PEAKS
THE PKC NEWSLETTER

PUNE KNOWLEDGE CLUSTER

Established by the Office of The Principal Scientific Adviser, to the GoI under The City Knowledge & Innovation Cluster Initiative (CKIC), the Pune Knowledge Cluster aims to bring together Academic Institutions, R&D organizations, Industries, NGOs, Civic Bodies, Local & State governments to collectively work for the betterment of Pune City by leveraging the science & technology capabilities of its partner organizations.

FROM THE PKC DESK

Greetings, dear readers!

We are back with the next issue of PEAKS - PKC's Quarterly Newsletter! In this issue, we highlight key milestones from PKC's journey from **July to September 2024.**

The **Cover Story** features our project, **Behavioral Nudges for Sustainable Transport**. The **Sneak Peak** section gives the reader a peek into the **Launch event of the COVID-19 Clinical Database**. In this issue, we are also **In Conversation** with **Ms. Pratima Harite, Head - Corporate Citizenship, Asia Pacific at Lenovo India Pvt. Ltd.**

This issue will also give an overview of the Events, Citizen - Centric Talks and Collaborations that PKC has organised and fostered within the last quarter.

Happy reading!

Issue available at
https://www.pkc.org.in/resources/newsletter/
Or Scan the QR Code

IN THIS ISSUE

Behavioral Nudges for Sustainable Transport

India is poised for rapid economic growth and a significant increase in its urban population. According to the Ministry of Housing and Urban Affairs, the urban population is expected to almost double by 2051.

To accommodate this rise in both economic activity and population, major Indian cities will need to implement significant changes to their current infrastructure, ensuring the efficient and sustainable movement of goods and people.

Within the last decade, the Pune Metropolitan Region has seen its population grow at an average rate of 2.5% per year, while the population of its vehicles has shot up by almost 7% per year. Despite this rise in the number of vehicles, the utilization of public transport has remained at 20%, with most citizens relying on personal vehicles for their daily commuting activities. This has led to traffic congestion, road safety concerns, and a steady rise in air

pollution. In fact, as per the GHG emissions inventory for Pune, the transport sector has the largest share of direct emissions. (~24%).

There are two possible approaches towards tackling these issues: The 'Business As Usual (BAU)' paradigm supports more infrastructure for personal motor vehicles, and the 'Sustainable' paradigm prioritizes walking, cycling and increased public transportation usage. Given the targets set by the Pune Municipal Corporation (PMC), Pimpri Chinchwad Municipal Corporation (PCMC), and Pune Metropolitan Region Development Authority (PMRDA) to achieve a 50% modal share for public transport by 2028, adopting a sustainable model is the smarter approach for reducing carbon emissions in a city like Pune.

While a comprehensive plan to achieve these goals is yet to be established, the city has witnessed numerous policy and infrastructure upgrades. Pune Mahanagar Parivahan Mahamandal Limited (PMPML), which operates a large fleet of public transport buses in Pune, has introduced cleaner fuels like CNG and

electric buses, and improvements have also been made to enhance the first- and last-mile connectivity. Apart from this, roads with wider footpaths and dedicated lanes for bicycles are also being developed.

Ms Anita Kane, Senior Advisor, Sustainability & Environment at PKC, says, "During our discussions with the PMPML officials, we realized that city-wide evidence-based insights on possible service improvements can be extremely crucial for decision-makers – to help them convert public transportation into a lucrative option for commuters."

Accordingly, a project was envisioned that not only encourages citizens to adopt behavioural changes but also quantifies the impact of these changes on the overall improvement in sustainable transport. Leveraging the best of the cluster ecosystem, PKC collaborated with like-minded non-profit organizations working in the mobility sector, academic institutions, residential societies and corporates to implement this project.

This project was named as - Behavioral Nudges for Sustainable Transport as it focused specifically on improvement in the PMPML ridership through controlled experiments called 'Nudges'. As described in the 2008 book by Richard Thaler and Cass Sunstein, 'Nudges' are non-intrusive interventions that predictably alter people's behaviour without forbidding any options or significantly changing their economic incentives. Accordingly, this project was designed to introduce interventions in a systematic and controlled manner, which would eventually encourage the citizens of Pune to view public transport as an optimal and economically viable option compared to their personal vehicles.

To determine the nature of these interventions, the PKC team performed a retrospective analysis of the PMPML operations data and shortlisted bus routes having a lower daily ridership. Thereafter, a three-pronged survey was designed and implemented in collaboration with CEPT University, Ahmedabad and COEP Technological University, Pune:
- A passenger survey to understand the motives of passengers for using PMPML services as well as the service improvements that they wished to see
- A boarding-alighting survey, to get an idea of the route profile and identification of the stops with significant boarding-alighting activity.
- A bus-stop survey to understand the physical aspects, including the infrastructure, signage, accessibility, etc., which could play a crucial role in the decision-making of citizens

The survey underscored the role played by service quality in determining citizen preferences, highlighting the impact of bus stop infrastructure, information dissemination and bus frequency on ridership. These observations were shared with the PMPML leadership and pilot interventions/nudges were designed on selected routes.

The Information and Outreach Nudge was designed along bus route 256 to influence the ridership through enhanced awareness of this bus route, which covers the area from Pune Mahanagarpalika to Balewadi Depot. Balewadi, a mixed-use locality consisting of educational institutions, corporates, and residential complexes, was the focus area for the outreach and specific areas within Balewadi were further identified for implementing the nudge.

A series of 12 campaigns comprising in-person and digital dissemination of information regarding the PMPML bus 256 was carried out in collaboration with students from NICMAR University and Moze College of Engineering.

The campaign reached around 9000 citizens in the Balewadi area, out of which 800+ citizens were further interviewed regarding their experience with the services provided by bus 256 and their propensity to use it to understand their travel behaviour. Although many commuters had their daily destination on the route, very few were regular users of the bus.

Elaborating upon these observations, Ms. Sanskriti Menon, Center for Environment and Education, says, "The reluctance of the commuters stemmed more from a lack of information rather than the availability of personal automobiles. When adequate and relevant information was provided by our volunteers, over 50% of the interviewed participants displayed an interest in increasing their usage of the bus."

These findings have been shared with the PMPML leadership team, and a detailed analysis of the ridership data is awaited.

"We are very happy with the results of this program and the outreach efforts undertaken by the PKC team. It has given us a showcase of how similar efforts can be undertaken on other bus routes.", concludes Mr. Vijay Ranjane, former transport planning manager at PMPML.
This program works in a collaborative manner and welcomes partnerships in the form of employee engagement, volunteering by employees and CSR.

To know more about the program and to partner with us, visit: *https://www.pkc.org.in/pkc-focus-area/sustainable-mobility/behaviour-nudges-for-sustainable-transport/*

In this issue of PEAKS, we are *In Conversation* with **Ms. Pratima Harite**, who currently heads Corporate Citizenship, Asia Pacific at Lenovo India.

She shares her views on the role of collaboration in the CSR sector while walking us through the different CSR initiatives undertaken by Lenovo India in space of STEM Education.

MS. PRATIMA HARITE

Head, Corporate Citizenship
Asia Pacific
Lenovo India Pvt. Ltd.

What are the key focus areas for Lenovo India in the social/CSR sector?

Let me begin by giving a brief introduction to Lenovo Foundation, the charitable arm of Lenovo. Our social initiatives center around the communities where we live and work, with a strong emphasis on providing access to technology for under represented groups and STEM education. In India, we are dedicated to utilizing our advanced technology expertise to support quality education for students, focusing on enhancing teacher capacity and fostering STEM mindsets in students.

A significant portion of our programs is dedicated to ensuring that at least 50% of our beneficiaries are female students or women.

From a larger philanthropy angle, on access to technology for the under represented communities, two examples I can speak about are the Work For Humankind and Endangered Indigenous language initiative. Work for Humankind - India, a campaign where we worked towards bridging the digital divide for farmers by empowering them and reviving millet cultivation through Lenovo's smarter technology. Currently, this program is run through a digital centre set up at the IHRD College of Applied Science, at Kanthalloor, Kerala. In this initiative,

Lenovo supported the revitalization of six different varieties of millets so far. Around 300 farmers have benefitted through this Digital Center and the marketing initiatives we set up under the Kanthalloor Millets brand. The digital centre is run entirely by the students and Lenovo volunteers, with great local support from the Kanthalloor Gram Panchayat, the Home Stay Owners Association and other local stakeholders.

The second initiative is the use of technology to support endangered indigenous languages. Motorola, in partnership with Lenovo Foundation, has added two endangered languages, Kuvi and Kangri, in its smartphones to leverage the technology making endangered indigenous languages relevant in the digital world. This is our step towards embracing inclusivity and delivering technology for all by adopting a fully localized user interface within the devices.

Let's talk more about STEM Education. What is Lenovo's vision of transforming STEM Education in India?

Our STEM education portfolio is divided into two broad pillars: STEM in schools and employability skills in STEM fields.

When it comes to STEM education in schools, one of the things we strongly focus on is the capacity building of teachers themselves, as the 'teacher' needs to be upskilled in order for the 'student' to pick it up. Our programs focus not only on enhancing teachers' understanding of STEM concepts but also on improving their digital access and teaching methods. We strive to integrate these capacity-building elements into their regular teaching schedules, allowing teachers to track their progress without the need for additional time commitments. It is important for us that students connect classroom concepts to real-life experiences. To support this, we focus on hands-on learning, whether through digital tools or tinkering labs. Our initiatives in Meghalaya, Karnataka, and Maharashtra focus on teacher capacity building, while our STEM labs in Puducherry provide students with essential hands-on learning experiences.

Coming to our second pillar – we believe that creating skilled talent is only the beginning. Providing them with opportunities to apply their knowledge through on-the-job training or internships is essential for their growth and success. Therefore, when we launched our first program for STEM careers for women in the manufacturing sector, we ensured that the participants gained practical experience, with on-the-job training at the Lenovo Puducherry manufacturing plant. Thus, we aim to create an ecosystem where students are naturally upskilled and ready for corporate roles, fully equipped with employability and life skills. This ensures that students are confident, open-minded, future-ready, and well-prepared for the job market.

Apart from digital tools in STEM, we also look at emerging technologies like Artificial Intelligence. It would be fascinating to see how AI can track a student's performance over time, enabling a systematic assessment of their growth and learning curve.

This approach could provide deeper insights into improvements in critical skills such as problem-solving and critical thinking, which are often difficult to measure through traditional examination methods.

How does collaboration play a role in driving progress within the social sector? What does Lenovo look for in CSR partnerships?

If you had asked me this question a few years ago, I would have said that collaboration in the social sector was limited. But the post-COVID reality tells a different story. I have seen a significant increase in collaboration within this sector, leading me to believe that today, collaboration is not just necessary but also a smart way to operate, particularly in the face of funding constraints. This is especially true of corporates. Let's take STEM education for example - it is one sector in India where you have the largest funding today, yet the impact of these efforts often feels minimal. I believe this is largely because we tend to work in silos.

If more corporations collaborated, it could drive systemic change. Lenovo has embraced this approach; we collaborated in AVPN's Collaborative Fund for STEM education with corporates like Micron Foundation, XTM Markets, BHP and Chevron. This fund aimed to strengthen the ecosystem around STEM education for girls and women with corporates in Singapore, India, Malaysia, Japan and India.

Having said this, collaborations are not always a perfect fit- it requires regular check-ins, learning and unlearning to ensure that the outcome is smooth. Our current partnership with your organization, Pune Knowledge Cluster Foundation (PKCF) and Meghshala Trust is one such example. This collaboration did wonders with the curriculum in Marathi, the regional language, digitizing it to take forward the teacher capacity building program in Maharashtra through the Teach with Tech program.

Regarding the second part of your question, our primary criteria for collaboration are needs assessment and geographic focus. We prefer to work with smaller organizations that have a strong desire to grow and scale. It's crucial for us to understand how these organizations view their programs: do they intend to stay within their current scope, or are they looking to innovate and expand? This perspective not only benefits the program but also provides growth opportunities for the organizations involved.

Would you like to share any special success stories or memories from your initiatives in the social/CSR sector?

I believe that CSR is not just about an individual or a corporate, it has to do a lot with the ecosystem – the beneficiaries and the communities we work with. While the CSR Act does not explicitly talk about volunteering, we recognize that much of our CSR success stems from the passion and engagement of Lenovo employees. One example I can share is the Wayanad landslide that happened recently- A team of 6 to 8 employees got together, connected with an organization that provided on-ground disaster support and facilitated a collection drive for wheelchairs and walkers, which were then shipped off as aid. The entire project was fundraised and executed completely by our employees.

In fact, every year in September, we have an event called – Love On (which happens to be an anagram of 'Lenovo') Month of Service, in which the employees practice one month of giving back to the community.

While we comply with the CSR Act, I attribute much of our success in implementing CSR mandates to the commitment and initiative of our employees.

Lenovo's Teach with Tech project with PKC will now complete four years. Can you recap the journey and share your experience of working with PKC?

The genesis of our collaboration with PKC for the Teach with Tech project emerged during a time when PKC was still in the ideation phase. I remember a conversation I had with Prof. Ajit Kembhavi, Principal Investigator of the Pune Knowledge Cluster, who stressed upon the importance of leveraging the strength of the cluster ecosystem and the country's own stalwart academia for creating the curriculum for the program. And given my admiration of the cluster concept since its inception days, I found the whole idea very interesting.

From those initial discussions to where we are today, it has been a valuable journey of learning. For Lenovo, PKC and our collaboration with Meghshala has significantly improved the efficiency of on-ground resource utilization while enhancing digital access and training for teachers. I believe there is an even greater opportunity to grow with the senior experts and advisors we have on board, and we hope to do a lot more on Teach with Tech with PKC Foundation.

Launch of the COVID-19 Clinical Database

"Through this COVID-19 database, we can ensure that India puts a step forward in contributing towards medical research for infectious diseases," said Dr. Rajesh Karyakarte, Professor and Head at the Department of Microbiology, B. J. Medical College, Pune, at the COVID-19 database launch ceremony held in Savitribai Phule Pune University.

In May 2024, a first-of-its-kind open source COVID-19 database was launched by PKC, together with various partners, including hospitals – BJ Medical College, Noble Hospital and Symbiosis University Hospital and Research Centre; research organizations – CSIR-National Chemical Laboratory, and the companies – AIQoD (Formerly- GI Bots) and EPIC-Health Information Management (EPIC-HIM).

The project, initiated in 2021, involved collecting and sourcing in-patient department (IPD) files from over 10,000 COVID-19-positive patients in Pune. The data was transcribed into a database

using extraction and analytics tools, with systems in place by PKC and its partners to ensure accuracy and originality.

The database currently holds data from over 2000 patients, capturing 100 clinical parameters, including vitals, supplemental oxygen, lab investigations, and pre-existing conditions (such as diabetes, hypertension, cancer, etc.).

Primary features of the database include its fully open-source nature, allowing for free viewing and downloading of the data. The integration of lab investigations and clinical parameters

captured over the entire hospital stay enables the user to perform a detailed case study as required. Insights from the database can help boost research, guide policymaking, and improve public health by identifying high-risk groups, enabling personalized treatments, and offering an early warning system.

PKC invites all stakeholders, particularly clinicians, students, and researchers, to provide their insights and feedback on the data to help us expand the database and make it more user-friendly.

The database can be accessed on PKC's website:
https://www.pkc.org.in/pkc-focus-area/health/covid-19-pune-clinical-database/

NATIONAL & INTERNATIONAL EVENTS

This section showcases events PKC has hosted to promote building of collaborative networks and also highlights events and meetings where PKC has been invited to present its initiatives.

Events organized by PKC

Saksham Workshops for Vector-Borne Diseases for Field Workers
20 - 21 June 2024 | Kolhapur and Gadhinglaj

Conducted in collaboration with the National Vector-borne Disease Control Program (NVBDCP), the National Health Mission and the District Malaria Office, PKC's Saksham Workshop series focuses on empowering multipurpose healthcare workers with essential knowledge about vector-borne

diseases so that they could be better equipped in controlling and preventing the spread of these diseases, particularly, dengue. Workshops in June were conducted for field workers of Kolhapur and Gadhinglaj.

Curb the Carbon Conclave: Transitioning to Sustainability | 28 June 2024 | Pune

PKC, in collaboration with Samuchit Envirotech and Centre for Sustainable Development and Gokhale Institute of Politics and Economics, hosted this conclave to promote discussions on sustainable solutions towards decarbonization.

Jumpstart Proposal Writing Workshops | 3 July and 29th July 2024

This set of workshops was conducted by Ms. Prachi Pasalkar (Program Manager, PKC), and catered specifically towards beginners new to the field of proposal writing, focusing on the framework of a scientific research grant proposal and important aspects of writing the proposal.

ChemAmaze training workshop | 18 July 2024, Chennai
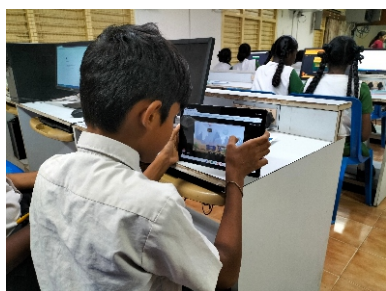
Conducted in collaboration with National Vector-borne Disease Control Program (NVBDCP), National Health Mission and the District Malaria Office, Pune, PKC's Saksham Workshop series focuses on empowering multipurpose healthcare workers with essential knowledge about vector-borne diseases so that they could be better equipped in controlling and preventing the spread of these diseases, particularly, dengue. Workshops in February were conducted for field workers of Khed, Purandar, Shirur and Daund talukas.

Teacher Training Workshop | 19 July 2024, DLRC Pune

The workshop was conducted for teachers from 8th to 10th grade at DriveChange Learning and Resource Centre (DLRC), Pune. It equipped educators with practical strategies and insights to seamlessly integrate the vision of NEP into their science and mathematics curriculum.

ConnecTree Awareness Session | 20 July 2024, Pune

The awareness session was focused on introducing the volunteers of Jeevitnadi Foundation to ConnecTree, a GPS-enabled web-based platform developed in-house by PKC which can be used to map tree cover through sapling growth and survival.

CITIZEN CENTRIC TALKS

PKC's citizen-centric talks are aimed at making science accessible to citizens and increasing scientific curiosity. They are held in a hybrid mode to ensure maximum participation. Recordings of the previous talks are available on our Youtube Channel.

Speaker: Prof. Ganesh Bagler
(Professor, Infosys Centre for Artificial Intelligence, Department of Computational Biology, IIIT-Delhi, New Delhi)
Topic: Computational Gastronomy: A data-driven science of food | 5 July, 2024

In this talk, Prof. Bagler took the attendees through his journey in the Gastronomy sector and elaborated upon the advantages of implementing a data-driven approach in gastronomy, particularly in creating healthier and more sustainable recipes.

Speaker: Mrs. Ujjwala Karle (Deputy Director and Head, Technology Group and Digital Twin Lab, Automotive Research Association of India)
Topic: An adventure ride in the Automotive Sector | 12 July, 2024

As part of PKC's Women Role Model Talk Series, this online talk focused on Dr. Karle's professional journey while providing the attendees with useful insights about establishing a career in the automotive sector.

Speaker: Mr. Siddhartha Beninger (Director, Institute for Sustainable Development at the Centre for Development Studies and Activities)
Topic: In the Interest of our Quality of Life | 2 August, 2024

This talk was conducted as part of PKC's SustEn Talk Series in collaboration with the Centre for Sustainable Development at Gokhale Institute of Politics and Economics. Held in person, the talk enabled interactive discussions on applying various ecological concepts to develop a decision support system for policy-makers to aid urban development.

Speaker: Mr. Madhav Joshi (CEO, India Health Fund)
Topic: Innovating for Public Health | 27 September, 2024

This talk was conducted as part of PKC's Health Talk Series in collaboration with India Health Fund, and held in person at IISER Pune. The talk focused on the recent innovations that have strengthened the public health ecosystem in India, highlighting the importance of deep tech, telemedicine, molecular techniques and AI.

COLLABORATIONS

In the last quarter, PKC has signed MoUs for several initiatives under the capacity building and environment verticals with EduNet Foundation and Climatora.
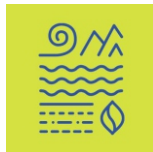
Want to be a part of PKC's *Urban Forestry Initiatives?*

Help us in our efforts towards understanding Pune's tree cover! While there are already some insights into the species' diversity and abundance, there is always room to make it better.

Through our program - **TreeVerse**, we are building a predictive model of Pune's carbon sequestration potential in the near future. We also have a program - **ConnecTree**, that enables monitoring of sapling growth.


If this sounds too technical and you are unsure about how to contribute, here are some ideas:
- Help our team get adequate access to the new plantations in your area if you plan to monitor their growth
- Share your thoughts on what can be done to make Urban Forestry a community-driven initiative
- Share an interesting technology you think could be useful and cost-effective
- Help spread the word within your community

So, are you ready to join hands with us, and contribute towards saving the environment? Connect with us on: contact@pkc.org.in

To learn more about our Urban Forestry Initiatives, visit:
https://www.pkc.org.in/pkc-focus-area/greenweb/
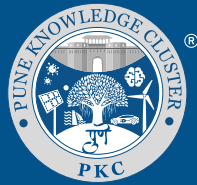
PUNE KNOWLEDGE CLUSTER

Office Address: 3rd floor, Placement Cell, Savitribai Phule Pune University Campus, Ganeshkhind Rd, Ganeshkhind, Pune, Maharashtra 411007.
+91 78238 92474 | contact@pkc.org.in | www.pkc.org.in