

ARIA—Aerial Response & Integrated Aid Platform

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Executive Summary: ARIA combines an autonomous, solar powered drone fleet, computer vision AI, and a nationwide mobile app into a single unified system that operates across all three phases of a disaster: rescue, relief, and rebuilding.

Background and Motivation: After every war, natural disaster, or conflict, countries spend billions on recovery. For example, the recent LA Eaton Fire destroyed 9,400 homes.¹ Also, the ongoing war in Iran has affected the Strait of Hormuz and pushed oil prices to as high as \$117 per barrel.² According to the UNDRR, governments spend over \$2.3 trillion on disaster recovery due to a lack of coordinated, unified recovery infrastructure.³ This shows the detrimental socioeconomic effects of a disaster and why an effective, systemic solution is urgently needed.

Business Description: ARIA has three phases: rescue, relief, and rebuilding. Firstly, post-disaster drones scan affected areas and send initial aid packages. Using computer vision, they identify damage severity before classifying zones on a live map as red, yellow, or green. The ARIA app directs residents to the closest green zone, while physically restrained people can use the SOS feature to alert first responders and people nearby. Secondly, in phase 2, ARIA uses drones to deliver urgent items to green zones, including medicine, first-aid kits, water purification tablets, food rations, and batteries. Live map updates also ensure that first responders can allocate resources as efficiently as possible. Phase three focuses on recovery through a Skills & Labor Marketplace, where survivors can register for jobs and support local income recovery for affected residents. Additionally, ARIA will coordinate with local supply hubs, NGOs, and government relief centers, simultaneously logging every delivery to create a transparent aid trail. Compared to humanitarian helicopters, which cost between \$1,800-\$3,200 per flight hour to operate, ARIA's autonomous drones run at approximately \$20-\$50 per flight hour. Overall, we estimate ARIA's drone fleet to cut initial damage assessment time from 72 hours to under 36, cover 50km², and serve up to 500,000 affected residents simultaneously.

Market Strategy: Our target market will be governments because of their incentive to prioritize efficiency that our drones will bring. Our drones also provide a financial incentive by eliminating labor costs through AI adoption and optimizing resource deployment. Compared to similar market competitors, our drones will excel in functions other than delivery or area-mapping. Unlike single-function competitors such as Zipline, which focuses solely on medical delivery, and Palantir, which offers data analytics without physical aid. Our long-term survival strategy through Skills & Labor Marketplace supports survivors' financial stability and local reconstruction tasks. By deploying localized drone-based mesh networks, the platform can safely evacuate citizens and deliver targeted, high-priority survival aid to cut-off regions. ARIA will launch through a pilot program with ASEAN disaster-prone governments such as the Philippines and Indonesia, leveraging existing NGO partnership before scaling.

Financial Timeline: ARIA scales its commercial viability by targeting the \$33 billion global humanitarian aid sector and national budgets. Through a dual-engine revenue model, the platform secures predictable peacetime income via annual Sovereign Readiness Retainers, while active crises generate high-margin revenue (\$1,000,000 monthly per 500,000 affected people) funded directly by international emergency appeals. Long-term operational sustainability is achieved through 70% gross margins on active deployments and a self-funding Skills Marketplace (phase 3), which collects a nominal transaction fee on local reconstruction payouts to ensure ARIA remains financially viable within the first 1–6 months post-disaster. Due to the resource allocation optimization, countries will also be able to save money by adopting ARIA.

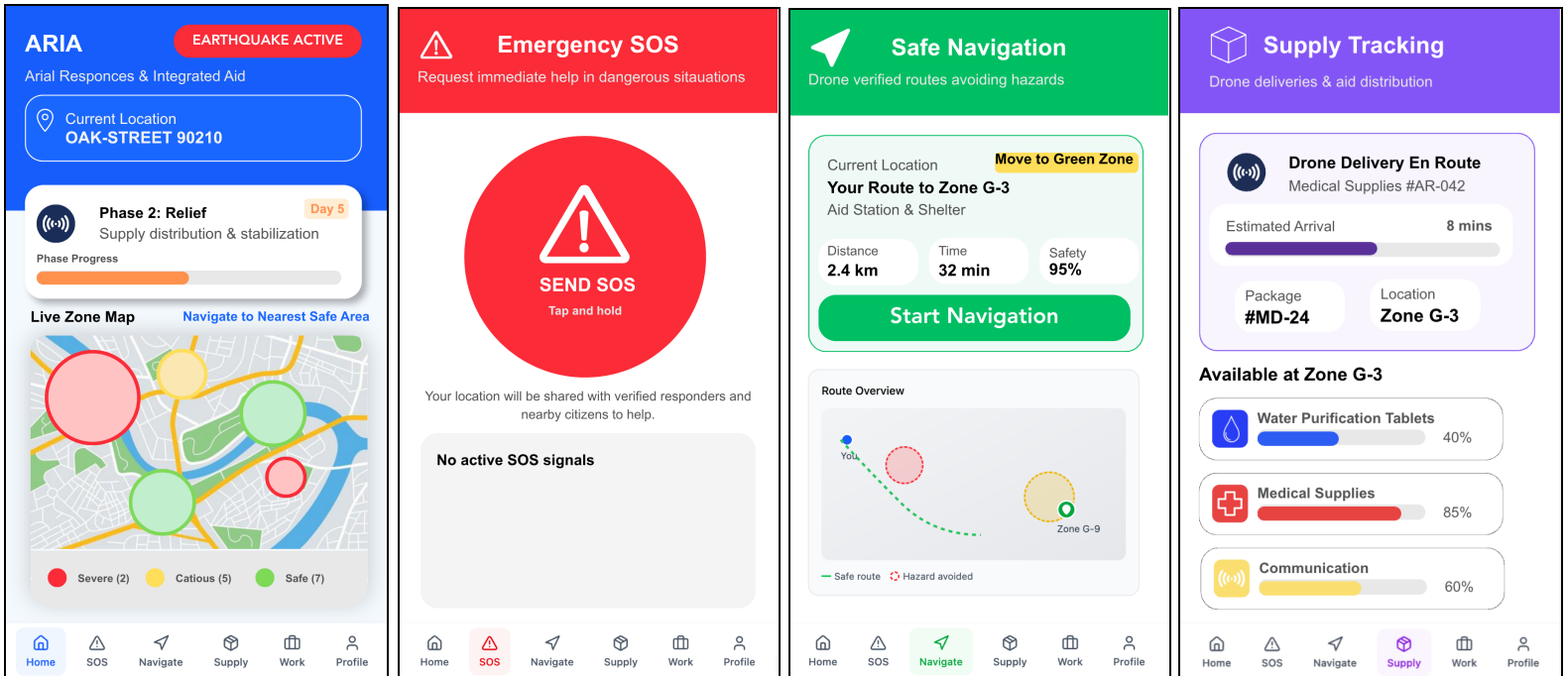
Conclusion: Disasters don't wait, and neither should recovery. Every hour lost to uncoordinated response costs lives and thousands in economic damage. ARIA eliminates that gap by unifying drone intelligence, AI mapping, and community rebuilding into one seamless, efficient platform. With a scalable revenue model, proven technology, and a platform built for every phase of recovery, ARIA is the infrastructure the world needs before the next disaster strikes.

Citation:

1.<https://www.nbcnews.com/science/environment/la-fires-aftermath-lead-metals-contamination-california-homes-vacant-rcna341436>

2.<https://www.theguardian.com/world/2026/apr/23/tehran-tollbooth-what-is-iran-demanding-and-what-would-it-mean-for-oil-prices>

3.<https://www.undrr.org/gar/gar2025>

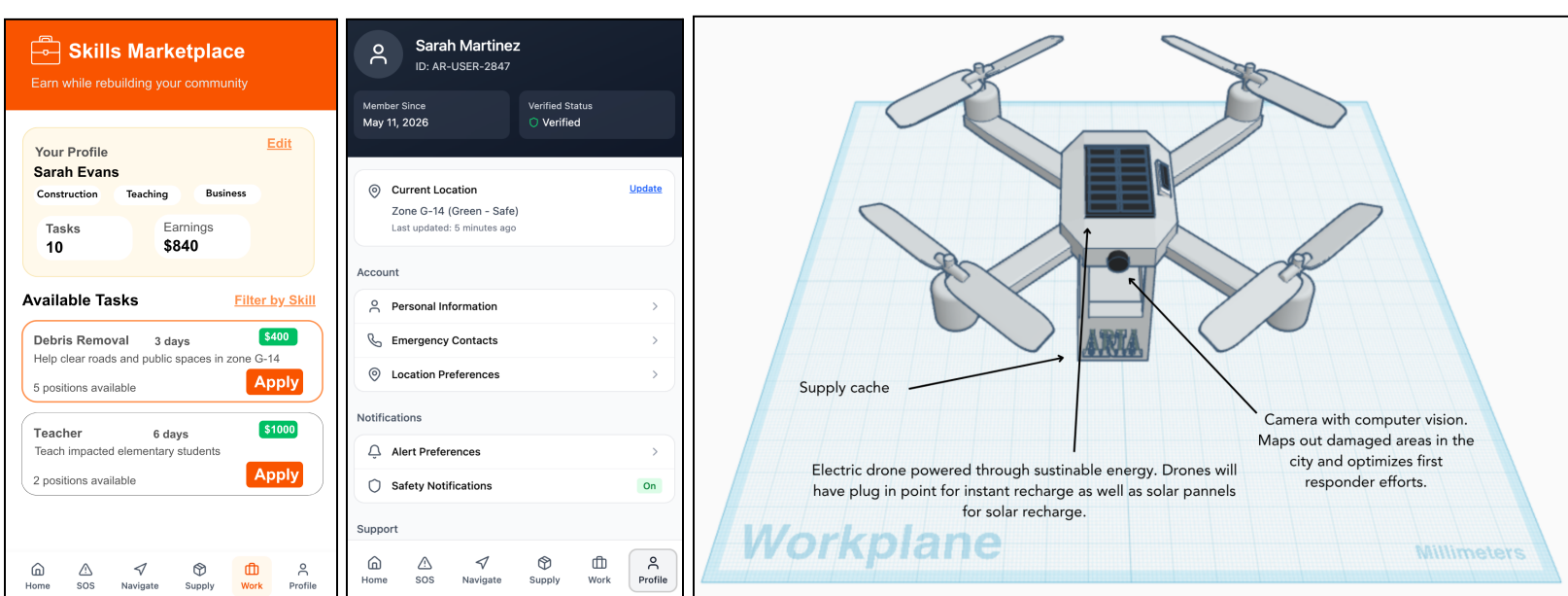


This homepage shows present **rescue progress**, the user's live **location**, and the **live zone map**.

Page for people who are unable to reach green zones during disasters and require **emergency assistance** from first responders or neighbors.

Enables people to **navigate** to green zones from their location when disasters first hit.

Allows people to track how much of each supply there is at their **respective green zone** and view **future supply drops**.



The skills and jobs marketplace helps **people find jobs** after conditions stabilize.

Profile page consists of personal information and notifications settings.

A comprehensive **visual 3D model** of an **ARIA** drone.

App visuals created using Canva,
Drone model created using Tinkercad.

