

CO-DESIGNING THE INDIA WORKFORCE INDEX

Insights from the Kick-Off Conference



Acknowledgement

We acknowledge the support of the volunteers from FLAME University. We are grateful to Soham Kale, Aishwarya Rajasagi, Sumedha Sudeep and Likhita Pedderreddigari for supporting the project as rapporteurs during the event.

Funding Acknowledgement

This report is part of the project *"Index of Job Market Trends for Blue- and Grey-Collar Jobs in India"*. The project receives anchor funding from the Michael & Susan Dell Foundation and is executed and supported by WageIndicator Foundation and FLAME University.

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1. Introduction

India was estimated to have over 550 million workers in its workforce as of 2024, out of which almost 450 million or 85% hold blue-collar jobs (ANI, 2024). There is an increasing shift of this blue-collar workforce from traditional sectors like construction, transport, manufacturing and services industry to growth sectors like e-commerce and logistics, retail and hospitality, mushrooming into a new genre of workers - grey collar workers, with distinctively more specialised knowledge and technical skills. While these two sections of the workforce are widely recognised as the backbone of the economy, their overall contribution to the country's Gross Domestic Product (GDP) (as of 2023) was estimated to be only about 1.25% (ANI, 2024). The disparity reflects the complexity of the Indian labour market and the long-standing inequality in income levels.

As India strives to achieve its development goals by driving more investment in labour-intensive industries and pushing for more employment generation, the need to include the blue-collar and grey-collar workforce in its growth has become imperative. There is, however, a problem of reliable data available in the country to understand the current Indian labour market dynamics, especially those impacting the blue-collar and grey-collar workforce. Existing resources either exclusively comment on the formal white collar jobs or are capable of commenting on issues and trends related to the blue-collar workforce, but only to a limited extent.

The information asymmetry impacts several stakeholders of the ecosystem, including but not restricted to workers seeking access to information on available jobs, skills requirements and potential wages, government officials in their policymaking for economic empowerment, universities designing curriculum, skilling centres preparing the youth for the job market, and industries in their production and growth planning. Timely, reliable data on Indian labour market dynamics that is accessible to all would help in capturing the gaps in labour demand and labour supply in the country, and empower workers with usable data on negotiating wages and navigating the skills and job landscape.

a. In Relation to the Existing Initiatives

There is a body of work ongoing in the country to address the information gaps, including initiatives by the State, civil society, the private sector, and other

organisations. Initiatives include the eShram dashboard¹, the announced Occupational Shortage Index², Skill India Digital Hub³, and the India Jobs and Occupation Tracker (I-JOT)⁴. The eShram dashboard relies on information that workers provide themselves and includes information, updated daily, such as top occupation sectors by state and Universal Account Number Cards generated for unorganised workers (Ministry of Labour & Employment, 2025). The I-JOT, on the other hand, utilises the PLFS to give quarterly updates on the labour force participation rate, gaps by gender, and trends in occupations by gender and states (Mishra et al., 2024; Tandon et al., 2025). Additionally, a 2017 working paper published by the World Bank explored how online job portals, in this study, Babajobs⁵, could be used to create a tool that gave details about work conditions and skills needed using techniques such as text analysis and forecasting (Nomura et al., 2017).

Countries such as Indonesia, South Korea and the United States have created vacancy information and job-matching platforms. The Occupational Information Network (O*NET), created by the United States, uses several resources and methodologies, including employer job postings, government programs, machine learning and web research in order to provide a database of more than 900 occupation profiles and 55,000 jobs (O*NET, 2025a; O*NET, 2025b). In Indonesia, as part of their labour market information system, there is the job-matching platform AyoKitaKerja, which has details on job vacancies for workers and potential candidates for firms and employers. However, it currently caters to one segment of the market - low-skill workers (Testaverde et al., 2021). In contrast, South Korea has a more advanced labour market information system, WorkNet, that gathers data through partnerships as well as government agencies, has a rigorous validation process and caters to a wider range of occupations (Testaverde et al., 2021). These methodologies can be incorporated into the workforce index as it aims to provide similar information.

There have also been initiatives that cater to several countries, often for a certain sector. The Online Labour Index, an initiative by the International Labour Organisation (ILO) and University of Oxford and funded by the European Research Council used English, Russian and Spanish platforms that gave information on freelance roles. The project ran from 2026-2024 (Furrer et al., 2025). Eurostat utilises online job advertisements to track demand

¹ <https://eshram.gov.in/dashboard>

² <https://www.pib.gov.in/PressReleaseIframePage.aspx?PRID=2097431®=3&lang=2>

³ <https://www.skillindiadigital.gov.in/home>

⁴ <https://icrier.org/publications/india-jobs-and-occupation-tracker-i-jot/>

⁵ <https://babajobs.co.in/>

in the information and communications technology sector (Eurostat, 2025). Finally, UNESCO-UNEVOC created the 'Global Skills Tracker'⁶, a dashboard where one can view the top common and specialised skills by occupation and country. It also has metrics pertaining to sustainability, technology and the use of Artificial Intelligence in the sectors (UNESCO-UNEVOC, 2025).

While there are certain similarities between the existing initiatives and our index, such as studying vacancies through job portals, using datasets like the PLFS, classification by gender and occupation, and quarterly updates, there are certain aspects that are unique to the workforce index. Currently, in India, there is no index created that uses both multiple online job boards and secondary resources, such as the PLFS and the Consumer Pyramids Household Survey, to estimate supply and demand. Moreover, wages are not commonly included in indices, and the workforce index will integrate information from WageIndicator's existing salary database, minimum wage and living wages databases. Finally, there is no index addressing blue and grey collar workers.

b. Project Partners

To address this information asymmetry in the labour market, WageIndicator Foundation, IIM Ahmedabad and FLAME University have embarked on this project to create a credible information source focusing on the Indian blue-collar and grey-collar workforce. The project started on November 1, 2025 and was officially launched during the two-day stakeholder consultation conference held in Pune between November 27-28, 2025. The project receives anchor funding from the Michael and Susan Dell Foundation, and is also supported by WageIndicator Foundation and FLAME University at present. The project is open to include more funders as it progresses.

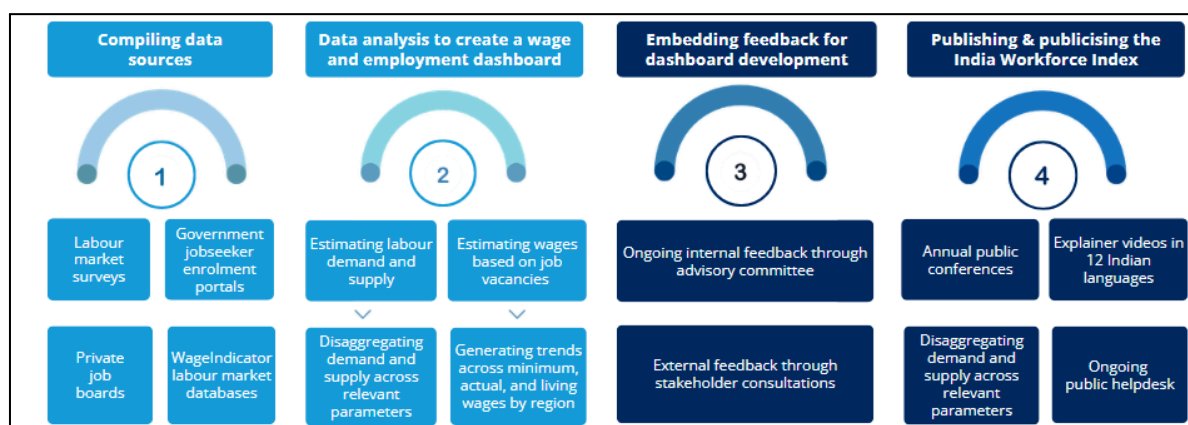
WageIndicator has carved its niche in creating independent labour market data that is accessible and useful to all stakeholders. Currently, we provide information on minimum wages for 208 countries and territories, living wages for 183 countries, labour laws for 145 countries and wages and salaries for 75 countries. In 2006, we built Paycheck.in, the publicly available India-specific labour market information platform, integrating several critical, disaggregated information on minimum wages, labour laws and careers. In 2008, IIM Ahmedabad joined as a research partner, and in

⁶ <https://unevoc.unesco.org/home/Global+Skills+Tracker>

2013, the Monster Salary Index was launched in collaboration with Monster India. The expertise from the ongoing portfolio of data, research and services across 208 countries and territories, and across public and private sectors is advantageous for this initiative to build India's labour market index for the blue and grey collar workforce. Besides the WageIndicator Foundation, FLAME University and IIM Ahmedabad teams, the project will be supported by an advisory board comprising researchers and practitioners from India, as well as other countries, who focus in this area.

The India Workforce Index intends to map the labour market trends for blue and grey collar workers in India. The labour demand will be tracked using the vacancy data, the labour supply will be analysed using the survey data. The data on wages will be tracked as well, and triangulated with WageIndicator's own databases, including those on living wages and minimum wages. Figure 1 provides a brief outline of the the proposed work.

Figure 1: Outline of the proposed plan to create the India Workforce Index



c. Inaugurating the Stakeholder Consultation

The stakeholder consultation was aimed at building on the already available knowledge and experiences across the country. The deliberation succeeded in bringing together practitioners, researchers, and policymakers in one room to dialogue and inform the conceptualisation of the index.

Professor Prasad Pathak, Dean of Research at FLAME University, inaugurated the conference, emphasising the need to address these nationally-relevant issues and

information gaps pertaining to the Indian labour market through purposive and collaborative research.

2. Insights from Panel Discussion

The consultation had two panel discussions spread over the two days. The panels were moderated by members of the WageIndicator Foundation, and the speakers included representatives from different members of the ecosystem: researchers, practitioners, Foundations and multi-lateral organisations. We consolidate the key learnings from the two panel discussions in each of the subsections.

a. Tracking the trends in India's labour market for blue and grey-collar workers

The first panel discussion aimed to track the labour market trends for blue and grey collar workers. Table 1 below lists the moderator and panellists for the session.

Professor Biju Varkkey from IIM Ahmedabad introduced the project and motivated the need for such an index in the Indian context. Bénédicte Leroy De La Briere placed the project in line with the earlier work that was done by the World Bank Group at the global level. Anil D'Souza shared the need for a business case, which would be required to sustain the project in the long term. Ankur Dalal contributed to the discussion on the changes in labour codes in India and how that could affect the economy. Philip Mathew shared his insights into the practical aspect of the implementation of a project at the pan-India level and shared how we could learn from the experience at Magic Bus India Foundation. The rest of the section consolidates the key learnings from the discussion.

Table 1: List of speakers and moderator for Panel Discussion on Day 1

Moderator	
Paulien Osse	Co-Founder, WageIndicator Foundation
Speakers	
Prof. Biju Varkkey	Indian Institute of Management, Ahmedabad
Bénédicte Leroy De La Briere	World Bank India
Anil D'Souza	Fairwinds Capital

Ankur Dalal	International Labour Organization
Philip Mathew	Magic Bus India Foundation

Professor Varkkey emphasised that the information asymmetry that is present in the ecosystem is more pronounced for blue and grey collar workers and less for those who are engaged in white-collar jobs. Metrics to study job search, job choice and decision-making processes of the white collar workers have been studied earlier, but there is a gap when it comes to the rest of the economy. India is experiencing a surge in supply of blue and grey-collar workers, but matching the jobs with the person with the right skills poses a major challenge. We need a framework to study the labour-market trends of these workers and develop an index to help us track the changes in the economy. This is the core motivation of this project that we are undertaking. While there were questions from the panel about the sustainability of a public good in the long term, the project will be undertaken with funding from the partners in the short term, and the index will be developed as a public good. The long-term sustainability of the index needs to be thought through if the index needs to be useful to all stakeholders in the longer time frame.

Philip Mathew mentioned that organisations such as Magic Bus India Foundation, which are involved in training the youth, emphasised the importance of the index that would capture the in-demand skills in the economy. There are a number of skilling partners in the economy, but there is a need to differentiate between the type of skills that are built in the youth and those that are required in the type of jobs that they select. For instance, the service sector contributes to more than one-third of the GDP, and the skills required in that sector are customer-centric and vocational skills will not be sufficient for this group. Magic Bus follows the ILO Framework of Skilling and provides 270 hours of skill training to youth from the Economically Weaker Section to help them integrate into the job market. He reflected on the potential and usability of the index designed through this project and shared that such an index will face direct competition from the tools that are created by organisations for their own needs and localised tools that capture more nuances.

There are several organisations that operate at a hyper-local level and are already in touch with the potential hiring organisations. Thus, they can map skills that they require at that level and do not need to use a broader tool for their operations. A new

index needs to be transparent about data and objective for it to be adopted and used by different stakeholders. Blue-collar staffing companies that require staff, but often lack the appropriate technology to track the labour market trends, can use such a tool. If the index can use appropriate technology to reach a wider group and cater to the different needs of the stakeholders, this can become useful. The potential use cases will only be clearer when the index is developed and used by different user groups. He also emphasised that the organisations face the challenge of attrition and that if the index could find a way to support retention, it would be useful to many. If the index could find a way to track the migrant group and their movements in search of job opportunities, it would also be helpful.

The consultation conference was closely followed by the implementation of the Four Labour Codes in India. **Ankur Dalal**, representing the ILO India, placed the index in the context of the changes in the economy. The index will be useful and interesting depending on the choice of variables used in the dashboard. According to the new laws, which will be more stringent than the older ones, companies have to inform about all the vacancies. The Ministry has mandated employers to report all empty seats in their employee quota. So this should be visible in their portal. The audience pointed out that the challenge, however, remains in the aspect of the digitisation of such vacancies. If the companies comply by sending over the vacancy posts that are not digitised, the vacancy will still not be available for all. Ankur also other mentioned other initiatives such as an agreement with Swiggy for placing gig workers and domestic workers in suitable positions, that could be useful for the project. Reaching workers in the construction sector, where informality is very high, could pose a challenge.

Migrant workers, who often do not have the required language and digital skills, are also hard to capture in an index. There is a need to adopt novel methods that will include migrant workers who do not have local language knowledge, are digitally illiterate, do not have access to technology, and might not be able to produce certificates. The ILO has currently undertaken a study on the International migrant workforce in collaboration with the Indian Government. If the index includes these groups of workers, it will be useful.

The work of the India Workforce Index becomes all the more relevant in the context of reforms brought in by the recent labour codes. For example, the reforms promote

and legitimise contractual work under the Full-time equivalent category. So it can be expected that there will be frequent movement of labour, and a fund for reskilling of workers may become necessary to ensure a smooth transition from one job to another.

The reskilling fund has increased the amount of reskilling and upskilling of the workers. The component of including wages in the index makes it very interesting since the aspect of wages is even less tracked at present. There is the concept of floor wages. There are more than 10,000 minimum wages in India right now. The wage structure has been simplified (due to wage codes), which will drastically reduce the minimum wage. The proposed index can help in compliance monitoring the skills and assess the wages in the economy, and ensure that companies that solely focus on profit are also complying with at least the minimum wages. The Government is also leaning towards such metrics of measurement. Thus, this index would be valued in the ecosystem.

Bénédicte Leroy De La Briere mentioned that the World Bank India Group has been looking into labour capital markets. Labour Observatory and Labour Market Information Systems, commonly known as LMIS, have also been developed in other countries such as Chile, South Korea, and Ethiopia. The World Bank has been involved in developing the LMIS and supporting the methodology in different countries such as Indonesia (Testaverde et al., 2021). Bénédicte shared the learnings from different initiatives and connected them with what we can aspire to do for India. The household surveys conducted by NSSO are widely available for use by everyone in the ecosystem. However, for a lot of data collected by the Government, the office remains the sole custodian of such data, and the data is not released for wider usage. Thus, the role of Governments is crucial in making data available for more informed decisions.

In terms of the index that we aim to create, this needs to be clear about the objectives, and the index needs to be more informative in comparison to the others. For example, it remains unknown whether eShram is actually used by workers to navigate jobs. People can use AI to search for jobs, but it is important to have a portal where both job seekers and hiring managers can go to meet their objectives. Besides showing the in-demand jobs and skills, it would also be interesting to have information about job trajectories to help make informed decisions. Singaporean LMIS

has the information on the trajectory. For example, if someone wants to be a chef, a path to showcase the skills from the entry-level job to the possible end-goal could be documented. The existing LMIS could aid in this representation. While the usage of technology is an important component in the design, creating a human-centric design is important. Choice of languages, voice-response options, and human assistance at different levels should be incorporated into the design.

The panellists stressed the importance of having (hyper) localised data, disaggregated based on the needs. Instead of keeping it a stand-alone index, collaborating with the existing initiatives would be helpful. Given the low female labour force participation in India, it would also be useful to account for the gender aspect in the design. Finally, it is important to keep the sectoral decisions in mind when designing the index. A few learnings from the skilling sector have been the low conversion rates of skilled workers getting employed; lack of data on the rural sector: most rural workforce are being recruited into industries through Inter-state staffing institutes and highly localised recruitment companies. The Urban workforce is largely using the mainstream job portals.

The audience and the panellists also reflected on the efficiency of the market in the context of the index. One of the hypotheses in the literature is that a lot of labour markets in surplus economies (like India) are efficient. In skills training programs, not to get someone a job but to fill a vacancy with a better-trained person. This does not increase the total pool of jobs, only shifts people across jobs. With this hypothesis, one would not need a system such as this for an employer. So there is a need to be cautious of the stakeholders and what the index attempts to address, if it truly adds value. If an employer is not using the tool, it would tell us about the overall state of the market that the solution attempts to address. These concerns will be taken into account when the index is launched and through subsequent consultations with the ecosystem players. Stakeholders we are targeting might not be able to analyse the data. This portal will be helpful if a third party could interpret the data and help this data reach our stakeholders.

b. The landscape of occupation, skills, and wages in India

The second panel discussion, held on the second day of the consultation, aimed to delve into the landscape of wages, occupations, and skills for blue and grey collar workers. Table 2 below lists the moderators and panellists for the session.

Professor Bornali Bhandari from NCAER introduced the methodology to capture skill shortages and skill gaps in India. Dr. Aasheerwad Dwivedi, who represented FMS, Delhi University and FICCI Economics Forum, spoke about the challenges of measuring skills from the available surveys and emphasised the importance of using multiple data sources, not just PLFS, in the project. Shriya Sethi, from The Convergence Foundation, spoke about the on-ground challenges of operating under data constraints, and the lack of awareness among the population and suggested the use of investment data to capture the upcoming labour-market trends. Professor Vinoj Abraham from the Centre for Development Studies, Kerala, consolidated the learnings from his research in terms of computing wages and suggested considering localised apps in capturing the demand and supply in the economy. In his concluding remarks, he spoke about the transition between education and the economy for the youth. The trail of conversation was further consolidated by Dr. Apoorva Palkar, the Vice Chancellor of Maharashtra State Skills University. The rest of the section consolidates the discussion.

Table 2: List of speakers and moderator for Panel Discussion 2

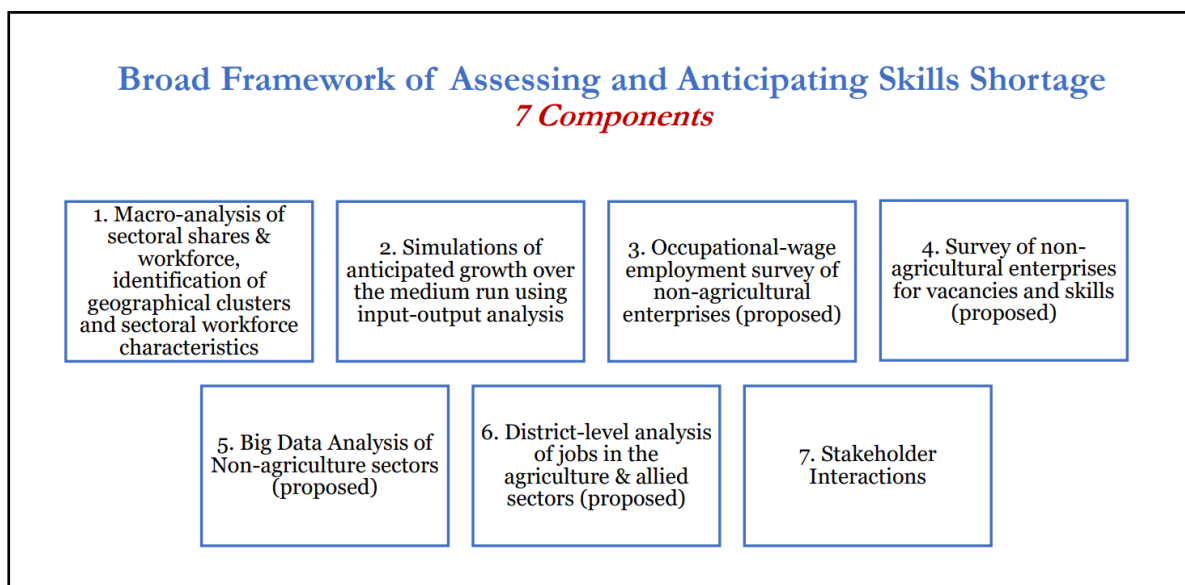
Moderator	
Dr. Leena Bhattacharya	WageIndicator Foundation
Speakers	
Prof. Bornali Bhandari	NCAER
Prof. Vinoj Abraham	Centre for Development Studies, Kerala
Shriya Sethi	The Convergence Foundation
Dr. Aasheerwad Dwivedi	FMS and FICCI
Dr. Apoorva Palkar	Vice Chancellor, Maharashtra State Skills University

Professor Bhandari presented the methodology to create a dynamic framework for skill gap assessment that can be regularly updated to predict skill requirements (Bhandari, 2025). Through her presentation, she made a clear distinction between skill gap (question on the competence of the employees) and skill shortage (inability to fill a vacancy), and iterated the the requirement of a higher sample size, frequently conducted surveys, and data that can be disaggregated for creating a meaningful index. She walked the audience through the methodology, the projections that were made possible with the existing data, and the challenges faced when researchers want to make nuanced distinctions that are often not captured in surveys such as PLFS.

Even when using specific data like the PLFS, there is a need to know the limitations. In PLFS, textile workers are missing for the state of Haryana, so the migrant workers are not captured. Instead, ASI has information on textiles in Haryana. PLFS does not distinguish between hand loom/ power loom, it has the same NCO digit code, in that case, reliance on stakeholder surveys would be essential to capture the insights into job roles that are facing, or will face, skills shortage in the 'Weaving of textiles' sub-sector such as: Weaver-Handloom, Jacquard/Loin loom, Weaver-Power loom, Weaving assistant (Handloom). Further, even information on solar and wind energy does not exist in PLFS separately, based on the NIC codes. Thus, relying only on PLFS will not be helpful because it is not specific enough; it gives an indication, but is insufficient.

Due to specialisation and rapid technological change, there is a need to get into details, which NCAER did using stakeholder surveys. The questionnaire was designed based on PLFS, and based on the role, the interviewees were asked about technical and vocational skills. The survey also included detailed descriptions of livestock and clusters. This helped in identifying labour shortages and geographic clusters based on location. Thus, when designing the index, it is important to start with the definition of blue and grey collar workers and identify the use case of the index, whether it is to inform policy about the number of vacant jobs or engage in the discourse on the corresponding wages. Local consultations and stakeholder interactions tell of dynamic changes and upcoming challenges. The broad framework for assessing and anticipating skills shortage is presented in Figure 1.

Figure 2: Framework for Assessing and Anticipating Skills Shortage



Source: Bhandari (2025)

Dr. Aasherwaad Dwivedi, speaking about the usefulness of the index for an industrial body such as FICCI in collaborating on this project, mentioned that the uniqueness of the index needs to be accounted for in relation to similar indices that exist in the ecosystem. He suggested a small pilot and considering a specific sector, a suggestion that was commonly shared by the attendees, which was then extended to a macro level. A pilot, at a small scale as compared to the Occupational-wage employment survey, will be helpful of the need from the supply and demand side. The challenges in terms of measuring the skills were also highlighted, since the surveys usually have limited questions related to measurements. He also raised concerns about the self-reported aspect of the surveys and the need to consider alternative sources of information for validation.

Shriya Sethi, from The Convergence Foundation, shared her learnings from working on the problem statement on the mismatch between youth not finding jobs and companies not finding the perfect employee. She shared knowledge about her research and insights into working with the state of Uttar Pradesh. She mentioned that there is a lack of awareness about the type of jobs that exist, and a disconnect between that and the skills that are taught at the university. The job boards, which are designed to cater to all job seekers, often cater only to the urban youth. The job advertisements are mainly for services and manufacturing jobs.

The hiring agencies in the rural sector are primarily leading the recruitment drives, and the data is proprietary and not easily accessible. To address the problem statement, her team had approached the India staffing federation for information. They found that the top 5 organisations make up 20% of the market, the rest are hyperlocal and do not have centralised data.

PLFS, which is often the most used survey, is not comprehensive enough, and other data sources are often not available. The employment bureau itself is often not updated and not digitalised. Finally, the job boards provide the stock of data, and the need for future projections still remains. Investment data could help in this regard. If a port is coming up in a certain geographical area, then this will create a job opportunity of a certain kind, and tracking such changes at the local level could help in building the index. Existing initiatives, such as those started by Convergence Foundation in Uttar Pradesh, and digital platforms by Wadhvani Foundation (publicly available short videos to explain jobs), can be considered in the road ahead for designing the India Workforce Index.

The panellists engaged in a lively debate on whether the approach should be sector-based or geography-based. Within a sector, such as textiles, there will be manufacturing and associated roles, which are fundamentally different job roles and will have different associated skills. Within a geography, we can examine how the different jobs respond to each other, which can feed into the index. We can look into research insights and compare them with the insights from implementation to make an informed decision.

Professor Abraham dwelled on capturing the skills and the suitability of the data to be used in the index. He made a point of differentiating among the skills to determine who should supply the skills. For instance, what skills should be provided by the market (specific to a certain job profile and industry) and which ones should be provided by the state (public-good merit)? This decision will help in designing the use-cases of the index, in terms of what statistics are seen by which stakeholders. The decision could also be based on the answers to questions such as: Is it about what firms require or a public good skill? Who needs skills, what kind of skills, who will benefit?

In terms of demand-side data, the government portal gives data on this. There is also traditional employment exchange data, such as National Career Services (NCS), as well as data from state and district portals that can be used as an official source. Given that these vacancies are there, how would the economy be? Such projections can be made with NCS. There are no official sources that capture all demand data. Employment exchange is a source from which we know job vacancies, at the state level and sectoral level. But the information is only what is added to the portal. So it might not be a true reflection of the real situation.

Some of the vacancies are only provided on local WhatsApp groups, and the hiring is done immediately, making it unnecessary for the recruiters to advertise them on job portals. Pilot initiatives can be conducted to gather local information. We also need to think about how deep we can go in terms of collecting and providing wage data. PLFS has some information on wages. A lot of demand-side job advertisements do not post the salaries, but only an indication that they will be based on education and prior experience. There is a need to think of the best way to proxy such information. Finally, for compiling and NIC and NCO mapping, it would be useful to map all data sources to the nationally representative surveys and to make them representative of the region to make them useful for policymakers.

Prior research conducted by Professor Abraham looked into the connection between the high-tech industry and academia, and he shared his insights from his research. Currently, such linkage exists in the form of university placements. At present, academia provides what industries require in collaboration at the Research and Development level. There is untapped potential for collaboration and skilling—especially at the university level. A meaningful metric could be the gap between university requirements in terms of courses, enrolment and actual placements and skills used. Many capable youth might not be seeking jobs; it would also be good to account for this, if possible.

Dr. Apoorva Palkar shared her insights on measuring industry-relevant skills when designing the course for specific cohorts of learners. Dr. Palkar spoke about the measurement issues and the challenges faced in terms of fragmented data and technology, and poor governance, to make informed decisions. She stressed that a university cannot be viewed as a stand-alone institution but should be viewed together with the economic landscape. Creating an index and analysing the job

options for all students, especially those at the bottom of the pyramid, is crucial. Employment increases may be driven by investment, not necessarily by workforce readiness. Hence, there is a need to track career progression, digital experience, and technology adaptability. The learners also need to possess market credentials for employability. Viksit Maharashtra is aiming towards bridging these gaps, but several systemic challenges still remain. There is a need to identify the skills gaps and track the macro-level KPI to understand the future job opportunities, and accurately track blue/ white collar workers, their skill development, career progression pathways and wage disparities.

Maharashtra is following digitalisation cues from the initiative of the World Bank in Indonesia. The key players are universities, colleges and employment portals. There is an attempt to use AI to effectively forecast future skills gaps by drawing job vacancies from job portals. An initiative such as this can use government data and geographical information to accurately predict jobs and future skills. Of course, there is a need to negotiate data-sharing frameworks, understand regional aspirations, unmet demands, and emerging opportunities. Currently, academia, industry, and government operate in silos. The goal would be to bring them together towards shaping such an initiative.

3. Unpacking the knowledge from the Ecosystem

The consultation had two sessions for the attendees to participate and share their learnings with the group. The first session was moderated by Sharvi Dublsh and Garima Manocha from the Michael and Susan Dell Foundation, and Jaya Luhana from Tech Mahindra, Abhishek Waghmare from Data for India and Sneha Nawage from Dasra shared their experiences.

Sharvi Dublsh and **Garima Manocha** introduced the Foundation and provided a broad overview of the initiatives that the Foundation undertakes. The Foundation began in 2005 and focuses on four sectors: K-12 education, University Success, Jobs and Livelihoods, and Financial Services. The India Workforce Index will be under the Jobs and Livelihoods sector. They emphasised the importance of having access to reliable and timely trends on labour demand, supply and wages. The workforce index can aid in designing skilling programs tightly linked to market demand. It can enable better counselling for job seekers to pursue progress and jobs. It can also help in

ensuring workers receive desirable wages and that there is better job retention. Representatives from other organisations working in the jobs and livelihood sector were introduced, and they discussed their work and learnings from the field.

Table 3: List of speakers and moderators for the Co-Creating Knowledge session on Day 1

Moderator	
Sharvi Dublsh	Michael & Susan Dell Foundation
Garima Manocha	Michael & Susan Dell Foundation
Speakers	
Jaya Luhana	Tech Mahindra Foundation
Abhishek Waghmare	Data for India
Sneha Nawage	Dasra - Social Compact team

Jaya Luhana elaborated on the work in the Employability sector that the Tech Mahindra Foundation does. They focus on two aspects - direct implementation, including digital academies, logistics and healthcare, and partial implementation. One of the challenges they face is having a lot of data but being unclear on how to utilise it. To solve this, they teamed up with industry partners to understand the skills and counselling workers require. Additionally, every six months, they conduct a survey of employers since the skills that are in demand change frequently. For instance, in the past year, it was found skills were needed in the medical sector. She emphasised the importance of knowing what skills are in demand in order to tailor counselling accordingly.

Abhishek Waghmare from Data for India discussed the team's research on topics such as the economy, work, and living conditions, as well as suggestions for the index based on his learnings. The team at Data for India has conducted research using survey data such as the NSS, PLFS, and administrative data. Recently, they studied occupations in which graduates of India are employed. One area he suggested that the index could contribute to is the gap between wage rates and annual household incomes. Currently, there is limited data from the Labour Bureau

and Tax departments, but he also recommended working with the National Household Income Survey when it is released.

Sneha Nawage detailed Dasra's work in building systems to ensure well-being and better accountability for blue-collar workers. The team at Social Compact focus on six outcome areas - wages, occupational safety and health, gender parity and inclusion, prison system, access to entitlements, and the future of work skilling. The foundation has a set of 80 indicators regarding work that they ask if employers follow, such as providing an appointment letter or safety training. They also speak to workers to understand their experiences. Often, there are policies in place for employees, but this is not extended to the blue-collar workers. At other times, even if there are policies, they are not implemented, such as contractors not paying blue-collar workers when on leave, or maternity benefits are not given, and instead women's jobs are terminated if they inform the workplace that they are pregnant. She mentioned that 74% of workers earn less than minimum wage, and workers often work overtime without pay or are given a lower wage and told it is the market rate. These practices are not always visible to business leaders, so the foundation has been presenting the data on blue-collar workers to aid leaders in making informed decisions. For example, there is a construction company that employs approximately 3 lakh workers and is now training them and making more workers permanent so that they can access benefits. The challenges blue-collar workers face can be kept in mind while creating the index.

4. Stakeholder Consultation on Data, Methodology and Ecosystem Mapping

The session titled 'Connecting the Dots' was moderated by **Fiona Dragstra**, Director WageIndicator Foundation and **Professor Biju Varkkey** from IIM Ahmedabad. The session was conducted to equip the attendees with more information about the project and help consolidate the key learnings of the two days so that they could meaningfully contribute to the group discussion on identifying the data, methods and mapping the ecosystem players for this project. The moderators motivated the need for the project and explained the project in more detail.

They outlined the different user groups that our index would cater to. The index would be designed keeping in mind different users, including, but not limited to, workers and worker representatives, skilling and educational institutions, employers

and industry associations, and government policy makers. The index will capture data and provide three key metrics on labour supply - measured as the number of enrolled job seekers and estimates of attrition from the existing workforce (coded by job title, education level, place of residence) and labour demand - measured as the number of unique job openings across job boards, and wages. While the index will have a baseline design to appeal to different users, it could also be shaped dynamically, depending on the usage, feedback, to the needs of the stakeholders.

A common feedback that occurred at different points of the consultation was to focus on a few states rather than the country at large. In line with this, it was decided that the project will draw trends for the country where possible, but focus on a few states and sectors in the first year, which will be decided on the review of literature and scoping the available data. The index will be updated quarterly, and it will also be reviewed every half year by different stakeholders. Once the working prototype is published and has undergone peer review, it will also be translated into different languages to ensure visibility and usability across the states.

The consultation was designed with a clear purpose of ensuring inclusion of stakeholders' perspectives from the inception phase, so that every participant could contribute to the iteration and the generation of the tool. There were two group activities scheduled over the two days for the attendees to contribute towards identifying data sources, discussing the proposed methodology, and mapping the ecosystem. In this section, we dwell on the data sources that were identified in the discussion, the proposed methodology, and the group inputs towards mapping the ecosystem players. While we will start our project using these, the list is not exhaustive, and we aim to update it over the course of the project.

a. Data

The group work on Data was moderated by **Dr. Rupa Korde** from FLAME University and WageIndicator Foundation, together with **Kulvinder Singh** and **Mekhala Kumar** from WageIndicator Foundation.

During this session, stakeholders discussed various resources for information on labour demand and supply. They also identified proxy sources that could be used for the validation of demand and supply data found. Additionally, they considered market signals such as activity indices to be important, including RBI, NCAER, CRISIL and

GST data. The full list of identified data sources and their links is presented in Appendix A.

Moreover, stakeholders posed questions such as whether working on primary sources would be feasible, which steps need to be taken first while building the index, and how the classification of work would occur. Suggestions for data collection and research were provided as well. This included gathering rural data through collaboration with panchayats and the Ministry of Rural Development, as well as creating a labour research group similar to the Institute of Labour Economics (IZA). Finally, challenges of collecting and working with data were discussed. This is discussed in detail in the *Challenges and Way Ahead* section.

b. Methodology

The group work on Methodology was moderated by **Professor Biju Varkkey** from IIM Ahmedabad and **Puneet Kumar Shrivastav** from WageIndicator Foundation. The team discussed the potential methodology that could be followed while developing the index.

The index should build upon the existing frameworks. Dependence on secondary sources causes data gaps, as it is difficult to map and pool all the secondary sources together. Also, the horizontal and longitudinal comparison of data would be difficult if the index is based only on the secondary data sources. The existing data sources may dissolve, and new secondary data sources may evolve over the period of time. It would be difficult to cover all such data sets, as they vary in their nature of collecting and disseminating the information.

The possible variables that could be used to create the index include location/ place of residence /job (state, region, district rural, urban), age, marital status, religion, social category, educational details about general education, technical education, vocational education, professional education, highest level of education, main subject of education, employment status, employment details, skill, name of skill, area of skill, source of skill, income, employment and its categories, occupation, industry/sector of employment, requirement of job, educational requirement, skill requirement, experience, nature of job, demand for further skill, monthly income/salary/wages, details of on-job training, obsolescence and shortage of skills

etc. The implications of these variables and their usability have been discussed in Table 4 below.

Table 4: List of Possible Variables for India Workforce Index and their implication and usage with Demand, Supply and Wage metrics

Variables	Implication in general	Demand side (Y/N)	Supply Side (Y/N)	Wage Side (Y/N)
Age	Discrimination/ bias in employment, Identification of fresher worker /experienced worker	Yes	Yes	Yes
Gender	Discrimination / bias / preference in employment	Yes	Yes	Yes
Education	Eligibility form both demand and supply side, establishing thread / commonality while mapping/ matching demand and supply	Yes	Yes	Yes
Education type/ nature	General, Vocational, Technical, Professional etc.	Yes	Yes	Yes
Educational requirement	Level of education required for the job	Yes	No	No
Qualifications	Eligibility form both demand and supply side, establishing thread / commonality while mapping/ matching demand and supply	Yes	Yes	Yes
Skills	Name/area of expertise skills will help in mapping and matching the skills from both demand & supply side, Eligibility form both demand and supply side, establishing thread / commonality while mapping/ matching demand and supply, source of skill, obsolescence and shortage of skills	Yes	Yes	Yes
Level of skills	Low, medium, high (learner, proficient, expert)	Yes	Yes	Yes
Years of experience	Establishing thread / commonality while mapping/ matching demand and supply	Yes	Yes	Yes
On job training/ Apprenticeship	Low, medium, high skills (learner, proficient, expert), Establishing thread / commonality while mapping/ matching	Yes	Yes	Yes

	demand and supply			
Job /Task description	Establishing thread / commonality while mapping/ matching demand and supply	Yes	Yes	Yes
Formality of the work	Understanding the wage dynamics, decent work dynamics, social security dynamics, working condition dynamics, vulnerability	Yes	Yes	Yes
Employment Status (Fresher /Unemployed, Experienced)	Understanding the nature of jobseeker (first timer or experienced)	Yes	Yes	Yes
Experience(Fresher/Experienced)	Level of experience required for the job	Yes		
Primary and subsidiary jobs	Aggregation of the complete situation of employment, Hardship, Moonlighting, growth aspirations, income, etc.	Yes	Yes	
Full-time or part-time jobs	Gig work, flexible working, aggregate demand and supply of work and workers, preferences	Yes	Yes	
Level of disaggregation	Will help in defining the occupation code and making of dictionary of occupations and classifying by the colour of collar	Yes	Yes	
Job-based requirement data (mobile, helmet, motorcycle, toolkit)	Will help in classification in Colour of Collar (Blue or Grey), Employment enabling condition, preference of employers, better outreach or the service delivery by the workers, cost-effective employment, gig and platform work	Yes	Yes	
Type of employment (wage, self, casual)	Will help in classification into Colour of Collar (Blue or Grey), together with the type of job performed	Yes	Yes	
Wage payment/receipt interval/frequency	Informs the classification in Colour of Collar (Blue or Grey), wage/ earnings frequency viz, daily, weekly, or monthly			Yes
Working Hour	Informs the classification in Colour of Collar (Blue or Grey), gig and platform work	Yes	Yes	Yes
Working Shift	Informs the classification in Colour of Collar (Blue or Grey), Flexibility, Operational	Yes	Yes	Yes

	capacity of employers, gig and platform work			
Migration patterns	Understanding and mapping the flow and stock of workers, impact on demand and supply, Other associated issues of safety, security, living conditions, access to services and associated benefits, stability	Yes	Yes	
Seasonal nature of the job	Understanding and mapping the flow and stock of workers, impact on demand and supply, stability, work/ employment transition	Yes	Yes	
Cost of living	Mapping the source and destination of workers and workplaces, Determination of minimum wage, living wage, actual wage and other associated dynamics			Yes
Socio-cultural factors (Religion, caste, marital status)	Mapping the contextual factors of employment, Preference, bias, discrimination, network, occupational mobility, etc., affecting demand and supply dynamics	Yes	Yes	Yes
Income or a proxy variable	In order to understand the growth and upward mobility, and also to understand the Quality of life/living standard, trends may provide insights for further expansion			Yes
Language requirements vs language spoken	Mapping or matching the local skill demand & supply- the Preference/ bias/discrimination, suitability, fulfilling local skill catering needs	Yes	Yes	
Investment patterns	Mapping or matching skill availability and requirement planning- based on demand projection and future skill requirement assessment against the investment	Yes	Yes	
Location	Mapping the locational data (availability & requirement)- Rural, Urban, Semi Urban, Metros, Tier-2, Tier-3, Cities, District, State, Region, etc. Mapping locational advantage, clusters, and industrial corridors	Yes	Yes	
Sector/ Industry	Mapping the blue-collar workers' / gray collar workers' skills according to industry/sector requirements and sector-specific growth	Yes		
R&D and Innovation	Firm/establishment-based (Micro) R&D Investment, Macro Level R&D & innovation,	Yes		

(Investment)	mapping the need for skilling and reskilling			
Skill Obsolescence	Indication towards effective planning and optimum utilisation of resources	Yes		

However, in order to develop the index, there would be a requirement of preparing a dictionary of requisite skillsets- classification of skill on a more specific level, with detailed differentiation between skill and task (depends on the work design differentiation of primary skills and thinking about how the organisation 'uses' an employee, and which skills are being prioritised. Also, to account for the undocumented skills, there would be a need to identify gaps in recognised prior learning (RPL). Assessment agency variation in credentials mapping and acceptance of certification. There may be issues in awarding the body's goodwill and recognition among the employers and bargaining power of the job seekers due to a lack of standardised credentials in case of deviation from the National Council for Vocational Education & Training (NCVET) guidelines.

The index should also cover the job seekers' perspective. The index should also coexist with the indicators that cover the risk of discrimination (such as age, gender). And it should also cover the mapping of enabling/ support services, especially for women (such as safety index). It should also use the crowd-sourcing data and the hyperlocalisation mode of recruitment.

The index should also take into account the migration corridors (in terms of source and destination) and the role of the network. Data from the Indian Staffing Federation may also be useful in designing the index. Additionally, it should consider those who supplement their income through multiple jobs, decent work standards, and protections and benefits that are part of social security.

The team reflected that having an exhaustive list is not possible, and finding an absolute number is difficult. Therefore, indexing helps in solving fragmentation, and it helps in the decision support system. Integration is a big challenge. The index would serve the purpose of policy formulation and effective planning as it may provide the information to the grassroots (district) level and would enable policy makers to identify which districts are the most problematic in the detailed classification of jobs. Comparison between district-level data sets would be possible. The index is useful as it would be using the 3 pillars together, i.e. demand, supply and wages.

c. Ecosystem

The group work on Ecosystem mapping was moderated by **Dr. Leena Bhattacharya**, together with **Komala Rangaswamy** from WageIndicator Foundation.

The India Workforce Index initiative is situated within a very dynamic and intricate global ecosystem. The stakeholder mapping and consultation process has revealed the vast scope and potential impact of the initiative. Given the nature of the initiative, we recognise the need for an iterative, systematic approach, with continuous dialogue and engagement with the stakeholders. In this regard, the initial stakeholder consultations have been very successful and provided rich insights into many critical aspects of the ecosystem. The consultation enabled us to draw from a broad range of expertise, local knowledge and diverse stakeholder perspectives, leading us to identify both risks, considerations and potential risk mitigation strategies for the project. We find it a great advantage to have received such rich and insightful stakeholder perspectives from the very beginning, i.e. the design phase of the project. Having gained a better understanding of the project during the launch event, participant stakeholders are now in a position to positively influence the development of the index, thereby ensuring enhanced final outcomes.

A key outcome of the Consultation has been the mapping of the ecosystem and key influencers within this ecosystem. Categorising the stakeholders based on experience, potential use case and resource contribution, will enable us to identify the type of partners required to be onboarded at different project lifecycle stages.

Having mapped the key stakeholder constituencies in the ecosystem, we will further step into undertaking the task of identifying a critical mass of collaborators within each of these constituencies. We understand that consistent stakeholder involvement and collective deliberation can be critical to ensuring: (1) the Workforce Index stays relevant in the dynamic environment, (2) it is useful and accessible to its diverse stakeholders (with sometimes conflicting interests) and (3) a strong collective ownership among local stakeholders to take it beyond the project timeline.

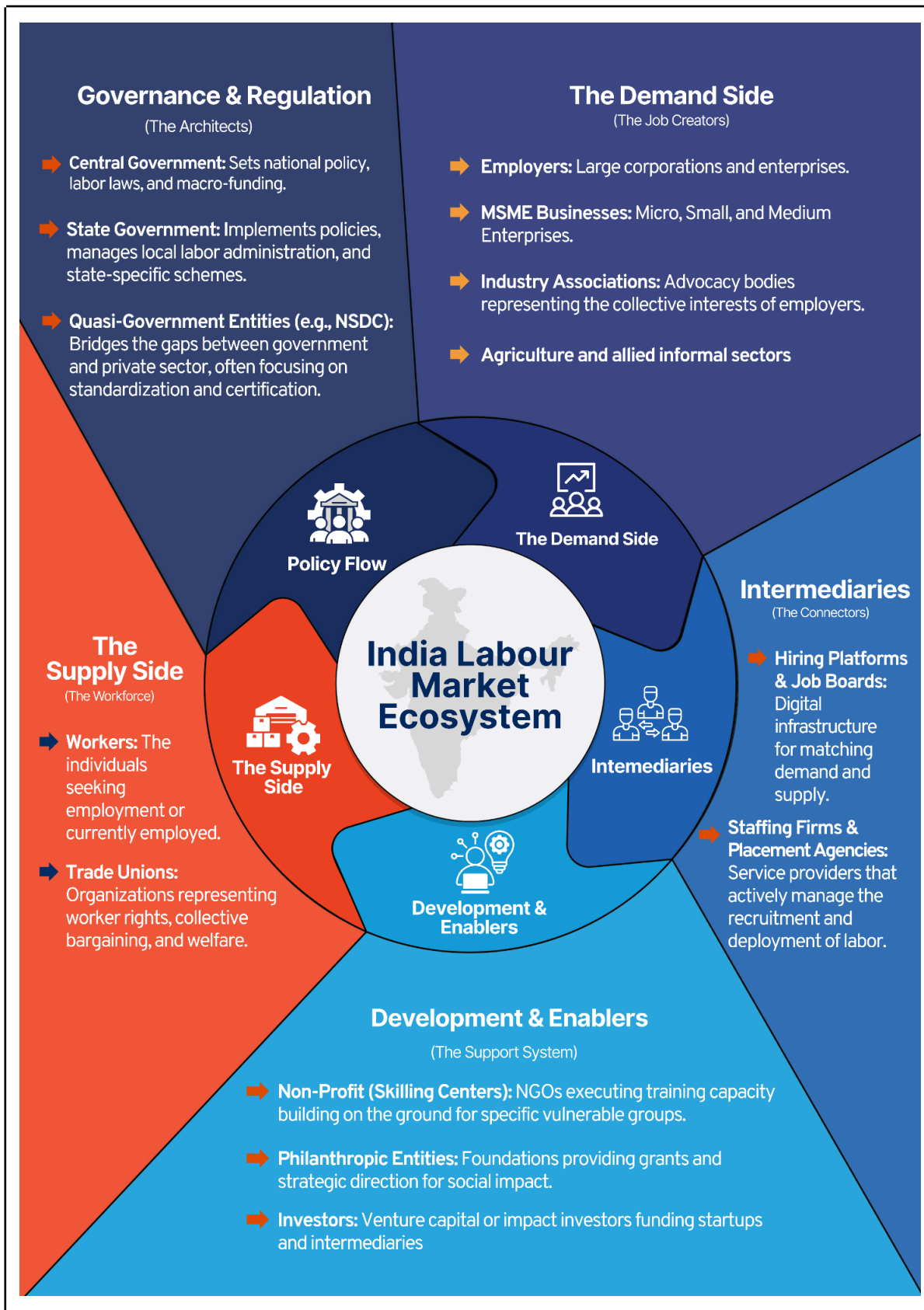
Broad reflections that emerged from the discussions will support further analysis. First, it is on the interconnectedness between the formal state-led and non-state-led skilling and employment sectors: the skilling ecosystem constitutes government entities, the private staffing and hiring companies, civil-society-led social initiatives

and corporate-led philanthropic interventions. Second, the interlacing of the formal with the informal labour markets, the rural with the urban employment, the local with the inter-state, intra-state migrant workforce and the domestic markets with global supply chains. Third, the need to reconcile the skilling-employment paradigm with the labour rights and social justice paradigm and approaches: in other words, there is a gap in the current ecosystem between the drive for a skilled workforce and the coinciding demands of workers for data to improve worker protection and social justice.

Real-time feedback and validation from end users will be important to ensure that the Workforce Index maintains the balance between systems design and the needs of individual stakeholders, especially workers. To begin with, an initial round of 1-1 side meetings with stakeholders to explore synergies, along with viability checks for onboarding them on the prototype development, will be adopted. Among others, considerations like **Criticality** (How critical is the stakeholder to the success of the project), **Position** (What is the stakeholder's position towards the project) and **Effort** (How much effort will it take to engage the stakeholder) (Rodgers, n.d.) may be used to determine the level and type of participation of each stakeholder constituency.

We are confident that sustained participation from stakeholders will shed light and clarity on addressing crucial questions of who we are designing for, how we will design it and who must be engaged to make it happen. From this, we will draw out a purposive, clear stakeholder engagement strategy with short-term and long-term goals for the Initiative.

Figure: Key components of the current labour market ecosystem in India



Source: Inputs received during the conference.

Team moderators briefly summarised the discussions in the group sessions to gather the key takeaways. The moderator on the data team mentioned that the index needs to be standardised, validated and updated, keeping in mind the challenges posed by attrition, the problem of access, lack of standardization, and the lack of willingness to share data. The moderator at the discussion on the methodology addressed the challenges in standardising and harmonising the different data sets. The methodology needs to lay out the process of integrating different surveys and creating harmonized data to capture the demand and supply sides. The moderator of the discussion on Ecosystem addressed the need to include legal representatives to ensure that the data can be shared publicly without causing potential harm to any of the stakeholders. There is a need to align the data-sharing partners and the broader ecosystem with the objectives of providing transparent and updated data to ensure a broader lifetime of the project.

5. Challenges and Way Ahead

There are certain challenges that were identified in the consultation. In this section, we list them and propose means to address these challenges, keeping in mind the scope of the project.

The attendees identified several data sources that could potentially be used in the project. The project team will be working towards addressing concerns about **harmonising different data** that are based on different sample methods and population or sub-population groups. While some sources, such as those by the NSSO, are nationally representative, other data sources are regional in nature. Some only focus on certain sectors. The research team will work towards understanding the scope of harmonising such data and developing a methodology to harmonise it. This would mean that not all existing data will be integrated into the index. The index will comprise only such data that would make the index valid.

An additional point of concern was about the **validity of the self-reported data**, which will be addressed closer to the harmonisation by considering the survey questions and scope of the data collection. There were concerns about wage transparency and the **usage of self-reported wages** in the survey questionnaire. Gig wage data may be declared 'proprietary' information by platforms. While data like PLFS are self-reported at the household level, they are valid and are widely used for

research purposes. In addition, the Government of India is launching the National Household Income Survey (NHIS) in 2026, which will also help in addressing these questions. In the absence of alternative data sources such as tax files of individuals, we will proceed with the available data in the nationally representative surveys.

Household surveys, such as those conducted by NSSO, report NCO and NIC codes for those who are employed. Moreover, these surveys are cross-sectional in nature, and the same person is not tracked over time. This will lead to some **loss of data due to attrition**, but this is unlikely to affect the nature of the index. We aim to **update the index on a quarterly basis**, and not comment on the change in the economic indicator for every individual. Of course, data permitting, we would like to track changes in the labour market index of individuals, but this remains outside the scope of the project. Another challenge that was pointed out was the availability of the secondary data at regular intervals. Although we aim to update it quarterly, we need to consider which datapoints are updated with the newest data and which remain the same, and their implications for the interpretation of the index.

The **incentive mechanism facing the private sector** is likely to pose a challenge towards designing this index. The private sector that capitalises on skewed information could be unwilling to share its data for this index, which will be available publicly for all users. We acknowledge that this could be a challenge. We are addressing this through structured MoUs with private partners. The ones who contribute to the index will strengthen it. Over the course of the project, we will discuss whether including or excluding certain data introduces bias into our index, and the direction of that bias. The same job is also likely to be present across different job boards and websites. Existing methodology will be used to **remove duplication of advertised jobs** so that our index accurately reflects the in-demand jobs (Tijdens et al., 2019). Finally, **handling the personal data** of individuals poses a challenge to the development of the index. Most of the data that we will use is anonymised. Hence, no one using the data can trace it back to the person. In the case of primary surveys that are conducted as a part of this project, we will anonymise the data before feeding it into the index, ensuring that no data can be traced back to the individuals. Since we have been engaging in conducting surveys and handling personal data for over two decades, this will not be a challenge for the team.

6. Concluding Remarks

Professor Santosh Kudtarkar, Dean Undergraduate Education & Innovation, FLAME University, concluded the conference by sharing an address on behalf of FLAME University, highlighting the long-term partnership between WageIndicator Foundation and the University and with the hope of a successful and sustainable relationship ahead.

The conference concluded with a consensus towards designing it in a human-centric way to ensure that we are inclusive in our design and keep it suitable for different users. While there were concerns about the sustainability of a public good beyond the project lifetime, the aim is to establish an index as a public good.

References

- ANI. 2024. "Blue collar jobs to drive 70 pc of India's new job growth by 2030: Report." *The Economic Times* (English edition), April 19, 2024. <https://economictimes.indiatimes.com/jobs/hr-policies-trends/blue-collar-jobs-to-drive-70-pc-of-indias-new-job-growth-by-2030-report/articleshow/109433609.cms?from=mdr>.
- Bhandari., B. (2025) <https://ncaer.org/wp-content/uploads/2025/06/National-Skill-Gap-Study-for-High-Growth-Sectors.pdf> accessed 11 December 2025
- Eurostat. (2025). Labour market demand for ICT specialists in online job advertisements. <https://ec.europa.eu/eurostat/web/experimental-statistics/labour-market-demand-and-ict-specialists#expandable-example-content> accessed 11 December 2025
- Furrer, M., Kässi, O., & Rani, U. (2025). *Decoding the Online Labour Index (2016–2024): Methodology and Caveats*. *Online Labour Observatory*. <http://onlinelabourobservatory.org/wp-content/uploads/2025/05/OLI-methodology-summary-2025-05-25-final.pdf> accessed 11 December 2025
- Instituto Nacional de Estadísticas (INE). (n.d.). Sistema de Información del Mercado Laboral (SIMEL) [Data portal]. <https://de.ine.gob.cl/> accessed on 16 December 2025
- Ministry of Employment and Labor (MOEL) & Korea Employment Information Service (KEIS). (n.d.). WorkNet. <https://www.work.go.kr/jobMain.do> accessed on 16 December 2025
- Federal Democratic Republic of Ethiopia. (n.d.). Labor Market Information System (LMIS). Ministry of Labor and Skills. <https://lmis.gov.et/> accessed on 16 December 2025
- Tijdens, Kea & Aias, & Kaandorp, Casper. (2019). Classifying job titles from job vacancies into ISCO-08 and related job features - the Netherlands. 10.13140/RG.2.2.27133.72164.
- Ministry of Labour & Employment. (2025). eShram Dashboard. [Dashboard]. <https://eshram.gov.in//dashboard> accessed 11 December 2025
- Mishra, D. , Fernandez, C. & Puri, H. (2024). India Jobs and Occupation Tracker (I-JOT). *Indian Council for Research on International Economic Relations*, 1. https://icrier.org/pdf/India_Jobs_and_Occupation_Tracker-1.pdf
- Nomura, S., Imaizumi, S., Areias, A.C. & Yamauchi, F. (2017). *Toward Labour Market Policy 2.0* (Working Paper No. 7966). World Bank Group. <https://documents1.worldbank.org/curated/en/370301486667802852/pdf/WPS7966.pdf>

- O*NET. (2025a). *About O*NET* . O*NET Resource Center.
<https://www.onetcenter.org/overview.html#data>
- O*NET. (2025b). O*NET Data Collection Overview. O*NET Resource Center.
<https://www.onetcenter.org/dataCollection.html>
- Tandon,A., Puri, H., Goyal, T.M. & Fernandez, C. (2025). India Jobs and Occupation Tracker (I-JOT). *Indian Council for Research on International Economic Relations*, 4. https://icrier.org/pdf/India_Jobs_and_Occupation_Tracker-1.pdf
- Testaverde, M., Posadas, J., Cho, I., Granata, J., Johansson de Silva,S., Kim, G., Meidina, I., Choi, T.S., Bodrogini, P.W., & Yoo, K. (2021) *Toward a world-class labor market information system for Indonesia*. World Bank Group.
<https://openknowledge.worldbank.org/server/api/core/bitstreams/906d1c88-4c68-5427-acd3-288aa4abd074/content>
- UNESCO-UNEVOC. (2025). Global Skills Tracker. [Dashboard].
<https://unevoc.unesco.org/home/Global+Skills+Tracker/lang=en/menu=Skills+insights#top2> accessed 11 December 2025
- Rodgers, A. (n.d.). *Stakeholder Classification: Understanding The Essentials*. Stakeholder Management Software. Retrieved December 16, 2025, from <https://simplystakeholders.com>

Appendix A: Data

Demand Side	Link
Google Jobs	https://www.google.com/about/careers/applications/jobs/results#!t=jo&jid=127025001&
Apna	https://employer.apna.co/
WorkIndia	https://www.workindia.in/
JobHai	https://www.jobhai.com/
Digital Labour Chowk	https://digitallabourchowk.com/
NCS	https://betacloud.ncs.gov.in/
Vahan	https://analytics.parivahan.gov.in/analytics/
Urban Company	https://www.urbancompany.com/mumbai
YesMadam	www.yesmadam.com
Employment exchange boards	https://services.india.gov.in/service/listing?cat_id=58&ln=en https://www.data.gov.in/catalog/employment-exchanges-data
Employees' State Insurance Company	https://esic.gov.in/recruitments
MyJobee	https://myjobee.com/
Indeed	https://in.indeed.com/

Naukri	https://www.naukri.com/ , https://www.naukri.com/campus , https://www.naukrigulf.com/
EPFO	https://www.epfindia.gov.in/site_en/Estimate_of_Payroll.php https://www.epfindia.gov.in/site_en/Dashboards.php
DevNet Jobs	https://www.devnetjobs.org/
LinkedIn	https://www.linkedin.com/
Jobs near me/ Lokal Jobs	https://www.getlokalapp.com/jobs/jobs-near-me
MCA	https://www.mca.gov.in/content/mca/global/en/data-and-reports/reports/annual-reports/companies-2013.html
SSC reports	https://ssc.nic.in/Portal/AnnualReport
District Industrial Centre	https://pune.gov.in/en/document/district-industries/ https://thane.nic.in/en/document-category/statistical-report/ https://schemes.industry.kerala.gov.in/public/index.php/public_dashboard
Razorpay, Keka to track wages	Data is not available publicly
MSME - Udyam Aadhar	https://www.data.gov.in/resource/list-msme-registered-units-under-udyam https://dashboard.msme.gov.in/
Ministry of Panchayat Raj GPDP	https://gdpd.nic.in/deptAnalysisReport.html https://gdpd.nic.in/staticalreport.html
Chamber of commerce - sector reports	https://chamberindia.org/reports
Jobforher/herkey	https://www.herkey.com/

NSDC JobX	https://www.nsdjobx.com/
QuantCube	https://www.quant-cube.com/
Quess Corps - Hamara Jobs	https://hamarajobs.ai/
Staffing and Payroll Companies	Link
Meraki	https://merakitalent.com/vacancies/?page=1&locations=1704
Quess Corps	https://careers.uesscorp.com/
Meraqui	https://meraqui.com/career/
Sodexo	https://accesshr.in.sodexo.com/#/jobs
Ambe	https://www.ambeinter.com/jobs-in-india.php
Border plus	https://www.borderplus.co/
Tern	https://www.tern-group.com/candidate
Magic Billion	https://magicbillion.in/
AamdhanE	https://aamdhane.com/
TeamLease Foundation	https://www.teamlease.com/
Edujobs	https://edujobsacademy.com/
Aspireforher	https://aspireforher.com/
Indiaworks	https://india-works.de/en/

Sector Specific Resources	Link
Consulting firm reports	http://indianchamber.org/page/publication/knowledge-reports
Administrative Data	Link
Data from forms filled by companies	https://labourbureau.gov.in/reports-on-indian-labour-statistics
Karnataka gig worker welfare data	https://swdservices.karnataka.gov.in/petccoaching/GIGWorkers/GIGStatistics.aspx
Data Lake Platform	https://datalakeg.nhai.gov.in/nhai/MISC/ProjectDetailsAdvance

SUPPLY - Secondary Labour Surveys	Link
Periodic Labour Force Surveys	https://microdata.gov.in/NADA/index.php/catalog/PLFS/
Annual Survey of Unincorporated Sector Enterprises	https://microdata.gov.in/NADA/index.php/catalog/238
Annual Survey of Industries	https://microdata.gov.in/NADA/index.php/catalog/ASI
Consumer Pyramids Household Survey	https://consumerpyramidsdx.cmie.com/
World Bank Surveys	https://data.worldbank.org/indicator/SL.TLF.TOTL.IN
Open Data ONDC	https://opendata.ondc.org/
Disability data (Census of India 2011)	https://www.data.gov.in/dataset-group-name/disability
National Centre for Promotion of Employment for Disabled People	https://ncpedp.org/

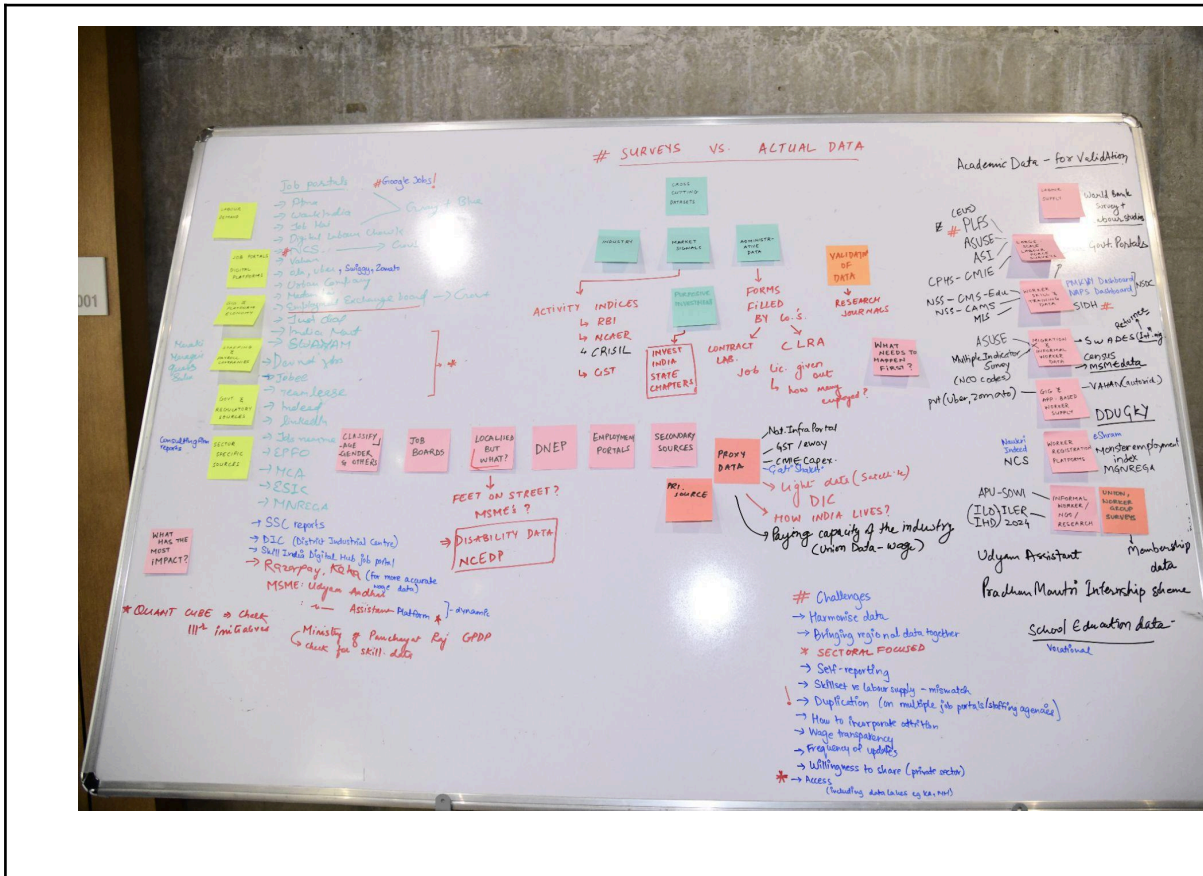
Worker Skill Training Data	Link
NSSO Surveys	https://www.mospi.gov.in/national-sample-survey-office
MIS	https://microdata.gov.in/NADA/index.php/catalog/218/study-description
PMKY Dashboard	https://www.skillindiadigital.gov.in/pmkyv-dashboard
NAPS Dashboard	https://app.powerbi.com/view
Skill India Digital Hub Job Portal	https://www.skillindiadigital.gov.in/opportunities
Datasets on Employment and Labour	https://ndap.niti.gov.in/catalogue
Migration	Link
MIS (2 digit - NCO codes)	https://microdata.gov.in/NADA/index.php/catalog/218/study-description
SWADES (International return migrants data)	https://www.gfmd.org/pfp/ppd/19751
Census data	https://censusindia.gov.in/census.website/data/census-tables
MSME data	https://dashboard.msme.gov.in/
Gig and App-Based Worker Supply	Link
Uber, Zomato, Swiggy, Rapido, Ola, etc.	Data from reports
ESG reports	Respective webpages
Vahaan	https://vahan.parivahan.gov.in/vahan4dashboard/
Just dial	https://www.justdial.com/Mumbai/Contractors/fil-312
Worker registration platforms	Link

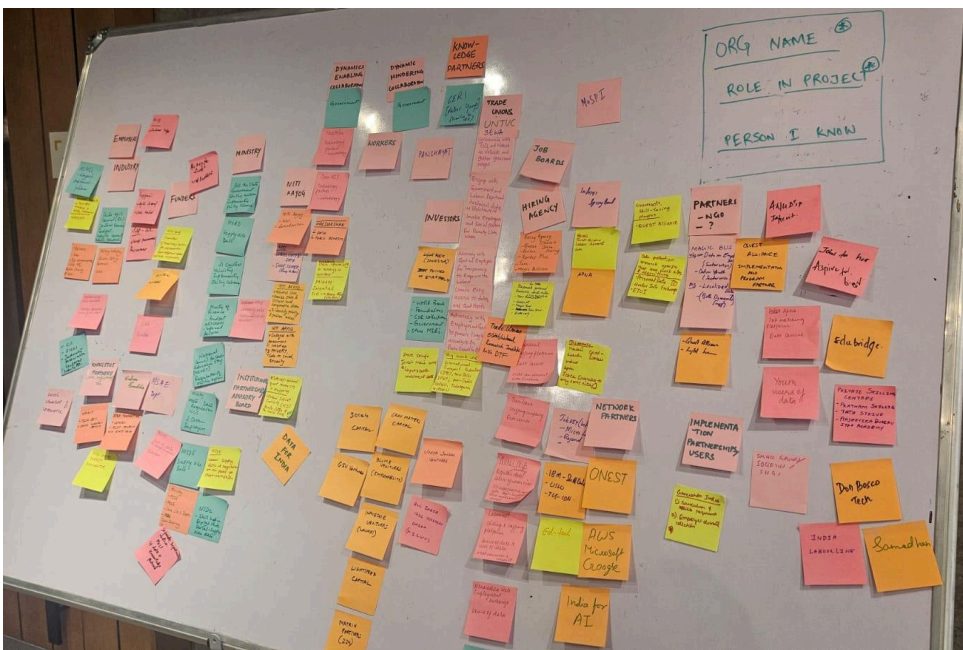
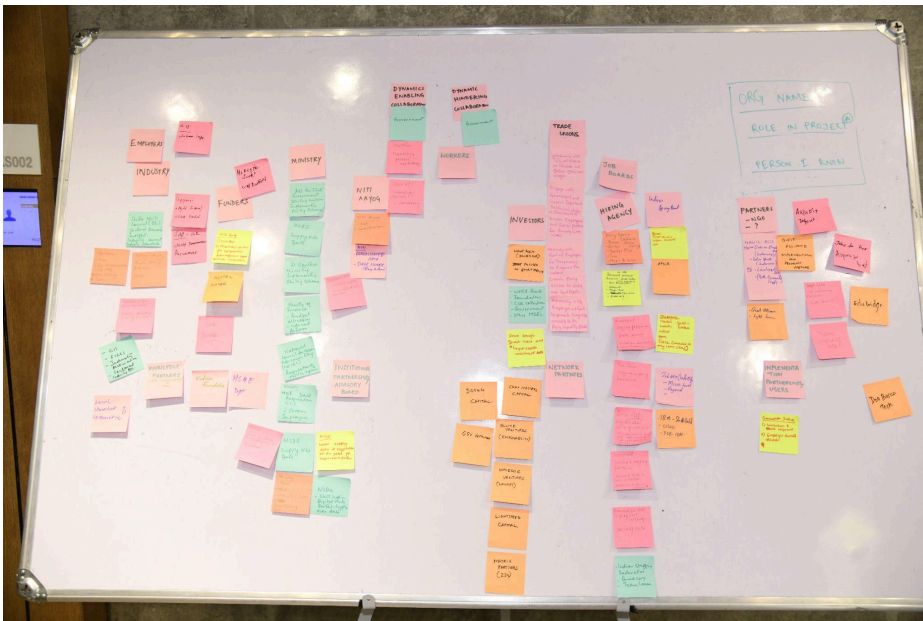
Naukri	https://www.naukri.com/
Indeed	https://in.indeed.com/
NCS	https://www.ncs.gov.in/pages/search.aspx
eShram	https://eshram.gov.in//dashboard
Monster - Now FoundIt	https://www.monster.com/
MNREGA	https://nreganarep.nic.in/netnrega/nrega_ataglance/At_a_glance.aspx
Informal worker / NGO/ Research	Link
Azim Premji University Reports	https://azimpremjiuniversity.edu.in/the-indian-economy/
Reports - ILO	https://www.ilo.org/publications/
Aajeevika bureau - Work Fair and Free	https://aajeevika.org/
India Labour Line	https://indialabourline.org/
Jan Sahas	https://jansahas.org/
Samadhan	https://samadhan.labour.gov.in/
Janpahal	https://www.janpahal.com/
PAIGAM	https://www.paigam.net/
CLRA	https://clra.in/
Dattopant Thengadi Foundation	https://dtforg.in/?p=2876
Private and non-profit skilling centres/ Govt	Link

skilling centres	
Pratham Skilling	https://www.prathamskilling.org/
Tata Strive	https://tatastrive.com/
Step Academy	https://www.stepacademy.org.in/
Quest alliance	https://www.questalliance.net/
Wadhvani Foundation	https://wadhwanifoundation.org/
IBM Skills Build	https://skillsbuild.org/
CISCO	https://www.netacad.com/
TCS iON	https://www.tcsion.com/
SWAYAM	https://swayam.gov.in/
Data Collected by Unions	Link
Worker info exchange	https://www.workerinfoexchange.org/
All India Gig Workers' Union	https://aigpwu.in/
ITF, New Delhi	https://www.itfglobal.org/en/region/asia-pacific
IFAT, India	https://ifat.org.in/
TGPWU, Telangana	https://tgpwu.org/
GIPSWU / Gig Worker Webpages	https://www.gigworker.org.in/
INTUC	https://www.intuc.net/

SEWA	https://www.sewa.org/
Others	
Pradhan Mantri Internship scheme	https://pminternship.mca.gov.in/
School education data	https://www.education.gov.in/statistics-new
National Infrastructure Pipeline	https://indiainvestmentgrid.gov.in/national-infrastructure-pipeline
GST/Eway	https://docs.ewaybillgst.gov.in/Documents/ewaybill4yearJourney.pdf
CMIE Cap ex	https://capex.cmie.com/
Gati Shakti	https://www.nsws.gov.in/portal/scheme/pmgatishakti
Nightlight data	https://bhuvan-app1.nrsc.gov.in/bhuvan_ntl/
How India Lives	https://howindialives.com/gram/search.php
Satellite data	https://mausam.imd.gov.in/imd_latest/contents/satellite.php

Appendix B: Images from the co-creation workshop





Appendix C: List of Participants

Name	Organisation
In-person	
Chander Shekhar	Digital Labour Chowk
Santosh Abraham	Sattva Consulting
Sneha Nawage	Dasra - Social Compact team
Neha Sinha	GATI Foundation
Mark Taylor	Issara Institute
Philip Mathew K M	Magic Bus India Foundation
Naveena Pradeep	Prosperiti
Nandita Sebastian	Generation
Harsh Doshi	Field
Rekha Menon	IPE Global
Abhishek	National Skill Development Corporation
Mansi Kasliwal	STEP Foundation - TCF
Saumya Jain	BCG (Social Impact Incubator)
Sanjana Misra	CIFF
Hansa Sharma	Fairwinds Capital
Anil Prem DSouza	Fairwinds Capital
Shivangi Amba	The Convergence Foundation
Shriya Sethi	The Convergence Foundation
Jaya Luhana	Tech Mahindra Foundation
Pradyumna Bhattacharjee	The World Bank Group
Benedicte de la Briere	The World Bank Group
Ambarish Ambuj	The World Bank Group
Radhika Talekar	NITI Aayog
Ritvik Gupta	Aapti Institute
Abhishek Waghmare	Data For India
Aasheerwad Dwivedi	FMS, DU and FICCI
Biju Varkkey	Indian Institute of Management - Ahmedabad
Rajgopal D Chandra Shekar	Indian National Trade Union Congress (INTUC)
Dnyaneshwar Khandear	Lighthouse Communities Foundation (LCF)

Sarfaraz Antuli	Lighthouse Communities Foundation (LCF)
Rupa Korde	FLAME University
Prasad Pathak	FLAME University
Sajith Narayan	FLAME University
Barun Kumar Thakur	FLAME University
Anwasha Basu	FLAME University
Manasvi Sharma	FLAME University
Ankur Kushwala	FLAME University
Kaustubh	FLAME University
Neha Bailwal	FLAME University
Arun Kaushik	FLAME University
Santosh Kumar	FLAME University
Naman Dubey	FLAME University
Samar Bajaj	Michael & Susan Dell Foundation
Sharvi Dublish	Michael & Susan Dell Foundation
Garima Manocha	Michael & Susan Dell Foundation
Fiona Dragstra	WageIndicator Foundation
Paulien Osse	WageIndicator Foundation
Leena Bhattacharya	WageIndicator Foundation
Shailja Tripathi	WageIndicator Foundation
Mehr Kalra	WageIndicator Foundation
Gunjan Pandya	WageIndicator Foundation
Sidharth Rath	WageIndicator Foundation
Abhishek Patil	WageIndicator Foundation
Mekhala Kumar	WageIndicator Foundation
Puneet Kumar Shrivastav	WageIndicator Foundation
Komala Rangaswamy	WageIndicator Foundation
Kulvinder Singh	WageIndicator Foundation
Online	
Ankur Dalal	International Labour Organisation
Ekta Verma	Partners in Change
Vinoj Abraham	Centre For Development Studies
Bornali Bhandari	NCAER

Kea Tijdens	WageIndicator Foundation
Vasupradha Tatavarty	WageIndicator Foundation
Akshatha M.	Quesscorp
Samrudhhi	Lend A Hand India
Dr. Apoorva Palkar	Maharashtra State Skills University
Ajit Sharma	Organisation not known
Rashmi Lodha	Organisation not known