IMAGINE

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ESPORT
Data Driven
Challenge
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Gaming

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DR NE
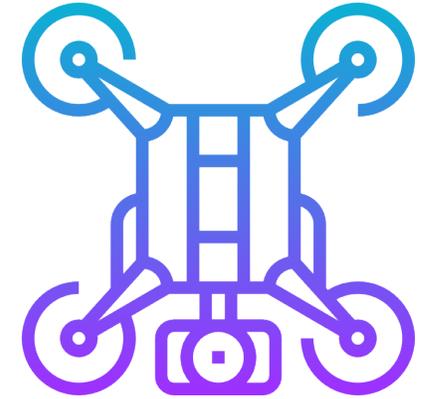GATES
CHALLENGE

WHAT ARE THE DRONE GATE REQUIREMENTS?

Drone timing gates measure the passage of a drone with an electronic sensor. There are many ways to set up your sensors, and the mini-course offers examples. You are welcome to use any electronic setup that YOUR team prototypes, tests, and showcases.

Arduino, RaspberryPi, Micro:Bits and generic options are possible. It's up to you and your teammates to research and design a drone timing gate system that can be assembled, tested in front of an audience, and removed from the staging area in 20 minutes.

The goal is not to clock a fast speed – this is not a race. Judges are concerned with your accuracy, teamwork, design, and electronics.
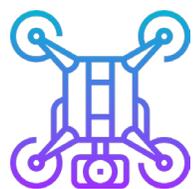
The best drone gates are...

- Durable
- Easy to assemble
- Lightweight
- Portable
- Marketable
- Eye-catching
- Matched to your team branding

Extra Points for Entrepreneurship

1. Provide plans and documentation.
2. Create an "Instructable" for your gate.
3. Develop a "pitch" for your gate product.
4. Develop a DIY video or "unboxing" video.
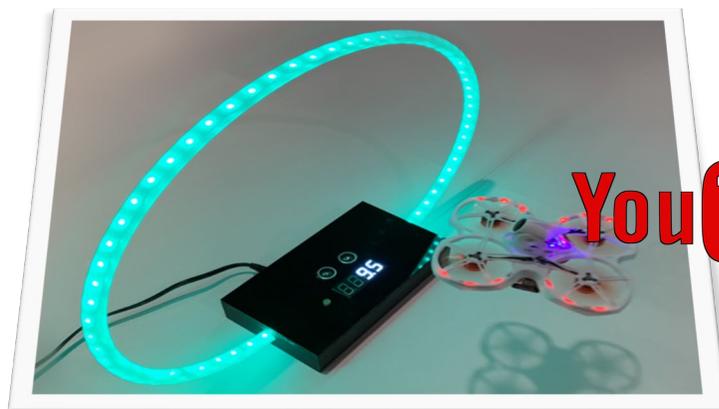5. Exhibit amazing teamwork during the showcase.

SAMPLE PROJECTS TO HELP WITH PLANNING

Obviously, you'll need to adjust measurements and details from any sample solutions to match your drone team's needs. Remember to give credit to all individuals that contribute to your final concept!

Tiny Whoop Drone Gate With Timer

https://www.instructables.com/member/jsterling_34/

Drone Landing Pad with Arduino Timer

https://www.instructables.com/member/DIY+Machines/

IMAGINE – BRAINSTORM – Ideation Strategies

THE RULES OF IDEATION

1. No negative feedback
2. Focus on quantity over quality
3. Use others' ideas as launchpads
4. Encourage big thinking

Narrow the list LATER.
MORE is better.
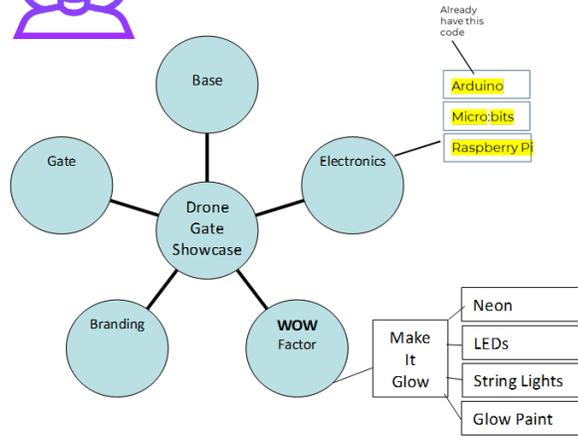Be flattered, not greedy.
Sometimes CRAZY = innovation.

Ideation is a messy business that starts with stepping outside your comfort zone. It's time to imagine yourself as the user of these drone gates.

Watch a few videos to see what drone users, competitors and fans expect from timing gates, but don't limit your thinking to what is already on the market.

Rather than start tossing out random ideas, begin with a plan that gives some level of structure to your team's brainstorming.

IMAGINE OPTION A

"WEB – NOTE – LIST" IS A MULTI-STEP METHOD

1. **Start with a web like the one shown here.**
    The main idea goes in the middle. Add sub-categories.

2. **Do a Sticky Note Brainstorm.**
    - Hand out small pieces of paper or sticky notes.
    - Take a few minutes to jot down ideas, one idea per note.
    - Organize notes in categories (color, size, shape, etc.).
    - Mix-and-match to imagine a "perfect" product.

3. **Add an Optimist-Pessimist list.**
    - Half the group lists ways your final idea could go right!
    - The other lists ways the idea could go horribly wrong.
    - Use lists to troubleshoot and launch new ideas.

Success!	Disaster!
Brightly lit	Wiring fails
Eye-catching	Gets wet
Patentable	Blows away
fundraiser	Too heavy

IMAGINE OPTION B

"METHOD 6-3-5" IS A SILENT BRAINSTORM

Staying silent keeps any one team member from dominating the discussion or idea generation, putting every team member on the same level.

1. Six people write down three ideas in five minutes.

2. When the five minutes are up, team members pass their sheets on to the next person.

3. Repeat the process until all six have added thoughts or comments or drawings on all 18 sheets and get their own sheet of paper back.