INTEGRATED BIOMETRICS

Meeting the Identity Challenge to

Feed Millions in Yemen

For thousands of years, Yemen has played a pivotal role in the powerful kingdoms and dynasties that left their marks on the Arabian Peninsula and Africa. But the British withdrawal to the north in 1967 led to a split into two separate nations, and although the two formally re-unified in 1990 and peace talks have been ongoing since 2016, the continued struggles have left the Yemeni government, economy, and people in dire straits.

Even as violence recedes, famine is widespread. In 2019, the United Nations reported that more than 24 million Yemenis—more than 75 percent of the country's population—are in need of food and other humanitarian aid. And with 40 percent of the population under the age of 15, the crisis is even more alarming.

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During a briefing in October 2018 to the Security Council, the UN Under-Secretary-General for Humanitarian Affairs stated that approximately 14 million people in Yemen, or half its total population, were facing "pre-famine conditions"—entirely reliant on external aid for survival. Health workers have pointed to a rising number of deaths linked to food-related factors, with one aid agency estimating at the end of 2017 that 130 children were dying every day from extreme hunger and disease...nearly 50,000 during the course of one year.

THE CHALLENGE OF IDENTITY IN DELIVERING RELIEF

When the largest global humanitarian food relief agency mobilized to address Yemen's crisis, they quickly realized they could not effectively do so in Yemen without first addressing the country's problem around identity.

In many countries, people take the concept of "identity" for granted: birth certificates, a driver's license, voter registration, citizenship papers, or a Social Security card are the norm and relatively easy to obtain. In other countries, however, this is not the case. Systems for establishing and permanently recording and tracking identity are either badly outdated or missing.

In Yemen, food relief could not be effectively distributed to those in need without an accurate understanding of precisely where the help was needed and who needed that help.

The challenges were formidable. In addition to the lack of an accurate national ID database or legal identity framework, Yemen had been torn apart by internal and external conflicts, not only increasing human suffering but destroying food production and distribution systems. Those conflicts also caused mass movement of people within the country – leaving millions as refugees within their own borders. Furthermore, nefarious elements within the country had begun to "game the system" of relief and aid, diverting food and monetary assistance into the wrong hands, further deepening the crisis.
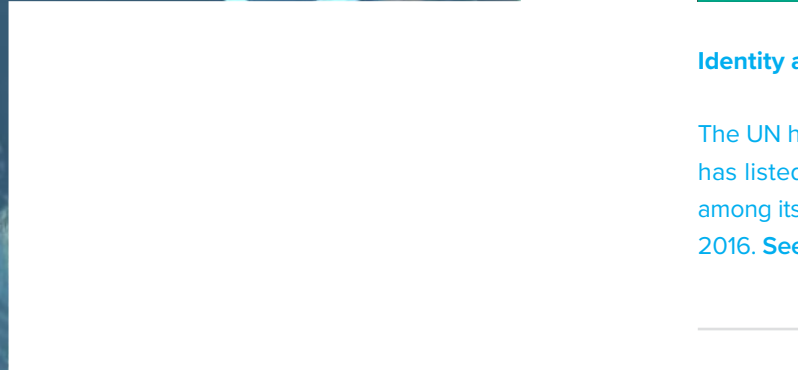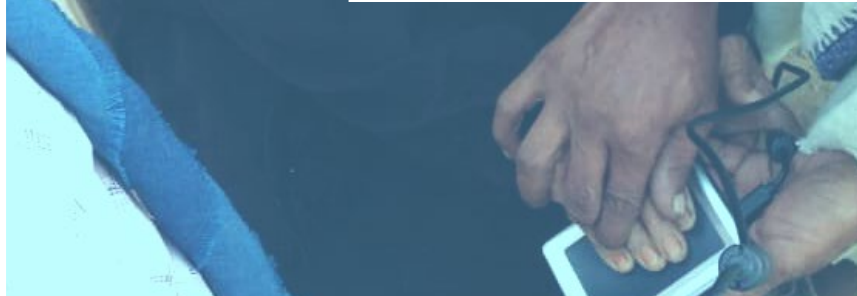
Identity and The United Nations

The UN has recognized the importance of identity and has listed both digital identity and birth registration among its Sustainable Development Goals (SDG 16.9) in 2016. **See more**.

Without first gaining an accurate understanding of both the "who" and "where" of the need, an effective food relief system would be impossible to develop and deploy.

To address this issue, the agency turned to Prodigy Systems. Based in Yemen's capital of Sana'a, Prodigy is a highly experienced technology solutions provider, with technical expertise as well as experience working under the kinds of conditions that often stymie other IT companies.

"As citizens and residents of Yemeni, this project is extremely important to us," said Adnan Al-Harazi, CEO of Prodigy Systems. "We were honored to be able to help lay the foundation of a project that will save the lives of so many of our fellow citizens."

Tasked with developing a system for registering and authenticating the head of household and adult members of every family group in need—across difficult terrain and with minimum existing infrastructure—the Prodigy team quickly concluded a new, truly mobile, biometric enrollment solution was needed. This requirement, combined with the unique geographic, demographic, and political conditions, quickly led to the decision that fingerprint scanners from Integrated Biometrics were the only viable solution.

To receive food at an official distribution point, the head of the household (or another designated person) must be enrolled in the database. This widely accepted approach not only ensures that only those truly in need will receive assistance, but also is designed to eliminate fraud and theft. In many famine-torn regions, misappropriation of food is common and can come from criminal elements eager to sell NGO-provided food on the black market.

SOLUTION: A NATIONAL DATABASE, WITH ENROLLMENT USING INTEGRATED BIOMETRICS' FIVE-0

With the new solution, each household head is enrolled using Integrated Biometrics' FIVE-0 fingerprint scanner, which automatically feeds all ten fingerprints into the database developed by Prodigy. These fingerprints become a part of the individual's record to ensure the highest possible accuracy in both the enrollment and verification processes.

Once in the database, the records are de-duplicated to verify that no individuals have been registered more than once. When aid recipients arrive at a collection point, they identify themselves with a single fingerprint. This process ensures that only individuals registered to receive food for their household will receive that assistance and prevents fraud and misappropriation of humanitarian assistance.

Environmental conditions in Yemen can be very, very challenging for most fingerprint scanners, but dry, dusty conditions and bright sunlight have been no problem for the FIVE-0. Plus, enrollment is much faster because workers are not constantly forced to stop and clean old fingerprints from the sensors.

Prodigy recognized the importance of mobility from the outset of the project.

To complete the enrollment, our team will need to visit as many as 80,000 settlements and enroll nearly a million more people, who are widely dispersed across great distances, so it's impossible to have them come to a central point. In addition, many of these areas do not have a reliable network infrastructure," said Al-Harazi. "The FIVE-0 connects to our mobile phones, so we can register citizens regardless of where they are. The FIVE-0 is extremely lightweight (190 grams) and, because it draws the small amount of power it needs from the phone, we are not forced to carry heavy or bulky batteries."

In areas where a cellular signal exists, enrollment information is immediately uploaded to the database. When no signal is available, the record is stored on the mobile phone or tablet until personnel are within mobile signal range.

"As a company, it's vitally important to us that our products help people, making their lives better," said Integrated Biometrics EVP Dave Gerulski. "We're extremely pleased that we are able to contribute to such a critical humanitarian project."

LEARN MORE ABOUT FIVE-0

FBI Certified FAP 50
Mobile 10-Print Scanner

Visit us online: integratedbiometrics.com/products/five-0/

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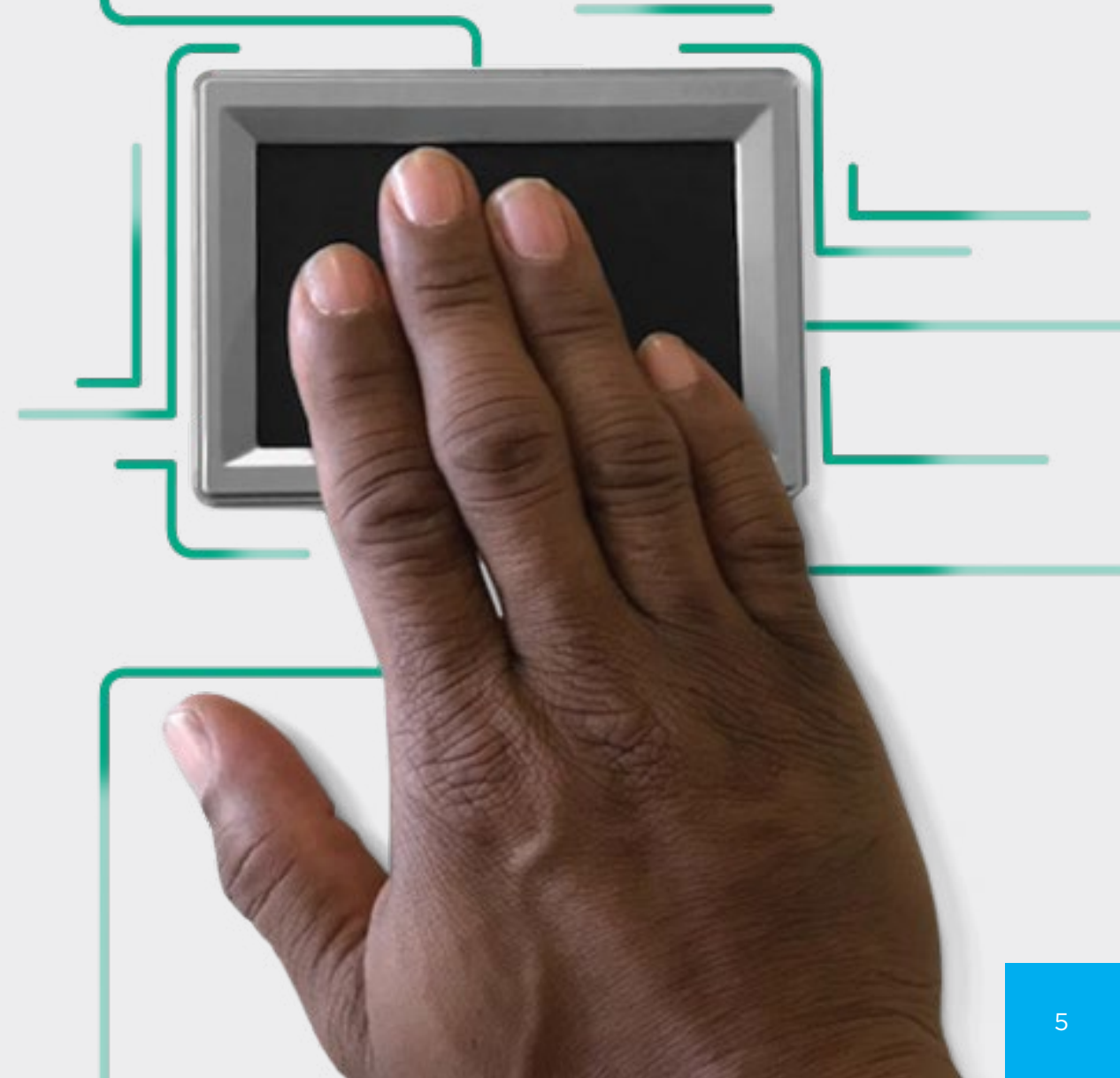
ABOUT INTEGRATED BIOMETRICS

Integrated Biometrics, LLC designs and manufactures FBI-certified fingerprint sensors for law enforcement, military operations, homeland security, national identity, election validation, social services, and a wide range of commercial applications. The company's patented light emitting sensor technology enables lightweight scanners that outperform traditional prism-based devices in size, power consumption, portability, and reliability. Identity management solutions providers, government agencies, and corporations around the world rely on Integrated Biometrics' products to enroll and verify individual identity quickly and accurately, even in remote locations.

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