

DROSOS FOUNDATION FUNDS PILOT PROJECT 'NITROUS' TO ENABLE PERSONS WITH DISABILITIES



Drosos Foundation and Giza Systems Education Foundation have signed an agreement to launch the 'Nitrous Project.' The pilot project leverages digital fabrication technologies to enable persons with disabilities (PwDs).

Under the slogan "Innovation that changes lives," the project aims to utilize digital technologies to enable the disabled by creating assistive devices and empowering them to revolutionize the products they use to make them highly customizable to suit their individual needs. The project will also involve them in product design and learning digital fabrication skills to promote them actively joining the workforce and becoming entrepreneurs in their own right.

Applying the massive potential of digital fabrication to assistive technologies substantially opens up the possibilities for the world of persons with disabilities. Prosthetics, customized wheelchairs, bionic eye devices, sonic gadgets, joysticks, cups, utensils, and so many other tools can be created and customized based on their individual needs.

To launch this project made possible by Drosos Foundation, Giza Systems Education Foundation (GSEF) has teamed up with E-Nable, Etba3ly, and the Enactus Cairo University 'Sa3ed' team. Based entirely on volunteering efforts, the teams had managed to already design and produce a number of assistive devices to address this dire need in the Egyptian community.

To capitalize on the various milestones already achieved by E-Nable, Etba3ly, and 'Sa3ed', GSEF approached them to collaborate, and share the knowledge and experiences they had accumulated. By pooling their collective know-how, Nitrous aims to build a viable commercial model that would allow for the sustainability of the activity.

The name of the pilot, "Nitrous," was derived from the concept of nitrous oxide used in car racing. It is tantamount to injecting nitrous into a car engine, which allows for a higher level of oxygen available during combustion, to increase the engine's power and performance. The name epitomizes the amazing contribution and collaboration of e-Nable, Etba3ly and Sa3ed in coming together and joining forces

with Giza Systems Education Foundation to ultimately boost and fast-track the performance of the 3D printed prosthetics initiative for the entire community.

"It is awe-inspiring to witness and work with youth having this level of maturity. Wanting to make a real difference and grasping the rudimentary understanding of collaboration for a higher goal has been a learning experience in and of itself. They have shared their experiences in dealing with the PwD community and their know-how to fill a huge glaring gap in the society. Striving towards the inclusion of persons with disabilities, we plan on employing digital fabrication technologies to develop assistive devices, teach PwDs the basics of the technologies, and promote entrepreneurship from within the PwD community," commented Shehab EINawawi, CEO of Giza Systems and Chairman of the Board of Trustees, GSEF.

For the 18 month duration of the pilot, Nitrous will work on three main objectives. The first objective will tackle the utilization of digital fabrication to support disabled people in creating their own assistive technologies. The second will involve the engagement of the community by creating skills amongst the disabled to not only promote inclusion and wellbeing, but to support them in becoming entrepreneurs. The third will be geared towards the utilization of the makerspace for the development of a sustainable business model that would allow for the spread of the makerspaces to expand and grow further.

By establishing a successful commercial model, Nitrous will have practically demonstrated the impact and sustainability of the activity. Following the successful achievement of the objectives, GSEF will be seeking out funding for a full rollout of the activity to ensure expansion, propagation, and sustainability.

To deploy this pilot project, Nitrous will rely on the existence and outreach of the fixed and mobile Fab Labs all over Egypt to accomplish the objectives of this partnership. To promote the development of their own assistive devices and their involvement in product design, Nitrous will target PwDs to introduce and familiarize them with the available technologies, so as to increase their knowledge and skills. Through Nitrous, PwDs will also receive training on business planning, forecasting, marketing and other business related skills to increase their professional chances of joining the workforce or creating their own businesses.

The project will be headquartered at the Fab Lab in New Cairo - one of GSEF Fab Labs - which will be staffed with dedicated resources and positioned to be the go-to place for ideas relating to digital fabrication for the disabled. It will serve as the R&D facility that will design, prototype and test new products. Outreach to the community will be done through the rest of the Egypt makerspace network.

The initiative marries well with the Drosos Foundation's thematic priority of creating economic independence, specifically with one of the foundation's programs of supporting economic opportunities for marginalized populations such as PwDs.



With the local ecosystem already in place, this joint initiative will greatly impact the empowerment and inclusion of PwDs in the Egyptian society, as well as improve by leaps and bounds the availability and affordability of assistive technologies.

About Drosos Foundation

Drosos Foundation was established in late 2003 as a private not for profit organization dedicated to supporting community development, based in Zurich, Switzerland. The foundation is committed to enabling disadvantaged people to live a life of dignity. Drosos seeks long-term impact through its supported projects in Egypt, Morocco, Tunisia, Lebanon, Jordan, Palestine, Switzerland and Germany.

In Egypt, Drosos is operational and active since 2005. The Foundation pursues two complementary strategies for promoting the independence and personal responsibility of the individual; promoting creative skills and promoting economic independence.

The foundation has a wide range of beneficiaries including marginalized youth, women and children. The majority of Drosos Foundation supported projects are geographically focused on Greater Cairo, Alexandria and Fayoum; and most recently expanded to governorates in Upper Egypt such as Aswan and Qena with the prospect of further expanding Drosos support to other underserved governorates.

The foundation places special focus on strengthening partnerships and capacity building through its supported projects. The majority of Drosos supported projects in Egypt are led by national non-governmental organizations. Projects that are implemented through international non-governmental and United Nations organizations aim to transfer specialized knowledge and skills to national partners.

Drosos collaborates with various government entities including the ministries of International Cooperation and Social Solidarity to support long-term strategies; and with various line ministries to ensure sustainability of its supported projects.

Drosos is ideologically, politically and religiously independent.

About e-Nable Egypt

E-Nable Egypt is the Egyptian Chapter of a global community collaborating to make free 3d-printed prosthetic hands available to all who need them. The e-NABLE Community is an amazing group of individuals from all over the world who are using their 3D printers to create free 3D printed hands and arms for those in need of an upper limb assistive device.

They are people who have put aside their political, religious, cultural and personal differences – to come together and collaborate on ways to help improve the open source 3D printable designs for hands and arms for those who were born missing fingers or who have lost them due to war, disease or natural disaster.

The e-NABLE Community is made up of teachers, students, engineers, scientists, medical professionals, tinkerers, designers, parents, children, scout troops, artists, philanthropists, dreamers, coders, makers and everyday people who just want to make a difference and help to "Give The World A Helping Hand."

About Etba3ly

Etba3ly 3D is a 3D printing Service and Market place. Users design and upload 3D printable files, and Etba3ly 3D prints the objects and deliver it to their doorstep. Users can also choose from a wide variety of 3D printable models online for free, or use free online tools to make their 3D model.

Etba3ly 3D connects the community of designers, innovators, and makers. Among Etba3ly 3D community there are Designers and 3D modelers who can make a dream come true. From turning your idea into reality, to converting a drawing or a picture into a 3D printable model. Users connect through our forum online, or at events all over Egypt.

About Sa3ed

Sa3ed is multi-stage qualification program in collaboration with several organizations. The program begins with the provision of a three-dimensional prosthetic part and user training, and ending with the beginning of a new job opportunity that is available for the user. The goal is to satisfy an existing need of over 160,000 persons with disability, who lack the opportunity to get a job or do business. The goal is more moral than material; equality for all.



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