



IRIS SOLUTIONS

GET INVOLVED

THE ENGINEERS BUILDING NEW THERAPEUTIC TOOLS FOR GAZA AND BEYOND

TECHNOLOGY



Three years ago in Palestine, the interactive technology company **Iris Solutions** were approached by the British-Palestinian organization **Medical Aid for Palestinians** (MAP). MAP wanted them to develop the first sensory rooms in Palestine for use in the treatment of conditions such as autism and, potentially, trauma. The engineers loved the idea. They began developing and installing what are now Palestine's fifteen sensory rooms in six locations, including one in Jabaliya refugee camp in Gaza. They serve over 4,000 children, bringing stress relief and improved therapeutic conditions to one of the world's most pressured environments. Now, Iris Solutions are looking to reduce the difficulties and costs of building sensory rooms through an innovative product called the Sensory Box.

The sensory environment

A sensory room is a comfortable, immersive environment that excludes everyday noises and provides various controllable sensory sources such as lights, sounds, colours and objects.

The idea for a controlled sensory environment for use in therapy goes back to the 1970s, when it was developed in the Netherlands. As a therapeutic tool, it emphasises client control over their own conditions by allowing them to adjust the various light, sound and visual sources in a safe, comfortable space. As it prioritises non-verbal interaction, it can be very good for people profoundly affected by autism and intellectual disability. This environment enables stronger engagement with therapy as it is not just beautiful, but most importantly one feels in control, cared for, safe, and focused. "Studies have found that a sensory room can reduce self-harm by 40%, if used correctly," says Iris' co-founder and executive director Ayman Arandi. "So it can help a lot in aiding the healing process."

Sensory environments are being explored by therapists as having potential as part of the treatment of trauma, and for this reason it is sought out in war zones. "A nine-year old kid in Gaza has seen war not once, but twice in his short life time," says Arandi. A 2004 study **concluded** that 83.2% of Gazan children surveyed had witnessed shooting, and 66.9% had seen victims of violence who were injured or dead. Of these, 32.7% had signs of severe post-traumatic stress disorder (PTSD) and 49.2% showed signs of moderate PTSD. The unique pressures of living in overcrowded Gaza also take their psychological toll.

Beyond these applications, Iris believe that sensory rooms have a role to play in many educational and rehabilitative environments. "We hope that one day there will be a sensory room in every school and nursery as we think it's important for the educational

process," Arandi says. He reports that when schools have scheduled visits to the sensory rooms, teachers observed that the children were more relaxed and responsive to activities arranged there.

Making a Gazan sensory room

Then, two years ago, MAP asked Iris to create a sensory room in Jabaliya refugee camp in Gaza. They knew it would be tough due to restrictions on the flow of people and goods into the area. While Iris are located just an hour and a half away in el Dafa, in Ramallah, both an Egyptian and Israeli permit are required to enter Gaza. The permits that MAP attempted to get them were refused.

"So, we found someone with an international passport and permission to go there, who was willing to carry the equipment," says Arandi. All installation after this point was done remotely, with Iris giving the Gazan engineers instructions over Skype. There were frequent stoppages due to power cuts every day. "It was a very complicated process, [we worked] with people who had never installed such a room."

Getting the necessary materials imported to the country was also a challenge, according to Arandi. "It has to go through the Israeli borders, so we have to wait and pay a lot of expenses to get the hardware we need."

The room is now serving Jabaliya's community, but Iris realised it would be difficult to repeat this success in such conditions. "We realized through feedback that it was making a huge difference, but it was too expensive," says Arandi.

Iris' Solution: the Sensory Box

With Gaza's high-stress environment, demand is high, and a sensory room costs around US\$25,000 to create.

"So we decided to dedicate our time to developing and cutting the costs of the sensory room to make it more accessible to everyone," says Arandi. "After much research and collaboration with rehabilitation specialists, we developed the **Sensory Box**."

Iris' engineers redeveloped the necessary technology and equipment into an affordable kit with all the tools to adapt and build a sensory room. They developed software for use on a tablet to allow lighting control, as well as special lightbulbs to replace those in the room. A dongle plugged into a TV allows significant control over visuals, and heavy curtains allow considerable sound and light insulation. "Through this tech box you can have a sensory room in any nursery or home," says Arandi.

After this point, you can then keep on adding to it as your resources allow. In this way, Iris' sensory box cuts the cost of setting up a working sensory environment to a fraction of the original cost.

How are sensory rooms making a difference?

"I can still remember the first room we made, we had been so consumed in its tech side," says Arandi. "But once we realized the impact, we were just astonished. I remember this lady came up to me and told me that inside this room she was able to breastfeed her child peacefully for the first time, as he had been crying almost nonstop. Later, a lot of mothers used it for the same purpose."

As well as being used in treatment of those with specific developmental issues, the rooms have been sought out by, well, everyone else. Iris's specific focus is children. "... Kids can go inside relax, and feel safe," says Arandi. "It offers them an isolated controllable atmosphere far from the war, chaos and problems surrounding them. It offers them a safe place to just sit there for twenty minutes to an hour to talk about their feelings and let it out."

By this summer, the Sensory Box will be on the market, after further testing. "We aim to make the Sensory Box applicable to many needs and conditions," says Arandi. Among other developments, Iris are currently working on a mechanism that could not only allow teachers or parents to monitor the process of the child, but will also generate data to be used in further research - within strict privacy grounds.

"They say - dream big - and that is exactly what we are doing," says Arandi.

Image courtesy of Iris Solutions.

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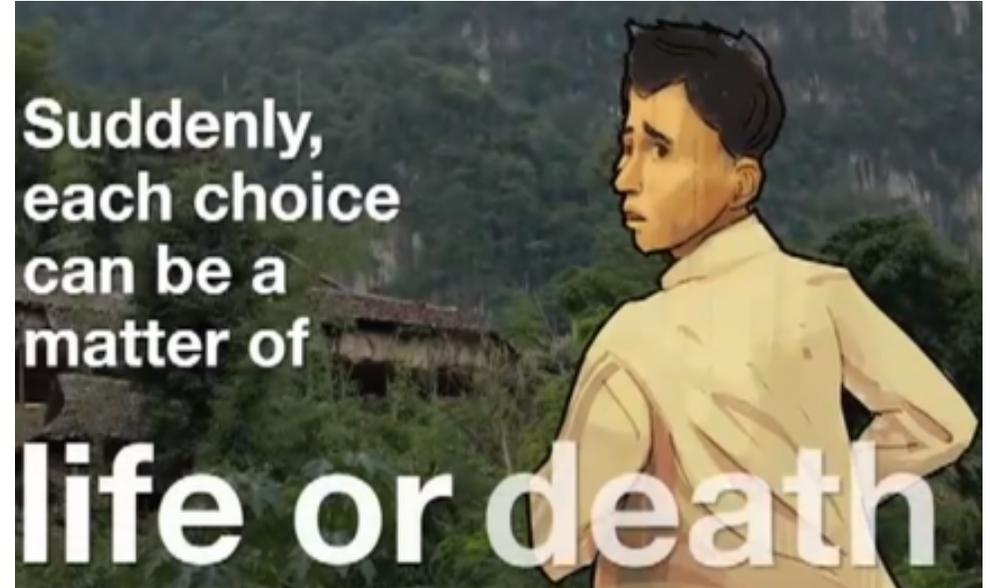
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