



The Adaptation SME Accelerator Program (ASAP): Asia Focused Adaptation SME market study

Market Study Report and Selected Findings | November 2023

Adaptation SME Accelerator Project (2020 – 2023) – www.climateasap.org

Led by:

The  Group

The logo for The Lightsmith Group, consisting of a dark blue rounded rectangle with the word "Lightsmith" in white, sans-serif font.

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KEY FINDINGS

There are significant number of SMEs in Asia which are developing and offering solutions to customers to help identify, assess, and address impacts and risks due to climate change and are ready to scale. These solutions can be applied in new geographies to address similar challenges.

- **Using the Harmonized Framework for Identifying Adaptation-related companies, a sizeable and Diverse Universe of Adaptation SMEs exist in Asia.** 202 Adaptation Solutions SMEs across 27 Countries were identified by the ASAP project over the last 3 years. These businesses operate across sectors and represent a diversity of business models, with companies providing the most products and services that help with climate impacts in Agriculture; Climate Risk and Analytics, Water Supply, Sewerage, Waste Management and Remediation; Disaster management; Finance & Insurance; Healthcare; and Electricity, Gas, Steam & Air Conditioning Supply, and other areas.
- **Alignment with National Determined Contributions and National Adaptation Plans.** The large proportion of companies in these sectors aligns with the on the ground impacts identified in the latest [IPCC Working Group 2 report on climate change impacts, adaptation, and vulnerabilities](#) and many of the region's National Determined Contributions ("NDCs"). Technologies including remote sensing using satellites and drones, agriculture management platforms, parametric and crop-indexed insurance, weather forecasting, seed treatment, water treatment, and AI enabled software among others address key climate risks in the region including vulnerable food and water supply due to temperature extremes and rainfall variability, damage to infrastructure by flooding and extreme weather, impacts to human health from increased heat and infectious disease, and specific heightened risk for damaged infrastructure, vulnerable food and water systems in small island states. The rapid growth of climate adaptation solutions is indicative of the scale of existing impacts of climate change in the region and the need to scale these solutions rapidly.
- **There is a Strong Opportunity to Accelerate and Invest in Adaptation SMEs in Asia.** Companies that ASAP engaged with were actively seeking technical assistance or investment funds to demonstrate their product and/or service or to scale it after a successful pilot demonstration. ASAP activities including the Accelerator programming, convenings, workshops, and meetings with stakeholders demonstrates that investors are looking for opportunities in this space and many of the SMEs identified in the ASAP database could be unique opportunities for both private and public sector investment to have impact in the region.
- **Key Sectors for investment include:** Agriculture and resilient food systems; climate risk and weather analytics; finance (including access to capital, risk mitigation, and agriculture and health insurance products), water (wastewater treatment, irrigation, water harvesting, smart water management); distributed and demand response energy systems & efficient cooling solutions; health care monitoring and care; resilient infrastructure, and disaster recovery.
- **Women leading adaptation SMEs** - Women were found to have an active role in either owning, founding, and/or leading climate adaptation SMEs with at least 36% of the companies in the database reporting information. An additional 35% of companies either did not report data or did not have it readily available for assessment. Considering that the ASAP Accelerator program had 100% of the 6 companies in its Asia cohort with women either owning, founding, or leading the companies, there is a good likelihood that the number of women leading adaptation efforts in Asia is over half of the SMEs or more.

INTRODUCTION

The Adaptation SME Accelerator Program (ASAP) seeks to mobilize and empower SMEs in developing countries to address climate resilience and adaptation through a three-pronged strategy, comprised of the following:

- **Component 1: Identification (Map Companies and Markets)** – mapping resilience companies and markets; building the taxonomy of climate resilience and adaptation technologies, products, and services; creating and maintaining a database of Adaptation SMEs; publishing sample investment case studies/company profiles.
- **Component 2: Integration (Organize Regional Adaptation SME Networks)** - developing a network of Adaptation SMEs and related stakeholders through convenings and an up-to-date Adaptation SME database.
- **Component 3: Incubation & Acceleration (Launch Adaptation SME Accelerator Programs)** – incorporating a “toolkit” for identifying and supporting Adaptation SMEs in and into existing incubator and accelerator programs; launching the first cohort(s) of Adaptation SMEs in developing countries through these incubator and accelerator programs.

This Market study represents the Asia regional portion of *Component 1 (Identification)* with the following objectives:

- Applying the principles of the Adaptation Taxonomy to better understand the main sectors and prospects for investment in Adaptation SMEs in the region.
- Mapping of 160 SMEs and counting which are offering adaptation and climate resilience solutions to customers in the region.

Through these objectives, this study hopes to achieve the following longer-term impacts:

- Improve the standards and framework for identifying and categorizing the adaptation-focused technologies, products, and solutions, which will help to increase the awareness of SMEs involved in activities which fit into the Adaptation Taxonomy;
- Increase the number of investable climate resilience and adaptation-focused businesses in the region by including mapped Adaptation SMEs in the public database and by specifically highlighting opportunities for investment and/or technical assistance; and
- Enhance the ecosystem of adaptation-focused SMEs and other public and private stakeholders in the region to spur critical investment in climate adaptation and resilience, thereby helping to bridge the gap in financing towards adaptation.

[ASAP](#) is led by the [Lightsmith Group](#) with funding from the [Global Environment Facility's Special Climate Change Fund](#) and the [Inter-America Development Bank](#). ASAP is facilitated by Conservation International.

STUDY SCOPE, OBJECTIVES, AND OUTCOMES – SELECTED FINDINGS

This market study was structured around two deliverables: (a) surveying existing studies highlighting the specific climate impacts and challenges facing the region (b) applying the ASAP Adaptation Taxonomy to identify SMEs involved in adaptation and climate resilience solutions throughout Asia.

For the purposes of this summary report, the terms *climate adaptation* and *climate resilience* are used interchangeably, though readers should be aware that there is technical distinction between the two. The full peer-reviewed Adaptation Taxonomy (Attachment A) further details the distinction between these terms.

Adaptation Taxonomy

A peer-reviewed harmonized taxonomy has been developed to establish a set of transparent principles for determining whether an SME qualifies as an “Adaptation SME” based on the type(s) of technologies, products, and/or services that it provides. Given the existing universe of definitions, standards, methodologies, and frameworks in existence or under development related to climate finance and sustainable activities, the Adaptation Taxonomy was developed by building upon, and with reference to, the following existing definitions, taxonomies, and approaches:

- Intergovernmental Panel on Climate Change (“IPCC”)
- EU Taxonomy for Sustainable activities
- Task Force on Climate-related Financial Disclosures (“TCFD”)
- Climate Bonds Initiatives (“CBI”)’s Climate Resilience Principles
- Joint MDB methodology for tracking climate change adaptation finance
- Joint MDB IDFC Framework for Climate Resilience Metrics
- Market Research for a Climate Services Observatory (“MARCO”) project
- European Market for Climate Services (“EU-MACS”) project

The [Adaptation Taxonomy](#) has been designed to be *flexible* and *dynamic*, as adaptation and resilience needs (and the solutions that can address those needs) will evolve and change over time. The Taxonomy is also structured to be *inclusive*, since there are many companies that may not self-identify as a climate adaptation-related company, but that do have technologies, products, and services that can help to build climate resilience. In addition, given the highly context-specific nature of climate adaptation, the Adaptation Taxonomy does not provide a stand-alone list of technologies, products, and services that could be narrowly viewed as contributing to adaptation. Rather, it seeks to offer a framework to identify “Adaptation SMEs” based on whether the technologies, products, and services they provide enable the **identification, assessment, management, and/or monitoring** of physical climate risks and their impact(s). Four main elements comprise the Taxonomy, namely: (i) a definition of “Adaptation SME”, (ii) eligibility criteria, (iii) a segmentation of “Adaptation SMEs”, and (iv) a results framework to measure, monitor, and report adaptation-related outcomes. The results framework will be further developed in the subsequent phases of the broader ASAP initiative.

The Adaptation Taxonomy establishes a working definition of an “Adaptation SME” as follows:

An **Adaptation SME** is a company providing technologies, products and services that:



Figure 1: A working definition for an “adaptation SME”

It also provides a set of eligibility criteria for an SME to qualify as an “Adaptation SME”, outlined as follows:

In order to qualify as an **Adaptation SME**, an SME’s technology, product, or service must satisfy the following criteria:

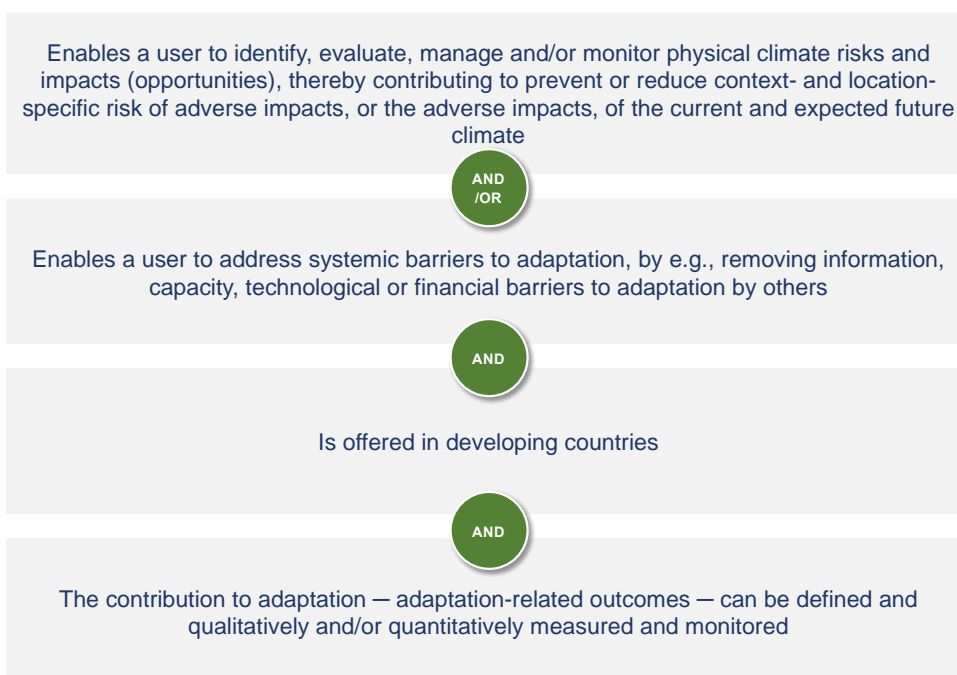


Figure 2: “Adaptation SME” eligibility criteria

Over time, the Taxonomy may evolve to include/exclude specific technologies, products, and services, but the Adaptation Taxonomy provides a key starting place for future refinements. Ultimately, the harmonized Adaptation Taxonomy can, and should be used by both public and private stakeholders to identify, engage, increase the awareness of, and most importantly, scale SMEs in developing countries involved in climate adaptation and resilience.

The full Adaptation Solutions Taxonomy can be found at https://lightsmithgp.com/wp-content/uploads/2020/09/asap-adaptation-solutions-taxonomy_july-28-2020_final.pdf

THE STATE OF CLIMATE IMPACTS IN ASIA

The impacts of climate change are already apparent in much of Asia and the IPCC expect for future impacts to be substantial across the region and to impact many important sectors (IPCC 2023). Even with a successful global effort to limit warming to 2°C, adaptation solutions will be required to mitigate the growing number of environmental and social risks & impacts due to climate change. As noted in recent reporting, these impacts are already having devastating consequences on vital industries such as agriculture, infrastructure, water, and healthcare, are impacting the amount and quality of water available to communities, and the growing uncertainty of hazardous weather impacts the ability for communities and businesses to continue to normally operate.

In IPCC Sixth Assessment Report on Impacts, Adaptation, and Vulnerability (2023), the growing impacts of climate change in Asia include – increased temperatures, monsoon rainfall variability, an upward trend of intensity and frequency of extreme weather events. Projections in this report anticipate significant impacts to agricultural and food security (particularly to cereal production), increased incidence of pests and disease impacting both agriculture and health, erosion and large-scale flooding from extreme weather, and threatened supplies of adequate fresh water.

Asia is a diverse geography in which over half of the world's population lives, and depending upon the exact geography the specific impacts and severity of climate change will vary. The exact costs for countries to adapt to climate change are anticipated to continue to rise, with the UN Adaptation Gap Report 2022 estimating the annual adaptation finance needs for 2021-2030 in East Asia & the Pacific to be between \$27-208 billion; and for South Asia to be between \$23 – \$177 billion annually (UNEP 2022). These solutions are needed throughout society with concerted effort needed in sectors including agriculture, water, infrastructure, health, and others to combat both long-term and short-term challenges arising from climate change.

Long term challenges arise from the slow and systemic changes caused by increased GHG causing shifts in precipitation and temperature patterns that drive changes in land use and species migration, threats to human health, food & water security and reduced economic output. Agriculture is estimated to make up an average of 10% of the GDP of countries in Asia. However, the OECD (2013) estimates that there are 350 million small and resource poor farmers in the region, who would be disproportionately impacted by impacts of climate change.

SNAPSHOT OF ECONOMIC IMPACT OF CLIMATE CHANGE IN ASIA

Temperatures are rising 2x faster in Asia than the global average – a metric associated with increased frequency and severity of weather-related natural disasters (IMF 2021).

Annual adaptation finance needs from 2021 - 2030 for countries in East Asia & the Pacific are estimated between \$27-208 billion (UNEP 2022).

Annual adaptation finance needs from 2021 - 2030 for countries in South Asia are estimated between \$23-177 billion (UNEP 2022).

Heat waves have the potential to cost countries in Asia up to \$4.7 trillion in GDP per year due to impacts in labor productivity and human health (Woetzel et al 2020).

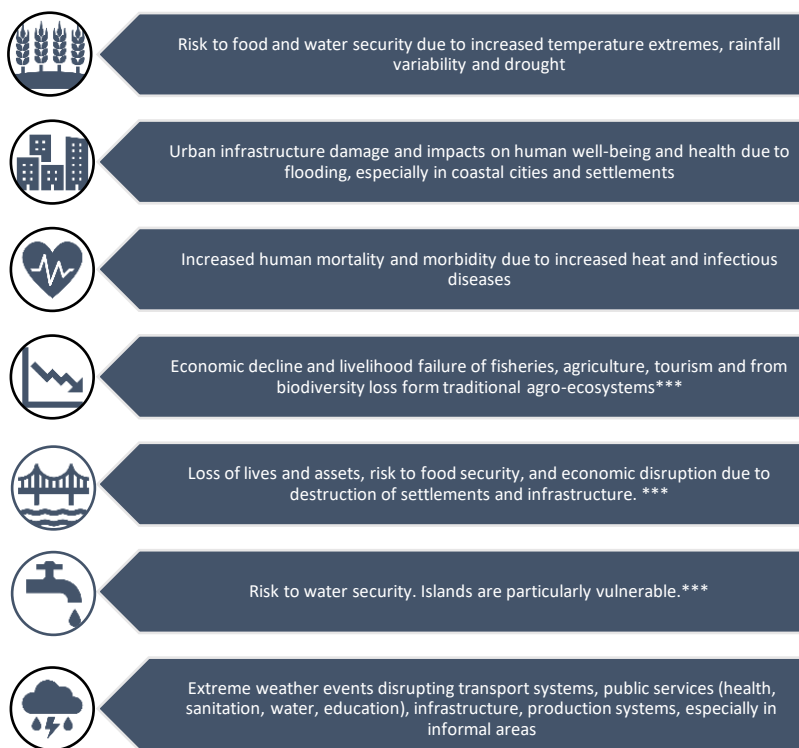
Extreme Weather events – including storms, flooding, and drought will likely increase in impact to both human lives, property, and economic loss. The World Meteorological Organization

(WMO 2023) tallied 81 weather, climate, and water-related disasters in 2022 which killed over 5,000 people, impacted 50 million and caused more than \$36 billion in economic damages. Pakistan and Afghanistan suffered from historic flooding that killed 400 people and caused an estimated \$30 billion in damages (Kronstadt & Margesson 2022). Other climate driven weather events in 2023 include droughts in China, Kiribati and Tuvalu which increased water insecurity; heat waves in North India that killed dozens; and devastating tropical cyclones.

Heat waves are anticipated to increase, impacting human health and labor productivity, costing Asia up to an estimated \$4.7 trillion in annual GDP by 2050 (Woetzel et al 2020). Pests and disease are anticipated to rise. The International Federation of Red Cross and Red Crescent Societies (2023) reports that dengue infections were five times higher than 2022 in Bangladesh with an estimated 30,000 new cases this year. Air quality and pollution are expected to increase the cases of lung and other health challenges with an estimated four billion people already exposed to air pollution levels that endanger their health in the region (ADB n.d.).

KEY REGIONAL RISKS FOR ADAPTATION IN ASIA

According to the latest IPCC 2023 Synthesis Report on Climate Change, key risks in Asia which will require adaptation solutions include:



*** Specific to Small Islands

IPCC, 2023: *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, 184 pp., doi: 10.59327/IPCC/AR6-9789291691647.

MAPPING ADAPTATION SMES – ANALYSIS AND BREAKDOWN

Through a combination of desk research and targeted outreach to networks and key regional partners, the Asia Climate Adaptation SME study used the Adaptation Solutions Taxonomy to screen and identify 202 Adaptation SMEs originating from and/or operating in 28 Countries in Asia. Innovation clusters were found regionally including (a) South Asia (145) – Led by India (117); (b) Southeast Asia's (58) where innovation was more evenly distributed across 7 countries – Indonesia (6), Malaysia (11), Myanmar (4), Philippines (10), Singapore (10), Thailand (10), and Vietnam (7); (c) West Asia (29) – Israel (6), Jordan (6) United Arab Emirates (7); (d) East Asia – China (7) & Japan (8), as seen in Figure 3. Many companies either currently or aspire to offer services at least to other countries regionally if not to other regions in Asia and globally.

Adaptation SME Accelerator Project - Asia SME Market Mapping

Asia market mapping of Small and Medium Enterprises providing climate adaptation and resilience solutions to customers.

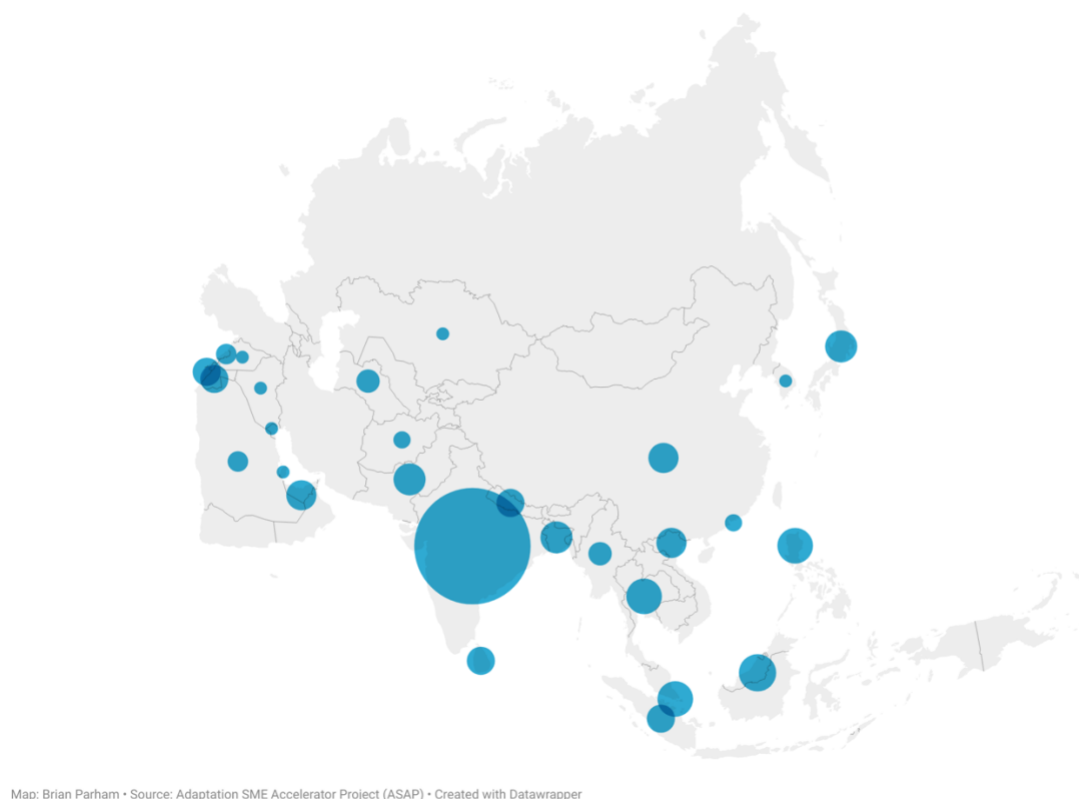


Figure 3 - Climate Adaptation SMEs Geographic deployment in Asia. Dynamic figure can be found at <https://datawrapper.dwcdn.net/edPhR/1/>

Of the 202 Asian SMEs identified in the Asia study which have products, technologies, and solutions that can help to build resilience to risks increased by climate change over 53% had direct applications in Agriculture (Figure 4). Water supply, wastewater and other waste management solutions were provided by ~14% of SMEs. Transport, Storage and Supply Chain solutions were provided by ~14% of the companies identified. Additional sectors identified include Information and Communications (~12%); Infrastructure (~10%); Consulting, Scientific and Technical Services (~8%); Electricity & Air Conditioning Supply (5.5%), Healthcare (5.5%),

Finance and Insurance Activities (4%); Climate Risk Analytics (4%), and Disaster Response (~2.5%). Innovations found represented the diversity of climate impacts the region faces in agriculture, clean water, infrastructure, heat, health, and other challenges. Often solutions like those in Information and Communications; Consulting, Scientific, and Technical Services; Climate Risk Analytics; and Finance and Insurance Activities contributed towards resilience and adaptation for customers in other key sectors. Examples include: (a) providing tech enabled communication and analytics to customers to better understand climate risk information and services providing additional advisory services, and (b) insurance and other financial products for businesses and customers including smallholder farmers to mitigate climate risks. The full list of the 202 Asia Adaptation SMEs identified by the ASAP project can be found in Attachment A to this report.

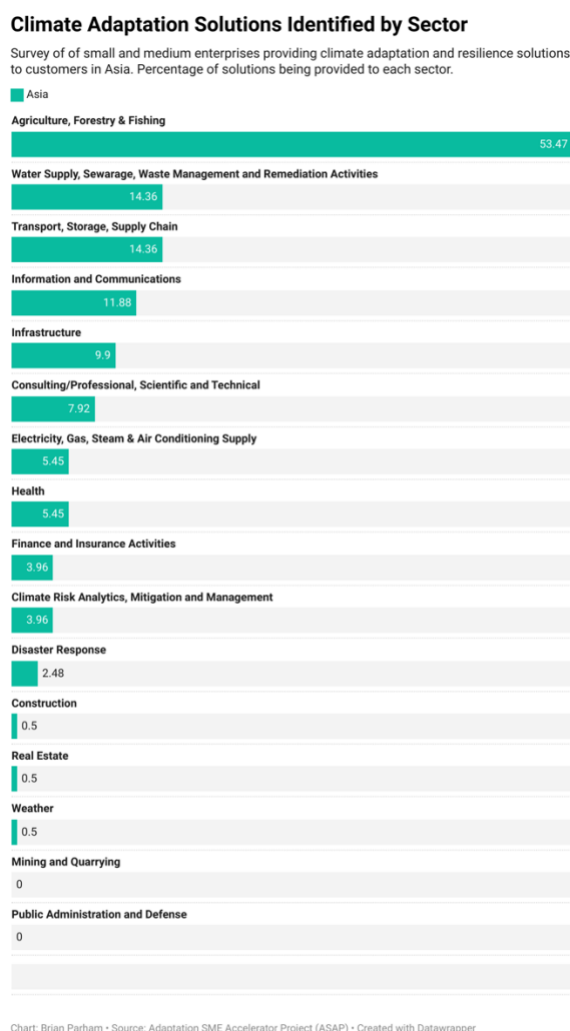


Figure 4 - Sectoral breakdown of climate adaptation solutions and services being deployed in Asia. Dynamic figure can be found at <https://datawrapper.dwcdn.net/4om33/4/>

Example companies and technologies identified in the ClimateASAP database which address “Key Regional Risks for Adaptation in Asia”

Note: Companies may have applications in multiple categories but were listed underneath that which most fits its core products & services.



Risk to food and water security due to increased temperature extremes, rainfall variability and drought

Solutions identified include analytics and management support platforms, remote sensing, precision agriculture and crop monitoring, financial products and crop insurance, and saline tolerant seeds. Example companies include:



[Agnext](#) - Agnext is a developer of an agricultural sensing platform intended for precision and digital agriculture technologies in India. The company's platform is an analytics-as-a-service that utilizes agriculture imagery and internet of things-based devices, enabling farmers to get updates in the mobile application for crop monitoring, analysis and keeping farm notes.



[AgriTask](#) - Developer of an agricultural management platform intended to make precision agronomy and agriculture technologies immediately accessible to farmers. The company's platform integrates multiple technologies into a farmers' intelligence ecosystem and correlates between various data layers of ground data, forecast data and activities that are performed or planned for specific crops, for deeper agricultural insights.



[Agtuall](#) - Agtuall provides affordable crop price risk management solutions for smallholder farmers across the world. Their end-to-end data analytics platform increases the resilience of smallholder farmers by assessing the frequency and intensity of natural calamities and their impacts on crop yields and price. Builds resilience to extreme weather events and weather volatility that affect crop yields, crop prices, and farmer incomes.



[Braintree Technologies](#) - Braintree Technologies offers a drone as a service, turnkey solution for remote sensing services enabling precision farming that analyzes plant growth and health from drone imaging.



[Crop 2X](#) - Crop2x is a precision agri-tech startup that provides weather forecast and water information that can help farmers increase production while minimizing inputs. This enables farmers to adapt to changing climatic conditions due to climate change. Builds resilience to extreme weather events and weather volatility that affect crop yields and farmer incomes.



[Impact Terra](#) - Impact Terra is a leading agri-tech providing analytics for the global food and agriculture market. The company focuses on improving food security and reducing climate risk. Its software-based platforms provide

businesses and governments with global agriculture & climate analytics, and smallholder farmers with actionable advice.



[Kawa Space](#) - Kawa Space is organizing the world's satellite data and making it universally accessible, queryable, and instantly useful. Our GEOINT platform enables agri-tech teams of all sizes to decode their area of interest using a simple API call. At Kawa, we are on a mission to democratize space for all. 525 million smallholder farmers grow 70% of the world's food, yet they're among the poorest people on earth. We're changing that with advanced analytics and advisory using satellite imagery. Full-stack of Planet-Scale Space Derived Analytics, as an API to teams assisting agriculture, ESG and associated industries



[Lal Teer Seeds Ltd.](#) - Expanding into saline-tolerant vegetable seed varieties. With extensive research and collaboration with local communities across 64 districts of Bangladesh, Lal Teer Seed has become the largest biotechnology and seed Production Company in the country. Initiated research on the development of saline resilient vegetable varieties and established a research station at Rampal, Bagerhat in collaboration with Salt Taxel from the Netherlands.



Urban infrastructure damage and impacts on human well-being and health due to flooding, especially in coastal cities and settlements

Solutions identified include early warning products, software platforms for climate risk financial products, flood insurance provider, & an environmental intelligence and analytics platform.



[FloodFlash](#) - Provider of tech-enabled flood insurance intended to help people in high-risk areas. The company's technology is a sensor-based product that uses an algorithm to detect the water level before exceeding a critical depth which helps in providing personalized and competitive flood policies, enabling customers to settle flood insurance at effective rates.



[Komunidad](#) - Komunidad is an environmental intelligence platform which helps businesses and governments use earth observation data and analytics to accurately assess physical risks and improve resilience. Their clients are in agriculture, insurance, ports and harbors, construction companies, schools, and government. Builds resilience to extreme weather events, flooding, and other climate-related events that affect governments and businesses in various sectors.



[mistEO Private Limited](#) - Climate change is a clear and present threat to humanity. It poses risks to global financial stability in the form of physical and transition into a low carbon economy. Climate risks affect vulnerable and marginalized segments of the population disproportionately, made further acute by inequality, lower incomes, weaker institutions, limited risk management strategies, and other factors. ClimaChain is our risk management

framework that aims to address the issue of financial losses via a real time settlement platform to cover income losses, a hyper granular weather forecasting platform for hedging physical risks and an early warning system for public security, safety and livelihood protection during inclement or severe weather events. ClimaChain: A real time settlement platform for weather related risk transfer products. ClimaChain enables auto generation, verification and settlement of claims based on weather probability triggers set in an insurance contract and saves up to 8% to 10% in administration cost to insurance companies. Indra: Hyper Local Weather Forecasting platform which runs proprietary weather forecasting models and provides granular predictions on the pan India domain. And EWS: Early Warning Systems for inclement weather events.



Increased human mortality and morbidity due to increased heat and infectious diseases

Solutions identified include health diagnostics, environmental data, and predictive analysis & modeling services for extreme heat in an urban setting.



[Blusense](#) - Provider of next-generation POCT platform designed to diagnose infectious diseases. The company's platform is developing a consumer-oriented point-of-care blood testing device based on a nanotechnology biosensing method that can deliver results in a few minutes with a single drop of blood, enabling people to monitor, control and manage virus outbreaks better.



[Blue Sky Analytics](#) - Blue Sky Analytics is a geospatial data intelligence startup that has developed products for monitoring air pollution and wildfire smoke. They are currently building a catalogue of environmental datasets.



[FortyGuard Tech Ltd.](#) - Sensing as a Service - We integrate multiple sensing technologies to deliver a unified digitalization of urban heat & proprietary energy data analytics. Predictive Analytics - Using proprietary data we intelligently model and visualize the problem & inform heat action on the ground. Cooling Solutions - Urban optimization scenarios and bespoke technical data to steer selection from a palette of urban enhancement. We provide sensing to identify a dollar figure with the problem of outdoor temperatures. FortyGuard proprietary technology was built in Abu Dhabi to provide predictive analytics & modeling services to help make informed cooling or optimization scenarios for the outdoors. With the FortyGuard Platform we sense, model & predict the impact of our urban cooling solutions.



[Phoenix Insurance](#) - Phoenix Insurance offers insurance for a wide range of hazards including fire, cyclone, flood, and miscellaneous insurance. With 31 branches throughout Bangladesh, the company provides online insurance services through most of its branches.



[Qoala](#) - Developer of an online platform created to offer microinsurance products, including for tropical diseases. The company's platform leverages big data, machine learning, IoT and blockchain to develop a digital and automated claim experience, enabling e-commerce and travel platforms to enhance their customer experience and users to get access to significant cost savings through a contextual and tangible insurance experience to the increasing millennial populations.



Loss of lives and assets, risk to food security, and economic disruption due to destruction of settlements and infrastructure. ***

Solutions identified help provide information for decision making support to fishermen to provide both weather advisory and better market information.



[Nuner8](#) - Nuner8 is helping small scale fisheries be sustainable, traceable, and profitable. We do this in three ways: 1) By providing them real-time fishing and weather advisory. This helps them be climate resilient and save fuel cost by up to 40% per fishing trip; 2) By helping them sell fish at higher margins by connecting them to markets and helping them with supply chain support; 3) By providing financial literacy and connecting them to financial partners for low interest loans and insurances."



Risk to water security. Islands are particularly vulnerable

Solutions identified include wastewater treatment, satellite enabled AI for hydrological analysis, water management software, and software and IoT solutions for water efficiency and leakage detection for customers and utilities.



[Absolute Water](#) - Absolute Water increases the availability and quality of water in areas projected to experience water stress by organically treating and converting raw sewage wastewater into potable water through a system that naturally degrades pollutants and converts it into nutrients. Builds resilience to increased drought and water scarcity that affect residential and commercial water use.



[Aumsat](#) - Aumsat provides satellite-based, AI-enabled hydrological analysis for locating, predicting, and forecasting groundwater resources. Their services help detect groundwater zones remotely, without fieldwork, helping farmers identify the optimum location for digging a well with high precision, less effort, and at lower cost. Builds resilience to increased drought and water scarcity that affect crop irrigation.



[Agua Wireless Systems Pvt Ltd.](#) - The aging water infra across cities and countries, leads to multiple problems across the distribution network - 1) 35-50% losses during urban water distribution (Underground leakages/theft) 2) Uneven distribution of water - Pressure differentials lower volume of water to entities far from the supply 3) Lack of real-time quality monitoring 4) Outdated tech - Manual meters have inefficient data collection procedures. AMR meters have no real-time data collection. This prevents features like leakage detection and demand-based supply Our solutions aim to solve all the above problems, and much more. Agua Wireless Systems designs IoT solutions to enable Smart Water Management in urban, rural, and industrial areas. Our solutions enable automated water distribution, fair usage-based billing and leakage detection in underground pipelines and tanks. Proprietary communication protocols are used for communication. By automating the entire water distribution network, we ensure that the supply is based on actual demand. This solves the problem of intermittent supply in low-income areas, while arresting leakages and wastage in the supply chain. By also monitoring water quality, we can alert authorities in case the water supplied deviated from the prescribed water quality norms. A network of Smart water meters, Automated Valves, and water quality sensors, communicating over LoRa/GPRS/WiFi technologies, helps measure, analyze and control water supplied to each entity on the pipeline. A cloud-based SCADA system also enables monitoring & geotagging of assets.



[Bariflo](#) - We have a patented technology of AI-IoT waterbody management system comprising up, hypolimnetic climate-driven aeration device which diffuses air at the sediment level based on sediment respiration rate and climate changes. Sediment is where the majority of waste and aquatic species shelter and requires at least 3-4ppm of dissolved oxygen at the sediment oxygen boundary layer. Further, our cost-effective AI-based mobile monitoring device will provide data at various places across the waterbody to present practical problems, which existing technologies are devoid of. It also provides a bacterial load to the stagnation region to treat the excessive nutrients in the water body. Also, we have a floating agriculture platform which will provide another 25-50% where leafy vegetables like coriander leaves, mint leaves, bell peppers, etc. organically as the waste of feed and excreta in water are nutrients for the agriculture on top of the waterbody. These systems are being installed at the mouth of pollution entering the waterbody to treat it organically and rejuvenate the biodiversity.



[Hiraya Water](#) - Hiraya Water provides AI-driven smart water management products and services for developing markets, helping water utilities optimize their operations – reducing water loss, reducing power consumption and improving service levels. Builds resilience to increased drought and water scarcity that affect drinking water availability and price.



Extreme weather events disrupting transport systems, public services (health, sanitation, water, education), infrastructure, production systems, especially in informal areas

Solutions identified include flood barriers, wildfire control solutions, infrastructure deterioration sensors, disaster early warning systems and disaster communications products.



[Cold A/S](#) - Cold Sail was founded to service the fishing industry and produce special tarpaulins. Product production has increased to include a wide range of products including sports and playground equipment. The company piloted a project important for climate adaptation through a NDF and NEFCO financed project to pilot inexpensive and mobile flood barriers with a product being tested in Vietnam and Thailand called “Cold Flood Barriers”.



[Fighting Treetop Fire \(FTF\)](#) - Till today no method is capable to control and suppress extreme mega and uncontrollable wildfires. That inflicts billions of dollars of economic loss and deaths every year. Due to the climate-crisis, extreme uncontrollable wildfires are increasing worldwide. Fighting Treetop Fire (FTF, patented) a defoliating a control line system: a tool to cut off the leaves, needles and thin twigs quickly using an Artificial Intelligence controlled Laser. The advancing wildfire, upon approaching the stripped trees and shrubs will transfer back from treetop to a low intensity and slow-moving surface fire. Once these green fine fuels are only on the ground, it is possible to complete the fire suppression process quickly and safely with today's standard means like water or chemicals.



[LinkAiders](#) - Immediately following a devastating disaster, affected areas have no access to mobile coverage or power. Information cannot reach relief coordinators, who must act blindly, based on contingencies. There is a need for a resilient information management system, efficiently providing overview of the disaster impact especially within the first critical 72 hours, where lives can be saved.



[Microimage Mobile Media Pvt. Ltd.](#) - "Disaster and Emergency Warning Network (DEWN): DEWN is one of the first of its kind mass alerting for early warning usage. Born over 10 years ago it has evolved with the changing mobile landscape to stay relevant with the mobile technology. DEWN supports many infrastructures however deployed often on GSM technology with outbound messaging via SMS, cell broadcast, mobile app notifications etc.

[Slope Alarms](#) - Research at Loughborough University has resulted in development of Community Slope SAFE, a novel sensor for detecting the onset of slope movements hence providing an early warning of landslides. The technology has applications for real time information and early warning for deterioration in assets including building foundations, retaining structures, tunnels, and dams.

Country Profiles

Country specific deployment varied widely (Figure 5), and likely represents that the market mapping exercise could continue to identify innovations being developed in countries that had fewer SMEs identified through this market mapping exercise. It is also likely that existing SMEs in the database have expanded the regional scale of the deployment of their technologies and services, which have not entirely been captured to date.

Adaptation SME Country Sector Profiles - Asia

ASAP Adaptation SME Database - Asia Mapping

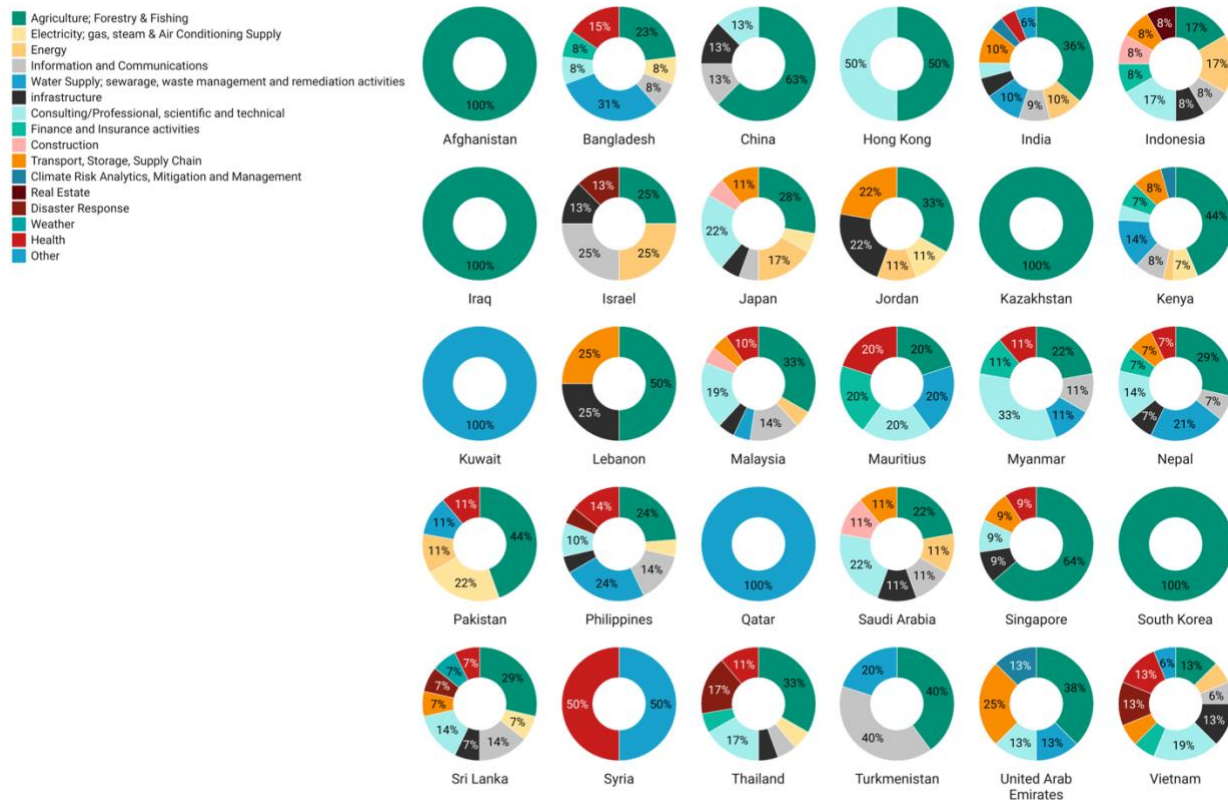
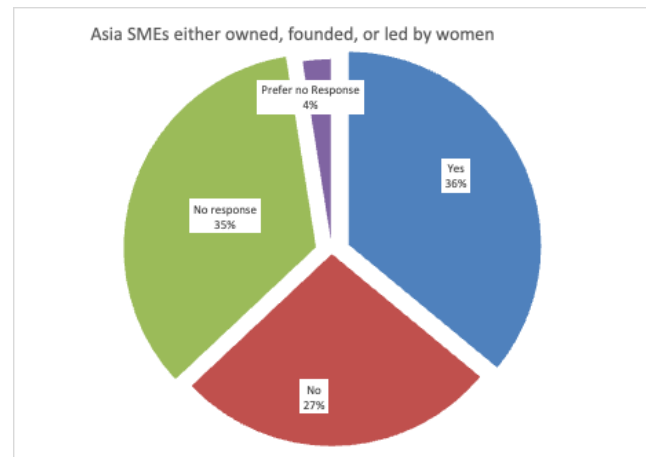


Chart: Brian Parham • Source: Adaptation SME Accelerator Project (ASAP) • Created with Datawrapper

Figure 5 - SME's deploying climate adaptation solutions by sector by country in Asia. Dynamic figure can be accessed <https://datawrapper.dwcdn.net/4EBLP/1/>

Gender and Climate Adaptation & Resilience SMEs

Women were found to have an active role in either owning, founding, and/or leading climate adaptation SMEs with at least 36% of the companies in the database reporting information. An additional 35% of companies either did not report data or did not have it readily available for assessment. Considering that the ASAP Accelerator Program had 100% of the 6 companies in its Asia cohort with women either owning, founding, or leading the companies, there is a good likelihood that the number of women leading adaptation efforts in Asia is higher than the reported 36%.



CONCLUSION

The ASAP market study provides a snapshot into the developing innovative space in Asia for climate adaptation solutions. During the project, accelerators, investors, public sector agencies, multilateral agencies, and other stakeholders have adopted the Climate Adaptation Taxonomy as a foundation for engaging with innovators and investors in climate adaptation and resilience in the region and globally. Continued work to identify new companies and engage with those existing in the database, particularly the ones who could expand their existing customer base or define new lines of product centered around the capability to build climate adaptation and resilience, will be required to monitor, and build upon the dynamic entrepreneurship demonstrated. With over half of the world's population experiencing the growing impact of climate change and with impacts projected to grow further, it will require investment into innovations at all stages of development from seed to early-stage venture through to growth equity to scale adaptation and resilience technologies in critical sectors of agriculture, infrastructure, healthcare, information and analytics, water, disaster recovery, and public administration. There will be a growing need for business-to-business products providing climate analytics, decision making support, information, technical expertise, financial products, and other expertise to support the growth and adoption of these technologies. This study demonstrates that entrepreneurs and innovators are building the foundation to address climate impacts and foster resilience in the region, but many require external capital and expertise to grow at the rate needed to address rising climate impacts. It should serve as a call to action for accelerators, investors, multilateral development agencies, national governments in Asia; and those from the international community who are invested in the development of climate resilience in Asia to engage through investment, technical assistance, strategic programs, and other policy support to enable the widespread deployment and adoption at scale of these and other climate adaptation solutions being developed in Asia.

The database of companies identified in this study can be accessed at www.climateasap.org

ABOUT THE ADAPTATION SME ACCELERATOR PROGRAM (ASAP) & ITS PARTNERS

ASAP is a program dedicated to assisting small and medium-sized enterprises (SMEs) in adapting to climate change impacts. It offers tailored support and resources to vulnerable SMEs in developing countries. ASAP focuses on capacity building, mentorship, and access to financing, helping SMEs identify climate risks and implement resilience strategies. The project aims to integrate climate resilience into SMEs' business models and foster sustainable practices. Through its targeted efforts, ASAP contributes to enhancing the adaptive capacity of SMEs in the face of climate challenges. ASAP is led by the Lightsmith Group with funding from the Global Environment Facility's Special Climate Change Fund and the Inter-America Development Bank. ASAP is facilitated by Conservation International. For more information on ASAP, visit www.climateasap.org and about The Lightsmith Group visit www.lightsmithgp.com.

About Conservation International

Conservation International protects nature for the benefit of humanity. Through science, policy, fieldwork and finance, we spotlight and secure the most important places in nature for the climate, for biodiversity and for people. With offices in 30 countries and projects in more than 100 countries, Conservation International partners with governments, companies, civil society, Indigenous peoples and local communities to help people and nature thrive together. Go to Conservation.org for more, and follow our work on [Conservation News](#), [Facebook](#), [Twitter](#), [TikTok](#), [Instagram](#) and [YouTube](#).

About The Global Environment Facility (GEF)

The GEF is a family of funds dedicated to confronting biodiversity loss, climate change, pollution, and strains on land and ocean health. Its grants, blended financing, and policy support helps developing countries address their biggest environmental priorities and adhere to international environmental conventions. Over the past three decades, the GEF has provided more than \$22 billion and mobilized \$120 billion in co-financing for more than 5,000 national and regional projects. More information can be found at www.thegef.org.

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Appendix A: Climate Adaptation Solutions Directory (Asia)

#	Company	In what countries are your company's solutions currently offered?	Sector	Please provide an overview of what you do. If accepted in to the ASAP Directory, this will be the text used as your Business Overview.	Website
1	4energy Global	Germany Poland United Kingdom Greece Egypt, Arab Rep. France Portugal India	Electricity; gas, steam &; air conditioning supply	4energy Global is a leading provider of low energy cooling products & intelligent energy management solutions.	http://www.4energy.org/
2	Aavalor Green Energy	India	Water supply; sewerage, waste management and remediation activities; Energy	Aavalor is developing green energy hydrogen generators along with a nanotech water filter.	https://aavalor.com/
3	Absolute Foods	India	Agriculture; forestry and fishing	Absolute Foods is a developer of vertical and land farms that grow 100% natural and non-GMO produce. We control every aspect of farming, from seed to harvest, to ensure highest quality of produce. Our veggies are densely loaded with nutrition and grow without any chemicals, pesticides, fertilizers, or adulterants.	https://www.absolutefoods.com
4	Absolute Water	India	Water supply; sewerage, waste management and remediation activities	Absolute Water increases the availability and quality of water in areas projected to experience water stress by organically treating and converting raw sewage wastewater into potable water through a system that naturally degrades pollutants and converts it into nutrients. Builds resilience to: increased drought and water scarcity that affect residential and commercial water use.	https://absolutewater.in/
5	Aerial Industries	Nigeria/Singapore/Sub-Saharan Africa	Agriculture; forestry and fishing	Next generation open-farm precision technologies for a smarter, healthier and more sustainable arable farming ecosystem. Products include an aerial robot for agriculture mechanization and embedding crop data computing software which allows farmers to access innovative crop spraying solutions.	https://www.aerialindustries/
6	Aerodyne Group	Malaysia United States Sweden Chile Peru Indonesia India Saudi Arabia United Kingdom Canada Japan Portugal Netherlands	Agriculture; forestry and fishing Construction Energy Information and communication Infrastructure Professional, scientific and technical activities Transportation and storage	Aerodyne provides Drone-as-a-Service technology and AI-powered data analytics services to resolve industrial challenges in a variety of sectors to operate optimally and increase productivity.	https://aerodyne.group/
7	Aerospring	Singapore Global	Agriculture; forestry and fishing	Developer of an aeroponic gardening technology intended to come up with vertical aeroponic cultivation of plants.	https://www.aerospringgardens.com
8	Agnext	India	Agriculture; forestry and fishing	Agnext is a developer of an agricultural sensing platform intended for precision and digital agriculture technologies in India. The company's platform is an analytics-as-a-service that utilizes agriculture imagery and internet of things based devices, enabling farmers to get updates in the mobile application for crop monitoring, analysis and keeping farm notes.	http://www.agnext.com/
9	Agpulse Private Limited	India	Agriculture; Supply Chain	Post-harvest loss has a direct impact on the environment and vice versa. Food loss and waste account for about 4.4 gigatonnes of greenhouse gas emissions each year; these include on-farm agricultural emissions and the energy used to produce, transport and store food that is ultimately lost or wasted. Our botanical product is helping to increase the Shelf Life of the perishable commodity, hence solving the problem of high post harvest losses contributing towards minimization of GHG emission and strengthening the food security. The product is developed from botanical herbs which delays the decaying and degradation activities of perishables fruits and vegetables. The perishables after harvest are dipped in the solution made from the product and then it can be moved from farm gate. It can also be treated before exporting or at retain chain hub.	http://www.agpulseorganic.com
10	Agribazaar	Afghanistan, India	Agriculture; forestry and fishing	Agriculture software platform that transforms the agriculture supply chain using software. Connecting farmers to a marketplace.	http://www.agribazaar.com
11	AgriCix Lab	India	Agriculture; forestry and fishing	AI enabled SaaS stack for entities in the business of producing, trading, storing, transporting, processing or financing agricultural products.	http://agriCix.com
12	AgriDunya	Pakistan	Agriculture	Customer Problem In Pakistan there is still traditional agriculture trading there are many problems like Limited Transparency, Human Errors in Offline Trade, cut middle man, Quality Variation Issues, hard to find seller/buyer and track fake products. 1. Limited Transparency: Critical commodity authenticity and ownership data do not pass easily or reliably from one participant to another in the supply chain. 2. Seller (Farmers & Cooperatives): Sellers have trouble accessing the worldwide customer, thus lower sales or lower prices. 3. Buyers (Food Processing Industries & Stockist): In an excessively intermediate supply chain, buyers have limited access to suppliers, limited choice of supplies, shortages of basic supplies, and lack of traceability. 4. Human Errors in Offline Trade: Trade agreements are carried out manually or verbally, which may increase the risk of costly human mistakes and can create disputes. 6. Agri Inputs & Machine Suppliers: No transparency on Agri input prices & no convenient access for farmers and millers to agricultural machinery and equipment suppliers. 7. Finding Agriculture Professionals: Difficult to find Agriculture experts for processing industries and companies. 8. Quality Variation Issues: Disputes between seller and buyer due to manual quality analysis. Products include - 1. Real Time Price Updates: Changing the way of Agri trade with Live Market Pricing. 2. Business Transparency: Transparent market information, negotiation, and deal formation. 3. Digital Marketplace: Bridging the gap between Farmers, sellers, and industry buyers to trade globally with unlimited access. 4. Employment Opportunities: Connecting job seekers and employers in the Agri industry. 5. Agri Inputs & Industrial Equipments: Hassle-free purchase of Agri inputs and machines with price comparison and doorstep delivery service. 6. Mobile Quality Analyzer: The MQA solution facilitates an objective, consistent, and cost-effective quality control process for Agri products.	http://www.agridunya.com
13	AgriTask	Brazil Kenya, Mexico, Philippines, Thailand, Tanzania, Brazil, Peru, Chile, Argentina, Bolivia, Uruguay, Morocco, Nigeria, South Africa, Mozambique,	Agriculture; forestry and fishing	Developer of an agricultural management platform intended to make precision agronomy and agriculture technologies immediately accessible to farmers. The company's platform integrates multiple technologies into a farmers' intelligence ecosystem and correlates between various data layers of ground data, forecast data and activities that are performed or planned for specific crops, for deeper agricultural insights.	https://www.agritask.com

		Ehiopia, Congo, Dem. Rep.; https://start.agritask.com			
14	AgriVijay	India	Agriculture; forestry and fishing	AgriVijay is an offline & online platform which empowers farmers by providing renewable energy products and services, agritech innovations, and energy advisory services.	https://agrivijay.com
15	AgroMetrics	United States India	Agriculture; forestry and fishing	Agrometrics' service is centered around a telemetry monitoring equipment designed to facilitate wireless transmission and reception of measured quantities of environmental conditions. The company's equipment monitors environmental variables like soil, water, wind and atmospheric pressure.	http://www.agrmetrics.com
16	Agronize	India	Agriculture	Today farmers are unable to get good yields and optimum returns on their efforts. Due to lack of weather forecast and crop monitoring. This leads to damages to the crop and reduces yields as well as income also. With our app-based solutions, farmers can get real-time localized weather forecast information and continuous crop monitoring. This enables them when to sow the seeds and harvest the crop timely. By using precision agriculture and the latest technologies like AI, ML, IoT, and giving accurate and timely information to the farmers. This makes them plan and makes decisions efficiently. They can minimize the input costs, maximize the income as result.	http://www.agronize.com
17	AGRONTX SERVICES PRIVATE LIMITED	India	Agriculture	Crop and Nutrition Advisory for farmers is not standardized and require technological enablement. Farmers & Stakeholders don't have a trustworthy, integrated, & customized data driven Platform to avail & offer Products & Services. Farmers in India today are facing a wide variety of problems ranging from Scientific crop Advisory, procuring Innovative & quality input Products to not getting affordable credit, Extension accuracy and quicker dissemination of information, both requires data on Crop Production, Diseases, Soil health, Crop Nutrition issues, input purchases, Productivity, Mandi Prices, Produce sales, Credit requirement, disbursement and realization etc in static and dynamic parameters. Majority of small and marginal farmers in India and across the globe don't have a medium to get their Soil tested promptly by a Non-chemical method. Even if farmers have some ways to get the soil tested, testing process is cumbersome and Soil testing labs are limited to cater to the demand. By the time Soil testing results are available crop has possibly surpassed critical growth stages for the fertilizers to show the result. Reliability, trust and cost per sample are another factors that comes into play. There is no widely accepted unified platform that connects 118 million farmers, 0.8 million Agri-Input shops, 0.2 million Produce traders, thousands of FPOs, SHGs and Agriculture & Horticulture department and Agriculture policy makers. AgroNxt has developed a SaaS platform that is aimed to offer Products and Services to enhance Productivity & Profitability of Farmers by engaging different Stakeholders. AgroNxt Farmer+™ captures data that matters and use it to generate actionable, localized advisory for farmers and help them to get Products and Services. AgroNxt Business+™ is a platform for Agri-Input Shops, FPOs, NGOs and Input companies that helps them to do more meaningful business with farmers and customers. AgroNxt Govt+ for Government officers and front line workers. AgroNxt has taken Technology transfer from IIT Kanpur for IOT enabled chemical less Soil testing device that will be offered as an integrated product with AgroNxt SaaS platform.	https://agronxt.com/
18	Agrotelligence, Inc.	Turkey	Agriculture; Information	We believe the root of agricultural problems are; Agricultural Amnesia, Difficulty of collecting data, lack of data and information and of course climate change. CLIMATE & CROP MONITORING Understanding the climate and its' effects on your crop. IRRIGATION MANAGEMENT & DISTRIBUTION UNIFORMITY Irrigation hides another real problem under the irrigation challenge. It is distributions uniformity. PRESCRIPTIONS & SEASON PLANNING Plan your season, create your prescriptions, add your calendar, record with one click, and form your bid list. INSECT & PEST MANAGEMENT Observation is the key in farming. Agrotics creates the timeline for the understanding life cycle of your orchards. FROST MANAGEMENT Remotely frost monitor across your orchard in real-time-comparable frost level reports. GHG & CO2 MEASUREMENT AND CERTIFICATION Creating awareness through the measurement for mitigating climate change effects.	http://www.agrotics.com
19	Agsmartic Technologies	India	Agriculture; forestry and fishing	Developer of a platform based on data-driven agriculture intended to predict yield and maximize output. The company's product use data collected from field using low-powered sensors that gather soil information, detects crop disease and help to control irrigation, enabling farmers in improving the yield of the crop and manage their farms better.	http://www.agsmartic.com/
20	Agtuall	India	Agriculture; forestry and fishing Finance and Insurance Activities Information and communication Professional, scientific and technical activities	Agtuall provides affordable crop price risk management solutions for smallholder farmers across the world. Their end-to-end data analytics platform increases the resilience of smallholder farmers by assessing the frequency and intensity of natural calamities and their impacts on crop yields and price. Builds resilience to: extreme weather events and weather volatility that affect crop yields, crop prices, and farmer incomes.	https://agtuall.com/
21	Agua Wireless Systems Pvt Ltd	India	Water	The aging water infra across cities and countries, leads to multiple problems across the distribution network - 1) 35-50% losses during urban water distribution (Underground leakages/theft) 2) Uneven distribution of water - Pressure differentials lower volume of water to entities far from the supply 3) Lack of real-time quality monitoring 4) Outdated tech - Manual meters have inefficient data collection procedures. AMR meters have no real-time data collection. This prevents features like leakage detection and demand-based supply Our solutions aim to solve all the above problems, and much more. Agua Wireless Systems designs IoT solutions to enable Smart Water Management in urban, rural and industrial areas. Our solutions enable automated water distribution, fair-usage based billing and leakage detection in underground pipelines and tanks. Proprietary communication protocols are used for communication. By automating the entire water distribution network, we ensure that the supply is based on actual demand. This solves the problem of intermittent supply in low income areas, while arresting leakages and wastage in the supply chain. By also monitoring water quality, we are able to alert authorities in case the water supplied deviated from the prescribed water quality norms. A network of Smart water meters, Automated Valves, and water quality sensors, communicating over LoRa/GPRS/WiFi technologies, helps measure, analyze and control water supplied to each entity on the pipeline. A cloud based SCADA system, also enables monitoring & geotagging of assets.	https://aguaws.com
22	AI Genix International	India	Agriculture; forestry and fishing	Developer of pest management and sustainable farming technologies designed to address the global hunger threat and food security issue.	https://www.ai-genix.com

23	Algebra Intelligence	Jordan	Energy	Algebra Intelligence is a software development firm that focuses on integrating cutting-edge Artificial Intelligence (AI) solutions into the energy sector. Through its product (TaQTaK) which is an innovative AI-driven energy management solution that improves the electricity system by providing real-time monitoring, proactive notifications, as well as ticketing and reporting solutions. Purpose of Product: Algebra addresses many of the challenges energy generators and consumers face including high energy cost, integration of renewable sources, lack of predictive maintenance, and absence of monitoring, forecasting, and management dashboard. Product Benefits: 1. Improve the generation of the solar system and reduce electricity consumption and ultimately bills amounts. 2. Improve visibility into assets' performance and operations. 3. Ticketing and predictive maintenance decrease the downtime of assets. 4. Forecast values with the operation and maintenance cost which will enable us to project the yearly generation gain and consumption cost and ultimately calculate the plant payback period and its feasibility. 5. Accurate forecast estimation of energy generation and consumption that will help the grid operators to reduce their operation cost and take correct decisions.	https://www.algebraintelligence.com/index.html
24	Ambrotechs	India	Agriculture	Technology solutions for Sustainable and environment friendly land based aqua farming , digital technology to build farm to fork traceable sea food. IoT based In-situ Water quality measurement solution , input provider that helps farms to improve their farm revenues by 30-35% with reduced carbon footprint , SaaS based technology and digital know-how to connect aqua eco-system	http://www.ambrotechs.com
25	ARTEA ECO (ATELIERS ARTEA)	Qatar, Philippines, Dubai, UAE, Australia	Waste.	We are reimagining agro, industrial& hospitality wastes into biocomposites and turning them into sustainable food services packaging, catering consumables, hospitality finishes, furniture, and compostable consumer flexible plastic packaging. We are able to reduce the use of new materials to produce our products. We also help in the education of our clients and how to improve their operations and achieve their sustainability goals.	http://www.ateliers-arte.com
26	Artisan Greens	Singapore	Agriculture; forestry and fishing	Provider of hydroponics farming services intended to obtain cleaner, fresher and healthier produce.	http://www.artisan.green
27	Asteria Aerospace	South Asia/India	Information and communication, Analytics	Developer of drone-based solutions intended to provide actionable intelligence from aerial data. The company's products offer surveillance, security operations, and pipeline monitoring, enabling users to integrate operational workflows while increasing safety with saving time and money.	https://asteria.co.in
28	Aumsat	India	Information and Communications; Water supply; sewerage, waste management and remediation activities	Aumsat provides satellite-based, AI-enabled hydrological analysis for locating, predicting, and forecasting groundwater resources. Their services help detect groundwater zones remotely, without fieldwork, helping farmers identify the optimum location for digging a well with high precision, less effort, and at lower cost. Builds resilience to: increased drought and water scarcity that affect crop irrigation.	https://www.aumsat.com/
29	Avant Meats	Hong Kong SAR, China	Accommodation and food service activities/Agriculture; forestry and fishing	Developer of cultivated meat and animal protein food products intended to optimize cell-based agriculture for more sustainable, authentic and nutritious products.	https://www.avantmeats.com
30	Bael	India	Agriculture	Currently, cross border trades in Fruits & Vegetables are non-transparent and complicated and 80% market on the both sides are un-organized. This results in lower exports and imports even though availability of market and supply is there. We are a e-marketplace who is simplifying cross border trades in fruits and vegetables thru our platform by providing, 1) Trade & Price discovery 2) Quality Assurance 3) Trade financing 4) Logistics services	http://bael.co.in/
31	Banka BioLoo	India	Water supply; sewerage, waste management and remediation activities	Banka Bioloo is in the business of providing water, sanitation and hygiene facilities at homes, schools, worksites and public places in India.	http://www.bankabio.com/
32	Bariflo	India	Agriculture	We have a patented technology of AI-IoT waterbody management system comprising up, hypolimnetic climate-driven aeration device which diffuses air at the sediment level based on sediment respiration rate and climate changes. Sediment is where the majority of waste and aquatic species shelter and requires at least 3-4ppm of dissolved oxygen at the sediment oxygen boundary layer. Further, our cost-effective AI-based mobile monitoring device will provide data at various places across the waterbody to present practical problems, which existing technologies are devoid of. It also provides a bacterial load to the stagnation region to treat the excessive nutrients in the water body. Also, we have a floating agriculture platform which will provide another 25-50% where leafy vegetables like coriander leaves, mint leaves, bell peppers, etc organically as the waste of feed and excreta in water are nutrients for the agriculture on top of the waterbody. These systems are being installed at the mouth of pollution entering the waterbody to treat it organically and rejuvenate the biodiversity.	https://bariflodelabs.com/index.html
33	Barrix	India	Agriculture; forestry and fishing	Provide organic farmers with eco-friendly alternatives for pest control. Barrix products increase agricultural yield free of pests and residues by using pheromones and plant nutritional supplements.	http://www.barrix.in
34	Basil Energetics Private Limited	India	Energy	Energy consumption of electricity produced from fossil fuels by focusing on demand side. DC appliances are super efficient and run directly from DC of solar panels without inverter. The smart nano grid enables different energy sources to be combined in a seamless manner. The solution enables rooftop solar solution for air conditioner and other cooling appliances, solar pumps, etc. The solution offered consists of DC Appliances including water pumps as per the needs of user, smart nano grid and solar panels to suit the loads. Electric cycle, which can be charged from PV panels is also offered	http://www.basilenergetics.com
35	BBOXX	Sierra Leone/Kenya/Pakistan/Somalia/Congo, Dem. Rep./Mali/Guinea/Nigeria/Rwanda/Senegal/Togo/Côte d'Ivoire	Electricity; gas, steam & air conditioning supply	BBOXX designs, manufactures, distributes and finances innovative plug & play solar systems to improve access to energy across Africa and the developing world. More than 150,000 BBOXX products have been sold in more than 35 countries, improving the lives of nearly 1 million people.	https://www.bboxx.co.uk/
36	Bhuh Pramaan	India	Climate Risk Analytics and Risk Management	Bhuh Pramaan is a Geo-analytics start-up that strives to solve real-world geospatial challenges. We transform the data from multiple sensors through machine learning algorithms to deliver informative customized analytics. AGRICULTURE The data scarcity in agriculture value chain are: What? Where? When? How? Of Agriculture • Optimum sowing dates in real time? • Can we schedule irrigation? • Fertilizers applied to maintain soil productivity? • Sell or Storage or transport produce? • Scientific approach for Crop damage assessment due to natural disasters? The specific information unavailability to agriculture value chain is glaring due to data silos or unorganized data solutions. Multi-criteria decision models for sustainable agriculture to manage, mitigate production uncertainties. • Optimize production resources • Crop Mapping and Crop Health Monitoring • Crop stress monitoring • Drought Index • Weather-based risk rating • Logistics management NATURAL RESOURCE MANAGEMENT • AIR -AIR QUALITY ANALYTICS Vaayu" offers to visualize data, generate tangible reports and	https://www.bhuhpramaan.com

				act on key pointers. Our predictive analytics simplifies complex information to comprehensible actionable deliverables that ensures timely decisions. • FORESTS Scientific forest management: • Evidenced data collection • Planning to implementation and monitoring • Efficiently operations. Agriculture Our proprietary artificial intelligence/machine learning based algorithms are capable of processing petabytes of data to generate evidence based crop monitoring parameters like NDVI (Normalized Difference Vegetation Index (NDVI), Canopy Chlorophyll Content Index (CCCI), Normalized Difference Red Edge (NDRE) and Modified Soil-adjusted Vegetation Index (MSAVI). Our solution offers convenient automated monitoring of agricultural fields with vegetation dynamics based on relevant vegetation indices over time series periods. Our algorithms process biotic and abiotic stress indicators for better monitoring of crops. The application embedded with Soil data analytics tool to recommend crop suitability model to optimize crop production.	
37	Biolive	Turkey	Waste.	As we all know, one of the most fundamental problems of the deterioration of the ecological balance and the acceleration of global warming on Earth is petroleum-derived plastics. Petroleum-derived plastics need to be reduced both because they do not disappear in nature for many years and the amount of water and carbon footprint released in the production processes is very high. On the other hand, plant-derived biopolymers have low strength properties, most of them are food-based and their costs are very high. Therefore, it cannot be used in all areas. As a solution to all these problems, we produce plastic raw materials that are much more cost-effective and have high strength properties than a waste that has no usage area and is produced in very high amounts. Both alternatives stand out as the products with the highest negative environmental impact in their class. This situation has negative effects on all living things and the environment in various ways, from the health and working conditions of people working in leather production and processing processes to biodiversity, from pollution of water resources to high greenhouse gas emissions, has effects. Our plant-based leather invention is a solution to all these problems. Every year in our country, 500000 tons of olive seed waste is generated in the world and 6 million tons of olive seed waste is produced in the world. These wastes come out in the olive oil production process and are a problem for producers. The only area of use is the burying and burning of these wastes. Our product is the transformation of olive pomace (olive seed waste) into bioplastic raw material, which is the first in the world and is produced in very high amounts. The 100% state of the biopolymer obtained from our invention is mixed with nature within 3-12 months, and it can match with many plastic types by establishing a chemical bond with other plastic types. The raw materials of our bioplastics obtained from olive seeds can be used in many sectors such as textile, food packaging, medical, construction, automotive and electronics. In the textile sector; Many products such as labels, hangers, buttons, biosilicone, etc., which constantly produce plastic waste, can be produced with bioadditive plastic raw materials that we produce. In addition, we have the world's highest rate of plant-based leather invention with the biopolymer we produce from the olive seed (Rebil Group company is a partner).	http://www.biolivearge.com/
38	Biopipe Global	Bangladesh India Philippines South Africa Ethiopia	Water supply; sewerage, waste management and remediation activities	Biopipe Global has developed a patented 100% sludge-free, chemical-free, odor-free, silent, easy to assemble and install, scalable, low cost, ecological and virtually maintenance-free onsite sewage wastewater treatment system.	https://www.biopipe.co/
39	Bioponics	Singapore	Agriculture; forestry and fishing	Developer of sustainable, bacteria-based agrichemical products designed to improve plant and crop production quality and yield. The company developed a photosynthetic bacterium that releases ammonium as an ethically and naturally sourced fertilizer using atmospheric nitrogen, enabling clients to improve crop yields and quality.	https://www.bioponics.io
40	Blue Sky Analytics	India	Climate Risk Analytics and Risk Management; Health	Blue Sky Analytics is a geospatial data intelligence startup that has developed products for monitoring air pollution and wildfire smoke. They are currently building a catalogue of environmental datasets.	https://blueskyhq.in/
41	BluKhet	India	Agriculture; forestry and fishing	Developer of soil-less farming techniques intended to boost agriculture in India. The company's techniques include automatic nutrient dosing and an IoT-based module that automates the entire farm using our smartphones, enabling farmers to obtain highly dense as well as nutritional yield.	https://www.blukhet.com
42	Blusense	Malaysia Vietnam Thailand India Costa Rica Panama Colombia Peru	Human health and social work activities	Provider of next-generation POCT platform designed to diagnose infectious diseases. The company's platform is developing a consumer-oriented point-of-care blood testing device based on a nanotechnology biosensing method that can deliver results in a few minutes with a single drop of blood, enabling people to monitor, control and manage virus outbreaks better.	http://www.blusense-diagnostics.com/
43	BoomGrow	Malaysia	Accommodation and food service activities Agriculture; forestry and fishing	BoomGrow is a produce supplier that leverages indoor precision agriculture technologies to optimize crop growth and water efficiency.	https://boomgrowfarms.com/
44	BovControl	Global	Agriculture; forestry and fishing	Bovcontrol is a data collection and analysis tool to improve performance on meat, milk and genetics production.	https://www.bovcontrol.co.m/
45	BrainTree Technologies	Malaysia	Information and communication Professional, scientific and technical activities	BrainTree Technologies offers a drone as a service, turnkey solution for remote sensing services enabling precision farming that analyzes plant growth and health from drone imaging.	https://braintreex.com/
46	Brightmerge	Israel	Energy	We are solving the data complexity problem that exists when scaling up deployment and operations of renewable energy microgrids to achieve zero carbon emissions and high levels of availability while maximizing financial returns. Our users must combine weather prediction, energy production, energy consumption prediction models into a unified techno financial model to create a single source of truth for project developers and operators. Our product is an Enterprise SaaS platform that has a data integration hubs that ingests the required data from open source, proprietary and internal data sets for weather prediction, energy production, energy consumption prediction models into a unified techno financial model to create a single source of truth for project developers and operators. With these models we created dispatch schemes that can serve multiple consumers and producers within a community microgrid or industrial, commercial, military, educational campus.	http://www.brightmerge.com
47	Building Ai Indonesia	Indonesia	Energy	Reduce energy consumption through intelligent automatic control of commercial building cooling systems. Energy management software and hardware	http://www.buildingai.asia

48	Capacloud	India	Agriculture; forestry and fishing	Provider of garden products engaged in the installation of vertical gardens. The company offers a new generation of vertical garden products that are maintenance-free, connected through IoT, and let a variety of plants grow on any vertical surface or structure, thereby enabling customers to grow plants vertically.	https://capacloud.com
49	Citiponics	Singapore/China/Malaysia	Agriculture; forestry and fishing	Developer of urban farming technology intended to farm in a sustainable way through green technology which encourages zero wastes.	https://www.citiponics.com
50	clickncare	Malaysia	Health	There are about 7 million migrant workers in Malaysia but due to language, cost and documents they are deprived of quality healthcare. To address the pain points we have developed an web based application where the migrant workers can consult a native doctor. There are two products for them to use - General Physician Consultation and Specialist Consultations. We also help them to get medicines delivered through our partner pharmacies.	http://www.clickncare.net
51	Cold A/S	Vietnam/Thailand	Disaster Management/Infrastructure	Cold Sail was founded to service the fishing industry and produce special tarpaulins. Product production has increased to include a wide range of products including sports and playground equipment. The company piloted a project important for climate adaptation through a NDF and NEFCO financed project to pilot inexpensive and mobile flood barriers - Cold Flood Barriers.	https://cold-sejl.dk
52	Compost Baladi	Lebanon	Agriculture: Compost	Compost Baladi is a Lebanese enterprise founded in 2017 in direct response to the chronic global waste management crisis. We provide products and services with a vision to promote the local recycling of any bio-waste, anywhere, into a bioresource. Through extensive experience in the sector, we support waste generators such as municipalities and commercial establishments with the design, commission, operation, and monitoring of waste recovery, treatment and reuse operations. Our support is offered in the form of consulting services, technology manufacturing/supply and partnership agreements. Our mission is to enable food waste recycling in regions where economic, social and environmental barriers have resulted in poor disposal through building on circular value chains that make the waste burden an opportunity for fueling regenerative agriculture.	http://www.compostbaladi.com
53	Corvus Energy	Japan/Norway/Canada/Global	Electricity; gas, steam & air conditioning supply/Energy/Professional, scientific and technical activities/Transportation and storage	Corvus Energy is a supplier of zero emissions solutions for the maritime industry especially within energy storage.	https://www.corvusenergy.com
54	Crop Bee	India	Agriculture	1.Actionable weather Parameters with High accuracy at ease of farmer 2.Integrated Pest management (IPM) Strategy to control pest and disease in vernacular Languages. 3. Direct Home delivery and In-built QR code scanner in the app for products integrity verification. 4.Satellite and Drone Imagery: Using AI/ML for classification for crop Phenology, Crop monitoring and Crop Yield & acreage estimation at village to global scale	http://www.cropbee.in
55	Crop2x	Pakistan	Agriculture; forestry and fishing	Crop2x is a precision agritech startup that provides weather forecast and water information that can help farmers increase production while minimizing inputs. This enables farmers to adapt to changing climatic conditions due to climate change. Builds resilience to: extreme weather events and weather volatility that affect crop yields and farmer incomes.	https://crop2x.com/
56	Cropin	Kenya, Ethiopia, Rwanda, Uganda, Mozambique, South Africa, Zimbabwe, Ghana, Côte d'Ivoire, Burkina Faso, India, Global, Nigeria	Agriculture; forestry and fishing; Supply Chain; Information and Communications	Offers farm management software designed to facilitate connected and data-driven farming to integrate the agricultural sector with information and communication technology (ICT). Allows different value chain participants to monitor farm produce status, improve the financial and operational aspects of agriculture and ensure the quality and safety of food for end consumers.	http://www.cropin.com/
57	Cultivate	India	Agriculture; forestry and fishing; Supply Chain; Information and Communications	Developer of a farm cultivation platform intended for precision agriculture which increases crop yield and quality. The company's platform integrates IoT sensors, crop models, and artificial intelligence which ensures that the right farm inputs are provided to the crops at the right time automatically, enabling farmers to save resources, get more yield and reap more profits.	https://www.cultivate.com
58	Develop Train Maintain LLP	India	Energy	Solar is unviable in hill stations/coastal regions creating an energy void, Only alternative in this regions is diesel genset. The crucial problem is dependency on single power source that is solar. The solution to this can be a small Hybrid System of Solar and Wind to provide energy at such places. Wind and Solar complement each other and hence can provide reliable energy 24x7. To tap this perpetual and abundant source of energy directly from the rooftops we are developing WAYUMITRA, the hybrid rooftop turbine. It is a synergy between Wind and Solar Energy providing you with clean and dependable power 24x7. Our turbine can be directly installed on any kind of rooftop avoiding poles or Structure. WAYUMITRA is designed keeping in mind the many constraints of accessing the roof of a house, whether urban or rural. The wind flow at the surface level is erratic and turbulent. To tackle the turbulence, we have used a Savonius 'Drag-type' turbine. For the erratic winds, we've incorporated a guide-vane system known as DUX. WAYUMITRA is designed such that most of the main parts of the DUX are modular. Modular design enables us to access and install at locations such as rooftops. It was designed keeping in mind the many constraints of accessing the roof of a house, whether urban or rural.	https://www.developtrainmaintain.com/
59	Dexler Energy	India	energy; precision agriculture	Dexler Energy is working on a smart farming solution that can be installed underneath the solar panels in ground mount installations to bring farming back to the fields, generate additional returns and improve the overall impact. The smart farming solution effectively combines precision agriculture learnings and applies it in a Solar farm context Our in-house designed structures contain grow-beds which act as the ecosystem for plants to grow healthy and robust root system under Solar PV systems. Our grow beds use food-grade & non-corrosive material to avoid contamination to the crops. The IP filing process has been initiated for the smart farming solution. We are also working on technology to augment our systems with IoT to monitor and control the parameters of the nutrient reservoir such as ElectricalConductivity, Ph, Dissolved Oxygen to maintain ideal conditions for plant growth and reduce manual interventions. We are also building proprietary machine learning algorithms based on crop specific package of practices which would help us in managing the yield by providing pre-emptive alerts on crop loss due to pests and diseases detected by its image recognition system	http://www.dexlerenergy.com
60	Digital Microsystems Pte Ltd	Singapore	Transportation; Logistics; Infrastructure	We are in business of AMI products & Solutions for electric utility companies in the emerging markets. We provide end to end smart metering solutions (Meter to cash) to utility companies addressing various operational challenges that they are faced in, day in day out, such as: Power theft, Collection problem, Meter reading, Managing assets in the field, Demand Side Management, Visibility over consumptions, evolving consumers' expectation, and customer satisfaction issues.	http://www.dms-ami.com
61	Distinct Horizon	India	Agriculture; forestry and fishing	Developer of a mechanized deep placement fertilizing machine designed to reduce farmer's fertilizer use. The company's machine reduces labor requirements and increases production yield, enabling farmers to increase yield and make better profits.	https://www.distincthorizon.net

62	doctorfromhome.in	India	Health	<p>At present, India's health care system consists of a mix of public and private sector providers of health services. The system suffers from the following weaknesses: 1. Availability of health care services from the public and private sectors taken together is quantitatively inadequate. 2. Quality of healthcare services varies considerably in both the public and private sector. 3. Affordability of health care is a serious problem for the vast majority of the population, especially in tertiary care. Our telehealth solution can change the current paradigm of care and allow for improved access and improved health outcomes in cost effective ways. Through https://doctorfromhome.in, anyone in India can access a top specialist anywhere in the large cities, or perhaps even globally through the digital connect. This will change the entire nexus of middlemen who thrive on taking patients to random low-quality hospitals for a fat commission, and then getting needless procedures done which ruin their livelihoods. We create access to qualified specialists and doctors, to whom a person in India might not have the capacity to physically get to, either due to time constraints, family issues, work restrictions, or due to lack of knowledge.</p> <p>Doctorfromhome is the marketplace for point to point doctor- patient connect, the Uber of all Telehealth platforms!! There are no subscriptions or contractual obligations for doctors or patients. Only board certified and verified doctors are registered nationwide, who set their own fee structure and schedule, based on their availability and specialty.</p> <p>doctorfromhome.in provides a virtual clinic, with the ability to maintain contact with patients as well as monitor their health remotely. Our service is the perfect solution to close the health equity, access, and cost gap, that is a huge problem in a vast, and diverse country like India</p>	https://doctorfromhome.in/
63	Doorastha Analytics Pvt. Ltd	India	Energy	<p>Energy is a core driver for livelihood, education and health. With utilities failing to fulfil the need, rural consumers are turning to heavily polluting sources like diesel and kerosene to meet their needs. Distributed energy sources like solar power and mini-grids offer a very powerful alternative, BUT they have to be run efficiently and profitably, which has typically not been the case, leaving them susceptible to frequent failures. Also, absence of metering and flexible payment models made the acceptance more difficult for the financially constrained. Doorastha addresses this gap from source to the consumer with a Smart Metering and Monitoring System for micro-grids. At Doorastha, we believe technology solutions are more needed for handling challenges like the above. We see that there is a need to address this from source to the consumer. With that in mind, we created a Micro-Grid Smart Metering and Monitoring System aggregating Consumer usage & revenue data, Grid System Components status, etc. This iLUMY Solution enables fault detection, theft and pilferage prevention, thus helping drive higher efficiency, maximizing energy output and revenues. This is complemented by a flexible payment model which is implemented through indigenously designed smart meters. Data from these systems is used to drive optimal utilization, which is key for sustainability of these remote assets. Our back-end system on the cloud processes the data to provide information to the stakeholders, displayed via insightful front-end visual displays. All stakeholders can leverage data to measure against their objectives. This home-grown technology ensures the utilization and maximizes revenue from these assets for the financier, while making the life easy for the operator.</p>	http://www.doorastha.com
64	E Green Global	Korea, Rep.	Agriculture; forestry and fishing	<p>Producer of potato seeds and micro-tubers intended to increase the overall bio-security of the potato industry. The company's tuber overcomes the limitations of the current seed potato supply system.</p>	https://www.eggtuber.com
65	E Waste Social Pvt Ltd	India	Water supply; sewerage, waste management and remediation activities	<p>Our platform enables Corporates, Companies and Institutions or anyone who has an inventory of electronic waste to sell, and for recyclers of electronic waste to buy. E-Waste Social's SAAS based offering will help companies with decision making on retain, refurbish, and recycle strategies for the electronic assets by providing actionable insights. It is also engaged in assisting corporates to reduce carbon footprint, certification and fulfillments of EPRs, and achieving CSR through the value chain. E-Waste Social's partnership with United Nation Global Compact reinforces its mission to achieve UN SDGs of clean environment, sustainable cities and communities, responsible consumption and production, Industry innovation and Infrastructure.</p>	http://www.ewastesocial.com
66	Earth Analytics India Ltd.	India/Switzerland	Information and communication	<p>Earth Analytics India uses drone and satellite data to analyze changes in agriculture, forestry, and infrastructure in India. The company was born out of the RIICE (Remote sensing-based Information and Insurance for Emerging economies) project and is backed by Sarnap SA, the Swiss satellite technology expert. Powered by MAPscape, a software developed by Sarnap SA, EarthAnalytics India makes use of both optical as well as infrared sensors.</p>	https://www.earthanalytics.in/
67	EcoEnergy	Pakistan	Electricity; gas, steam & air conditioning supply	<p>EcoEnergy provides affordable access to solar energy for off-grid businesses and households. They use a pay go system that breaks payments into monthly installments and only has customers pay for what they use.</p>	https://ecoenergyfinance.org/
68	Ecosea Farming	Chile Japan Australia Canada Norway United Kingdom	Agriculture; forestry and fishing	<p>EcoSea Farming engages in the development for aquaculture systems that create a more efficient and sustainable environment for fish farming.</p>	https://www.ecoseafarming.com/
69	EF Polymer Private Limited	India	Water	<p>In all countries, farmers are facing the problem of low water availability and cause to this they are not able to use all available land, their crop gets destroyed sometimes because of less water to irrigate, production affects every year due to less rainfall. As we all know water is getting low day by day and most drinkable water uses for the irrigation purpose and now humans need to update with less water. EF Polymer has developed a naturally biodegradable water retention polymer for soil conditioning by using fruit waste. It can absorb water up to 150 times its weight and release it over a long period of time to maintain the soil moisture. It is high in nutrients and hence it will work as a fertilizer as well. By using the product, farmers and land restoration proponents can reduce the water requirement for irrigation up to 40%, fertilizer requirement up to 20%, and can increase crop yield by up to 15-20% on barren land. Unlike our competitors, our product is organic, biodegradable, and lower in cost per acre.</p>	http://www.efpolymer.com
70	eFeed	India	Agriculture	<p>1. Animal Nutrition Advisory where our farmers get good nutrition knowledge from our mobile application and from our experts at our physical fulfillment centres 2. Animal Nutrition Premixes and Supplements: Our in-house made compositions of the products make sure that nutrition quality is ensured for the animal feeds. Our products ensure that all nutrients get to the animal and they don't get diseases. Our products also improve milk production and FCR in poultry and aqua.</p>	http://www.efeed.in
71	Ekosis	Indonesia	Agriculture	<p>All in one solution for agribusiness industry. Social Media: focused on connecting people in agribusiness sector Marketplace: ensure safety and security of trade, build credit to get access to funding Funding: get access to capital that uniquely tailored to users' need Lesson: share their knowledge to others with hopes to open up opportunities for others and increase supply of various product</p>	http://Ekosis.id
72	ELWIN AMANCHASIS COY LTD	Nigeria Morocco Turkey United States United Arab Emirates United Kingdom Germany Netherlands Israel China Japan South Korea	Agriculture; forestry and fishing Manufacturing	<p>Elwin AgTech Project 1.0 is an innovative commitment to delivering sufficient, & nutritious foods, and creating sustainable dignified jobs by empowering smallholder farmers with smart farming techniques (climate adaptation and resilience) for optimum improvement in productivity up to 60% for marketable value profitability.</p>	https://www.elwin-group.com.ng

73	EpVi new technological Epoch Pvt Ltd	India	Energy	Every electricity user is paying 15-25% extra electricity bill due to electricity wastage because of unhealthy appliances, unattended appliances, over used appliances and current leakage about which people are unaware. We are targeting the households, Commercial offices who are paying electricity bill more than 6000 per month (1.2 Cr household and 99% commercial offices). We are helping them with our Product called Smi-Fi an IoT device and phone app which Monitor the real time electricity, Identify the fault, track appliance health, allow user to control appliances and maintain the right level of usage using algorithms this leads to decrease 97% of their electricity wastage and save their electricity bill up to 25%.	https://www.epviindia.com
74	eRecycleHUB	Jordan	Transportation; Logistics; Infrastructure	Solid waste became one of the major environmental problems in Jordan. In 2014, Jordan approximately generated an estimated 2 million, 45000, and 4000 tons of (MSW), hazardous, industrial waste, and medical waste, respectively per year which costs millions JDs to manage them, with most of them diverted to unsanitary landfills and dumpsite. Unscientific solid wastes disposal in landfills is leading to public health risks, adverse environmental impacts as well as socio-economic problems. Likewise, improper disposal of solid wastes in water bodies leads to pollute water sources and affects their quality, several human activities like dumping waste from the domestic, commercial and other sources is done into water sources. Studies showed that runoff from dumpsites can pollute water resources. Leachates from dumpsites contain heavy metals which are not only potential source of contamination to soil and water resources, but also harmful to human life as they enter food chain through plant and animal uptake. Also, the majority of the waste generators in Jordan are still not aware of the concept of recycling or any private sector companies that provide recycling services. Currently, most waste generators use municipal waste collection services that take their waste straight to landfills. An even smaller number of commercial waste generators contract and use formal recycling services. There are no linkages between the recycling service providers and wastes generators as well. eRecycleHUB is an early stage startup, founded in 2021, (will launch to the market soon), aims at facilitating the sale and purchase of recyclables (Scrap) via Recyclables Drop off Station Vehicle/Recyclables Drive Thru Bank. eRecycleHUB received a seed funding from UNICEF and incubated by Jordan University of science and Technology (JUST). Our main objectives are to offer an access to recyclables drop off stations and make everyone aware of the importance of recycling and the value of their recyclables. The benefits of selling recyclables include a step towards saving the earth, earning profits out of recyclables while offering the best in class nationwide recycling or sort at source program to encourage waste generators (domestic and commercial) to adopt recycling and waste separation behavior. eRecycleHUB is a disruptive innovation that introduces a new value, product, or business for managing recyclables. It proposed to digitize scrap trading business and use technology in waste management and recycling service (specialized in recyclables aggregation and segregation at source), offering an efficient smart solution for collecting recyclables. We take concrete steps towards our aim of zero waste to landfill with our innovative & environment friendly disposal practices. eRecycleHUB improves solid waste management market, innovates the recycling business, regulates waste collection process, reduce waste management costs, and put raw material back into the productive cycle.	http://www.erecyclehub.com
75	EroGo	United Arab Emirates	Food Supply Chain	EroGo is an online grocery platform that eliminate food produce, making food more accessible, affordable and the planet safer. How it works, the dynamic pricing via expiration date as a key variable, which is connected to farmers, store owners, food makers and wholesalers is now placed in user's hands, and can get their shopping automated and get discount on over 1500 SKU, 30-40% cheaper than normal supermarket or online grocery platform, due to special rate we get from wholesalers and farmers. And we engage customer using 1 click ingredient order and sustainable score of their impact for every prevented waste. This drives saving for consumers, the retailers and the planet safer – a clear win win and So in essence, those deals that are manually sorted in stores are automated and displayed to user in an app, which means users do not have to go to stores to get discounts item, but they can do it from the comfort of their home, which is delivered and they are able to buy full range of produce the need per week. The wholesalers we currently working with, really believe this is a great product and can help reduce manual process and also increase ROI.	http://www.eroego.com
76	European Jordanian Company for Renewable Energy Projects (NMI - context)	Jordan	Electricity; gas, steam & air conditioning supply	Renewable energy developer working across the Middle East and North Africa (MENA) region with a mission to utilize Renewable Energy to create a sustainable energy future. EJRE was established in 2008 to offers a portfolio of low-carbon energy technologies and a range of development services and consultancy which together can meet clean power generation demand from the industrial, public and commercial sectors on any scale. EJRE is fully capable of providing the ideas for a low-carbon future – to meet short and long - term targets set by many countries around the world and in MENA in particular. And we can implement it by developing, constructing and operating renewable energy projects of outstanding quality and value; and by designing the built environments we live and work in.	http://ejre.com/jo/
77	EXCEL GEOMATIC S PRIVATE LIMITED	India	Climate Risk Analytics and Risk Management	Geospatial Data Creation, Data Modelling Service, Web GIS Platforms- Geolytics SCM for Supply Chain Management, Geolytics Agro for Crop Monitoring, Geolytics Urban for Management of Smart Cities, Geolytics Telecom for Web GIS Platform for Visualization of 2D/3D Data, Circle Boundaries and Territory wise Sales Analysis. Excel Geomatics Nirikhyaan, Geolytics FCP for Farmer Producer Company. Mobile Integrated Solution for FPO provides facility for Mapping of Field Boundaries and collection of related farmer and farm data. Movement of field resources can also be tracked using this platform. Geolytics Forest for forest Monitoring, Geolytics Mining for regular monitoring of mines but also helps in planning and management Measurements, area & volume calculations, 2D profiling, 3D visualization etc. Geolytics. Change for Management of Smart Cities; helps in monitoring/assessing the changes in the project area. KisanMall.in: A market Place for Farmers: Farmers associated with the FPO can order the inputs using the Platform. The platform provides the provision to bring Farmers, Input Companies and Aggregators on single platform. Advantages of Excel Geomatics: Mapping and Data Creation Service, Data Analytics & Modelling Service, No Dependency on Proprietary Software: Our offerings are based on Open Source WebGIS Technology and requires no licensing. Customized WebGIS Solution & SAAS: We provide our customers with software customized to meet their precise needs..	http://WWW.EXCELGEOMATICS.COM
78	FarmBee	India	Agriculture; forestry and fishing	FarmBee is a mobile app available for Android users which provides farmers with updated information on commodity prices and weather data as well as analytical tools. The service provides an analysis of farming methods based on data collected from other farmers cultivating similar crops. The platform offers direct on-call and mobile app support for farm management on pests, diseases, nutrition, weeds, and other issues.	http://www.linkedin.com/company/rmlfarmbee
79	Farameasy Technologies Pvt. Ltd.	India	Agriculture; Finance	Farmers of India, primarily small and marginal farmers, do not have access to financial services like cash credit, insurances, loans etc., as Banks/NBFCs view them as small ticket customers. Also, banks/NBFCs do not have any credit model to determine financial capability of a farmer, thus they are risk averse to provide loan/insurance, etc. to a farmer. Farmers also do not know their economic worth, as their income is irregular, and they do not have basic documents like PAN, Land patta, etc. to prove their financial worthiness. Finally, the semi-literate farmers get intimidated by the cumbersome paperwork required by banks for availing any loan or insurance, thus they skip the formal route, and take money from Loan Sharks at a very high premium (upto 10% per month), thereby falling into the debt trap. At extreme cases, the farmers lose the farmland and might be forced to commit suicide. Farm Infinity (farm∞) is a digital platform to facilitate easy access to	http://www.farminfinity.com

				affordable financial services like Farm Loan, Crop Insurance, Livestock Insurances, etc. to 125mn small and marginal farmers and agribusinesses of India. The company, Farmeasy Technologies Pvt. Ltd. has created a proprietary algorithm to determine credit worthiness of farmers by evaluating over 80 individual parameters, 600 data-sets and over 10Mn data from Govt. database. With our Credit worthiness & Risk assessment scorecard, Banks, MFIs, NBFCs and Insurance companies can provide better financial services to farmers and agribusinesses by reducing the risk of NPAs (non-performing assets) and improved repayment of loan.	
80	FarmPal Technologi	India	Agriculture; forestry and fishing	FarmPal is a technology-driven agtech company connecting farmers directly to businesses through an integrated and transparent supply chain.	http://www.farmpal.co.in/
81	FarmUnboxed	United Arab Emirates	Agriculture/ Supply Chain	International trade of fresh produce is risk prone and hence financial institutions have not actively participated in this trade. Due to lack of standardization of quality and fluctuations in price the industry is riddled with inefficiencies and mistrust between the participants. There are 6-7 layers between the farmers in developing countries and final international consumer with 20% wastage due to multiple handling. There is a 10 fold increase in price between the farm gate and the shelf of the retail store; 55% of the increase is intermediary margins. We have built a digital marketplace which brings in transparency and bridges the gap between the farmer and International consumer. Our partners offer trade finance, logistics and Quality Inspection on the platform so we are able to reduce the intermediaries and there is better price realization for both farmers and consumers. We have an ambition to make the process 100% digital. We have an aspiration to build a data platform that will be the Bloomberg of fresh produce that is able to predict trends and help decision makers plan their procurement well in advance	http://www.farmunboxed.com
82	Fighting Treetop Fire (FTF)	Israel	Information: Disaster avoidance: Financial	Till today no method is capable to control and suppress extreme mega and uncontrollable wildfires. That inflicts billions of dollars of economic loss and deaths every year. Due to the climate-crisis, extreme uncontrollable wildfires are increasing worldwide. Fighting Treetop Fire (FTF, patented) a defoliating a control line system: a tool to cut off the leaves, needles and thin twigs quickly using an Artificial Intelligence controlled Laser. The advancing wildfire, upon approaching the stripped trees and shrubs will transfer back from treetop to a low intensity and slow-moving surface fire. Once these green fine fuels are only on the ground, it is possible to complete the fire suppression process quickly and safely with today's standard means like water or chemicals.	http://fightingtreetopfire.com
83	FloodFlash	Europe &; Central Asia	Finance and Insurance Activities/Water supply; sewerage, waste management and remediation activities	Provider of tech-enabled flood insurance intended to help people in high-risk areas. The company's technology is a sensor-based product that uses an algorithm to detect the water level before exceeding a critical depth which helps in providing personalized and competitive flood policies, enabling customers to settle flood insurance at effective rates.	http://www.floodflash.co/
84	Flylab	Thailand	Agriculture	We will use local Agriwaste to feed our Black soldier flies larvae and will produce 2 products and 1 byproduct: -BSF meal: dry protein powder made from Black soldier Fly larvae. It can be used as ingredient in Animal Feed formulation -BSF oil: Fats from the Black Soldier Fly Larvae that also can be used in Animal Feed formulation. BSF Frass: Manure from the breeding of the BSF Larvae that can be used as a fertilizer for plants.	http://flylabfeed.com
85	FortyGuard Tech Ltd	United Arab Emirates	Climate Risk Analytics and Risk Management	Sensing as a Service - We integrate multiple sensing technologies to deliver a unified digitalization of urban heat & proprietary energy data analytics. Predictive Analytics - Using proprietary data we intelligently model and visualize the problem & inform heat action on the ground. Cooling Solutions - Urban optimization scenarios and bespoke technical data to steer selection from a palette of urban enhancement. We provide sensing to identify a dollar figure with the problem of outdoor temperatures. FortyGuard proprietary technology was built in Abu Dhabi to provide predictive analytics & modeling services to help make informed cooling or optimization scenarios for the outdoors. With the FortyGuard Platform we sense, model & predict the impact of our urban cooling solutions.	https://www.fortyguard.com
86	Fresh Produce Value Creation Services Private Limited	India	AGRICULTURE; Transportation; Logistics; Infrastructure	Go4fresh is solving most critical problem in fresh fruits & vegetables supply chain i.e. lack of market access & information access to marginal communities (growers) plus small & micro enterprises (retailing/distributing/kitchens). Lack of market access & information access leads to multiple issues like loss of business/income, higher food wastage and poor quality (unsafe food, high chemical content). Go4fresh offers digital interface for small enterprises to buy, small farmers to sell and logistics operators to pick-up & deliver to small enterprises. Mobile & browser based interface is integrated & affordable model which is unique, scalable and inclusive in approach. Go4fresh is trying to recreate enhanced experience alike vibrant physical markets with speed of execution, transparency, safe & secure transaction. Go4fresh offers add-on services to registered farmers - farm programs (improved package of practices for better quality & quantity of produce) and farm-side pack house services (to efficiently collect, check, pack, label & deliver the produce). Go4fresh is developing data & demand driven inputs for small enterprises to enhance sourcing efficiency and for small farmers to plan crop & harvesting in alignment with demand to maximise sales realisation & reduce cost of production & handling.	http://www.go4fresh.com
87	Fruitfal	India	Agriculture; Fiannce; Supply Chain	Small growers in informal markets lack links to trusted markets, and access quality capital. Similarly, micro and small produce retailers have limited buying power and suffer the same lack of access to quality capital. Meanwhile both are exposed to opaque trading with virtually no flow of market information, limited product/price discovery and wild volatility. Fruitfal's mobile B2B trading platform fills these gaps by providing both small growers and retailers transparent access to market information (demand/supply, price, quantities, prediction, forecasts etc) in order to better grow, sell and purchase fresh produce. We organize the unorganized for better outcomes at the bottom of the pyramid. Fruitfal is A trusted mobile native B2B trading platform for small growers and micro/small retailers.	http://www.fruitfal.com
88	Future Pump Limited	Kenya Benin Burkina Faso Ethiopia Gambia, The Ghana India Malawi Mali Mozambique Nigeria Papua New Guinea Nepal South Sudan Zambia Uganda Zimbabwe	Agriculture; forestry and fishing Water supply; sewerage, waste management and remediation activities	Futurepump is a company headquartered in Kenya which develops solar powered irrigation pumps. These pumps run on renewable energy, designed for 1-2 acre farms, and are highly efficient and portable. The company aims to provide solutions for future precipitation changes due to climate change.	https://futurepump.com
89	FutureFarms	India	Agriculture	By 2050, we would have reached around 10 Billion people on the planet and our food systems need to ramp up capacity by over 70% to keep up with demand. With agricultural lands shrinking, more people moving to urban areas, unpredictable weather patterns, and the increasing carbon miles, we are moving further away from our food source and getting more and more vulnerable. We are helping build climate-resilient and sustainable cities of the future by building distributed micro-farms that grow produce indoors, can be fit into existing buildings, save over 80% water and reduce carbon miles and food wastage. We have developed an autonomous operating system and a platform to monitor and manage modular vertical indoor farms and urban greenhouses. We will deploy thousands of these micro-farms within cities and communities and sell the high nutrition crops, grown for flavor and taste, directly to the consumers via our technology platform	http://www.futurefarms.in

90	GalaxEye Space	India	Climate Risk Analytics and Risk Management	As of today, there is very limited availability and affordability of high-quality imagery data over large areas of land, captured at a high resolution at high revisit times. Currently available data sources are either very expensive or low-quality or not available as and when required. Current choices for Satellite Imagery Datasets are very compromising, when seen against each other, comparing between Optical and SAR Imagery. Lately, users are seeing this as complementary datasets, rather than competing datasets, but face a lot of operational challenges in acquiring the same due to fundamental difference in physics. Secondly, the Supply problem wherein the current data providers serve their customers with huge data piles, sizing to atleast several GBs, if not more. Acquired data contains a lot of irrelevant data as well, which flows down through the further supply chain, thus adding to costs as well. Moreover, the delay in storing, processing and transmitting the data often leads to the customers receiving outdated information. We are proposing a hybrid sensor smart satellite constellation that would acquire and fuse Optical and SAR data of the same place at the same time, at a pixel level, and hence open doors to a completely new dataset, which would overcome individual sensors' setbacks. Our core selling point is a Satellite Imagery Data Product and Associated Services, that include imagery data processing, Analytics using ML/DL Algorithms and deriving insights. This data would be captured from sensors onboard the satellite. Key features of our data product include high resolution near-real-time satellite imagery, covering complete Geography of our Earth at very high revisits. This data will be available in different formats and data depth, which would enable diverse industries make use of this data in very different ways to be able to make efficient decisions. Our satellite would capture data on-demand by a customer, over a particular Area of Interest, giving the required data features at optimal specifications.	https://galaxeye.space
91	GARBALISER	Lebanon	Agriculture - soil	Liquid fertilizer made from natural raw material, based on organic leftovers. Farmers can use it in all types of agriculture technology and irrigation system.	http://www.garbaliser.com
92	GFresh Agrotech	India	Agriculture; Supply Chain	he company is revolutionising the vegetable supply chain & creating significant impact by empowering small farmers and getting rid of middlemen who manage an ineffectual supply chain. On customer side, it solves the problem of delivering quality products, on-time deliveries, competitive pricing along with the freshness and quality desired. working on developing an in-house blockchain enabled AI & ML Platform for demand-supply forecasting, price predictability and automation of operations, thereby aiming to create India's first blockchain enabled supply chain for agri produce.	http://gfreshagrotech.com
93	Ghoorcom	Jordan	Transportation; Logistics; Infrastructure; Agriculture		http://www.ghoorcom.com
94	GLYDE	India	Transportation; Logistics; Infrastructure	We are solving the problem of Last Mile connectivity & short rides. • Currently only 18% of India's Population has access to personal mobility, rest struggle everyday to commute to their destination. • Last Mile Connectivity is a bugbear that Public Transport has also struggled within India. • In spite of having some existing players in the market, there's still a lack of Affordable, Efficient & Sustainable ride options especially for last mile connectivity and short rides. • Increasing Carbon foot print per person travelling requires eco-friendly ride options to reduce pollution. We are building a smart mobility platform to offer Keyless and Dockless E-Scooters on pay-as-you-go model. 1 >>> Any user can search & book a two-wheeler at their nearby location 2 >>> Unlock it through the mobile application itself (keyless) 3 >>> Take the ride and the vehicle can be parked anywhere throughout the city (dockless) after the ride	https://glyderides.com/
95	GOLDEN MOUNTAIN CROPS PVT LIMITED(G MC)	India	Agriculture	In India, the agri supply chain is very complicated and 95% of the farmers are small farmers. They completely depend on traders and middlemen for marketing. The middlemen and traders will sell the products to primary processing centers or whole sellers depending on the product and then wholesalers to outlets. Golden Mountain Crops developing a digital platform that procures directly from small farmers & FPOs by assisting them in the development of primary processing centers by linking them with banks and marketing directly to outlets through doorstep delivery. Golden Mountain Crops developing VIPLAV mobile Application which retail outlets can order their products directly from the application, The company will take the order, and the facilitation center will pack make ready according to the buyer and distribute to micro-distribution centers and through the mobile van, the order will be supply to outlets within time at their door steps.	https://www.indiamart.com/golden-mountain-crops/
96	Gramophone	India	Agriculture; forestry and fishing	Gramophone is a data-driven full-stack technology platform that makes farming intelligent and empowers farmers to double their income. At Gramophone, we strive to create a difference in farming by bringing timely information, technology, and the right kinds of inputs to achieve better yields for farmers.	http://www.gramophone.in/
97	GreenShaov	Iraq	Agriculture	Sudden climate changes in Iraq and random waste of water and energy in the agricultural sector and the negative impact on food production and lack of income for farmers, especially low-income farmers, women and refugees in Iraq. Products: 1- Intelligent irrigation systems that work with artificial intelligence technology with a smart sensor to measure soil moisture with high accuracy, as well as the ability of the farmer to monitor and control irrigation through an easy-to-use digital user interface 2- The smart plastic house system to control humidity, temperature and intensity of sunlight and provide the appropriate weather for the growth of all types of crops with very high accuracy and prevent any negative impact on crops due to climate changes 3- Smart systems to measure soil quality and fertilizer percentage based on smart sensors the service: Agricultural advice using smart software and a database that works with artificial intelligence technology	http://www.greenshaov.com
98	Greenway	India	Agriculture; forestry and fishing Electricity; gas, steam &; air conditioning supply Human health and social work activities	Greenway designs and manufactures improved cookstoves and other household appliances for mass-market consumers.	https://www.greenwayappliances.com
99	Ground Truth Technology Private Limited	India	Climate Risk Analytics and Risk Management	The world is going through changes and unprecedented events like pandemic, climate change, geopolitical changes, and black swan events are severely impacting the supply chain of important commodities. To respond to such events companies and policy makers need real-time information on their supply chain. However, companies and governments still rely on traditional information sources. Traditional information is generally released by research, news and media companies which are usually survey based or based on ground sources. Such traditional data have the following issues : 1. Information comes late 2. Information is not available in certain geographies like China and South East Asia 3. Data is prone to error because it is based on manual surveys 4. Data is prone to manipulation and political intervention. Tathya is building a platform to monitor economic and environmental indicators in near real-time using satellite images and other alternative data. At Tathya our mission is to provide near real-time insights into the global supply chain of important commodities in the metals and mining sector and also measure its impact on the environment. We apply machine learning on satellite images to provide insights on critical assets like industrial units, ports, and mines to answer important	https://www.tathya.earth/

				questions like how much steel or copper is being produced, how much mining is happening, how much inventory is left or how much CO2e is being emitted in near real-time. This information is very critical to diverse sectors like financial Institutes, policymakers and various companies in the commodity value chain.	
100	Harvesting	Uganda/Tanzania/Kenya/India	Agriculture; forestry and fishing	Developer of a crop risk assessment technology intended to address challenges in agriculture using data science. The company's technology helps financial institutions to understand agriculture communities and risks associated with lending farmers by leveraging advancements in remote sensing satellites and machine learning as well as engages in building accurate predictive models for crop yields via data collection, data analysis and data reporting, enabling clients to view, analyze and manage.	https://harvesting.co/
101	HAVVA Agrotech	Malaysia	Agriculture; forestry and fishing/Water supply; sewerage, waste management and remediation activities	HAVVA provides hydroponic vertical farming solutions for customers ranging from home use, to community farms, to large and small scale commercial farms to conserve water and enhance crop growth.	https://havva.my/
102	hawa Water	United Arab Emirates	Water	We solved the problem of water crisis and plastic pollution, and developed a government approved product. Water is condensed from air bottled in a returnable glass bottle. The cost of capital entry is low.	http://hawawater.com
103	Hello Tractor	Nigeria/Kenya/Afghanistan/Bangladesh/Thailand/Jamaica/Guatemala/Global Nigeria, Kenya, Angola, Ghana, Côte d'Ivoire, Malawi, Mozambique, Senegal, Tanzania, Uganda	Agriculture; forestry and fishing	Hello Tractor has developed a low cost monitoring device that when placed on a tractor provides the owner with powerful software and analytics tools to ensure tractors are both profitable and properly cared for.	https://www.hellotractor.com
104	Himalayan Innovations	Nepal	Transportation; Logistics; Infrastructure; Agriculture	Himalayan Innovations runs a logistic platformGaunbata Sanjal is an innovative agritech initiative in Nepal, that uses a digital platform to connect rural small hold women farmers with urban markets,also provides them with digital literacy and access to finance through the young digital managers from the Girls4Rurals network.	https://www.gaunbata.com/
105	Hiraya Water	Philippines	Water supply; sewerage, waste management and remediation activities; Infrastructure	Hiraya Water provides AI-driven smart water management products and services for developing markets, helping water utilities optimize their operations – reducing water loss, reducing power consumption and improving service levels. Builds resilience to: increased drought and water scarcity that affect drinking water availability and price.	https://www.hirayawater.com/
106	Humus	India	Transportation; Logistics; Infrastructure & Agriculture	We are organising the fragmented/broken supply chain of Agri fresh produce to safeguard the interests of the crucial stakeholders, namely Producers(Farmers) and Consumers! Currently, we are building the distribution and the procurement channel for the Agri fresh produce. The expected outcome will be the producers get access to the right platform to sell their produce, and the consumers get a to wide range of commodities	http://www.humus.co.in
107	IFFCO Kisan Sanchar Limited (Agriculture VAS Solutions)	India	Agriculture; forestry and fishing	India Farmers Fertilizer Cooperative Limited aims to enrich farmer's lives and improve their production through a range of information solutions and products.	https://www.iffcokisan.com
108	Imagine Powertree Private Limited	India	Energy	1.Consumption of Huge Space by Traditional Solar Plant in Urban Areas : Solar consume huge amount of the land in the ground so it is difficult to install in urban locations 2. Transmission & Distribution Losses : There are approx. 25 - 35% Transmission & Distribution Losses are there when we transfer electricity from generation point to consumption points. There is a strong need to bring solar energy closer to you so we can reduce this losses. 3.Visibility to Solar : Solar is always hidden in rooftop or deserts, there is strong need to bring it at visible locations to make it scalable option. Invented proprietary solar product which we plant like a tree which reduces ground space from solar by 98% which also allows us to install solar at uncertain locations as well like median and side strips of roads, Gardens and others. (18+ Design IPRs - 7 already granted by Patent office, Government of India) As we generate solar at point of consumption we are able to save energy and money on transmission and distribution losses. To increase efficiency, our power tree solar panels rotate with the sun direction (patent pending). We also use one proprietary material which reduces the weight and also makes us circular in economy and gives embedded sustainability. We have developed multiple indigenous technologies like Solar Powered Electrical Vehicle Charging Point, Solar Tree Powered Water Purification System for entire Village, Floating Solar Float from Single Use and Mixed Plastic Waste and Others	http://www.powertree.co.in
109	Impact Terra	Myanmar/Netherlands/Singapore	Agriculture; forestry and fishing	Impact Terra is a leading AgriTech providing analytics for the global food and agriculture market. The company focuses on improving food security and reducing climate risk. Its software-based platforms provide businesses and governments with global agriculture & climate analytics, and smallholder farmers with actionable advice.	https://www.impactterra.com
110	INGENIAR: Risk Intelligence (INGENIAR CAD/CAE LTDA.)	Colombia/Mexico/Venezuela, RB/Nicaragua/Ecuador/Peru/Chile/Bolivia/Brazil/Uruguay/Argentina/Niger/Madagascar/Comoros/Mauritius/India/Vietnam/Thailand/Myanmar/Nepal	Finance and Insurance Activities/Professional, scientific and technical activities	INGENIAR [Ingeniería y Análisis de Riesgos] was founded by Omar Darío Cardona Arboleda in 1986 in Manizales city, with the aim of offering specialized services in the field of engineering, planning and public policy, with emphasis in seismic resistant structure design, urban planning, risk modelling and disaster risk management, and specialized software development.	http://www.ingeniar-risk.com/en
111	Ingens Tech Private limited	India	Energy	When solar panels are not cleaned the efficiency drops. Cleaning utility scale solar power plants via traditional techniques is not viable at the scale and rate that solar plants are being deployed. There is a need for a automatic and autonomous system that can clean larger solar power plans on a routine or on demand basis. An autonomous and automatic solar cleaning machine that can move on solar panel arrays and clean them with a dry brush. The cleaning machine itself is self powered and doesn't require any external power. Further more the machine has on-board self diagnostics and telemetry for its own health monitoring and reporting multiple telemetry data points to a remote server via a on-board and off-board connectivity features.	http://www.ingentech.com
112	INTECH HARNESS PRIVATE LIMITED	India	Agriculture; Water	We have developed a Patented, IoT Enabled Farmer Obedient Pump Controller for farmers facing erratic power and water conditions, it is a controller that automates farm irrigation with an ability to respond to power and water disruptions without human intervention, unlike GSM-based controllers. Its precise operation brings relief to the farmer from the rigorous, intense, and daily activity of pump operation, increases the crop yield, reduces water and carbon footprint, and conserves soil. It is a single technology solution that addresses the current challenges in farm irrigation and also handholds the farmer into the future through the modular offering of Digital Agriculture through our IoT platform.	http://www.intechharness.com

113	Integriculture	Japan	Accommodation and food service activities/Agriculture; forestry and fishing	Developer of the Culnet System designed to improve sustainability, food security and reduce public health problems.	https://integriculture.jp
114	Intellecap Advisory Services	India	Human health and social work activities	Intellecap is the advisory arm of The Aavishkaar Group, which works to build businesses that can benefit the underserved segments across Asia and Africa. All our work at Intellecap is designed to make markets equitable and inclusive.	https://www.intellecap.com /
115	Ivvest	Jordan	Agriculture	We enable new agricultural entrepreneurs and small-medium size horticulture companies to access indoor farming solutions for by overcoming three major boundaries: 1) Highly Expensive to Start 2) Complicated Setup & Operations 3) Hard to Scale For them to become able to produce all-year-long of a higher-quality, safer, pesticide-free, standardized produce. Our solutions include our special vertical farming system and the environment controlling and monitoring technology, which enable producing 15x times more than traditional farming and 7x times more than greenhouses.	http://ivvest.com
116	Kaiima	Israel, Brazil	Agriculture; forestry and fishing	Kaiima's technology induces novel diversity within the genome, using the plant's own DNA, followed by proprietary selection methodologies. This process can be implemented on superior inbreds and varieties and provides immediate yield gains and other improvements relative to traditional breeding systems.	http://www.kaiima.com
117	KANPUR FLOWERC YCLING PVT ITD	India	Water supply; sewerage, waste management and remediation activities	KPPL is addressing multi-fold waste management issues having deep-rooted environmental and social ramifications : 1. Toxic leather effluent - Leather production hurts animals, the environment, and workers who manufacture it, the only ones who benefit are people who profit from the suffering of others. Around 80% of leather worldwide is tanned using chrome, a highly toxic process that results in chromium saturated waste-water released into waterways, making it highly poisonous (PH 6-8.5) & leach into the ground -linked to contracting cholera, hepatitis and severe diarrhea.70% of the Amazon rainforest has been cleared to make way for pastures, making Leather a leading contributor to climate change. 2. Showering flowers (16 Mn tons annually) at Temples is a religious ritual in India. These pesticide-laden flowers create havoc in the aquatic ecosphere and leaching in the groundwater-causing irreversible damage. 3. Stubble burning in India causes 35B\$ economic losses & significant health risks (IFPRI). Despite bans and legal penalties, farmers in Punjab-Haryana continue to set their fields on fire, causing poisonous smog (which contains trace metals) and severe environmental depletion in Central India. 4. Combating untouchability - Manual scavengers jump neck deep into clogged sewers and scrape human faces. There are about 0.5 million dry latrines in India where the human excreta is cleaned manually. We want to end this social barrier! With deep tech research and supply chain innovation we have been successful in building technologies to viably convert agricultural stubble and floral waste into vegan-leather, christened Fleather - our biologically grown biomaterial, developed by biomimicking adaptation of modified biological species over agricultural stubble and discarded temple flowers as substrate. Fleather is animal-free, cruelty-free, engineerable, biodegradable and limitless. Also, creating Fleather is low energy intensive, utilizes free organic raw materials and requires minimal water. Targeting the 513B\$ fashion industry Fleather provides unprecedented design & business possibilities. Based on Principles of Cyclicity, Fleather is biodegradable & can be composted at the End of Life, since it's made from waste (temple-flowers, farm stubble in Asia). For Fleather, we employ manual scavenger women for flower collection, sorting, and processing thus helping them earn disease-free livelihood with dignity & respect. In UP there are over 17,500 families engaged in the degrading practice - we want to break the evil of 'untouchability'. The production time is fractional compared to Animal Leather.	https://phool.co/
118	Kawa Space	India	Information and communication; Professional, Scientific, and technical activities	Kawa Space is organizing the world's satellite data and making it universally accessible, queryable, and instantly useful. Our GEOINT platform enables AagriTech teams of all sizes to decode their area of interest using a simple API call. At Kawa, we are on a mission to democratize space for all. 525 million smallholder farmers grow 70% of the world's food, yet they're among the poorest people on earth. We're changing that with advanced analytics and advisory using satellite imagery. Full-stack of Planet-Scale Space Derived Analytics, as an API to teams assisting agriculture, ESG and associated industries	http://kawa.space
119	Kazam	India	Transportation; Logistics; Infrastructure	2W & 3W EVs don't have smart and affordable charging station network EV drivers don't have a single super app to navigate, authenticate and operate all charging stations Existing charging stations in 2W segment are non-holistic for energy management. Kazam has built a platform using which any EV user can discover and operate Kazam or non-Kazam (OCP) Charge points using one mobile app for all charging needs Our hardware agnostic ERP software for organizations will help to manage any charging hardware to control, assess, analyze & manage charge points	https://kazam.in/
120	Khethworks	India	Agriculture; forestry and fishing/Water supply; sewerage, waste management and remediation activities	Developer of solar-powered irrigation systems designed to enable small-plot farmers to cultivate year-round. The company's systems develop and implement solar-powered pumps as an alternative to dependence on inconsistent monsoon rains and costly fuel-based pumping, enabling farmers to get year-round irrigation, cultivation, reduction in CO2 emissions, reduction in poverty, and income generation.	https://www.khethworks.com
121	kheti-badi.com	India	Agriculture	Trust Problem - No trust between buyers, sellers and consumers. There is no trust between farmers and bulk buyers of Organic food in regards to quality, authenticity and payment; no trust between consumers and retailers in regards to the source and transparency of the product. Solution Marketplace - Simple mobile friendly marketplace, include SMS verification and it is 100% free, and user data gets stored on blockchain to be traced back lifetime Payments - Real time 'Escrow' payment for two parties to protect their interest while exchanging good vs. money	https://kheti-badi.com
122	Kisanlends Fintech Pvt. Ltd.	India	Agriculture	Provide full stack Platform for smart farming using Satellite imagery. Our Prime Minister MR. Narendra Modi Who decided to increase farmers income Twice within 2025. So Farmers Need to adopt Smart Farming. Using satellite Imagery Monitoring Crops, Dieses & so on. We get users from our Application and Our Website and also partnering With multiple FPO(farmer Producer companies) their strong network on group farmers. Our platform is subscription based for monitoring satellite iimagery	https://www.agrifams.in/
123	Kisantreat Agritech India Pvt Ltd	India	Agriculture	Traceability and Transparency from Soil to Sale for the farmers and all agri value chain stakeholders. Phygital agri platform for "Soil2Sell" assistance where farmers receive real-time information about sowing, inputs, pre & post-harvest management, Direct Market linkage and supply chain management.Digital payments and micro-credit facilities for needs and input requirements for every individual farmer.	http://www.pranamkisan.com
124	Komunidad	Philippines/Vietnam/India/Thailand/Sri Lanka	Agriculture; forestry and fishing/Disaster Management/Electricity; gas, steam &; air conditioning supply/Human health and social work activities/Information and communication/Professional, scientific and technical activities	Komunidad is an environmental intelligence platform which helps businesses and governments use earth observation data and analytics to accurately assess physical risks and improve resilience. Their clients are in agriculture, insurance, ports and harbors, construction companies, schools, and government. Builds resilience to: extreme weather events, flooding, and other climate-related events that affect governments and businesses in various sectors.	https://komunidad.co

125	Kre38 Labs Pvt Ltd	India	Water; Information	Most of the last mile water distribution is through a system of elevated storage tanks and pumps. The tools used in management of these systems were created 30 years ago and are not good enough for today's needs. Waltr provides tools to efficiently manage last mile water distribution. Waltr creates digital twins for Water tanks, Pumps, Borewells with its IoT devices and mobile apps. Water tanks – Real time monitoring of Quantity – Level, Volume, Flow and Quality – TDS Pumps - Scheduling, Autonomous operations, Energy monitoring, Protection of infrastructure Borewells – Scheduling, Autonomous Operations, Borewell health and pump health monitoring All these available on your mobile phones (Android, iOS and Web app)	http://www.waltr.in
126	Krishitantra	India	Agriculture; forestry and fishing	Provider of soil health analysis services intended to identify the most critical challenges of the agrarian community. The company's offerings include rapid iot-based soil testing and soil nutrition advisory system, enabling farmers to resolve some of the core issues in agriculture including manpower, water access and price rises.	https://krishitantra.com
127	Lal Teer Seeds Ltd	Bangladesh India	Agriculture; forestry and fishing	Expanding into saline-tolerant vegetable seed varieties. With extensive research and collaboration with local communities across 64 districts of Bangladesh, Lal Teer Seed has become the largest biotechnology and seed Production Company in the country. Initiated research on the development of saline resilient vegetable varieties and established a research station at Rampal, Bagerhat in collaboration with Salt Taxel from the Netherlands.	https://www.lalteer.com/ http://www.saltfarmtexel.com/projects/salt-tolerant-agriculture-in-bangladesh
128	LinkAiders	Philippines	Information and communication	Immediately following a devastating disaster, affected areas have no access to mobile coverage or power. Information cannot reach relief coordinators, who must act blindly, based on contingencies. There is a need for a resilient information management system, efficiently providing overview of the disaster impact especially within the first critical 72 hours, where lives can be saved.	https://www.linkaiders.com
129	LIRNEasia	Sri Lanka	Agriculture; forestry and fishing	CROP Advisor Product: The CROP Advisor is focused on vegetable growing farmers who are in the export value chain. These are produce that goes to the EU market. They need to comply with the Good Agricultural Practices (GAP) guidelines. The CROP Advisor allows farmers to learn about the GAP guidelines and comply with them. It also facilitates them to connect with the agriculture advisory services on diseases using MMS and voice messages. It also facilitate direct calls through the App. In the normal scenario the farmer has to wait till the extension officer comes to the field to get guidelines on the GAP systems and especially to get advices on diseases. Sometimes there are disease that spread at endemic level and need quick advices. The APP allows the farmer to get connected real time with the advisory services through MMS, Voice messages, Skype and Vibre...	https://www.lirneasia.net
130	Malai Biomaterials Design pvt. Ltd.	India	Agriculture Waste	We are trying to develop novel materials with outstanding ecological credentials developed from agricultural waste streams. Manufacturing of those shall positively influence the environment as well as employment opportunities of the communities of farmers. Our pilot material Malai is a plant based alternative to animal leather. It's vegan, home compostable and made without any petroleum based products or aggressive chemicals. Malai is a novel biocomposite material based on waste water from processing of coconuts and natural fibres. It has a feel and look similar to animal leather, similar mechanical properties but carries along far better ecological credentials.	http://Www.malai.eco
131	MandiGate	India	Transportation; Logistics; Infrastructure & Agriculture	The Agri supply chain is majorly controlled by unorganized sector which comprises of all Mandi adhati, commission agents, Mashakhors those people have the share of 98% of the business of retail supply chain which leads to Farmers are not getting the appropriate return on their Agri produce, they are being exploited by middlemen. Agriculture commodities market is unorganized sector with in-efficient supply chain consequences in waste of farm produce from harvesting, storage, supply chain to retailing via a vis increases in prices at retail level. aim to revolutionize sourcing & selling of fruit, vegetable & staples. Our aim is to link the farmers to the market and end consumers with an intervention of technology to increase efficiency & cut down losses across the supply chain. Both the farmers & our customers have access to virtual marketplace with transparent pricing for getting the best deal. Our vision is to emulate Amul model to aggregate farm produce in India and help building a sustainable eco-system benefiting both the producers & consumers.	https://mandigate.com/
132	Manna CEA	Korea, Rep. Kazakhstan Saudi Arabia	Agriculture; forestry and fishing	Provider of controlled environment agriculture systems intended to contribute to food security by providing technology and knowledge. The company's technology offers agricultural production methods that were previously considered impossible, enabling farmers to get nutrient control technology and cultivation tools that help them gain sustainable and high productivity.	https://mannacea.com
133	Mantle Labs	Global	Agriculture; forestry and fishing Finance and Insurance Activities	Mantle Labs has developed a technology platform that processes satellite data without the impact of cloud cover to provide high-resolution data, everyday and anywhere on the globe. The company's platform uses deep learning engines to process billions of pixels of image data from multiple satellites, enabling clients with data streams and parameters needed for risk assessment and management in near real-time, serving the agricultural banking, insurance, inputs, commodity and food industries.	https://www.mantle-labs.com/
134	Meridia	Ghana Indonesia Malawi Lithuania Netherlands Côte d'Ivoire	Real estate activities	Meridia offers smallholder farmers with affordable land documentation.	https://www.meridia.land/
135	MetroRide	India	Transportation; Logistics; Infrastructure	There is an absence of an Affordable, Quick & Reliable Short Distance Daily Commute solution. The available options are either very expensive or not punctual. MetroRide is an AI-powered electric mobility solution dedicated to "short-distance daily commute rides" which constitute the majority of the total urban commute globally. We connect daily commuters to high-frequency hubs like Metro Stations, Universities & Corporate Parks within a 5 KM radius. Our focus is to make these rides Affordable, Punctual & Sustainable. We scale using shared mobility, electric vehicles & AI. We invested in IoT for users' safety & also for faster scalability.	https://metroride.com
136	Microimage Mobile Media (Pvt) Ltd	Sri Lanka	Information and communication; Professional, Scientific, and technical activities; weather	Disaster and Emergency Warning Network (DEWN): DEWN is one of the first of its kind mass alerting for early warning usage. Born over 10 years ago it has evolved with the changing mobile landscape to stay relevant with the mobile technology. DEWN supports many infrastructures however deployed often on GSM technology with outbound messaging via SMS, cell broadcast, mobile app notifications etc.	https://www.mimobimedia.com
137	mistEO Private Limited	India	Climate Risk Analytics and Risk Management	Climate change is a clear and present threat to humanity. It poses risks to global financial stability in the form of physical and transition into a low carbon economy. Climate risks affect vulnerable and marginalized segments of the population disproportionately, made further acute by inequality, lower incomes, weaker institutions, limited risk management strategies, and other factors. ClimaChain is our risk management framework that aims to address the issue of financial losses via a real time settlement platform to cover income losses, a hyper granular weather forecasting platform for hedging physical risks and an early warning system for public security, safety and livelihood protection during inclement or severe weather events. ClimaChain: A real time settlement platform for weather related risk transfer products. ClimaChain enables auto generation, verification and settlement of claims based on weather probability triggers set in an insurance contract and saves up to 8% to 10% in administration cost to insurance companies. Indra: Hyper Local Weather Forecasting platform which runs proprietary weather forecasting models and provides	http://www.misteo.co

				granular predictions on the pan India domain. And EWS: Early Warning Systems for inclement weather events.	
138	mPower Social Enterprises	United States Haiti Guatemala Egypt, Arab Rep. Nepal Bangladesh Myanmar Philippines India Zambia Rwanda Botswana	Agriculture; forestry and fishing Human health and social work activities Information and communication Professional, scientific and technical activities Water supply; sewerage, waste management and remediation activities	mPower is a social enterprise aiming to solve development challenges using technology. Their global team of multi-disciplinary experts co-design with partners to iteratively learn and solve development challenges in areas of climate change, health, water and sanitation, agriculture, livestock, fisheries, governance and humanitarian issues among others.	https://www.mpower-social.com/
139	MyAgriGuru	India	Agriculture; forestry and fishing	Launched by Mahindra Agri, a wholly-owned subsidiary of Mahindra & Mahindra, MyAgriGuru is a 24x7 digital advisory platform for farmers.	https://download.cnet.com/MyAgriGuru-Agriculture-app-for-Indian-farmers/3000-20418_4-78143403.html
140	Nebeskie Labs Pvt Ltd	India	Energy; Information	Digitization of factories and buildings for efficiency. 90 % of the factories and buildings with I3.0 operation technology are still not connected with information technology and incurring financial losses. Challenges for digitizations are interoperability, modularity, scalability, and security of the IoT device, embedded software, and cloud. Our product is a highly flexible & modular IoT Edge platform that helps integrate IT with OT (operation technology such as VFD, PLC, HVAC, etc.) and enables digitisation in factories and buildings. Our edge IoT servers integrates with OT from different OEMs (cross OEM interoperability), takes care of complete abstraction of the physical layer and analytics at edge provides a low cost of operation. For our PaaS offerings, we provide a fully managed edge IoT stack and can be used in tandem with pre-existing ERP systems or any other 3rd party application. It reduces the development time and removes OT integration & data complexities. Our For our SaaS offering, we provide web/Mobile Application of top of our platform with comes with full suite of data analytics, visualisation, reporting, etc. Few Key problems that our platform solves are: Digitisation of assets (Real time remote monitoring); Energy and efficiency Management; Data analytics, visualisations and reporting of OT/manufacturing data trends; Predictive and preventive maintenance; Condition based monitoring and automations; Smart power quality management	https://nebeskie.com
141	New Leaf Dynamic Technologies Private Limited	India	Transportation; Logistics; Infrastructure	Challenges Faced by Farmers: The small landholder farmer has little to no leverage in the Agri Supply chain. They doesn't have access to reliable and affordable cold storage infrastructure close to their farm that gives them an option to store or pre-cool their produce. They are forced to sell their produce in the nearby 'mandi' which are highly inefficient. Conventional cold storages are expensive to operate because of high cost of electricity/dependence on diesel in case of outages. This prevents the private sector to invest in the cold infra closer to the farm gate. Challenges faced by B2B segment: 1. E-retailers/Retailers have Distribution Centres as there has been an increasing demand of perishables for doorstep delivery. On daily basis, retailer is handling 100 – 500 MT of fruits, vegetables that need to be rapidly pre-cooled and stored in controlled climatic conditions to ensure quality till it reaches customer doorstep. Both of them have installed conventional cold rooms which use electricity and incurring high energy bills being a 24x7 round the year operations. Refrigerant used for conventional solutions have high ODP, GWP. Retailers are now looking at innovative solutions with minimum carbon footprint having lowest possible operating cost while reducing electricity bills. 2. Food Processors have processing centres where more than 80% of the electricity consumption is from cooling. Cost of cooling can be as high as \$15,000 per month. GreenCHILL™ is a standalone 4 TR refrigeration unit that retrofits with any cold room of 10,000-20,000 kg (10-20 MT) storage capacity. Using GreenCHILL™ refrigeration unit, a cold room can be utilized for multiple applications throughout the year i.e. cold storage, pre-cooling, ripening and dehydrate fruits and vegetables. GreenCHILL™ - an adsorption refrigeration technology-based system is combined with a biomass fired hot water generator for driving the adsorption cycle having ammonia as refrigerant having zero ODP and zero GWP. GreenCHILL™ a fully automated refrigeration unit with Sleep Mode to maintain constant temperature range in cold rooms without any human interference throughout the day. Biomass is fed once a day or once in two in hopper and is utilized as per cooling demand. Any kind of loose or pelletized biomass can be used for running GreenCHILL™. It which requires only single-phase ~0.5 KW power and only 40-90 kgs per day of biomass to run the cold rooms 24/7. A 20 MT GreenCHILL™ saves 160 units of grid power each day which is equivalent to saving of INR 40,000 every month. Perishables can be cooled between 2° – 25° C without the need for a diesel generator backup. Additionally, GHG emission saving of 40 Tons of CO2 equivalent per year for each 20 MT cold room operations and helps with utilization of crop residue which are being burnt in open field causing pollution.	https://newleafdynamic.com/
142	Nimble Growth Organics	India	Agriculture	Demand side: There are no large scale organic F&V producer in the country. Supply side: technical advisory to farmers and market for farmers Traceability: solving the Organic production traceability challenge. End to end from production to SCM to sales of Organic F&V. B2B space	https://nimblegrowth.in/
143	Nimble Vision Pvt Ltd	India	Water	<ul style="list-style-type: none"> India and other developing countries are facing acute water shortage, the main reason behind this is missing awareness about the water usage and wastage in common people Missing water status in overhead & underground tanks also in manholes Missing water consumption, leakage & quality details in real time Missing water quality details like TDS, Ph, ORP, COD, BOD & TSS Manual operation and monitoring the systems results in wastage of effort, money, and time Missing the clarity of the system's continuous working parameters Difficulty in offering the quality service to customers Difficulty in scaling the offerings Missing insights on the system efficiency, failure in real time Communication gap between vendor & customer Missing info about village, city and pin code-based water consumption details Missing the reference for people to compare whether their consumption is good or bad. The data analytics on water consumption, availability helping common people, industries, and smart cities to reduce the water consumption, wastage This solution helps by giving accurate consumption with tracking by activities By providing the water quality details TDS, Ph, ORP helps in avoiding water borne diseases The Water leakage detection helps in avoiding the water wastage The public water distribution, meter reading and billing can be completely automated Mobile based billing payment History of pass consumption billing details. Area, City, Pin code based water consumption reports Insights on system operation, improvements and reducing manual effort In summary our solution is addressing below UN SDGs SDG -6: Clean Water SDG-9: Industry Innovation and Infrastructure SDG-11: Sustainable cities and Communities SDG-12: Sustainable consumption and production 	https://nimblevision.io/

144	nppn design and research	Thailand	Flooding; disaster management design: professional services	We specialize in architecture, interior architecture, landscape architecture, real estate, architectural technicians, and especially in water/flood management issues.	https://www.nppn-company.com/
145	NubeSol	India	Agriculture; forestry and fishing	NubeSol is a provider of advanced technologies designed to offer precision farming services.	http://www.nubesol.co.in/
146	Numer8	India/Philippines/Sri Lanka	Agriculture; forestry and fishing	Numer8 is helping small scale fisheries be sustainable, traceable and profitable. We do this in three ways 1) By providing them real-time fishing and weather advisory. This helps them be climate resilient and save fuel cost by upto 40% per fishing trip 2) By helping them sell fish at higher margins by connecting them to markets and helping them with supply chain support 3) By providing financial literacy and connecting them to financial partners for low interest loans and insurances	https://www.numer8.in
147	Oorja Development Solutions India Private Limited	India	Agriculture; forestry and fishing Energy Water supply; sewerage, waste management and remediation activities	Oorja is a Farming-as-a-Service company that finances and installs decentralised solar agri-infrastructure and sells irrigation, milling and cooling services to smallholder farmers.	https://www.oorjasolutions.org/
148	Organo feeds (pvt)Ltd	Sri Lanka	Agriculture	After the civil war ended in Sri Lanka 2009, most of the war affected people, who were resettled depended on agriculture and livestock for their livelihood. Due to this, demand for animal feed increased tremendously. Only 2 - 4% of the required animal feed for the northern province is being produced locally. Due to dependency on transportation and delivery from other provinces, animal feed was unaffordable to many farmers. (Organo was born in 2018 to fulfill the demand for high quality locally produced animal feed. During covid due to the shortage of raw materials, we started researching alternative solutions. Through research and development we were able to come out with a technique to use organic food (vegetable, fruit) waste collected from local food processing factories. 80% OF ORGANO RAW MATERIAL COMES FROM OF FOOD WASTE You matched with Organo feeds (pvt)Ltd! Know more 62% WEB PRESENCE organofeeds.com EMAIL derone1993@gmail.com	http://organofeeds.com
149	Orgro Fibre LLP	India	Agriculture	Orgro was founded on the ambition to eliminate single-use plastic from the Indian Subcontinent. But, such a gargantuan target can be achieved by creating more accessible solution, and not just social messaging. Hence, we conducted extensive research and graduating from the Central Sheep & Wool Research Institute at the Indian Council of Agricultural Research, Government of India. We have developed a proprietary and innovative process to take agro waste, an otherwise ignored commodity and transformed it into non-woven fabrics with applications across a wide range of use-cases.	http://orgro.rkinfotechindia.com/products/green-saplings/
150	Palmear LTD	United Arab Emirates, Jordan	Agriculture	Insect pests cost the world \$470 Billion annually. Early detection saves money. Our first pest is the Red Palm Weevil which is a very big problem in the palm tree industry. According of the Food and Agriculture Organization of the UN (FAO), the Red Palm Weevil pest or RPW is the single most destructive pest to some 40 palm species world-wide and is spread in more than 60 countries. It is affecting the livelihoods of 50 million farmers globally. The RPW is extremely difficult to detect at an early stage. Palmear combines an acoustic sensor with software (mobile app) for quick, robust and non-invasive monitoring and early detection of the RPW. Palmear developed a highly sensitive microphone with a small needle that is inserted into the tree, picks up all the sounds inside the trunk, amplifies them, then sends them to an Artificial Intelligence powered app that differentiates RPW sounds (if any) from everything else and notifies the user. If the pest infestation has been detected, the palm tree will be geotagged, allowing for early targeted interventions.	http://www.palmear.ai
151	Pando	India	Transportation and storage	Pando is a provider of a cloud-based logistics and supply chain platform intended to digitize deliveries to optimize transaction costs.	http://www.pando.in/
152	Parbatiya Agricultural Cooperative Ltd.	Nepal	Agriculture; forestry and fishing	The Farm produces Mosquito ferns "Azolla", Duckweeds "Lemnoideae", and a small trial production unit of Black Soldier Fly Larvae (BSFL) "hermetia illucens" as alternative high-protein livestock feed. These essential products will address many challenges of our Farm and other livestock farmers.	https://archive.nepalitimes.com/news.php?id=18442#.YbA-R9BBxD8
153	Peepoole	Kenya Sub-Saharan Africa South Africa Congo, Dem. Rep. South Sudan Pakistan Bangladesh New Zealand Philippines Syrian Arab Republic Haiti	Human health and social work activities Water supply; sewerage, waste management and remediation activities	Peepoo is a personal, single-use, self-sanitizing, fully biodegradable toilet that prevents feces from contaminating the immediate area as well as the surrounding ecosystem. After use, Peepoo turns into valuable fertilizer that can improve livelihoods and increase food security.	http://www.peepoole.com/
154	Phoenix Insurance	Bangladesh	Finance and Insurance Activities	Phoenix Insurance offers insurance for a wide range of hazards including fire, cyclone, flood, and miscellaneous insurance. With 31 branches throughout Bangladesh, the company provides online insurance services through most of its branches.	https://www.phoenixinsurance.com.bd/
155	Plant Cartridge	Malaysia	Agriculture; forestry and fishing	Plant Cartridge is a full-stack agrotech startup that enables resilience through sustainable agriculture by empowering growers to be more productive with less input and effort utilizing hardware, software, and managed services through a technological platform.	http://plantcartridge.com
156	Plantix	India Egypt, Arab Rep. Pakistan United Kingdom Global Malaysia Australia Tanzania	Agriculture; forestry and fishing	Plantix is an app which provides customers with tools to improve agricultural yields using image recognition software to diagnose and offer treatments for pest, disease, and/or nutrient deficiency problems. The software covers 30 major crops, detects 500 plant damages, is available in 18 languages and has more than 15 million downloads.	https://plantix.net/en/
157	plantOS	Global Malaysia	Agriculture; forestry and fishing Information and communication Professional, scientific and technical activities	plantOS provides automated crop monitoring and dosing as well as recommendations for farmers delivered through a centralized dashboard and mobile app.	https://www.plant-os.com/

158	Pranageo	Turkey	Information and communication	Pranageo provides R&D software packages for geospatial IT projects.	http://www.pranageo.com/
159	Prayogik Technologies Private Limited	India	Energy	Limited space at Onshore energy generation on jetties, harbours fishing villages Unmanned offshore platform. Logistic and fuel pipeline at Processing units in coastal areas. Offshore energy generation on-board fishing vessel Power Problems To produce quality fish products for market standards, processing units, ice factories, warehouses etc., are essential and they require power supply. Further, streets and shore roads of the fishermen villages should be lightened to facilitate movement of fishermen at nighttime. Other than that housing requirements, common properties of fishermen also should be electrified for community requirements Rajiv Gandhi Grameen Vidhyautikaran Yojana (RGGVY) Rural Electricity Distribution Backbone (REDB) Village Electrification Infrastructure (VEI) Integrated Power Development Scheme (IPDS) Technical & commercial Conventional Problem No portable system with Plug & Play Remote location power limitation, off grid limitation Heavy and huge battery costing Power for operational requirement cum survivability Heavy Capital and operational costing, Heavy manpower It is necessary to protect the coastal and marine natural resources which are the livelihoods of the fishermen and coastal communities Coastal community habitats close to seashores, estuaries, and backwaters are most vulnerable to coastal hazards. The fishermen habitats are close to water bodies, backwaters, coastal areas and Islands which are mostly away from the normal bounds of civic amenities. MIHPS (Modular Integrated Hybrid Power System) MIHPS consist of flexible highest efficient PV modules integrated with highly reliable TMSG-DC power unit, Bladeless Wind Turbines and hybrid charge controller made up of military grade DC-DC converter with MPPT technology is a Modular, portable, plug and play E-house with remotely controlling, monitoring system.. Seebeck Effect TGM is a thermoelectric generating module that works on Seebeck effect i.e. if there is a sufficient temperature difference between the materials (PN Junction diode) EMF would be generated across the terminals. Using modules in series of each having voltage 6V DC @ 65watt power we are able to generate electricity upto 1kW @27V DC without any moving parts use to charge batteries and other applications. Bladeless Wind Turbine An environmentally friendly aero generator which needs no blades. It is a new wind energy technology specially designed for on-site generation in residential areas, being able to work on-grid, off- grid, or along with regular solar panels or other generators Bladeless wind turbine is not actually a turbine, since it does not rotate. It is based on the phenomenon of aero elastic resonance, this way the device oscillates with a quiet non-aggressive movement which makes it perfect to be placed anywhere without disturbing wildlife	http://www.prayogik.in
160	Prescinto Technologies Private Limited	India	Energy	Sustainable development requires effective & timely transition from fossil fuel-based economy to clean energy economy. \$2.5 trillion of investment in Clean Energy is at risk with underperforming Solar & Wind plants. These plants are spread across 100's of acres, 100,000s of equipment and generate millions of data points every day, making it impossible to figure out how to improve the generation manually. At the same time, the existing digital platforms merely bring data from site to screen without any guidance on what is ailing the plant. The conventional solar & wind plant operation systems lack capabilities to classify & link losses to specific problems, hence adds no value beyond Data visualization which makes it difficult to take effective actions to improve generation & RoI. Prescinto's AI-powered energy SaaS platform empowers its client not just to meet the forecasted/budgeted generation but also helps in increasing the generation by as much as 5%. Prescinto's patent-pending platform collects solar & wind plant data, applies data science models to identify causes of underperformance, and suggests work orders to increase clean energy generation: a. Loss Classification – Downtime losses, systemic losses, soiling losses, and uncontrollable losses b. Prioritizing Action Items - Converts each loss bucket into actionable job tickets with projected gains c. Field Force Management – A unified interface, Computerized Maintenance Management System (CMMS), for capturing status on action items, accessing document repository, and capturing non-sensor data points	http://prescinto.ai/
161	Probus Smart Things Private Limited	India	Electricity	We are solving the line losses that happen in India due to which several houses in India are deprived of electricity. It leads to a total amount of INR 1 lakh crore loss annually. We are providing an integrated hardware and software solution that measures several parameters of the asset and provide users visibility on the software platform to take relevant actions	http://www.probus.io/
162	Quoala	Indonesia	Finance and Insurance Activities	Developer of an online platform created to offer microinsurance products, including for tropical diseases. The company's platform leverages big data, machine learning, IoT and blockchain to develop a digital and automated claim experience, enabling e-commerce and travel platforms to enhance their customer experience and users to get access to significant cost savings through a contextual and tangible insurance experience to the increasing millennial populations.	http://www.quoala.id/
163	Renew Power Projects	Pakistan	Energy	Enable to 1 billion people to get access of clean, reliable & affordable energy. All in one i.e., Solar + Inverter + Lithium Battery + SaaS, Financial Inclusion, Pay as u go	http://www.greamenergy.com
164	RENEWAGRI OM ECOMMERCE PRIVATE LIMITED	India	Energy, Agriculture.	Farmers suffer from post-harvest losses and most of them are also dependent on fossil fuel such as diesel to run their diesel gensets in order to run their electric water pumps, milking machines etc. along with firewood for cooking by the rural women. They also have availability of animal/food/agri waste which goes unharnessed in the form of energy but impacting with Climate Change with GHG/CO2 emissions. Also, if farmer wants to switch to Renewable Energy to solve these problems there is no dedicated marketplace or store in village where his energy needs are understood and product is recommended based on his pocket. There is no Knowledge dissemination or education around various renewable energy products in solar,biogas,thermal,wind and other green energy products such as electric. These are product are neither available at village level nor accessible. AgriVijay is India's first Marketplace of Renewable Energy products for farmers & rural households bringing all products in solar,biogas,thermal,wind & electric under one roof and with Energy Advisory approach where farmers energy needs are understood coupled with waste availability at their end before products are recommended, sold and deployed along with abating GHG/CO2 emissions mitigating Climate Change aligned with United Nations SDG's becoming Energy Independent along with increased savings & income.	https://www.agrivijay.com
165	RHODA	Sri Lanka	Transportation; Logistics; Infrastructure	an electric smartbicycle that is easier to ride and is intelligently connected to the smartphone.	http://www.rhoda.life
166	Ricult	East Asia & Pacific/South Asia/Pakistan/Thailand	Agriculture; forestry and fishing	Provider of agricultural technology intended to help farmers in Thailand and Pakistan increase farm productivity and access affordable loan. The company's platform uses a combination of traditional and alternative data sources to determine whether a farmer is willing and able to repay a loan, enabling its clients to reduce problems like food shortage, malnourishment, poverty and rural unemployment for smallholder farmers.	https://www.ricult.com/

167	S&S Design Startup Solution Private Limited (DNE)	India	Electricity; gas, steam & air conditioning supply	A group of mechanical engineering researchers and innovators with expertise in air conditioning design and development are developing an efficient hybrid residential cooling solution maximizing the heat utilization combined with primary evaporative cooling, secondary liquid cooling and tertiary refrigerant cooling using low GWP refrigerant.	https://designstartup.in/
168	Satellogic	Latin America and Caribbean Argentina Israel Uruguay Spain China	Information and communication Infrastructure	Manufacturer of satellites designed to provide vertically integrated geospatial analytics. The company's satellite constellations offer decision-making processes with the ability to remap the entire planet. Its satellites monitor changes in real-time on a planetary scale and offers daily updates on infrastructure, crop health and pipeline integrity, providing governments, organizations, businesses and individuals with access high-resolution updates to make informed decisions.	http://www.satellogic.com/
169	SatSure	India Australia Switzerland	Agriculture; forestry and fishing Information and communication	SatSure is a geospatial big data platform, tailored to the agricultural sector.	https://www.satsure.co/ind ex.html
170	Satyukt Analytics Private Limited	India, United Kingdom, United States, Spain, Australia, New Zealand (17 countries total)	Agriculture; Climate Risk Analytics and Risk Management	The agricultural sector in India is frequently exposed to a variety of production risks such as low crop yields, climate/weather risks, pests/diseases, irrigation mismanagement in the face of falling natural resources like groundwater, amongst many more. According to the FAO of the United Nations, 35% to 40% crop loss globally every year is attributed to these problems. In India, these losses can easily translate to the tune of Rs 50,000 crore plus (Economic Times, Feb 13, 2014), considering 70% of the Indian population are either small and marginal-scale farmers or involved in some way with agriculture. The agriculture-ecosystem has different stakeholders who have many challenges to carry out on a day to day basis. The following are the challenges faced by different stakeholders in the ecosystem. The most burning problems faced by farmers: 1. Depleting groundwater resources 2. Lower crop productivity 3. Low crop water productivity 4. Yield loss due to pest/disease 5. Higher requirements on farm inputs 6. Increasing costs of farm operations costs. At Satyukt we have the passion and right team to build a smart technology to solve the production risks faced by farmers to increase the production, productivity and profitability in these times of crisis. By using the smart farming tools, the farmers can be trained or educated to shift from intensive farming to extensive farming in a sustainable way.. The insights from the right tools helps farmers to increase food production and productivity in an efficient way. To provide customized and dynamic real-time crop advisories at a crop level at the fingertips of farmers, Satyukt has developed a mobile based application called Sat2Farm which gives insights estimated from satellite and weather. We have built a team to educate and train and disseminate the technology at the grass root level such as farmers, which is reaching out to them everyday at their farms in dynamic ways (individual visits, farmers groups, kisan melas, etc.) and providing hands-on training on new technologies and making them to understand how to read the advisories and get the useful insights to make smart decisions while minimizing time of farm operations and production costs and maximizing the production. The Products: 1. Sat2Farm mobile: provides customized crop advisories to farmers. 2. Sat2Farm web: Provides access to data to monitor farms. 3. Sat2Farm API: Provides access to data to integrate with existing platforms. 4. Sat2Credit: Provides insights to make smarter business decisions for BFSI.	https://satyukt.com/web/
171	SenseHawk	India Japan United Kingdom Finland Australia Vietnam	Energy Professional, scientific and technical activities	SenseHawk is a SaaS company that provides a suite of solutions in the development, construction, and operations of solar panels.	https://sensehawk.com/
172	Shaft Energies Private Limited	India	Energy; Transport	We are trying to meet the energy demand of our customers. We are also playing a major role in reducing pollution as electric vehicles will reduce the pollution. our product is Lithium battery packs for various applications like Electric vehicles Etc. Our brand name is JACKVOLT.	http://www.shaftenergies.com
173	Ship60	Vietnam	Transportation; Logistics; Infrastructure	Major headaches with poor packing quality, high warehouse & operations cost with fulfillment for eCommerce business. We are Logistic Tech platform to provide fulfillment & delivery services, offering distributed warehouse network to reduce shipping times and cost, help Brands and SMEs make operations stress free to focus on scalable growth.	https://ship60.com/
174	Skywater Bangladesh	Bangladesh	Water supply; sewerage, waste management and remediation activities	Skywater's vision is to introduce sustainable supply of safe drinking water through the Sky Water Harvesting System (SWHS) for communities suffering from scarcity of safe drinking water on the coast and in rural areas of Bangladesh.	http://skywaterbd.com
175	Slok Agro Bio Tech Pvt Ltd	India	Agriculture	We have 14+ Products hard to describe each please visit website (https://www.slokagrobiotech.com/shop) AI based aggregator application to help farmers in procuring all the tools they require from sowing till harvesting from nearby farmers/shop owners. Peer 2 peer connectivity Online training portal to educate farmers about sustainable farming practices at nominal cost. Helping farmers get the loan and insurance they need with minimal steps. Affordable bio-organic products for all the farming needs which can be bought online/offline. Daily Knowledge Tips through whatsapp & Text 24*7 call support , Multilingual	https://www.slokagrobiotech.com/
176	Slope Alarms	Myanmar Malaysia United Kingdom Canada Italy Austria	Professional, scientific and technical activities	Research at Loughborough University has resulted in development of Community Slope SAFE, a novel sensor for detecting the onset of slope movements hence providing an early warning of landslides.	https://www.lboro.ac.uk/enterprise/slope-alarms/
177	Smartfuture	Singapore	Health	Remote care solutions for healthcare	https://www.oursmartfuture.com/
178	SmartPaani	Nepal	Water supply; sewerage, waste management and remediation activities	SmartPaani seeks to provide solutions to water shortages in Nepal. Designs water systems that can reduce water requirement by 50-70%.	https://smartpaani.com/
179	Solinftec	Brazil, United States, Canada, Colombia, China, Argentina	Agriculture; forestry and fishing	Developer of software platform intended to be used for the automation of mobile assets and logistics processes within agricultural aspects. The company's software platform offers climate data, real-time field information regardless of the location of the property, enabling the client to manage crop growth and field activities.	http://www.solinftec.com/
180	SOLshare	Bangladesh	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use Electricity;	SOLshare provides energy access for low income rural people using a decentralized peer to peer microgrid system that allows customers to trade excess electricity for profit.	https://me-solshare.com/

181	Spudnik Farms Pvt Ltd	India	Agriculture	Modern food systems are optimised for higher yields and greater profits (at least for some), but not for equity, environmental sustainability, health or the prosperity of communities. Today, small holder farmers face several challenges: - Lack of market access and intelligence; - Lack of fair price; - Increasing input costs; - Unpredictable weather patterns; and - Environmentally unsustainable agricultural practices. At the same time, urban food environments make consumers unaware of the environmental and socio economic impact of their food choices, reducing them to mere purchasers rather than responsible participants in the food system. Conventional food supply chains are also extremely wasteful with an average waste generation of 40%. These issues are exacerbated because typical "push-based" supply chains are often opaque, dictatorial, exploitative and resource depleting. Thus, the major challenge we try to address through Spudnik Farms is sustainable food production in the wake of falling profits, socio-economic inequalities, and climate change. Spudnik Farms uses subscriptions as a revenue model to provide a direct connect between small-holder organic farmers ("Farmers") and urban consumers ("Subscribers"). Subscribers pay an upfront fee to receive organic fruits and vegetables at their doorstep once a week. At present, we offer the following products in 4-week subscription cycles: a) Standard vegetable box priced at INR 3,500 b) Small vegetable box priced at INR 3,000 c) Box for One priced at INR 2,500 d) Fruit box priced at INR 2,750 At the backend, we work with Farmer collectives to: - Organise production using market information and intelligence. - Provide on-field technical guidance and training in Regenerative Agriculture. - Manage a traceable integrated supply-chain.	http://www.spudnikfarms.com
182	Stellapps	India	Agriculture; forestry and fishing; Information and communication; Transportation and storage	Stellapps is the first of its kind startup in India working towards the digitization of the dairy supply chain. We are an Internet of Things (IoT) startup working on digitizing the agri-dairy supply chain through data acquisition and machine learning. Milk is the largest crop on this planet and there is a strong need for technology interventions, especially in emerging markets where the yield per animal is low, traceability is inadequate, and quality is not up to the mark.	https://www.stellapps.com/
183	Stiger EV	India	Transportation; Logistics; Infrastructure	We identified a market gap between 2 market segments, for a payload-carrying capacity of 250 kgs to 300 kgs. We are making electric vehicles profitable, comfortable and reliable. An electric reverse trike (two wheel front, one wheel rear) with a load carrying capacity of 300kgs, 120 km range, 3x the payload volume of a two wheeler, 40% lesser operating costs than a 2W, easy to drive vehicle	http://www.stigerev.com
184	Sunew Filmes Fotovoltaicos Impressos S.A	Tanzania Indonesia Sweden United States United Arab Emirates United Kingdom Ireland Haiti Brazil Saudi Arabia Hong Kong SAR, China Japan Australia Germany	Professional, scientific and technical activities	Sunew was created with the mindset of revolutionizing the energy consumption and production paradigm, building a better world for next generations. After 10 years of research, Sunew built an innovative and highly scalable production process, and now it's the world leader in Organic Photovoltaics (OPV) technology, with the largest installations in the world.	https://sunew.com.br/
185	Swapeco Solutions Private Limited	India	Waste; resources recycling; information	In India, Households & Enterprises sell off their recyclables to traditional recyclable waste buyers (also called "Kabadiwalas"). The Recycling industry is dominated by informal waste buyers and people face the below-mentioned problems while selling their recyclables: -Lack of on-demand collection service -Unregulated rates; No source for the user to check the prices -Cheating in weight measurement of Recyclables (one of the most crucial challenges faced); Unverified Buyers. -Waste is channelled to unauthorized recyclers -Offline transactions; Missing formal ecosystem; Lack of invoicing/compliance certificates Due to the above-mentioned problems many people don't segregate and give their recyclables for recycling and only 20% of the total recyclables are actually recovered while 80% end up in landfills leading to severe air pollution & groundwater contamination. We discovered that the most pressing challenges faced in the recycling industry could be solved through digital technology, something that very few startups are doing. ScrapUncle is a digital platform (App/Web) that enables users (households/enterprises) to dispose of their Recyclables (Paper, Plastics, Metals, E-waste, etc.) in a responsible & rewarding manner. Users can simply schedule a doorstep pickup for their recyclables & get paid. Below are some key features of our core offering: -Users can schedule a doorstep pickup via our app/website according to their convenient date & time slot. -Waste is channelled to authorized recyclers, who use legal & most efficient processes for recycling. -Best prices from our network of Recyclers -Trained & Verified collection partners with ScrapUncle Smart Weighing Scales (GPS enabled; only works when OTP is entered by the customer; could not be altered) -Invoicing & Formal Payments. -Sustainability reports & Waste Generation Analytics -Dynamic Rate List; We have pre-defined algorithms that determine the per piece price for some items depending on the composition of various basic raw materials in the item. The per-piece rate is also changed automatically with the change of the per kg rate of raw materials. -Separate B2B platform with special features (Tax Invoices, Weigh bills, Recycling Targets, etc.) for enterprises. Besides this, we are coming up with solutions (Inventory Portal, Invoicing, EPR tracking platform, etc.) that facilitate transactions & management for all stakeholders across the waste management and recycling value chain.	https://scrapuncle.com/
186	Tenchijin	Japan	Agriculture; Big Data	Because of climate change and city development, agricultural land area is plummeting significantly, soil is degrading rapidly, harvest yields are dropping as diseases and pests are becoming more frequent, food prices skyrocket, whilst the population to feed in South Asia and Africa is growing significantly. Agri-business have to dedicate more time, investment in machinery and fertilizers, use more water to mitigate these issues. Tenchijin COMPASS is a turnkey combination of land performance mapping, agronomic indices and harvest yield prediction to be visualized in an intuitive interface. Its use is straightforward: a) the customer selects its area of interest, displays the weather conditions, visualizes the best landcrop matching, the performances and future evolutions. Tenchijin COMPASS solution to land scarcity and soil degradation is an intuitive software interface to support decision-making. Our customers purchase it to reduce the cost for sourcing and sensing lands, to maximize their harvest and revenues and reduce their intrants costs. We provide them the following services: a) Gather the most suitable Big Data, b) Evaluate and rank lands according to criteria, c) Predict risks due to pest, disease, climate change, d) Deliver mappings of current and future land environments. COMPASS computing technology ingests a significant amount of data of various nature (temperature, wind, rain, land elevation, solar irradiance) from various sensors with resolutions tailored to the customers' needs. The outcomes include detailed analysis of the land, mapping of thermal, chemical environments and agronomy indices, evaluation, classification and prediction of land performances and health subsequent to pest, disease, weather forecasts and climate change. To deliver these results, Tenchijin's COMPASS relies upon a unique, accurate and reliable (A.I) technology using Machine Learning (M.L) supervised models related to prediction and classification to extract features from satellite imagery. The customers use the solution through an application program interface (API) to monitor the performances and future trends of their lands (harvest growth, disease).	https://tenchijin.co.jp/?hl=en

187	Tessol	India	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use/Agriculture; forestry and fishing/Transportation and storage	Tessol provides cold chain logistics' solutions for cold chain transit.	https://www.tessol.in/
188	Toffee Insurance	India	Finance and Insurance Activities	Taking a tech products approach to grow the reach of insurance, Toffee Insurance creates single-event insurance products in new categories using AI to secure "the next half billion first-time internet users". The startup uses behavioural and consumption data to co-create such bite-sized products using AI and machine learnings, in a bid to make insurance more appealing to the new generation.	https://toffeeinsurance.com/
189	Transaera Inc.	East Asia & Pacific	Electricity; gas, steam & air conditioning supply	Transaera, a manufacturing startup out of the Massachusetts Institute of Technology (MIT), United States, is developing a hybrid cooling solution with desiccant dehumidification technology based on novel materials discovered at MIT to solve the cooling challenge. The cooling solution is designed to operate a high efficiency room air conditioner in parallel with a moisture storage battery (MSB) to provide cooling and dehumidification while using dramatically less energy.	https://www.transaera.com/transaera/
190	TSUYO MANUFAC TURING PVT LTD	India	Transportation; Logistics; Infrastructure	1. 95% Chinese Imported Components 2. No Customisation available as per end usage and application 3. Less sustainable product without any warranty 4. More than 90% unorganised spares and service 5. High Volatility involved in terms of Pricing due to heavy dependency on imports 6. No IoT based digitisation in powertrain 7. Less adaptable product as per Indian geography 1. Electric Motor & Motor Controller 2. IoT based Hardware for Tracking and Monitoring for Fleet owners 3. Service & Spares	https://tsuyo.co.in
191	TurtleTree	Singapore/Global	Accommodation and food service activities/Professional, scientific and technical activities	Developer of a cell-based technology intended to produce clean milk and cultured milk products.	https://www.turtletree.co
192	Utilities Development Company	Kuwait/Middle East & North Africa	Water supply; sewerage, waste management and remediation activities	The company operates wastewater treatment projects which are designed to accommodate Kuwait's growing need for environmentally sound treatment and reclamation of wastewater.	http://www.udcsulaibiya.com/
193	Valinor Earth	United States/Canada/India	Agriculture; forestry and fishing/Information and communication/Professional, scientific and technical activities	AI-Powered climate-smart profit optimization tools for Agriculture.	https://valinor.earth/
194	VertiVegies	Singapore	Accommodation and food service activities/Agriculture; forestry and fishing	Provider of vertical Indoor farm management services intended to advance sustainable urban food production and the well-being of the community. The company utilizes a vertical system to grow pesticide, pollution, genetic modification and preservative-free leafy greens, microgreens, herbs, edible flowers and other related vegetables that are carefully curated for maintaining the optimal health of veggies, enabling farmers to achieve efficacious production on each growth cycle supplying the family	https://www.vertivegies.farm
195	Viliso Technologies Pvt Ltd	India	Health	We are manufacturer of an IoT based Device that Monitors Malodour, various Harmful Gases and Particulate Matters in the Air and Toilets. Our vision is to make the invisible (Virus Risk, Mould Risk, Malodour, Gases, Particulate Matters), visible to users on real time basis. • Health Hygiene Monitor (HHM) has two variants: Gandhvedh is an IoT based electronic device that monitors and detects Malodour, Total Volatile Organic Compound (TVOC), Temperature and Humidity. If any of the parameters cross threshold values, alerts are sent on mobile and web app and provides certain safety & solution tips, prompting them to take needed action to keep toilets clean and free from malodour Vayurvedh detects and stores data of invisible harmful toxin gases in the air (harmful gas (CO, CO2, NO2, H2S, LPG, Smoke etc.) and particulate matter (PM1, PM2.5, PM10) that are potentially threatening to human health and often ignored mainly because we cannot see them. It also Synthesize sensor data to calculate Virus Risk Index and Mould Risk Index. Research has shown the co-relation between air pollution, infections and diseases, specifically Corona Virus. Utilising air quality data within your work place or at home allows you to create the best possible environment to deactivate viruses or reduce your risk of infection and disease. smartHHM is our in-house developed cloud based application platform that provides information obtained from Gandhvedh and Vayurvedh devices to users on web and mobile app.	http://www.viliso.in
196	Waterhealth International	India/Ghana/Nigeria	Water supply; sewerage, waste management and remediation activities	Provide scalable, safe and affordable water solutions to underserved populations.	https://waterhealth.com/
197	Wave	Lebanon	Transportation; Logistics; Infrastructure	Cities in the MENA have a lack of infrastructure for sufficient public transport, which leads to polluted air, crazy traffic congestion, and a lack of daily required exercise. We offer a hassle free e-bicycle subscription that brings commuters to their destination in the most efficient way possible. It is fast, safe, has zero carbon emissions, and is healthy to ride. All for a price that competes with public transport.	https://www.wave.bike
198	WAY2GROW AGRITECH PRIVATE LIMITED	India	Agriculture	We analyzed a lot of farms and we came to know that there were a lot of fluctuations in crop production, the major reason behind the inconsistency of yield because of lack of expertise, climate change, and systems in the farm. Almost 90% of them feel it is tougher to adopt the technology. We use a controlled environment to control the plant parameter and need not bother about external factors like heavy rainfall, drought. We know what the plant needs! And benchmark each crop at different stages to get maximum yield. Our technology works in a single platform to take care of all operations in one place. Our product GrowSense, it's a hardware product that senses the plant and environment parameters and a farm management tool integrated with GrowSense.	http://www.way2grow.tech
199	Woolly farms	India	Agriculture	The food we consume are not safe due to broken agriculture practices. The trust deficit on food by our urban population is ever increasing due to the lack of transparency and unknown source and methodologies we employ. The cost of safe and organic produce is always high that obstruct mass adoption of food from better sources. This can only be solved by bringing better affordable yet safe. By solving this with technology we see a trillion dollar opportunity across the globe. We are reimagining how we build sustainable agriculture infrastructure. Woolly farm is an ecosystem of sustainable and controlled environment farms within and around cities with the participation of consumers through tokenisation. The farms are managed through a centralized monitoring system with sensor enabled SOPs. The consumer participation would help us build a patient capital for infrastructure development and compete with future unfriendly produces that affordable in market.	http://Www.woolly.io
200	Yam Pro Energy	Israel	Energy	Yam Pro Energy is an Israeli-based renewable-energy company. The company's objective is to plan, build and operate sea wave power plants worldwide and sell the electricity at most attractive price. Our company has a unique and cost-effective technology in Ocean wave energy and our patent in China was transferred to our name and is valid for the next 14 years.	http://yamproenergy.com

201	Zeesense	India	Energy	Developer of a wireless sensors and sensor network technology intended to develop products targeting security, safety, automation, care and lifestyle.	http://www.zeesense.com/
202	Zodhya	India	Energy	We found that commercial spaces/ business establishments spend up to 30% of their OPEX on energy bills, the next highest after rentals. With ongoing COVID19, COOs & Facility managers are under pressure to reduce costs and improve operational efficiency. Most of this energy consumption is also leading to a higher carbon footprint. Executives are eagerly looking towards solutions which helps them reduce such emissions (scope 2). Our devices enable a reduction in energy bills right from Day1 (T minus Zero), with ZERO operational changes. Also, the devices help the buildings towards better energy utilization, leading to a lower carbon footprint. The tech is a combo of - Hardware: Works based on an AI-based algorithm that optimizes the consumption of HVAC/ cooling systems - Software: Manages electrical aspects of the space including detection of repairs and hotspots	https://www.zodhyatech.com/