



BUSINESS INNOVATION & ANALYTICS PROGRAM PROJECT BOOK

Volume 1



FOREWORD BY DR. ANIL SHAH

Chairman of Smart Village Movement

The Smart Village Movement is a revolutionary experiment to bring sustainable development to rural communities. This “Business Innovation & Analytics Program Project Book” is the culmination of a course offered by UC Berkeley Haas School of Business in partnership with the Smart Village Movement to help Indian students build skills in entrepreneurship, innovation and data science.

This report brings forth innovative ideas to solve rural challenges through student projects that seek to address several UN Sustainable Development Goals. Some great ideas like Gramin Rural Polyclinic and Salesforce Trailblazer Labs that SVM recently implemented on the ground in Meghalaya, have originated from UC Berkeley student projects like these. Well-received by the Government and rural communities, these are now scaling throughout the state.

Every day I see people doing great things in the world. What do they have in common? The courage to go after chronic problems that limit a community and find innovative and sustainable solutions for the greater good. At Smart Village Movement, we pilot projects on a small scale with measurable impact and the ability to pivot early. In the process, we’ve learned that only programs that create sustainable and scalable revenue models will succeed in the long run.

As you read through this book, you will begin to appreciate the Open Innovation principles and ecosystem approaches to solving problems on the ground in emerging economies. Projects in this book that integrate innovation and technology from academia, support from the local and state governments, and ensure the commercial viability of businesses are the ones SVM will take forward and implement on the ground. A matter of great pride for all of us is that some of these ideas will become strategies adopted for rural development throughout India and other developing markets.

This project book is meant to serve as a resource on rural development for students, corporates, and researchers around the world and also as a manual for the practitioners and government officials on the ground. I welcome you to join me in the Smart Village Movement to address the needs of 3.4 billion people whose potential can be unleashed to create a more equitable world for us to enjoy.

Dr. Anil Shah MD, FACC, FSCAI
Interventional Cardiologist, Anaheim, CA. USA
Executive Chairman, Smart Village Movement

BUSINESS INNOVATION AND ANALYTICS PROGRAM

In partnership with the Smart Village Movement, The Center for Growth Markets at the UC Berkeley Haas School of Business is offering a program in Business Innovation & Analytics to Indian students. This program helps students build skills in innovation, entrepreneurship, and data science both through lectures and by completing a self-directed project that involves proposing a solution to and creating a business model for real-world challenges faced by villagers in rural India. In the program, students first receive two weeks of online lectures from instructors at the University of California, Berkeley, as well as guest speakers from multinational corporations and nonprofit organizations. The lectures cover a range of topics to teach students the business and analytics skills they need to complete their projects. Students will then select a project, addressing several different UN Sustainable Development Goal, listed below, that they can work on for the next 10 weeks. They submit the project at the end of the program for evaluation by instructors.








UN SUSTAINABLE DEVELOPMENT GOALS
























SUSTAINABLE DEVELOPMENT GOALS



<https://fcba.berkeley.edu/program-in-business-innovation-analytics/>

TABLE OF CONTENTS

<i>Agricultural Insurance</i>	6	  
<i>ARTH: Wastewater Management</i>	7	 
<i>Bamboo Hotspot</i>	8	  
<i>Clean Cooking Oil</i>	9	 
<i>Data Cards & Portable Wifi</i>	11	 
<i>E-Buddies for Students</i>	12	
<i>E-Guru: Let's Learn Together</i>	13	
<i>Early Year Child Development</i>	14	
<i>Education Platform for Teachers</i>	15	
<i>Fasal Fresh</i>	16	 
<i>Job Ready Skills: Job Alaya</i>	17	 
<i>Ketos Shield</i>	18	 

<i>Learn-O-Gram: English Learning App</i>	19	 
<i>Local Health Communities</i>	20	  
<i>Maternal Health</i>	21	
<i>Medicinal Plants: Lemongrass</i>	22	 
<i>MUV Services for Small Farmers</i>	23	 
<i>Potato Processing</i>	24	 
<i>Quit Using Tobacco: An A.I. App</i>	25	
<i>Realistic Role Play</i>	26	
<i>Rural Transport Connectivity</i>	27	 
<i>Supply Chain: Revamp.io</i>	28	  
<i>Treehouse Lodging</i>	29	 
<i>Vitamin A Deficiency</i>	30	
<i>Waste Collection</i>	31	

CROP INSURANCE AGAINST FLOODS

BY GARV PRATAP SINGH & ANANYA SAGGAR

EXECUTIVE SUMMARY: THIS PROJECT AIMS TO STABILIZE AND EMPOWER HORTICULTURE FARMERS -- SPECIFICALLY VEGETABLE FARMERS OF EAST KHASI HILLS, MEGHALAYA -- THROUGH CROP INSURANCE AGAINST FLOODS, STORMS, AND OTHER NATURAL CALAMITIES AND THROUGH EDUCATING THEM ON THE MATTER.

Addressed Painpoints :
1) Heavy rainfall
2) Repetitive landslides and flooding

SOLUTION APPROACH

Farmers in India tend to not get insured as they are unaware of agricultural insurance and the benefits it has, and/or are under a lot of debt due to excessive borrowing from informal sources of credit who charge high interest rates. In order to address the crop damages natural calamities cause, offering farmers insurance at an affordable premium will serve as compensation. It will prevent farmers from plummeting deeper in debt and from relying on moneylenders to recover financially after a failed harvest season. Providing crop insurance will gear farmers away from overexploitation by these moneylenders. Through this service, farmers will attain financial security alongside awareness in procuring high-quality seeds and other agricultural tools.



CASE STUDY

A case study in Bangladesh conducted by the Asian Economic and Financial Review in 2018 revealed the following: without insurance policy, a farmer will not lose anything financially if there were no weather hazards during planting season; however, they may lose 432,000 Bangladeshi Taka (about 5,000 USD) if there were. On the other hand, with insurance policy, a farmer will lose 43,200 Bangladeshi Taka (about 500 USD) through premium payment without suffering from any weather damage. However, they will be compensated the full 432,000 Bangladeshi Taka if there were. This could be helpful in considering whether crop insurance will be financially beneficial for Meghalayan farmers.

RESOURCES NEEDED

PHYSICAL

- Land
- Furniture
- Computer

HUMAN

- Accountant
- Logistics Employees
- Direct contact for farmers

REVENUE & PRICE

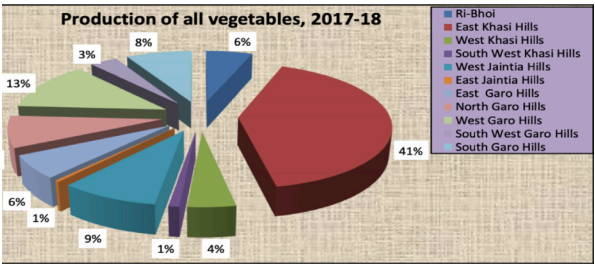
Revenue will be generated through charging farmers with less than 1 acre the premium on an annual basis at 3%, whereas farmers with more than 1 acre will be charged the premium on a half-yearly basis at 6%.

COST

The fixed costs on a monthly basis includes of 3,000 rupees for rent, 10,000 rupees for utilities, and other insurance costs. The variable cost depends on employee salary which will be 5,000 rupees each for 3 employees. As the number of farmers increase, the amount of employees will increase too. Additionally, cleaners and sweepers will be paid at a piece-rate of 100 rupees per day.

FACTS

- (1) 41% of all vegetables grown in Meghalaya are cultivated in East Khasi Hills.
- (2) There are around 356 - 360 vegetable farmers in the East Khasi Hills region.



PROSPECTIVE PARTNERS



DISTRIBUTION CHANNELS

Distribution is available indirectly, through hiring a few agents who will be in contact with the farmers and who will ensure timely payment of the premium. Such indirect channel is chosen due to its cost-effectiveness and accessibility to farmers.

NEXT STEPS

1. Comparative analysis with existing insurance providers
2. Identify existing experiences and opinions about agricultural insurance
3. Identify factors that require agricultural insurance based on location(s)

ARTH: WASTEWATER MANAGEMENT

BY ISHA RAMESHRAJ

EXECUTIVE SUMMARY: THIS PROJECT SEEKS TO PROMOTE ARTH, A HOUSEHOLD WASTEWATER PURIFICATION SYSTEM TO RECYCLE AND RECHARGE GROUNDWATER, FOR RURAL HOUSEHOLDS IN MEGHALAYA THROUGH TRAINED VOLUNTEERS AND DEMONSTRATIONS WITH VIDEOS AND CAMPAIGNS.

Addressed Painpoints :
1) Health implications
2) Pollution of water bodies
3) Mosquitos/vector breeding

SOLUTION APPROACH

The main solution to rural household wastewater management is implementing soakpits to serve as secondary chambers to drain wastewater. The ARTH process will aid households in recycling and recharging groundwater by utilizing judicious use of freshwater to generate minimal greywater. The process also uses wastewater for outdoor household purposes such as their gardens. By installing 3-4 ARTH units in households, consumers will understand how to use ARTH and keep up maintenance.

CASE STUDY

This natural treatment study explores the potential for removal of pollutants, cost-effectiveness, and recycling options for the 1.20 million m³/day of wastewater generated in Hyderabad, India. It was found in the paper that wetland sediments rich in medium to coarse grain soil characterized by 30–39% porosity and 12–15 m/d of hydraulic conductivity is a potential interaction zone for wastewater treatment. This information can be helpful in further developing the project in terms of what sediments to choose from to generate the most efficient amount of groundwater.

RESOURCES NEEDED

PHYSICAL

- Social media marketing
- Demonstrations
- Regular maintenance

FINANCIAL

- Fundraisers and Donations

INTELLECTUAL

- Advisors and volunteers

HUMAN

- ARTH Experts

REVENUE AND PRICING

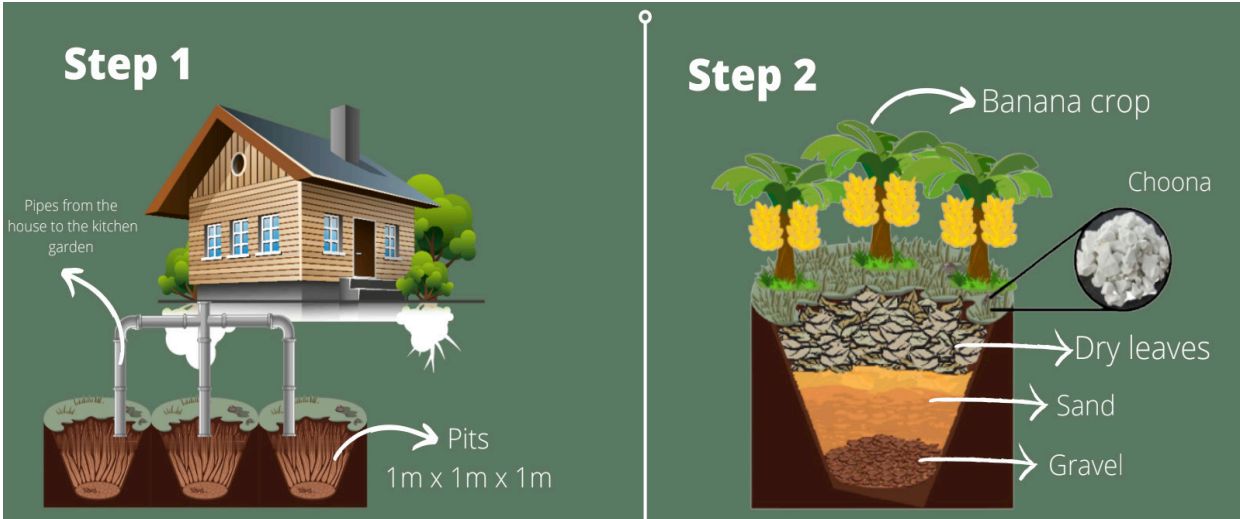
As a non-profit pricing model, the revenue model will work to be free to families and provide services through volunteers. The company’s operational costs will come from fundraising.

COST ANALYSIS

The fixed costs will include normal company operation costs, the variable costs depends on maintenance, and the per unit cost will depend on the units and training.

DISTRIBUTION CHANNELS

Direct B2C channels. Local skills are more than sufficient to manage the system based on the understanding of the operation.



NEXT STEPS

1. Considering scale and space at the household level
2. Figure out if this could be an urban model rather than rural.

PROSPECTIVE PARTNERS



BAMBOO HOTSPOT

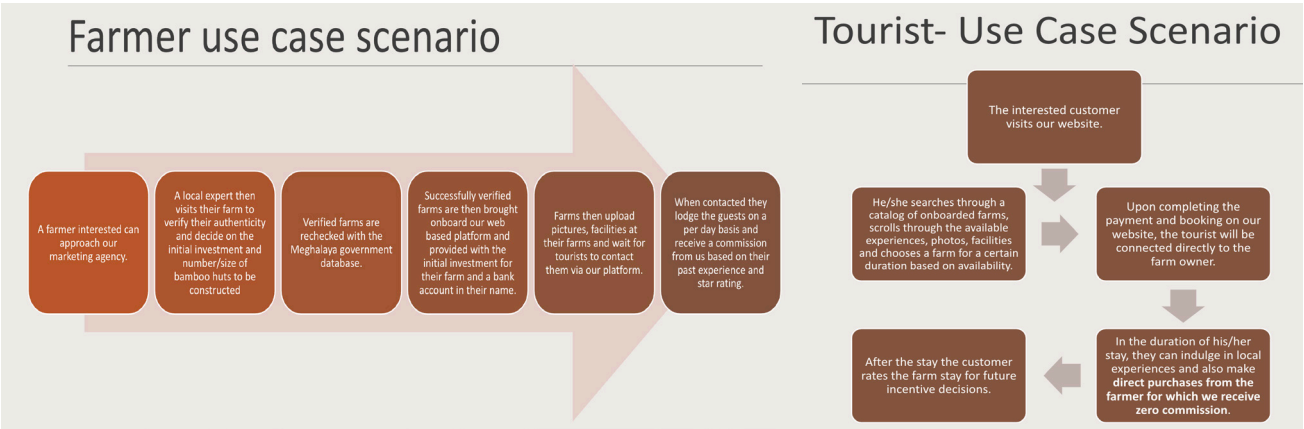
BY RITVICK SENTHIL

EXECUTIVE SUMMARY: THIS PROPOSAL IS AIMED TOWARDS 20-TO-30-YEARS-OLD ADULTS WHO ARE LOOKING TO EXPERIENCE NATURE IN A DIFFERENT WAY, URBAN FAMILIES WHO ARE LOOKING FOR SOME BONDING TIME WITH THEIR CHILDREN, AND TOWARDS THE 50-TO-60-YEARS-OLD ELDERLY WHO RESIDE IN MEGHALAYA AND MAY BE CRAVING FOR RURAL NOSTALGIA.

Addressed Painpoints :
1) **Limited touristic products, services, and experiences at local destinations**
2) **Lack of experience-based tourism**

SOLUTION APPROACH

In order to expand rural tourism, this project centers on the transformation of bamboos into tourist lodgings and marketing these locations on a website. The online platform will provide access to farm experiences unique to the Sacred Groves region, i.e. jam/pickle making, bamboo weaving, treks, and root bridge construction workshops. Construction of a simple single 240-square feet bamboo hut only cost around 2 lakhs and is more eco-friendly compared to conventional wood. Farmers interested in housing tourists may reach out to a local expert, who will visit their farm and verify their authenticity. These experts will decide how many bamboo huts they can build on their farm and how much initial investment they would need. After the Meghalayan government’s verification, farms will then be included on the web-based platform and provided with their initial investment. Farmers will upload pictures of the newly constructed bamboo cottages on the website for tourist accessibility. The platform will have a star-rating feature that will reflect tourists’ experience.



RESOURCES NEEDED

FINANCIAL

- **Funds to build platform**
- **Initial investment to upgrade facilities**

INTELLECTUAL

- **Advisors**
- **Programmers for trouble-shooting**

HUMAN

- **Coding experts for platform**
- **Local experts to manage farmers**

PHYSICAL

- **Construction and materials for bamboo huts**

REVENUE AND PRICING

Revenue may be earned on a per-day basis. Farms will earn 10% of revenue per day if they lodge 1-10 groups. Their revenue will increase by 5% daily if they lodge more than 10 and if the farms have at least a 4.5-star rating on the proposed platform. As for pricing, accomodation for a multiple-day bamboo hut lodging will cost 2,000 rupees per day. Taxi will cost a minimum of 37 rupees. Local food will cost 250 rupees per meal. Discounts will be available for repeated lodgers.

COST STRUCTURE

The initial fixed cost of the bamboo huts would include the initial investment to purchase farm land. The variable cost depends on salaries for technicians, programmers, and local experts. Unit costs will be charged based on taxi charges and additional fees.

DISTRIBUTION CHANNELS

The platform will be accessible online and through travel agents. Though indirect selling may not be as profitable, it will still increase the visibility of the platform regardless. Other distribution channels that will help promote the platform include publishing blogs (wherein lodgers share their experience at the farms) alongside becoming a movie-shooting venue -- which will popularize and market the lodgings.

PROSPECTIVE PARTNERS

Partner	Type	Resource
Travel agencies	Competition	Indirect selling, marketing
Taxi agency	Strategic	Transportation to and from the farm
State bank of India (market leader in agri-finance)	Strategic	Provision of bank accounts to farmers to enable transaction of lodging fee
Bamboo house India	Strategic	Constuction of bamboo cottages



ACCESS TO CLEAN COOKING FUEL

BY SUBH DHAL

EXECUTIVE SUMMARY: THIS PROJECT AIMS TO PROVIDE LPG AT THE DOOR STEPS TO MIDDLE INCOME HOUSEHOLDS THAT USE TRADITIONAL COOKING FUELS.

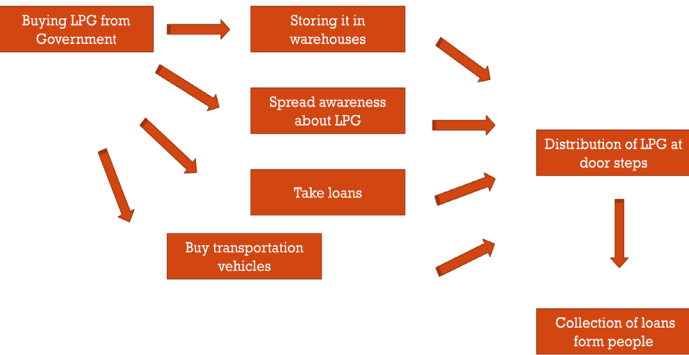
- Addressed Painpoints :
- 1) Long hours spent collecting biomass
 - 2) Health risk
 - 3) High cost of LPG connection
 - 4) Lack of distribution channels in remote areas

SOLUTION APPROACH

In order to reduce health risks due to the use of traditional wood fuel as well as saving time which can be further utilized to earn income.

KEY FACTS

- (1) Only 33% people in Meghalaya have access to clean cooking fuel
- (2) 70% of women are exposed to the negative health impacts associated with indoor air pollution from inefficient cookstoves, resulting in respiratory, pulmonary, and vision problems.
- (3) Burning solid fuels causes indoor air pollution (IAP) due to the emission of harmful substances such as carbon monoxide, particulates, benzene, and formaldehyde at levels up to 100 times higher than the recommended limits set by WHO.



RESOURCES NEEDED

PHYSICAL

- Transportation vehicles
- Storage units

HUMAN

- Drivers

FINANCIAL

- Cost of vehicles
- Cost of loans
- Cost of storage units

REVENUE, COST, & PRICING

The revenue model of this project will depend on monthly installments or full payments. The monthly installments for connection and LPG installment will be 17%. The costs will include an average delivery cost of 100 rupees for 21 km, cost of delivery vehicle of 4 lakh rupees, and the warehouse rent of building.

DISTRIBUTION CHANNELS

The distribution channels for LPG would be through home delivery and central collection centers.

CASE STUDY

A study conducted by the Integrated Research and Action for Development, India in 2019 found that urban households in Raipur used LPG more than those in rural areas. Yet “easy service provision, through delivering LPG cylinder at doorsteps,” increased the use of LPG in Raipur overall. This can be helpful in assessing the effectiveness of delivering LPG cylinders to Meghalayan households who may initially prefer to stick with traditional cooking methods.

NEXT STEPS

1. Using fire wood is an integral part of the Khasi/Jaintia kitchen (as established by ground inputs and other NGO validations), how is this intervention going to tackle that?
2. Existing organisations promote and provide low cost/free access to clean cooking fuel but the acceptance rate is low, can this intervention work alongside these existing and established organisations or find alternative pilot locations.

PROSPECTIVE PARTNERS



DATA CARDS AND PORTABLE WIFI

BY ADITYA, ALEESHA, & VANSHA

EXECUTIVE SUMMARY: THIS PROJECT PROMOTES PROVIDING LOW-COST INTERNET SERVICE TO RURAL SCHOOLS OF MEGHALAYA. NOT ONLY DOES THIS PROJECT EXPANDS INTERNET ACCESSIBILITY ACROSS LEARNING INSTITUTIONS, BUT ALSO TRAINS STUDENTS AND TEACHERS TO BE MORE COMFORTABLE WITH TECHNOLOGY.

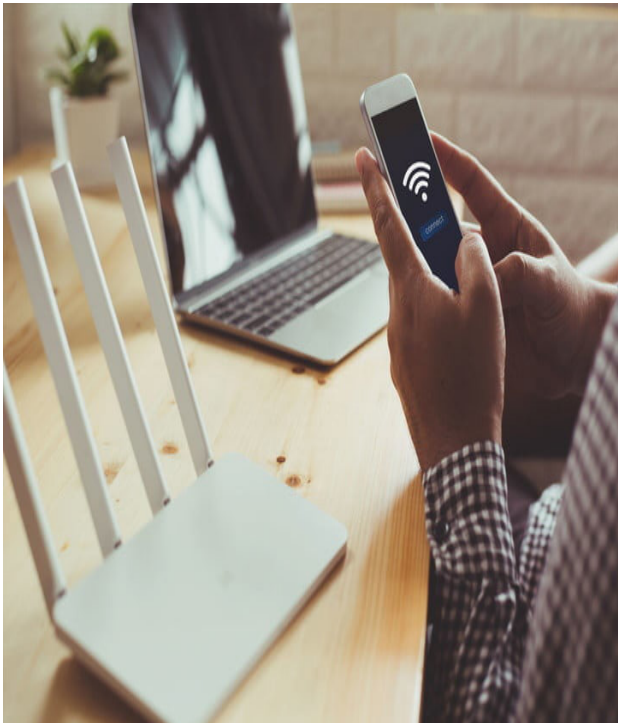
Addressed Painpoints :
1) Inadequate internet penetration
2) Resistance to technology

SOLUTION APPROACH

In order to encourage a wider use of internet in Meghalaya, distribution of data cards and portable wifi in government-sponsored middle and high schools will help gear the state towards technological transition. This is done by primarily providing internet services at low cost, which increases accessibility, and thus enabling schools to initiate such change. In turn, creation of smart classrooms and digital products will help rural schools be on par with those in urban setting.

CASE STUDY

In a 2014 Malaysian study about student internet use, there proved to be a positive, significant correlation between the amount of time students were online and the time they spent on there for academic purposes.



RESOURCES NEEDED

HUMAN

- Technical assistant
- Mentors & Advisors
- Employees for help desk
- Staff for internet partnership

INTELLECTUAL

- Patents, copyrights, contracts
- List of customers
- List of pilot marking schools

DISTRIBUTION CHANNELS

A 7-day free trial will be offered to each school that may be interested in purchasing data cards and portable wifi. Said products will gain attention through word of mouth and physical campaigning. A distribution office will ensure that they reach customers' delivery addresses promptly.

PROSPECTIVE PARTNERS



Guwahati Meghalaya Freight Carriers



REVENUE AND PRICING

Revenue stream will be generated through partner and user fees, which are dependent on the size of institution. It is expected to cost 2,000 rupees per 100 users; low-cost internet services are provided in return. Should there be any connectivity and equipment issues, the support team costs 200 rupees per visit.

COST ANALYSIS

COST (MUST HAVES):	
❖ Fixed costs:	
1. Office space rent (Rs. 30,000 per month)	
2. Employee salary (Rs. 10000-15000 as per job)	
❖ Variable costs:	
1. Transportation (Rs. 1500 – 2000 each time)	
2. Advertisement (Approx. Rs.50,000)	
3. Repairs (Range - Rs.100-1000)	
4. New equipment (Range – Rs.5000-10000)	
✓ Approx. expenditure per month: Rs.100000-150000	

NEXT STEPS

1. Schools in rural Meghalaya are not equipped with computers, prior to this project, hence digital infrastructure needs to be established.

E-BUDDIES FOR STUDENTS

BY ABHIJITH AND VISHNU

EXECUTIVE SUMMARY: THIS PROJECT PROPOSES AN E-BUDDY PROGRAM TO OVERSEE THE MENTORING OF RURAL SCHOOL STUDENTS TO SUPPORT THEM IN THEIR STUDIES, HOMEWORKS, ASSIGNMENTS, AND INCULCATING AN ASPIRATION TO LEARN MORE.

- Addressed Painpoints :**
- 1) Technological infrastructure unavailability
 - 2) Financial crisis
 - 3) Rural children deprived of education unlike those in urban areas

SOLUTION APPROACH

In order to provide first-generation learners proper education exposure or career guidance from their parents and families, investing in a service platform of E-Buddies for students will improve quality education in Shilong. This proposed challenge is a system by which interested urban students can sign up as E-Buddies to guide students from SVM villages and other rural villages in their day-to-day studies, homework, projects, periodic exams and help them in elevating their overall education experience, something which is missing in small, far-flung government schools. This may also serve as a motivating factor to perform better.

WEBSITE PROTOTYPE

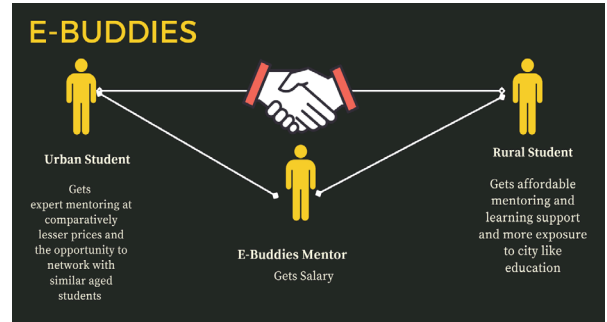


E BUDDIES

"Don't Miss out While You Are Away From School"

Book a Lesson





FACTS

In the 11th (ASER) Annual Status of Education Report 2016, statistics reveal low quality of reading among class III students of rural Meghalaya.

Reading:

- 2.4% of students can't even read alphabets
- 13.6 % can read letters but not words
- 37.5 % can read words but not class I textbooks
- 27.2 % can read class I but not class II textbooks.

RESOURCES NEEDED

PHYSICAL

- Electronic devices

FINANCIAL

- Corporate and/or Government investment

INTELLECTUAL

- Trained mentors
- Seminars and workshops
- Platform Creation


HUMAN

- Platform registry assistance
- Social inclusion promotion
- Curriculum based mentoring

DISTRIBUTION CHANNELS

The platform is directly distributed through online sales consultancy and virtual/ direct methods where students register for enquiry. Direct sales will result in high profitability while indirect sales will reduce the profit as there is greater risk since students are involved.

PROSPECTIVE PARTNERS



REVENUE AND PRICING

Revenue will be calculated through a cost model and breakdown depending on the kind of service picked by families. This can be modeled through direct selling and/or a subscription model.

Revenue Model

- Direct Selling/Subscription Model-Recurring revenue

Pricing Model

- Per month(5 hours/10 sessions)
- Rural: Rs.100/-
- City: Rs.1100/-
- Number of students in consideration per mentor: 30 students = 120 total students (60 pair)
- Number of mentors: 4
- 1 mentor: 5 hours for 1 month
- 1 mentor=(15*100)+(15*1100)=Rs 18000/- (Per month)

COST ANALYSIS

COST MODEL & BREAKEVEN	
COST ANALYSIS	
Office room rent	Rs 60000
Salary	Rs 48000
Miss Cost	Rs 40000
180 Students	Rs 36000
Total fixed cost	Rs 184000
Contribution margin	24000
Breakeven point	8 months

- ## NEXT STEPS
1. Establish monitoring mechanism for the program
 2. Lay out guidelines for the program
 3. Identify schools/means of communication



E-GURU: “LET’S LEARN TOGETHER”

BY NEERAJ S

EXECUTIVE SUMMARY: THIS PROJECT PROMOTES THE USE OF A DIGITAL PLATFORM, INTENDED TO EQUIP RURAL MEGHALAYA TEACHERS AND THOSE INTERESTED IN ADAPTING TO THE NEP CURRICULUM WITH PROPER ASSISTANCE, TO IMPROVE MEGHALAYA’S EDUCATION AND TECHNOLOGICAL INFRASTRUCTURE.

Addressed Painpoints :
1) Inadequate teacher training
2) Lack of investment in education infrastructure

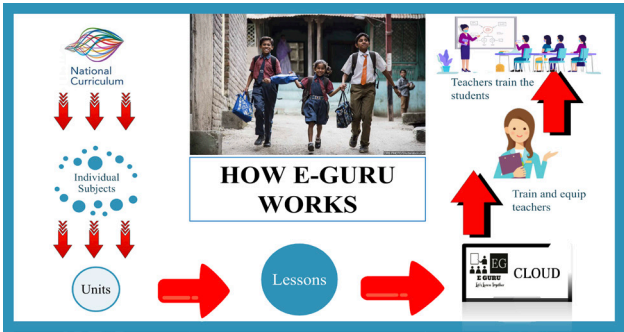
SOLUTION APPROACH

In order to provide teachers with proper training, implementing E-Guru aids teachers in constructing standardized lesson plans as per India’s national curriculum. The interactive online platform avails them to various teaching tools in the palm of their hands – ranging from guided modules to performance scorecards – that enhance both their teaching and tech knowledge. Consequently, E-Guru results in a better classroom environment for students.

FACTS

649 points / 1000 points

Meghalaya ranks last in performance in the educational sector by scoring 649 points out of 1000 in 2021 PGI.



ZAMBIA CASE STUDY

In Zambia’s Eastern province, de Hoop et al (2020) evaluated an intervention for 1st grade students that provided electricity and tablets that had lesson plans and interactive activities loaded onto them. After 14 months, the results showed a 0.4 and 0.22 SD improvement in reading and math respectively. It also improved local assessment achievement by 0.16. This portrays the role technology can potentially have on improving education systems and children’s learning habits.

RESOURCES NEEDED

PHYSICAL

- Electronic devices

FINANCIAL

- Corporate and/or Government investment

INTELLECTUAL

- Syllabus-oriented content creation
- Training modules for teachers

HUMAN

- Social media marketing
- Educational campaigns
- Distribution of E-Guru accessible electronic devices

DISTRIBUTION CHANNELS

The service is directly distributed through schools and government authorities. Online sales consultants are available either physically or virtually should a school have any enquiry regarding sales. Direct selling assures high profitability gain. Indirect selling reduces the profit potential since there are other parties involved.

PROSPECTIVE PARTNERS



REVENUE AND PRICING

- Annual subscription model for each standard.
- Generates Recurring Revenue

Pricing model - Fixed
Subscription price - 4000 Rs/year
At 71st subscription, E-Guru will start recovering costs.

Revenue will be earned after the 67th customer, which is the breakeven point if 100 were sold. Initial subscription costs 10,000 rupees per classroom. Annual renewal from then on only costs 2,500 rupees.

COST ANALYSIS

Cost Model	
Platform development cost	2L
Miss Cost	.5L
Fixed Cost	2.5 L
Content creation	1L
Variable Cost	1L
Total cost	3.5 L

NEXT STEPS

- Establish methodology for monitoring the program
- Identify pilot region (Internet connectivity/Availability of digital tools)
- Establish needs of the students for different levels



EARLY YEAR CHILD DEVELOPMENT

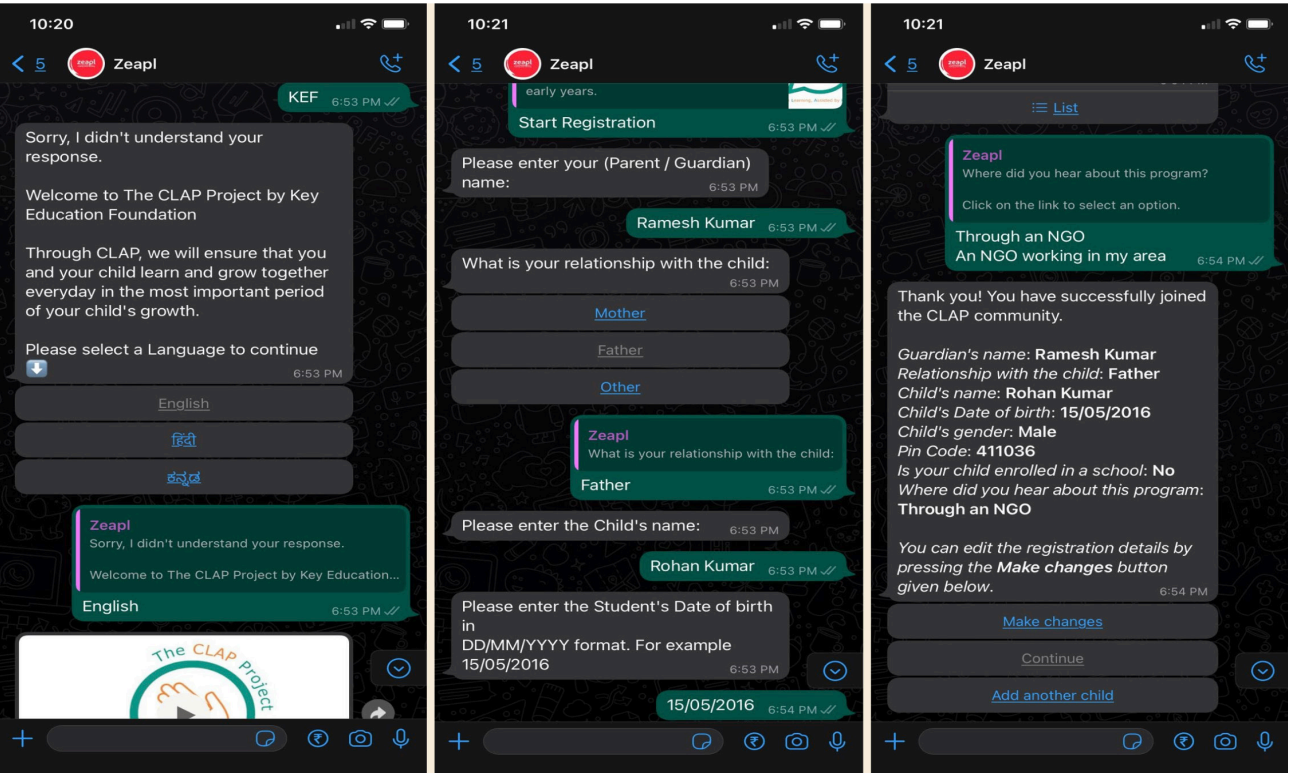
BY ARYAN KAUL

EXECUTIVE SUMMARY: THIS PROJECT PROPOSES A PLATFORM THAT ENGAGES AND ENCOURAGES PARENTS TO INVOLVE THEIR CHILDREN IN EARLY EDUCATION THROUGH DIGITAL MEANS IN THE COMFORT OF THEIR HOMES. THIS IS SPECIFICALLY AIMED TOWARDS CHILDREN IN THE AGE OF 3 THROUGH 8, PARENTS OF THESE CHILDREN FROM RURAL AREAS, AND/OR THEIR GUARDIANS.

Addressed Painpoint :
1) Low enrollment numbers in pre-primary and government Anganwadi centers

SOLUTION APPROACH

In order to encourage parents to enroll their young children in education centers, this project aims to increase parent engagement in pre-primary education through WhatsApp. The digital service elevates access to pre-primary learning content. With parents taking charge of their children’s education, children can learn at their own pace at home. WhatsApp is a relatively easy to use platform and is availble in customers’ vernacular language. It also works on low bandwidth. Usage of simplified technology in the local language makes it ideal for children in the rural areas to be school-ready.



RESOURCES NEEDED

PHYSICAL

- Electronic devices

FINANCIAL

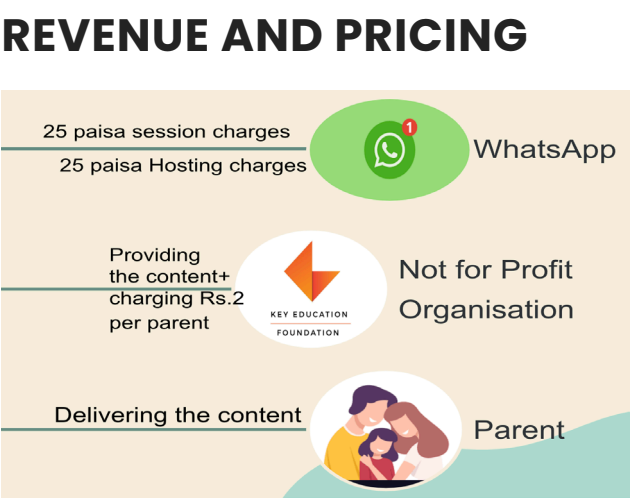
- Non-profit partner
- WhatsApp based startup

INTELLECTUAL

- Learning content

HUMAN

- Employees for parent outreach
- Anganwadi teachers
- Student volunteers



WhatsApp charges 25 paisa per session and 25 paisa for hosting. A non-profit ogranization will provide the learning content. The service offered by this project will charge 2 rupees per parent, in which content from the non-profit will be delivered through WhatsApp. The amount of revenue earned will be 1 rupee, 50 paisa per parent.

FACTS

- Only 1 of 8 students in 8th grade can read English sentences in India.
- Dropout rate is at 22.60% as of 2018 and has only increased due to the COVID-19 pandemic.

DISTRIBUTION CHANNELS

The service is available through NGO’s, Anganwadi teachers, school areas and government tie ups. Direct outreach is needed through NGO’s & government tie-ups.

PROSPECTIVE PARTNERS



EDUCATOR PLATFORM FOR TEACHER

BY SUMITHA S

EXECUTIVE SUMMARY: THIS PROJECT TARGETS TEACHERS IN GOVERNMENT-RUN SCHOOLS IN LAITKROH, MAWPHLANG, AND SOHIONG. IT SEEKS TO PROVIDE FACULTY TRAINING IN INFORMATION AND COMMUNICATION TECHNOLOGY. IN EXCHANGE, TEACHERS WILL ENCOURAGE ACTIVE PARTICIPATION IN CLASS AND MAKE STUDENTS WELL-VERSED WITH COMPUTERS AND INTERNET USAGE.

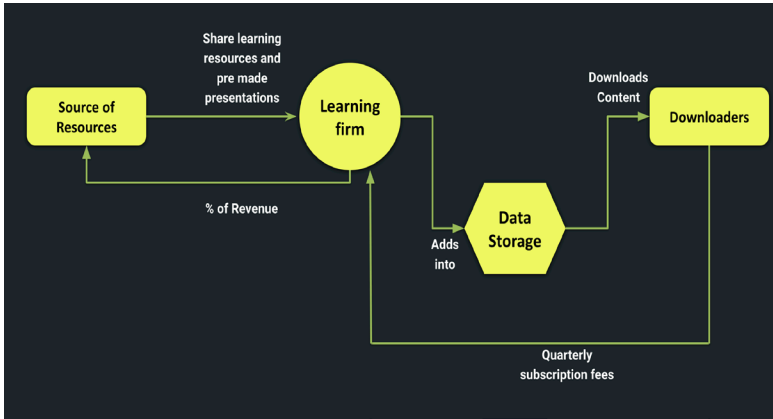
Addressed Painpoints :
1) Inadequate teacher training

SOLUTION APPROACH

In order to provide teachers adequate training, the distribution of a shareable data storage will aid teachers initiate a more engaging classroom environment. The shared drive will contain various learning resources and pre-made yet subject-specific presentations – guiding Meghalaya towards a standardized method of teaching. The use of the database will result in greater ease of transmitting course materials across many schools.

FACTS

In a 2021 archival research featured in The World Bank Research Observer, educator-targeted programs that focus on information technology had a 0.086 standard deviation increase in student learning – compared to programs with no subject focus with -0.24 standard deviation.



RESOURCES NEEDED

FINANCIAL

- Government aid

INTELLECTUAL

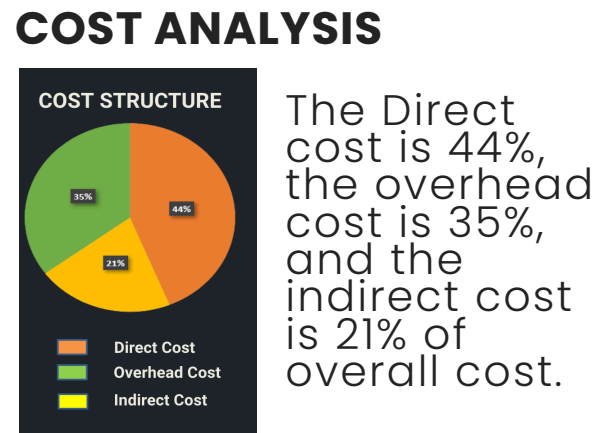
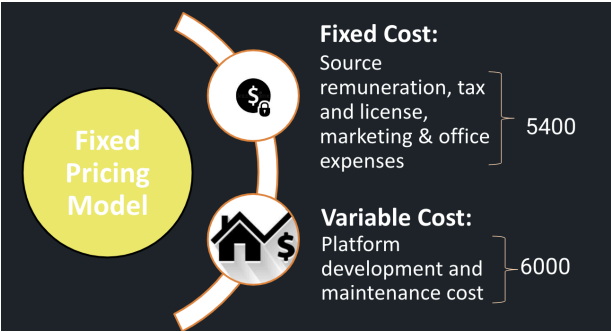
- Creation of an efficient data storage
- Creation of guidelines for teacher use
- Compilation of learning resources

HUMAN

- Counselling to reduce teachers' resistance from embracing a new method of learning

REVENUE AND PRICING

Revenue streams follow a quarterly subscription model, offered in two options. Individual model charges 199 rupees per customer, for teachers who want to acquire the service for their own, while, institutional model charges 499 rupees per school management.



DISTRIBUTION CHANNELS

The database is sold directly to teachers and school administrators. It is also offered indirectly through teacher-training institutions.

PROSPECTIVE PARTNERS

Government of Meghalaya

Directorate of Educational Research and Training, Meghalaya

Meghalaya School Improvement Programme (MSIP)

NEXT STEPS

- How will the training take place? If digitally, schools/institutions would either have to provide computer and internet set up or promote access to a space that is equipped
- Identify small group of enthusiastic teachers to pilot with and establish monitoring mechanism



FASAL FRESH

BY SUVINAY GOYAL

EXECUTIVE SUMMARY: THIS PROJECT PROPOSES THE LAUNCH OF FASAL FRESH, A SERVICE AIMED AT MEGHALAYAN FARMERS WHO GROW RICE, MAIZE, AND POTATOES. FASAL FRESH SEEKS TO STORE PRODUCE SAFELY AND INCREASE THEIR SHELF LIFE.

- Addressed Painpoints :
- 1) Lack of investment capital for storage
 - 2) Produce wastage due to minimal storage options

SOLUTION APPROACH

In order to prevent produce wastage, Fasal Fresh incorporates the use of storage facilities and terrestrial transportation. These storage facilities will be equipped with proper provisions to store produce, such as minimal oxygen absorber and moisture and temperature control services. Potential customers may inquire and/or rent online or on-site. Upon scheduling, sum total is determined after their produce is taken to the facility -- which includes storage expenses and even transport services, as necessary. Farmers must collect their produce once storage time is over and post payment afterwards. If, for some reason, their produce is harmed, the average market price of that amount will be compensated to the farmers.

CASE STUDY

In Indonesia, there is an unstable credit market, making it harder for farmers to convert their excess supply of food into lean consumption. Thus, there is a need for food storage systems. The researchers conducted a randomized evaluation of two seasonal programs— food storage and food credit—in West Timor, an island in Indonesia. The results are as given: “The seasonal storage program increased the retention rate of stored staples and the seasonal credit program allowed households to borrow cheaply in the lean season. By introducing new technologies to raise the harvest-to-lean season MRT for staple farmers, these programs implicitly subsidized the relative price of lean season consumption.” This shows how the implementation of food storage systems increase consumption and decrease produce wastage.



RESOURCES NEEDED

PHYSICAL

- Storage units
- Temperature control system
- Oxygen absorbers

FINANCIAL

- Funds for units & materials

INTELLECTUAL

- Advisors to help with grain price fluctuations
- Staff to ensure process transparency

HUMAN

- Website developers
- Transport contractors
- Grain check evaluators
- Local experts

NEXT STEPS

1. Identify company that has a storage facility on offer (Ecozen could be one)
2. Establish a business model (Would this project be entrepreneur based? If so who is responsible for the capex and opex? Would it be run by SVM? If so what is the business model?)
3. Identify pilot location after understanding farmers’ willingness to spend on such a service.
4. Can we look at supermarkets/ buyers as other target audiences instead?

REVENUE AND PRICING

Price charges for storage will vary per crop -- depending on the equipment and method used. Pricing model reflects storage expenses, a flat rate ranging from 100 to 200 rupees, plus daily charges; transportation costs range from 10 to 16 rupees per kilometer traveled.

COST ANALYSIS

Majority of the fixed cost will be towards the building of storage units, and the variable costs will depend on other SG&A costs such as electricity, power, salaries, etc.

DISTRIBUTION CHANNELS

Service can be accessed using the website. On-site booking will also be offered. Advertisements, blogs, newspaper ads, pamphlets, and social media will be used to promote the service in farmer-centered areas.

PROSPECTIVE PARTNERS

Partner	Type	Resource
Local Transport Contractors	Strategic	Transporting the produce from the farm to the storage site if the farmer opts for it.
Interstate Transport Contractors	Strategic	Providing the service to the farmers for transporting their produce to the desired market or such with the alteration made to the transport for increasing shelf life and reducing spoilage during the transit.



JOB READY SKILLS: JOB ‘ALAYA’

BY PUNNYA SHRIPAD

EXECUTIVE SUMMARY: THIS PROJECT PROVIDES AND TEACHES HIGH SCHOOL AND PRE-UNIVERSITY STUDENTS JOB-READY SKILLS, WHICH EQUIP INDIVIDUALS WITH THE RIGHT WISDOM, WORKING COMPETENCIES AND BEHAVIORAL PATTERNS FOR A PARTICULAR JOB. THIS PROJECT IS TARGETED TO STUDENTS IN 8TH TO 12TH GRADE AND CAN BE APPLICABLE TO 6,612 SCHOOLS IN THE STATE OF MEGHALAYA.

- Addressed Painpoints :
- 1) Lack of soft skills
 - 2) Inaccessible training centres
 - 3) Expensive and inaccessible online content

SOLUTION APPROACH

In order to provide students with accessible soft skills, Job Alaya will relay teaching materials such as books that can be accessed both online and offline, together with schedule planners, to the instructors. The teachers will then host classes both online and offline. The problem of travel distance is solved through this remote accessibility. This proposition offers gains such as lower unemployment rate, increased access without worrying about physical distance, and increased affordability.

CASE STUDY

A study from Berkeley collected observational data from three vocational education programs that claim to develop generic skills through their curriculum, and an intensive case study of one class was conducted. The study found that: (1) teachers taught problem-solving skills, often embedded in cooperative working arrangements; (2) project-centered course design and a nontraditional classroom environment supported teaching of dispositions; and (3) student-centered instruction meant teachers had high expectations for students that extended beyond the classroom.

RESOURCES NEEDED

PHYSICAL

- Smart devices
- Access to books and PPT presentations
- Transportation
- Internet connectivity

FINANCIAL

- Donations and loans

HUMAN

- Software engineers
- Qualified teachers
- Mentors & advisors

INTELLECTUAL

- Patents, contracts, copyrights, customer lists

REVENUE, COST, & PRICE

There will be 80 sessions per year, and it will cost 50 rupees per session for each student. Each session will last 1.5 hours. Per year, a student will need to pay 4,000 rupees. Initial investments include study materials which are free of cost for the students. This will cost around 100 rupees per package. In addition, the teachers’ salary will cost 50 rupees per session.

FACTS

In Meghalaya, the male literacy rate is 75.95% while the female literacy rate is 72.89%. This is relatively low and goes to show how much soft skills and higher education are needed for students to thrive in the labor force.

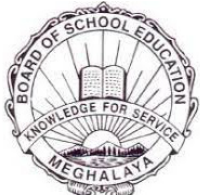
DISTRIBUTION CHANNELS

Possible distribution channels include the state’s education department, direct sales in private schools, social media, and indirect selling through other licensed vendors.

NEXT STEPS

1. Establish pathways post-training. Internships/ Recruitment options.
2. Identify local means of instruction to ensure the traditional institutions are kept in loop.

PROSPECTIVE PARTNERS



KETOS SHIELD

BY AJAY THIAGARAJAN

EXECUTIVE SUMMARY: THIS PROJECT FOCUSES ON PROVIDING A SMART WATER QUALITY MONITORING SENSOR, “THE KETOS SHIELD”, FOR WATER DISTRIBUTION COMPANIES IN MEGHALAYA.

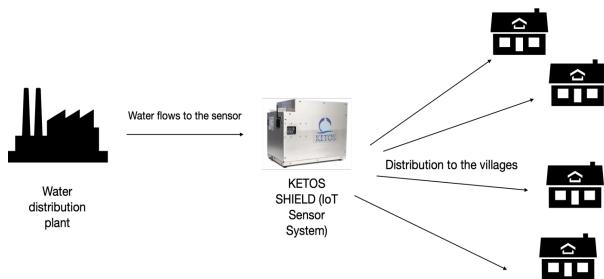
Addressed Painpoints :

- 1) Unknown harmful substances in water
- 2) High cost and time wastage in problem rectification
- 3) Stagnated water in the uncleaned tank

SOLUTION APPROACH

In order to ensure clean water supply for local villages and help water distribution companies increase credibility among customers, this project will filter harmful substances in water before it is distributed to the villages. This smart water quality monitoring sensor will provide villagers with reliable access to clean water for drinking and daily household consumption, help water distribution companies identify contaminated water through sensor detection and immediate cross checking, and reduce companies’ human resources cost.

Use Case Scenario



KEY FACTS

This hypothetical case study on water purification in Nigeria explored the opportunities and challenges inherent in investing in a new enterprise that would capitalize on two distinct technologies: one to be sold for use by household and commercial purposes. Some effective technologies that are available for home or community-scale water purification are chemical-based, such as treatment with chlorine, thermal-based such as boiling and solar heating, and mechanical, such as ceramic filtration. Some of the thermal methods are nearly free, although they may require extensive training so that users acquire the discipline necessary for health protection.

RESOURCES NEEDED

PHYSICAL

- Office buildings and storage facilities
- Machinery and equipment

FINANCIAL

- Creditors
- Line of credit

INTELLECTUAL

- Trademark and copyrights
- Customer information

HUMAN

- Software engineers
- Mechanical engineers
- ML/AI experts

REVENUE, COST, & PRICING

Companies pay 2,000 rupees for app maintenance fee per month and 20,000 rupees per month for water quality sensor maintenance. The fixed costs will include the property rent and the variable costs will depend on buying tools for building the sensor, machinery costs, and software/R&D costs.

DISTRIBUTION CHANNELS

Direct selling to water distribution companies and indirect selling through resellers.

NEXT STEPS

1. Identify exact pilot location (SVM’s water quality testing project has shown that much of the East Khasi Hills’ district has excellent water quality.) Where does this product fit in?
2. Identify the water companies/ supply institutions and understand what the water quality check mechanism currently is. Conduct a cost benefit analysis for the same.



PROSPECTIVE PARTNERS



LEARN-O-GRAM: ENGLISH APP FOR RURAL STUDENTS

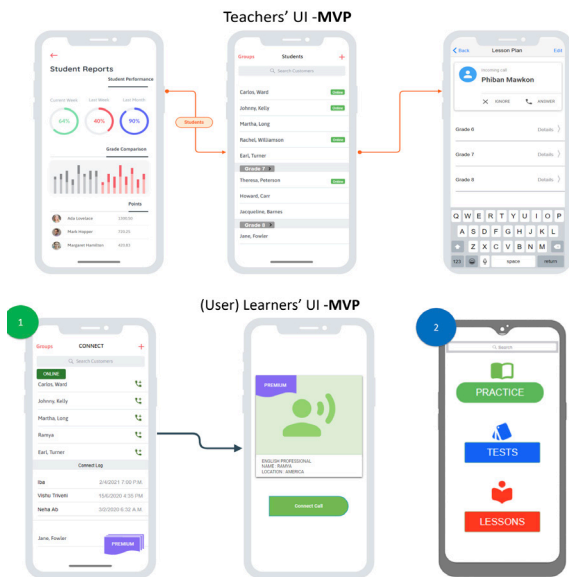
BY ROSHNI BALASUBRAMANIAM

EXECUTIVE SUMMARY: THIS PROJECTS PROPOSES THE LAUNCH OF LEARN-O-GRAM, AN ENGLISH LEARNING APP WHICH HELPS RURAL SCHOOLS' STUDENTS SPEAK ENGLISH FLUENTLY WITH THE SUPPORT OF LOCAL LANGAUGES.

- Addressed Painpoints :**
- 1) Resistance to change/technology
 - 2) Lack of individualized care for students and support in vernacular dialects
 - 3) Inadequate teacher traning for technology
 - 4) Resistance to adopt new modes of learning
 - 5) Lack of investment in infrastructure

SOLUTION APPROACH

In order to increase the fluency of English and create a more equitable approach, Learn-O-Gram will serve as an English learning app, allowing rural students to learn how to speak English. This app will serve both the teachers and students. The app will connect the students with vetted volunteer teachers who know English fluently and they will have access to their own dashboard. The student dashboard will have A.I. technology, quizzes, games, and lessons to help students self learn and practice.



CASE STUDY

A study performed by Emily Mindog of Nagoya Women's University in 2016 found that the use of an application in learning English enabled those who wanted to speak fluently "easy access to English content that caters to their interests" (17). Not only did the software's availability presented them opportunities to learn a different language in a linguistically homogenous country, but it also provided learners the freedom to learn at their own pace -- for the software can be adjusted according to their preference (e.g. frequency, duration). This allowed them to enjoy the process consequently. This study can be helpful in thinking about the effectiveness Learn-o-Gram could achieve in classrooms; with its implementation in a school setting, students will receive more encouragement and guidance in learning English.

RESOURCES NEEDED

HUMAN

- Software developers
- R&D
- Tech and customer support representatives

PHYSICAL

- Servers and/or hosting app

FINANCIAL

- App development cost
- Loans

INTELLECTUAL

- Patents on code/functionality
- Contracts and agreements

REVENUE, COST, & PRICING

For this app, revenue will be earned through each partnership and contract signed with an institution. Partnering schools will have to pay a partnering fee and fee per user to receive access to the app. Additionally, the freemium model will pull in revenue through ad-based revenue. The price for the partnering fee is dependent on user-strength and each user fee is priced at 20 rupees a month. If the user is not part of the partnering school and is under the freemium model, the user fee will be 35 rupees a month. In terms of costs, the fixed costs include developer fees for creating the application and costs for database and servers. Additionally, paying to host the app on App Store and Play Store will be a one time cost. Variable costs will depend on application maintenance and technical/customer support.

DISTRIBUTION CHANNELS

This application will directly be distributed on the App Store and/or Play Store. Additionally, this app will be advertised and distributed to rural schools, both government, and private, and external individuals such as tutors, parents, and private teachers. Learn-O-Gram will indirectly be distributed through EdTech organizations and partnerships with other NGO's and connectivity participants.

PROSPECTIVE PARTNERS



LOCAL TELECONSULTATION CAMPS

BY GANESH J BANNUR

EXECUTIVE SUMMARY: THIS PROJECT OFFERS ASSISTED TELECONSULTATION HEALTH CAMPS CONDUCTED WEEKLY TO PROVIDE PRIMARY HEALTHCARE TO LOW INCOME VILLAGERS. THERE ARE ABOUT 700 PREGNANCIES PER YEAR IN SVM VILLAGES, AND 600,000 IN RURAL MEGHALAYA AND ASSAM. THESE FAMILIES EARN INCOMES BETWEEN 4,000 TO 10,000 RUPEES. THE TARGETED AUDIENCE INCLUDES VILLAGERS IN RURAL HOUSEHOLDS WITH LOW INCOME, ESPECIALLY PREGNANT WOMEN AND SICK FAMILY MEMBERS.

Addressed Painpoints :

- 1) Limited ability to attract well-trained paramedical and medical personnels
- 2) Poor infrastructure and lack of a supportive ecosystem
- 3) Low medical personnel retention

SOLUTION APPROACH

In order to compensate for the lack of urban medical centers that are not viable to villagers due to costs, working hours, and distance, the value proposition of the project includes hybrid healthcare services using telecommunication and local nurses. There will be a local coordinator for scheduling and enabling teleconsultations, as well as a potential partnership with Gramin healthcare in order to supply the medication and diagnostic tests. This way, affordable healthcare is made available and it saves villagers suffering from diseases and improves their overall quality of life.

CASE STUDY

This 2007 paper explored the use of telecommunication in Indian healthcare through different case studies. One case the authors mentioned was the Development of Telemedicine Technology (DTT) Project, a government-sponsored initiative. This project is intended to optimize medical resources through the involvement of hospital staff in its implementation. An application developed by Sanjeevani was used to “appropriate medical peripherals.” Sanjeevani connected “two computers [through] remote connections” and was used to “connect referring doctors with specialists or referring doctors with patients.” This could be helpful in visualizing the extent telecommunication could provide in improving local healthcare communities in Meghalaya.

RESOURCES NEEDED

HUMAN

- Doctors and nurses
- Paramedics
- Local coordinators

FINANCIAL

- Initial credit from suppliers

PHYSICAL

- Administrative office
- Stethoscopes

INTELLECTUAL

- Patents from stethoscope companies

REVENUE, COST, & PRICING

Revenue will be generated through a per consultation fee. 30 rupees will be charged for doctors performing charitable work, while 65 rupees will be charged for paid doctors. The costs include fees paid to coordinators in charge for customer acquisition activities, signage at local shops, advertisement at events, and salaries paid to the doctor for visits and camps.

DISTRIBUTION CHANNELS

Distribution involves B2C. This means that customers go to the health camp in their villages, in-person. Then, the doctor will consult the patient through audio or video call, which will be direct but virtual.

NEXT STEPS

1. Studying the demand of HR enabled healthcare services in a few districts of Meghalaya in alignment with the objectives of the Department of Health and Family Welfare, Government of Meghalaya.
2. Mapping the scope of participation of private public partnership projects.
3. Scouting for companies that can pilot for meeting the objectives of the systems strengthening project.

PROSPECTIVE PARTNERS



FACTS

The Meghalaya Health Systems Strengthening Project will enhance the management and governance capabilities of the state and its health facilities; expand the design and coverage of the state’s health insurance program; improve the quality of health services through certification and better human resource systems; and enable efficient access to medicines and diagnostics.

A STEP TOWARDS MATERNAL HEALTH

BY RAJNEET KAUR

EXECUTIVE SUMMARY: THIS PROJECT PROPOSES SETTING UP CLINICS THAT PROVIDE AFFORDABLE AND SPECIALIZED HEALTHCARE SERVICES FOR CHILDREN AND PREGNANT WOMEN IN RURAL VILLAGES OF MEGHALAYA.

Addressed Painpoints :

- 1) Lack of real time visibility of inventory, stock, and condition
- 2) Quantity and timely supply of quality healthcare, consumables, and medicines

SOLUTION APPROACH

In order to reduce mortality rate of women and children, this project will make specialized and one-to-one healthcare services accessible to low-income women who shy away from receiving treatment due to the high costs. These clinics will be set up in community health centers and equipped with specialists and tools/materials. This project will also attract customers by spreading awareness about the necessity of receiving proper healthcare.



FACTS

- 1) 61 pregnant women and 877 newborn babies died in April 2020 in Meghalaya due to unavailability of healthcare services
- 2) Launch of Meghalaya's Outcome Oriented Transformation in Health, Nutrition, Education and Rural Development (MOTHER) program was launched in 2022 in all districts of the state to track pregnant mothers for increasing institutional deliveries, reducing maternal and infant death.

RESOURCES NEEDED

HUMAN

- Gynecologists
- Trained nurses
- Staff for childcare services

INTELLECTUAL

- Patents

PHYSICAL

- Government hospitals
- Private hospitals

INTELLECTUAL

- Procurements
- Outsourcing



REVENUE, COST, & PRICING

The revenue earned for this model comes in from its services. Patients are charged 1,800 rupees for delivery, 200 rupees for ultrasounds, and 1,500 rupees for other formalities including childcare services. The fixed cost includes of equipment and medications and the variable costs depend on rent, health expert salaries, and staff compensation.

DISTRIBUTION CHANNELS

Partner with B2B and B2C healthcare companies or hospitals to obtain patients from referral. Speeches about necessity of proper health care are also given in village gatherings to raise awareness.

NEXT STEPS

- 1) Scouting for technology based solutions to empower maternal and infant health piloting business models with grassroot organizations.
- 2) Working with SHGs and Village Health Councils at the village level to promote private healthcare enabled services.

PROSPECTIVE PARTNERS



MEDICINAL PLANTS: LEMONGRASS OIL

BY LEKSHMI A S & MALAVIKA V K

EXECUTIVE SUMMARY: THIS PROJECT AIMS TO LEVERAGE THE AGRICULTURAL POTENTIAL OF RURAL MEGHALAYA BY PROVIDING HERBAL REMEDIES USING ESSENTIAL OIL EXTRACTED FROM LEMONGRASS. THE TARGETED AUDIENCES FOR THIS PROJECT ARE FARMERS AND LABORERS IN MEGHALAYA AS WELL AS PHARMACEUTICALS.

Addressed Painpoints :

- 1) Absence of formal medicinal processing with pharmaceutical companies
- 2) Lack of patents for herbal and aroma growers
- 3) Minimal market reserach for bulk buying or tranfusion of research resources

SOLUTION APPROACH

This project will provide herbal essential oils at low costs to the people and pharmaceuticals who are interested in herbal remedies. This way, the government will also increase lemongrass production as it generates high revenue. Lemongrass, in particular, is a widely used ingredient in aromatherapy to relieve muscle pain, as well as repel mosquitoes. In the more agricultural aspect, growing lemongrass prevents soil erosion and revives the land as a whole in Meghalaya.



CASE STUDY

The Institute of Bioresources and Sustainable Development (DBT-IBSD), Shillong, promotes lemongrass as a cash crop in a bid to strengthen and create additional livelihood opportunities for local farmers of Byrnihat, Ri Bhoi, an Aspirational District of Meghalaya, through utilization of local bio-resources.

FACTS

- Lemongrass plants yield for up to 6 years, after which they need to be replanted. The best part is that they can be harvested 3 to 4 times a year, subject to good weather conditions.
- The average yield is about 10-14 tonnes/acre from which essential oil can be extracted with an average yield of 80 kgs/acres.
- The essential oil of Lemongrass sells for around Rs.800 per kg.

RESOURCES NEEDED

PHYSICAL

- Machinery & manufacturing plants
- Transportation vehicles
- Land, water, fertilizers, & electricity

FINANCIAL

- Cash and bank deposits

HUMAN

- Farmers
- Processing employees
- Sales people
- Distributors

INTELLECTUAL

- Proprietary knowledge
- Methods of production

NEXT STEPS

- Understanding the enterprise landscape in Meghalaya.
- Piloting with PRIME entrepreneurs in Meghalaya for mapping gaps within the lemongrass sector.
- Collaborate with pharma companies for medicinal usages and procurement from Meghalaya.

PROSPECTIVE PARTNERS



PATANJALI®



REVENUE & PRICING

Revenue will be generated through direct sales, as well as indirect sales, through resellers and pharmaceuticals. In both of these cases, the pricing will be Rs 150 for 100ml of the essential oil.

COST

FIXED COST	
Particulars	Investment in Rs
Distillation unit	320000
Installation charge	50000
TOTAL	370000

VARIABLE COST	
Material and Labour	Investment in Rs
Cost of labor for land preparation	10000
cost for planting	15000
Application of fertilizers and manures	10000
Weed control and other practices	20000
Cost of planting material	100000
Irrigation charges	20000
Labour charge for harvesting	50000
Cost of distillation	90000
TOTAL	315000

DISTRIBUTION CHANNELS

Distribution channels include direct to customers and indirect to pharmaceuticals. Channel economics include the costs of handling, direct selling expenses, freight cost and wages of distribution employees. Lastly, to select the type of distribution channel, things to look out for are the costs, location, and facilities..

MUV SERVICES FOR SMALL FARMERS

BY ARMAAN DHILLON

EXECUTIVE SUMMARY: THIS PROJECT SEEKS TO START A COMPANY THAT WILL PROVIDE MUV SERVICES TO SMALL MEGHALAYAN FARMERS TO HELP SEND LIVESTOCK AND PRODUCE TO CITIES. THIS IS AIMED TOWARDS FARMERS WITH LITTLE TO NO MEANS OF TRANSPORTING THEIR PRODUCTS ON THEIR OWN. NOT ONLY WILL THIS PROPOSAL ELIMINATE ISSUES REGARDING LIMITED TRANSPORT ACCESSIBILITY, IT WILL ALSO HELP FULFILL THE DEMAND OF LIVESTOCK AND PRODUCE IN CITIES.

Addressed Painpoints :

- 1) Difficult to access markets, town hubs, or service centres
- 2) Inaccessible transportation

CASE STUDY

According to the Study of Rural Transportation Issues published by the US Department of Agriculture, “More than 80% of cities and communities are served exclusively by trucks” (403). The truck industry links farmers to markets with the flexibility, timeliness, and door-to-door service it provides -- especially geared towards shippers who handle perishable agricultural products. In particular, their collected data from 2004 to 2009 on truck demand showcased a higher number in the North Central region of the United States, where grain farmers were mostly located (430). This can be helpful in assessing the reliability of the proposed MUV rental service to Meghalayan farmers in having their produce shipped to markets.

SOLUTION APPROACH

In order to ensure small farmers more market accessibility, this MUV-renting service will allow those with little to no transportation to send and sell their livestock or produce to nearby cities. Customers may rent the vehicle at the distribution office. The company will then employ workers to drive these MUVs from the customers’ location to a specific market, as per farmers’ instructions. Customers can accompany the driver to the products’ destination if they wish to do so.



RESOURCES NEEDED

HUMAN

- Drivers
- Sales employees
- Agriculture professionals

INTELLECTUAL

- Contracts
- Customer lists
- Advertising

PHYSICAL

- Transport facilities
- Multi-utility vehicles
- (Un)loading equipment

FINANCIAL

- Raise funds, loans, salaries
- Fuel expenses

REVENUE AND PRICING

Revenue for this service will be generated through charging each customer a rent fee every time they need an MUV. Price will be based on the destination and weight of load; it is expected to be around 0.03 rupees per kilometer per kilogram. Customers may pay in either using cash or online.

COST ANALYSIS

Fixed costs include advertising and lease price for MUV and rent of office space. Variable costs will depend on fuel, servicing, and salaries.

NEXT STEPS

1. Establish differentiation/ USP for this project as 1917 iTeams (GoM initiative) is doing something similar
2. Building trust between consumers and producers. How will that look like?

DISTRIBUTION CHANNELS

A physical distribution channel with direct selling will only be available for this service. This may come in the form of an office, where customers could book an MUV. Doing so ensures more accessibility and higher potential for profit.

PROSPECTIVE PARTNERS

mahindra



POTATO PROCESSING

BY RITESH UPPAL

EXECUTIVE SUMMARY: THIS PROJECT FOCUSES ON SETTING UP A POTATO PROCESSING UNIT, OWNED AND OPERATED BY THE FARMER PRODUCER COMPANY, CONSISTING FARMERS OF 5 DISTRICTS IN EAST KHASI HILLS, MEGHALAYA, WITH THE OBJECTIVE OF SUPPLYING THE POTATOES TO VARIOUS COMPANIES FOR BRANDING.

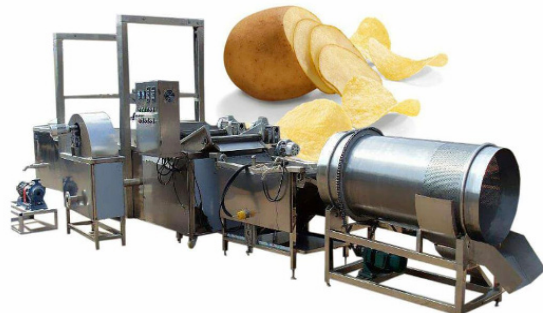
- Addressed Painpoints :
- 1) Lack of pre/post production training
 - 2) Dependency on middlemen
 - 3) Minimal crop management knowledge

SOLUTION APPROACH

In order to solve the issue of middlemen and low value addition, this project proposes setting up a potato processing plant so that the profit share ratio of farmer producer company (FPC) to potato product company in the unit increases/decreases and leaves farmers with greater profits. Additionally, manufacturing these potatoes into products such as potato chips turns out to be much more profitable than selling sole produce. Farmers will now be owners and have greater access to a national market as well as gain more value addition as they enter the processing product industry rather than selling just vegetables. Knowledge regarding the production techniques will be provided by CREATE and branding companies will also provide training.

CASE STUDY

The potato-processing plant concept has been investigated thoroughly in Idaho and Oregon. In both places, the authors explained how potatoes are being processed and how they obtain the electricity and energy to run the operations. This could be beneficial for the potato processing unit project that is going to be implemented in Meghalaya.



FACTS

The potato is the most important crop in Meghalaya after Paddy. The Khasi tribal farmers of Meghalaya grow potatoes as an important cash crop. This crop is grown over 18,000 ha, which is about 8% of the net cultivated area in the state.

RESOURCES NEEDED

PHYSICAL

- Manufacturing plant
- Machinery
- Seeds, fertilizer, potatoes
- Property space

FINANCIAL

- Banks
- Partners
- Government

HUMAN

- Farmers
- Trained staff
- FPC members

REVENUE AND PRICING

Revenue will be earned through shares in the processing unit and profit earned by selling the processed potatoes. The potatoes will be bought from the farmers at 11 rupees and processed for 6 rupees

COST ANALYSIS

Fixed cost would include: manufacturing plant, machinery for processing of potatoes, and property to set up plant. The variable cost will depend on fertilizers, seeds, potatoes, and worker salary. FPC will have 70-80% shares and the potato product company will have 20-30% of the shares. Farmers will have shares in the FPC. The machines for a manufacturing plant with an hourly capacity of 500 kg costs about \$700,000 (56 lakh INR) and, along with land and buildings, the total cost goes up to \$1.5m (12 crore INR). The cost of weighing and packaging machines is \$285,000 (22 lakh INR) and an imported slicer costs \$40,000 (3 lakh INR).

DISTRIBUTION CHANNELS

Farmers will stick to a B2B business model but will shift their channels from middlemen initially to the processing units now. Manufacturing companies will have better reach to customers and this is not as feasible for the farmers.

NEXT STEPS

1. Analyze financial viability: selling price post-processing vs. current selling price.
2. Determine location of plant and ownership of the land.

PROSPECTIVE PARTNERS



QUIT USING TOBACCO: AN A.I. BASED APP

BY ISHIKA BHOSALE

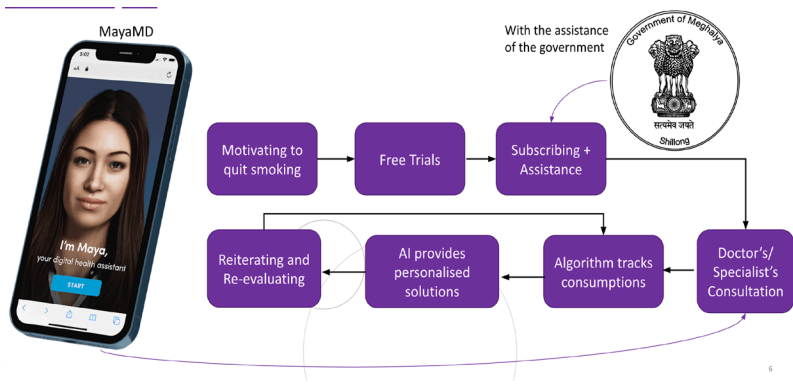
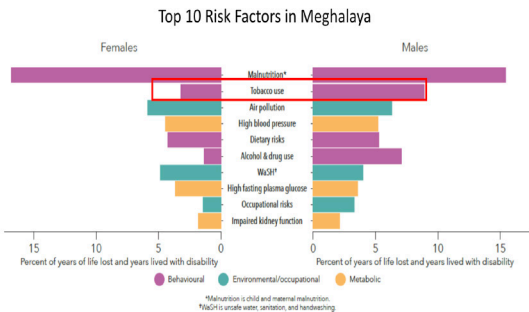
EXECUTIVE SUMMARY: THIS PROJECT PROPOSES THE USE OF AN EXISTING AI-ENABLED APPLICATION THAT WILL HELP PEOPLE GET RID OF THEIR TOBACCO ADDICTION AND IMPROVE THEIR LIFESTYLES. THIS IS PRIMARILY AIMED TOWARDS FARMERS, PEOPLE WITH LOW-SPENDING CAPACITY, THOSE WITH AGE-OLD SOCIOCULTURAL HABITS OF USING TOBACCO, AND PEOPLE OF 15 YEARS AND ABOVE.

Addressed Painpoints :

- 1) Absence of technology-related health solutions
- 2) Absence of platforms that create telemedicine services and continuum of care

SOLUTION APPROACH

In order to eradicate tobacco consumption in Meghalaya, MayaMD (the proposed application) will enable smokers to understand their own habit cycles and use such knowledge to break away. It will accomplish this through helping patients identify when, where, and why their triggers occur. The application will guide users in inserting a new routine in their habit cycles, replacing every detrimental habit related to their tobacco addiction with another activity that will provide them similar satisfaction. Other in-app features include: consumption and money savings tracking, health benefits, and personalized solutions and techniques.



CASE STUDY

Stanford University School of Medicine developed a therapeutic consultation system in 1973 that enabled patients to receive consultations from a computer-based application. This was specifically targeted for those who need advice about antimicrobial therapy. According to Shortliffe, Axline, Buchanan, Merigan, and Cohen, "An average consultation using the current system requires approximately five minutes of terminal time and involves a maximum pause of three seconds between the user's response to one question and the initiation of the following prompt." This could be helpful in assessing the efficiency of an A.I. based program in elevating the accessibility of tobacco addiction treatment in Meghalaya. With the help of telemedicine, citizens can consult with experts from all around the world, in the case that Meghalaya lacks specialists in the field of smoking/tobacco.

RESOURCES NEEDED

HUMAN

- Software engineers
- Data scientists
- Marketing specialists

FINANCIAL

- Government & angel funding

INTELLECTUAL

- Trademark, copyright, patents

REVENUE, COST, & PRICING

Availability of this service will partially depend on government funding under the National Tobacco control program, wherein customers will pay the remaining balance based on one-time paid freemium (1 year subscription). Freemium price will fall between 150 to 200 rupees -- which is only 13-17% of average monthly spending on tobacco. They will have to pay extra for any medications and extra consultations. Total revenue from Meghalaya is estimated to be around 12 rupees crores. Major expenses will be allocated towards app development, Maya MD fees, advertisement, and R&D.

DISTRIBUTION CHANNELS

Application distribution will be available both physically and virtually. Physical distribution involves direct sales, physical campaigns (bootcamps in villages, hospital visits), and live flash sales. Web distribution involves play store, advertisements (Google Ad-sense, Facebook ads, WhatsApp), social e-commerce, and website/social media.

NEXT STEPS

- Need to study the unit economics spent per person through usual programs versus cost of MayaMD platform per person.
- Curating A.I. health assistance in tobacco related care parameters/ programs for a pilot region in the state.

PROSPECTIVE PARTNERS



INTERACTIVE REALISTIC ROLE PLAY

BY MURALI KRISHNA H

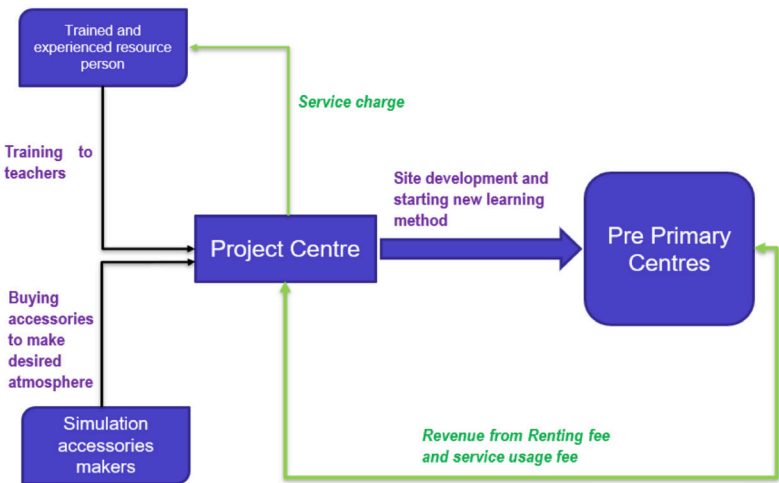
EXECUTIVE SUMMARY: THIS PROJECT AIMS TO INCREASE THE ENROLLMENT OF CHILDREN IN ANGANWADI CENTERS BY IMPLEMENTING AN INTERACTIVE PHYSICAL SPACE WITH REALISTIC ROLE PLAY. IT TARGETS THE 50 SVM PILOT VILLAGES OF MAWPHLANG, SOHIONG AND LAITKROH OF MEGHALAYA -- SPECIFICALLY THE HEAD PERSON IN ANGANWADI CENTERS AND/OR PRIMARY CENTERS OF MEGHALAYA.

Addressed Painpoints :

- 1) Low enrollment rate in Pre-primary & Anganwadi centers

SOLUTION APPROACH

In order to encourage child enrollment, transforming conventional classrooms into an interactive room will attract children into such learning spaces. These so-called “Kids’ City” will be filled with simulation accessories (ranging from movie theaters, shops, et cetera), which they can independently explore as they wish. By constructing a mini urban replica, children are enabled to try various hands-on exercises and learn about different occupations. This will expose them to an exciting world of learning and therefore, invite more children to enroll in schools.



FACTS

Meghalaya’s pre-school and Aganwadi enrollments both fall below the national average. Private or public pre-school enrollment is at an average of 71.2% nationally, but Meghalaya is currently at 34.6%. Meanwhile, enrollment in Anganwadi centers (age 3-8) is currently at an average of 57.1% nationally, yet Meghalaya only has 9.1% average.

RESOURCES NEEDED

PHYSICAL

- Simulation accesories
- Dress materials, vehicles
- Project Center
- Inventory Storage

INTELLECTUAL

- Student databases
- Proprietary knowledge

HUMAN

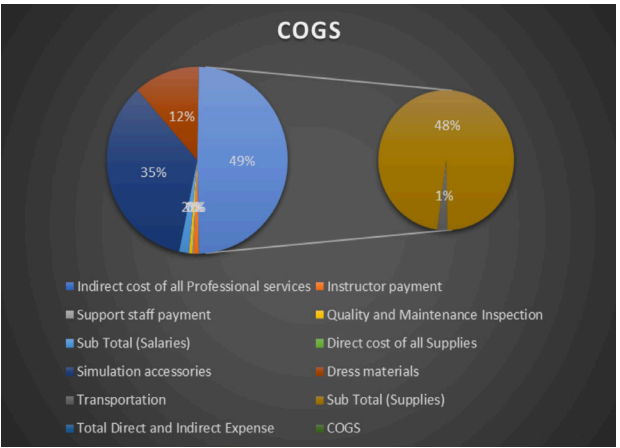
- Experienced guides
- Teachers, suppliers, dealers

FINANCIAL

- Initial investment
- Partnership
- Loans

REVENUE AND COST

Initial investment is estimated to cost around 120,000 rupees per center. Revenue will be generated through renting simulation accessories and providing external service. Monthly rent will cost 12,300 rupees.



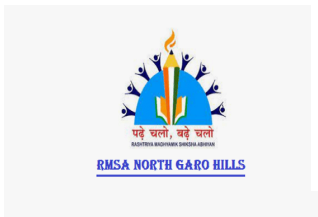
DISTRIBUTION CHANNELS

Distribution of simulation equipment will be done directly through suppliers. Direct renting will be available through pre-primary center management, whereas indirect selling will be through local day care centers.

NEXT STEPS

1. One reason for the low enrollment in schools/participation with Angandwadis is the absense of/low participation level of the teachers/Anganwadis, how would this project train and motivate the anganwadi workers?
2. How would the monitoring and evaluation for these centres work?

PROSPECTIVE PARTNERS



RURAL TRANSPORT CONNECTIVITY

BY SARATH JEEV KUMAR

EXECUTIVE SUMMARY: THIS PROJECT AIMS TO BUILD A SCALABLE AND SUSTAINABLE BUSINESS MODEL TO INCREASE RURAL TRANSPORT CONNECTIVITY IN MEGHALAYA -- SPECIFICALLY FOR HOUSEHOLDS WITH A METALLED ROAD CONNECTION AND A MINIMUM ANNUAL INCOME OF 50,000 RUPEES. THIS PROPOSAL ALSO FOCUSES ON ROAD TRANSPORTATION WITH A SLIGHT EMPHASIS ON THE PRODUCT'S ECO-FRIENDLINESS.

Addressed Painpoints :

- 1) High cost of movement of people and goods
- 2) High transport costs barrier
- 3) Lack of rural access to services

SOLUTION APPROACH

In order to decrease transportation costs in Meghalaya, promoting the use of MOPED will open up much more services to households by providing low-cost transport. It will also make carrying heavy loads much more doable. MOPED features a low-cost, Chinese-manufactured bike and a portable umbrella, which protects passengers from the sun and/or rain. Its tire size is comparably larger than most vehicles, thereby more suitable to Meghalaya's terrain. Additionally, the product is also eco-friendly, for it further promotes the use of electric vehicles.



CASE STUDY

A 2015 study performed by The Energy and Resources Institute in New Delhi explored the role and impact of public transportation in multiple regions in India. Researchers found that transportation vehicles such as auto-rickshaws served as the main mode of public transport, for they provided "connectivity between important demand-generating and demand-attracting points" -- including areas "conventional public transport systems could not reach." This can be helpful in perceiving just how vital low transportation costs are in increasing mobility in Meghalaya.

RESOURCES NEEDED

HUMAN

- Workers to transport product
- Employees to provide workshops for repair services

INTELLECTUAL

- Persuade bike owners to provide rental services
- Network marketing professionals to provide real time insights
- Website and associate profiles

PHYSICAL

- Warehouse for products

FINANCIAL

- Corporate/government investment

REVENUE, COST & PRICE

Product will be sold directly through network sales approach . Pricing will be cost-based, wherein cost-per-unit is at 26,000 rupees and sale price at 30,000 rupees. Its fixed cost is expected to be around 150,000 rupees -- which will include inventory, office, initial advertisement, website development and hosting.

DISTRIBUTION CHANNELS

Distribution will be available directly through personnel selling and network marketing as well as online sales.

NEXT STEPS

1. Conduct a paid-for pilot to understand if the product can withstand heavy rains (Prevalent in Meghalaya) and bad condition of roads, especially during monsoons.
2. Understand if there is a market for such a vehicle and if people are willing to invest in the purchase.



PROSPECTIVE PARTNERS



SUPPLY CHAIN: REVAMP.IO

BY ARSALAN SARTAJ

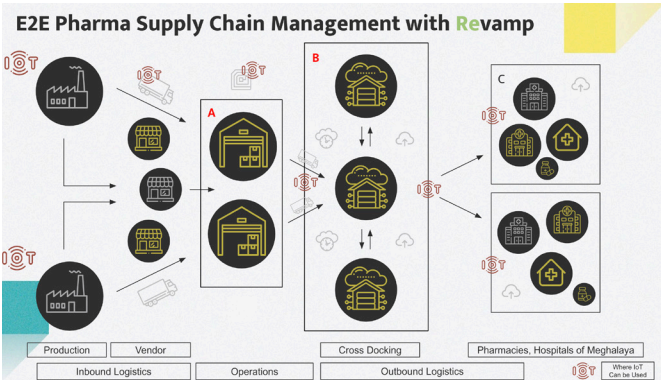
EXECUTIVE SUMMARY: THIS PROJECT PROPOSES THE ESTABLISHMENT OF A COMPANY THAT MAKES EXISTING SUPPLY CHAIN SYSTEMS SMARTER BY INTEGRATING IOT SOLUTIONS IN 50 PHARMACIES ACROSS MEGHALAYA.

Addressed Painpoints :

- 1) High dependency on manual operations leading to inaccuracies in inventory data
- 2) Absence of robust data-driven procurement
- 3) Lack of planning of needs and finances when buying and distributing items

SOLUTION APPROACH

In order to digitalize data in pharmacies, Revamp.io adds IoT (Internet of Things)-enabled devices to the supply chain or logistics networks in Meghalaya. Doing so avails easy-to-operate automations for pharmacy employees and helps with end-to-end traceability and transparency in the supply chain. Data is stored in Microsoft's Dynamics 365 cloud servers, where it can be remotely accessed by data analysts and operations team -- enabling the use of data to streamline operations.



KEY FACTS

- 1) World Bank funded Meghalaya Health Systems Strengthening Project 2021 will enhance and support strengthening of procurement and supply chain management.
- 2) The Department of Health's procurement and supply chain management systems (PSM) will be strengthened to improve the supply of medicines and consumables. The project will support capacity-building of state and sub-state level structures involved in PSM, like the state Procurement Board, including organizational strengthening, business process reengineering, need-based retrofitting and renovations of warehouses to improve storage capacity and monitoring capacity and PSM information system.

RESOURCES NEEDED

PHYSICAL

- Hardware (IoT devices, scanners, RFID tags)
- IT (software, APIs, and plug ins)

FINANCIAL

- Raising money and line of credit

INTELLECTUAL

- Software licenses
- Registrations
- B2B Leads

HUMAN

- Software engineers
- Data analysts
- Marketing professionals
- Advisors and mentors

REVENUE, COST, & PRICING

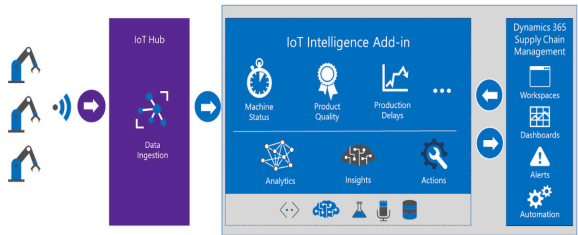
Revenue will be generated through enterprise-based solutions on demand. For IoT installation, a share of total deployment cost based on volume will be charged. IoT deployment will come with a free one-year replacement plan, following Subscription as a Service (SaaS) model. Pricing will vary based on demand. The costs associated with this model will include the fixed costs of IoT hardware and equipment as well as an RFID enabled service which will cost 30,000 rupees per pharamacy. The variable costs will depend on facility rent, salaries for employees, and additional unit costs.

DISTRIBUTION CHANNELS

Distribution involves B2B alongside direct and physical methods through pharmacies and other medical companies.

NEXT STEPS

- 1. Conducting a needs assessment of healthcare systems that need IOT enabled services and solutions in NHM Meghalaya.
- 2. Evaluating the feasibility of solutions for healthcare project partners like Gramin, Apollo and Tech Eagle.



PROSPECTIVE PARTNERS



TREEHOUSE LODGING FOR MILLENIALS & GEN Z

BY SWADHA ARORA

EXECUTIVE SUMMARY: THIS PROJECT PROMOTES THE CREATION OF A TOURISM CIRCUIT IN MEGHALAYA THROUGH THE IDEA OF “BREATHING WITH NATURE.” BY TARGETING GEN Z, MILLENIALS, AND TOURISTS WHO ARE FASCINATED BY EXOTIC WILDLIFE AND DIFFERENT CULTURES, THIS PROPOSAL SEEKS TO CREATE AN EXCLUSIVE IDENTITY FOR MEGHALAYA THAT WILL ATTRACT VISITORS ALL OVER THE GLOBE.

- Addressed Painpoints :**
- 1) Limited tourist products, services, and experiences in local areas
 - 2) Absence of channels and customer retention strategies

SOLUTION APPROACH

In order to expand customer retention, building 8 - 10 treehouses will not only offer tourists places to stay, but it will also provide them opportunities to immerse in nature and in the culture Meghalaya offers. This will be done through enhanced reiki sessions, crystal and sound healing, indigenous music, and cuisine tasting. The range of treehouse lodgings varies from a shared or single room to the entire house. Packages will be available, which will include pre- and post-package services and even a customized tour -- according to the guests' preferences.



MAJOR FACTS

- Announcement of promotion of tourism promotion with a funding of Rs. 700 crores by Japan International Cooperation Agency is a major boost to support tourism activities in the state of Meghalaya.
- Promoting eco-tourism is a major objective of state policies for economic boost.
- Post COVID normalcy and demand for travel to destinations are important factors to draw investments for tourism and hospitality projects.

RESOURCES NEEDED

PHYSICAL

- Construction & design materials
- Infrastructure
- Food & liquor supplies
- Road network
- Fauna and Flora

FINANCIAL

- Investors: Meghalaya government, theme park brand, and hotel chain

INTELLECTUAL

- Trademark, contracts, and deals with SMEs with tribal welfare
- Permits to look at forest and wildlife
- Land ownership rights contracts

HUMAN

- Architects, interior designers, hotel managers, performers, guides, chef, staff
- Web developer and social media manager
- Hospitality experts

REVENUE, COST, & PRICING

Revenue will be generated through a combination of lodging, branding, and selling strategies. Third-party advertising emphasizing eco-friendly tourism will play a major role in sales and marketing. Estimated expenses in constructing treehouses lie between 1,760 - 2,200 rupees per square foot. Maintenance is expected to be around 30,000 - 40,000 rupees. Room pricing costs at least 1,199 rupees for a shared room. For a solo room, it sells at a minimum of 5,999 rupees. Renting the entire treehouse will be priced a minimum of 11,999 rupees.

DISTRIBUTION CHANNELS

Distribution employs both direct and indirect channels. Direct distribution comes in the creation of a dedicated e-commerce website. Indirect distribution involves the 2-step method through third party companies such as Booking.com, Trivago, Airbnb, Luxury Escapes, and Agoda.

NEXT STEPS

1. Identifying incentives that promote eco-tourism initiatives in Meghalaya.
2. Collaborate with local investors to initiate project development for real estate provisioning.
3. Secure funding mechanisms for the project.

PROSPECTIVE PARTNERS



VITAMIN A DEFICIENCY NUTRITION

BY RISHIT GARG

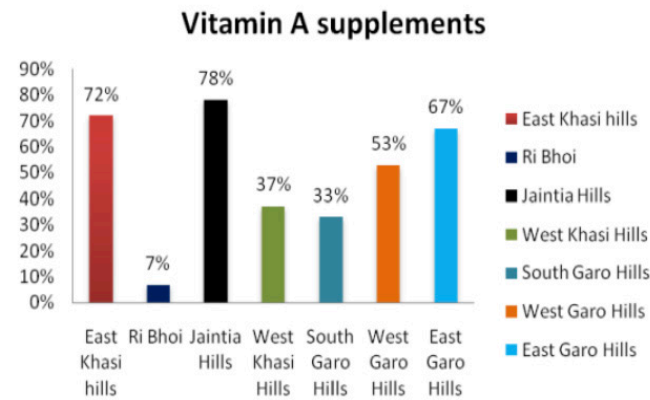
EXECUTIVE SUMMARY: THIS PROJECT IS A STARTUP FOR ADDRESSING THE VITAMIN A DEFICIENCY IN MEGHALAYA. THE TARGETED AUDIENCE FOR THE VITAMIN A PRODUCT IS YOUNG CHILDREN AND WOMEN WITH LITTLE TO NO KNOWLEDGE ABOUT THEIR DEFICIENCY, LOW SPENDING CAPACITY FAMILIES, AND THOSE WITH LIMITED EDUCATION. THE MULTI-VITAMINS WILL BE GIVEN TO CHILDREN FROM 4-7 YEARS OLD.

Addressed Painpoints :

- 1) Low preventive dietary interventions and nutrition deficiencies
- 2) Lack of diagnostic facilities in cities cause untimely interventions
- 3) Burden of additional responsibilities in ASHA workers' mobilization

SOLUTION APPROACH

The project will set up multiple education camps in schools in a span of 2 weeks to spread awareness of deficiencies in Vitamin A and the effects they can have. Then, the project will begin to supply the Vitamin A product for women and children.



CASE STUDY

A thorough reading of a study done by a student of Martin Luther Christian University on ICDS in Meghalaya reflected the following. The distribution of vitamin A supplements to children is very low in West Khasi Hills compared to other regions. The public is not informed about the activities of the Aganwadi Centre and the roles and responsibilities of the workers. In addition, coordination between the Department of Social Welfare and Department of Health and Family Welfare needs to be enhanced. This goes to show how undereducated and undersupplied vitamin A is in rural areas, possibly applicable to Meghalaya as well.

KEY FACT

The average consumption of traditional foods that are rich in vitamin A for someone facing deficiency is 10,000 IU to 50,000 IU per day; so 1 tablet a day is sufficient.

RESOURCES NEEDED

PHYSICAL

- Large sized education camps
- Tablets
- Storage units

FINANCIAL

- Funds to set up channels and gather resources

HUMAN

- Website and social media managers
- Spokesperson for camps
- Transport contractors

INTELLECTUAL

- Salesperson and tacticians



REVENUE, COST, & PRICING

The selling price of Vitamin A tablets will be around 6 to 7 Rs per 10 tablets and the delivery cost will be 1 to 3 Rs. The costs associated with this project will depend on hosting education camps which will cost 10,000 Rs for 2 weeks and cost of the tablets itself will be 4 Rs for 10 tablets. Other variable costs will include screening children and product distribution.

DISTRIBUTION CHANNELS

There will be three types of channels: (1) On-site: parents and children can order and collect vitamins from whichever camp which is the primary distribution channel. (2) Online and social media: order through a website and will be live 24/7; users can receive medicine at the nearest education camp or delivered. (3) Door-to-door delivery: once there is a strong consumer base, this chargeable service can be provided.

NEXT STEPS

In order to effectively address this problem, it is essential to enhance the knowledge of nutrition and appropriate diets and to encourage the consumption of traditional foods especially locally available vitamin A rich foods.

PROSPECTIVE PARTNERS



EFFECTIVE WASTE COLLECTION

BY MEHTAB SINGH RANDHAWA

EXECUTIVE SUMMARY: THIS PROJECT AIMS TO CREATE AWARENESS BY USING INNOVATIVE AWARENESS METHODS FOR THE EFFECTIVE COLLECTION OF WASTE. THIS REQUIRES PARTICIPATION FROM THE ENTIRE COMMUNITY, SPECIFICALLY THOSE STRUGGLING WITH A LOT OF NON-VALUABLE WASTE.

Addressed Painpoints :

- 1) Failure to realize the importance of waste management
- 2) Lack of awareness

SOLUTION APPROACH

In order for the community to learn the importance of a trash bin, this project promotes using an incentive-based system to have students and villagers collect trash in exchange for a reward -- on the basis of how much they give. First, awareness is raised by showing the community the harmful effects of waste and by delegating schools the responsibility of educating their students about it. Then, people are tasked with collecting a certain amount of waste which will then be rewarded based on how much trash they collect. Schools are rewarded certificates for meeting goals. Waste is then segregated by employees before dropping them at a certain location. It will then be taken to factories afterwards. Through the implementation of this project, people will understand both the negative and postive effects of waste allowing villages becoming cleaner and healthier for its residents.



CASE STUDY

In Southern England, Bracknell Forest Council manages the waste for a population of 118,000 people. Given their low recycling rate and increasing price of landfill tax in the region, the council decided to implement a pilot, self-funded incentive scheme. Every citizen opting-in is given an "e+ card" where points are accumulated. Points are given per pick-up of these specified bins, which are emptied by the personnel of the waste truck. No cashable value is given to the users of the system, but a maximum total value of GBP 26 in points per year is given. The main rewards were offered as leisure, e.g. as discounts or direct access to sports facilities, membership to local clubs, gyms, pools, etc. The implementation was successful by the council as the amount of waste was reduced by 1,000 tonnes, representing a savings of GBP 90,000. The system is now implemented at full scale.

RESOURCES NEEDED

PHYSICAL

- Brooms and garbage can
- Garbage trucks
- Prizes

FINANCIAL

- Donations
- Selling valuable waste and recycle items

HUMAN

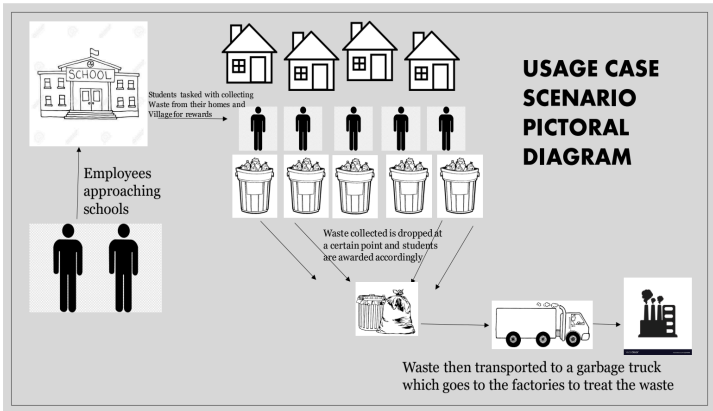
- Partners (i.e. factories, companies,etc)
- Waste collectors
- Teachers and supervisors

REVENUE, COST, & PRICING

Revenue will be generated through various ways as follows: selling valuable items to waste collectors or investors, converting waste to something useful and profitable or simply through recycling, and selling non-valuable waste to road companies for construction of roads. Collected trash sells at 6,000 rupees per 200kg of waste if sold to waste collectors and/or road construction companies. In terms of costs, the fixed costs include brooms, garbage cans, and garbage trucks. Variable costs include salary of employees and prizes.

DISTRIBUTION CHANNELS

The distribution channel involves D2C, wherein people will be sent to specific villages to introduce and advertise the project's intentions. Indirect selling will require employment of ragpickers, who are expected to collect waste from home-to-home.



NEXT STEPS

1. Existing waste collection/recycling issues stem from logistical and transport limitations, thus we must identify a solution to overcome this.

PROSPECTIVE PARTNERS



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