

Assignment 2 - Jugaad Designs

classmate

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Problem Statement : "The Jugaad" : Humans are very creative and often use it to get work done with available set up and resources. Students are expected to find Jugaad (things used creatively but not meant for that) things and submit a minimum of 3 to 5 photographs of jugaad in their surroundings or home. Prepare a report mentioning the Jugaad and source of photos. Discuss the outcome during lab session.

What is Jugaad : An approach to problem solving that is flexible and uses limited resources in an innovative way.

It is an Indian phrase used to describe the kind of ingenuity that enables Indians to manage the large and small changes of everyday life. F

The essence is to improvise, and to quickly and cheaply cobble a situation.

Jugaad examples:

1.) Indian scientists in 1969:

The parts of rocket for India's first ever rocket launch were transported using bicycles and bullock carts, due to shortage of funds.

The expensive machinery to transport was avoided and instead using a simple and indigenous way, our scientists saved a lot of money for other important things.

2.) Table drawer: The metallic handle of my study table had broke so I used a simple string of micron and put it in the holes of the broken handle. So without getting a new metallic handle, I can use a string to open the drawer.

3.) Plants in pot: Instead of getting expensive plant pots, one can use buckets or containers that one use and throw to plant small house plants. This brings out 'The best of waste'.

4.) Cooler with exhaust fan: An exhaust fan throws out hot air. An individual thought - why not use it to throw in cold air instead?

5.) Ropes to the rescue: Due to floods in Telangana, cars were getting wiped out. A person used ropes to tie his car and saved his property without any help from the authorities.

6.) Cleaning wheels : A man built a machine that swipes using 4 brooms connected to a turning wheel, thereby using rotation motion to his advantage.

Jugad photos: (PPT)

**Jugaad at
its best**



**Science and technology
revolutionize our lives,
but memory, tradition
and myth frame our
response.**

ARTHUR SCHLESINGER



Benifits of Jugaad

The non-conventional way to get things done!



NEW AVENUES FOR PROGRESS

Sometimes biggest of big problems can be solved by a simple thought in mind.



TIME SAVING

A flexible approach to solve a problem is benefitting for time as well as resources.



INNOVATION

Thinking out of the box brings out innovative ideas that no one could have even thought of!

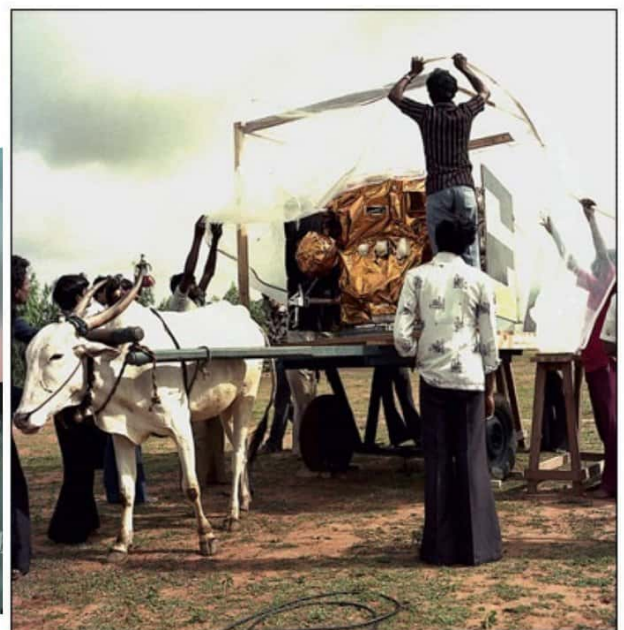
A cycle and a church were used for India's 1st rocket launch

The rocket for India's first-ever rocket launch was carried in parts on a bicycle to the launch site, a church in Thiruvananthapuram in 1963. The launch sent NASA-made Nike-Apache rocket to space and led to the foundation of the Indian Space Research Organisation (ISRO) by Vikram Sarabhai on August 15, 1969. The church was later renamed Vikram Sarabhai Space Centre.



Due to budget restrictions, ISRO didn't have the money to use trucks for carrying rocket equipment instead they used simple bicycles and bullock carts and made the mission a success.

Source - "The wings of fire" (autobiography of Dr. APJ Abdul Kalam)



**APPLE Satellite being transported in bullock cart
(1981)**



Source - Individual Idea
Picture source - Home

Table Drawer

The metallic handle of my table drawer had broke.

I had a string of micron, I put it inside the holes of the metallic drawer, and instead of the metallic handle, I can use a string to open or close the drawer.



Plants in a pot!

Instead of purchasing expensive flower pots for garden plants, one can simply use buckets or any kind of container available at home that is of no use or was a use and throw container.

Source - <https://in.pinterest.com/nirmalparekh200/jugad-from-home-waste/>



Cooler with an exhaust fan!

Normally we think of an exhaust fan as a fan that throws out hot air. But a creative individual thought- Why not use it to throw cool air!

Source - [https://twitter.com/bhandaraic/status/1307554988944584705?](https://twitter.com/bhandaraic/status/1307554988944584705?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1307554988944584705%7Ctwgr%5E%7Ctwcon%5Es1_&ref_url=https%3A%2F%2Fwww.timesnownews.com%2Fthe-buzz%2Farticle%2Fdesi-jugaad-cooler-made-out-of-an-exhaust-fan-goes-viral-watch%2F810537)
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Source - [https://twitter.com/TheSiasatDaily/status/1435246719948791810?](https://twitter.com/TheSiasatDaily/status/1435246719948791810?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1435246719948791810%7Ctwgr%5E%7Ctwcon%5Es1_&ref_url=https%3A%2F%2Fwww.siasat.com%2Fman-ties-car-with-ropes-in-flood-hit-telangana-town-2188985%2F)

[ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1435246719948791810%7Ctwgr%5E%7Ctwcon%5Es1_&ref_url=https%3A%2F%2Fwww.siasat.com%2Fman-ties-car-with-ropes-in-flood-hit-telangana-town-2188985%2F](https://twitter.com/TheSiasatDaily/status/1435246719948791810?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1435246719948791810%7Ctwgr%5E%7Ctwcon%5Es1_&ref_url=https%3A%2F%2Fwww.siasat.com%2Fman-ties-car-with-ropes-in-flood-hit-telangana-town-2188985%2F)

Ropes to the rescue!

Due to floods in Telangana, everything was getting swiped up. A person wanted to save his car, so they used a rope in this dire situation to hang around his car and save his property without any help from the authorities!



Cleaning wheels!

A man sitting on a machine that cleans the floor as it moves forward. A solution that reduces manual labour and is really innovative.

Source - <https://twitter.com/anandmahindra/status/1010033280752680960?lang=en>

What's Next in **Jugaad**?



Increased task automation.



Extra focus on high-value tasks.



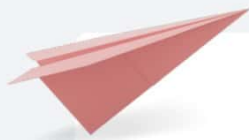
Continuous investment.



A better conscious focus on money saving



Greater geographic distribution and representation of the workforce.



I have long advocated that india can't settle only for 'jugaad' (make-do)& has to shoot for 'jhakaas' (Mumbai slang for 'brilliant') Still, I would like to create a museum of these fascinating jugaad devices somewhere. Maybe at Mahindra Reaearch Valley in Chennai?

- Anand Mahindra



**THANK
YOU!**

The text "THANK YOU!" is rendered in a bold, blocky, sans-serif font. The letters are a vibrant orange color with a thick black outline. A soft teal drop shadow is cast behind the text, giving it a three-dimensional appearance. The words are arranged in two lines: "THANK" on top and "YOU!" below it. The exclamation mark is a solid orange circle. Surrounding the text are several small square accents: some are teal with black outlines, and others are solid orange. These squares are positioned at various points around the text, including above, below, and to the sides, creating a playful, celebratory feel.

Conclusion : Various examples of "Jugaad" were studied and the application of Jugaad into technical aspect as an engineer was thought upon. The lab had a healthy discussion about various examples and applications on Jugaad.

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