IPM Prism

L&T INSTITUTE OF PROJECT MANAGEMENT

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Setting Benchmarks in Innovation & Technology

STAY AHEAD | STAY RELEVANT | STAY CONNECTED

Rajiv Nehru
Dean- L&T IPM

The Engineering, Procurement, and Construction (EPC) industry is noted for its fragmentation, complexity, and averse to change. EPC contracts require several subcontractors and are often multi-year in nature. EPC firms face inefficiencies and business issues due to a fragmented ecosystem. Fortunately, prior to the COVID-19 crisis, the EPC industry recognized the significance of digital transformation. The crisis has only expedited this trend. EPC companies are facing unprecedented challenges and opportunities in the current market scenario.

Volatile oil prices, environmental regulations, changing customer demands, and new entrants are some of the factors that are reshaping the EPC industry. To survive and thrive in this dynamic environment, EPC companies need to embrace digital transformation and leverage the power of emerging technologies such as cloud computing, artificial intelligence, machine learning, the Internet of Things, and blockchain etc. To emphasise the critical importance of innovation and digitalization of EPC projects, the present issue of PRISM is themed as 'Setting Benchmarks in Innovation and Technology'. True to its mission of staying ahead, relevant and connected, IPM always remained as a "Go to" institute for all L&T-ites. Some notable contributions from IPM in the Third quarter of FY 2024-2025 include:

- The ***Executive MBA on 'Infrastructure Construction Management'*** Program was launched on October 14th in association with NICMAR University, Pune. EMBA is a two year post graduate, inter-disciplinary, industry-academia, multi-modular Infrastructure Management & Business Administration Degree Programme. At the inaugural batch, 60 participants from various ICs of L&T underwent the first module of the program at NICMAR University campus, Pune.

- Various Batches of **L&T IPM's flagship PRAGATI** programs were held in this quarter. The second module of batch two ***'Advanced Project Leadership Program'*** APLP program in association with IIM Calcutta, was held at IPM, Chennai from 14th - 19th October'24. Various batches of ***'International Executive master's in business (Specialisation in Project Management)'*** IEMB program was held at L&T IPM Vadodara and Mumbai from 21st to 26th October. Third Module of ***'Program for Excellence in Project Delivery'*** PEPD program Batch 6, was held at IIM Indore campus from 2nd to 6th December.

- ***'Essentials of Project Planning & Control'*** (EPPC 2.0), a strategic corporate-level talent development initiative aimed at enhancing planning and cost management capabilities of frontline project executives for profitable and timely delivery of projects. The program intends to provide insights into the application of project scheduling methodologies and tools, with a practical linkage to S0-S10 schedules. L&T IPM conducted Module 1 and 2 of EPPC 2.0 program for PT&D IC at **Riyadh, Saudi Arabia and Doha, Qatar. At the end of Q-3, 1720 participants were trained in 16 different locations** in the country and abroad.

- L&T IPM's signature events ***'Knowvember Season 4.0 and Inknowvate'*** were held in November. The month-long knowledge exchange events were a huge success, with many L&T employees taking part in various events. Key members of the Project Management Council and top executives from L&T Construction's ICs delivered addresses and keynote remarks for the initiative.

- This year's events included 'Inknowvate', L&T IPM's first attempt to demonstrate unique and cutting-edge ideas in the Built Environment and Infrastructure Management. The cover story of this PRISM edition delves into greater depth about these events.

- **IC-specific program** on ***'Managing contracts'*** for L&T Realty on 10th and 11th December. The program focused on essentials of Contract formulation, administration and closeout. The program was tailored specific to meet the needs of senior managers of L&T Realty including project managers, procurement managers and contract administration heads

- Fifteenth batch of ***'Project Management for Execution Engineers'*** (PMEE) program was inaugurated in this quarter for Construction managers of B&F IC from 21st to 24th October. The PMEE program aims to impart knowledge, skill and abilities across the entire spectrum of the theory and practice of project management. PMEE is a four-module program covering various disciplines of project management.

- **IC specific program** on **'Project Planning and Scheduling using Oracle Primavera P6'** for Diploma Engineer Trainees (DETs) from 28th October to 2nd November. L&T IPM worked with central planning teams, EDRC and Operations team of PT&D IC for developing the pedagogy. The pedagogy included inculcation of specific Design related deliverables by means of case studies of Solar PV projects, AIS and GIS substation projects. DETs will work closely with Engineering Design heads for Planning & Scheduling of Engineering related activities/ Phase of Renewables and Substation Projects.

- **IC specific program on *'Lead Engineer Development Program'*** (LEDP) batch 2 was conducted for EDRC engineers of PT&D IC in this quarter in the month of November. The topics included four areas in behavioural aspects in the context of project management. Critical thinking, presentation skills, interpersonal skills and time management were four areas included in the program.

- **Specific Competency Development Modules (SCDMs)** were conducted for Senior project professionals of B&F IC on niche topics including ***Subcontract management, Strategic Sourcing & Supply Chain Management*** for B&F IC. In this quarter two batches were held for participants from L&T Energy hydrocarbon on 'EOT and Delay analysis' for on 13th – 15th November and 20th to 22nd November.

- One module of ***'Master Class in Risk Management (MCMR)'*** program was held from 18th to 21th December at L&T IPM campus at Vadodara in this quarter.

- **Various programs were conducted for Ecosystem partners of L&T in this quarter.** L&T IPM conducted two programs for GMMCO Ltd. ***'Strategic Leadership & Project Advancement through Resilience & Knowledge*** [SPARK]' program & ***'Leadership, Execution, Agility & Decision Making*** [LEAD]' programs were conducted for sixty top management and General Managers of GMMCO Limited respectively. The LEAD program was held at L&T IPM campus at Vadodara from 9th to 13th December. The concluding module of SPARK program was held at L&T's leadership Development Academy (LDA) campus at Lonavala from 2nd to 4th December. The PMP preparatory program was conducted for thirty participants of Tata Chemicals Limited at Dwarka, Gujarat

- The ***'Dynamic Planning and Execution Mastery in Project Management'*** program was held for executives of GAIL limited from 11th to 13th December at GAIL Delhi probably. An ***'Advanced Course in Project Management'*** (ACPM) was held for Senior executives of SAIL limited.

- Beginning third quarter, L&T IPM has initiated training support to L&T Edutech on 'project management industry specific topics' for students enrolled in ***M. Tech program on Construction Technology and Management & Infrastructure Planning and Management*** in association with NICMAR University

- Continual training support to Divisional Corporate L&T Construction on Project Management topics as a part of the First Level Leadership Program *(FLLP).*

- Project Management Professional (PMP)® Preparatory Course for project professionals covering all business units of the organisation.

I would like to thank all *IPM Patrons* and *Project Management Council* for their continued support and guidance. I express my sincere gratitude to the HR leadership and training functions of all ICs for their excellent support and for embedding IPM as their preferred partner in project management talent development. IPM is keenly looking forward to providing L&T project professionals with the best learning engagement & experience in all forms of programs delivered.

Stay Ahead of the competition. *Stay Relevant* by utilising knowledge-sharing opportunities provided by IPM and *Stay Connected* with the Institute. IPM is delighted to be your partner on the path of pre-eminence in project delivery.

Rajiv Nehru, Dean, L&T IPM.

EPPC 2.O Program for Heavy Civil IC

Feedback
Please send your valuable suggestion & comments to *Program@lntipm.org*

Greetings from **L&T IPM.**

We are changing the world with technology. - Bill Gates

The EPC business and regulatory environment is changing and it's changing fast. The industry is going through business consolidation and end market diversification, change in contracting models, and digital transformation. The perennial issues of fluctuating raw material prices, skilled workforce availability, and dynamic scope changes make it tougher to manage profitability during these times. n today's business and operating environment, EPC companies need to focus on key imperatives i.e. retaining market position by embracing digital technologies, increasing service revenues through new business models such as operations and maintenance, and faster decision making in a global operating environment through collaboration.

The articles included in this issue are relevant to the theme 'Setting Benchmarks in Innovation & Technology'. The cover article on highlights and coverts the 'Knowvember Season 4.0 and Inknowvate' events held by L&T IPM as a part of Knowledge sharing celebrations. There are specific articles on the topics are covered by experts in the section of 'Faculty Corner'. The article 'Risk Management in Mega Projects' authored by Prof. Manish Jantikar, Dy. Dean, L&T IPM. This article highlights key risks encountered by Mega projects that are large in size and complexity. The next article by Dr. Debopam Roy, Faculty, L&T IPM explores the question on 'Are legacy corporations slow to adopt innovations?' and throws light on key innovation adoption models. The article on 'Revolutionizing Project Management with digital technologies' by Mr. Manjunath Pagala, Construction Manager, HCI IC provides insights on key digital technologies that any large project must adopt to stay competitive and achieve desired profitability. The article quotes examples from MAHSR Project to strengthen the argument.

This issue provides a coverage on the EPPC 2.0 international programs held by L&T IPM this quarter for PT&D IC at Saudi Arabia and Malaysia. In addition, this issue also provides details on the ecosystem partner programs conducted by L&T IPM for SAIL, GMMCO Ltd. Tata Chemicals Ltd and GAIL Ltd. A brief coverage on a unique teaching opportunity at L&T IPM, named Professor of Practice (POP) is also included in this issue.

We would like to take this opportunity & to heartfully thank all the authors of the articles who have reflected on their thoughts and experience in relation to 'Setting Benchmarks in Innovation and Technology'.

Happy Reading!!!

IPM PRISM is a quarterly publication of L&T Institute of Project Management. IPM can be seen as PRISM that converts the white light of L&T experiences in executing complex domestic & international projects and adopted global best practices into structured programs for participants to learn the various aspects of project management signified by the colours generated by the PRISM.

Compiled and edited by Dr. Purushothaman Srinath, Dr. Dharmendra Trivedi, Dr. Avirag Bajpai for L&T Institute of Project Management.

L&T IPM's Knowvember Season 4.0: A Celebration of Knowledge and Innovation

Dr. Purushothaman Srinath - Faculty, L&T IPM

L&T IPM recently held Knowvember Season 4.0 and INKNOWVATE from November 6th to 29th, respectively. This article describes and highlights key events held as part of KNOWVEMBER and INKNOWVATE. A quick introduction to KNOWVEMBER and INKNOWVATE is presented. Several captivating events were held as part of KNOWVEMBER, including keynote talks, project management quizzes, simulation competitions, panel discussions, and lessons learned from L&T's megaprojects. The culminating and valedictory event, "INKNOWVATE," highlighted and exhibited various major infrastructure advancements. The inaugural event of Knowvember Season 4.0 had a digital footprint of around 4000 L&T - Ites. The final valedictory event, Inknowate, which was hosted in Hybrid mode, witnessed a footfall of 200 L&T-ites and digital footfall of about 2000 L&T-ites.

About Knowvember Season 4.0:

"Knowvember" is the hallmark event of the L&T Institute of Project Management (L&T IPM), designed to foster knowledge sharing, innovation, and professional growth within the construction and project management community.

This biannual event serves as a platform for industry leaders, academics, and practitioners to converge and exchange insights on the latest trends and best practices in project management. The KNOWVEMBER Season 4.0 included eight events as shown in Table 1.

Knowvember Season 4.0 Objectives:

- To upgrade knowledge and skills of the of L&Tites in the areas of Project Management.
- To keep pace with the changing & current scenarios in Projects.
- To empower participants to learn & get exposure to the facts about L&T projects.
- Chance to participate and win prizes through quizzes.
- Have a chance to be selected to be part of the simulation exercise for better learning and understanding.

Why Knowvember Season 4.0?

The event aligns with IPM's vision of creating global project management professionals by providing a platform for the exchange of knowledge and ideas that drive the industry forward. Participants engage in a series of workshops, discussions, and case studies, all aimed at enhancing their project management capabilities. Knowvember provided a comprehensive platform for knowledge sharing, innovation, and networking within the construction and project management industry and reflects L&T's commitment to continuous learning and development.

S.No	Date	Event
1	6th November	Inauguration and Keynote Address on "Use of AI/ML and Blockchain in Project Management."
2	8th November	Panel Discussion on "Future of 3D Printing Technology in Projects."
3	11th November	'Lessons Learned' session from Southwest Gas Field Development (SWGFD) Project Algeria
4	15th November	Project Management Quiz focusing on L&T Projects.
5	22nd November	Simulation Competition for Quiz Toppers.
6	26th November	Panel Discussion on "Geospatial Technology in Construction Projects."
7	28th November	'Lessons Learned' on CTP 14 WDFC Project
8	29th November	Concluding Event - One day physical even on "Inknowvate" followed by Knowvember Talk

Table 1: List of KNOWVEMBER SEASON 4.0 events

About INKNOVATE:

L&T IPM is hosted an event named 'Inknowvate' on November 29th. It was a physical event, held at the L&T Construction Headquarters in Chennai. 'Inknowvate' event aimed to spotlight groundbreaking ideas and innovative practices, offering participants an immersive experience in the future of construction and project management. This event was designed to ignite discussions on innovation within the construction and project management sectors and provides a chance to the innovators around the world to showcase their cutting-edge technologies to the audience.

The event took at L&T's HQ in Manapakkam, Chennai which houses various independent companies (ICs) that operate in sectors such as Buildings & Factories, Water and Effluent Treatment, Power Transmission and Distribution, Renewables, Civil infrastructure etc. Executives from different business units of L&T attended this event. This event provided an ideal chance for innovators to interact with L&T's business and seek future collaborations/implementation of unique solutions. Table 2 shows list of innovators who were invited for the event.

With a focus on showcasing cutting-edge technologies and innovative approaches, Inknowvate will provided participants with the opportunity to engage with innovative though leaders and peers, fostering a culture of creativity and forward-thinking within the industry. Selected innovations were be featured on IPM knowledge@work platform accessible to industry leaders and L&T professionals. Table 1 shows the details of Innovators who presented their work at INKNOVATE'24 held L&T Campus at Manapakkam on 29th November.

S.No	Area	Innovators
1	Advances in use of Technology for Infrastructure Project s	1. Reude Technologies 2. Avishkar Hyperloop
2	Advances in use of building Materials & Construction Methodologies	1. Tvasta manufacturing Solutions 2. Satiq Concrete Solutions 3. Schwing Stetter India
3	Project Management Software	1. Bexel Manager 2. Hexagon 3. Bentley systems India 4. Homepecked

Table 2: List of Innovators who presented their work at various areas

INKNOWVATE Highlights:

- Presentation/ Demonstration of Novel Innovators in Construction & Project Management

- Keynote address by Dr. Govindaraj V, Head-R&D Cell, L&T Construction on 'Innovations in Infrastructure Development'

- Inauguration & Valediction address by L&T Leaders

KNOWVEMBER Season 4.0 Inauguration:

The KNOWVEMBER Season 4 was inaugurated on 6th November. The context was set by IPM Dean Prof. Rajiv Nehru. Mr. A.L. Sekar, Advisor to Chairman & MD, Larsen & Toubro Ltd addressed the participants. He related the terminology of KNOWVEMBER with energy and ways to look at the future. Speaking on the context of KNOWVEMBER (which means Knowledge + November), he emphasised that knowledge should not be seen as a standalone aspect, but rather should be aligned with understanding and put to use by means of wisdom. In his speech, Mr. A.L. Sekar, related Project Management with respect to a human body. Digitalization initiatives can be related to an analogy of sensors in human body which can highlight where the is an issue. He highlighted the role of various applications used in HCI IC, which tracks the leakage of time & cost by collating information from various sources. He emphasized that such apps are highly valuable for tracking 5Ms viz Men, Machine, Material Machine, Method & Money. As such these 5Ms generate a lot of data, wherein this information has to be identified to prevent leakage of profit. Today, the use of digitalization to identify slips in project time and cost, is reactive, Speaking on MPCS system, which stood the test of the time, has sustained itself as a robust project control system. With the influx of digitisation, company is at crossroads to leverage the power of digitalization (akin to a Neuron in human body) to collect information. He highlighted that L&T is at a crossroads today, wherein the company needs to bring in the artificial intelligence and machine language into every aspect, every aspect of the project and link them all together with consumption of time and money.

Dr. C. Jayakumar, Executive Vice President & Head – Corporate Human Resources, Larsen & Toubro Ltd addressed the audience. In his speech, highlighted how L&T is in the path of digital transformation, where he quoted an example of L&T -Eye, which involves analytics drilled down, done by our own digital team under the

leadership organization and including human capital dashboard. He stated that technology and digitalization should be seen as both opportunity & threat. Opportunity includes areas where digitalization can be leveraged, and threat to foresee and forecast risks. He also quoted the example for the rate of digitalization, where in an airline took 66 years to reach 50 million customers, however, today a technology can have customers in a mere 19 days. Also company like L&T should adopt digitalization for talent retention since todays younger talent prefers the flexibility in their work space, including remote working and employee experience. He highlighted various initiatives in area of employee wellness, Learning & Development where L&T is adopting digitalization. As such he concluded his speech by mentioning that 'digital mindset' has become the norm of the day.

Next speech was delivered by Mr. Sthaladipti Saha, Senior Vice President & IC Head, Buildings & Factories IC, L&T Construction. He highlighted the digitalization initiatives, undertaken by B&F IC. The modularization done for Ram Mandir was highlighted by him. Mr. Saha spoke about various technological advancements undertaken such as 3d printed post office, Modularization approach at SOU and CIDCO housing etc. Mr. Saha mentioned that despite the advancement's challenges remain in areas including time and cost overrun, shortage of skilled workforce, low productivity, material wastage and carbon footprint reduction. He suggested solutions such as improved Project management skill, training & engagement, Lean awareness, Engineering and construction methods etc. He suggested the various phases of L&T digitalization from 2017 to current. He emphasized that we should move from data aggregation to integration which should help people make decisions and improve productivity. He stressed that IPMS is a potential way ahead forward.

The inaugural keynote address was delivered by Mr. R. Ganesan, Senior Vice President & Head, Corporate Centre, L&T Construction. In his speech Mr. Ganesan highlighted the change in technological landscape starting from use of tools for collecting individual information to current landscape where generative AI is relevant (see Figure 1).

He stressed that the foundation of digitization included era of digitization where physical artefacts were captured and stored as data, digitalization such as IOT, Mobility, GEO spatial etc, Data synchronization such as data fabric, ADF to data science such as predictive analytics. Speaking on the technological change, he provided examples of the culture and technology meeting together to improve the bottom-line. Various novel tools were highlighted by Mr. Ganesan for procurement and SCM, project time and cost forecast, Equipment life for CAPEX decisions, Use of AI for contract and tender interpretations for risk analysis, SOP integration with an UI interface for all employee access. Highlighting the aforesaid tools, he stressed the importance of maintaining good data in projects with the quite 'Data is the new Oil'. A description about IPMS and L&T EYE, Single window system for supply chain, Enterprise AI platform was briefly discussed by Mr. Ganesan.

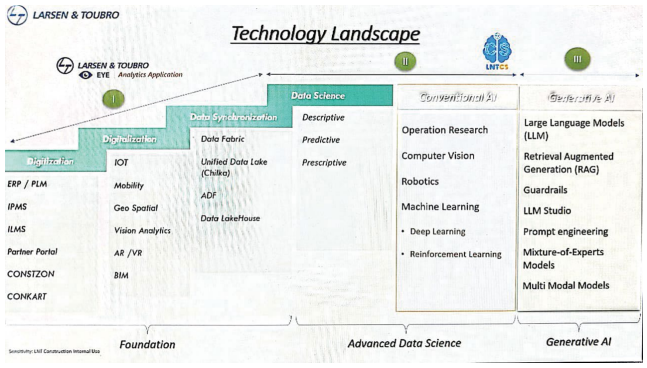


Figure 1: Technological Landscape at L&T Construction presented by Mr. R. Ganesan, Senior Vice President and Head – Corporate Centre, L&T Construction

Mr. A.L. Sekar, Advisor to Chairman & MD, Larsen & Toubro Ltd addressing the audience at KNOWVEMBER Season 4.0 inauguration

Dr. C. Jayakumar, Executive Vice President & Head Corporate Human Resources addressing the audience

Mr. Sthaladipti Saha, Senior Vice President & IC Head, Buildings & Factories IC, L&T Construction addressing the audience

Mr. R Ganesan, Senior Vice President and Head – Corporate Centre, L&T Construction addressing the audience

Panel Discussion in Future of 3D Printing Technology for faster implementation in Projects

Knowvember Season 4.0 included a panel discussion on 3D printing technology. The panellists included Mr. Amit Barde, Head - Precast, Mr. S. Lakshmi Narayanan, DGM & Head – Robotics, Dr. A.V. Rahul, Professor, IIT Tirupathi, Mr. L.S. Kannan, Advisor, Concrete technology, Mr. Dhandapani, Senior Engineering Manager, L&T EDRC. The panel was moderator by Prof. Manish Jantikar, Dy. Dean, L&T IPM. The discussions centred around how 3D printing technology is transforming the construction industry by enabling faster, more efficient, and sustainable building methods. The discussion centred on how 3D printing can be integrated into large-scale infrastructure projects, the challenges associated with its implementation, and the future trajectory of this innovative technology. The status of 3D printing word wide trend was discussed by the panellists.

Mr. S. Lakshmi Narayanan, DGM & Head – Robotics, B&F IC at the panel discussion on 3D printing

Lessons learned on Southwest Gas Field Development (SWGFD) Project, Algeria:

The SWGFD project is L&Ts first ever mega endeavour in Algeria. The project involves comprehensive execution of engineering, procurement, construction and commissioning of gas treatment units at three central processing facilities (CPFs) situation in central Algeria. The lessons learned session was handled by Mr. Jitendra Singh, Project Director, SWGFS, Mr. P. Leeladhar, Construction Director- SWGFD, Mr. Aravind Nair, Project Manager, HTJ, Mr. Abhishek G, Project Manager, HBH, Ms. Shradda, Project Control Lead – SWGDF. The session was moderated by Dr. Hiren Maniar, Dy Dean, L&T IPM. The discussion started with a brief introduction video about the project. The video highlighted the scope, timeline and unique challenges (no network, cultural barriers, unique codes and standards, engineering hurdles etc) in the project. Mr. Jitendra Singh summarized the challenges and risks in projects. He stressed that

this was the first projects that L&T forayed in Africa. He listed specific challenges in the projects such as poor road connectivity, no mobile connectivity etc. Mr. P. Leeladhar, Construction Director- SWGFD highlighted the measures adopted by project management team to overcome the issues in the project. Mr. Aravind Nair highlighted the measures adopted to overcome challenges and optimise project schedule. Mr. Abhishek explained the differences in challenges of execution the projects at domestic and international projects – such as technological insights, productivity levels, quality requirements, statutory body requirements, cultural differences etc. Ms. Shradda, pointed out the issues in invoicing, cash flows and working capital issues that typically occur in international projects such as SWGFD.

Mr. Jitendra Singh, Project Director, SWGFD project speaking at the 'lessons learnt' event

Panel Discussion on Geospatial Technology in Construction Projects

The session was moderated by Prof. Sunil Kumar, Faculty, L&T IPM. Mr. Ravi M, Director, Geospatial Technologies, LTI Mindtree, Dr. Salil Goel, Professor, IIT Kanpur, Dr. Manohar Yadav, Professor, MNIT Allahabad. TAs construction projects grow increasingly complex and multifaceted, the adoption of geospatial technologies has become essential to enhance efficiency, accuracy, and collaboration. This panel discussion brought together leading experts and practitioners to explore the transformative potential of geospatial tools in critical areas such as site selection, resource allocation, and environmental impact assessments. Topics of discussion included the role of geospatial technologies in real-time monitoring, progress tracking, and logistics optimization to boost productivity and reduce delays. By sharing success stories, innovative practices, and lessons learned, the panel aims to deepen understanding of how geospatial technology can streamline construction workflows, improve safety and sustainability, an achieve superior project outcomes in today's competitive landscape. Dr. Goel laid the basic technology setup of Geospatial technologies. Dr. Manohar spoke on the role of Geo spatial technologies from construction project point of view. Mr. Santosh spoke on the benefits of Geo spatial technologies in construction sector. Mr. Ravi and Dr. Salil spoke on how Geospatial technology can be leveraged at the project feasibility study.

Dr. Manohar Yadav, Professor, MNIT speaking on the role of Geospatial technologies in Infrastructure projects

Project Management Quiz & Simulation:

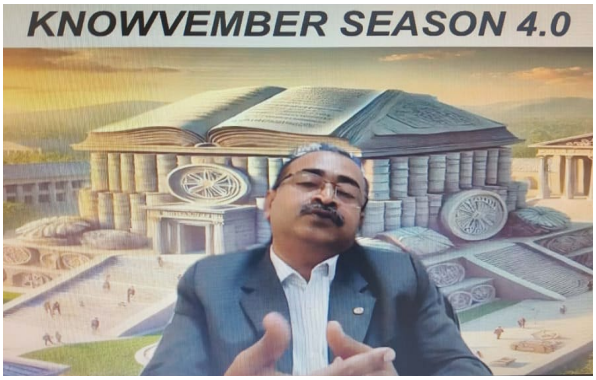
Knowvember season 4.0 included a project management quiz and a simulation event. The event was moderated by Mr. Arun Vetrivel, Faculty, L&T IPM. The quiz event included active participation on K@W portal for posting queries, and participation in simulation competition & quiz events and other Knowvember events etc. The details of Quiz and simulation events are shown in Table 4

Name	Award/ Price
Mr. Pranav Anand Vikram Chandra, Assistant Manager (Civil), WET IC	Winner – Knowvember Quiz competition
Ms. Tejashwini, Assistant Manager (Civil), HCI IC	Winner - Knowvember Simulation competition
Mr. Vishwanath, Manager (Mech), WET IC	1st Runner up - Knowvember Simulation competition
Mr. Murali, Manager, WET IC	2nd Runner up - Knowvember Simulation competition

Table 4: Knowvember Quiz and Simulation event winner and Runner Up

Lessons Learned on CTP 14 WDFC Project:

A lesson learned session on CTP 14 WDFC Project was conducted via MS Teams on 28th November. The panellists included Mr. Chintan Parikh, Project Director; Mr. Nabeen Padia, Head Account & Admin, Mr. Ram Suresh, Project Planning & Control; Mr. Jaishankar Batra, Manager Structure & Formation; Mr. Vikas Niwad, Manager – Tracks; Mr. Saurabh Sharma, Manager – Systems. The event was moderated by Mr. Aun V, Faculty, L&T IPM. Mr. Chintan Parikhs discussions centred around the uniqueness of WDFC project. His speech was followed by Mr. Nabeen padia who explained the major constraints in the project including geographical challenges, engineering and construction challenges such as ROW issues, Statutory approval issues etc. Mr Vikas explained the process of getting together the project team including guidance from leadership. Discussions centred around guiding style, The discussions also focused on how was the goals of team aligned with the clients expectations. CTP 14 Project is an integrated contract package for the design and construction of double line railway infrastructure creating a robust and efficient freight network from Rewari to Dadri of the western dedicated fright corridor. This ambitious project includes the development of civil works including formation, bridges, buildings and track system, alongside the design supply and installation of electrical and mechanical works and signal and telecom systems.



Mr. Chinthan Parikh, Project Director, CTP 14 WDFC Project speaking at lessons learnt session

Knowvember Season 4.0 Project Management Quiz and Simulation Winners (From left to Right Mr. Pranav Anand, WET IC, Ms. Tejashwini, Asst Manager, HCI IC)

INKNOWVATE and Valedictory:

Inknowvate event was held at LTC campus at Chennai on 29th November in Hybrid mode. Professionals from various ICs of LTC participated in the half a day event. Prof. Rajiv Nehru, Dean, L&T IPM set the context for the event. He highlighted the background on the rationale for conducting Inknowvate event. The context setting was followed by a speech by Mr. E.P Sajit, Senior Vice President, WET IC. In his speech, he emphasized the importance of continuous innovations for business and projects which in turn will help the organization to be relevant and competitive. He explained the characteristics of disruptive nature of innovation with examples from amazon, kodak etc. He distinguished the inventions and discovery with examples from WET IC. Next speech was delivered by Mr. S.V Desai, Whole time director & Senior Executive Vice President, HCI IC. He started his speech with an example of neurons – to Inknowvate and Lead tomorrow. The presentation touched on innovation waves historically such as industrial revolution, stream engines, electricity, petrochemicals, digital network and AI. Topics on innovations in the construction industry was also highlighted. The presentation stressed on points of 'innovate or perish' with examples from various industries. In his presentation he pointed out the need for innovation which starts with a pain point. This was followed by unveiling of drone by the dignitaries. Mr. Shivashankar Rajendra, Reude Technologies spoke on the application, benefits and innovations in the areas

of drone technologies. Mr. Manu Paulose, Tvasta solutions presented on the advantages of 3D Printing technologies. His speech highlighted on 3D printed products, solutions and offsite construction technologies. Next speech was by Mr. Juzer Bastawala, Bexel Manager. His presentation highlighted how bexel adds value to the construction projects by utilising BIM. His highlighted how BIM can be leveraged for better management of Projects. His speech highlighted benefits of BIM in terms of in adoption rate, ROI, current and future state etc. Dr. Shanthanu from Satiq concrete manufacturers spoke on concrete solutions offered, in terms of specialised concrete, zero cement concrete, concrete polymer solutions, waste utilization and sustainable concrete etc. Mr. Asish Saxena, Hexagon solutions spoke smart digital realty for autonomous industrial solutions and solutions from Hexagon technologies. The presentation touched base on topics of project planning and solutions, dashboards and ERP landscapes for managing the projects using Hexagon. Mr. Varatharajan from Schwing Stetter spoke on innovations in the area of concreate, green energy applications, optimised concrete operations. Mr. Mahesh from Schwing stetter spoke on Innovations in area of concrete equipment's. Mr. Kalyan Vaidyanatha, Director, Bentley systems spoke on the 'Digital Twin for Project Life cycle management'. His presentation touched on areas of information silos, decision making, connect data and connected data environments. The Bentley iCloud data was also highlighted in his speech. Next speech was by Mr. Paragh from Home pecked solutions wherein the presentation focused on driving decision intelligence in construction. Next presentation was on Avishkar Hyperloop. The keynote speech was delivered by Dr. Govindaraj, Head R&D, L&T Construction The topic was in 'Innovation in infrastructure development'. His speech highlighted the services offered by L&T Research & Testing sector, its vision and services. His topic touched on topics of 3D Printable concrete with coarse aggregate, Ultra High Performance Concrete (UPHC), Geopolymer concrete, Textile reinforcement concrete, Cement grouted Bituminous Macadam, Reclaimed asphalt pavement material, Bitumen mixed with shredded waste plastics, Self-healing concrete, digitalization etc.

The keynote was followed by a valedictory speech by Mr. Ganesh, Head and CEO of L&T Geostructures.

Unveiling of Drone at INKNOWVATE 2024

Prof. Rajiv Nehru, Dean, L&T IPM felicitating Dr. Govindaraj, Head – R&D cell, L&T Construction

Mr. S.V. Desai, Whole time director & Senior Executive Vice President, HCI IC speaking at INKNOWVATE' 24

Mr. EP Sajit, Senior Vice President and Head, Water and Effluent Treatment IC speaking at Inknowate 24

Valedictory speech was delivered by Mr. R. Ganesh, Head and CEO, L&T Geostructures

Various Innovators presenting their solutions at INKNOWVATE' 24 event (Top left to right: Avishkar Team, Mr. Juzer (Bexel manager), Mr. Kalyan V (Bentley systems), Mr. Manu (Tvasta 3D printing solutions)' Bottom left to right: Dr. Shanthanu B, Satiq concrete solutions, Team for Schwing Stetter and Mr. Ashsish Kumar Desai (Hexagon)

Conclusion:

Knowvember, with its rich tradition and innovative spirit, continues to be a beacon of knowledge and growth for the project management community. Its focus is to ensure that L&T IPM remains at the forefront of project management education and innovation.

Revolutionizing Project Management with Digital Technologies

Manjunath Pagala, Construction Manager, MAHSR C4 – Section 3, HCI IC

Introduction:

In the ever-evolving landscape of project management, the adoption of digital tools has become a game-changer. These tools are not just enhancing efficiency and accuracy but are also setting new benchmarks in innovation and technology. From Building Information Modelling (BIM) to Geographic Information Systems (GIS), and from Light Detection and Ranging (LiDAR) to Artificial Intelligence (AI) and Machine Learning (ML), digital tools are revolutionizing the way projects are planned, executed, and monitored.

The construction and infrastructure sectors have witnessed significant transformations due to these advancements. Digital tools are enabling project managers to handle complex projects with greater precision, improve collaboration among stakeholders, and make data-driven decisions that lead to better project outcomes. This article delves into the various digital tools that are shaping the future of project management and explores their applications and benefits.

The Evolution of Project Management

Project management has evolved significantly over the years, moving from manual methods to sophisticated digital platforms. This evolution has been driven by the need for better coordination, real-time data access, and improved decision-making capabilities.

Key Digital Tools in Project Management:

1) Building Information Modelling (BIM)

Description: BIM is a digital representation of the physical and functional characteristics of a facility. It serves as a shared knowledge resource for information about a facility, forming a reliable basis for decisions during its lifecycle.

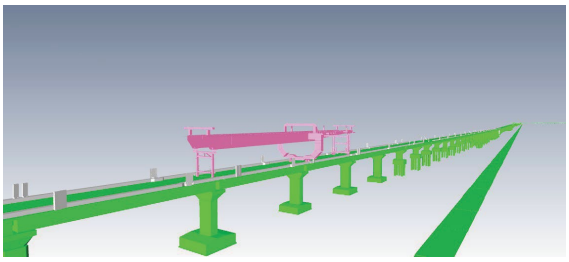


Figure 1: Digital representation of MAHSR-C4 Progress by using BIM

Benefits: Enhances collaboration, reduces errors, and improves project outcomes by providing a comprehensive view of the project. BIM allows for detailed 3D modelling, which helps in visualizing the project before it is built, identifying potential issues early, and ensuring that all stakeholders are on the same page.

2) Geographic Information Systems (GIS)

Description: GIS technology is used to capture, store, manipulate, analyse, manage, and present spatial or geographic data.

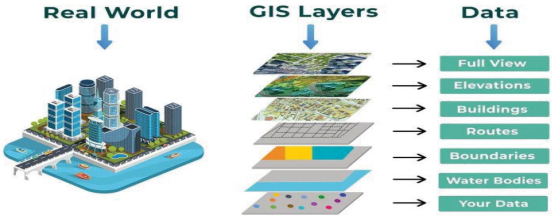


Figure 2: GIS Representation

Benefits: Facilitates better planning and management of resources, improves decision-making, and enhances communication among stakeholders. GIS can be used for site selection, environmental impact analysis, and infrastructure management, providing a spatial context that is crucial for effective project planning and execution.

3) Light Detection and Ranging (LiDAR)
Description: LiDAR is a remote sensing method that uses light in the form of a pulsed laser to measure variable distances to the Earth.

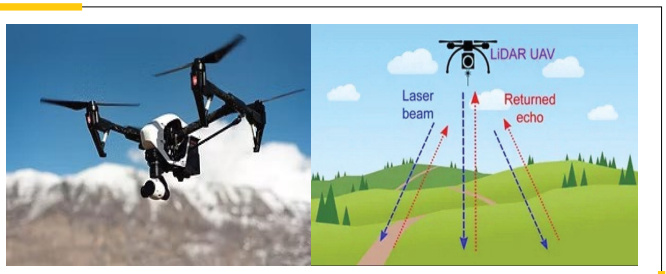
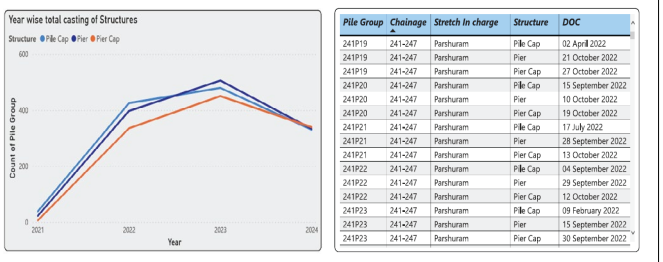


Figure 3: LIDAR representation

Benefits: Provides high-precision data for topographic mapping, infrastructure development, and environmental monitoring. LiDAR can create detailed 3D maps of the terrain, which are essential for planning construction projects, assessing natural disaster risks, and monitoring environmental changes.

4) Big Data and Analytics with Power BI
Description: The use of big data involves analysing large volumes of data to uncover patterns, trends, and insights.



Pile Group	Chainage	Stretch In charge	Structure	DOC
241P19	241+247	Parshuram	Pile Cap	02 April 2022
241P19	241+247	Parshuram	Pier	21 October 2022
241P19	241+247	Parshuram	Pier Cap	27 October 2022
241P20	241+247	Parshuram	Pile Cap	15 September 2022
241P20	241+247	Parshuram	Pier	10 October 2022
241P20	241+247	Parshuram	Pier Cap	19 October 2022
241P21	241+247	Parshuram	Pile Cap	17 July 2022
241P21	241+247	Parshuram	Pier	28 September 2022
241P21	241+247	Parshuram	Pier Cap	13 October 2022
241P22	241+247	Parshuram	Pile Cap	04 September 2022
241P22	241+247	Parshuram	Pier	29 September 2022
241P22	241+247	Parshuram	Pier Cap	12 October 2022
241P23	241+247	Parshuram	Pile Cap	09 February 2022
241P23	241+247	Parshuram	Pier	15 September 2022
241P23	241+247	Parshuram	Pier Cap	30 September 2022

Figure 4: Progress Dashboard of MAHSR-C4/Sec3 Progress

Benefits: Enhances predictive capabilities, optimizes resource allocation, and improves project performance. Power BI allows project managers to visualize data in real-time, track key performance indicators, and make informed decisions based on comprehensive data analysis.

5) Artificial Intelligence (AI) and Machine Learning (ML)
Description: AI and ML technologies are used to automate tasks, analyse data, and provide insights.

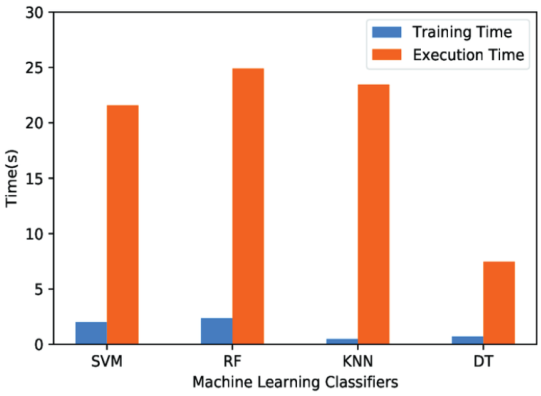


Figure 5: Use of AL and ML for analysing training and execution time

Benefits: Increases efficiency, reduces human error, and enables proactive project management. AI can be used for predictive maintenance, risk management, and optimizing project schedules, while ML algorithms can learn from past project data to improve future project outcomes.

Conclusion:
The integration of digital tools in project management is setting new benchmarks in innovation and technology. These tools not only improve efficiency and accuracy but also foster a collaborative environment that is essential for the successful delivery of complex projects. As technology continues to evolve, the potential for digital tools to transform project management practices will only grow.

Risk Management in Mega-Projects

Prof. Manish Jantikar, Dy. Dean, L&T IPM

India is basking on the cusp of glory, as investments in the country have seen a significant boost in recent times. The forex reserves are at an all-time high. The government is giving special impetus to infrastructure development and growth in the country. While the Mumbai Ahmedabad high-speed rail bullet train is in progress, feasibility studies are being conducted on three additional routes. India's quest to become a developed nation by 2047 relies heavily on developing its infrastructure, which is critical for creating liveable, climate-resilient, and inclusive cities that drive economic growth. The government's commitment is demonstrated by the allocation of 3.3% of GDP to the infrastructure sector in fiscal year 2024, with a special emphasis on the transportation and logistics divisions

Megaprojects are large-scale manufacturing or infrastructural projects that dramatically alter the environment in noticeable ways. Gellert and Lynch (2003) describe coordinated capital applications, advanced technology, extensive planning, and political influence.

Megaprojects are characterized by complexity, uncertainty, ambiguity, dynamic interfaces, significant political or external influences, and time periods of a few years, which may exceed a decade or more (Floricel & Miller, 2001).

They also include individuals worldwide with diverse cultural backgrounds, political systems, and languages (Shore & Cross, 2005). At least three characteristics of megaprojects stand out: a significant amount of resources, high human, social, and environmental effects, and severe complexity (Capka, 2004; Flyvbjerg, Bruzelius, & Rothengatter, 2003).

Thus, megaprojects, with their large scale, complexity, and huge resource requirements, exacerbate risk-management difficulties. These initiatives frequently last years, involve numerous stakeholders, and are subject to changing environmental, political, and economic situations. As a result, efficient risk management in megaprojects is not an option, but a necessity or a must without which one cannot progress.

Megaprojects can have a considerable impact on sponsoring governments and private entities because of their vast magnitude. Megaproject failures frequently result in inefficient resource use, cost overruns, lower-than-expected revenues, delivery delays, business loss, and technical failures, with devastating consequences, such as company bankruptcy or government upheaval (Flyvbjerg et al., 2003).

Risks in projects might take the form of monetary losses, scheduling delays, quality concerns, reputational damage, and performance issues for the project. Risk management is a systematic strategy (process) to discovering, analysing, and mitigating any risks that may jeopardize a project's designated objectives. It entails anticipating uncertainties (known knowns, known unknowns, and unknown knowns) and developing plans to reduce or eliminate their influence. The core of risk management is proactive planning and dynamic monitoring, with an effort to ensure that project objectives are met efficiently.

While many factors will be responsible for the success of the project, one of the most important aspects which will be responsible for a project success is efficient risk management. Risk is an uncertainty that, when managed properly during the course of the project, can lead to better acceptance and handling of the situations in a structured manner; otherwise, it can lead to unpleasant situations. In other words, project risk can be described as a potential problem or threat that could affect the project's ability to deliver the project in the right schedule, budget, and failure to meet the predefined objectives and the desired performance for which it is planned.

Ways of Handling Risks

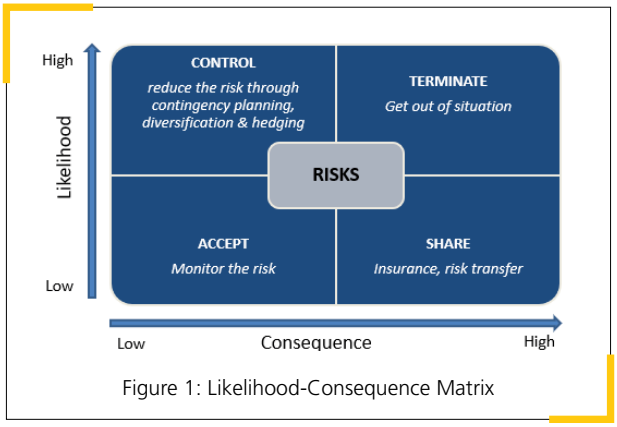


Figure 1: Likelihood-Consequence Matrix

Interpreting the Likelihood-Consequence Matrix:

Likelihood-Consequence Matrix is shown in Figure 1.

- **Low Likelihood, Low Consequence (Accept)**

When the likelihood and consequence of the occurrence are low, it means that these risks provide little or no danger and do not require significant mitigation of the resources or situation.

- **High likelihood and low consequences: (Maintain Control)**

When the likelihood of risk is high and the consequences low, risk can be reduced through proper contingency planning, diversification, and hedging. In addition, frequent hazards with low impacts can be managed cost-effectively to eliminate operational inefficiencies in the project. For example, preventive maintenance addresses regular equipment wear and tear.

- **Low likelihood and High Consequences: (Share)**

Contractual risk-sharing arrangements and insurance are generally more effective in managing rare but severe hazards. Example: Force majeure events can cause infrastructure damage.

- **High likelihood and high consequences: (Terminate)**

Whenever risks with a high chance of catastrophic impact are encountered, they should be frequently avoided or terminated to conserve resources. For example, withdrawing from a high-risk commercial enterprise.

Risk Response Strategies

Figure 2: Risk Planning strategies

Figure 3: Four Risk response strategies

The figure 2 and 3 displays four fundamental risk-response strategies used in risk management to identify risks in projects. Each strategy provides a distinct way to deal with risks based on their type, intensity, and the organization's risk tolerance.

1. Avoidance

Avoidance is the process of eliminating risk by eliminating its source or by adding risk-based actions. The basic objective is to eliminate risk exposure and prevent it from occurring. Decidngi not to pursue a project in a politically unstable zone to mitigate risks from regulatory changes or political upheavals or designing a system that does not rely on outdated or untested technologies can prevent technological breakdowns are some examples of avoidance.

This strategy is used when a designated risk has a high likelihood of occurrence and can lead to severe impacts. In addition, the cost of avoiding risk is lower than the potential damage that can be caused.

2. Mitigation

Mitigation is a strategy for the proactive reduction of risk to an acceptable level. The main objective here is to minimize the risk in megaprojects to safeguard further complications that can occur. Implementing safety standards at building sites to prevent workplace mishaps is a method of mitigation in projects. Adding redundancy to a vital IT system can reduce downtime in the event of a breakdown, which is another way to mitigate the project.

This strategy can be used where the perceived risk cannot be completely avoided but its impact or likelihood can be mitigated, and the impending danger is controllable with effective interventions.

3. Transfer

A transfer strategy is the process of transferring risk to a third party, typically through a contract or insurance. The main objective is that the external entity should bear the financial or operational implications of the risk, rather than the business itself.

Purchasing insurance to protect against natural disasters is an example of a risk-transfer strategy. Outsourcing a high-risk operation to a vendor or contractor who has specialized knowledge and risk-sharing agreements is one of the most common ways of transferring risk, as the project organization may lack the requisite skills/experience in undertaking and managing that particular activity directly associated with the risk. Hence, choosing a vendor with relevant experience is the preferred approach. The cost of risk transfer, such as insurance premiums, is reasonable compared with the potential loss.

4. Acceptance

An acceptance strategy involves the decision to accept a risk and prepare for its potential repercussions. The main objective of this strategy is to prepare for and absorb the effects of risks rather than completely prevent them. This also reflects the megaproject organization's ability to handle these types of risks as they are adept at dealing with these kinds of risks and have prior exposure and experience.

Accepting currency exchange rate volatility in international procurement items and establishing a reserve fund to cover probable losses in a megaproject are examples.

This strategy is used when the risk is minimal in severity or likelihood, and mitigation, transfer, or avoidance would cost more than the risk itself. The project organization is willing to accept repercussions for strategic reasons.

Framework of Risk Management for Megaprojects

During the course of a project, one needs to be careful about how one approaches the project. Risk is a complex concept that extends beyond simple probability analysis. It includes individual variances in risk attitudes and responses to uncertainty, subjective assessments, and cognitive biases (Meulenaer et al., 2015; Tubbs et al., 2005). Thus, effective risk assessment, communication, and decision-making depend on an understanding of these characteristics (Chemweno et al., 2015; Mieth et al., 2020; Peters et al., 2006).

Thus, risks must be addressed properly in projects failing, for which there is a chance that the project may suffer severe losses (in terms of budget) or extended periods (in terms of schedule). The framework of Risk Management must be followed as shown in Figure 4.

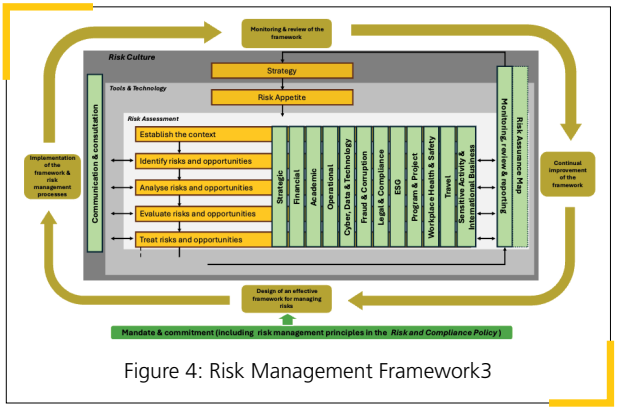


Figure 4: Risk Management Framework3

Interpretation of the framework

The above framework is built around the Risk Management Process and Risk Culture, which are

supported by relevant tools, properly defined strategies, and approaches. All of these are crucial as risk management as a critical organizational function of any organization.

Risk Management Framework Process

a. Establish the Context: This is the initial process, where the scope, stakeholders, and risk assessment criteria are determined. It aligns the risk management process with company goals and external contexts.

b. Identify risk and opportunities: Systematic identification of uncertainties that can have a favorable or negative influence on the organization (opportunities and hazards).

c. Analyze risks and opportunities: Understanding the nature, causes, and potential consequences of hazards. This involves the use of qualitative or quantitative analysis approaches to determine likelihood and implications.

d. Prioritize risks and opportunities: Based on severity (a combination of likelihood/probability and impact/occurrence). Tools, such as risk matrices, are commonly used here.

e. Treat Risks and Opportunities: One needs to choose and implement suitable steps to mitigate or capitalize on identified risks and opportunities.

f. Monitoring, review, and reporting: A continuous evaluation of risk treatment efficacy and evolving risks is performed. New risks are added as and when they occur in the risk register: Reporting promotes accountability and transparency.

This framework takes a comprehensive approach to risk management by combining organizational culture, methodological techniques, and advanced tools. By stressing the continuous review of all risks, along with stakeholder interaction, the framework integrates risk procedures with strategic priorities, enabling operational resilience and sustainability. Thus, the risk-management framework supports the successful completion of megaprojects.

Some of the most common types of risks in projects are as follows.

- Cost increase
- Health and safety
- Schedule
- Quality
- Labour availability / disputes
- Scope uncertainty
- Unforeseeable conditions
- Design change
- Regulatory change
- Foreign exchange fluctuations
- Teaming / culture
- Price fluctuations
- Material and plant availability
- Force majeure
- War
- Logistics
- Taxation
- Local laws, customs and language
- Environment
- Weather and climate and MANY OTHERS

Risk Assessment – Likelihood and consequences

Risks can be handled based on the nature of their likelihood and consequences. They can be further analyzed based on qualitative or quantitative analyses. Qualitative analysis is measured by the risk probability assessment, which investigates the likelihood that each specific risk will occur. Risk impact assessment investigates the potential effect on a project objective, such as schedule, cost, quality, or performance, including both negative effects for threats and positive effects for opportunities. They were then categorized based on the impact severity criteria from insignificant (VL), minor (L), moderate/significant (M), major (H), and severe/catastrophic (VH) and the probability criteria from remote/rare (VL), unlikely (L), occasional /possible (M), likely (H), and almost certain (VH). Figure 5 shows risk matrix as discussed.

	Consequence				
Likelihood	**Insignificant**	**Minor**	**Moderate**	**Major**	**Severe**
Almost Certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	Extreme	Extreme
Possible	Medium	Medium	High	High	Extreme
Unlikely	Low	Medium	Medium	High	High
Rare	Low	Low	Medium	High	High

Figure 5: Risk Matrix4

This matrix specifies the probabilistic and impact combinations that prioritize particular project risks. The color-coded matrix indicates the total risk level based on a combination of the probability (likelihood) and impact (occurrence).

- Green (low): Acceptable risks requiring little or no intervention.
- Yellow (medium) indicates risks that require monitoring and modest control measures.
- Orange (high): Significant danger that requires aggressive management and mitigation.
- Red (extreme): These are critical threats that must be immediately addressed or avoided.

Importance of Risk Management in Megaprojects

Risk management is critical for mega-projects, such as infrastructural development projects involving roads, railways, metros, ports, industrial complexes, and large-scale energy facilities, as well as defense projects that require significant investments and are vital to regional and national growth. The significance of risk management in these initiatives is based on the following factors.

1. High Stakes: Failure in a megaproject can result in significant financial losses, legal conflicts, and public disapproval. Effective risk management can reduce these hazards.

2. Complexity: Megaprojects entail multiple interrelated tasks. A delay or problem in one location may spread throughout the project, increasing the impact if it is not acted on time. Identification of the risks that lead to these types of delays can keep megaprojects on track.

3. Stakeholder Diversity: Managing expectations and opposing interests among several stakeholders, including governments, investors, contractors, and end users, is crucial. This can be done by maintaining the stakeholder register and having an issue log to address all stakeholder concerns. The project director/manager should ensure that a win-win situation has arrived while negotiating with stakeholders.

4. Dynamic Environment: Megaprojects are susceptible to commercial, regulatory, and geopolitical developments, among other risks. A solid risk management plan provides resilience in the face of such uncertainties, and with additional information, the project director/manager may be able to manage projects more efficiently.

Failure to Manage Risks

Failure to manage risks in megaprojects may result in the following.

1. Cost Overruns: Unexpected risks (known unknowns, unknown knowns, and unknown unknowns) can cause costs to exceed the project budget, jeopardizing the project's financial viability. This will result in huge overruns in existing budgets, which may lead to earnings depletion. As a result, greater risk management is required to prevent unexpected surprises throughout the project's execution phase. It is also critical to allocate sufficient budgets for risk management so that when these risks arise, they are properly addressed. Budgets must be allocated appropriately. This can be accomplished by assigning a specific amount to the contingency portion of the budget.

2. Delays in risk management can have a major impact on the project and its operational timeframes.

3. Mismanagement can erode stakeholder trust, thus compromising future efforts and relationships. Many megaprojects have been delayed or shelved because of failure to satisfy stakeholders' concerns. Thus, stakeholders should be given preference first, and resolving their concerns is critical to the project's continuance.

4. Legal disputes: Risks that are unresolved or that may go unresolved may lead to contract violations and lawsuits due to failure to achieve the desired results, further delaying the project.

Conclusion

In summary, the route to successful megaprojects in India is fraught with both great opportunities and unique challenges. Effective risk management is crucial for a country's ambitious infrastructure modernization plans. Government and private companies can take a proactive and methodical approach to detect, assess, and control risks. This would allow stakeholders to secure their assets while also encouraging trust and collaboration among all the parties concerned.

Finally, effective risk management is vital to India's long-term growth and development goals, allowing today's ambitions to become tomorrow's realities. This will be possible only when all the organizations involved follow a rigorous approach to risk management. Comprehensive risk management of megaprojects can help tackle complex landscapes with foresight and fortitude, using setbacks as stepping stones to a brighter future.

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EPPC Program Module 3
Primavera

Innovations in Legacy Corporations

Dr. Debopam Roy, Faculty, L&T IPM

Most conversations around innovations and industry are incomplete without reference to Netflix vs Blockbuster. Blockbuster, founded in 1985, offered affordable VHS (Video Home System) movie rentals through its chain of 9000+ stores worldwide, and retained 60% rental fees, and shared 40% with the studios. It was the giant of the home entertainment business till mid-2000s. Netflix, started subscription based DVD by mail service in 1997, but in 2007, its transition to streaming, was a major disruption. It offered convenience, affordability and a wider selection, making Netflix global streaming giant with over 220 million subscriptions. Blockbuster's resistance to streaming led to its decline and finally they filed for bankruptcy in 2010. What makes this an ideal plot for a blockbuster movie (pun intended), is the David vs Goliath nature of the story, where the underdog made an innovation, which upstaged the giant corporation, which could not move with time (see figure 1).

Figure 1: Depict of Netflix and Blockbuster Picture generated by MetaAI

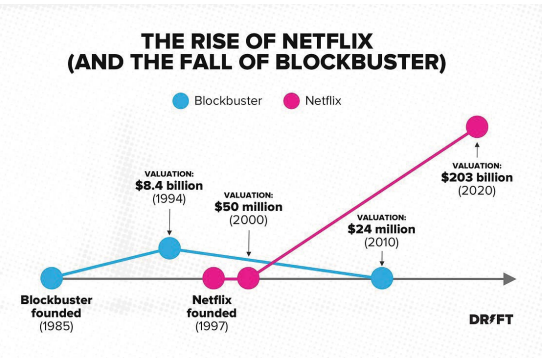

Figure 2: Netflix and Blockbuster Growth comparison1

This is not a unique story, and the business world today is brimming with such David vs Goliath stories of unicorn startups upstaging the legacy conglomerates in various business segments. The US automobile industry, which was for long dominated by Detroit Big Three (Ford, GM, and Chrysler), has seen a major decline in the last couple of decades, which is most apparent in the decline of the city of Detroit itself. Among various other internal and external reasons, Tesla has also made a significant contribution to this decline, by accelerating the transition to EV (electric vehicles), technological disruption of autopilot, direct to consumer sales model, etc. The rise of Tesla has actually forced the Big Three to accelerate their own EV development plans, which they were initially slow to embrace. Similarly AirBnB, founded in 2008 with just a single listing, has grown to rival Hilton, with its 5000 + properties, as the biggest brand in hospitality sector. Lloyds Bank and Barclays, founded in 1765 and 1896 respectively, together have just under 80 million customers globally, while Swedish fintech company Klarna, founded in 2005, claims 90 million customers in 17 countries.

All these stories have the common theme of a new age startup challenging the supremacy of legacy companies, and raises this question, are

legacy corporations, by nature slow to adapt innovations?

Corporate lifespanhave been shortening for decades with average age of an S&P 500 company in the US being under 20 years, down from 60 in 1950s, and inability to adapt to innovation can further reduce the lifespan by few nautches. For large corporations, traditionally focus has been on Kaizen or continuous improvements though the PDCA (Plan-Do-Check-Act) cycle. Even though this assures sustained growth over long time, this is does not sufficiently mitigate revolutionary technological disruptions that we are witnessing currently. But is innovation something totally alien to the DNA of legacy companies. As we see the emphatic and enthusiastic growth of new age startups and deluge of technological disruptions, how can legacy corporations stay connected, stay relevant and stay ahead?

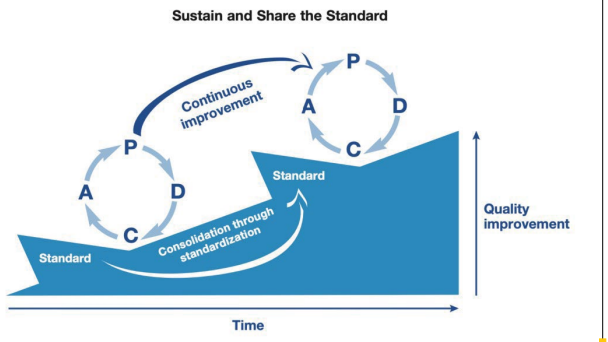

Figure 3: Continuous improvement model2

If we see most large corporations today, there is a conscious attempt to inculcate a culture of in-house innovation, besides attempts to acquire potential disruptors. They're launching innovation hubs,setting up venture funds, partnering with startups and there are ample examples of successful innovations by large corporations. IBM was a pioneer in cloud computing with its IBM Cloud platform, offering a wide range of services like infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS). Microsoft revolutionized home gaming with the Xbox console, and continues to innovate with y new technologies like cloud gaming. General Electric made major breakthroughs in medical imaging and diagnostic equipment, constantly developing new technologies for improved patient care. A classic example of successful innovation in a conglomerate is Post-it Notes, developed by a 3M scientist who was looking for a stronger adhesive but instead created a weakly adhesive material with countless applications.

These, and many other such examples prove that legacy businesses can actually excel in innovation, because most innovations are conceived by employees and not entrepreneurs, and large corporations with their large pool of talent, if worked effectively, can become powerhouses of technological innovations. The scale of operations, tried and tested systems, strong balance sheet, rich data sources, are actually huge advantages for these corporations, which no startup with a few VC support can ever match. The biggest advantage is the diverse workforce, which comes with the diversity of thought, and approaches ideas from different directions, some of which can lead to paradigm shifting technologies.

Risk averseness is often cited as a major inhibitor to innovation in large companies. However, this can be easily prevented by separating the innovation from the core business, giving sufficient space to be able to operate with a degree of independence while also being insulated from the bureaucracy in the mother company, but still benefitting from the core resources. The new venture, while being in corporate control to ensure accountability, can still bring in the outside perspective, by hiring fresh talent from the startup ecosystem. The startup may take more time than the core business to find product market fit and demonstrate scale. On the other hand, there may be a need to pivot quickly to address environmental changes. Hence, the company must be both more resilient and more patient with respect to the new venture. Thus, by grooming intrapreneurial talent, and making

some adjustments in the system and culture, giant corporations can leverage their advantage in creating a stronger ecosystem for innovations, which can then be standardized and adapted into their systems of steady growth.

Many lament the obsoletion of Kodak from the camera business, but the market was largely captured by Canon, another legacy company, established in 1934. Kodak actually invented the first digital camera in 1975 but failed to see its potential, focusing instead on their profitable film business. They viewed it as a niche market that wouldn't threaten their film dominance. Canon recognized the potential of digital photography early on and invested heavily in research and development. This resulted in a strong product line, which coupled with extensive line of interchangeable lenses provided a significant advantage. As per management guru C.K. Prahlad, Canon was focused on core competence in optics, rather than individual products, so that they could capitalize on the opportunity in camera market, while simultaneously, also becoming a market leader in copiers. This focus on competence building, rather than business dominance, can go a long way in preserving the advantages of large corporations in adapting to innovations in the market. In L&T, the focus has always been on building and improving core competence. And as our Chairman SNS often mentions, L&T is a technology company working in the domain of construction. And this focus on the core competence of technology has not only facilitated new ventures such as LTTS, Sufin, Renewables, etc. but also enabled L&T Construction to develop many innovations in the areas of formwork, precast, safety PPE, logistics, etc. L&T's diverse talent pool, culture of nurturing innovation, and focus on competence building are strong stimulus which can guarantee, that this company with close to a century of legacy is strongly poised to usher in the next wave of technology disruptions in engineering and construction.

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EPPC Program for B&F IC conducted at Kolkata

Unlocking Potential: L&T IPM conducts programs for Ecosystem partners

Dr. Purushothaman Srinath & Dr. Avirag Bajpai - Faculty, L&T IPM

L&T IPM regularly conducts program for some of L&T's ecosystem partners. In this quarter, programs were conducted for executives of partner organizations including Steel Authority of India Limited (SAIL), Gas Authority of India Limited (GAIL), TATA Chemicals and GMMCO Limited. This article briefs on the programs conducted for ecosystem partners of L&T.

SPARK and LEAD PROGRAMS FOR GMMCO Ltd

L&T Institute of Project Management (L&T IPM) conducted two programs for GMMCO Ltd. 'Strategic Leadership & Project Advancement through Resilience & Knowledge [SPARK]' program & 'Leadership, Execution, Agility & Decision Making [LEAD]' programs were conducted for top management and General Managers of GMMCO Limited respectively.

SPARK program is a comprehensive 6-day leadership development program designed to ignite the potential within GMMCO's diverse top management team. The two modules of the program were conducted at L&Ts Leadership Development Academy (LDA), Lonavala from 21st to 24th August & 2nd to 4th December respectively. Leaders of GMMCO Limited were participants of this program. This intensive program aims to equip participants with the critical skills and knowledge necessary to: Develop Strategic Leadership, Enhance Project Advancement, Build Team Resilience, & Master Risk Management.

The Leadership, Execution, Agility & Decision Making [LEAD] program is a one year, four module comprehensive program designed for GMMCO project managers seeking to enhance their management skills in the context of infrastructure projects. The first module of this program was held at the L&T IPM campus at Vadodara from 9th to 13th December.

This program combines theoretical knowledge with practical experience, equipping participants with the tools to excel in complex engineering endeavours. The focus of this area will be to i) Develop requisite management skills while sharpening technical skills to manage complex projects, ii) Equip participants with the latest tools and techniques for handling complex domestic and international projects, iii) Upskill project execution talent to support leadership ascent of high-Caliber project professionals.

GMMCO was founded in 1967 as part of the renowned CK Birla Group, a US $3 billion conglomerate. Gmmco has been representing Caterpillar, the world's leading manufacturer of machines and engines, in India for about three decades.

Participant Group photo – SPARK program for leaders of GMMCO Limited held at L&T LDA, Lonavala from 2nd to 4th December

Participant Group photo -LEAD program for Project Managers of GMMCO Limited held at L&T IPM campus, Vadodara from 9th to 13th December

TATA Chemicals PMP Preparatory Program

The PMP Preparatory Program was successfully conducted at the Tata Chemicals Mithapur Dwarka Plant during the months of September and December. The program included two batches, training a total of 60 Tata Chemicals project professionals, with 30 participants in each batch.

The participants, averaging 20 years of professional experience, represented diverse backgrounds, including projects, design, and operations. The program was expertly coordinated and delivered by Dr. Avirag Bajpai and Mr. Arun Vetrivel from L&T IPM.

The Tata Chemicals management expressed their appreciation for the program, providing excellent feedback on its content, delivery, and overall impact.

Tata Chemicals PMP Preparatory Program Participants

Tata Chemicals PMP Preparatory Program session

Advanced Course in Project Management (ACPM) for SAIL Limited

The ACPM program – Module 1, was inaugurated in December month at L&T IPM Campus at Vadodara. L&T Institute of Project Management (L&T IPM) has developed a multi-module program titled "Advanced Course in Project Management (ACPM)" aimed at enhancing the project management competencies of SAIL professionals. This program is specifically designed for those directly or indirectly involved in greenfield and brownfield project development. The key focus of the program is to cover effective project management practices that help in reducing costs, meet deadlines and increase the efficiency of participants' projects. This program enables participants in understanding the essential elements required in planning a project and give them the confidence and useful tools to put it into practice. Program will be conducted over three modules of 06 days each duration covering various facets/disciplines of advanced Project Management. The three modules are designed keeping in consideration to impart in-depth competency in participants across various knowledge areas of project management. Accordingly, the three modules are named Module -1: Kick Starting the Project, Module-2: Getting Execution Ready (GER), Module - 3: REALISING VALUE & COMPLETION (RVC).

AICM program for SAIL limited Group photo

Dynamic Planning and Execution Mastery in Project Management for GAIL Limited:

The program was held for GAIL executives from December 11th to 13th at New Delhi. Various topics include Project Scanning and Financial Criteria; Cost-Benefit Analysis and Environmental Management; Project Financing and Budgeting; Cost Management Techniques; Advanced Project Planning and Control

Program for GAIL Executives – Group Photo

SCDM - Forensic delay analysis and EOT Claims in EPC Projects

Must Read: L&T IPM's Global Footprint Grows with Programs in Saudi Arabia and Malaysia

Dr. Purushothaman Srinath - Faculty, L&T IPM

In light, of the institute's mission to support L&T businesses worldwide, L&T IPM held two programs in Riyadh, Saudi Arabia for Power Transmission & Distribution IC. The Essentials of Project Planning and Control (EPPC) 2.0 program was conducted at Four Points by Sheraton Hotel, Riyadh Khaldia Imam Faisal Bin Turki Street, Riyadh. The first module of the program was conducted for two batches from 19th to 21st October and 26th to 28th October respectively. Further, EPPC 2.0 program was conducted at Kuala Lumpur, Malaysia from 14th to 16th October (Module 1) & 27th to 29th November (Module 2). Twenty participants attended the sessions. The sessions were led by Prof. Rajiv Nehru, Dean, L&T IPM, Dr. S. P. Srinath, Faculty, L&T IPM & Dr. Debopam Roy, Faculty, L&T IPM. Figures 1 &2 depicts the program images.

Essentials of Project Planning and Control (EPPC) 2.0 is a corporate level talent development initiative aimed at developing the professional capabilities of planning engineers to plan, monitor & control large to mega projects. Through a very comprehensive learning process, learners will be equipped with state-of-the-art knowledge and practice in project planning and control. The programme also addresses other key areas that planning professionals' interface with including cost, contract, risk, team, and customer relationship management. To achieve required levels of competencies, it is essential to have in-depth knowledge about all these aspects of project planning and control. The programme is co-designed and executed in association with L&T IPM and IC planning & control experts. It is a blended programme including teaching sessions, case studies, e-learning (ATL courses), structured inter-module engagements, action learning assignments and post-course engagements through my-zone and K@W.

Figure 1: EPPC 2.0 Program at Riyadh, Saudi Arabia for PT&D IC

Figure 2: EPPC 2.0 Program (Module 1) at Kuala Lumpur, Malaysia for PT&D IC

What is the Professor of Practice (PoP) Initiative by L&T IPM and Why Does It Matter?

Dr. Hiren Maniar, Dy. Dean, L&T IPM- Vadodara

Overview

L&T IPM is conducting project management programs with the help of regular faculty, academic partners, external faculty, and L&T practicing managers. Participants are getting a blend of the latest theoretical knowledge from academicians and practical insights from practicing managers who are highly successful and knowledgeable in their fields. L&T IPM intends to synergize theoretical perspectives provided by academic professors and the wealth of experience & expertise of L&T practicing managers. To leverage the experience & expertise of practicing managers, L&T IPM has institutionalised, Associate Professors of Practice (APoP) & Professors of Practice (PoP). The scheme incorporates the best set of industry practices within an academic framework. The main objective is to enrich and align its participants to face and resolve the real-world problems.

L&T IPM recognizes the importance of the wealth of experience available in L&T. The synergy of thoughts and ideas of faculty members with practicing managers helps amalgamate conceptual understanding with practical experience. It is time that, as an institution, we tap and leverage the available professional experience to reap the maximum benefit.

Key characteristics of a Professor of Practice (PoP) include:

1. Professional Expertise: They typically have substantial professional experience in their field, such as leadership roles in business, industry, or public service, rather than a focus on academic research.

2. Teaching Focus: They often focus more on teaching, mentoring, and preparing students for real-world challenges in their industry. This role might involve sharing hands-on knowledge, case studies, and practical skills with students.

3. Research Opportunities: It provides a plethora of research opportunities. Identify/develop case studies for academic use—alone or jointly with IPM faculty; thus, their primary role is to bridge the gap between theory and practice.

4. Diverse Backgrounds: Professors of Practice often come from a variety of backgrounds with cutting-edge industry experience, which enormously helps participants in understanding industry insight.

Overall, the role helps enhance the learning experience for students by providing practical insights and real-world applications of academic theories.

Expectation

The "Professor of Practice" program of L&T IPM is a part-time teaching/training engagement program with flexibility regarding the intensity of involvement of L&T project professionals. Appointees in the Professor of Practice series are distinguished professionals who have a proven track record of executing complex domestic and/or international projects. The Professor of Practice is expected to leverage his/her specialized knowledge towards collaborating with faculty and teaching in L&T IPM Project leadership development programs. He/she may also develop case studies or publish papers jointly with L&T IPM faculty. L&T practicing managers will share best methods, best tools, and innovations employed in successful projects across IC/SBGs, which should help participants in understanding and applying the best practices in real-life projects of L&T.

Eligibility

The candidate should have

- Bachelor's degree in engineering and master's degree in engineering or management discipline.

• 15 years (for APoP) and 20 years (for PoP) of experience in different domains of project management.

• Worked in senior project execution roles for at least 3 years (APoP) or 5 years (PoP).

• Willing to share their experience of knowledge in the diverse project management knowledge areas from the bidding to the handover stage of EPC projects

• A PhD is desirable but not essential.

Roles & Responsibilities

The Professor of Practice is expected to perform a wide range of duties, including:

1. Minimum of 20 hours (for APoP) or 40 hours (for PoP) to a maximum of 60 hours of their time in any financial year.

2. Designing, developing, and delivering new practice-oriented courses/sessions.

3. Provide guidance and act as a jury/ panel member in the evaluation of Capstone Projects/Action Learning/Process Improvement Projects, embedded in IPM Programs.

4. Identify/develop case studies for academic use-alone or jointly with IPM faculty.

5. Actively take part in IPM Knowledge@Work by contributing knowledge as artifacts and providing responses to the queries raised by others related to the respective Knowledge@Work Communities of Practice (CoPs).

Benefits & Rewards

The Professor of Practice is a formal engagement with L&T IPM, and it will be offered to prospective L&T Project Professionals depending on experience and ability to teach. Selection for engagement will be done through a standing committee as it is being done for the visiting professors. The offer would be for three years and would be extendable based on performance and contribution made up to the age of retirement as per the Institute norms.

Benefits

• Professors of practice will be enrolled as subject matter experts (SMEs) in the IPM Knowledge @Work platform.

• Higher visibility across L&T businesses for the domain expertise

• Visibility in the IPM Website, IPM Newsletter (PRISM), Knowledge@Work, Project Management Conclave, and in the Project Management Council

• Exclusive access to a large number of e-books online with the ProQuest platform and to case studies on renowned online databases.

Rewards

As a token of gratitude for such professional engagement, L&T IPM will offer reward points (with a maximum of 144,000 accruable points in any financial year) for various categories of engagements, like professional membership fees, e-books, fee waivers for enrollment in IPM programs, etc.

Current Status

L&T IPM has onboarded 30 PoP & APoP as of 31st December 2024, and they have achieved the following achievements in FY 2024-25:

• Teaching assignments in L&T IPM Programs: 250 hours

• Case Study on "Enhancing project excellence by discovering correlations between safety and quality in PT&D Projects" by G Karthik (APoP from PT&D IC)

Qualified and interested project professionals are requested to send their resumes through their IC/SBG HR *(after getting consent for committing a minimum of 20 to a maximum of 60 hours of their time in any financial year)* to Dr. Dharmendra Trivedi (Dtrivedi@Lntipm.org).

PRAGATI - Career Progression Programs

Pragati - L1 PEPD - Program for Excellence in Project Delivery in association with IIM, Indore

PROGRAM HIGHLIGHT:
Date: 02-06, December 2024
No. of Participants: 28
Location: IIM Indore
Program Director: Dr. Ravindra Shrivastava

Under career progression program, PEPD is a carefully designed modular program spread over a year, with 4 modules, each module having 5 days of intensive classwork. The program is designed to enhance required project management competencies for L&T project Professionals from S&E to Tier 1 levels. It creates a very competent talent pool of project managers, who can handle independent projects or packages of large projects, demonstrating delivery excellence and profitable execution. IIM Indore's academic excellence and L&T IPM's prowess in practical applications are synergized to deliver value to the individual as well as sponsoring ICs/BUs. Pedagogy consists of case study-based teaching, IC/SBG specific project work and simulation based experienced learning. Batch 6, Module 3 conducted at IIM Indore. Total 28 Participants attended this program from various ICs/BUs.

Pragati - L1+ IEMB - International Executive master's in business in association with SDA Bocconi, Italy

PROGRAM HIGHLIGHT:
Date: 14-20, October 2024 (Batch 1 Module 8)
No. of Participants: 32
Location: SDA Bocconi, Mumbai

Date: 14-20, October 2024 (Batch 2, Module 4)
No. of Participants: 41
Date: 21-26, October 2024 (Batch 3, Module 2)
No. of Participants: 41
Location: Vadodara

Program Director : Dr Avirag Bajpai

PRAGATI Level 1+ "International Executive master's in business with specialization in Project Management (IEMB-PM)" in association with SDA Bocconi of Batch 2, Module 4 & Batch 3, Module 2 conducted in this quarter at L&T IPM Vadodara Centre. The blended program, in the form of on-campus and online contact sessions with a rigorous and interactive course curriculum. The program duration of 60 days is spread over 2 years, with 48 days of classroom sessions taking place in 8 modules (6 days per module, every 3 months) and 12 days of online sessions between the modules Total 41 & 45 participants respectively from batch 2 and 3 from various ICs/BU's attended this program. Batch 1 of Module 8 was conducted at SDA Bocconi, Mumbai Centre with 32 participants.

Pragati - L2 APLP - Advanced Project Leadership Program in association with IIM Calcutta

PROGRAM HIGHLIGHT:
Date: 14-19 October 2024 (Batch 3, Module 2)
No. of Participants: 31
Location: Chennai
Program Director : Dr. Debopam Roy

The Pragati L2 APLP batch 3, Module 2 in collaboration with IIMC was concluded on 14th October 2024. The program covered the entire lifecycle of the project from tendering to commissioning, and included both core project execution related topics such as planning and scheduling, construction and site management, contract closeout, and commercial and strategic topics such as collaboration and high performance, commercial strategies for bidding, etc. Total 31 Participants were attended the module 2 of this program.

IKons of IC-Specific Programmes

Project Planning Training Program for DETs (For PT&D)

PROGRAM HIGHLIGHT:
Date: 28 Oct to 12th November 2024
No of Participants: 10
Location: Chennai
Program Director : Dr. S. P. Srinath

Ten days training program was delivered to Diploma trainees at IPM Chennai. The program covers the project planning and project life cycle aspects in line with PT&D Business case studies.

FLLP - First Level Leadership Program (For Divisional Corporate)

PROGRAM HIGHLIGHT:
Date: 4-11 November 2024 (Batch 15)
No of Participants: 51
Location: Lonavala
Date: 4-11 November 2024 (Batch 16)
No of Participants: 50
Location: Lonavala

Program Director : Prof. Manish Jantikar

First Level Leadership Programme (FLLP) is a program initiative by Divisional corporate of L&T Construction. The program is designed to initiate young professionals into the fundamental principles and practices of leadership and is aligned to meet the business environment by focusing on digitalization, latest project management techniques and individual's strength. L&T IPM being the knowledge partner for a FLLP program delivered the project management module. The module's objective is to enhance project execution capabilities through Digitalization, Project Management and Resource Management.

Project Management for Business Results (PMBR) (For LTTS)

PROGRAM HIGHLIGHT:
Date: 18-26 October 2024
No of Participants: 22
Location: Bangalore
Program Director : Arun Vetrivel

The program focused on building ownership for the project and putting the right mix of experience/skills. The program provided an understanding of customer expectations with respect to proposals and create win-win situation, accessing risk and managing on time delivery.

LEAD Engineer Development Program (LEDP) (For PT&D)

PROGRAM HIGHLIGHT:
Date: 7-11 November 2024
No of Participants: 27 (through Online)
Location: Online
Program Director : Dr Debopam Roy

As part of Engineer development program, LEDP Engineer Development program was conducted in the month of November 2024 IPM faculty has deliver important sessions on various behavioural skills applied in project management.

SAKSHAM - Foundations of Construction Management & Engineering (FCME) (L&T Realty)

PROGRAM HIGHLIGHT:
Date: 14-19 October 2024
No of Participants: 34
Location: Mumbai
Program Director : Dr Ravindra Shrivastava

SAKSHAM - FCME (Fundamentals of Construction Engineering & Management) were initiated and completed in this quarter. The FCME curriculum is designed for Graduate Engineer Trainees (GETs) and focuses on teaching the fundamentals of construction engineering and management. Each program spans six days. The program covers the principles of concrete technology, IS code orientation, technical parameters of execution, materials, design, HSE management, structural and formwork systems, labor, and contract management.

Contract Management (L&T Realty)

PROGRAM HIGHLIGHT:
Date: 10-11 December 2024
No of Participants: 32
Location: Mumbai
Program Director : Dr Debopam Roy

In line with the requirement of L&T Realty, a program on contract management was delivered for L&T Realty project professionals. The program covered critical aspects of contract management, with a special focus on the following areas: Contract Fundamentals; Overview of FIDIC, NEC, Red Flag Conditions of Contract; Contractual Documentation and Communication; Quantification and Substantiation of Claims; Dispute Avoidance and Resolution.

Executive Leadership Development Program (ELDP) (For PT&D)

PROGRAM HIGHLIGHT:
Date: 25-26 November 2024
No of Participants: 17
Location: Online
Program Director : Dr Debopam Roy

Two days training program was delivered in line with the requirement of PT&D business. Program covered effective stakeholder management with advance project management skills with handle complex projects more effectively and deliver superior results in the dynamic environments of India and the Middle East. Total 17 participants attended this program.

PMEE-Project Management for Execution Excellence (For B&F)

PROGRAM HIGHLIGHT:
Date: 21-24 October 2024 (Module 1)
No of Participants: 22
Date: 09-12 December 2024 (Module 2)
No of Participants: 21

Location: Chennai
Program Director : Dr. S.P. Srinath

The program focuses on imparting knowledge, skills and abilities across the entire spectrum of the theory and practice of Project Management and helps to understand the complexities of project execution, develop insights into legal and commercial aspects of projects. Further, the program is designed to measure the competencies of the Construction Managers and Tower in-charge in project execution thereby achieving project execution excellence. Two batches of this program conducted at IPM Chennai centre for B&F.

Subcontract Management (For B&F)

PROGRAM HIGHLIGHT:
Date: 10-11 December 2024
No of Participants: 20
Location: Chennai
Program Director : Dr. S.P. Srinath

The major objective of this training program was to enhance understanding of effective subcontract management in EPC projects and understand various strategies for subcontracting & structuring subcontracting. It covers various aspect of subcontract management like understand principles and practices of subcontract evaluation, selection & post -award administration & mobilization of subcontractors it also covered Project subcontracting plan and Strategies for subcontracting etc.

Enhancing Profitability through Effective Supply Chain Management and Strategic Sourcing (For B&F)

PROGRAM HIGHLIGHT:
Date: 3-4 October 2024
No of Participants: 14
Location: Chennai
Program Director : Dr. S.P. Srinath

Two days program delivered for B&F project professionals which covers essentials of Supply Chain management in Infrastructure projects, Principles and Practices of effective Supply Chain & Inventory Management, tools and techniques for managing Supply Chains in Construction projects. It also covered Risk management in supply chains, Procurement Strategies for Large Construction Projects and Inventory optimization strategies etc.

Strategic Sourcing for EPC Projects (For B&F)

PROGRAM HIGHLIGHT:
Date: 14-15 November 2024
No of Participants: 14
Location: Chennai
Program Manager: Dr. S.P. Srinath

The core objective of this program is to enhance understanding of strategic Sourcing in EPC projects and understand Principles of Strategic Sourcing, Supplier selection & Evaluation. The program covers Introduction to Strategic Sourcing in EPC Projects, Principles of Strategic Sourcing, Strategic sourcing process steps, Identifying and evaluating sourcing opportunities, Supplier Selection and Evaluation, Criteria for supplier selection, Managing supplier databases, Negotiation Strategies for EPC Projects, Types of contracts in EPC projects, Risk Management in Strategic Sourcing, Cost Management and Optimization, Cost analysis and budgeting and Techniques for cost reduction etc.

Project Management for Executive Development Program (EDP) (For Divisional Corporate)

PROGRAM HIGHLIGHT:
Date: 17th October 2024
No of Participants: 18
Location: Mysore
Program Manager: Prof Manish Jantikar

The program provides a fundamental understanding of projects and project management. It provides deeper understanding of the life-cycle phases of a project with real world examples & discussions. The program also provides a basic understanding of critical project management areas such as schedule, risk, stakeholder, communication, quality & EHS management.

Primavera (For L&T Energy: Hydrocarbon)

PROGRAM HIGHLIGHT:
Date: 7-9 October 2024
No of Participants: 14
Location: Vadodara
Program Manager: Dr Ravindra Shrivastava

Primavera is a popular and powerful tool for project planning and monitoring. This 3-day program provides detailed exposure to various features and aspects of Primavera that can simplify the job of project managers to handle the complexities of managing single and even multiple projects. The program focuses on various scenarios in real-time project planning and scheduling and the best global practices followed to create and maintain reliable CPM schedules

Project Management (For WET)

PROGRAM HIGHLIGHT:
Date: 15-16 November 2024
No of Participants: 28
Location: Lucknow
Program Manager: Dr Debopam Roy

Two days program on Project Management was conducted for Water International BU of WET IC executives. The program coverage includes Project lifecycle, Project management phases and processes, project management areas – scope, contract, schedule, cost, risk and stakeholder management and WET IC project management case study

Essentials of Project Planning & Control (EPPC)

EPPC 2.0 is a corporate-level talent development initiative aimed at developing the professional capabilities of engineers in effectively planning, monitoring, and controlling project execution. The program ties the planning concepts with S0-S10 schedules & best practices for managing them.

L&T IPM conducted EPPC 2.0 program for PT&D IC at global locations in Malaysia, Doha, and Riyadh. At the end of Q-2 & 3, Total 1755 participants were trained under EPPC Module 1 and total 984 participants were trained under EPPC Module 2 at various locations in the country and abroad.

IPM Faculty Team	Prof. Rajiv Nehru	Dr. Hiren Maniar	Prof. Manish Jantikar
	Prof. Sunil Kumar	Dr. Debopam Roy	Dr. Ravindra Shrivastava
	Dr. Avirag Bajpai	Dr. Purushothaman Srinath	Prof. Arun Vetrival

Specific Competency Development Module (SCDM)

Forensic Delay Analysis and EOT Claims in EPC projects using Primavera

PROGRAM HIGHLIGHT:
Date: 13-15 November 2024 (Batch 1)
No of Participants: 23
Date: 13-15 November 2024 (Batch 2)
No of Participants: 21
Location: Vadodara
Program Manager: Prof. Ravindra Shrivastava

The L&T IPM organised the SCDM program on "Forensic Delay Analysis & EOT Claims in EPC Projects Using Primavera" from 13th to 15th November. The program was designed to provide a deep understanding of key concepts and fundamental principles of delay; contractual liability related to time, construction delays - international practices, contractor entitlements and obligations, How to Analyse Delay Reasonably and Prepare EOT Claims Differentiate between prospective and retrospective delay analysis, as well as various delay analysis methodologies, and create different delay claim scenarios. This program provided an excellent platform for participants to share their thoughts on problems they had encountered, as well as their experiences, lessons learned, and cross-learning related to practices followed by different businesses.

Master Class

MCMR - Master Class in Managing Risks

PROGRAM HIGHLIGHT:
Date: 18-20 December 2024 (Module 2)
No of Participants: 31
Location: Vadodara
Program Director : Dr Avirag Bajpai

Master class in managing risk focused on Risk Management Fundamentals – From PMI's PMBOK - Foundation standard for Risk Management and CII risk model. It also covers Context of ISO 31000 for Companies involved in Project acquisition and Execution. L&T Risk Management Practices for domestic & International projects. International Project Risk Analysis and Management Identification, Analysis, Response Planning, Implementing Risk responses and Monitoring of Risks. (MENA Focused). Program emphasis on Qualitative and Quantitative Risk Assessments Risk Remediation – Contract, Commercial and execution remedies Managing Stakeholders through effective Risk Communication and Preparing for events where conventional risk management is not sufficient (Black swan events.). Program was design and deliver in collaboration with L&T Corporate Risk Management (CRM). Module was delivered in the month of December 2024 at Vadodara

Role Based Program

Executive MBA Infrastructure and Construction Management (E-MBA-ICM) (In Association with NICMAR – Pune)

PROGRAM HIGHLIGHT:
Date: 14-22 October 2024
No of Participants: 57
Location: NICMAR-Pune Campus
Program Manager: Dr Debopam Roy

L&T IPM, in collaboration with NICMAR University, Pune has launched Executive MBA in Infrastructure Construction Management (E-MBA-ICM). The major aim of the E-MBA-ICM program is to develop mature and responsible techno-manager as a future leader of L&T with an emphasis on managing construction business/projects of L&T who can fulfil responsibilities in diverse fields. The program design for two years of duration (in four semesters) with 80 credits includes offline modules at NICMAR & IPM Campuses, online weekends modules and work-based learning through projects. All the sessions/modules design with join delivery of NICMAR & IPM Faculty. First semester offline module was conducted at NICMAR-Pune campus with total 57 participation across all major ICs/BU's.

M. Tech programmes in Construction Technology & Management and Infrastructure Project Management (NICMAR M. Tech)

The program is design by L&T EduTech in association with NICMAR Pune and IPM Faculty has delivered few technical sessions in this program.

PROGRAM HIGHLIGHT:

Date: 18-20 November 2024
No of Participants: 18
Date: 5-6 December 2024
No of Participants: 18
Date: 25-27 December 2024
No of Participants: 18
Location: NICMAR-Pune Campus
Program Manager: Dr Debopam Roy

SCDM - Forensic delay analysis and EOT Claims in EPC Projects

Knowledge @ Work – A Knowledge Management platform by L&T Institute of Project Management

Knowledge@Work (K@W) is a strategic initiative of L&T IPM. It enables employees across the company's global locations to obtain access to project management domains and contribute to and receive knowledge in 21 knowledge areas relevant to project execution (which we are calling as 'Communities of Practice'). All L&T employees can utilise the platform to capture, share, and reuse the company's project management knowledge to overcome challenging project challenges. The platform enables the smooth exchange of knowledge artefacts across L&T professionals (across all ICs/BUs), hence facilitating a collaborative, cross-functional learning environment.

K@W's significance to Knowvember and Inknowvate:

As stated in the cover article, several participants and competitors of Knowvember and Inknowvate'24 were incentivized to post queries and answer at the K@W portal. Specific points were provided to competitors of simulation competition for the same. The portal can be assessed at www.kb.lntipm.org

Features and benefits of the portal:

K@W is organised into discipline-specific 'Communities of Practice (COPs)', which facilitate interaction and knowledge exchange among project management experts who share common expertise or abilities.

- The platform serves as a forum for businesses and people to exchange quick responses to queries and collaborate on problem-solving via the 'Ask Query' capability.
- Qualified experts will respond to the question seekers, assisting and enlightening users on best practices, processes, and tacit knowledge.
- There is a provision to restrict access to confidential documents only to authorised people.
- The K@W platform enables users to transform their individual knowledge into organisational knowledge, thereby adding value to the enterprise.
- The platform is well-positioned to serve as a vehicle for the dissemination of best practices, policies, and training materials.

Key Statistics of the K@W portal

Page Visits	25003
Downloads	2600
Artefacts	890
Queries	458
Solutions	398
SME	310

Top Community of Practices

Category	Top COP	Count
Active Members	Contracts and Claims Management	515
Download	Contracts and Claims Management	521
Artefacts	Planning and Scheduling	207
Subject matter Experts	Construction and Site Management	89

Several new updates, features and functionalities were introduced to the portal in the last quarter. Some of the significant features are highlighted below

- An architectural feasibility to leverage the generative **Artificial Intelligence platform ChatGPT** was evaluated with the Proof of Concept.
- The Response from the ChatGPT is generic and should be validated in the context of L&T projects; hence a check gate was established using the Subject Matter experts with options to accept, reject and modify responses from ChatGPT before publishing the response to all users of the portal.
- The Queries posted by employees may contain important information about L&T projects; hence, to protect the confidentiality of these sensitive data, it is planned to use the enterprise version of ChatGPT in accordance with the ChatGPT usage guidelines approved by Corporate IT Team.
- The recordings of the completed Tuesday Talks and Power Talks of L&T IPM are available for the members of the respective Communities of Practice.

Now you can promote your domain-specific knowledge-sharing sessions related to a particular COP through K@W. ***To publish the event details in K@W, share the event flyer and joining link to Mr. Arun Vetrivel, arun.vetrivel@lntipm.org***

Master Class in Managing Risk Program

Title: Innovation Project Management

Author: Harold Kerzner

Publisher: John Wiley, USA

Publisher Review:

Conventional project management methods are oftentimes insufficient for managing innovation projects. Innovation is lost under the pre-determined scope and forecasted environments of traditional project management. There is tremendous pressure on organizations to innovate, and the project managers responsible for managing these innovation projects do not have the training or tools to do their jobs effectively. Innovation Project Management provides the tools, insights, and metrics needed to successfully manage innovation projects—helping readers identify problems in their organization, conceive elegant solutions, and, when necessary, promote changes to their organizational culture.

There are several kinds of innovation—ranging from incremental changes to existing products to wholly original processes that emerge from market-disrupting new technology—that possess different characteristics and often require different tools. Best-selling author and project management expert Harold Kerzner integrates innovation, project management, and strategic planning to offer students and practicing professionals the essential tools and processes to analyze innovation from all sides. Innovation Project Management deconstructs traditional project management methods and explains why and how innovation projects should be managed differently.

This invaluable resource:

- Provides practical advice and actionable tools for effectively managing innovation projects

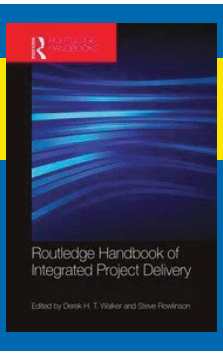
- Offers value-based project management metrics and guidance on how to establish a metrics management program

- Shares exclusive insights from project managers at world-class organizations such as Airbus, Boeing, Hitachi, IBM, and Siemens on how they manage innovation projects

- Explores a variety of types of innovation including co-creation, value-driven, agile, open versus closed, and more

- Instructors have access to PowerPoint lecture slides by chapter through the book's companion website

Innovation Project Management: Methods, Case Studies, and Tools for Managing Innovation Projects is an essential text for professional project managers, corporate managers, innovation team members, as well as students in project management, innovation and entrepreneurship programs.



Title: Routledge Handbook of Integrated Project Delivery

Author: Derek Walker, Steve Rowlinson (Ed.)

Publisher: Routledge – Taylor & Francis Group, UK.

Publisher Review:

The concept of integrated project delivery (IPD) has evolved as a result of the need for highly expert teams of people to collaborate to deliver extremely complex projects, to manage expectations about delivery speed, changes in governance standards and to take advantage of and manage expectations raised by rapid advances in technology. All this demands effective change management. This is the first Handbook to contextualise and thematically explore the concept with an emphasis on rigorous practical and theoretical validation. The Handbook is divided into five sections, each with a focus on several interconnected themes including:

- An introduction to IPD concepts.
- The foundational elements and characteristics of IPD.
- People, culture and collaboration as key ingredients to successful and effective IPD.
- Technology and process aspects of relational contracting forms such as IPD.
- New and relevant perspectives to IPD that have received scant attention to date.
- Aspects and emerging issues that are rarely consciously considered in traditional project delivery due to the commercial imperative that drives firms and client organisations.

The Handbook offers both discussions of these key themes, and also in-depth research into construction and other industry project procurement and delivery that spans decades. In addition, the Handbook presents 'best' and 'better' practice, but also includes insights into cutting-edge experimental developments in technology and practices where proof of concept is currently being developed into emerging practice. Contributing authors in this Handbook collaborate with the co-editors to draw together an integrated set of chapters that align to deliver a coherent narrative of the IPD concept. It is an invaluable reference for practitioners and academics alike, and useful as core course content for numerous degree programs of study and professional development courses.

IPM Training Calendar

January 2025 to March 2025

New Programs	
Program Title	**Program Type**
Level 1 "Program for Excellence in Project Delivery (PEPD)"	Pragati – Level 1
Level 3 "International Project Leadership Program (IPLP)"	Pragati – Level 3
Master Class on Project Cost Management (MCPCM)	Master Class
Master Class in Managing Contract (MCMC)	Master Class
Primavera (Multiple Batches)	Tool Based
Forensic Delay Analysis and EOT Claims in EPC projects using Primavera	Tool Based
Construction Productivity	B&F: IC Specific
Essentials of Cost Management	B&F: IC Specific
Construction Site Logistics	B&F: IC Specific
Dynamic Planning and Execution Mastery in Project Management For GAIL(India) Limited	Eco System Partner
PMP Program For Nayara Energy	Eco System Partner

EPPC Program for Heavy Civil IC at Rishikesh

IPM - VADODARA
IPM/PTI BUILDING
KC RESIDENCY CAMPUS
B/h L&T KNOWLEDGE CITY
AJWA-WAGHODIYA CROSS ROAD, NH #8
VADODARA

IPM - CHENNAI
L&T CONSTRUCTION DIVISION
TRAINING CENTRE, 1ST FLOOR
OPP TC-II,
MANAPAKKAM
CHENNAI