



**Industry:** Nuclear Research, IT

**Technology:** PHP Laravel

**Country:** India

## Client Profile:

Bhabha Atomic Research Center (BARC) was established in the year 1954 by Dr. Homi Jehangir Bhabha to cater to the manpower needs of the expanding atomic research and development program. It is one of India's premier nuclear research institute located in Trombay, Mumbai (Maharashtra). From the establishment till now, the institute has won several accolades for its research work that has contributed constructively to the society and due to this; it is now the mother of esteemed Indian R&D institutions like IGCAR, RRCAT, VECC, etc. This revered collaboration between these reputed organizations and BARC works on pioneering research on nuclear & accelerator technologies and industrial establishments like NPCIL, NFC, ECIL, etc., spearheading nuclear power production, materials technology, electronics & instrumentation. The core mandate of BARC is to maintain the peaceful application of nuclear energy, primarily for power generation. Having a widely spread infrastructure for advanced research and development that jackets the whole spectrum of engineering, nuclear science, and other related areas, BARC is a well recognized multi-disciplinary research centre. As the scientists and research fellows associated with the organization used to perform their research publically in the form of product or service, keeping in track with the real-time status of research was a daunting task as in the legacy manual system.

## Challenges:

The Department of Atomic Energy (DAE) under which BARC is functional has the Technology Transfer and Collaboration Division that innovates on various technologies which could be further used for the public and society. The Scientists with high caliber innovate the formulae that can be purchased by various companies/individuals, may it be General or Rural deployment, foreign deployment, or Internal DAE Unit Deployment. Upon analyzing the situation of the client, we found the below-mentioned challenges:

- The manual system was very cumbersome with a heavy load of print copies maintenance and safeguarding.

- The manual maintenance of the system involved huge manpower which however could be diverted to other productive works to ensure the smooth functioning of the division.
- BARC has many sub-divisions located at remote places across the country, handling this vast network manually roadblocks timely collaboration and coordination between them in many cases.
- It was a big challenge to have a smooth collaboration between the Licensee and an extended CRM to gather information about product deployment, product launch, and success ratio.
- It was a challenging task for the Licensee to coordinate with BARC for any assistance even after redeeming the services for years.
- It was a challenge to transform the manually operated BARC Technology Transfer and Collaboration Division which was aimed at social betterment.

## Solution

After analyzing the present status of BARC, team KCS suggested automating the process. We offered them a web-based portal on PHP Laravel so the need of various stakeholders could be catered well. In our solution, we ensured that smooth flow is formed for internal technology approval and technology transfer approval in the application to make the process automated.

- An automated system was created that made real-time collaboration between scientist & developer scientist's easy for online approval on any new or ongoing project easy.
- Developers/Scientists can log in with their credentials and can submit/track the status of their research approval.
- The problem of heavy load due to print copies maintenance and safeguarding was eradicated with the automated system.
- Before conducting any research the developer needs to seek permission via request form in the web portal and upon receiving the concerned head/admin could give approval/denial for the research work. Hence, the long process for research approval application was simplified.
- Once the committee members receive the technology research updates via the portal they could give a go-ahead in case everything goes well as per their requirement.
- The Licensee (company that wants to buy that technology) could also create an account in the web portal and could access the research/technology in real-time. In this way, the stakeholders and development team all remain in sync
- With the web portal, the developer scientists and Licensee all could remain on the same page even after years of collaboration. They could connect easily and collaborate for any technological needs/approval in the future as well.



## KCS Approach

The division has been in existence for years and has been managing the operations manually. The urge of digitalization to automate the whole process has triggered to go for a solution that can handle operations under this scope and give additional spectacle to ensure that all are in place and the technology is transferred to the right persons at the right time and a smooth transition occurs as well. KCS has come up with the web-based Portal on PHP Laravel to cater to the needs of various stakeholders

## Impact

The solution had a great impact on the operations of the BARC Technology Transfer and Collaboration Division. The web portal provided an automated system for technology transfer and technology approval. Here is the impact of the solution provided by KCS.

- An automated developer's platform was created which ensured a smooth workflow and communication regarding the new and ongoing technology research and transfers.
- The web portal gave the management one view about the projects (past, present, and upcoming). They could view the research request and could provide approval/denial in real-time so less time could be hampered of both the management and research developers.
- The automated system ensured that the management & developer could remain in sync regarding any new request, the old one, or a pending research request.
- The web portal provided an intuitive solution to the Licensees in which they can apply and pay online to get the license approval for technology in a hassle-free manner.
- The web portal made it easy for the Licensee to coordinate with research scientist even for the year's old project.

## Tech Stack



Bootstrap



HTML



Laravel



MYSQL



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