

Over the time, the overall success rate of innovation has been a challenging topic. It's a well acknowledged fact that chances that a technology developed in R&D Lab are on lower side. This is substantiated by the fact that more than 84% of granted patents are never commercialized. If we deep dive the reasons, the challenges are multi-level and at multiple fronts. We are attempting to discuss those reasons and exploring the ways to overcome the same.

As an introduction, Technology readiness level (TRL) and its connection with successful monetization of new technologies is very crucial. TRL is an important concept that provides a common language and framework for assessing the readiness of a technology for commercialization. A higher TRL level generally indicates a lower level of technical risk and a greater likelihood of successful deployment.

TRL concept can be used to assess the level of technological risk associated with a particular project and to determine what additional development and testing is necessary before the technology can be commercialized. An exemplary monetization path of a technology can be depicted through this representation.

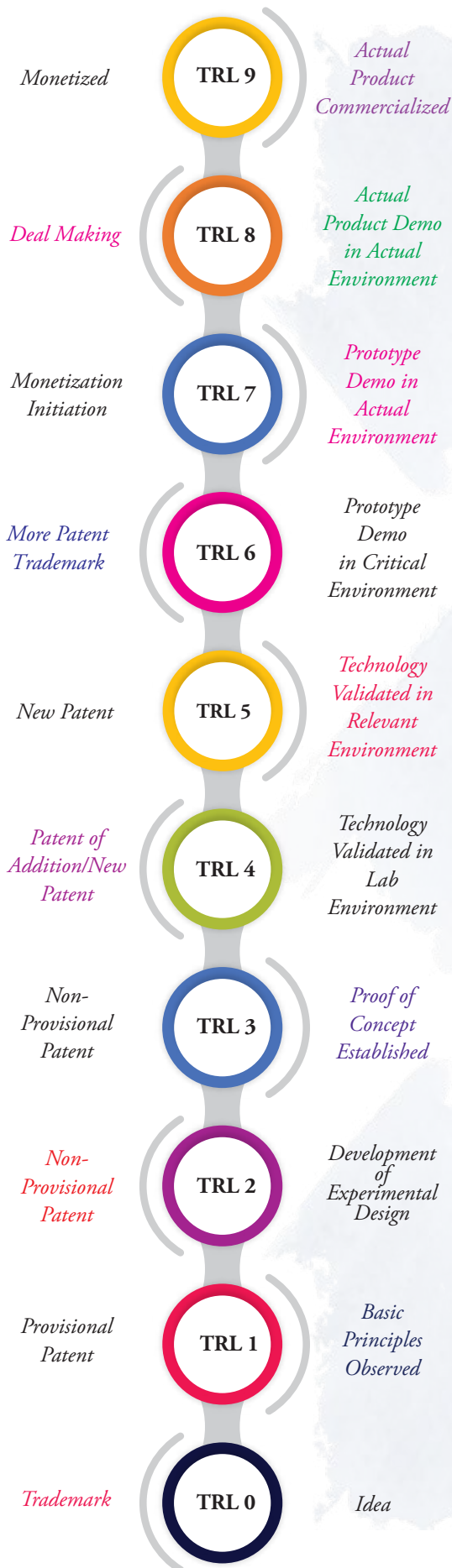
TRL is a scale used to measure the maturity of a technology, with levels ranging from 1 (basic concept) to 9 (matured and ready for commercialization) given by scientists of NASA. This concept can be utilized by innovators to secure funding, partnerships, and customers for the technology, which can help to accelerate its monetization.

Advancing a technology from one TRL level to the next can be a challenging process, and there are several factors that can make it difficult while chasing an

increment in TRL. Some of the common challenges include:

- 1. Technical complexity:** As technology becomes more advanced, it can become more complex and difficult to develop and test. This may require specialized skills and resources, which are generally difficult to obtain or manage in a given time scale in the same lab with the same inventor.
- 2. Resource constraints:** Developing and testing a technology can be expensive and time-consuming, and resource constraints such as budget limitations or personnel shortages can make it difficult to advance TRL.
- 3. Regulatory requirements:** Depending on the technology and its intended application, there may be regulatory requirements that must be met in order to advance TRL. These requirements can be complex and time-consuming to navigate.

# Monetization Process



**4. Integration challenges:** As a technology becomes more advanced, it may need to be integrated with other systems or technologies, which can be a complex and challenging process.

**5. Market demand:** Even if a technology passes feasibility and has a high TRL, it may not be commercially viable if there is no market demand for it.

**6. Practical issues:** Most technologies demand more time, devotion, and passion from the innovators' side. However, due to their own mindset, opportunities, career path, and de-motivation, the technology remains idle at their initial stage.

**7. Economic viability:** Availability of better alternatives, absence of proper IP protection, and entry barriers are also key factors which cannot be ignored.

To overcome challenges, it is important to have a well-defined development plan, access to the necessary resources and expertise, and a clear understanding of the regulatory and market requirements. Collaboration with partners and stakeholders can also be helpful in addressing challenges and advancing TRL.



To give a perspective, the technologies coming out from R&D Institutes are generally at TRL 4 which is a non-monetization level. One of the many approaches that have high impact in monetization, may be followed as depicted in the figure here.



One of the potential approaches include leveraging TRL and monetization in parallels of strategizing IP protection. Leveraging TRL with superimposition of corresponding IP protection has been a time-tested recipe in successful commercialization of a technology. It is important to understand and acknowledge that no single strategy fits all. Hence, it becomes even more important to identify the specific challenge and finding the solution in accordance.

Another aspect which should be considered is, while we are confident on Public-Private Partnership, it is time to explore and deploy a new PPP model i.e. Private-Private Partnership, where collaboration at multiple fronts can be devised and implemented. Multiple strategies in superimposition with variety of approaches substantially enhances the chances of successful commercialization.



**Shruti Kaushik**  
Co-Founder | IP Attorney

Shruti is an IP Attorney with more than 16 years of experience in IP portfolio building.



**Lalit Ambastha**  
Co-Founder | IP Attorney

Lalit is a strategic IP advisor with more than 17 years of experience in technology protection and monetization.

*Disclaimer: The views expressed are personal.*