



# Israel: 70 for 70

70 contributions Israel has made to the world



**70 ISRAEL**  
CELEBRATE ISRAEL 70



# introduction

Israel is a country that is so often targeted for hate, and yet has given so much to the world. In just 70 years, Israel has quite literally saved lives with its innovation and inventions, its humanitarian outreach and international aid, as well as its long-term development both in Israel and worldwide.

In this booklet, celebrating and marking 70 years since the declaration of Israel's independence, we are proud to bring you just 70 of the literally thousands of different ways in which Israel is making a real difference to people worldwide. Whether it is through the technology in your phone, the medicine in your hospitals or even the actors on your screen, Israel brings new and exciting ways to change the world for the better, every single day.

There are so many different things to choose from, and for every category in this booklet there are thousands more examples that could have been included.

If you would like to find out more about how Israel is having an impact for positive change and growth worldwide then **please do be in touch with the Zionist Federation on 020 8202 0202 or email [steve@zionist.org.uk](mailto:steve@zionist.org.uk)** to find out more and join the conversation.



# research

**1** Scientists at the Weizmann Institute of Science in Rehovot, Israel, developed a DNA-based computer that was officially recorded in the 2004 Guinness Book of Records as “the smallest biological computing device” ever created.



**2** Is there life on Mars? When NASA's Opportunity and Spirit rovers visited Mars, they found signs that water had once existed on the planet. The calculations that enabled them to run using solar power and transmit images back to Earth were made at the Technion in Haifa.

**3** A Nobel contribution: Israel has 12 Nobel Prize laureates, covering a variety of fields including economics, chemistry and literature. They are also 12th globally in terms of Nobel Prizes per capita.



**4** Net gain: Yoel Margalith, director of the Ben-Gurion University Center for Biological Control, discovered a bacterium which kills mosquitoes without harming the environment. Mosquitoes kill more humans globally than any other creature.

**5** Israel spends 4.25% of its GDP on research and development - more than any other developed nation.



**6** The most unique gene? Researchers at the Tel Aviv Sourasky Medical Centre discovered the gene responsible for forming fingerprints in humans.



# environment

**7** Israel is a world leader in reusing water. It recycles around 80% of the waste water and sewage it produces. Spain, the second highest, manages just over 10%.



**8** Water from thin air: Water Gen, an Israeli company, has developed unique, advanced technology to extract fresh drinking water directly from the air, literally a godsend for those in countries plagued by drought and lack of access to fresh drinking water.



**10** Israel is the only country in the world that entered the 21st century with a net gain in its number of trees.



**11** What a drip: Israel invented drip irrigation, an incredibly efficient method of watering plants in arid climates.

**12** An Israeli inventor has developed the world's first cardboard bicycle from recycled materials. The bike is resistant to rain and sun, and costs less than a tenner!



**13** A busy bee: Bio-Bee was invented on Kibbutz Sde Eliyahu and breeds beneficial insects and mites for biological pest control and bumblebees for natural pollination in greenhouses and open fields. Its best-seller worldwide is a two millimetre-long, pear-shaped orange spider that is a highly efficient enemy of the spider mite, a devastating agricultural pest.



**14** Bright idea: Israel are pioneers in the use of solar technology. Improvements by the Technion Israel Institute of Technology in Haifa, for example, have managed to boost solar power by around 70%.



**15** A helping hand: IsraAid is the name of the Israeli delegations who are often first on the ground in risk areas around the world. They help countries when there are disasters, for example Haiti. More than that, every day, Israel helps Syrian refugees that are wounded.



**16** Fruit and vegetable engineering: Since the first half of the 20th century, Israeli agricultural experts have been developing new ways to bring new fruit and vegetable varieties to the global market, from vividly coloured squash to seedless peppers.

**17** TaKaDu is a global software provider of Integrated Event Management solutions and has a UK office which helps Londoners save water.

# rights

**18** Israel is the only Middle Eastern country where the Christian population is growing. Israel safeguards important Christian sites including many associated with the life of Jesus.



**19** Israel is the only Jewish-majority state in the world, fulfilling the Jewish right to national self-determination. With 6.5 million Jews, it represents over a third of the world's total Jewish community.

**20** Relative to its population, Israel is the largest immigrant-absorbing nation on earth.



**21** Iron Lady: Israel was the fourth country in the world to elect a female Prime Minister - Golda Meir, also Israel's fourth Prime Minister.

**22** Democracy in action: Israel is the only state in the Middle East ranked 'Free' by Freedom House, which evaluates countries according to their political rights and civil liberties.



**23** In stark contrast to the rest of Israel's Middle Eastern neighbours, Israeli law affords unparalleled rights to its LGBT citizens, including employment discrimination laws.



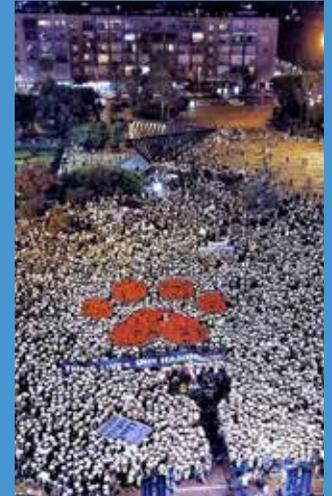
**24** In 2012 Israel passed 'the Photoshop laws,' banning the use of underweight female models and regulating the digital manipulation of images that make women appear thinner than they are. The law is intended to combat body image issues, including anorexia.



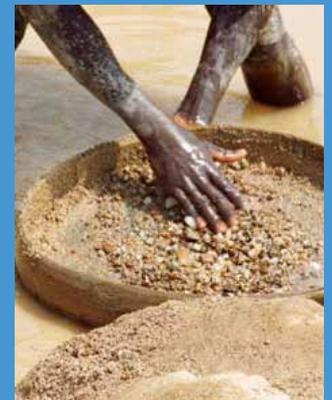
**25** Israel was ranked 44th in the world by the World Economic Forum's Global Gender Gap report - the highest in the Middle East. The next highest state in the region came 99th.



**26** Delicious: Concern for animal rights means that Israel has the most vegans per capita in the world, estimated at around 5% of its population.

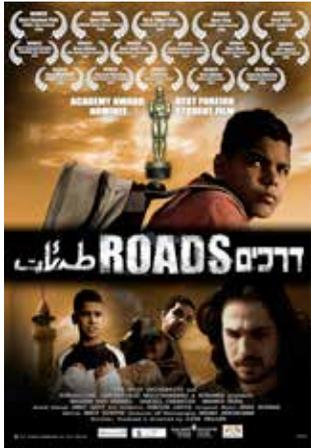


**27** Israel was the first nation in the world to adopt the Kimberly process, an international standard that certifies diamonds as "conflict-free."



# culture

**28** Road to success: Lior Geller's "Roads" holds the world record for most awards won by a short film. Played at over 100 festivals, it has won a total of 24 different awards.



**29** Perhaps unsurprising for a country with so much history, Israel has the highest number of museums per capita.



**30** Perhaps more surprisingly, it also has the highest number of orchestras per capita.



**31** Fighting fit: Security professionals are just some of the people around the world who train in Krav Maga, Israel's national martial art. Developed during the Second World War, it is explicitly designed as a form of self-defence rather than a sport.



**32** No one-hit wonder: Israel's Gal Gadot was 2017's highest earning female actor after playing the lead role in "Wonder Woman," and then reprising the character in "Justice League."

**33** Hebrew is the first example of a dead language being revived again for everyday usage. Formerly present only in religious services, it is now Israel's mother tongue.



**34** The world's only theatre company comprised entirely of deaf & blind actors can be found in Jaffa, Israel, and is one of the world's most innovative theaters.



**35** Striking the right note: Everyone knows that musicians read musical scores, but did you know there's a similar system for dancers? The Israeli-developed Eshkol-Wachman movement notation is used to record movement on paper or screen.



# technology

**36** The USB memory stick was invented by Israeli company M-Systems. It was first marketed by IBM at the end of 2000 as "DiskOnKey". In 2006 SanDisk acquired M-Systems for \$1.55 billion.



**37** Research in Motorola's Israel R&D centre helped shrink mobile phones from their original brick size to the svelte models we take for granted today.

**38** Digital printing was revolutionised in 1993 by the launch of the E-Print 1000 - the first printer that could print directly from a computer file. It was manufactured by Israel's Indigo company, which was then acquired by Hewlett Packard.



**39** Israel has literally reinvented the wheel. The Softwheel is the brand name given to a wheel with a flexible shock absorption system built into the wheel itself. It boosts stability without sacrificing speed - in wheelchairs, bikes, cars and even planes.

**40** Just don't mention selfies: Israeli company TransChip developed the first hi-res camera chip that could fit in a mobile phone, making phone photos all too real.



**41** Israelis redefined satellite navigation with Waze, the world's largest community-based traffic and navigation app, enabling users to join other drivers in their area who share real-time traffic and road info, saving everyone time and fuel on their daily commute.



**42** LiveU is driving the live video revolution, providing live video streaming for TV, mobile, online and social media. It enabled Sky Broadcasting to set a new Guinness World Record for the most concurrent live web streams for an event, the UK General Elections in 2015 - streams fed from 138 locations to cover 150 constituency results.

**43** 3d sports: FreeD by Israel's

Replay Technologies invented "Free dimensional" or FreeD, a system that allows sports fans to see key plays in a 360-degree view. The company is now owned by Intel.

**44** GetTaxi is a global fare and ride-sharing app, widely used in the UK by licensed black cabs and others.



**45** Helping the blind: OrCam's

MyEye is a tiny camera and microphone that attaches to a pair of glasses. By pointing a finger at a text, the user triggers its text-recognition technology and a computerised voice reads out what's in front of the camera. The device can also recognise faces, money and other objects.



**46** Israel is one of only 12 countries to send a satellite into space - and is the smallest country, population-wise, to have done so.



**47** The Guinness World Record for most people using virtual reality displays at the same time was set in 2017, when the Israeli company Mobileye made a presentation to 1,867 business leaders - which included a mass VR experience of being in a driverless car.



**48** Israeli inventions in the consumer goods market continue to thrive, as seen by the invention of the epilator. The first one, Epilady, was originally manufactured by a Kibbutz in Israel in 1986.

# medicine

**49** Israel's Teva is the world's largest producer of generic drugs, providing cheap alternatives to branded medications.



**50** Israel's BabySense tackles the threat of cot death by monitoring a baby's breathing and movements during the night – and triggering an alarm if any irregularities appear.

**51** Pain free: Diabetics tired of monitoring their glucose levels via invasive needle-pricks can instead opt for an Israeli device that monitors the shade of their finger tip.

**52** In a world first, Israeli scientists recently grew new bone tissue from a patient's own fat cells, replacing a missing shinbone part lost in a car accident.



**53** Medics and soldiers around the world use the "Emergency Bandage" – a special, Israeli-designed bandage that is so easy to use that it can be applied with one hand. It enables serious wounds to be treated at the scene of the incident, rather than when patients arrive at a hospital.



**54** The right prescription: MedAware's pioneering software uses complex data analysis to identify prescription errors. Verified by a Harvard Medical School study, the software could save countless lives.



**55** Israeli company Rewalk Robotics invented a robotic exoskeleton that allows people paralysed by spinal injuries to stand and walk again. The UK's Claire Lomas completed the London Marathon using one.

**57** The world's first dual robotic surgery took place in Jerusalem in 2017, when two robots performed a three-hour operation on a factory worker who had suffered severe spinal injuries.



**56** NaNose was developed in Israel, by Israeli-Arab Professor Hossam Haick. The Nanose device analyses breath in order to detect diseases such as cancer and Parkinson's, even in their earliest stages.

**58** Doctors looking to easily examine patients can give them an Israeli PillCam – a tiny camera that photographs their insides after swallowing it.

**59** Natural healing: Israel was one of the first countries to legalise medical marijuana, and is reckoned to have more clinical trials for the drug than any other country.



# defence & security

**60** Shooting down rockets, Israel's Iron Dome is a mobile all-weather air defence system which has been successful in defending Israeli towns and cities across the country from the repeated rocket fire from the Gaza Strip.



**61** Opening doors: Rav Bariach/RB-Doors is an Israeli company with operations in over 50 countries worldwide. With offices in both UK and Ireland, RB is the biggest manufacturer of steel doors in the world while producing high-quality locking systems for their international markets.



**62** Israel is a worldwide leader in the Unmanned Aerial Vehicles (UAV / drone) business since the 70's. In 2013, Israel was the biggest exporter of UAVs in the world with sales of \$4.62 billion over the past 8 years. The IDF has made extensive use of UAVs since 1969.



**63** Flight Guard is a brand name for an airborne system for protecting civilian aircraft against man-portable air-defence systems.



# economy



**67** As of November 2017, 94 Israeli founded - companies were being traded on America's NASDAQ (the second largest stock exchange in the world), for a combined value of over £50 billion.

**64** Israel is often described as the "start-up nation," and has more start-ups per capita than any other country in the world.



**65** Silicon Wadi: Israel has the second highest concentration of technology start-ups in the world. Only Silicon Valley in the United States has more.

**66** Safe investment: Israel is a world pioneer in cyber-security, attracting around 15% of the world's venture-capital investment in this burgeoning new field.



**68** Israel was ranked the third most innovative country in the world in the World Economic Forum's latest Global Competitiveness Index.

**69** Roses are red: Israel produces 5% of the world's flowers, exporting 245 million red roses every year.



**70** Trade between Britain and Israel is worth over £5 billion annually – Britain is Israel's second largest trading partner.



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