

**ABES INSTITUTE OF TECHNOLOGY, GHAZIABAD**  
**Quarter 2 (2022-2023)**

**Name of The Activity:**

**Title of the event: Process of innovation development, technology readiness level (TRL); commercialization of lab technologies & tech transfer**

**Summary of The Event:**

The Institution's Innovation Council (IIC) ABESIT organized an Expert Talk on "Process of innovation development, technology readiness level (TRL); commercialization of lab technologies & tech transfer".

This workshop will be helpful to enable students to achieve a high level of confidence in their ability to better understand about innovation development and technology readiness level (TRL).

Theme : Innovation

Workshop Name : Process of innovation development, technology readiness level (TRL); commercialization of lab technologies & tech transfer

Date : 28th February 2023.

Time : 01:00 PM

Venue : Auditorium, ABESIT

Technology Readiness Levels (TRL) are a type of measurement system used to assess the maturity level of a particular technology. Each technology project is evaluated against the parameters for each technology level and is then assigned a TRL rating based on the projects progress. There are nine technology readiness levels. TRL 1 is the lowest and TRL 9 is the highest.

When a technology is at TRL 1, scientific research is beginning and those results are being translated into future research and development. TRL 2 occurs once the basic principles have been studied and practical applications can be applied to those initial findings. TRL 2 technology is very speculative, as there is little to no experimental proof of concept for the technology.

When active research and design begin, a technology is elevated to TRL 3. Generally both analytical and laboratory studies are required at this level to see if a technology is viable and ready to proceed further through the development process. Often during TRL 3, a proof-of-concept model is constructed.

Once the proof-of-concept technology is ready, the technology advances to TRL 4. During TRL 4, multiple component pieces are tested with one another. TRL 5 is a continuation of TRL 4, however, a technology that is at 5 is identified as a breadboard technology and must undergo more rigorous testing than technology that is only at TRL 4. Simulations should be run in environments that are as close to realistic as possible. Once the testing of TRL 5 is complete, a technology may advance to TRL 6. A TRL 6 technology has a fully functional prototype or representational model.

TRL 7 technology requires that the working model or prototype be demonstrated in a space environment. TRL 8 technology has been tested and "flight qualified" and it's ready for implementation into an already existing technology or technology system. Once a technology has been "flight proven" during a successful mission, it can be called TRL 9.

The workshop was taken by Prof. (Dr.) Avinash Kumar Sharma, Innovation Ambassador, Convener, Institution's Innovation Council, ABESIT. in Offline Mode at ABESIT Campus. The event started on 28th February, 2023 at 01:00 pm onwards. The session started with the welcome of the expert of the session Prof. (Dr.) Avinash Kumar Sharma, Innovation Ambassador, Convener, Institution's Innovation Council, ABESIT who addressed all the student participants and faculty members and then gave an interactive talk about Process of innovation development, technology readiness level (TRL); commercialization of lab technologies & technology transfer.

Activity Name	Process of innovation development, technology readiness level (TRL); commercialization of lab technologies & tech transfer			
Mode Of Conduct	Offline , At Auditorium, ABESIT			
Date	28th February 2023 01:00 PM onwards.			
Faculty Participant List	1. Dr. Avinash Kr. Sharma 2. Dr. Sheelesh Kr. Sharma 3. Dr. Arpita Gupta 4. Dr. Rizwan Khan 5. Dr. Bipin Kr. Rai 6. Dr. Upasana Pandey 7. Mr. Manish Chhabra 8. Mr. Avdhesh Tiwari 9. Mr. Laxman Singh 10. Ms. Monika Singh 11. Ms. Khushboo Saxena 12. Mr. Rachit Patel 13. Mr. Sumit Kumar 14. Ms. Priyanka Gupta			
Student Participation List				
	S.NO	Name	Year	Branch & Section
	1	HARSH PAWARIYA	2nd	CSE-A
	2	DAKSH SHARMA	2nd	CSE-A
	3	AMAN SARASWAT	2nd	CSE-A
	4	HIMANSHU PAL	2nd	CSE-A
	5	GAURAV SHARMA	2nd	CSE-A
	6	SURAJ PRAJAPATI	2nd	CSE-C

	7	SHIVANSH TRIPATHI	2nd	CSE-C
	8	SAGAR CHOUDHARY	2nd	CSE-C
	9	YOGENDRA KUMAR YADAV	2nd	CSE-C
	10	YUVRAJ SINGH	2nd	CSE-C
	11	YASH PAL	2nd	CSE-C
	12	DEEKSHA JAIN	2nd	CSE-A
	13	ANJALI KUMARI	2nd	CSE-A
	14	GANESH PRATAP	2nd	CSE-A
	15	ADITYA JAISWAL	2nd	CSE-A
	16	DEEPAK CHAURASIA	2nd	CSE-A
	17	SAUBHAGYA	2nd	CSE-C
	18	RATNESH SINGH	2nd	CSE-C
	19	YOGESH NARAYAN	2nd	CSE-C
	20	VISHIST DEEP	2nd	CSE-C
	21	VANSH CHAUHAN	2nd	CSE-C
	22	SHIVAM YADAV	2nd	CSE-C
	23	SHANTANU SHARMA	2nd	CSE-C
	24	RITIK SHARMA	2nd	IT
	25	AAYSUHI VISHNOI	2nd	IT
	26	VANSHIKA TYAGI	2nd	CSE-C
	27	RIYA SHARMA	2nd	CSE-C
	28	RITIKA YADAV	2nd	CSE-C
	29	SAJAL MADHWAR	2nd	CSE-C
	30	SANSKAR RAJPOOT	2nd	CSE-C
	31	TARUSHI CHAUHAN	2nd	CSE-C
	32	SHIVANI RANA	2nd	CSE-C
	33	JITESH KUMAR	2nd	CSE-B
	34	ABHISHEK SAXENA	2nd	CSE-B
	35	SURESH SHARMA	2nd	CSE-B
	36	MUSKAN YADAV	3rd	CSE-B

	37	RIYA MALVIYA	3rd	CSE-B
	38	MUSKAN MITTAL	3rd	CSE-B
	39	ANSHUM SHUKLA	2nd	CS-IOT
	40	VISHAL KUMAR PANDEY	2nd	CS-IOT
	41	NIKHIL AGARWAL	3rd	CSE-B
	42	MADHAV PANDEY	3rd	CSE-B
	43	ROOPAM TYAGI	3rd	CSE-B
	44	ROHIT PRASAD	3rd	CSE-B
	45	HARSH SHARMA	3rd	CSE-B
	46	RITIK RANA	3rd	CSE-B
	47	HIMANSHU CHHATWAL	2nd	CS-IOT
	48	AKANSH TYAGI	2nd	CSDS-A
	49	RAGHVENDRA PRATAP SINGH	2nd	CSE-B
	50	DEEPRAJ SINGH	2nd	CSDS-A
	51	YASH KATIYAR	2nd	CSAI-B
	52	UTKARSH TYAGI	2nd	CSAI-B
	53	KABIR SHUKLA	2nd	CSDS-A
	54	MUKUL PRAJAPATI	2nd	CSE-B
	55	KAMAL KASHYAP	2nd	CSE-B
	56	KRATIKA SARASWAT	2nd	CSE-B
	57	PARTH SINGH	2nd	CSE-B
	58	MOHINI YADAV	2nd	CSE-B
	59	MUKUL KUMAR	2nd	CSE-B
	60	POOJA VERMA	2nd	CSE-B
	61	PRIYANSHU CHAUDHARY	2nd	CSE-B
	62	MRIDUL GOEL	2nd	CSE-B
	63	KUNAL	2nd	CSAI-B
	64	TANISHKA GARG	2nd	CSE-C
	65	VANSHIKA GUPTA	2nd	CSE-C
	66	SHAILY BHATI	2nd	CSE-C
	67	VANSH TYAGI	2nd	CSE-C
	68	MONA SINGH	2nd	CSE-B

	69	SHRUTI KUSHWAHA	2nd	CSE-C
	70	STUTI SRIVASTAV	2nd	CSE-C
	71	S SONIKA	2nd	CSE-C
	72	ARCHIT BHAWANI	2nd	CSAI-A
	73	AMAN CHAUHAN	2nd	CSDS-A
	74	AAKARSH MISHRA	2nd	CSDS-A
	75	PIYUSH KOUNDALL	2nd	CSAI-B
	76	VAISHNAVI SHARMA	2nd	CSAI-B
	77	PRADDHUMN SINGH	2nd	CSAI-B
	78	SHRISHTI SHUKLA	2nd	CSAI-B
	79	APALA GUPTA	2nd	IT
	80	PARTH GUPTA	2nd	CSE-B
	81	SIDDHANT SRIVASTAV	2nd	CSE-C
	82	TRIPTI SINGH	2nd	CSE-C
	83	ANAMTA RAHMAN	2nd	CSAI-A
	84	M SHIJIN	2nd	CSAI-B
	85	ROSHAN DUBEY	2nd	CSE-C
	86	SURAJ SINGH	2nd	CSE-C
	87	AVANTIKA SRIVASTAV	2nd	CSAI-A
	88	SUSHANT SHARMA	2nd	CSE-C
	89	PRANAV KUMAR TRIPATHI	2nd	CSAI-B

**Snapshots of The Event:**



Institution's Innovation Council, ABESIT

Organizing

## Expert Talk

Topic

Process of Innovation Development,  
Technology Readiness  
level (TRL); Commercialization of lab  
Technologies & Tech Transfer

on

28<sup>th</sup> February 2023 at 01:00 PM

Venue Auditorium Hall

Mode: Offline



**Expert**



**Dr. Avinash Kumar Sharma**  
Innovation Ambassador,  
Convener, Institution's  
innovation council, ABESIT

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### **Outcomes of the Activity:**

Students gained knowledge in the following areas:

- How Scientific Observations are made and reported in Technology Readiness level.
- How Practical application is involved in TRL, MRL and IRL.
- Risk analysis and various implications involved in the TRL.

Students felt that all the topics covered were very informative. They got a lot of technical inputs on Technology Readiness Levels and understood how to assess the maturity of a given technology, system, subsystem, or component, from a manufacturing perspective.