



Solution Challenge

 Google Developer Student Clubs

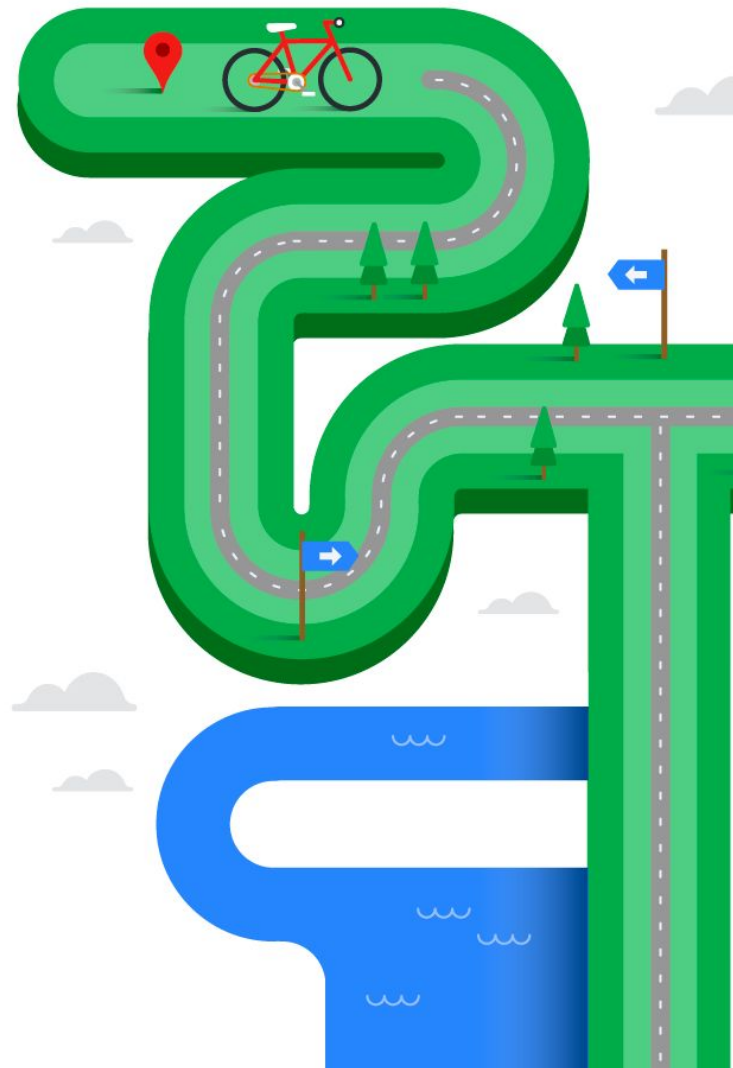
SUSTAINABLE
DEVELOPMENT
GOALS

Solution Challenge

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Problem Identification

Getting started on your project by asking the right questions and evaluating your opportunities.

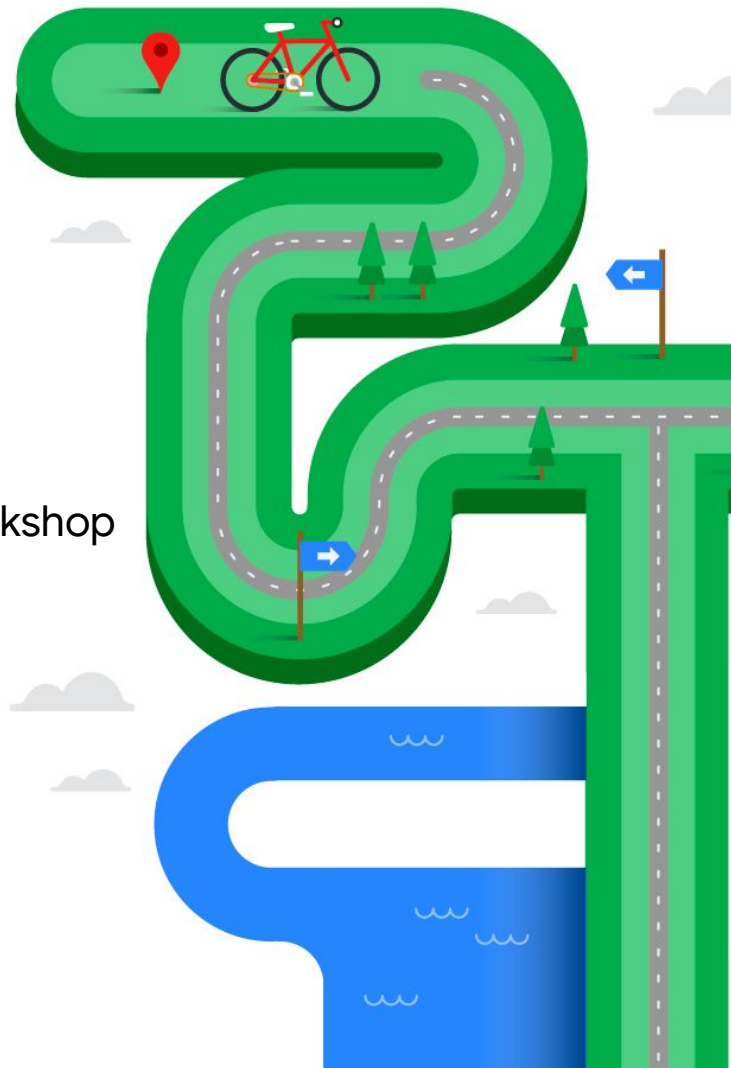


Solution Challenge

 Google Developer Student Clubs

Get Our Slides

<https://github.com/leilanihagen/solution-challenge-ID-workshop>



Speakers

Introductions!



Evelyn Le

DSC Lead

University of Texas - Dallas



Alex Robinson

DSC Lead

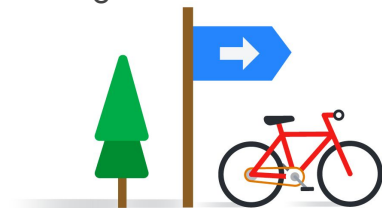
University of Central Florida



Erin Tan

DSC Lead

Mt. San Antonio College



Speakers

Introductions!



Li-Yun Wang

DSC Lead
Portland State University



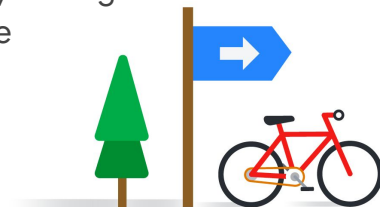
Leilani Hagen

DSC Vice President
Portland State University



Daniel Fiorillo

DSC Community Manager
Google



Today's Goals

What should you walk out of this workshop with

1. **Understand Solution Challenge 2021's focus and judging criteria**
2. **Define and limit the scope of your problem**
3. **Identify potential market and users**

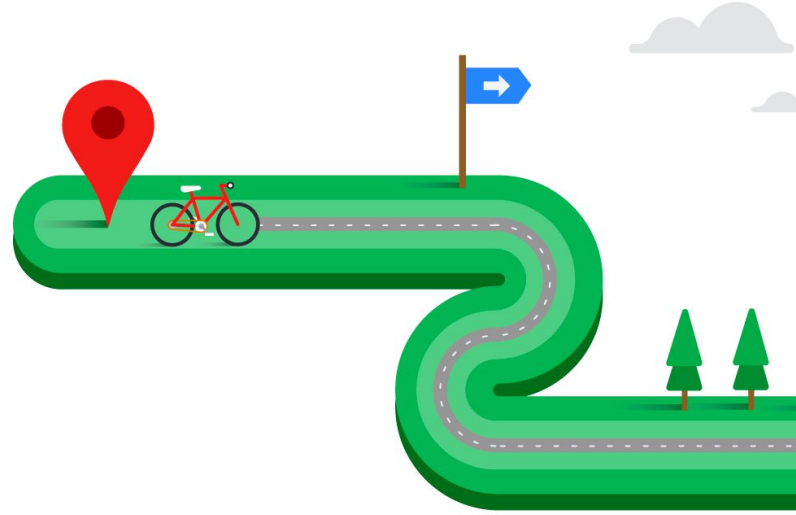


Agenda

CST Timezone

- 1:05 pm: Focus & Judging Criteria
- 1:20 pm: Identify the Right Problem
- 1:35 pm: **Group Activity 1**
- 1:50 pm: Break
- 1:55 pm: Understand Market and Users
- 2:10 pm: **Group Activity 2**
- 2:30 pm: Q&A

Focus & Judging Criteria



The Google Developer Student Clubs 2021 Solution Challenge mission is to solve for one of the United Nations' 17 Sustainable Development Goals using Google technology.

Created by the United Nations in 2015 to be achieved by 2030, the 17 Sustainable Development Goals (SDGs) agreed upon by all 193 United Nations Member States aim to end poverty, ensure prosperity, and protect the planet.



Judging criteria

A panel of Google judges will evaluate your project using this scoring system:

IMPACT - 60 POINTS

1. Does the entry establish a clear challenge focused on one or more of the United Nations 17 Sustainable Development Goals? Is it explained in a clear manner with specific Sustainable Development Goal targets they are looking to solve for? **[10]**
2. How effectively does the solution address the challenge identified by the team? **[20]**
3. Is there evidence of a next step? Does the team display a plan for future extension if they were to continue? **[10]**
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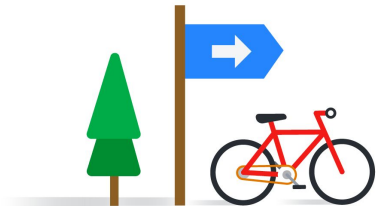
TECHNOLOGY - 40 POINTS

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FAQs

Q: Can my solution solve a problem outside of the scope of the 17 Sustainable Developer Goals?

A: For Solution Challenge 2021, we **require** your submitted solution to **solve** for **at least one** or more of the [17 SDGs](#). When you have submitted your solution, please review all the [17 SDGs](#) to understand which SDG your solution is focused on and what SDG targets you are looking to solve for.

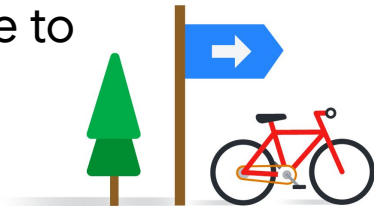


FAQs

Q: Given the implications of social distancing, our ability to test with users was impacted -- will the judges consider this?

A: Our **judges** will surely **be mindful of the limitations that have been added by COVID-19**. This includes but is not limited to:

- Ability to meet as a team
- Ability to have users test the solution
- Lack of internet access or proper developer environments due to displacement from your college campus.



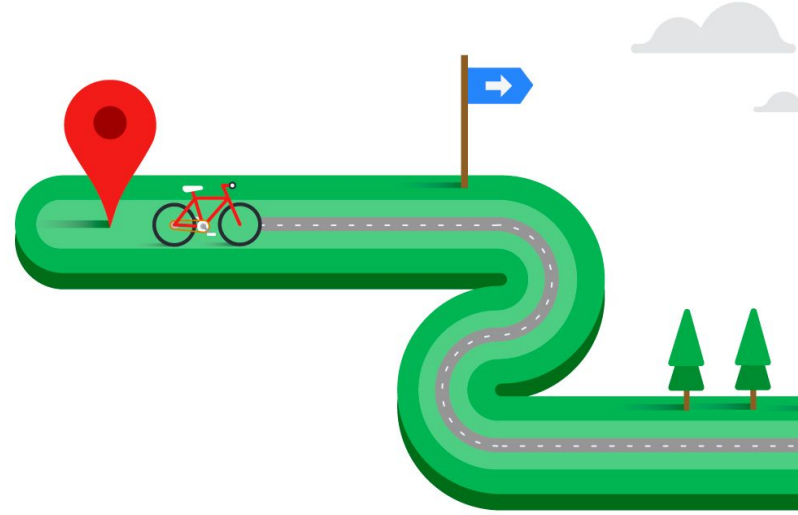
FAQs

To read the full list of frequently asked questions head over to the FAQ page at goo.gle/solutionchallenge.

If you have a question that is not answered below, please reach out to your DSC Lead or visit [Parthean](#).



Identify the Right Problem



Good & Bad Examples (Using 1 UN Goals)

Bad examples:

- **Broad** ideas
 - Ex: Neuroscience application
- **Unrelated** ideas
 - Ex: Google Maps for the moon
- Ideas that push **time constraints**
 - Ex: Automotive accident detection system
 - We only have **2 months!**



Good & Bad Examples (Using 1 UN Goals)

Good examples:

- Be as **specific** as possible
 - Ex: Book recommendation system based off of preferences (#4)
- There's room for **growth**
 - No need for it to be scalable right away
 - Plan for improvements and testing
 - Ex: Carbon footprint calculator - **apply** it to a multitude of things
- Be **ambitious**, but **realistic**
 - Are there people you can **reach out** to for help?



How to start thinking about your problem

It doesn't have to be huge!

- **Choose a theme**
 - **Can be related, but not limited to:**
 - Current events
 - Local problems
- **Last step(s)**
 - Choose a **UN Goal** it could apply to
 - **Network with those involved** in dealing with the problem
 - Apply the **rubric** to your idea





Google Developer Student Clubs 2021 Solution Challenge

An online community for participants of the 2021 Solution Challenge presented by Google Developer Student Clubs.

Lessons

DISCUSSION

- Announcements
- Introductions
- General
- United Nations Goals
- Android
- Web Development
- AI/Machine Learning
- Google Cloud
- Flutter
- Hardware / IoT

Links

- Solution Challenge Homepage
- Parthean Feedback Form

[All](#)[Problem Definition](#)[United Nations](#)[Google Cloud](#)[Beginner](#)[Solution Challenge](#)[Solution Definition](#)[Design](#)[DSC](#)[Firebase](#)[AI/Machine Learning](#)[Tensorflow](#)[Tutorial](#)[Flutter](#)

SDG 5: Gender equality

[PROBLEM DEFINITION](#)[UNITED N...](#)

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SDG 3: Good health and well...

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Generating project ideas from your interests!

Defining a problem and narrowing down scope

Steps

- 1. Write down **the problem**... what exactly is causing it?
- 2. Write down some **“Things that could help”** ways in which you can help solve the problem.
- 3. Do research, reflect on your ideas, modify and eliminate some based on your research, then select **1-2** of your ideas to tackle.

Define + Narrow Scope Example: Disinformation

Step 1 - Write down the problem:

Many people struggle to distinguish true from false information that they read and watch on the internet, leading to misinformed people.

Search for the root of the problem: Look for action words and verbs in your problem statement such as struggle and distinguish.

Define + Narrow Scope Example: Disinformation

Step 2 - Write down things that could help:

Root of the problem: struggle to distinguish false information sources

- An online community to flag disinformation sources and learn about disinformation
- A Facebook plugin that helps people recognize disinformation posts
- A web browser plugin that helps people recognize disinformation on the internet

Define + Narrow Scope Example: Disinformation

Step 3 - Do research, *modify* and eliminate, **pick an idea**:

Research: discussion communities for online content and good web browser plugin tools on this topic already exist

- ~~● An online community to flag disinformation sources and learn about disinformation~~
- A Facebook plugin that helps people recognize disinformation posts
- A web browser plugin that helps people recognize disinformation in articles and other text sources

Engage with your community!

Talk to Someone in Your Community

Who should you ask?

- Professors,
- Local businesses,
- Non-profit orgs,
- Even Friends & Family!

Where do you spend most of your time at work (this can be virtual)?

What do you find most difficult in your job?

What tools do you wish you had available?

Team size

Remember: teams may have up to **4 members**!

We recommend having **4 members** on your team :)

Group Activity #1: Idea Generation

Create a list of 3-5 project ideas

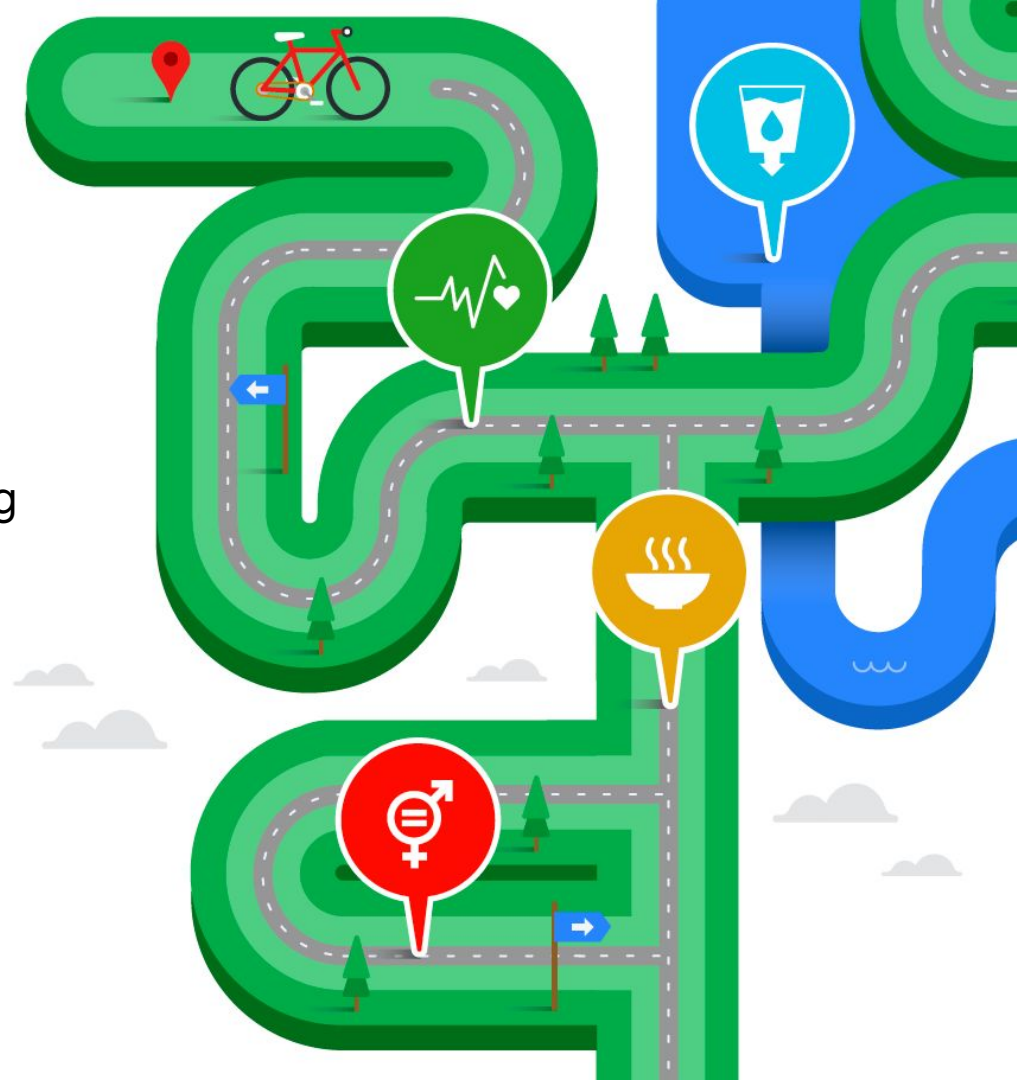
- Access using this link or QR code:
<http://bit.ly/pi-group-activity>
- Find the folder corresponding to your team break-out group number



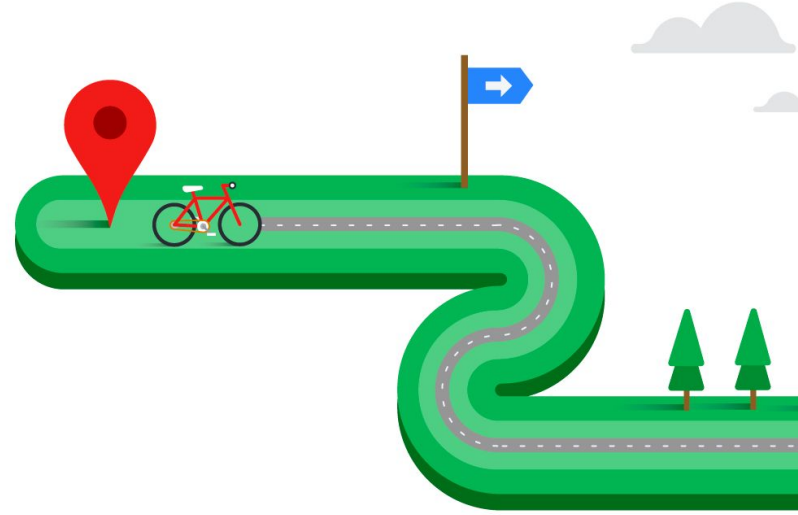
Group Activity #1: Idea Generation

Create a list of 3-5 project ideas

- This is the creativity phase, anything goes!
- Imagine the problems different people in your community are facing...



Potential Market and User



Understanding Markets

Some markets are better than others

- **Size** - The impact & scale of your problem/market
- **Acquisition** - How easy or costly does it take to acquire new customer?
- **Growth** - Is the market growing? How's its future going to look like?

Judging criteria

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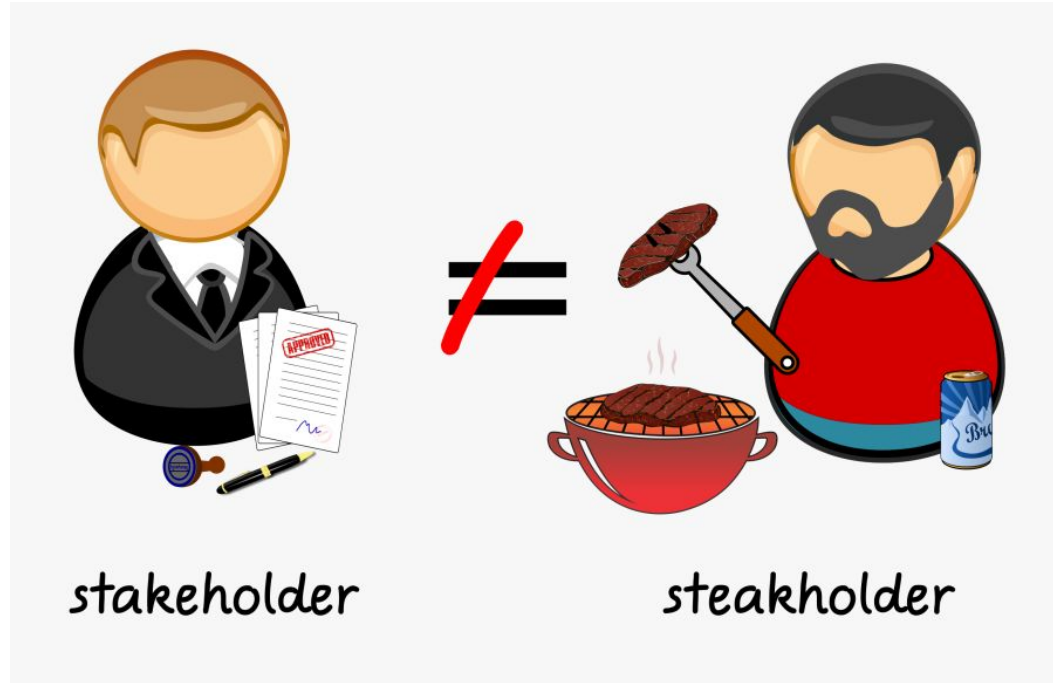
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Know Your Stakeholders



Know Your Stakeholders

Who are affected by the problem that you are trying to solve

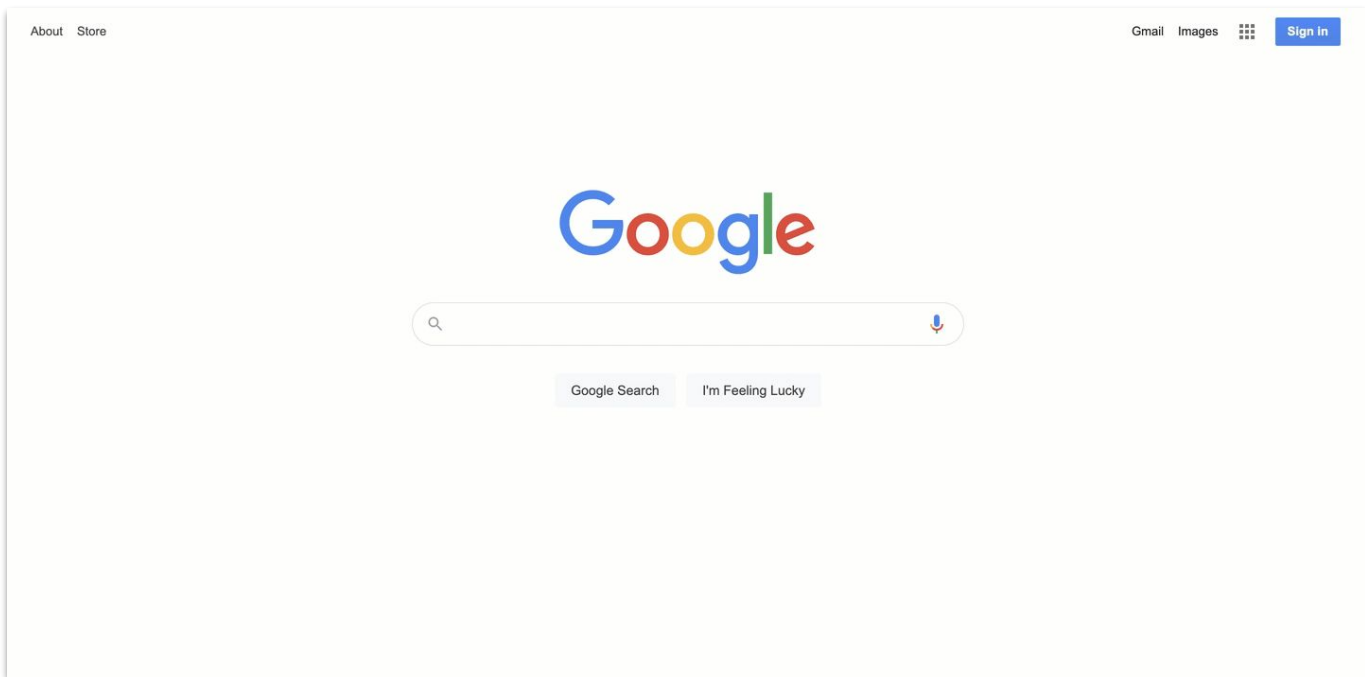
- **Customers/ Users**
- **Competitors**
- **Suppliers/ Partners**

Market Research

The quickest way to learn about your market is to do some online research

- **General Knowledge & Facts**
- **Available Solutions/Products**
- **News & Trends**

How to start your research





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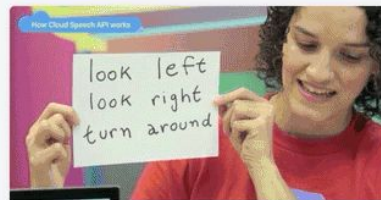
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Who are your users

Think about their

- **Characteristics** - Demographics, Age, Occupations, etc
- **Motivations & Goals** - What they want to achieve
- **Frustration** - What is blocking them that your solution could help

Validate your assumptions

During your market and user research, remember to:

- **Document your assumption**
- **Revisit during your design phase**
- **Test it out later!**

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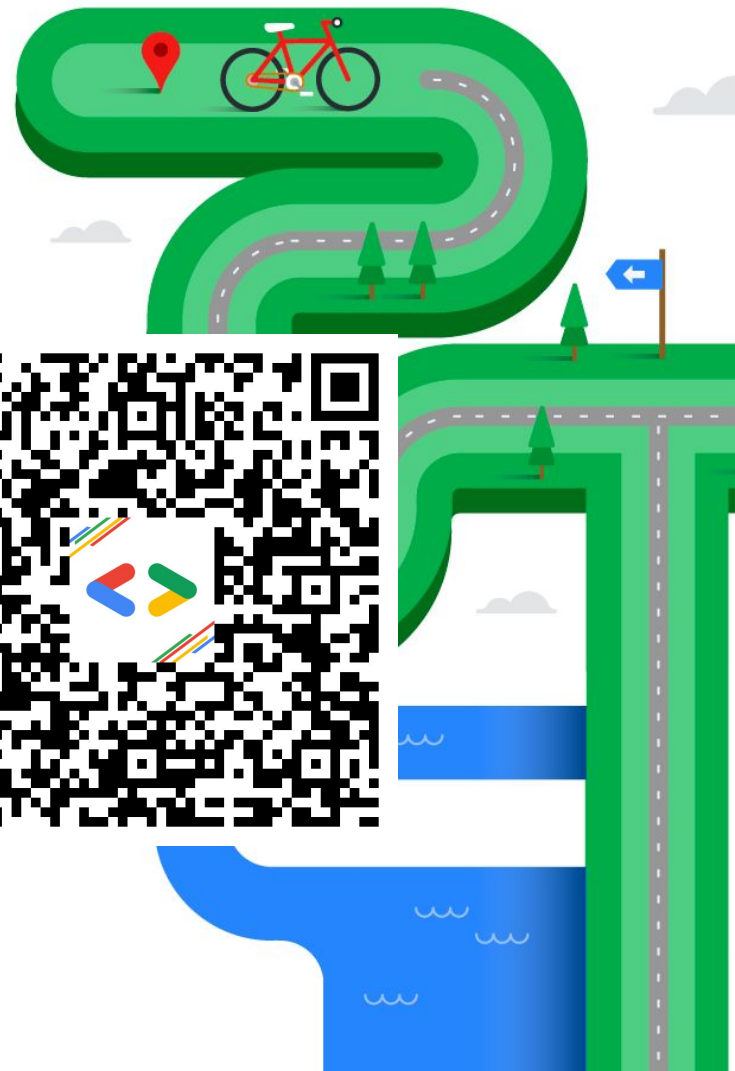
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Group Activity #2: Idea Selection

Evaluate previous ideas and pick the best one(s)

- Access using this link or QR code:
<http://bit.ly/pi-group-activity>
- Find the folder corresponding to your team break-out group number



Small Team Building! – Tip #2

Our recommendations:

- Elect a leader

Maybe...

- Rotate leader role

Definitely:

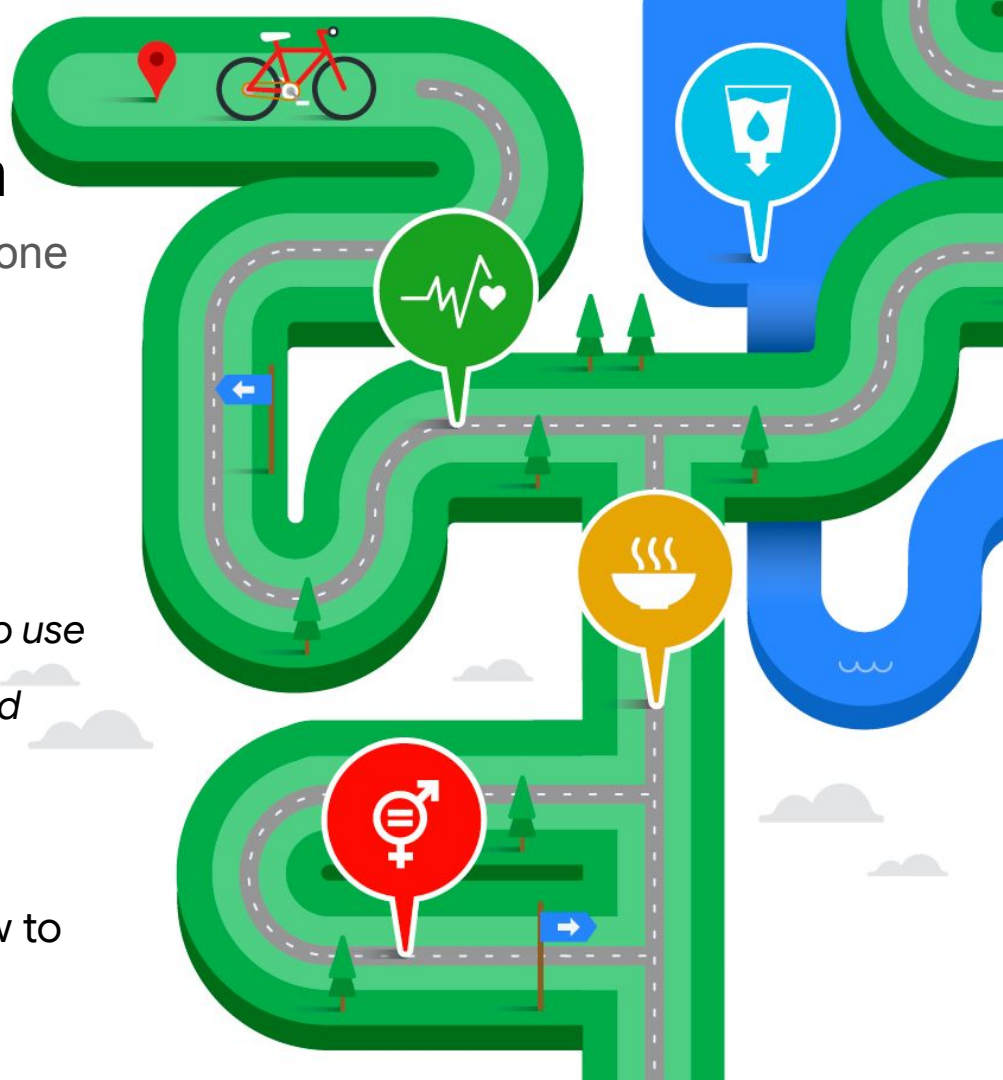
- Make decisions **together!**

Group Activity #2: Research + Project Selection

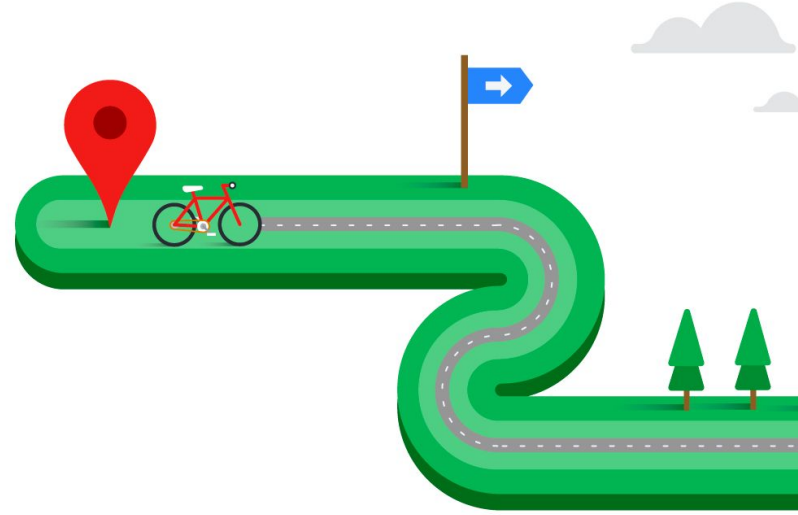
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TAKE NOTES:

1. Do some quick **market research**: *What similar products exist?*
1. Identify **target users**: *Who do I expect to use my product/app/service the most? How old are they? What do they do?*
2. Finally, **choose 1 of your ideas from activity #1** based on research, and how to best serve your target users.



More Resources!





Developer Student Clubs
University of Central Florida presents:

PART OF DSC UCF'S FULL
STACK WEB APP SERIES



Front-End Design: HTML and CSS

JAN 24TH, 2-4 PM EST

HTML



Code along with us as we lead you through the process of developing a website front-end. Use Figma to learn about UI/UX design and then dive into HTML, CSS, and Bootstrap!

CSS



No Prior Knowledge Required

Learning Resources:

dscucf.com/e/resources

RSVP: dscucf.com/rsvp/full-stack

More Info: dscucf.com/e/full-stack

Participate in our Community Engagement Challenge! Chance to win a **Google DSC Backpack!**

The challenge:

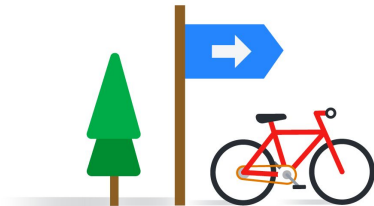
- Discuss the Solution Challenge with your DSC community
- Find someone in your community to interview about the Solution Challenge

More details in the Challenge Form!



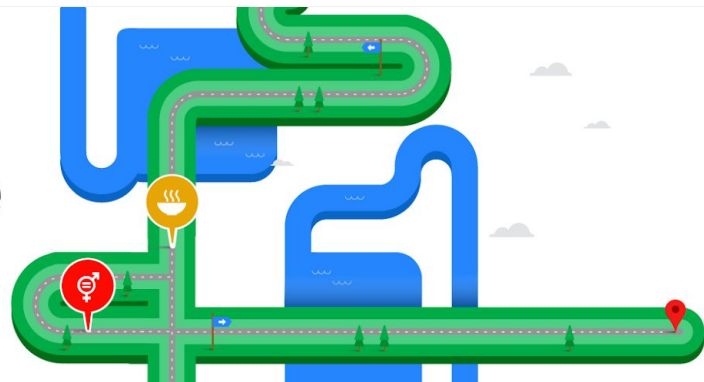
Participate in our Community Engagement Challenge!

<https://rb.gy/2xwwrg>





2021 Timeline



- ❑ **Step 1:** Join a Google Developer Student Club
- ❑ **Step 2:** Register for the 2021 Solution Challenge by submitting this [form](#)
- ❑ **Step 3:** Form a team
- ❑ **Step 4:** Select a United Nations Sustainable Development Goal
- ❑ **Step 5:** Identify a Solution
- ❑ **Step 6:** Learn & build
 - ❑ Design the front-end interface
 - ❑ Design the back-end technology
- ❑ **Step 7:** Test your solution
- ❑ **Step 8:** Iterate code
- ❑ **Step 9:** Record a demo video and submit by March 31st
- ❑ **Step 10:** Top 50 solutions announced ([May](#))
- ❑ **Step 11:** Top 50 deep mentoring ([May-June](#))
- ❑ **Step 12:** Top 10 finalists announced ([July](#))
- ❑ **Step 13:** Top 3 winners announced live on YouTube ([August](#))
- ❑ **Step 14:** Celebrate all the 2021 Solution Challenge participants!

Solution Challenge

 Google Developer Student Clubs

**We can't wait to see what
your team builds!**

