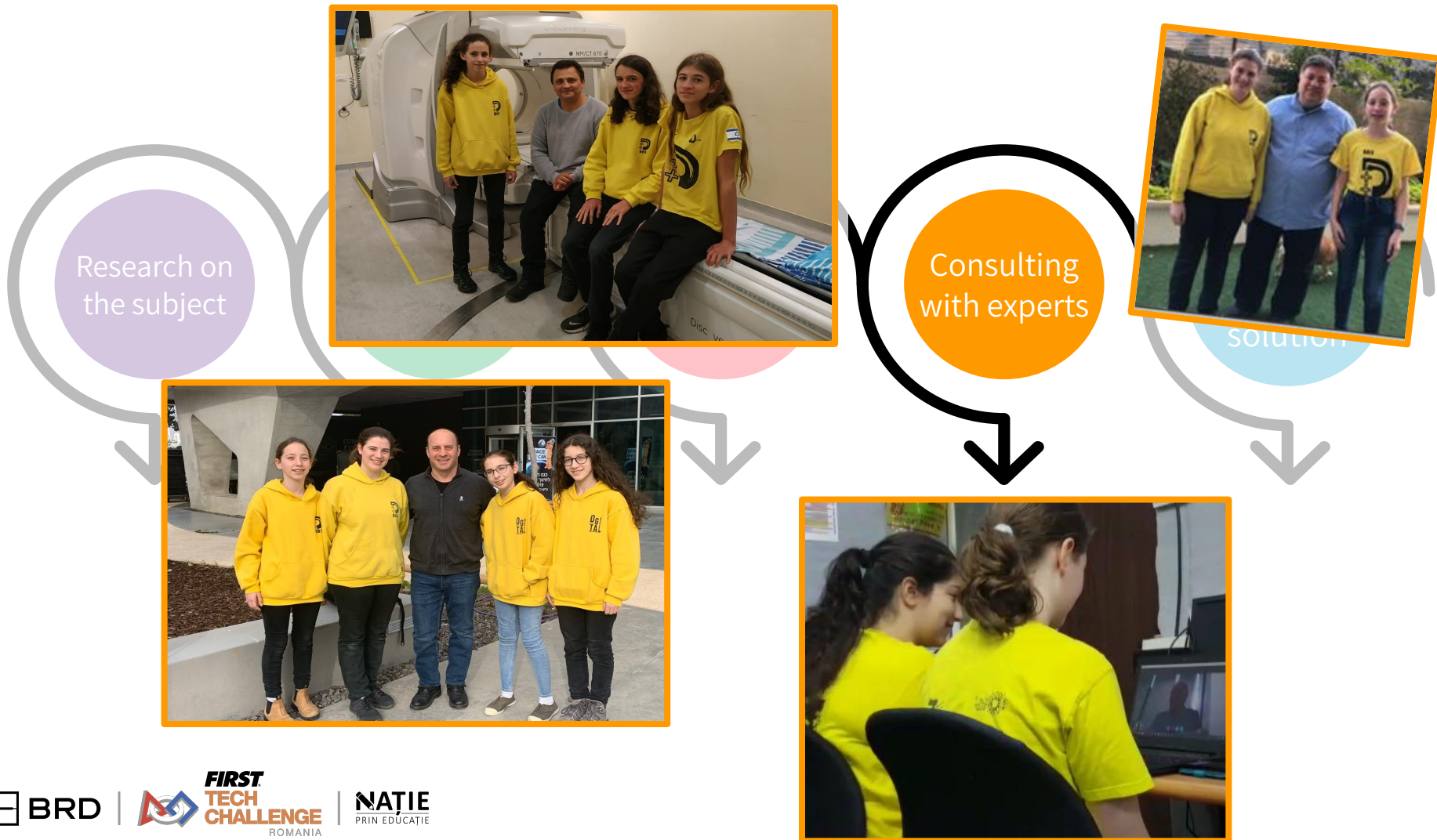
Engineering Change Notice (ECN) Log

Innovation Name				Team Name
Change #	Date of Change	Type(s) of Change(s)*	Description of Change(s)	Reason for Change(s)

*addition / deletion / mechanical, visual, etc.

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The Innovation Project Process - Experts



The Innovation Project Process - Research

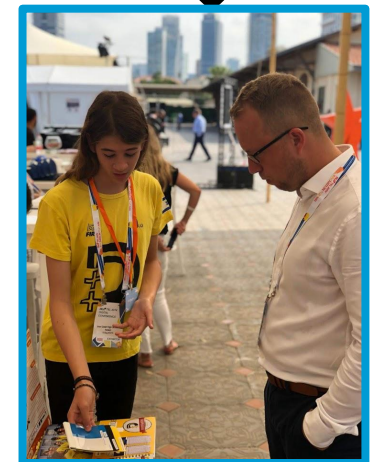
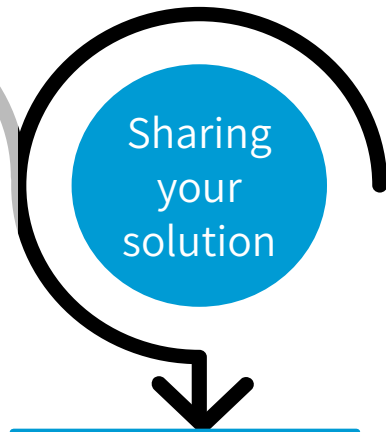


Share your innovation project!

With other teams

In conventions

Target consumers



Timeline



March 4th



April 21st



May 7th



June 28-30


Timeline



March 4th

- Brief solution description - 10 words
- Executive summary:
 - The problem - 200 words
 - The solution - 200 words
 - What technologies will the team use - 100 word
- The executive summary won't be judged, teams may change/improve their solution between the submission deadline and the interview

Timeline



Semi-Finalist
Requirements

April 21st

- Public project description - 150 words
- Public team description - 150 words
- Team logo
- Business pitch video - 2 minutes
- Innovation impact - 500 words
- Design - 500 words
- Business model - 500 words



We recommend you file a
provisional patent

Timeline



Optional submissions:

- Update executive summary - +350 words
- An A4 supplemental page for illustrations, photos etc.
- An image of the solution (sketch, photo, etc.)
- a video of the solution (CAD animation, prototype)

Business Pitch

- What problem are you solving?
- What is your solution?
- Who are your customers?
- Why is your product better than others on the market?
- What experts did you talk to?
- Your solution's strengths and market opportunities
- How did you improve your solution? (ECN)



A video may be a part of your pitch (such as a CAD animation or video of a prototype)





Business Model Canvas D++ // PLASTICKER



KEY PARTNERS:

Our entire eco system is made of: Label companies, Water bottle companies, the Ministry of Health, the Standards Institution of Israel, chemical manufacturers, investors, lawyers, accountants, advertising, freight forwarders, custom brokers and banks.

KEY ACTIVITIES:

Finding investors.
Filing a PCT patent.
Raising market awareness.
Continue meeting and closing a deal with a local water bottle company (preferably, one that is part of a global company).
Deciding upon the production of PLASTICKER.
Meeting with lawyers and accountants.

KEY RESOURCES:

Investors.
Patent Lawyer
Advertising/PR agency specialized in market awareness.
Local water bottle company
Lawyers
Accountants.
Label manufacturing companies
Water bottle companies
Chemical manufacturers
Freight forwarders
Custom brokers
Banks.

VALUE PROPOSITION:

PLASTICKER costs .27 of a cent. PLASTICKER accompanies the bottle from the moment it leaves the factory. PLASTICKER doesn't change the Daily routine of the customers. PLASTICKER surrounds the bottle, and it changes when the sun comes from any angle. PLASTICKER gives people a sense of confidence.

In short, PLASTICKER's value proposition is clear. Our survey showed that 78% of the consumers drink out of disposable plastic bottles on daily basis, 92% care about drinking non contaminated water, and do not want to pay much more for their products. For them PLASTICKER is the ideal and most attractive solution; as it will indicate whether the water in a bottle is or is not toxic and will give them a sense of confidence.

CUSTOMER RELATIONSHIPS:

Ofer Yanko, the CEO of Neviot, a major Israeli bottled water company. He believes that PLASTICKER can be simply and cheaply manufactured and that it can enhance product reliability. He finds it suitable to incorporate it in the Neviot brand.
Neviot is part of the Coca Cola Company. Before we will close an agreement with them or any other global company, we will prefer working on increasing market awareness.
We might even sell our product on the market separately without a bottle.



CHANNELS:

PR and advertising agencies will assist us in raising awareness in the market: Social networks and other medias.
The water bottle company will advertise the PLASTICKER as a feature of their bottles.

CUSTOMER SEGMENTS:

Our customers are water bottle companies that sell to all market segments:
Supermarkets, hypermarkets, grocery stores, convenience stores, drug stores, club stores, vending machines and others
Our customers will sell in bottles of different sizes such as 8 oz, 12 oz, 16.9 oz, 20 oz, 24 oz, 33.8 oz, 53.8 oz or 67.6 oz.
Our customers ideal end consumers are people who drink out of disposable plastic bottles on daily basis and care about harming to their health.



+ PLASTICKER

Timeline



20 Finalists
Selection

May 7th

- 20 Teams will be selected
- Teams will receive an e-mail from FIRST
- You can (and should) continue to improve your project in the time until the event

Timeline



June 28-30

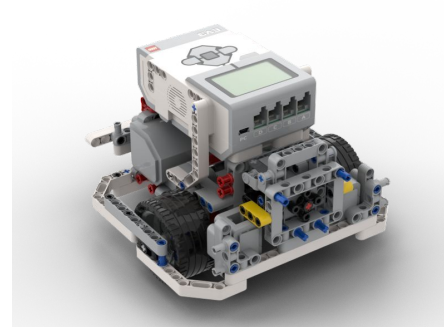
- A remote event
- ~5 hours a day of workshops, judging and mentoring
- On June 25 and throughout the event teams will be able to meet and talk other finalist teams
- Finalist teams will receive more information once they are chosen

What has the GIA done for us?

What has the GIA done for us?



Mayor of Tel-Aviv proudly posted our journey



The EDUCATOR++



FRC Entrepreneurship Award



STEAM camps and activities



Skyping with LEGO Legion



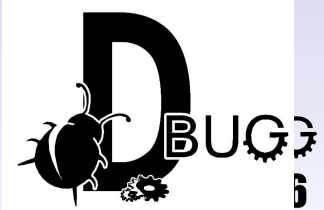
Hosting GIA Israel finals

CONTACT US



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- Website - team3316.com





סתם שקופיות שכנראה לא נצטרך אבל נגלה בקיקאוף

SWOT Chart



- SWOT - Strengths, Weaknesses, Opportunities and Threats
- Strengths and weaknesses are internal
- Opportunities and threats are external. You can take advantage of opportunities and protect yourselves against threats, but you can't change them.



What is the Global Innovation Award?

- The twenty (20) Semi-Finalist teams participate in a 2-day celebratory event
- The winner receives a cash prize of USD 20,000.
- The two runners-up each receive a cash prize of USD 5,000.
- For more official information:
<https://www.firstinspires.org/resource-library/fll/challenge/global-innovation-guidelines>



What happens at the event?

- Opening dinner
- Innovation workshops
- Presentations on stage
- Inter-team bonding activities
- Meeting and speaking with sponsors
- Pit visits
- Judging
- Award ceremony



Innovation workshops

- Think Like a Designer workshop
- USA Patent and Trademark Office workshop
- Presentations by Startup companies
- Innovation Ambassadors workshop
- One-on-One team consultation



Inter-team bonding activities

- Opening event dinner
- Who wants to be an innovator?
- Telling your FIRST story
- Team Movie Night
- Peer to Peer activities
- Scavenger hunt



Presentations and pit visits



Judging

- Judging room - 15 minutes
- Judging in pit



The Pledge

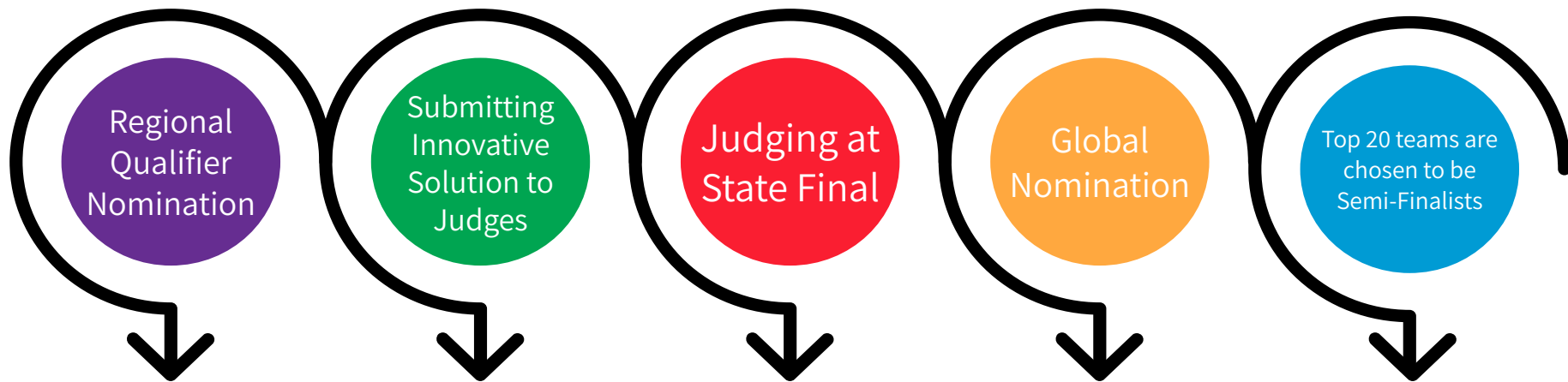
- As FIRST LEGO League Global Innovation Ambassadors we promised to:
 - Continue our journey of innovation
 - Share what we learned with our community
 - Continue to ask questions
 - Challenge ourselves and keep our spark of innovation lit



Award ceremony

- All projects are showcased
- Student Panel
- Winner and Runners up announcement





What makes a good GIA project?

- The problem you choose needs to be innovative and unique.
- Researching the current market and existing solutions
- Your solution must be innovative and better than existing solutions
- Your solution should be effective and feasible
- Consulting with lots of experts about your project!

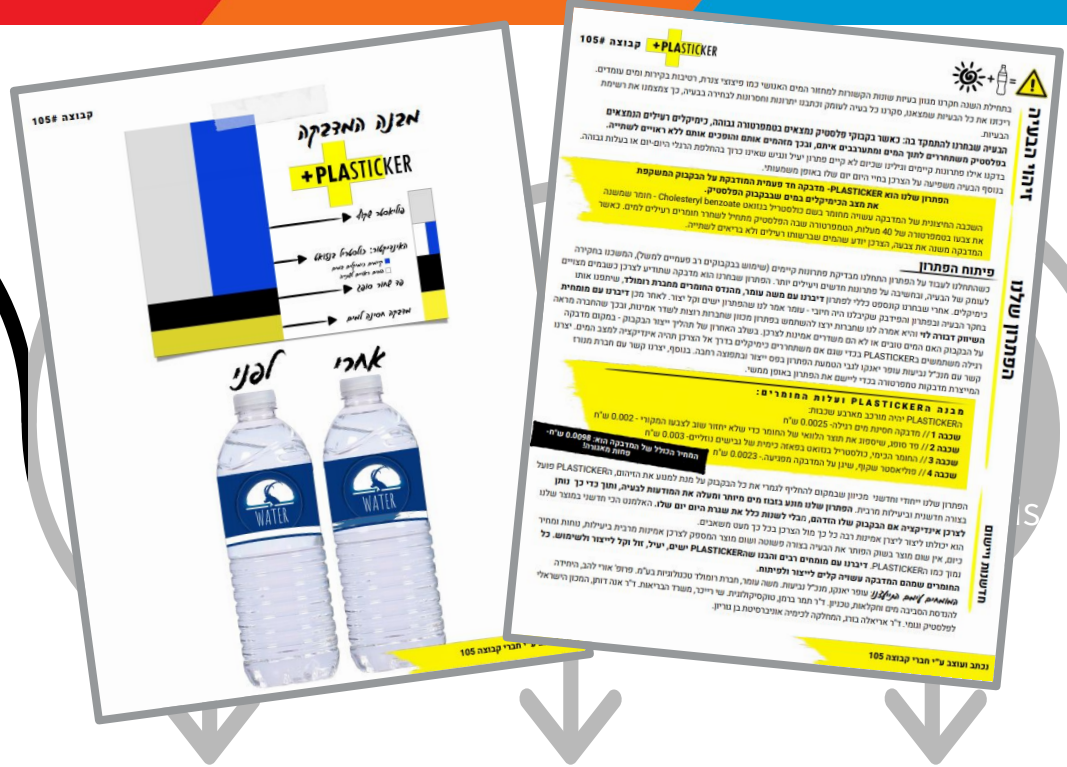
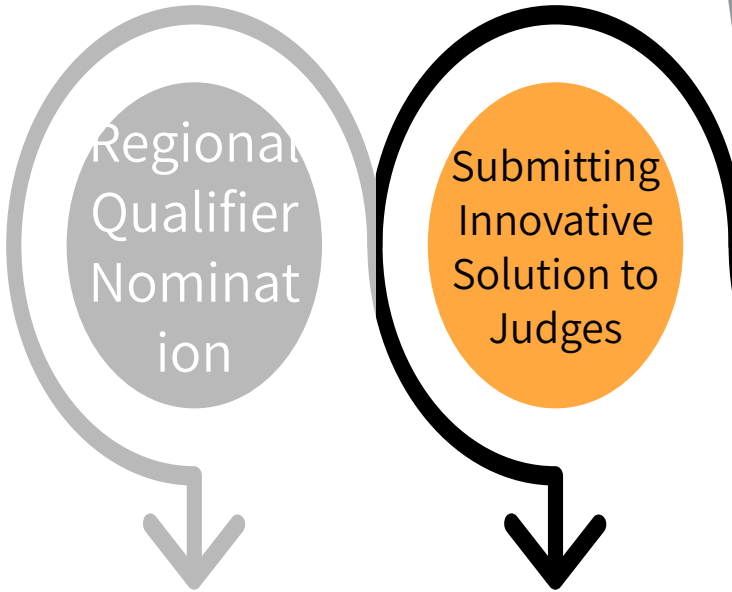


Speaking with Dr. Tamar Berman, a Toxicologist from the Israeli Ministry of Health

The Application Process



The Application Process



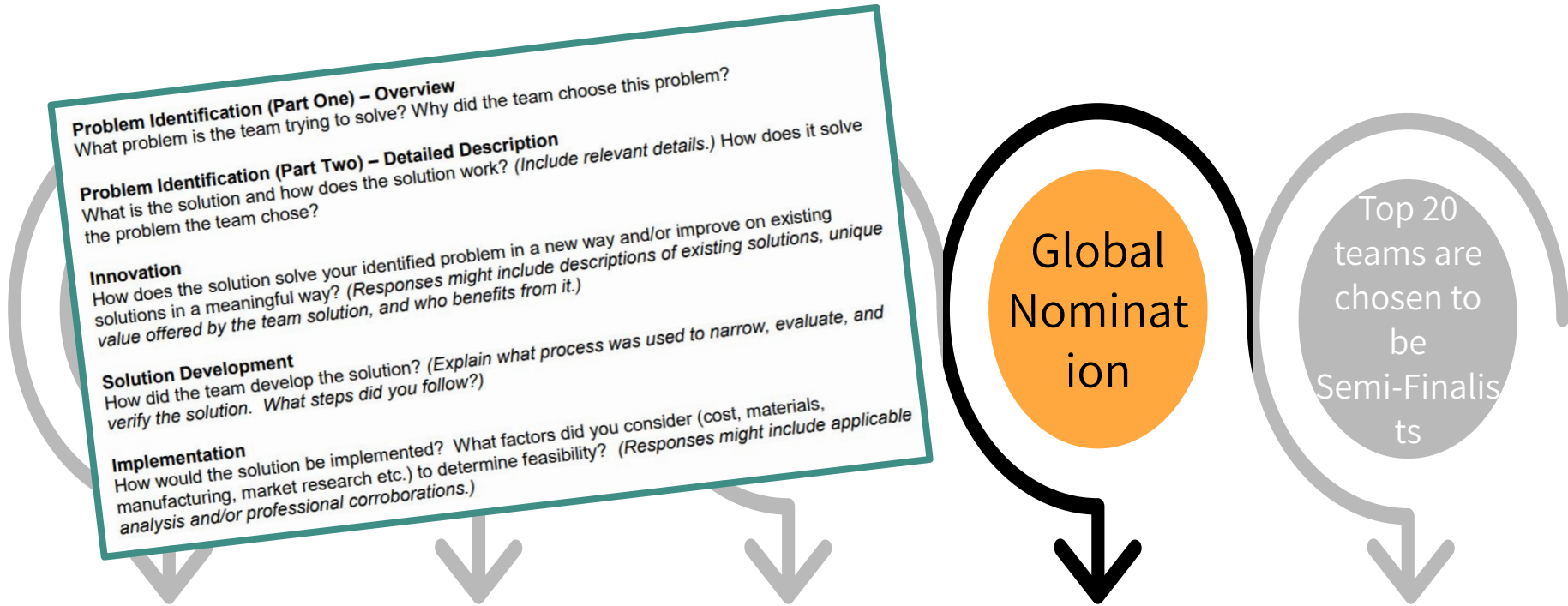
The Application Process



Judging
at State
Final



The Application Process



Problem Identification (Part One) – Overview

What problem is the team trying to solve? Why did the team choose this problem?

Problem Identification (Part Two) – Detailed Description

What is the solution and how does the solution work? *(Include relevant details.)* How does it solve the problem the team chose?

Innovation

How does the solution solve your identified problem in a new way and/or improve on existing solutions in a meaningful way? *(Responses might include descriptions of existing solutions, unique value offered by the team solution, and who benefits from it.)*

Solution Development

How did the team develop the solution? *(Explain what process was used to narrow, evaluate, and verify the solution. What steps did you follow?)*

Implementation

How would the solution be implemented? What factors did you consider (cost, materials, manufacturing, market research etc.) to determine feasibility? *(Responses might include applicable analysis and/or professional corroborations.)*

The Application Process



Dear Nava Saig and Team D++,

Congratulations!

The D++, PLASTICKER has been chosen as one of 20 Semi-Finalists for the Eighth Annual *FIRST*® *LEGO*® League Global Innovation Award.

The *FIRST*® *LEGO*® League Eighth Annual Global Innovation Award is June 19-21, 2018 in the San Jose, California. The event will be held at the San Jose State University Student Union and the Awards Ceremony will be held at the nearby California Theatre.

