

Jugaad and Project Management ¹

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Abstract

“Jugaad”, an Indian word signifying improvisation, has become a buzzword in management circles. Originally used by native users to solve their myriad problems in getting things done in day-to-day operations, it is now being adapted more systematically and formally as a method to improve and innovate. How does the concept and practice of “Jugaad” relate to formal project management principles and knowledge?

Traditional project management through its bodies of knowledge has espoused a structured methodology. One of the main criticisms on the emphasis of detailed planning has been its unsuitability to situations and projects which are uncertain or developmental in nature. This has given rise to methodologies like Agile and similar frameworks which indeed have become very popular in application and practice.

‘Jugaad’ principles and its practice can be viewed in multiple ways in relation to projects. As a method similar to Agile, or as a method in crisis management and more importantly as a way of frugal innovation. In the current business scenario of a VUCA environment this has significance and it is worthwhile to investigate the pros and cons of using the ‘Jugaad’ way in implementing projects.

This paper will explain the practice of “Jugaad” by tracing its origin and discuss the current effort to use it as a formal management practice. It will also provide examples and applications where it can be gainfully used for managing projects.

What is Jugaad ???

The word Jugaad is a *Hindi* word used originally signifying adaptation of a vehicle used for transportation. Usually this would mean adapting or converting a motorcycle, tractor or cycle to transport more than the designated number of people.(Exhibit 1)

The word ‘Jugaad ’has been recently added to the Oxford Dictionary which states the meaning as “*A flexible approach to problem solving that uses limited resources in an innovative way*”. Other dictionary meanings include “*the use of skill and imagination to find an easy solution to a problem or to fix or make something using cheap, basic items*”

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and “a vehicle made from different parts of other vehicles and used for carrying people, goods, etc., that is usually open at the front and the back and often not very safe to drive”.

Each of the above meanings gives credence to the way the word is used and the way it is understood in day-to-day to life, more so in modern management practice where it is being used to signify a quick or innovative way to solve unanticipated problems.



Exhibit 1 - It all started with Transportation!

Examples & Applications

In course of time, the practice of ‘*Jugaad*’ was deployed as a modification, adaptation or quick fix for transportation as can be seen from some examples in Exhibit 2. Later on, it became a method to find low cost solutions to many problems often with the help of appropriate technology. Because of this it naturally found favour in the developing countries which are usually hard pressed for resources.



Exhibit 2 - Applying ‘*Jugaad*’

Exhibit 3 shows three such examples of innovative practices.

Mitti Cool, the low-cost, biodegradable refrigerator made out of clay, is a great example of jugaad innovation. [Mansukhlal Prajapati](#) created a product and a new industrial process with very limited education and capital. Flexible thinking allowed the innovator to use a millennia-old material like clay to create a fridge which uses no electricity and can keep fruits and vegetables fresh for many days.

This simplistic solution allowed his community to refrigerate agricultural produce and dairy and food for the first time ever and in an environmentally friendly fashion. Interestingly, many users of the *Mitti Cool* say that food actually tastes better when stored in it as compared to a regular fridge, because it provides moisture to the food rather than drying it out.

Portable ECG: For heart attacks an ECG is the first point of diagnosis. The ECG machines that GE sells in the US cost \$10,000. Those machines are very big, so typically they sit in a hospital, and the patient goes to the hospital. Whereas 70 percent of India is in rural areas, where there are no hospitals. So GE decided to innovate.

In India, GE Healthcare developed a low cost, portable ECG device, the MAC 400, which is sturdy enough to operate in extreme conditions in rural areas. Instead of designing a new printer from scratch, GE's R&D team adapted a printer that they modelled with that being used in buses to print tickets.

Phone Battery

In Kenya, if your cell phone battery runs on low on power, you can charge with the dynamo-powered "smart charger" in the bicycle. It became popular because of non availability of electricity in villages. This device is so small you can put it in your pocket with your phone while you are on your bike.



Exhibit 3 - Innovative Products using 'Jugaad '

Interfaces of *Jugaad* with Project Management

There are three interfaces that can identified in the practice of *Jugaad* which can be meaningfully deployed in managing projects.

Crisis Management

The nature of *Jugaad* is unstructured, unplanned or ad-hoc and developed on the fly as impromptu practices. This very much lends to its use in crisis management which often shares similar characteristics and has to make do with what is available. In particular they



Exhibit 4 - Crisis Management

VUCA



Exhibit 5 - V U C A

- **Volatility** refers to the unpredictability, speed and magnitude of change
- **Uncertainty** refers to our inability to predict events and their outcomes.
- **Complexity** refers to the number of components and the relationships between these components in a system and their degree of dependency.
- **Ambiguity** refers to the degree to which situations, information and events can be interpreted in many different ways

The VUCA environment means that in today's digital era, we are constantly being challenged with change and are pressurised to innovate. Competition keeps getting fiercer, resources are becoming scarcer and customers are more demanding than ever. This has impacted the way project management is being carried out where it makes it difficult for project managers to make informed decisions, efficiently plan, easily adapt to change and find solutions to problems.

One of the solutions to a VUCA environment is by using VUCA Prime or having a vision, developing understanding, getting more clarity and practising agility.

By its very nature, a *Jugaad* way of working means that which is constantly changing, uncertain with regard to the outcome, connected to many components of work which are often unclear. All these parameters are those which are happening in the VUCA world. It is easy to understand that many of the *Jugaad* methods can be applied gainfully in modern day situations. Organizations have recognized this and some of them are able to apply them as an additional tool kit in developing new products. Agility, use of opportunity, diversity of expertise and flexibility are all qualities of *Jugaad* which are useful in VUCA situations.

Frugal Innovation

The salient features or advantages of frugal innovation are

- Cost reduction
- Risk reduction
- Work with reduced and available resources
- Sustainable - environment, resources
- Innovation can be practised by smaller outfits

This is done by keeping the product features to a bare minimum and ensuring that value is provided only to the extent that the specific customer needs it.

A great example of doing more with less with regard to resources is the Indian Space program for a trip to Mars. Interestingly the cost of the Indian mission to Mars was \$74m and cheaper than the budget of many Hollywood movies on space exploration.

The philosophy of frugality inherent in *Jugaad* has now been successfully applied by many organizations where they are able to introduce it in spite of structured processes by adapting them suitably. This would involve a measure of reverse engineering and going back to basics. *Jugaad* innovation goes far beyond simple de-features, but having a deep understanding of consumer needs and recognizing that certain features don't provide value for money. It's interesting to consider whether removing bells and whistles is going backward, or is actually an advancement from the complexity we face today e.g. by having too many software programs on your laptop or having too many buttons on your remote control could be overwhelming and counter-productive.

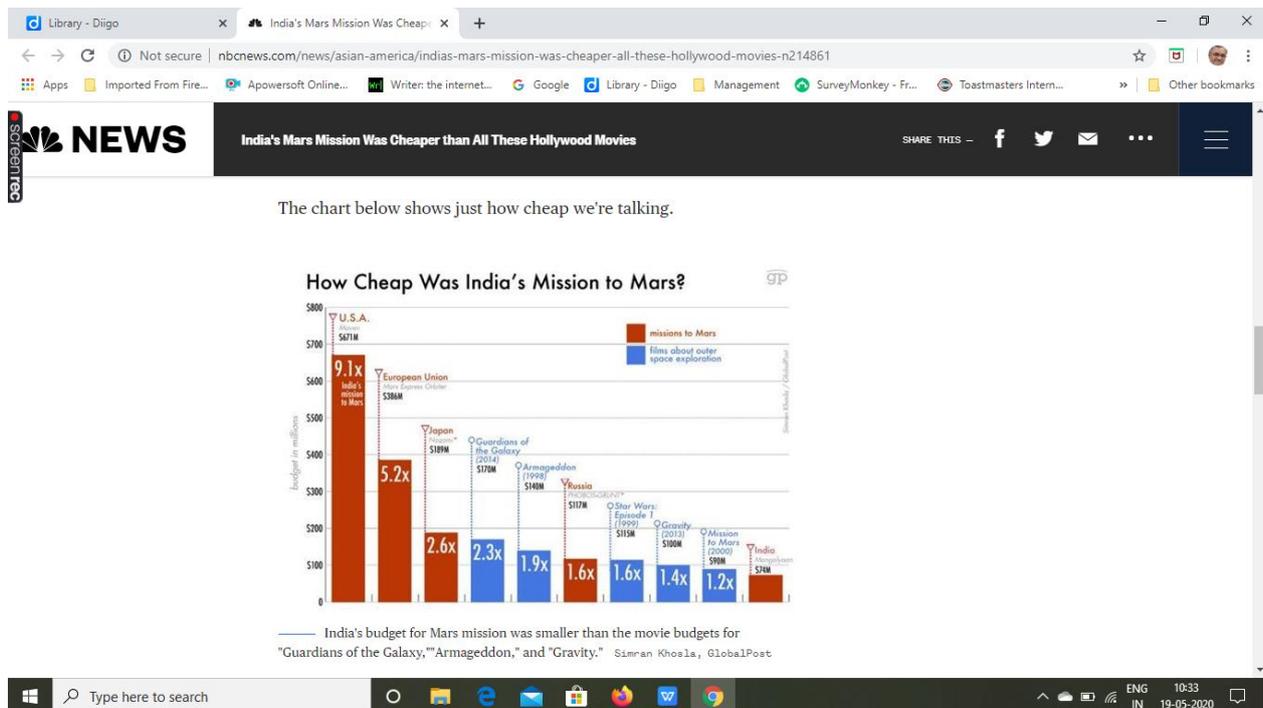


Exhibit 6 - Cost of Mars Missions

Source: <https://www.nbcnews.com/news/asian-america/indias-mars-mission-was-cheaper-all-these-hollywood-movies-n214861>

Learnings for Managing Projects

Many of the methods used while working in a *Jugaad* way can be applied for management of projects.

Crisis Management: This could be understood as part of Project Control process and will take place due to sudden occurrence particularly from the external environment. This would be unplanned and could be considered as part of uncertainty as against risk or rather those type of situations where nothing much is known. This could become more complex due to non-availability of resources, logistics or use of technology.

Managing Cost Over-Run

Cost over-run is often faced by Project Managers. In such a situation, we cannot add resources and we have to manage with this constraint. The '*Jugaad*' method finds solutions when resources are scarce or limited, so this mindset and practice could be helpful for project managers.

VUCA

In a VUCA environment for projects, many of the skills and practice of *Jugaad* could come in handy. These include agility, quick fixes, simplification and working with available resources.

Process & Product Innovation

By its very nature the *Jugaad* way is innovative and depends on out of the box solutions. This mindset and attitude are extremely helpful while managing projects because project situations often demand an innovative approach to problem solving. In particular, innovation in processes e.g. lean processes would be an added asset for reaching project objectives. The development project product could also be benefited through an innovative approach.

Agile Mindset

The agile methodology for managing projects has become very popular. The *Jugaad* way has a similarity with the agile practice and is sometimes misconstrued as the same. This is not so, as the agile method prescribes has a definite process to follow whereas with *Jugaad* it is ad hoc and a set process is not followed. Nevertheless, the agile mindset inherent in *Jugaad* would be useful for those following agile methodology for managing projects.

Conclusions

Jugaad is a home-grown method, developed ad hoc, due to circumstances of shortages or the lack of resources and the need to provide quick fixes.

While there are some pitfalls in deploying *Jugaad* as a method e.g. lack of process, poor quality, etc., the positive aspects of *Jugaad* could be very well used for managing projects.

- Crisis Management
- Project Control
- Managing Cost Over-run in projects
- Innovative practices to improve project efficacy
- Agile and *Jugaad* can co-exist and need not substitute one for another

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