



INNOVATION

חדשנות

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IsraAID, established in 2001, brings together 35 Israeli and Jewish humanitarian aid groups to send relief missions to every corner of the earth. From setting up field hospitals in Haiti and Nepal after earthquakes, to tornado relief in Oklahoma City, IsraAID is quick to respond to any natural and humanitarian disaster around the world. IsraAID has dispatched Arabic- and English-speaking social workers to Germany where they provide support to many of the more than one million asylum seekers who have sought refuge in recent years, and continues to provide aid to refugees from the Syrian civil war. Whenever IsraAID sends aid workers to a community, they work closely with local groups and authorities to ensure a smooth transition after the aid workers conclude their mission.



DESALINIZATION

התפלה



Like all countries in the Middle East, Israel has a severe shortage of freshwater. Many believe that future wars are likely to be fought over how to divide water resources. Since the early 21st century, Israel has turned its water deficit into a surplus by harnessing desalination technology to turn hundreds of millions of cubic meters of Mediterranean Sea saltwater into clean drinkable water. This allows the country's natural freshwater reservoirs to start a long process of replenishment. By 2018, five gigantic desalination plants dotted the Mediterranean coastline south of Tel Aviv, pumping their product into the National Water Carrier and meeting two-thirds of Israel's freshwater needs. Plans to build more plants will position the country to provide even more freshwater to its neighbors, a commodity that many hope will help with future peace negotiations.

DRIP IRRIGATION תִּירוּגוּ



Working the land has always been a key part of the Zionist ideal, but farmers in the early years of the state faced a huge problem: the country's desert-like climate meant there wasn't enough water to irrigate fields effectively. Enter an early example of Israeli ingenuity—drip irrigation. Rather than spraying fields with large amounts of water, most of which won't reach the roots, drip irrigation allows farmers to direct a few drops of water to the exact places they're needed. The net result is that farmers harvest plentiful crops, using less water. The technology, which was revolutionary in the 1950s, has become popular around the world for everything from large-scale commercial farms to backyard vegetable gardens. This Israeli innovation also answers the needs of drought-prone regions around the world.



Faced with thousands of rockets and mortars being launched from Lebanon in the north and Gaza in the south since 2006, leaving Israeli citizens vulnerable, Israel set about developing a solution to this life-threatening challenge that no existing missile interception technology could tackle. This state-of-the-art missile defense system can intercept incoming projectiles at a very short range. While the first phases were funded by the Israeli government, the US stepped in to provide major funding to build additional anti-missile batteries and to continue developing the technology. Since becoming operational in 2011, Iron Dome has intercepted the vast majority of missile threats likely to hit populated areas, and the system has played a key role in restoring a sense of normalcy to the lives of millions of Israelis.



KIBBUTZIM

קיבוצים



Some say the kibbutz is the original Israeli innovation. The first of this uniquely Israeli experiment in collective living was established in 1909 and called Degania. Its founders immigrated from Eastern Europe filled with dreams of working the land, becoming farmers, and sharing in all the work and the rewards. Other kibbutzim were established in rapid succession, until there were hundreds, all living by the motto, “from each according to their ability, to each according to their needs.” Kibbutz members, or “kibbutznikim,” were viewed as the cream of Israeli society due to their deep pioneering spirit. Today’s kibbutzim are less communal than they once were, and less focused solely on farming, but they continue to thrive throughout the country. There have even been experiments in “urban kibbutzim,” that seek to bring the unified sense of mission to city locations.



Israel's banknotes offer an opportunity to explore the history of the Jewish State. The name of Israel's currency, shekel, honors the currency used in biblical times. The story of Israeli banknotes is not just a story of wear and inflation. Like street names, stamps, or coins, banknotes have symbolic, political, and commemorative significance—a reminder of our history every time we open our wallets. They include some of the boldest anti-counterfeit features of any bills in the world, embed special security threads in them to discourage copying, and have braille to ensure easy access for the blind. Today, Israeli bills are adorned with the likenesses of leading poets whose work is intertwined with the history of the state. The 20 shekel note features the poet Rachel; the 50 shekel note features Shaul Tchernichovsky; the 100 shekel note features Leah Goldberg; and the 200 shekel note features Natan Alterman.



When Google announced a monetary prize to anyone that could land an unmanned spacecraft on the moon in 2007, a team of young Israeli scientists jumped at the opportunity to draw attention to STEM education. What started as a fun challenge quickly turned into a serious bid to win the prize; as teams from all over the world dropped out, Team SpaceIL kept progressing toward their goal. At the same time, they promoted the study of science among children of all ages in all sectors of Israeli society, garnering tremendous support worldwide. Despite Google ending the contest without a winner, Team SpaceIL launched in 2019. The spacecraft—named *Beresheet*—is designed to measure the moon's magnetic field using technology developed specifically for this mission.



In 2006, Israeli programmer Ehud Shabtai had an idea: wouldn't it be nice to crowdsource a map of Israel that anybody could update traffic in real time? It was a natural outgrowth of the burgeoning "sharing economy," where people collaborate and interact electronically, even if they never meet. Shabtai called the project FreeMap Israel, and it got popular very fast. In 2008, the company changed its name to Waze; in a crowded market for real-time traffic information, Waze stood out because it encouraged users to become active participants by sharing what they experienced on the roads. Waze quickly became the most popular driving aid in Israel, and global companies took note. In 2013, Google beat out Facebook and other suitors by paying \$1.3 billion to acquire Waze. The crowd-sourcing aspect of Waze continues to be popular among drivers around the world.



What happens when you bring thousands of people from all walks of life together to sing a song? The founders of the social initiative Koolulam say it's an incredibly fun way to help people build relationships with people they might not otherwise meet. Koolulam organizes mass events that draw as many as 12,000 people at a time— young and old, men and women, religious and secular, right-wing and left-wing, etc.—where everyone learns the words and melody of a popular song and sing it together. It's a uniquely Israeli spin on social activism: Israelis love to get together with friends to sing—it's called שירה בצבור—Shira BeTzibur—and Koolulam has succeeded in broadening the groups of people who share in the joy of song. The name Koolulam is a play on a few words: “cool”; קלם—kulam—everyone; קול—kol—voice; and the kululu exclamation of joy sung by many Mizrahi Jews.



IDF UNIT 8200

יחידה 8200



Until recently, the very existence of IDF Intelligence Corps Unit 8200, which collects signal intelligence and handles code decryption, was very hush-hush. The IDF scours new recruits to find those with high-level coding and computer skills who also show signs of the ability to rapidly adjust to changing circumstances and new technologies. The unit, whose soldiers wage war with keyboards, not guns, is credited with being among the world's best intelligence-gathering operations, and veterans often transition into the frontlines of Israel's startup scene. One veteran told Forbes Magazine that he knows of 100 startups launched by people who served with him in the fabled unit; he even spoke of a "magic room," where 10 soldiers had worked. What made it magic? Each of them has started companies worth an average of half a billion dollars.



Krembo Wings was born out of the friendship between its founder, then 16-year-old Adi Altschuler, and Kfir Koby, a young boy with cerebral palsy whom she was tutoring. Its vision is to “enable every child living with any type of motor, cognitive, or sensory disability to take part in enjoyable social interactions and become part of community life in Israel.” Since 2002, Krembo wings has developed a national network of more than 60 branches that cater to thousands of young Israelis of all backgrounds. Named for the delicate chocolate-coated marshmallow treat that Israeli kids love, Krembo, and the total freedom that wings represent, this youth group stands apart from all others in that it brings together children and teens with and without disabilities, instilling a culture of inclusiveness, support, and understanding.



MEDICAL CLOWNING

ליצנות רפואית



Although it was pioneered decades ago in the US, Israel has taken medical clowning to new heights by integrating medical clowns into the medical team rather than sending in the clowns before or after the doctors make their rounds. Dozens of hospitals around the country employ specially trained medical clowns to help replace tears and fears with laughter and calm. In some Israeli medical centers, one in five pediatric surgery patients enjoy the care of a medical clown as an integral part of the team of doctors, nurses, and other professionals. Studies carried out in Israeli hospitals find that the presence of a clown reduces the need for sedatives and can even improve the chances of success in a variety of procedures. It seems increasingly believable that laughter really can be the best medicine, and Israel has assumed its place as a leader in the field.