

# Innovative Thinking or RBPT @ DGVC Physics as a part of Triple Helix Science Club

Dr.D.Uthra

24, Aug, 2020

# Why do we need Innovation Councils

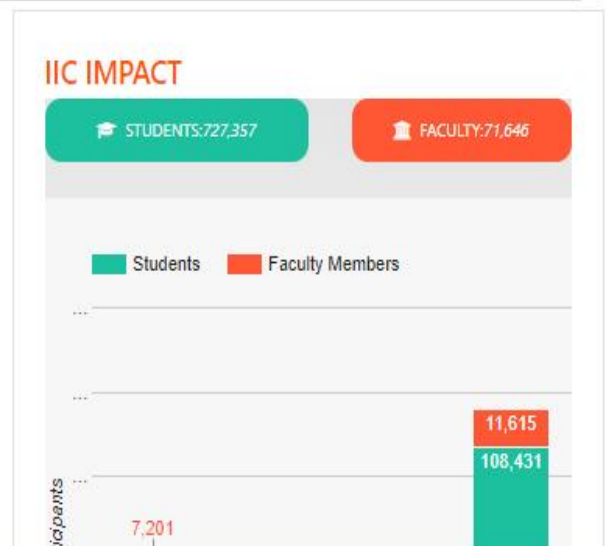
The screenshot shows the top portion of the MHRD's Innovation Cell website. The header is dark blue with the Government of India emblem on the left and the text 'MHRD'S INNOVATION CELL (GOVERNMENT OF INDIA)'. A red 'IIC LOGIN' button and social media icons for Facebook, Twitter, and Instagram are on the right. A navigation menu below the header includes 'ABOUT US', 'INNOVATION COUNCIL', 'INNOVATION RANKING', 'HACKATHON', 'INDIA FIRST LEADERSHIP TALK SERIES', and 'GALLERY'. The browser's address bar shows 'https://mic.gov.in/mic/innovation-council/#'.

## Institution's Innovation Council

### Introduction

Ministry of Human Resource Development (MHRD), Govt. of India has established 'MHRD's Innovation Cell (MIC)' to systematically foster the culture of Innovation amongst all Higher Education Institutions (HEIs). The primary mandate of MIC is to encourage, inspire and nurture young students by supporting them to work with new ideas and transform them into prototypes while they are informative years.

MIC has envisioned encouraging creation of 'Institution's Innovation Council (IICs)' across selected HEIs. A network of these IICs will be established to promote innovation in the Institution through multitudinous modes leading to an innovation promotion eco-system in the campuses.



# Spot the SDG on Innovation 😊 30 sec



## SUSTAINABLE DEVELOPMENT GOALS



# National Innovation Foundation

*goto* <http://nif.org.in/aboutnif>

- Set up in March 2000 with the assistance of **DST(?)**
- India's national initiative to strengthen the grassroots technological innovations and
- outstanding traditional knowledge
- Its mission is to help India become a creative and knowledge-based society by
- expanding policy and institutional space for grassroots technological innovators.

# Design Thinking

## *The five phases of the design process:*



Source: Design Thinking for Educators by IDEO <http://www.designthinkingforeducators.com/design-thinking/>

Give a try ! 😊

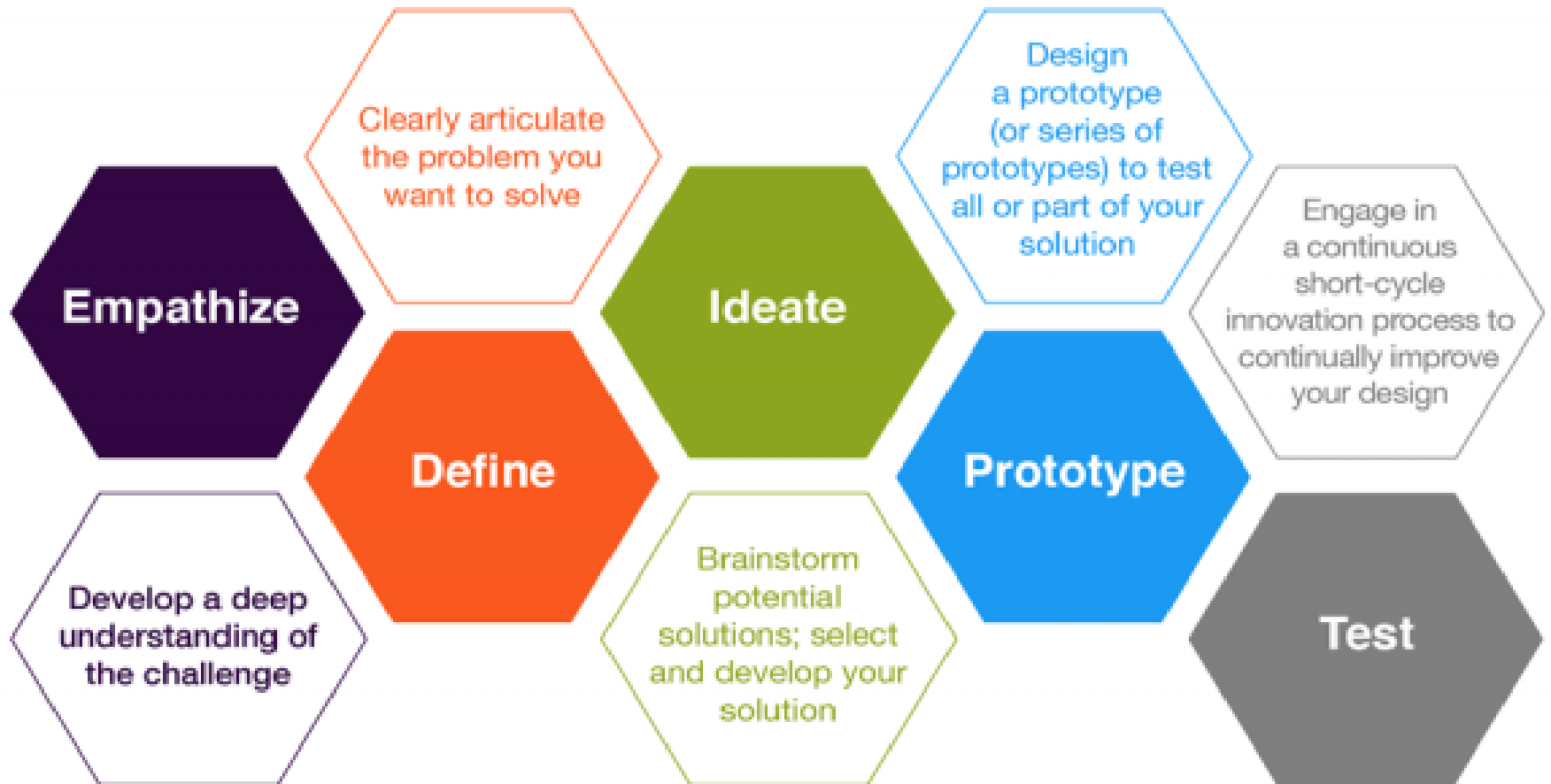
## Warm up activity

Team of two – four & Time - 10 minutes

- **Challenge** – To make the existing dustbins to brighten your (friends) day ;) restrooms/ canteen/ classrooms motivate you/ make you enviro- conscious
- Come with ideas – think of constraints, purpose, goal
- **Collaborate** 😊
- Learn to make meaningful conversations/ suggestions
- Hear other views / discuss - To achieve the goal
- Don't stick to “my idea” alone

# Meaningful Conversations

- I agree with \_\_\_ because...
- I disagree with \_\_\_ because...
- I'd like to go back to what \_\_\_ said about...
- I'd like to add...
- I noticed that...
- Another example is...
- So, what you're saying is...
- Do you think that...?
- Couldn't it also be that...?
- Why do you think that?
- Where can I find that in the book?
- Can you explain what you mean?
- Can you tell me more?
- Can you give an example of that?



# For All citizens...

<https://innovate.mygov.in/innovateindia/>

The screenshot displays the MyGov Innovation website interface. At the top, the browser address bar shows the URL <https://innovate.mygov.in/innovateindia/>. Below the browser, the website header includes the Government of India logo and navigation links: Home, Innovations, Terms and Conditions, and Share Innovation. The main banner features the 'my GOV Innovation मेरी सरकार' logo on the left and the 'ATAL INNOVATION MISSION INNOVATIONS #InnovateIndia' logo on the right. The central illustration depicts three people interacting with large gears, symbolizing innovation and progress. A large orange arrow points from the bottom left towards the center, containing the text 'Welcome to Innovate India'. On the bottom right, there is a 'Share Innovation' section with a 'Share Now' button. The Windows taskbar at the bottom shows the search bar and various application icons, with the system tray indicating the time as 22:00 on 21-09-2019.



MHRD'S INNOVATION CELL (GOVERNMENT OF INDIA)

# India First Leadership Talk Series

## PAST EPISODES



### How to deal with failure

Shri Anand Mahindra

Watch Videos Photos Winners



### Talk on Planning for Career

Dr. Anand Deshpande

Watch Videos Photos Winners



### Art of Decision Making

Shri Ajit Doval

Watch Videos Photos Winners



### Future of Technical Education in India

Prof. Anil D. Sahasrabudhe



### Innovation for Resurgent India

Dr. Ramesh Pokhriyal 'Nishank'

# For Engineering Students...

MyGov Innovation | India Innovate x

https://innovate.mygov.in/india-innovation-challenge-design-contest-2019/

GOVERNMENT OF INDIA

Powered by AICTE mission

## ENGINEER

Your Ideas into INNOVATION | Your dreams into a START-UP | The future of INDIA

### A CHANCE TO WIN

2 Cr seed fund to top 10 startups	70 Lacs worth of free TI Tools	25,000+ certificates spread across the contest
1.44 Cr stipends for Incubates	50 Lacs cash prizes (600+ types)	1.5 Cr product development funds for top 30 teams

DST & Texas Instruments

## INDIA INNOVATION CHALLENGE DESIGN CONTEST 2019

Anchored by NSRCEL @ IIMB

“Registration Date extended until Sep 30<sup>th</sup>”

Click here to fill the form

IICDC 2019

Type here to search

21:53 21-09-2019

# For class 6 - 10 students...

The screenshot shows a web browser window with the URL [www.inspireawards-dst.gov.in/UserP/award.aspx](http://www.inspireawards-dst.gov.in/UserP/award.aspx). The page features a header with the Department of Science & Technology logo, the INSPIRE logo, and the National Innovation Foundation - India logo. The main content area is titled "About INSPIRE Awards-MANAK" and contains the following text:

'Innovation in Science Pursuit for Inspired Research' (INSPIRE) scheme is one of the flagship programmes of Department of Science & Technology (DST), Government of India. The INSPIRE Awards - MANAK (Million Minds Augmenting National Aspirations and Knowledge), being executed by DST with National Innovation Foundation - India (NIF), an autonomous body of DST, aims to motivate students in the age group of 10-15 years and studying in classes 6 to 10. The objective of the scheme is to target one million original ideas/innovations rooted in science and societal applications to foster a culture of creativity and innovative thinking among school children. Under this scheme, schools can nominate 2-3 best innovative ideas online through this website. The online nominations for 2019-20 are open till 31st August, 2019.

Of the ten lakh ideas nominated, the best 1 lakh receive Rs. 10,000/- as INSPIRE Award. Subsequently, the shortlisted students

On the right side, there is a section titled "IMPORTANT LINKS" with the following links:

- Check Your Application Code & email Id
- List of winners of NLEPC'S
- Public Domain
- Important Communications by DST

The browser's taskbar at the bottom shows the Windows Start button, a search bar, and several application icons. The system tray in the bottom right corner displays the date and time as 22:15 on 21-09-2019.



# More challenges – Choose One -30 mins

- Write down the Challenge you choose to work upon
- Define your problem clearly
- Write down your (achievable )goal in your words
- Put a time scale and be aware of it as a team
- Ideate - discuss/ draw/ write/ tabulate/ graph
- What data do you need? Limitations- Fund, Time, Man power, and such...
- Be open to ideas, remember you should engage in meaningful conversations, **ASK for help**/ resources
- Go back to your challenge, - It is a NON-LINEAR Process

Are U Ready?

# Challenge A

- SSS fainted in class last week. She had her periods the next day- very scanty. She fought with her best friend in class today, and with her little sis yesterday and seems to be restless and crying a lot often. She was diagnosed to have thyroid problem and low haemoglobin.
- Doctor has asked her to meet her every month on 15<sup>th</sup>.
- She avoids Dr. as she does not know what to answer when Dr. asks “ Tell me your periods date, how did you feel emotionally or physically last month?”
- Can you help her to give the right facts to the Doc?

# Challenge B

- KK belongs to a lower middle class vegetarian family with amma appa, paati thaatha, a brother in high school. (S)he has to travel by bus for 45 minute and reach College. Classes start by 8.15 a.m. They have a fridge and LPG at home. (S)he skips her breakfast 😞 almost everyday and brings some kalanda saadam( mixed rice or pour sambar/rasam on white rice) with heavily sauted veggies. They look lifeless by 11.15am break. (S)he instead prefers some salty chips. (S)he wants to eat balanced food for lunch and breakfast and wants to be attentive in the class. (S)he wants to stay back and prepare for her PG entrance exam, take part in other activities. (S)he wants to feel healthy, strong.
- Ideate to help her/him to plan her/his diet

# Challenge C

- MM of your class recently hurt his right hand that he has to wear plaster for 15 days
- He is very scared to talk to teachers or any authority.
- He has to score marks in internal exam next week
- What ideas can you suggest him/ teachers and how can you help him score marks ?
- **Using ICT Tools is important in this.**
- Can you think of any concessions that can you recommend for him?

# Challenge D

- Your College (in Chennai) wants to strengthen its floral ecosystem. It wants to have more butterflies in the campus.
- Use internet to gather data
- Can you lead the Butterfly club by drawing a road map to achieve this?
- Which organisations/ individuals would you seek help into achieve this in an year?

# Challenge E

- Many girls and women (teachers too) have urinary tract infection - leads to fever, hospitalisation, repeats often
- They develop rashes in thighs due to humid weather and unhygienic toilets/ habits
- Many of us do not know how to use western toilets/ faucets
- Many are unaware of good toilet habits and feel shy to discuss these in public due to social taboo
- You lead the women empowerment club in your College
- You want to make a change in their lives through Rest Room Revolution.
- Your College teachers and Principal support you fully
- Come with a plan to educate them 😊

# Challenge F

- IIT Gandhinagar came up with an idea of minimising food in it's Canteen
- As an Eco champion and ideathon leader, ideate such a project in your campus

# Challenge G

- Suggestion boxes and Complaint boxes are usually unused.
- Can you help authorities how this fear/ attitude can be changed?
- Can you help the students to use it in a constructive way?
- You can help them write feedback in appropriate way?
- If you think the placement and look of such boxes itself is an issue, you are welcome to design it! 😊
- On one hand, Colleges ask for feedbacks every semester, while students are yet to understand how to give feedback, can you change the scenario and make it meaningful?

# Challenge H

- You feel there is a need to connect Science we learn in books and History behind these- biographies, history of invention, Knowledge system of our country
- Can you give ideas on how we can implement these

# Challenge I

- Many school students are struggling with class 12 portion. Reasons are many
- How can we help them handle the subjects

# Challenge J

- You have lot of time due to lockdown
- You want to prepare for entrance exams you will write after 15 months
- Once college routine starts, you know you have no time/energy
- How to use the time for your best
- Design an app with features to help you with this and successfully complete entrance exams, take you tyo websites/materials to help you prepare, test, help group discussions on important topics, prepare by sharing knowledge, find a good college for PG, get you apply on date



# *Discussion and Consolidation*



*Thank You*