

Collaborative Design Project- DEP301

Project Report

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Project Synopsis

As part of the Design Studio course, Prafulla Chandra, Rishabh Kumar and Zaid Khuram worked on a project attempting to help workers in the Unorganised sector of the Indian population. From thorough secondary research, limited and risky primary research along with help from experienced industry experts, the group was able to identify broad problems and ideate on how they could intervene.

The project developed into a business idea, called EZwork, that would serve as a platform for people to avail an end to end service for their household needs. EZwork would connect people to skilled service providers as well as hardware stores for any material needs.

With existing competition in the area chosen, from the established Urban Company, it was imperative that they identify their unique value propositions to each user. EZwork would primarily be aimed at Tier 2 and Tier 3 Indian cities, markets that their competition has failed to penetrate. With the help of having a physical presence on the field (through partner hardware stores), customers in this new market would hopefully be more open to availing the service they had to offer.

As part of the project, the group attempted to flush out what business strategies this startup would adopt, and define revenue streams to make this service self sustainable. A cost structure for getting the service off the ground was also detailed out and later cross checked again with experts and professors from management backgrounds. Final flowcharts of how the system would work and user interface screens of the app were developed to convey the product idea as clearly as possible.

Week 1

Project Overview

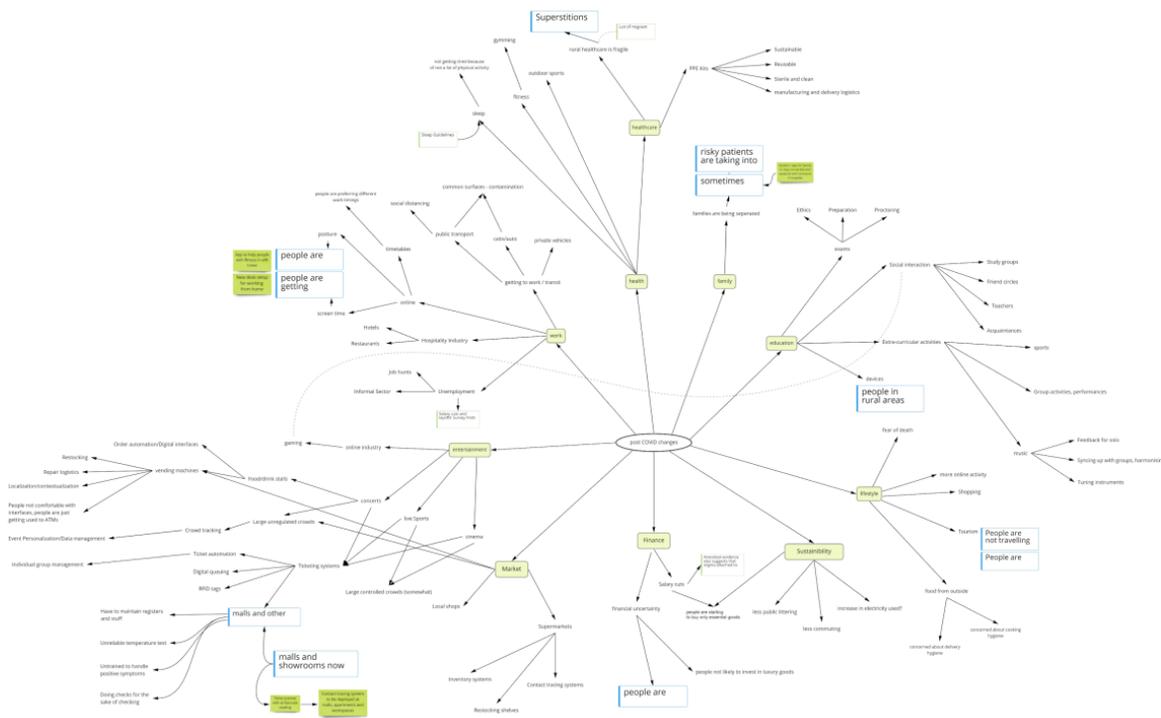
Since the pandemic, our country has been in a state of lockdown where businesses, entertainment, and every other non-essential service has been shut down. A major sector of the population (92.6%) are unorganised workers who don't enjoy any social security benefits from their job. This would mean they would need to survive on their savings, in the scenario that they do have some. If they don't, it would mean nothing else but to prioritise putting food on the table for their families than help fight an invisible virus that they may never encounter.

In this project, we want to help workers of the unorganised sector get access to social benefits and financial security along with preparing them to overcome unforeseen challenges such as the pandemic.

Worldview Mapping

We initially started off by exploring different areas and how Covid has affected them. We made sure to identify opportunities rather than just difficulties that have surfaced during this time. Some of the broad areas we covered in our exploration:

- Entertainment
- Work
- Health
- Family
- Education
- Vacation/tourism
- Finance



Img 1. Mind map of our exploration

We also looked at competitions and design challenges that have materialised since Covid, and how other designers have replied to it to broaden our ideas about how Covid has changed the world.

We then narrowed down three areas we were interested in and started exploring it further. We looked at products that already existed as solutions or alternatives to the problems we identified.

Area 1: Entertainment

The entertainment industry has taken a massive hit and one of our team members being a part of Mood Indigo has experienced first hand the challenges such an organisation is facing. Recreating the social atmosphere and festive ambiance in a

virtual environment is a problem many companies have attempted to tackle, however, have still not reached a point of acceptance by the people.

Virtual events are nothing new. We have been consuming sports and athletic events for decades, and for many people, the virtual experience is the preferred medium. We were aiming to understand the essence of what makes these particular virtual experiences work and develop the technology of conducting such events much more accessible to creators and provide an immersive experience to the audience.

Area 2: Crowd Management

With communal spaces slowly opening up, precautionary measures such as social distancing, temperature checks, and regular hand sanitisation are crucial to 'contain the virus'. Security personnel almost everywhere are required to keep account of visitors and their body temperature that is measured on-site.

We found numerous issues with such an impulsively executed system where security guards were unaware of why such thorough accounting was necessary and what needs to be done when the temperature is not within the ideal range. Streamlining and educating both stakeholders in such a process was an opportunity where we felt we could intervene.

Area 3: The Unorganised Workers

With the majority of the Indian population working in the unorganised sector, they do not have any social benefits through their job. This means that they would have to rely on their savings, if they have any, to get through the lockdown phase.

Many independent workers; street vendors, small enterprise owners and service providers (plumber electricians) as well as contracted workers who were laid off

have been struggling to keep up. Government aid does not always reach everyone and continuing work in their existing profession is sometimes not an option with people more cautious about contamination and spread. We hoped to come up with an idea that would help make such workers better prepared for such events and help them get new jobs easily.

Understanding the Issues (Secondary research)

We selected Area 3; the Unorganised workers and moved forward to research and understand the current situation with workers and how they've been affected by the pandemic. We found multiple papers that quantified the severity of the problem, helped define and categorise workers based on profession and explained government policies that should be in place to help combat the situation.

Table 1: Types of employment possible across the sectors in India, 2005-2018

Sector of the Economy	Major employment categories									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Organized sector	141	149	157	164	169	174	179	184	189	194
Unorganized sector	111	118	125	132	139	146	153	160	167	174
Total	252	267	282	296	308	320	333	344	356	368

Table 2: Number of workers employed in unorganized sector in India, 2005-2018

Sector of the Economy	Major employment categories									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Manufacturing	112	118	124	130	136	142	148	154	160	166
Services	100	106	112	118	124	130	136	142	148	154
Total	212	224	236	248	260	272	284	296	308	320

Img 2. Screenshot of our Miro board showing secondary research

1. SEWA: Impact of Coronavirus on the Informal Economy

Sewa.org

Income of workers

Street vendors, other small business owners and home workers have been significantly affected with fear of losing their source of income. Informal paid workers such as domestic help not affected as much, some employers are providing paid leave under the circumstances.

Trade in India

Supply chain has been disrupted along with uncertainty in import and export of materials from the country. Wholesale vendors have shut down and independent retailers are hiking prices making it difficult for families relying solely on their savings to make do.

Health and Sanitisation

Medical services are being quarantined off and focused solely on managing the Covid-19 situation. Social distancing is almost impossible in some communities. Concerns about domestic violence are rising rapidly with frustrated individuals having to stay at home for extended periods of time.

Recommendations on what the Government can do

SEVA goes over what different states have been doing to aid workers during the pandemic and gives examples of schemes other countries like Canada and South Korea have implemented to combat the same.

2. A study on Unorganised Sector and India's Informal Economy

Rinoj P K

Categorisation of workers in the unorganised sector

This paper helped us to identify parameters that have been used in the past to classify unorganised workers in India and help us understand some unique traits in the Indian workforce.

Home workers as a distinct category

Home workers in India are a significant part of the unorganised sector and contribute to the GDP of this country immensely. Under the broad category of self employed workers, there are 8.2 million home workers alone out of a total 69 million (NSS 1999-2000).

3. Report on Conditions of work and Promotion of Livelihoods in the Unorganised Sector

National Commission for Enterprise in the Unorganised Sector

In depth study of each category of workers

This paper gathers and analyses the socio-economic background of all categories of workers; wage workers, agricultural workers, and women workers in the non-agricultural sector. Data of education, gender, religion and caste are all graphed out and analysed.

4. Unemployment protection in the COVID-19 crisis: Country responses and policy considerations

International Labour Organisation

Unemployment in the Covid-19 crises

This document gives governments a set of guidelines to help respond to the crises. Emphasis the need for citizens to be provided with income security and further detailed methods of implementation that could be adopted to ensure the same.

Unemployment protection Schemes

Highlights two schemes to combat the crises. Providing employment retention benefits where corporations are given benefits such as tax reductions for providing job security and continued social benefits during the crises. The second method which would be more plausible for a country with a major Informal sector is unemployment benefits, where the government provides aid to workers who are not able to provide for themselves through financial schemes, subsidised rations, etc.

Highlights existing unemployment schemes

Provides guidance on planning such schemes and gives examples of how it's been done in the past across the globe; Botswana's wage subsidies, Partial employment retention benefits in European countries and Malaysia's employment insurance plan.

Preliminary Interviews

Simultaneously, we started investigating and talking to workers to understand how they've dealt with the situation personally. Since we were still at a preliminary stage in our project, we interviewed workers from diverse backgrounds and professions

Interview 1: Coconut Seller

	Notes
1	Coconut Seller. Working for a year. Works from 9am-10pm.
2	Makes about 500 rupees per day. During lockdown he made less than 100-200 rupees.
3	Had to roam around the neighbourhood for business during lockdown.
4	Had to bear abuse from police and people. Only breadwinner in the family
5	Sets prices depending on cost from wholesale. Has to purchase straws and polythene bags separately.
6	Competition with other stall across the road. Prices will remain constant, they get coconuts from same seller, no worry about that.
7	Faith in Lord, doesn't compare prices. Has never spoken to other coconut seller.
8	Never tried to get a wage job, not confident about that, felt it was illogical.
9	Does not understand how a certificate would be useful about his experience. Feels no one would care about documentation.
10	Owns a Aadhaar card and Ration card. Uses ration card to get subsidised pricing on essentials

Insights

- Clear lack of communication between street vendors
- Lack of access to documentation prevents them from looking for better prospects.
- Has to work long hours to make ends meet.

Interview 2: Security Guard

	Notes
1	Security Guard at Mall. Working here for 5 years. Works in shifts.
2	Makes 9800 bucks a month, where 1k is deducted in the PF. Income was stable during lockdown and wasn't laid off.
3	Only earning person in the family, income was stable during lockdown but his scheduled increase in salary got cancelled.
4	Used to work in a biscuit factory in Haryana, then moved to a garment factory, then moved to Lucknow for job prospects and better education for his children.
5	He used to get wage increments in the factory too, where he used to work earlier.
6	There were increment in wages here too, but nowadays it has stopped.
7	Thankfully there wasn't suspension and he is confident about his job security.
8	There is a written agreement for his job and everything is formalised.
9	There are no chances of promotion, he'll stay a security guard here.
10	Lives quite close to his workplace, saves money on the commute.
11	Doesn't have a smartphone, but his wife has one, and she knows how to use it. Doesn't know how to use it.
12	Kids are using that smartphone for online classes right now.
13	He gets no leaves and very less holidays. There are not a lot of prospects of leaves in the security industry.

Insights

- Formalised industries have better wage structure and social security benefits for their employees.
- Such industries still don't provide career progression opportunities.

Interview 3: Restaurant Cook

	Notes
1	Chef from Restauraunt. Working since 1 month.
2	20 years experience as a cook, used to work at Idrees Biryani (very famous) for 5 years. went to qatar for training and worked at 3 star restauraunts.
3	Learnt skills from a master who used to serve the royal family.
4	7000-8000 when he got into the profession and now hes earning 13000.
5	Got this job because of his friend who knew about his skills and invited him.
6	He was working there on an informal verbal contract.
7	The employer takes care of the workers. Gives holidays and sick leave days. Accomodation provided. Helps with small medical expenses
8	Proud of his experience and teachers.
9	Owned Aadhar card and passport (worked in Qatar)
10	Does use a smartphone but unaware of technology. confident to use features as long as its in hindi.
11	Excited about the idea of something to keep track of his skills and connect him with other people.

Insights

- This interview reinforced that informal sector workers don't get appropriately rewarded for their skill sets.
- The major medium for sharing information regarding job prospects is word of mouth.

Week 2

User Group

After numerous discussions and brainstorming sessions, we agreed to focus on home workers employed in the unorganised sector. During the research and studying we did through the week, we realised that we needed to narrow the user group further to understand patterns and cross check if the problems we hear from users are unique to them or a result of system wide issues.

We got the chance to interview a couple of migrant workers who were part of the unorganised sector. Insights we received from these users were eye-opening and completely relatable to issues we read about when they were making headlines during the pandemic regarding difficulties and hardships they've had to endure.

Through our research, we were also able to identify aspects of migrant workers that categorised them into a broader sector within unorganised wage workers. A trend of hardware shops acting as a middle man between customers and the workers was identified and used to narrow down our user group.

We narrowed down the user group to ***Skilled Freelance Home Workers in the Unorganised Sector***. This category includes but is not limited to plumbers, carpenters, painters, electricians and cleaners.

Expert Insights

We spoke to experts in the field to develop an understanding of the system our target users are a part of. We were able to verify that the problems we identified on the ground are not outliers but common issues across the user base.

Prof. Chetan Solanki

Professor Solanki is well-known for his SoULS Project, where he was successful in making a self sustaining industry of LED lights across hundreds of villages in Uttar Pradesh, bringing a power revolution in rural areas. He gave us insight regarding our project, and how we need to expand our horizons and look at the bigger picture. He mentioned that the decentralisation of the society is required, as mentioned before by Mahatma Gandhi through his concept of Swaraj.

According to Professor Solanki:

- All of these systems are building differences in the society, which is causing unrest, and will result in violence in the coming future.
- Generation and consumption has to be localised to make sustainable communities.
- Mazdoor markets exist, where people can come up and pick up workers, which is an extremely unorganised process.
- We have to look at endpoints when looking for solutions.

Dr. G K Karanth:

Dr. Karanth is a Prof. of Sociology at Institute for Social and Economic Change and former Director at Institute for Social and Economic Change. His research interests include rural development, social change, urbanisation, public policies and more.

According to Dr Karanth:

- Most of the development taking place in India is a result of migration of labour, It's India's version of Industrialisation.

- People who have labour power with them move to other places, as a result of this those places have developed.
- Migrant workers migrate under a contractor who guarantees basic livelihood including food, water and shelter for them. They travel in groups (families and others from same village)
- Govt. has come up with laws and regulations to protect emotional and financial interests of the labour force
- Interstate migrant labour act:
 - Requires every worker who is coming from a different state to go through a registration process under labour welfare boards of respective host states. Including details such as wages, terms on which they were brought, their hometown and family.
 - Contractor or one who brings them in would bear the responsibilities of the registration process.
- Since Contractor has to bear time and expenses of registering the migrant workers, In order to not go through the effort, he bypasses the registration process, because of which the government can't record any data on the imported labor force.
- We have such huge labor force of which we have no data
 - A. If they are wage workers
 - B. If they are migrants, their hometown their social status
- Even if they were registered as wage workers/ construction workers in their respective home states, Neither govt. of home state nor host state has data on where they currently work and reside.
- As a result they are not recognised as workers or migrant workers, the government benefits won't reach them.
- During the lockdown

- The Karnataka state govt. tried to frame policies to help the migrant workers who were stuck here, but failed in reality because these workers were not recognised as migrants, and the government. didn't know where they resided.
- The workers were concerned about the health of their families at home state, and lacked knowledge on the pandemic. So they had to pack and move back to their home states.
- Ideally workers' identity such as labour cards which help them get benefits should be portable, in a sense should be valid and work in different states.
 - the system should also track location and wages to avoid underpayment and to help state governments. to recognise them.
 - The process should be integrated seamlessly into their lives, such as in wage payments.
 - Wage payments have to be legitimised by digitisation, so workers have proof of payment.

More Interviews

We interviewed around 10 stakeholders with different backgrounds who each shared with us unique experiences they faced in their field. We recorded the findings, analysed it as a group and drew insights from each of them. Here is a link to the sheet where we have documented all our primary research:

https://docs.google.com/spreadsheets/d/1bBzMhcnmn1pHhUkKq46H2LsYlp4SMi_dezj448uiBA/edit?usp=sharing



Img 3. Carpenter who was interviewed. (U8)

Preliminary Affinity Mapping

We then mapped our findings into affinities based on common trends. We adopted a bottom up approach to minimise personal bias and media influence and focus primarily on the data we collected first hand. While we were aware that the interviews we conducted were not sufficient to capture the whole sector, we were still able to find trends.



Img 4. Preliminary Affinity board

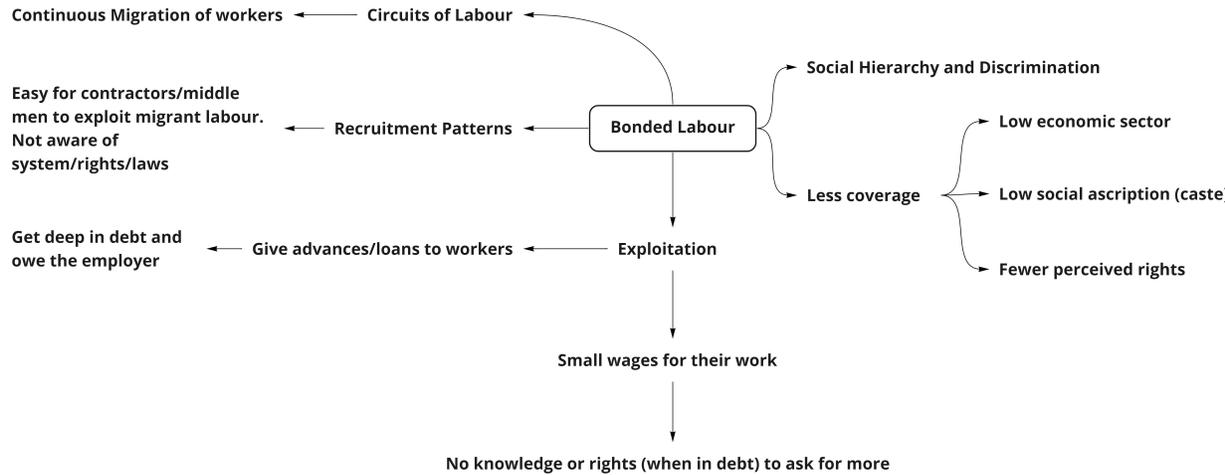
We identified certain focus points through our affinity:

- **Contacts and Communication:** We identified that word-to-mouth is the dominant medium for transaction of information regarding jobs and wages.
- **Agreements:** Contracts are usually informal and verbal. As nothing is written on paper and binding, a lot of the contractors take advantage of the situation and not pay proper wages.

- **Unskilled Labour:** As there is no formal contract established, there is no job security for the workers. As unskilled labour is common to come by, contractors don't hesitate to hire new workers.
- **Inefficient System:** People are not aware about the welfare opportunities available to them, or are failed by the same opportunities due to lack of streamlines systems and general apathy.
- **Migration:** People have to travel to find work opportunities, which are usually far away from their home. This affects the workers' mental health, and they have to spend money on maintaining two residential places.
- **Small-scale Financial Aid:** Workers in this sector are not involved with banks and depend on secondary systems like collective funds and borrowing money from the contractors.

Secondary Research Findings

We were only motivated further when these patterns from users were backed up in the research papers we looked into.



Img 5. Flow chart of insights from paper by Prof. Ravi S Srivastava titled 'Bonded Labour in India: It's incidence and pattern'

A paper by Prof. Ravi S Srivastava titled 'Bonded Labour in India: It's incidence and pattern', gave us insights and historic patterns on the system that exists around unorganised labour and their exploitation.

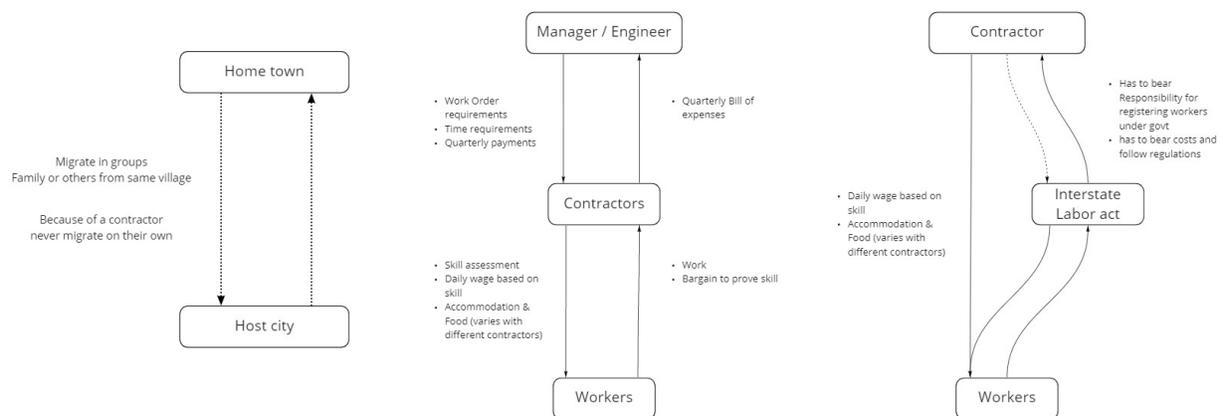
Bonded Labour is a broad term used to describe a relationship between the employer and employee that is characterised as a creditor and debtor. The common factor among multiple categories that fall under this definition is the idea of dominance and dependence. We noticed a similar association between the users we interviewed and their employers where they reluctantly told us about terms they had with their employers they were not satisfied with. A pattern of keeping the contractor or recruiter pleased was noticed as their contract relied heavily on the relationship they upheld with them.

The recruitment pattern outlined in the paper showed us how it was easy for contractors to exploit migrant workers who travelled across the country to secure their income. Being in a new state, contractors are required by the state to register workers and educate them about their rights within an employer-employee relationship. This step is taken advantage of. Contractors do not register their workers and hence denying them access to the schemes put in place by the government to help them.

Underpaying their workers makes it almost impossible for them not to ask for financial aid. Users we interviewed usually avoided taking loans from banks and preferred contacting local community members or people they share an existing relationship with. Contractors are one of the many people who end up loaning out money to them in times of crises. This creates a debt with their employer that they are required to fulfil and makes it easier for them to be taken advantage of.

Problem Areas Identified

- Employers or contractors that recruit migrant workers are expected to report and register them at their workplace. They end up taking advantage of this responsibility and exploit the workers for their own financial benefits.
- Government aid schemes are inefficient and incomplete. Almost impossible for workers to sign up without help and do not cater to employees whose work and home are in different states. No system to keep track of migrating workers or their home and host governments through the year.
- Migrant workers continue to sacrifice at their workplace to send as much money back home to their families. A constant worry of the situation.
- Workers prefer to take loans in times of need from members of the community or people they know rather than banks. They overlook the need to sign or officialise the agreement and end up getting exploited.



Img 6. Work Flow models of Contractors and Workers

Week 3

Final Interviews

We did more interviews to support our ideas and secondary research. We actually ventured out and talked to workers in Mazdoor markets to understand the atmosphere and the process of getting work.

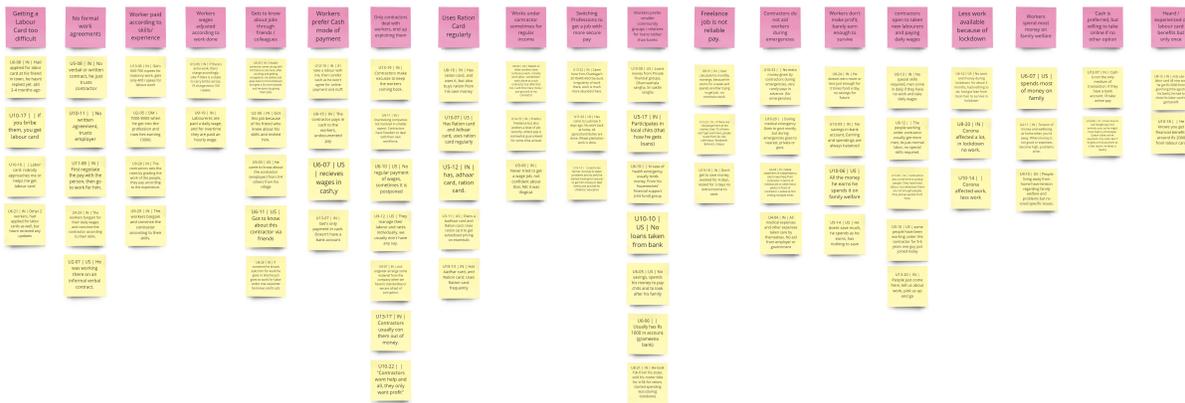


Img 7. Mazdoor Market, Lucknow

We weren't able to get too many interviews due to risks of Covid. However, we were able to analyse and draw much more specific insights from the interviews we did which helped us to start ideating on possible solutions. We have updated our finding on the Insights Sheet.

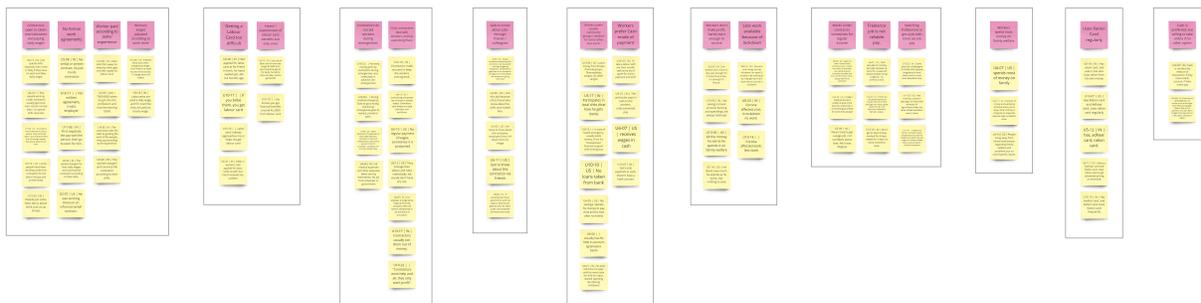
Final Affinity and Problem Identification

We started by grouping together similar insights to map out commonalities that we identified across our primary research. Through this process we were able to filter out issues that were trends across workers or just situation specific problems that were emphasised initially.



Img 8. Final Affinity

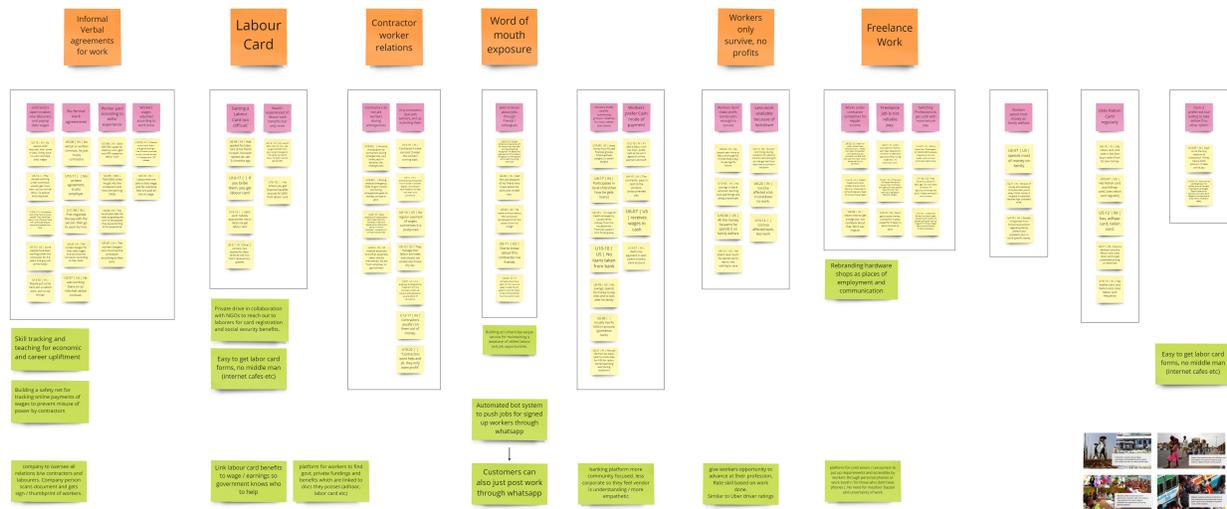
We then grouped together affinity groups that were related with regards to modes of payment, finding work and how workers dealt with emergency situations. This helped us streamline the next stage of idea generation as all related insights were categorised.



Img 9. Final Affinity grouped

Ideation

Keeping our initial research and goals in mind, we started ideating novel solutions that can help us solve problems in the current system, while also coming up with a profitable business model.



Img 10. Final Affinity grouped with Design ideas (green)

Some of the ideas were:

- Skill tracking and teaching for economic and career upliftment.
- Building a safety net for tracking online payments of wages to prevent misuse of power by contractors.
- Company to oversee all relations between contractors and labourers. Company person scans documents and gets the sign thumbprint of workers.
- Private drive in collaboration with NGOs to reach out to labourers for card registration and social security benefits.
- Easy to get labor card forms, no middle man (internet cafes etc).
- Link labour card benefits to wage earnings so the government knows who to help.

- Platform for workers to find govt, private fundings and benefits which are linked to docs they possess (Aadhaar, labor card etc)..
- Banking platform, which is more community focused and less corporate so that they feel the vendor is understanding / more empathetic.
- Platform for contractors / consumers to put up requirements and accessible by workers through personal phones or work booths (for those who don't have phones). No need for mazdoor bazaar and uncertainty of work.
- Rebranding hardware shops as places of employment and communication.

Initial Concept

We started by combining multiple ideas that we felt helped contribute in satisfying the design brief we set for ourselves.

“Create a product that helps reduce
irregularity and unpredictability of paid work
for freelance workers”

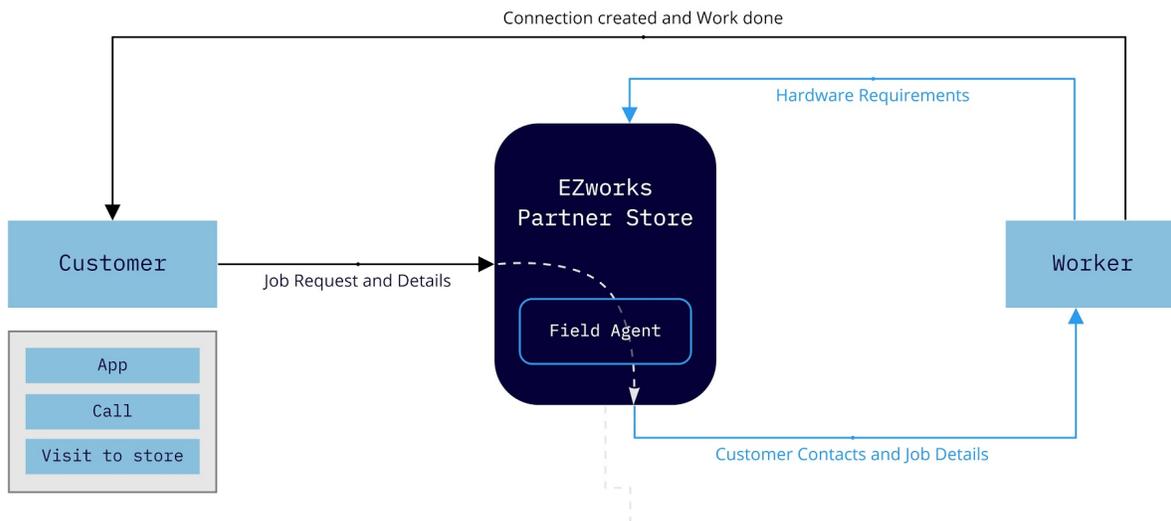
We went back through our interview insights and recognised why workers found it difficult to get regular work and how this irregularity contributed to their economic vulnerability in times of crises.

Also taking into account the current pandemic and the environment that it has created, we identified an area of need. While people will continue to require the services of skilled freelance workers, venturing out to find workers will become an unwarranted risk for most. With regards to the medically vulnerable, we intended to create a platform that bridged this demand of workers and the need of jobs.

EZwork - The Brand

EZwork is a brand that connects customers to skilled workers through our platform. We partner with existing hardware stores to create a physical presence on the ground and through our digital platform, we would expect Field Agents (hardware store workers) to onboard independent workers onto our system. While they will still remain independent workers with freedom to accept and decline jobs as they need, our platform will give them an extra level of reliability for their work.

Customers requiring specialised work of any type can fill in a Job Request, either through the app, calling in an EZwork partner store or by visiting an EZwork store themselves. Field Agents once receiving a Job Request would assign a worker to the job based on the expertise required for it.



Img 11. Flow chart explaining EZwork system

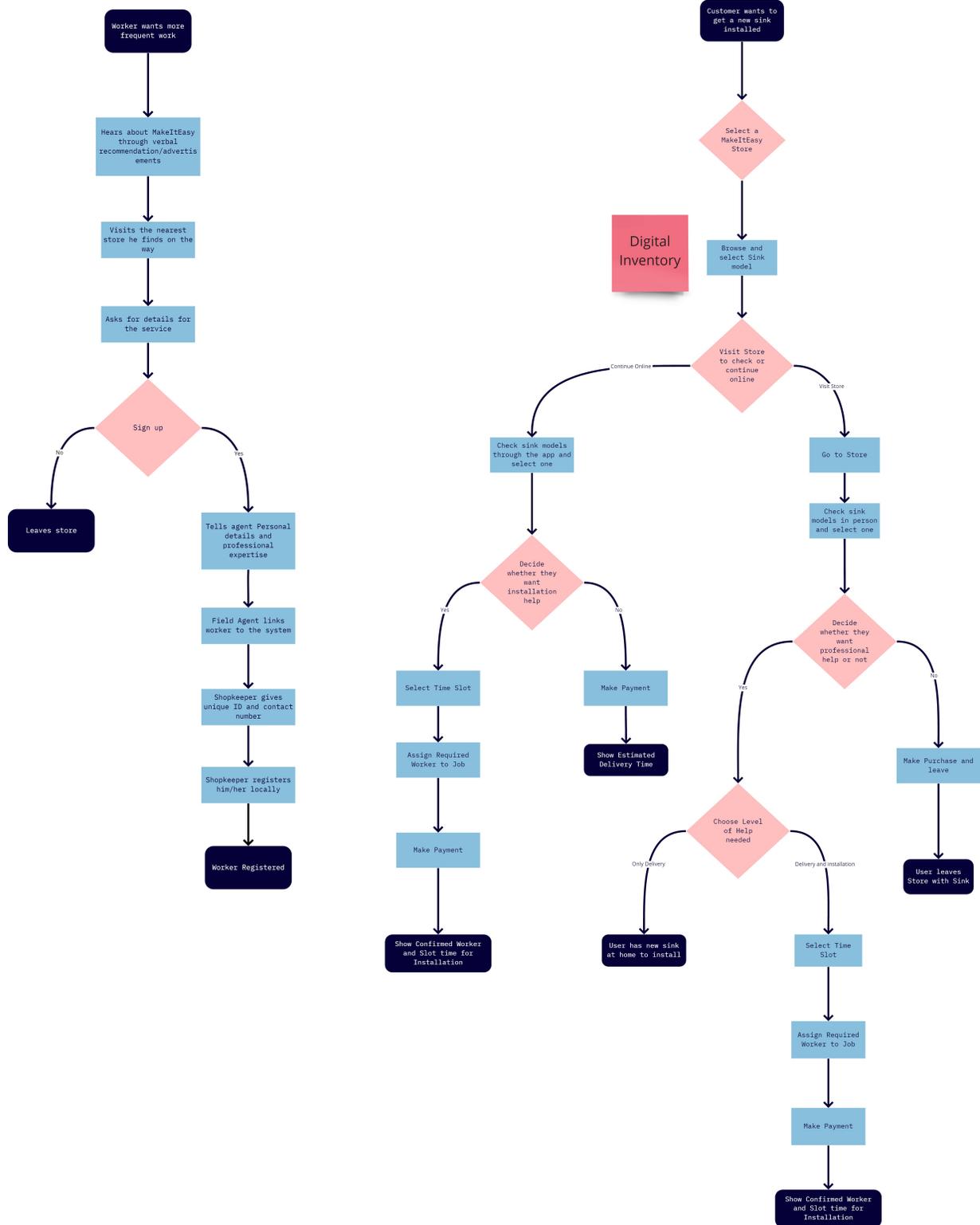
The Job Request will require a category of job to be filled in eg. Electrical, plumbing, etc. The job request will be sent to the relevant and closest EZwork partner store for a worker to be assigned.

Once assigned, the worker, field agent and customer would collaborate to get the job done based on the description and details of the work. At the moment, we have decided to not get involved in the details of the work and take no ownership of interactions that happen between the worker and customer.

After the work is done, the customer will be sent a Job bill which they can then pay either through EZwork app or by visiting the closest EZwork partner store.

User Flows

We created multiple user flows of interaction within our new proposed platform to figure out the details. We were able to make crucial changes at a much broader level by identifying challenges such as how customers would communicate the variety of jobs that individual workers can be expected to finish or how payments would work after multiple tasks being completed through the process.



Img. 12 Worker user flow (left) Customer user flow (right)

Week 4

Studying the Competition (Market Research)

Urban Company

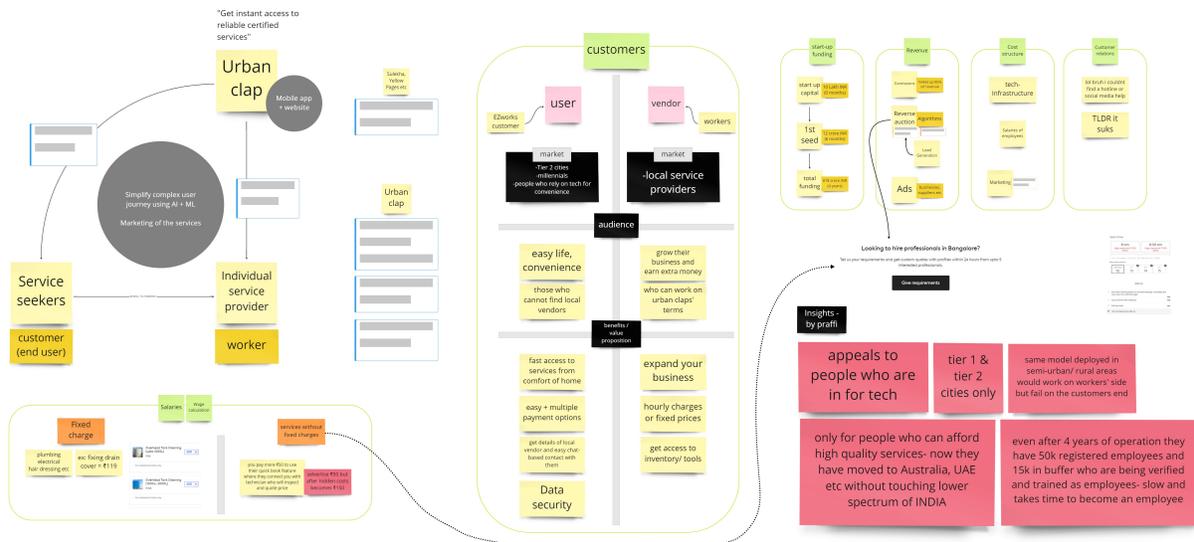
Urban Company provides a platform that allows skilled and experienced professionals to connect with users looking for specific services. All individual professionals are employed and trained by Urban Company before being enrolled onto the platform.

They provide standardised user experience, pricing and distribution to the customers (service seekers) and provide market access, credit, training and inventory of tools to the workers (service providers).

Urban clap is using Artificial intelligence and Machine Learning algorithms to train their model in better and convenient match making as time goes, so the more data they collect, the better the system gets. They use services such as Exotel to safeguard user privacy in IVR, OTP and phone based communications and authentications. So in case you want to talk to the worker on the phone, they use a privacy mask and route the call through their servers so the number of the worker is not compromised while keeping the communication simple.

Urban Clap decides the wages for labour, this often results in a possible exploitation of labour, some of these companies lure workers in with guaranteed hourly wages, attractive pricing etc in order to win their participation but once they start to gain market share they switch to policies and changes in their business model that is more profitable to the corporation.

One Urban company carpenter explains the process of seeking work on the platform, and how he tries to negotiate prices directly with the customer, skipping the platform to earn decent money. An Urban Company employed carpenter in Aditi Surie's in 'On-demand platforms and pricing: how platforms can impact the



Img 13. Urban Company structure

informal urban economy, evidence from Bengaluru, India (2020)' explains his wage status.

“For our time we get Rs 300 for the starting one hour, and then for an hour is 100 and another hour is 100. This doesn't work out for us past four hours. That's why if it is after four hours then we ourselves talk to the customer and work something out.” (p.93)

Standardising the rates for us means we have to deploy inventory management systems on our Hardware store partners and build up a huge library of rates, this would complicate our model to a point where we cannot deploy it in these tier 3 cities and suburbs where users are not comfortable using complicated tech infrastructure.

Even though we and UrbanClap share similar design statements i.e. design to overcome the challenges inherent in India's unorganised local services market, they mainly market their service as a convenience to millennials, and mainly big tier 1 cities. They recently rebranded to Urban company and expanded to Australia, UAE etc.

We are different in attempting to target the big tier 2 cities, tier 3 cities and sub-urban localities in India, that Urban Company has yet not expanded to. We aim to leverage our physical presence and make each of our stakeholders; the customer, hardware store owner (field agent) and worker independent and happy.

Dunzo

A main reason Dunzo's digital platform is convenient and is growing rapidly is due to the inventory available in stores that is displayed on the app.

While many hardware stores do not keep a digital inventory and still use books to keep track of expenses, it would make it infinitely harder for us to try to create a system where customers could select hardware from their home. The nature of these products also contributes to a much less likelihood of people willing to purchase such goods through a digital platform.

Uber

Uber adopts a system where customers are linked to drivers based on proximity. Drivers have the freedom to accept or deny a ride, which in a sense, gives them a level of independence in their profession. Once a ride is completed, Uber calculates the amount based on a standard metric of time and distance.

We however, face a problem where labour costs are very hard to calculate and judge without having any presence in that job itself. Because we have no metric to

calculate and standardise such labour fees, we faced a difficult time in drawing the line of how involved EZwork needs to be in the work done and prices quoted by the worker.

Defining the Target Market

Before moving forward to create our business plan and detail our product, we thought it was ideal to define the market our product was aiming to cater to.

Customers

We realised that we would be facing harsh competition from an already established brand like Urban Company that not only has a brand name, but a wide customer base as well. However, Urban Company existed in Tier 1 cities and a few tier 2 cities. They were completely absent or unheard of in the rest of India.

From the start, we chose to leverage informal work relations and communal growth to help workers. For our targeted market, we chose customers of tier 2 and tier 3 cities and as well as suburban areas of major cities as well. Customers here would be more open to a brand that was not limited to a digital interface. With the help of our partner stores, a more traditional population would be open to using our platform to their benefit.

Hardware Stores

Vendors that were already busy and booming with business would not be likely to join our brand, at least initially. We would target lower tier, small stores that would be open to a relatively secure way of increasing their sales. This would again be targeted at stores in tier 2 and tier 3 cities as well as suburban areas where they are more or less the only business of their nature in a locality.

Workers

While we catered to all Home Workers and specialised service providers, we didn't find any noticeable differences in the way we would cater to them through our platform. EZwork would be open to all home worker categories that would want to register with us.

Value Propositions

Before working towards creating a business model, we needed to understand what each of our users were getting out of being involved with EZwork. We mapped explicit and implicit benefits that each user was getting which in turn helped us create appropriate revenue streams down the line.

Customers

Our business revolved around the need of an easy way to connect service providers to the customers within their locality. Customers would get the convenience of not only finding a worker, but being a client of a transparent system where they would not be exploited with unwanted costs and hidden prices.

Customers would also be satisfied in having a connected hardware store for supplies for the job at hand. Payment of labour and materials would be conveniently done through our platform which would be one less point of hassle for the customer.

Hardware Stores

The physical presence of hardware stores on the field was something we felt was key to penetrate markets of tier 2 and tier 3 cities in India. Hardware stores would

benefit from more sales through a guarantee that all workers that get jobs through us would buy materials from their stores.

At the same time, the store would be renamed as an EZwork partner store which would not only mean constant marketing and brand growth but also being recognised by customers in the streets as a quality and trustworthy outlet.

Workers

Workers would get a higher sense of job security through our platform. However, workers will still hold a level of independence where they get to choose to accept or decline job opportunities. Workers would also get a form of identity as an EZwork worker, giving him a form of documentation for his profession.

Researching Financial Models

We realised that identifying revenue streams in a system as wide as ours was difficult and could have multiple issues if not thought out thoroughly. We researched to find a few business models that we could probably implement towards clients or our customers who would require work from the home workers.

Transactional Revenue Model

This is a model where our business would continuously charge a small fee to all the users for using our services. While this seems fairly straightforward, this model would create competition within ourselves and minimise revenue over time, making it hard to create profit in the long run.

Product is Free, but Services Aren't

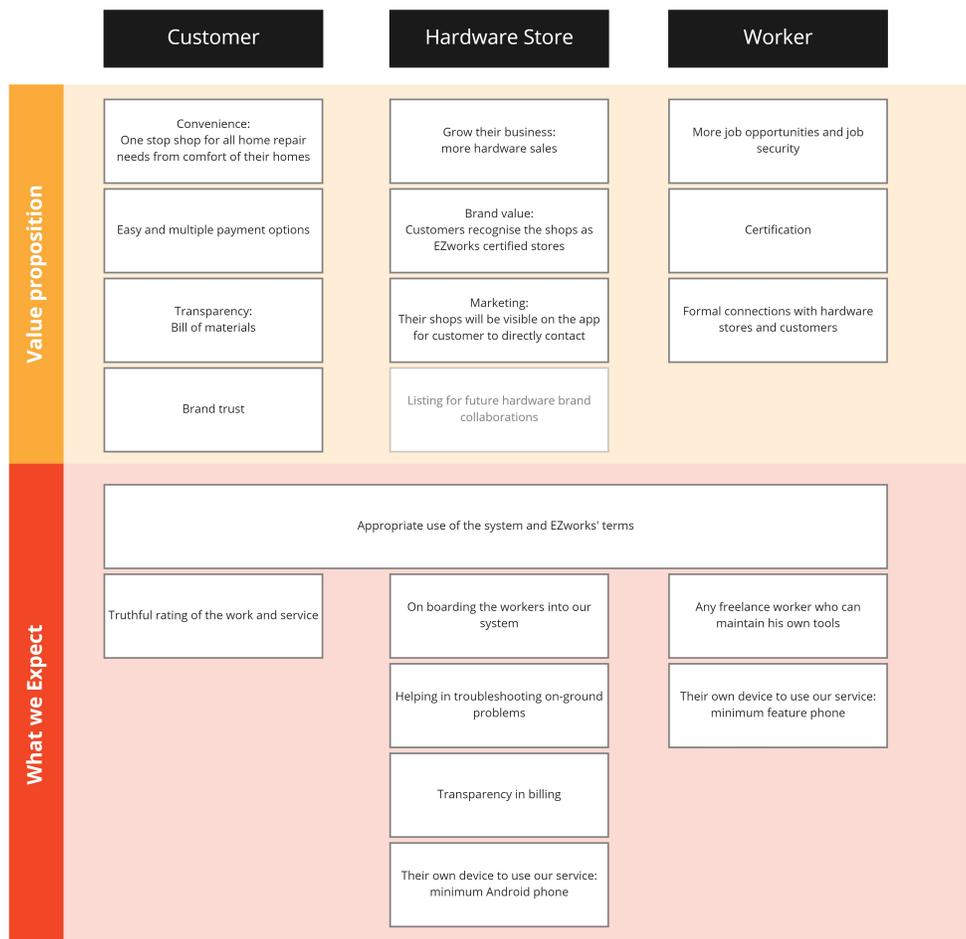
This model peaked our interest in terms of on boarding and providing services to customers. While we would allow our users to use our platform and services for

free, we would charge abundantly for services that would seem essential to our customers.

However, we did not feel this model was suitable for our business as it aims to create a simple flow for our users that requires minimal involvement and observation. If we did adopt such a system, we would only be backtracking on the primary notion of making it easy for our clients to reach required service providers for work.

Freemium Model

The freemium model is such that a company’s basic services are free, yet users would need to pay an additional premium to use more extensive features. While



Img 14. Incentive Value Analysis

this is a more known model used by service providers in similar businesses like Zomato, we didn't feel we had many premium services to offer at the moment.

However, we did develop a version of this to create a model to onboard more workers and keep them attracted to the security of our platform.

We again spoke to a friend of ours, Shashwat Sriraj, an Economic major to help us figure out the details of how to make such decisions. Shashwat suggested two models that we could look deeper into with regards to freelance workers. Reverse auctioning or a subscription model.

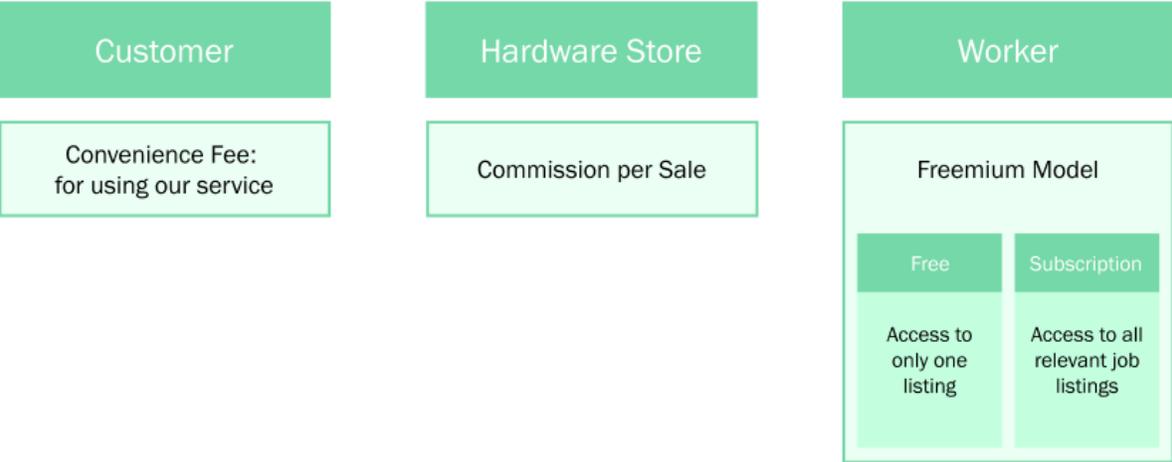
Reverse Auctioning

Reverse auctioning would create an open market for workers to bid on jobs each of them find appealing, creating competition and lowering prices for us as a company. However, we felt it was a different direction from the objective we set out with initially in our project. Workers would compete but ultimately end up losing out on business which would lower them further in economic turmoil.

Subscription Model

The subscription model was one where workers would pay a small sum of money over a time period to avail our services. While we did not directly implement this, a version of this was developed to help us create reliable sources of income for our business.

Revenue Streams



Img 15. Revenue stream model of EZwork

We finalised on different models that were specific to our different sets of users. For the clients, we adopted a transactional model where they would be charged a small convenience fee per job request. This seemed ideal as the nature of our business (repair/maintenance of household items) would not require the same customer to be back on our platform very often.

We decided to get revenue from hardware stores through a form of commissions per sale. Since their greatest benefit of our service is assumed to be increased product sales, we thought it ideal to take a cut of the revenue they receive as payment for using our service and brand name.

For our diverse group of workers that we would be linked to, we chose to create a version of the freemium model. Workers that register with us would continue to get job offers through a software and would have the opportunity to accept or decline based on their circumstance. However, by paying a small subscription fee, workers

would get access to our complete job list wherein they would be able to select their preferred jobs (with respect to pay, distance, implicit costs, etc) from a complete Job list they would have access to.

While this model could possibly create a divide in the type of jobs that are assigned to workers, we hope to reduce that through our digital system that would assign and publish such work. We hope that this model creates minimum imbalance or exploitation of workers while still allowing us to create a profitable business through the platform we create.

Revised System Plan

We revisited our Job request cycle to discuss how much power we give to our hardware store owners or Field Agents. We did recognise in our previous version that they could be a source of exploitation when selecting which worker should be appointed to which job.

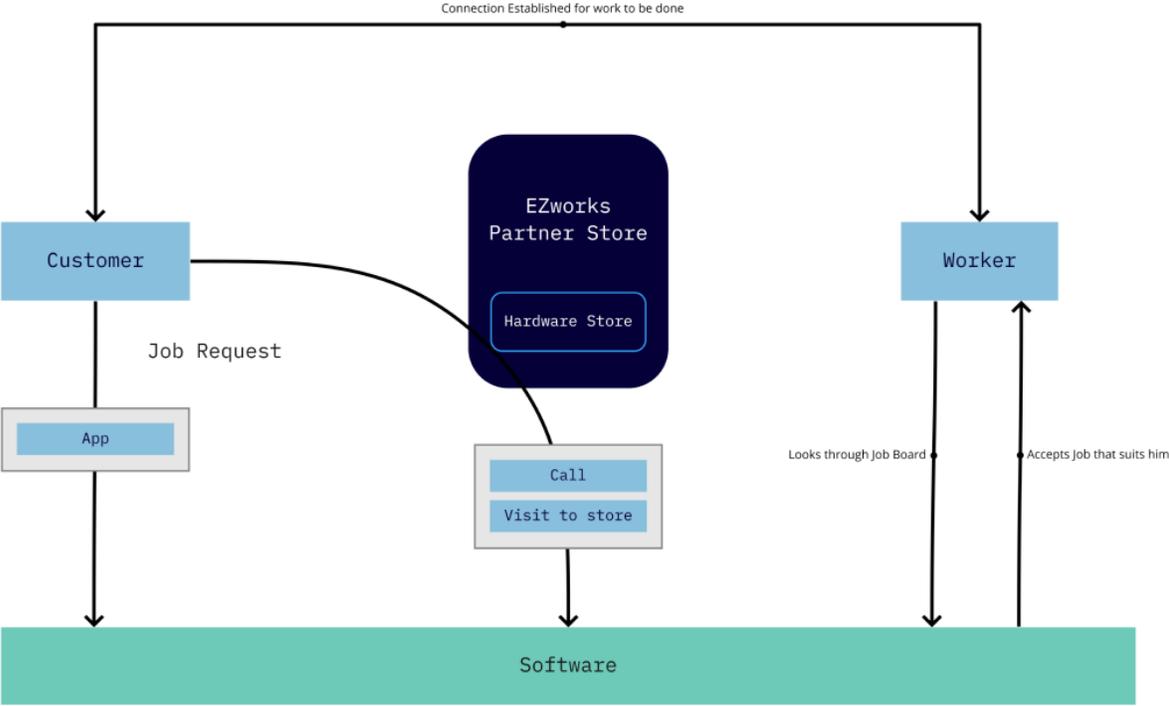
We tried to reduce the hardware store's involvement in appointing jobs to workers and automated that process to a degree. With parameters such as distance to customer location, job expertise and worker rating, an artificial intelligence software would offer jobs to workers as they are requested by our customers.

Workers would be able to sign up to a free service where they would be offered single jobs as they are requested and given the option to accept or decline. While on the premium service that would require a subscription fee, workers would be able to access a complete job list that would be updated in real time to choose one they find ideal.

The rest of the system would be fairly similar to our previous version. Customers would be able to fill in job requests individually through the app, or call or visit an

EZwork partner store to get help from a field agent to do the same. Hardware stores would still provide the materials for the jobs and would be required to enter the material receipt onto the ongoing Job order. Workers, once the job is done, would also be required to enter the labour receipt onto the Job order.

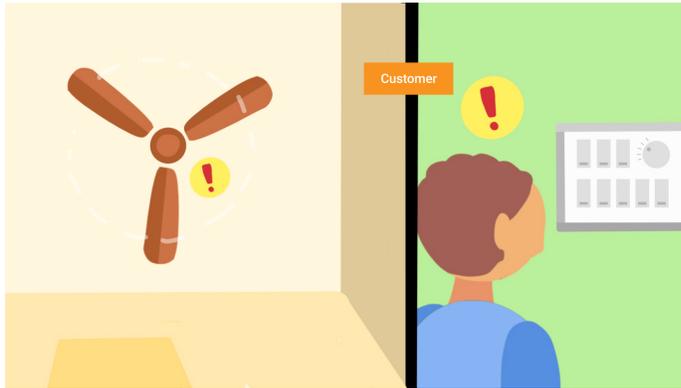
The customer would finally receive a complete bill, inclusive of materials (from the EZwork partner store) and the labour costs (put in by the worker himself after negotiating) that can be paid through our app. The customer would also be able to rate the quality of work after the job and raise any complaints with us if he/she faced any troubles.



Img 16. Revised system plan

Scenario

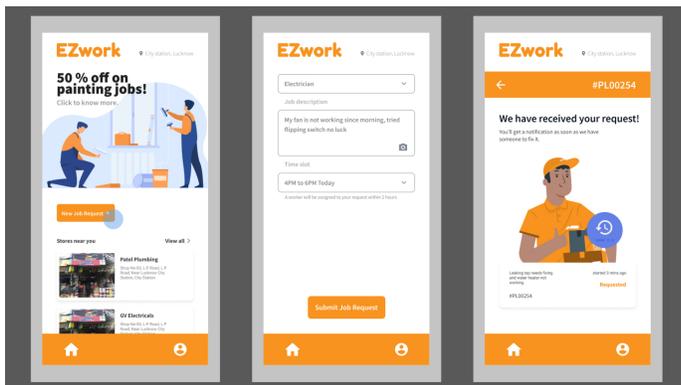
Mr. Aranjeet Sharma uses EZwork to repair his fan



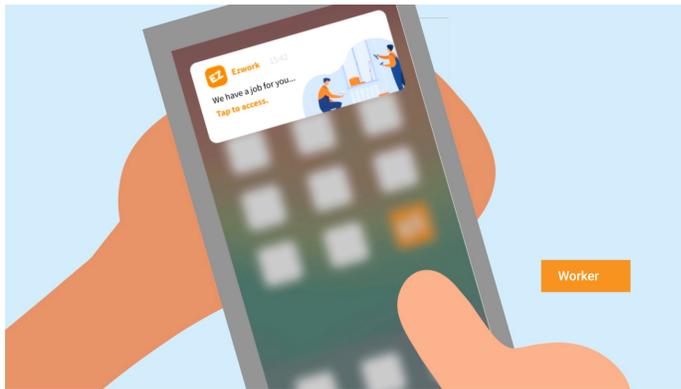
Mr Aranjeet Sharma's fan stopped working, so he thought of using the EZwork app he had known from a whatsapp forward to get help.



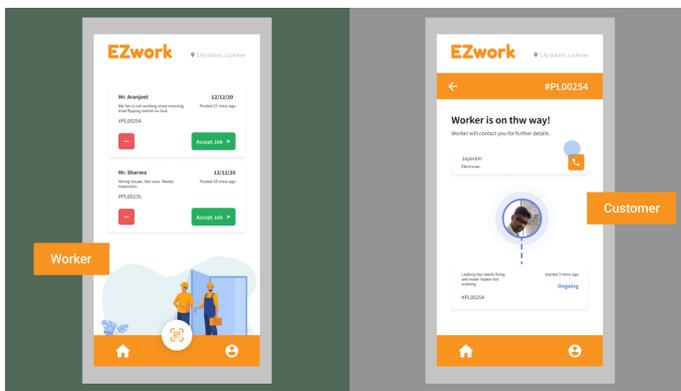
He goes to the EZwork app on his phone, he signs up using phone number- OTP based authentication.



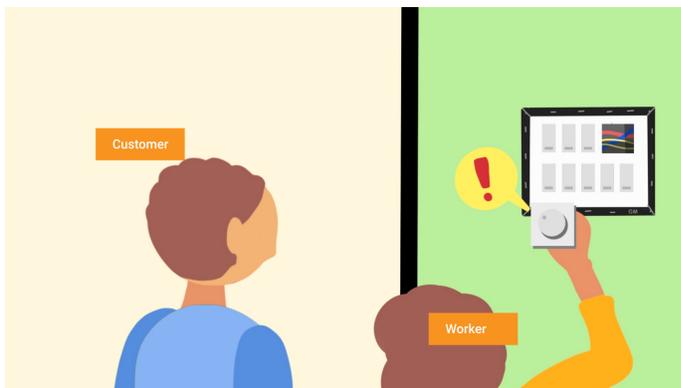
He selects the job type as "electrician" and enters a job query "my fan is not working since morning" and he specifies a time slot as 4PM today, and he submits a job request.



The app says "we have received your request, we'll inform you as soon as we have someone to fix it" on the customer side. Chand pasha who is our EZwork registered electrician receives a notification of the same job on his phone.



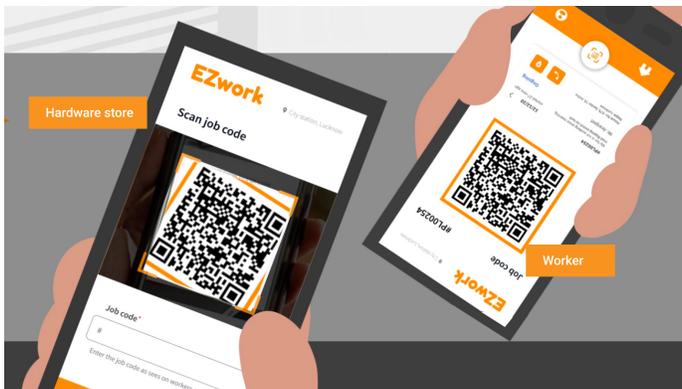
The worker accepts the job, and the status changes to connected to a worker.



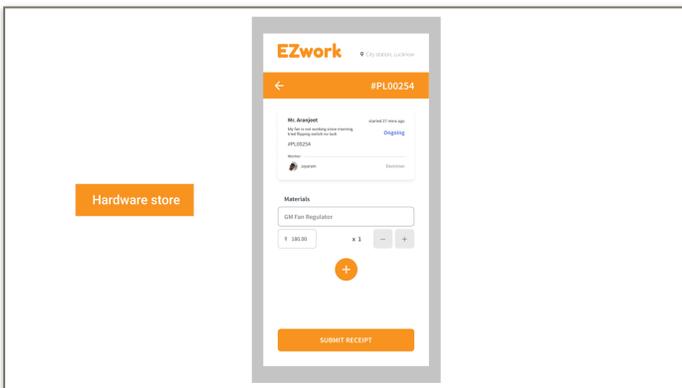
The worker approaches the customer, investigates the problem, and finds out it's the problem with the fan regulator, so he suggests the fan regulator should be replaced.



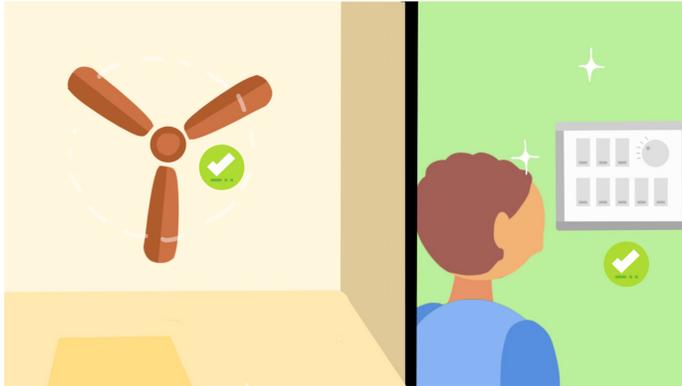
He goes to the EZwork store to get the materials.



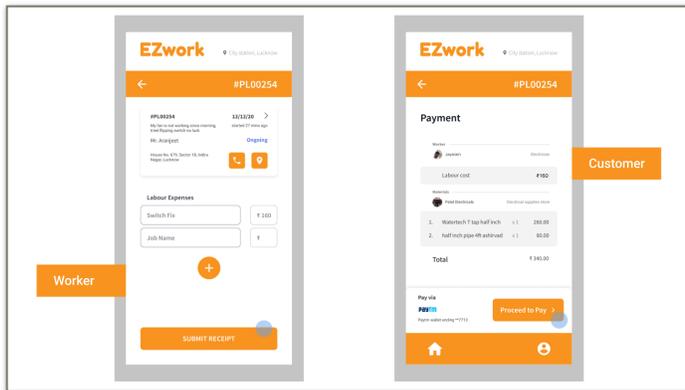
The field agent scans the barcode on workers phone to authenticate and connect with the job.



He then bills the materials into our system using our app.

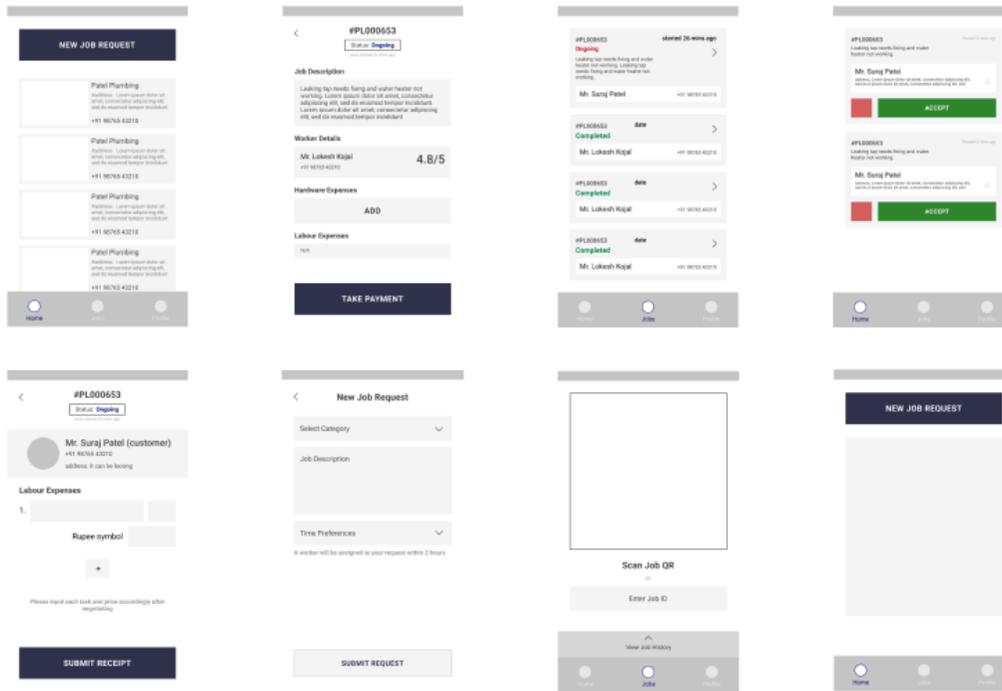
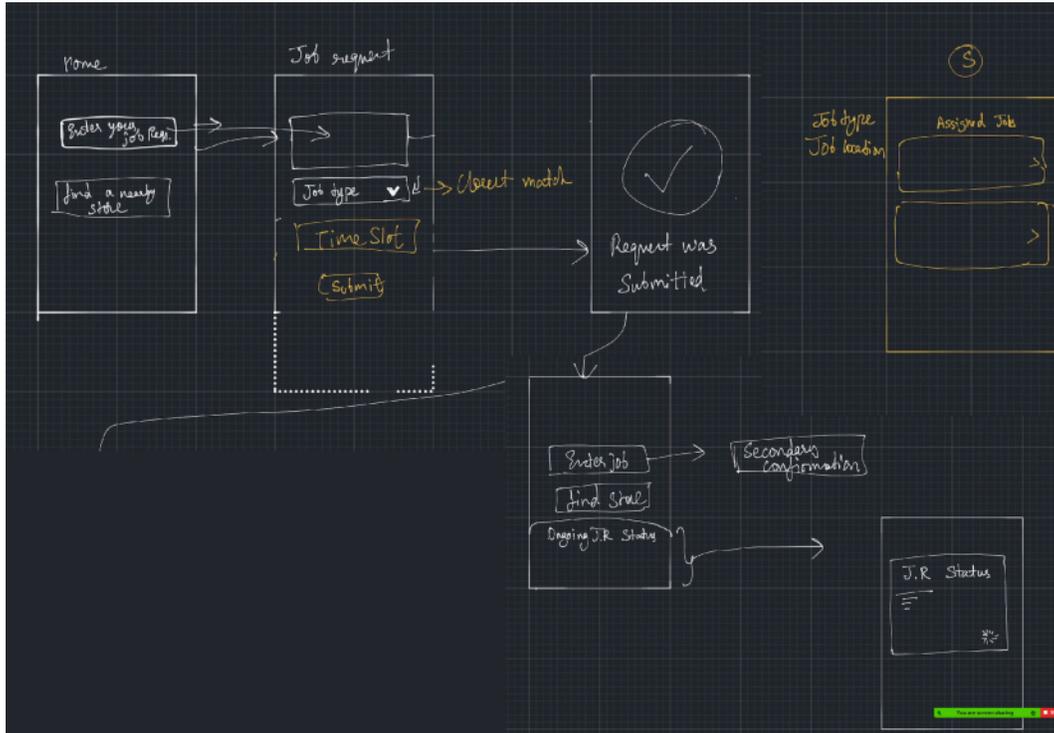


The worker finishes the job.



He negotiates the price with the customer and inputs in his app. Combined bill of our convenience fee, materials bill and labour will be shown, and the customer can pay through cash, net banking or UPI through the app.

Wireframes



Week 5

Validating Our Concept

Since we covered a lot of ground in the last two weeks, from coming up with an idea, flushing out the entire system of interactions and attempting to make it a business, we needed to know if our plan would pan out in reality. Testing our idea with real users was next to impossible since most of it depended on having a physical presence with hardware stores.

We approached multiple hardware stores first and explained to them our concept as well as we could to understand their concerns and worries before we moved forward. These insights helped us understand points we assumed to be insignificant as highly important to them and how our idea didn't accommodate everything.

- Most hardware stores do not document every transaction.
- Store owners prefer to not charge GST, which would help them give better prices to their customers, assuring a level of loyalty to the business as well as give them higher profits per transaction
- Store owners sometimes charge more than MRP to get profit, since they would have barely broken even on other transactions. Since they don't issue GST bills for all transactions, they get away without any issues.
- Store owners do not mind giving discounts and earning smaller profits from customers who would continue buying from them.

We also spoke to industry experts who have worked with startups before. Their insights on common mistakes entrepreneurs make helped us rethink many aspects of our system and business as well.

Prof Ashish Pandey

Having researched human behaviour and taught courses on human resource management for years, Prof Ashish's insights on our business idea were very helpful.

- We would need to study the market in tier 2 and tier 3 cities thoroughly as they differ from most tier 1 city markets.
- The effort we put into creating and pushing our business model should be less than the money we expect to earn for a successful business.
- All customers and all workers are not the same. Attempt to classify your users and make sure your system works for as many of the categories as possible.
- Study the existing relationships between your users on the ground currently. Businesses that leverage existing supply chains are bound to be more successful.
- How would we penetrate our target market? What strategies would we use initially to onboard users to hopefully reach our ideal system in a given time frame.

Mr. Dipak Bajaj

Having studied at IIM Shillong and been a close observer of the infamous Khatabook startup being built and developed by his classmate, he helped us dive deeper into understanding value propositions of each of our users and predict how our customers may react to the convenience we offer.

- The convenience of an end to end system for any task must not be overlooked. Customers want to reduce the amount of involvement in everyday menial jobs.
- As a corporation, we would not only have to endorse GST bills, but make sure the customer who is paying for it knows of each item being bought. Transparency within the job should be a prerequisite for all users.
- Standardising rates is very important. There is not enough incentive for customers to use our service if they could still end up getting exploited by workers through varying costs.
- Standard rates would incentivise customers to continue using our app because of the guarantee of fair prices we provide.

Final Concept

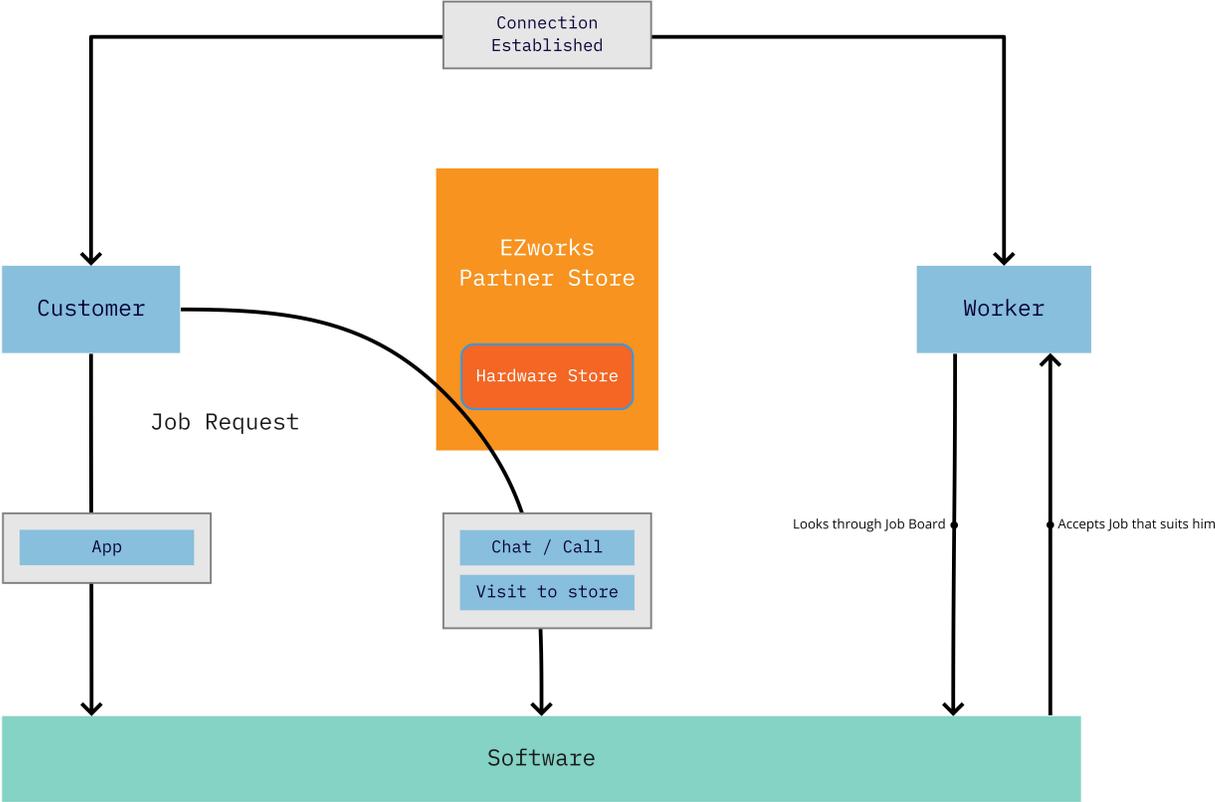
A platform to connect people with skilled workers and hardware stores to fulfill any household needs they may have.

EZwork would be used by customers to get a fair end to end service for any household job they may have. Hardware stores would be inclined to partner with us for the increased sales our customers would bring them along with the brand awareness and visibility they would be linked to. Workers would use our system to get a more secure source of jobs and not need to rely or be affected by changing

tides in the market. They would also be linked to a formal company, giving them documentation of their work experience and profession for any aid or benefits they might be eligible to receive

We detailed out and categorised the job cycle into three sections. *Submitting a job request, during a job, and post-job payments.* We made sure to identify and evaluate each interaction between the users to identify any concerns we may have overlooked.

Submitting a Job Request



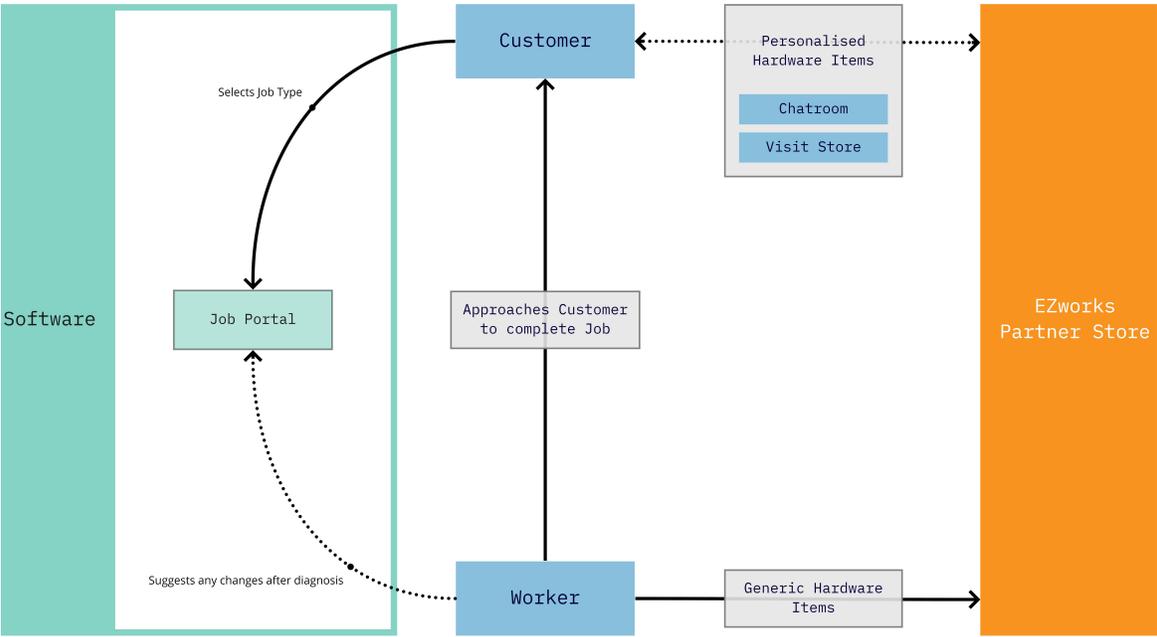
Img 17. Submitting Job request Flowchart

The majority of this section remains the same from our previous version. Customers would use either the app to submit a Job request, call or chat with the

hardware store or visit them to get help in submitting a request. Workers, depending on the subscription plan they are a part of, will get the option to accept or reject a job request or get access to a complete list of Job requests suitable to their professional expertise.

During a Job

Customers would be required to select the type of job from a broadly categorised list on the interface. Once selected, a worker would be assigned and approach them to complete the job. The worker would have the freedom to suggest a change in the type of job after diagnosing the problem to allow the customer to change it and select the accurate job type and pay the labour charges accordingly. The worker would then proceed to complete the work.

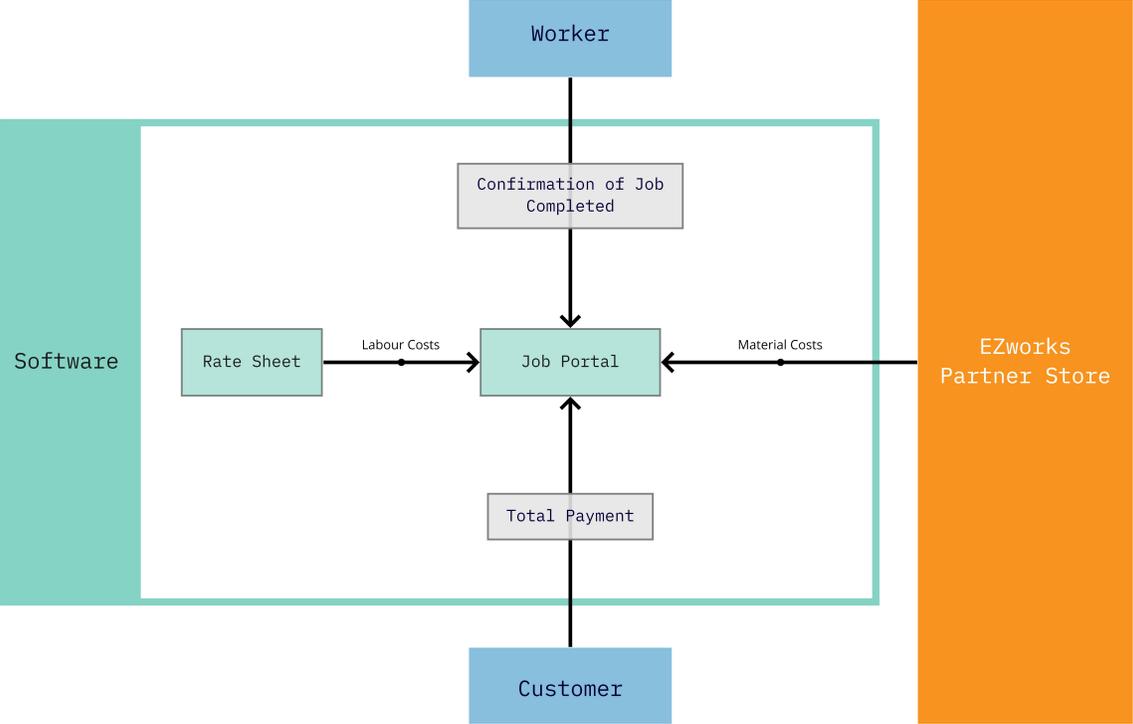


Img 18. During the Job Flowchart

All generic hardware items such as screws, bolts, washers, etc would be purchased by the workers himself and added to the on going job portal by the hardware store. In the case that the customer would like to select or personalise an hardware item, he/she would have the freedom to approach the partner store or chat with the store owner through the app itself and select the hardware item.

Post-Job Payments

Once the software receives a confirmation from the customer that the job is completed, labour charges from a standard rate sheet (set by EZwork) would be charged according to the job type. Material charges of all hardware items would be added by the partner store onto the ongoing job portal as well. A complete bill would be presented to the customer, along with a convenience fee and any other charges to be paid through the EZwork app.



Img 19. Post Job Payments Flowchart

Reaching our Users (Marketing Strategies)

It was imperative that we understand how to reach our users, what marketing strategies would work best and how much investment would be required in this area of the business. We spoke to Mr. Shantanu Sriraj who works as a marketing manager for multiple companies.

Above the Line Marketing

This strategy particularly refers to non-targeted large-scale marketing. It refers to more conventional forms of marketing in the form of TV ads, ad boards, newspaper ads, and in the current age, ads on video content platforms such as YouTube. It'll be useful to get the word out about our brand, primarily among the customers who will be coming to the platform for our services. It will help us onboard a large customer user base, and therefore help us overcome the smaller initial conversion rate of the customers for data aggregation and service businesses like ours.

On the Line Marketing

This strategy is a mix of above and below the line marketing, and in the current market, refers to digital marketing. Marketing agencies follow a semi-targeted nature of approaching their customers, where prospective customers will be sent information regarding our services based on their preferences. This can range from sending them text messages to showing targeted advertisements. An old-school approach to on the line marketing can be publishing ads specifically in magazines catering to construction businesses and hardware companies.

Below the Line Marketing

This strategy refers to targeted advertising, where we have identified our users like workers and shop owners, and we target them with personalised marketing campaigns. This can involve hiring sales persons and sending them to particular shops to onboard the shop owners. We can take up the strategy of individually approaching workers and onboard them as representatives of our brand, so that they can onboard their colleagues too, as word-of-mouth communication is prevalent in this particular sector.

Cost Structure

We talked to a multitude of external collaborators like ex-CEOs, industry experts, economists and business management professors to figure out a cost structure for the first 18 months. We segmented them across multiple categories of operational costs, salaries, infrastructure and particularly, user acquisition costs, and tried to come up with a realistic number. It still has to go through multiple rounds of reviews for a final check, as we'll have to define a lot of variables in our overall revenue structure to come up with a concrete number.

The initial user acquisition costs per customer will be very high due just due to the nature of business, but the plan is to onboard a critical mass so as to offset the overall costs.

Backend Engineer Specialist	60000	1	60000	1080000
Backend Intern	25000	1	25000	450000
Front end engineer	50000	1	50000	900000
Data Scientist	50000	1	50000	900000
Customer relations	30000	1	30000	540000
Sales Team	14000	4	56000	1008000
Co-working space	20000	1	20000	360000
Telephone and Internet	5000	1	5000	90000
Laptops	30000	5	150000	2700000
Server Space (10k users)	15000	1	15000	270000
Social media marketing	50000	1	50000	900000
Billboards	30000	3	90000	1620000
			Total	10818000
Fixed	Designers	40000	2	80000
Fixed	Backend Engineer Specialist	60000	1	60000
Fixed	Backend Intern	25000	1	25000
Fixed	Front end engineer	50000	1	50000
Fixed	Data Scientist	50000	1	50000
Fixed	Customer relations	30000	1	30000
			Total	295000
			Total	₹11,113,000
			10% running costs	₹12,224,300
				₹679,128

Img 20. Cost Structure spreadsheet

We were able to come up with a monthly number for the first 18 months, rounding off to nearly 7 lacs rupees per month. This was a very early and rough estimate, and requires multiple reviews by industry professionals.

Deployment Strategies

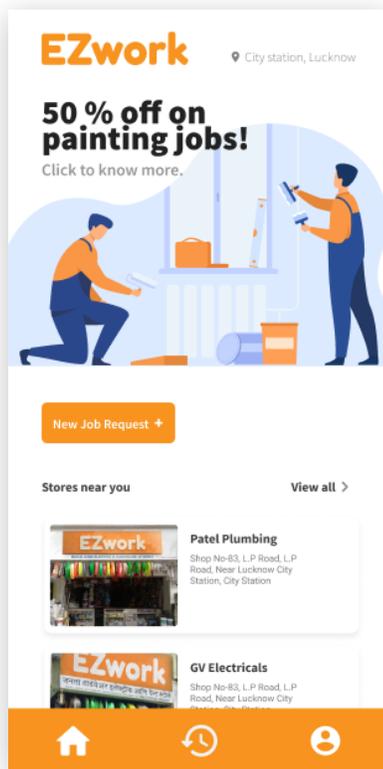
We plan to deploy our service in a Tier 2 Indian city, like Lucknow. We would approach hardware stores with our service and partner with them. We would make sure to be selective in approaching as to not overlap the reach of stores and create competition within our partner stores themselves.

Initially, we hope to launch with limited services such as plumbing, electrical and carpentry and eventually expand to include more workers. This would help us focus our initial efforts into introducing ourselves as a platform.

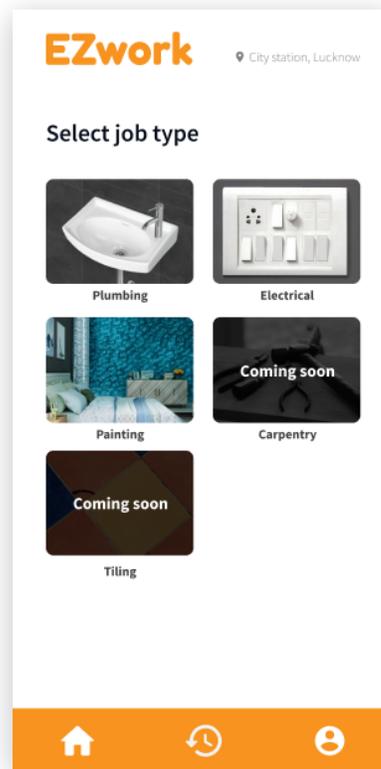
We also hope to launch with a very broad rate sheet for the jobs we offer. Since we have little to no reference to understand what types of jobs do people require and how much is charged, it would be an iterative process to develop this rate sheet as we grow.

App Prototype

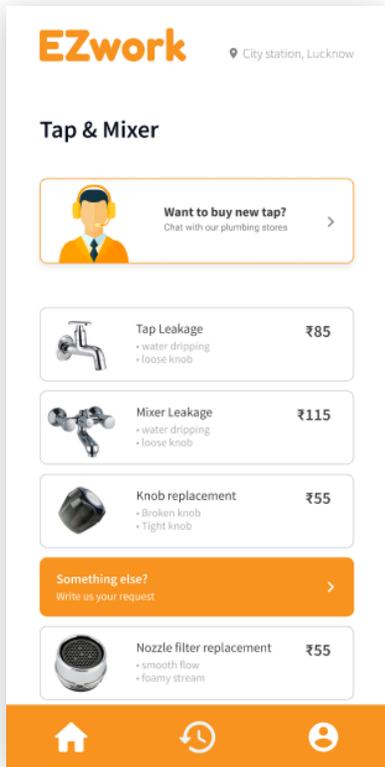
Customer Side



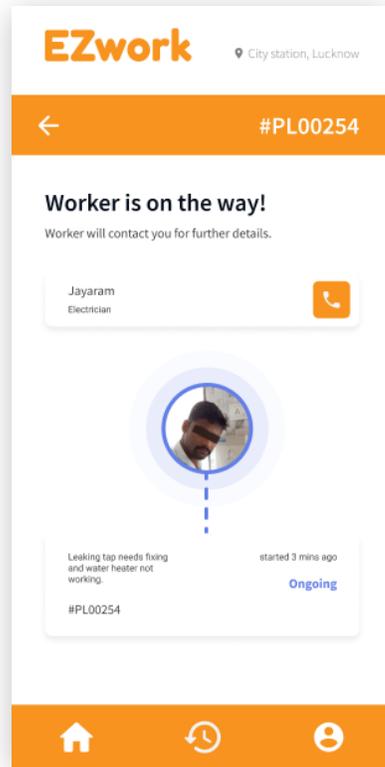
Landing Page



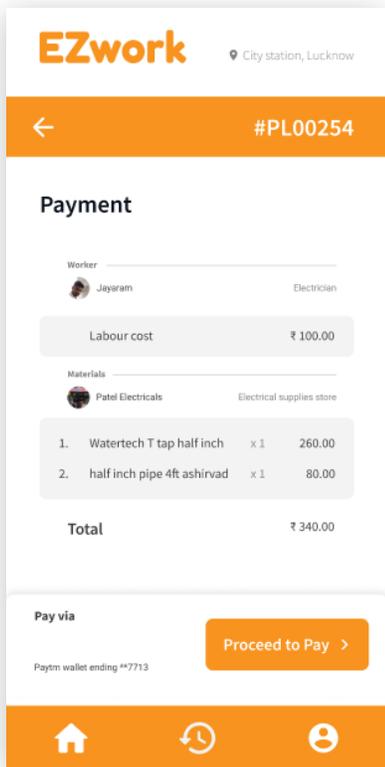
Job Type Selection



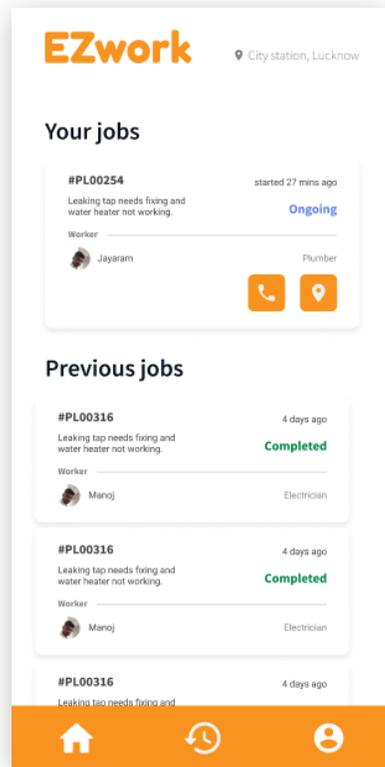
Job Detail Selection



Job Request Confirmation

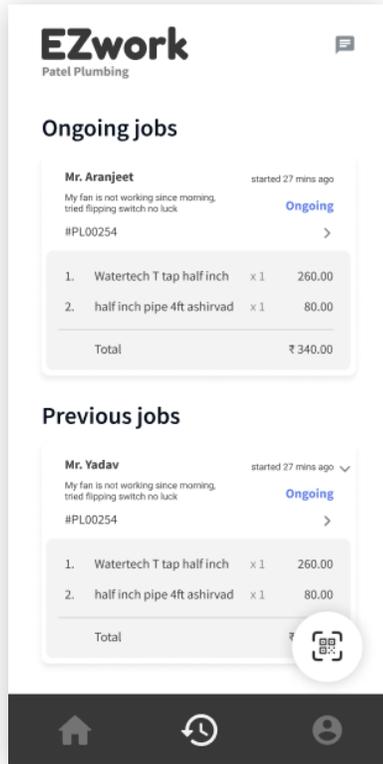


Final Payment



Personal Job History

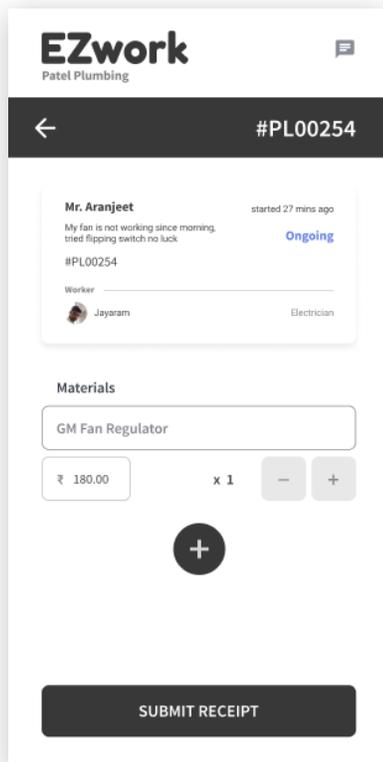
Hardware Store Side



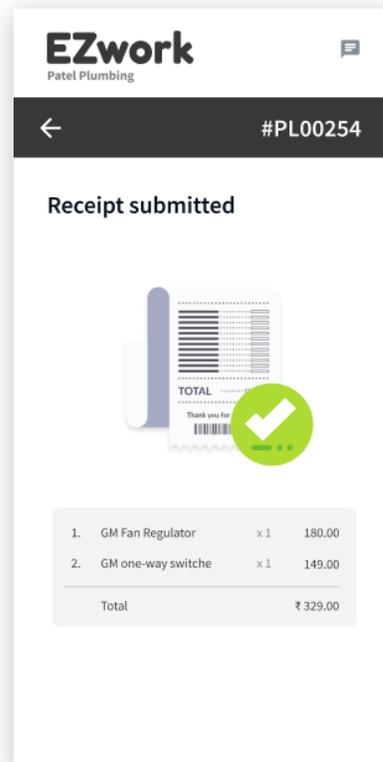
Ongoing Job Portal



Customer Direct Chat

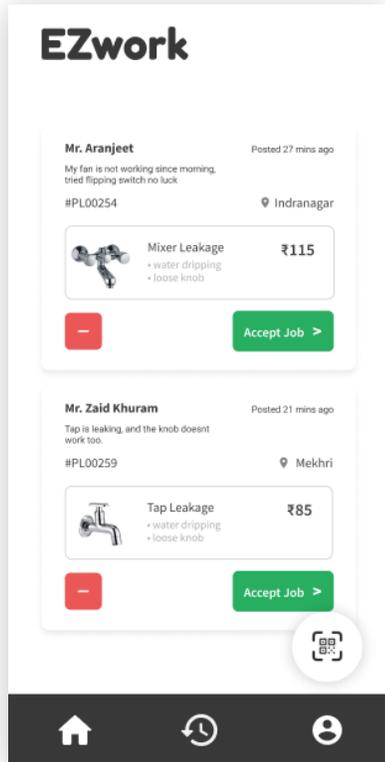


Material Costs Input

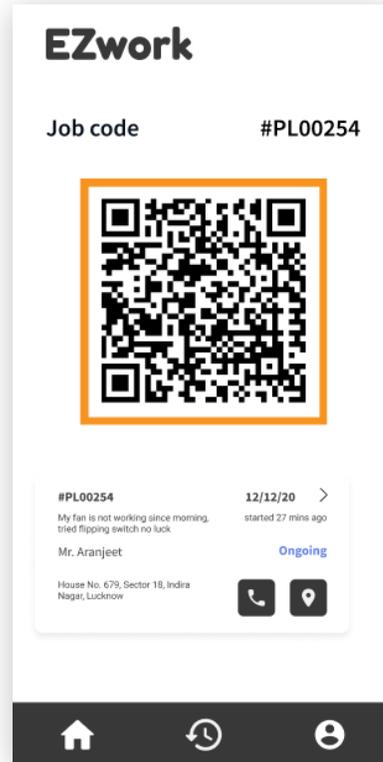


Costs Update Confirmation

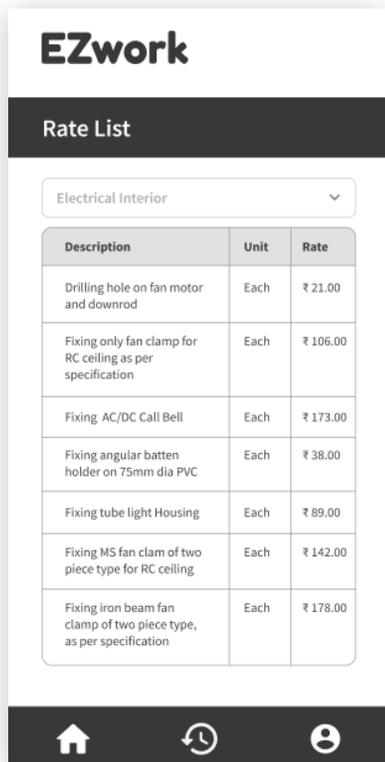
Worker Side



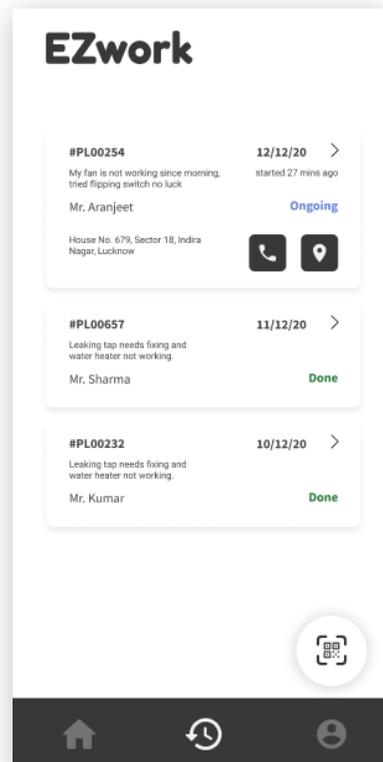
Incoming Job Requests



Job Code and Details



Rate List



Worker Job History

Acknowledgements

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Prof. Ashish Pandey
SOM, IIT Bombay

Shashwat Sriraj
M.Sc (Business Analytics), Christ University

Mr. Shantanu Sriraj
Marketing Manager

Mr. Dipak Bajaj
MBA, IIM Shillong

Pranjal Meena
IDC, IIT Bombay

Rishabh Jain
IDC, IIT Bombay

All the workers, contractors and hardware store owners that gave their time to share with us valuable insights

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