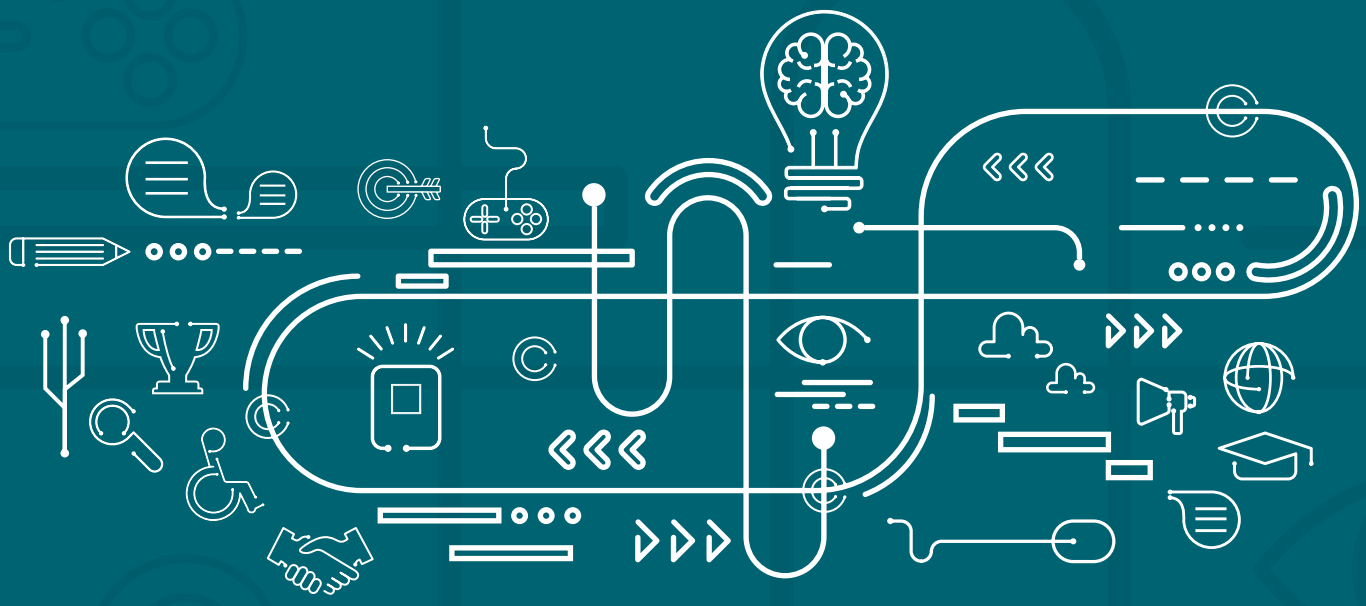
Innovation Program Report

2017 & 2018



mada

digital access for all

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Executive Summary

The Mada Innovation Program has been designed to encourage innovators to create Arabic solutions for Persons with Disability, thus increasing its availability within the region through a combination of grant programs. The goal of the program is to encourage the establishment of a private sector AT market in Qatar catered to the Arab world and increase awareness of the AT field among innovators. Through a combination of entrepreneurship grant programs Mada aims to provide a mechanism to bring relevant innovative AT and Accessibility products/services to the market. This will enhance the lives of PWD's in Qatar and the Arab world.

Throughout its tenure, the Mada Innovation Program had actively supported the development of new Arabic AT solution, encouraging innovators to participate towards creating accessibility and AT solutions and, raising awareness about AT innovations and solutions. The program has supported 12 new Arabic Innovations to be introduced to the market, 7 of which cater towards the Education sector and 5 in the Community sector.

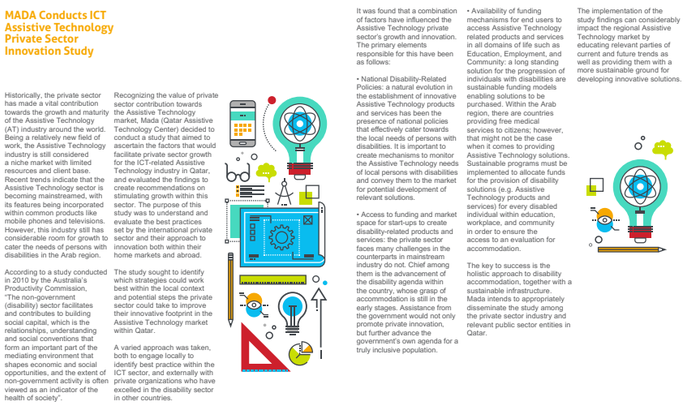
Additionally, the Mada Innovation Program also helped to raise awareness about Accessibility and Arabic AT through periodic publications and participations in various national and international events. The role and outcomes of the program was highlighted in 7 events. The participation played a critical role in attracting potential entrepreneurs and users to learn about and engage with the program.

Furthermore, the program served to contribute towards offering the latest information about AT and Accessibility Innovations to readers worldwide through periodic publications in Nafath and other relevant conferences. A total of 7 Nafath issues have been published to date and participation in 3 notable conferences have highlighted Mada and its work. These efforts not only raised awareness but also increased the profile of Mada as a pioneer of Arabic AT & Accessibility Innovation in Qatar and the Arab region by being a leading contributor towards the AT ecosystem nationwide.

Introduction

Historically, the private sector and innovators have made a vital contribution towards the growth and maturity of several industries around the world. Nowadays, Assistive Technologies (AT) and Accessibility are becoming more seamlessly incorporated into our lives every day. Being a new field of work, the AT and Accessibility industry become a new area with huge potential for entrepreneurs, innovators, startups and the private sector to invest in.

Mada conducted the ICT Assistive Technology Private Sector Innovation Study to understand and evaluate the private sector and their approach to innovation both within Qatar and abroad. The study aimed to identify which strategies work within the local context and identify potential initiatives for the private sector to invest in Arabic AT and widen the innovation presence within Qatar and the region. The study shed light on the private sector disability industry, and how such innovation could be applied in the local context. In 2017, Mada Assistive Technology Center launched the Mada Innovation Program with the objective to grow Arabic AT and increase the range of Arabic solutions for people with disabilities in Qatar and the Arab region.


MADA Conducts ICT Assistive Technology Private Sector Innovation Study

Historically, the private sector has made a vital contribution towards the growth and maturity of the Assistive Technology (AT) industry around the world. Being a relatively new field of work, the Assistive Technology industry is still considered a niche market with limited resources and client base. Recent trends indicate that the Assistive Technology sector is becoming mainstreamed, with its features being incorporated within common products like mobile phones and televisions. However, this industry still has considerable room for growth to cater the needs of persons with disabilities in the Arab region.

According to a study conducted in 2010 by the Australia's Productivity Commission, "The non-government (disability) sector facilitates and contributes to building social capital, which is the relationships, understanding and social conventions that form an important part of the mediating environment that shapes economic and social opportunities, and the extent of non-government activity is often viewed as an indicator of the health of society".

Recognizing the value of private sector contribution towards the Assistive Technology market, Mada (Qatar Assistive Technology Center) decided to conduct a study that aimed to ascertain the factors that would facilitate private sector growth for the ICT-related Assistive Technology industry in Qatar, and evaluated the findings to create recommendations on stimulating growth within this sector. The purpose of this study was to understand and evaluate the best practices set by the international private sector and their approach to innovation both within their home markets and abroad.

The study sought to identify which strategies could work best within the local context and potential steps the private sector could take to improve their innovative footprint in the Assistive Technology market within Qatar.

A varied approach was taken, both to engage locally to identify best practice within the ICT sector, and externally with private organizations who have excelled in the disability sector in other countries.

It was found that a combination of factors have influenced the Assistive Technology private sector's growth and innovation. The primary elements responsible for this have been as follows:

• National Disability-Related Policies: a natural evolution in the establishment of innovative Assistive Technology products and services has been the presence of national policies that effectively cater towards the local needs of persons with disabilities. It is important to create mechanisms to monitor the Assistive Technology needs of local persons with disabilities and convey them to the market for potential development of relevant solutions.

• Access to funding and market space for start-ups to create disability-related products and services: the private sector faces many challenges in the counterparts in mainstream industry do not. Chief among them is the advancement of the disability agenda within the country, whose grasp of accommodation is still in the early stages. Assistance from the government would not only promote private innovation, but further advance the government's own agenda for a truly inclusive population.

• Availability of funding mechanisms for end users to access Assistive Technology related products and services in all domains of life such as Education, Employment, and Community: a long standing solution for the progression of individuals with disabilities are sustainable funding models enabling solutions to be purchased. Within the Arab region, there are countries providing free medical services to citizens; however, that might not be the case when it comes to providing Assistive Technology solutions. Sustainable programs must be implemented to allocate funds for the provision of disability solutions (e.g. Assistive Technology products and services) for every disabled individual within education, workplace, and community in order to ensure the access to an evaluation for accommodation.

The key to success is the holistic approach to disability accommodation, together with a sustainable infrastructure. Mada intends to appropriately disseminate the study among the private sector industry and relevant public sector entities in Qatar.

The implementation of the study findings can considerably impact the regional Assistive Technology market by educating relevant parties of current and future trends as well as providing them with a more sustainable ground for developing innovative solutions.

The ICT Assistive Technology Private Sector Innovation Study in Nafath

Mada Innovation Program

Mada Innovation Program encourages the establishment of a private sector Arabic Assistive Technology (AT) market in Qatar catered to the Arab world. The program aims to support aspiring and existing AT companies or entrepreneurs to be able to establish a sustainable market place in Qatar. This will eventually lead to the growth of a thriving Arabic AT market sector within Qatar and the Arab region.

Through a combination of entrepreneurship grant programs, Mada aims to provide a mechanism to bring relevant Arabic innovative assistive technologies and accessibility products and services to the local market. The wider availability of Arabic accessibility solutions will enhance the Assistive Technology market in Qatar and the Arab region. This will result in developing an Assistive Technology market ecosystem in the region.

There are three types of award categories that fulfil the objectives of the Mada Innovation program. These categories involve offering grants for individuals and entities with Arabic innovative products or services. Grants are offered in the form of funding and/or provision of subject matter expertise (e.g. mentorship, user/professional experience feedback, etc.).

Following are the details for each category:

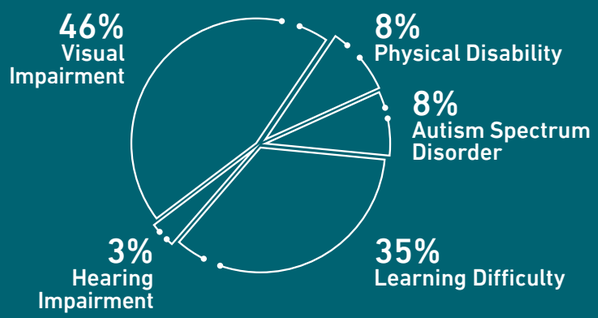
- **Entrepreneur Grant** This award type category is designed for creating opportunities for new innovative entrepreneurs and entities in Qatar and Arab region who already have a “Proven Concept” for their AT product or service to establish themselves in the market. Applicants selected for this award type will be provided with a grant through MADA Innovation Program to develop the proposed product/service concept to cater towards the local and Arab market. In addition to the subject mentorship and exposure along the process.
- **Localization Grant** This award type category is targeted towards international established entities who already have an existing prototype for a potential idea relevant to Assistive Technology products/services who are looking into Arabic localization of their product. MADA will provide the subject matter expertise as part of the MADA Innovation Program directly to potential established entities with relevant product/service concept to cater towards the local and Arab market.
- **Competition Award** This award type category is designed for creating opportunities for individuals and entities to gather seed funding for their Arabic AT related product or service “Proof of Concept”. Applicants selected for this award type will be directed towards participating in dedicated AT and Accessibility segment developed within various existing competitions.

Mada Arabic Innovation Program highlighted in Nafath

Mada Innovation Dashboard
Pre-2017

20
Innovations

Distribution of suported products based on Targeted Disability Areas



Mada Innovation Program Dashboard
2017-2018

12
Innovations

QAR 1,896,213
Invested on Innovation

543
Hour of Consultation

7
Partnerships

13
Startups, Entrepreneurs and innovators impacted

7
Solutions launched in the market

Products Supported

Mada Innovation Program provided proper evaluation common support and direction to innovators and entrepreneurs to create market-necessary solutions for meeting the Arabic Assistive Technology and Accessibility needs in Qatar and the Arab region. This empowers them to develop a cutting-edge product and successful business model that is sustainable in the market.

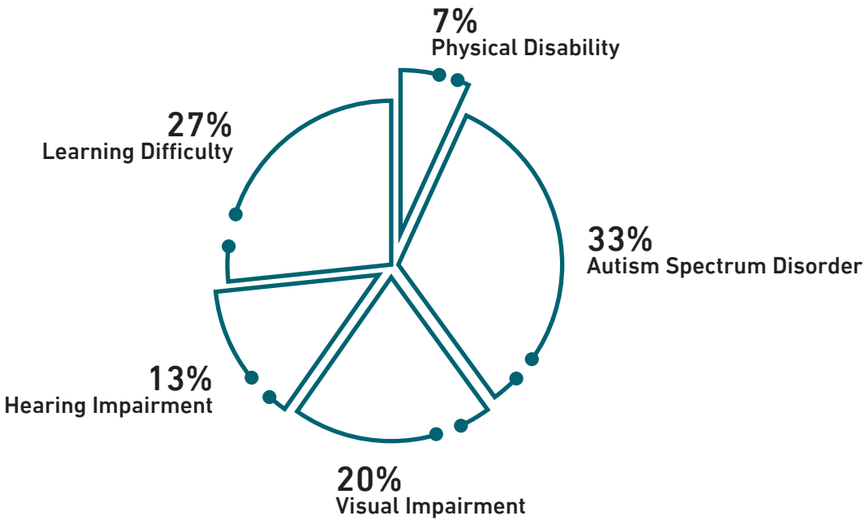
Since its inception, Mada Innovation Program has helped unlock the potential of many promising innovators, and assistive technology users. A number of solutions have been supported by the program in various forms and are currently available in the market to better support the needs of people with disabilities in Qatar and the Arab Region.

12 Innovated and localized solutions for people with disabilities was support by Mada Center through the Mada Innovation Program covered several disability areas.

Covered disability areas are physical disability, communication difficulties (autism spectrum disorder), learning difficulties, hearing impairments and visual impairments.

Solution	Disability Types
Tawasol Symbols	Communication Impairments and Learning Disabilities
Tawasol AAC App	Communication Impairments and Learning Disabilities
Arabic Money Reader App	Visual Impairments
SeeDo Robot	Deaf and Hearing Impairments
Bu Hamad Arabic Sign Language Avatar	Deaf and Hearing Impairments
PenCam	Visual Impairments
Clicker ٧ Arabic	Communication Impairments and Learning Disabilities
TextHelp Arabic Read&Write	Communication Impairments and Learning Disabilities
SmartFace App	Physical and Mobility Disabilities
Handy Access App	Physical and Mobility Disabilities
Social Robot (by Mursi Seraj)	Communication Impairments and Learning Disabilities
BONOCLE - Mada-Seedstars Arabic AT Award	Visual Impairment - Blindness

Distribution of suported products based on Targeted Disability Areas



Entrepreneur Grant

The Entrepreneur grant is designed for creating opportunities for new innovative entrepreneurs and entities in Qatar and Arab region who already have a “Proven Concept” for their AT product or service to establish themselves in the market.

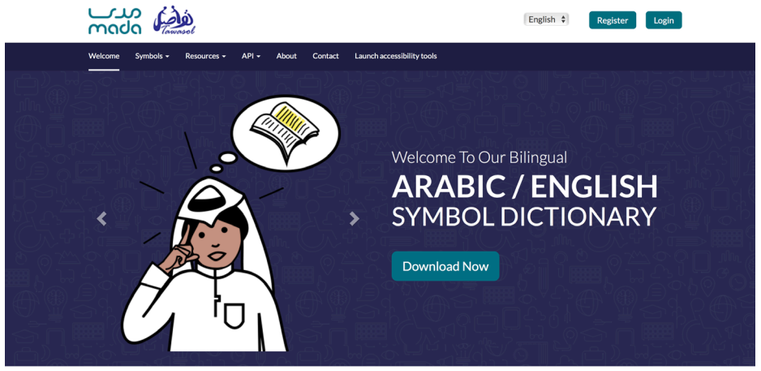
Applicants selected for this award type will be provided with a grant through MADA Innovation Program to develop the proposed product/service concept to cater towards the local and Arab market. In addition to the subject mentorship and exposure along the process.

Tawasol Symbols

In 2013, Mada embarked on a project to develop an Augmented and Alternative Communication (AAC) symbol dictionary called “Tawasol Symbols”, which focuses on the Qatari Arabic language and the modern standard Arabic MSA. The project was launched in collaboration with the University of Southampton and Hamad Medical Corporations and funded by Qatar National Research Fund (QNRF), where, the initial challenge was to select a suitable set of word and symbol lists that were culturally and contextually appropriate towards the local society.

In 2017, Mada developed a dedicated Tawasol Symbols website aiming to provide users with open-access to the Tawasol Symbols dictionary.

- 350 new symbols added to the dictionary in 2017 and 2018.
- The total number of symbols is 1150 by the end of 2018.
- The total numbers of subscribers on Tawasol Symbols website is 442.



WELCOME

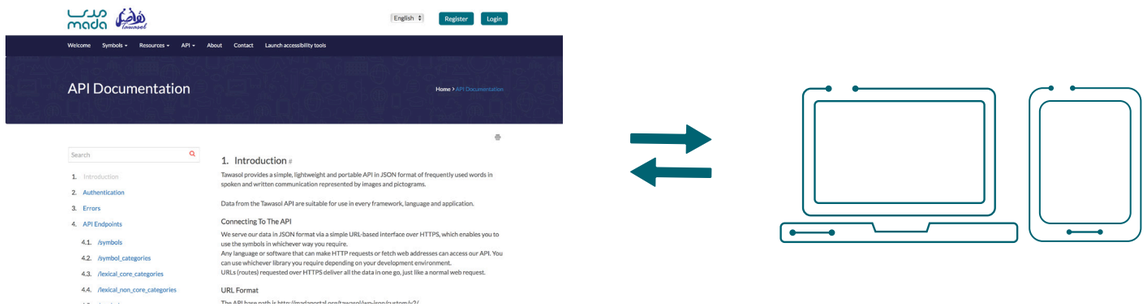
Tawasol Symbols website (www.tawasolsymbols.org)

Example of Tawasol Symbols

"Tawasol Symbols" API for developers

Tawasol Symbols API provides a simple, lightweight and portable API in JSON format of frequently used words in spoken and written communication represented by images and pictograms. The API allows the access to list of symbols through direct links secured by a token. Data from the Tawasol API are suitable for use in every framework, language and application.

The data are returned in JSON format via a simple URL-based interface over HTTPS, which enables the developer to use the symbols in whichever way you require. Any language or software that can make HTTP requests or fetch web addresses can access our API.



Tawasol API overview

"Tawasol Symbols" Educational Resources

"Tawasol Symbols" website outlines several education resources for teachers and specialist using Tawasol Dictionary. The resources help to create new materials and tools to help children and students with communication difficulties and learning disabilities. Most resources are provided as Word documents so that you can make changes and personalize resources as needed.

Examples of Educational Resources using Tawasol Symbols

“Tawasol Symbols” Training Sessions

To raise awareness about Tawasol Symbols and to encourage teachers and specialist to use the dictionary, Mada conducted six training sessions for teachers and specialist in communication impairments and learning disabilities. By the end of the training sessions, participants was able to create educational resources using Tawasol Symbols and use them in daily life activities for children with communication impairments and learning disabilities.

“Tawasol Symbols” Competition

In 2018, Mada Assistive Technology Center launched the “Tawasol Symbols Competition for the Best Education Resources” that aims to encourage teachers and specialist to create new educational materials using Tawasol Symbols. Resources will be useful for people with communication impairments and learning difficulties.

Mada funded the development of the Tawasol Symbols (QAR 273,000), and dedicated subject-matter-expertise (136 hours).

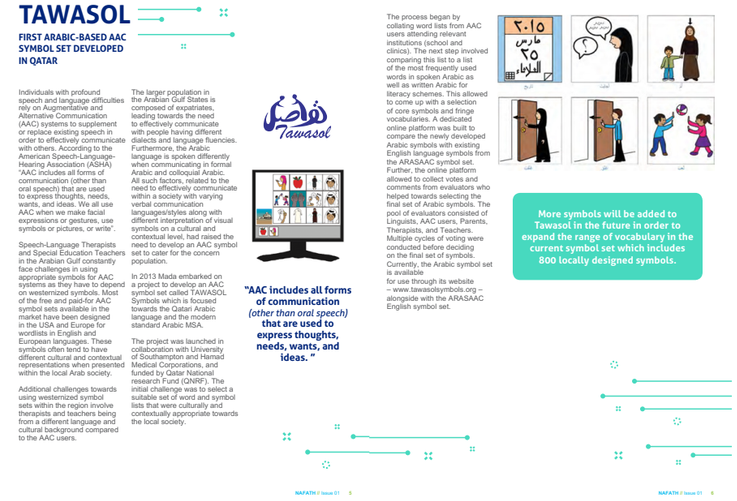
28|10|2018
Call for Competition

29|10|2018
Submission Deadline

03|11|2018
Evaluation

12|12|2018
Final Ceremony

Call for submissions to Tawasol Competition on Mada’s Social Media accounts



Exposure of “Tawasol Symbols” in Nafath Newsletter

Mada supported the development of the solution by providing funding of (QAR 355,163), providing resources (Tawasol Symbol set), and expert-matter feedback (53 hours)

Tawasol AAC App

The Tawasol AAC App is an Augmented Alternative Communication (AAC) mobile solution utilizing the Tawasol Symbols. Mada has empowered the Tawasol AAC App through the Entrepreneur grant within the Mada Innovation Program.

The solution serves the people who are non-verbal or minimally verbal, particularly children with autism spectrum disorder (ASD) and student with learning disabilities who are not able to communicate using natural speech. The App provides the ability to construct sentences in Arabic using Tawasol Symbols.

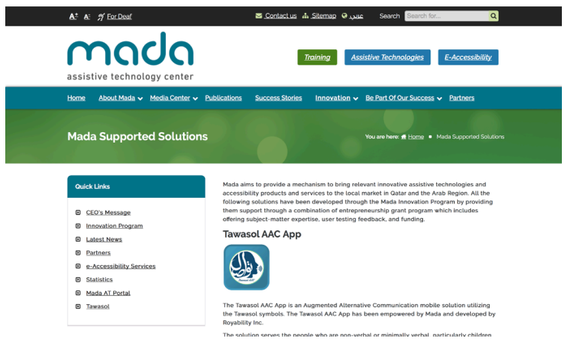
The Tawasol AAC App makes a great Arabic assistive technology tool that is in high demand for the Arabic speaking community. Moreover, thanks to the easy-use and intuitive interfaces, teachers and parents can communicate and teach easily with people with communication impairments and learning disabilities in schools and/or at home.

As part of the Mada innovation program, Mada supported the development of the Tawasol AAC App in every step including the development, testing and dissemination phases of the product as follow:

- An introductory session was provided to the developer about the Tawasol Symbols.
- 3 focus groups were organized for people with communication impairments and learning disabilities, parents, professionals to discuss their needs and how the solution could be used to support their needs.
- 5 revision sessions were conducted to monitor and check the app progress during the development stages.
- 2 testing sessions were conducted by Mada to insure the quality a successful completion of all milestones of the app before release.

Mada showcases the Tawasol AAC App during the Great Conference 2018 as part of the innovation zone. From which, the developers received a lot of useful feedback from the conference visitors. Moreover, Tawasol AAC App was given a spot at the innovation theater to present to the audience the main app features and uses to help and improv the lives of people with communication impairments and learning disability. The app was finally publication on Google Play and AppStore.

Tawasol AAC dissemination



“Tawasol AAC App” on the Mada Website

“Tawasol Symbols” in Nafath Newsletter Website

Arabic Money Reader App

Arabic Money Reader App is an app for smartphones designed for Visually Impaired users. Mada has empowered the Arabic Money Reader App through the Entrepreneur grant within the Mada Innovation Program.

Mada supported the development of the solution by offering funding of (QAR 194,050), and expert-matter feedback (41 hours).

It is developed to recognize Qatari Riyal currency notes using the camera of the smartphone. The app reads the Qatari Riyal currency in real time and works entirely offline without the need to have an internet connection. Once the currency detected, the app will inform the user about the value of money in Arabic and English.

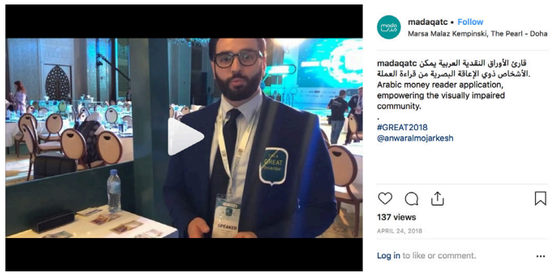
The App also provides several additional features including the ability to calculate the total number of banknotes automatically and the option to receive vibration alert when recognizing banknotes' value for more privacy use in public areas.

As part of the Mada innovation program, Mada supported the development of the Arabic Money Reader App in several steps of the project including the development, testing and dissemination during GREAT'18 conference of the product as follow:

- 2 focus groups were organized for people with visual impairments to discuss their needs and how the solution could be used to calculate to total number of banknotes especially in public areas.
- 5 revision sessions were conducted to monitor and check the app progress during the development stages.
- 2 testing sessions were conducted by Mada to insure the quality a successful completion of all milestones of the app before release.

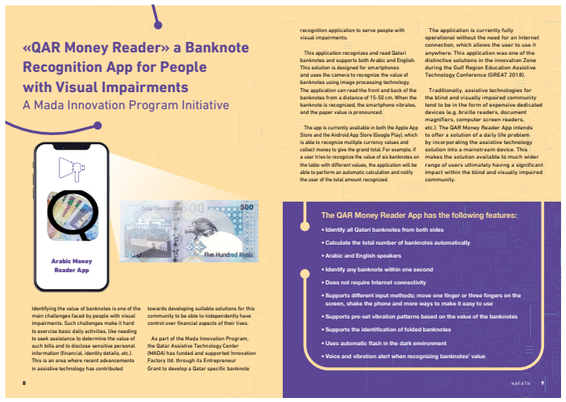
Arabic Money Reader App dissemination

In 2018, Mada Assistive Technology Center launched the "Tawasol Symbols Competition for the Best Education Resources" that aims to encourage teachers and specialist to create new educational materials using Tawasol Symbols. Resources will be useful for people with communication impairments and learning difficulties.

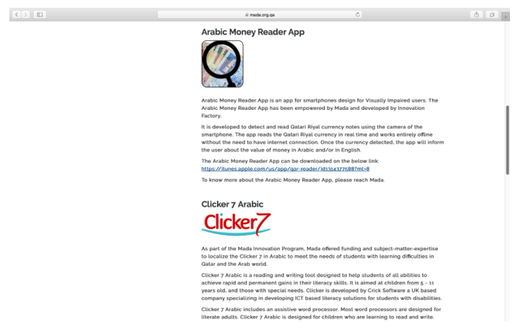


Exposure of "Arabic Money Reader App" in Social Media during GREAT'2018 Conference

Exposure of "Arabic Money Reader App" in Mada Social Media



Exposure of "Arabic Money Reader" in Nafath Newsletter



Exposure of "Arabic Money Reader" in Mada Website

SeeDo Robot

SeeDo is an interactive robot that has been engineered by Qatari innovator, Mohammed Al-Jefairi. SeeDo is designed as a modern day assistive technology solution for helping children with deafness to learn sign language.

Mada supported Mohammed Al-Jefairi by providing expert-matter support and professional exposure to professionals and end-users (25 hours).

The solution acts as an interactive robotic teacher that aims to overcome communication challenges faced by children with deafness and build better opportunities for their future. Using the sign language dictionary built-in and a specialized camera, SeeDo has the capabilities to be trained toward recognizing new signs in multiple sign language including the Arabic sign language. SeeDo uses its robotic hand to communicate in all forms of sign language. It can also display all kinds of useful visual content on its built-in TV screen. In addition to that, SeeDo is engineered with electronic processors, a motion sensor and specialized depth cameras which can capture and interpret hand movements, so that SeeDo can accurately respond to a child's sign language.

SeeDo uses advanced electronic processors, motion sensors and specialized cameras to capture and recognize the movements of the hand, so that the robot can accurately respond to the sign language. As part of Star of Science 2017, Mada was part of the judging panel and focus group. In addition, Mada offered mentorship support and expert guidance to Mohammed during his participation to enhance the SeeDo robot which was chosen as the 4th place winner of that edition.

Mohammed Al-Jefairi was one of the main keynote speakers in the opening day of the GREAT'18 conference. He was also provided a spot to showcase SeeDo robot in the innovation zone and a speaking slot in innovation theater to further expose his invention.

Exposure of "Seedo" in Social Media during the innovation theater at GREAT'2018 Conference

Exposure of "SeeDo Robot" in Mada Social Media

Exposure of "SeeDo Robot" in Nafath Newsletter

Bu Hamad Sign Language Avatar

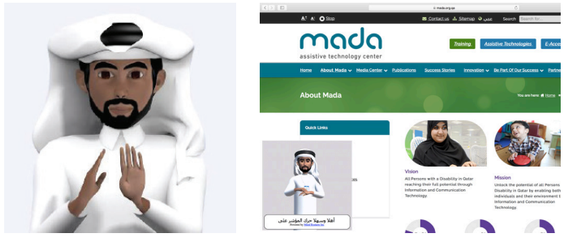
Many initiatives were launched aiming to develop and design avatar solution to translate Arabic Sign Language. Most of them are not updated or aborted due to the high cost of building dictionary containing all Arabic words that can be used by deaf individuals. Mada collaborated with MindRocket inc., a start-up focused on developing assistive technologies for the deaf community, using avatars to translate text into sign language. The startup was supported by Mada to deliver a front-end solution that interpret Arabic Text to localized Sign Language through a Qatari Avatar called Bu Hamad.

Bu Hamad is available as an accessibility feature on Mada official website and Mada AT portal allowing to deaf user a new experience to understand the content of webpages.

As part of the Mada innovation program, Mada supported "Bu Hamad Sign Language Avatar" in several steps of the project including testing and dissemination of the new technology as follow:

- 1 focus group was organized for people with hearing impairments to discuss their feedbacks regarding the interpretation using avatars.
- 2 skype-revision sessions were conducted to check the latest features during the development stages.
- 6 testing sessions were conducted by Mada to insure the compatibility of the plugin on several websites.

Mada also showcased the solution in the Innovation Zone and dedicated a demonstration session was offered at the Innovation Theatre during the GREAT Conference 2018 to provide exposure to the solution through an international platform.



Bu Hamad interpreting Mada AT Portal and Mada Website contents to Arabic Sign Language in real time

Exposure of "Bu Hamad Sign Language Avatar" in Mada Social Media

Exposure of "Bu Hamad Sign Language Avatar" in Nafath Newsletter

Exposure of "Bu Hamad Sign Language Avatar" in Social Media during the innovation theater at GREAT'2018 Conference

Mada supported Bu Hamad Sign Language Avatar by providing expert-matter support and professional exposure to professionals and end-users (26 hours).

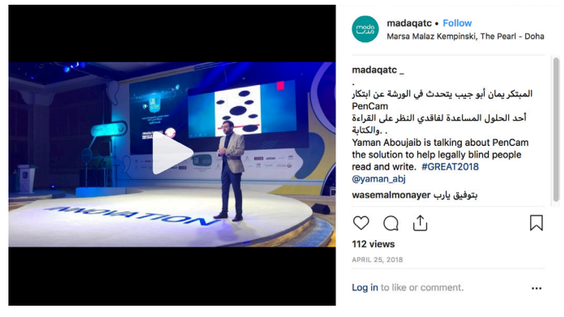
PenCam

PenCam is a new prototype technology to help legally blind people read and write through a high-resolution magnifier pen connected to a mobile phone app that fits most vision impairments. The portable solution is designed to allow people with visual impairments to perform reading and writing functions in various environments (e.g. school, office, etc.).

Mada has supported PenCam by providing thorough professional subject-matter feedback on the product. Additionally, Mada showcased the solution in the Innovation Zone and dedicated spot was offered at the Innovation Theater during the GREAT Conference 2018 to provide exposure to the solution and receive professionals and users feedback through an international platform.

Mada supported PenCam Project by providing expert-matter support and professional exposure to professionals and end-users (9 hours).

Exposure of "PenCam" during the innovation zone at GREAT'2018 Conference



Social Media Exposure of "PenCam" during the Innovation Theater at GREAT'2018 Conference

Localization Grant

This award type category is targeted towards international established entities who already have an existing prototype for a potential idea relevant to Assistive Technology products/services who are looking into Arabic localization of their product.

MADA will provide the subject matter expertise as part of the MADA Innovation Program directly to potential established entities with relevant product/ service concept to cater towards the local and Arab market.

Mada spreads Assistive Technology through localizing international Software

ne of the critical missions Mada is embarked on is to help more and more Arabic speaking people with disabilities getting access to the software solutions they need so much. Our vision that Assistive Technology should be accessed on a larger scale, especially when it comes to people in Qatar and the Arab region.

Mada has teams that are researching in-depth new ways to adapt international software specifically designed for People with Disabilities to the domestic requirements of language and ease of use. Briefly, here are the main software packages that Mada was working on and is continuously developing with its creators, international AT organizations and companies.

Clicker 5 – Reading Is Essential

Clicker 5 was designed to help struggling readers, writers and English language learners to access support tools they need at school, work or home. The program eases the process for individuals with dyslexia, learning difficulties, speech or language impairments, physical disabilities, low vision, autistic learners, and Down's syndrome. The program consists in a word processor and a grid containing letters, words or phrases to help children to write sentences without typing them. Additionally, it allows the user to hear before writing and even highlights the text as it's spoken. Furthermore, it allows users to write with pictures and animate their writings. Also, the program provides free learning resources and let the user create his or her own sets of grids, links them, and have full-screen grids. Clicker 5 supports voice recording, MP3 sounds and MPEG videos. The software is flexible enough to go much further than this and its accessibility options, including switch access, allows motivating activities to be made almost on-the-fly.

Mada Reader Writer

This product contains two applications – Reader and Writer – providing support in Arabic for these two essential learning activities. Reader is a handy little program for reading text aloud. One can select text from any program, whether some piece of news in a web browser, a report in Word or an email. The text is displayed in the Reader window, and then spoken aloud automatically or after clicking the Play button. When writing any sort of document, Writer helps typing more efficiently. It monitors the text one writes, and uses prediction to suggest words along the typing. The software can be personalized with multiple options.

ATBar – For Those Who Want or Need a Change

ATBar is a free tool and allows changing the look and feel of webpages. One can increase and decrease font sizes, have text read aloud, use colored overlays, readability and a dictionary to aid reading. Spell check forms and word prediction when writing are also available. It is a simple tool usable for the most popular browsers. It can help those with low vision, dyslexia, other reading difficulties as well as those who may wish to just reduce the glare or effort reading black text on bright white backgrounds.

16 | Nafath

QuickRes

As its name stands for, QuickRes swiftly changes monitor resolution to low, medium or the default and back by a click of the mouse. It is one of the most useful technical tool for PWDs using computers on a regular basis, as various applications require different font sizes or use pictures or graphics which need to be seen entirely.

Washer – So That Everybody Can See

Some software applications tend to correct color for the varying types of color blindness by adjusting specific components. However, these solutions are basically considering that the user has a standard form of color vision deficiency. Washer simply renders all the colors in a specific window to a grey scale format, thus catering for a high proportion of color deficiencies. The software itself is very simple to use. Once started, it will display anything within its main window in shades of grey, and can be dragged around the screen to select different areas.

Sonar – Precision Is an Important Tool

The software provides an expanded ring around the mouse pointer for users having difficulties locating the pointer. Unlike the Windows XP version, this package places a permanent ring around the pointer. The user has the option to change the color of the Sonar ring. It's also very easily accessible, having commands over the Windows menu, providing identification anywhere.

Vu-Bar

A truly unique piece of software, Vu-Bar provides an on-screen, slotted ruler. This is especially useful to dyslexic people, when the user skips lines or drops from one line to the next. This version allows the user to select the bar width, 25%, 50%, 75% or 100% of screen width and set the slot height to the required font size. This version has an extra option to lock the bar onto the mouse pointer for movement, as well as improved keyboard movement options.

Mouseketeer

The Mouseketeer is ideal for people who can use the mouse but cannot use its button. This software allows the selection of the type of mouse clicks (left, right, double click, drag and drop). For any function is sufficient to place the cursor for a few seconds on the icon for the desired function and then putting on the target.

RapidSet – Skipping Steps Is Needed Sometimes

Mada is thinking of People with Disabilities and their computer journeys, when not everything is set or arranged for their special usage. That's why we supported RapidSet to reach the local market. it allows quick and easy changing of the background and font colors, without having to go through the Screen Properties dialogs.

T-Bar – Help Reducing the Sensitivity

Many people with Scotopic Sensitivity will find this application useful. T-Bar is a colored bar which one can either drag around the screen or lock to the mouse. It can have ruled lines or not, up to user's preferences. The color can be chosen from the pre-defined options, then tweaked by altering the red, green or blue sliders to get the perfect color, the transparency level can be adjusted, again, to suit the individual. All the settings are saved between sessions, so there is no need to readjust the next time will be used.

KwikLoupe – When Bigger Is Better

Most users have problems with screen objects and font sizes. KwikLoupe is a simple to use screen magnifier. Magnification ranges from 2x to 4xx with a quickly accessible locating option to position the viewing window. The tool magnifies the area around the mouse pointer. All settings can be found at the bottom of the application window. It's also good for instant magnification when reading items rather than typing.

Edgeless

Like the original version, this application causes the mouse pointer to wrap around the screen instead of stopping at the edges. It can be configured to start at Windows startup if required. With this new version, the user can choose to wrap on all sides, just horizontal or just vertical. To maintain portability, this option must be set for each session. This version is also capable of supporting up to 2 monitors.

Mada is continuously investing a lot of resources and effort into developing and adapting useful software solutions for People with Disabilities in Qatar and the whole Arab Region. One of our core values is to understand the special needs and put Assistive Technologies to their good use. As contributor to a technological world, Qatar is making significant steps to share the benefits of Assistive Technology to as many users need it, enhancing the cultural progress and the concept of inclusive society.

If you would like to know more about or use any of the above AT please visit mada's website www.mada.org.qa

Nafath | 17

Raised awareness on Mada's previous localized work - highlighted in Nafath

Clicker 7 Arabic

Clicker 7 Arabic is an innovative solution to help students with reading and writing difficulties. The solution has been localized in Arabic through the support of the Localization Grant within the Mada Innovation Program.

Mada has also provided subject-matter expertise to the solution developers to ensure that it meets international quality standards and is appropriate for use within the local social and cultural context. This is the second generation of Clicker solution being localized with Mada prior to this, Clicker 5 Arabic was developed and well received by the Education sector in Qatar.

As part of its commitment, Mada supported the development of the solution by offering funding, providing resources, and expert feedback from professionals. Mada also showcased the solution in the Innovation Zone and dedicated a demonstration session was offered at the Innovation Theater during the GREAT Conference 2018 to provide exposure to the solution through an international platform.

Mada supported Clicker 7 Project by providing funding (1 million QAR), expert-matter support and professional exposure to professionals and end-users (105 hours).

Clicker 7 Arabic launch on Mada Social Media

«مدى» يزوّد «التعليم» بـ 150 رخصة من «كليكر 7» باللغة العربية

قام مركز التكنولوجيا المساعدة «مدى» بتزويد وزارة التعليم والتعليم العالي بـ 150 رخصة من برنامج «كليكر 7»، وذلك خلال تدشين النسخة العربية منه والمخصص لذوي الصعوبات التعليمية. وتم

Press release about the launch of Clicker 7 Arabic

TextHelp Arabic Read&Write

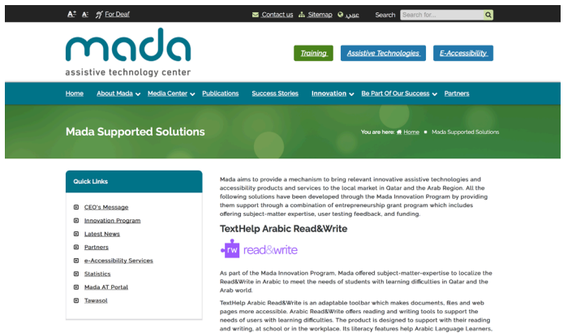
Mada supported Clicker 7 Project by providing Mada supported TextHelp Arabic Read&Write Project by providing expert-matter support and professional exposure to professionals and end-users (68 hours).and professional exposure to professionals and end-users (105 hours).

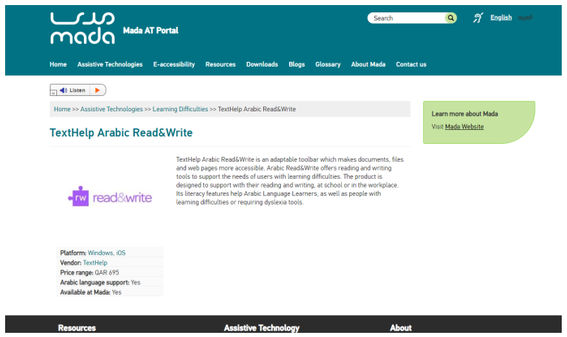
TexHelp Arabic Read&Write is an adaptable toolbar which makes documents, files and web pages more accessible. Arabic Read&Write offers reading and writing tools to support the needs of users with learning difficulties. The product is designed to support with their reading and writing, at school or in the workplace. And its user-friendly literacy features help Arabic Language Learners, as well as people with learning difficulties or requiring dyslexia tools.

The primary features of the solution are as follows, hearing emails or documents read out loud to text prediction, picture dictionaries, summary highlighters and a grammar, spelling and confusable words checker, Arabic Read&Write makes lots of everyday literacy tasks simpler, quicker and more accurate.

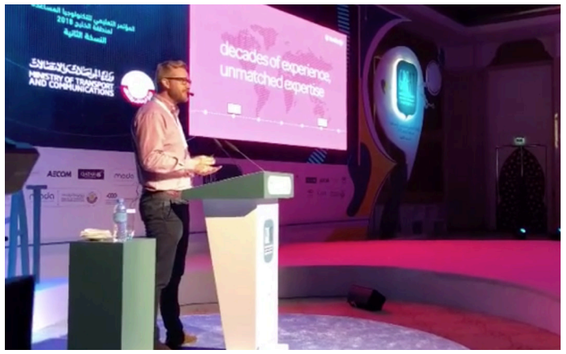
As part of its commitment, Mada supported the development of the solution by providing expert feedback from professionals. Mada also showcased the solution in the Innovation Zone and dedicated a demonstration session was offered at the Innovation Theater during the GREAT Conference 2018 to provide exposure to the solution through an international platform.

TextHelp Arabic Read&Write Launch on Social Media





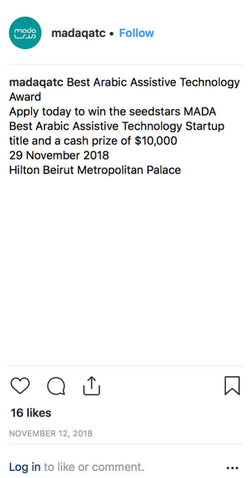
TextHelp Arabic Read&Write on Mada AT Portal and Mada Website



TextHelp Arabic Read&Write Presentation Session
in Innovation Theater during GREAT 2018

Competition Awards

The competition award type category is designed for creating opportunities for individuals and entities to gather seed funding for their Arabic AT related product or service “Proof of Concept”. Applicants selected for this award type will be directed towards participating in dedicated AT and Accessibility segment developed within various existing competitions.

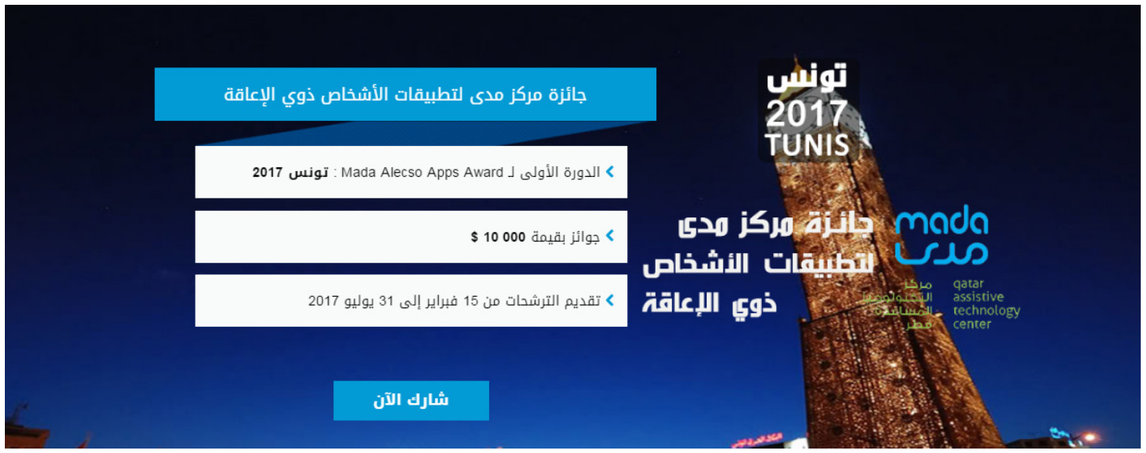


MADA-ALECSO Apps Award

The special award “Mada ALECSO Apps Award” was launched during the third edition of Alecso App Award, in collaboration with Arab League Educational, Cultural and Scientific Organization (ALECSO). “Mada ALECSO Apps Award” is granted to the best Arab mobile phone application developed for users with disabilities, with the aim of improving their living conditions though mobile applications providing services that make life easier to any person having any type of disability.

Through this award, Mada and Alecso are seeking to encourage individuals and institutions to create pioneering mobile applications that will make a real difference in the lives of persons with disabilities directly. The Mada Award for Mobile Applications goes through three major stages:

First, the call for submissions was opened and all applications was submitted electronically through the website of the Mada Mobile Applications



People with disabilities increasingly rely on smart phone technology and on the Internet to improve their physical and social capabilities. In this context, mobile application technology has demonstrated its ability to deliver value-added services to people with disabilities around the world.

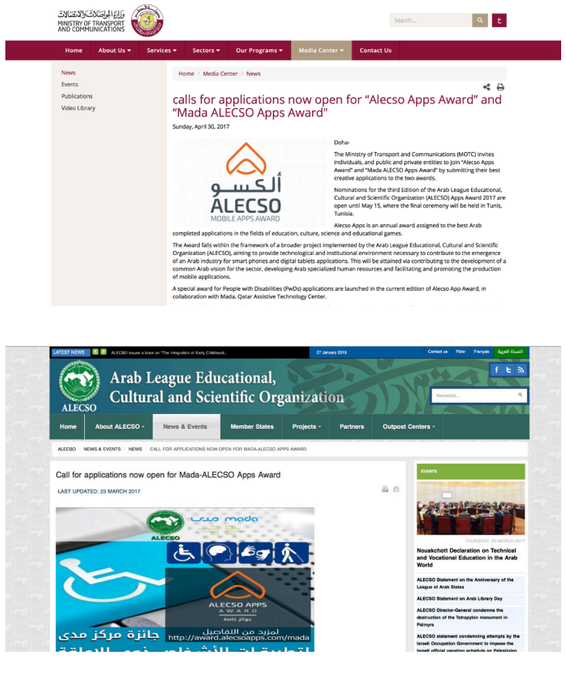
Innovation in this area is a great opportunity for individuals and organizations to create mobile applications that enable people with disabilities to benefit from high quality integrated services and to discover new levels of well-being that help them build their capabilities and achieve achievements.

Award. Secondly, the jury members from Mada and Alecso evaluated submissions from different Arab countries, during which the best applications were selected. In the third step, the winners were invited and awarded.

The 2017 edition of the competition was very popular in its first year, with 116 participants from 17 Arab countries. Two winners were selected for Mada-ALECSO App Award 2017.

The developer Abdul Karim Khoey from Morocco for the application “Smart Face”, an application that uses the front camera of the device to control the device through facial gestures or head movements. The second winner was Mohamed Al Qallal from Tunisia for the application “HandiAccess “, which provides access to the services of some government departments in the city of Sfax, Tunisia.

The competition is part of the innovation program designed to encourage and stimulate private institutions and companies working in the technology sector through providing expertise and financial assistance to meet the needs of users with disabilities through the provision of assistive technology in Arabic and to create a leading national market in this field. To expand the use of Arab Assistive Technology for users with local disabilities or from various Arab countries.



Mada to attend at the Mobile Applications Awards in Tunisia

02 Nov 2017 - 2:02

The Peninsula

Mada Assistive Technology Center will participate in the Mada Alecso Apps Award closing ceremony of the “3rd Alecso Grand Prize for Arab Mobile Applications” that will take place tomorrow and on Saturday Hammamet, Tunisia. The award is part of a partnership between Mada and the Arab League Educational, Cultural and Scientific Organization (Alecso). The award aims to improve lives of people with disabilities through creating smart phone applications that provide services that will facilitate their lives. The winning application will be awarded a prize of $ 10,000.

Smart Face

Smart Face is an application that allows you to control the Android device through facial movements or head. The application uses the front camera of the device to capture your movements and then translate them into my application commands.

The Smart Face App has been empowered by Mada through the Competition Award stream within the Mada Innovation Program. The competition was organized in partnership with Arab League Educational Culture and Scientific Organization (ALECSO) and was named the "Mada – ALECSO Apps Award".

As part of its commitment, Mada supported the development of the solution by offering funding to the winning solution.

سمارت فيس
Smart Face

Mada awarded SmartFace App during AlecsoApps Award (QAR 18,500) and supported the developer to exposure the App to professionals and end-users (8 hours).

Exposure of "SmartFace" in Nafath Newsletter

MADA – Seedstars Arabic Assistive Technology Startup Awards

As part of the Mada Innovation Program, Mada partnered with Seedstars to promote the Arabic Assistive Technology with the ultimate goal of supporting Accessibility startups in Qatar and the Middle East to benefit PwDs and improve their lives. Seedstars and Mada share a common vision to support innovation by working with the best entrepreneurs in the field and offering them with suitable funding and subject matter expertise for making their solution a marketable reality impacting the end users.

The collaboration involved Mada being the **ICT Accessibility Partner** for the Seedstars MENA 2018 event and awarding the Mada-Seedstars Best Arabic AT Startup competition winner.

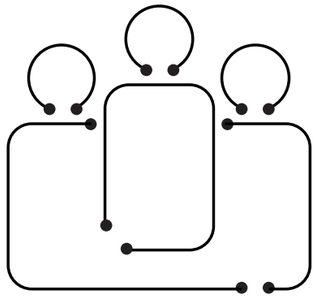
About Seedstars

Seedstars is a Swiss based group founded in September 2012 which has the objective to impact people's lives in emerging markets through technology and entrepreneurship. Seedstars promotes, connects, and invests in emerging market startups through its exclusive worldwide startup competition. In 2016, the program reached out to entrepreneurs in over 65 countries through various programs such as the global startup competition, co-working community, academy and acceleration program

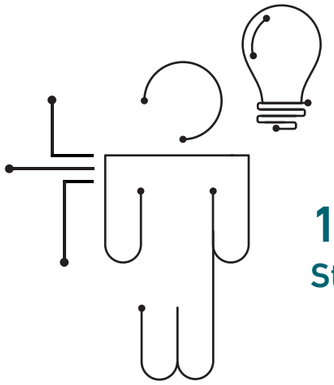
Seedstars MENA

On November 29, 2018, Seedstars World organized its 3rd edition of the most prestigious regional event to bring together the best entrepreneurs in emerging markets from across the MENA Region.

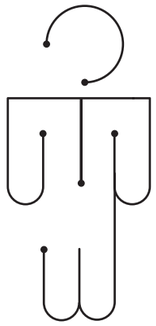
Event Key Elements



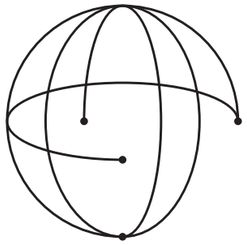
351
Attendees



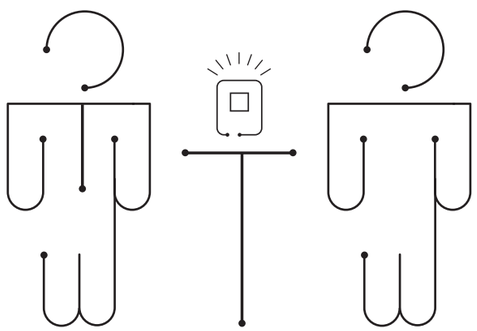
119
Startup Founders



45
Investors



21
Countries



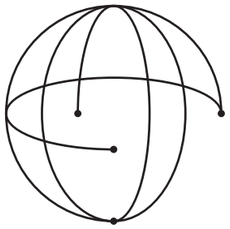
303
1 on 1 Meetings

Mada-Seedstars Arabic Assistive Technology Startup Awards Journey

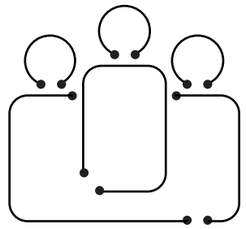
Call for Competition
04-11-2-18

Top 3 Finalists Selection
20-11-2-18

Awarding of Winner
29-11-2-18



48 Startups
Applied from
13 Countries



Final Round
3 Finalists presented their solution to Mada and Seedstars representatives

Winner
BONOCLE
USD 10,000
Prize Money

TOP 3 Finalists Solutions

LISAN
Lisan means “tongue” in Arabic and that is what the Lisan project is all about - literally giving a voice to the voiceless. A wearable glove that translates sign language to speech.

RAFIQ
RafiQ is a virtual assistant Android application that can understand Arabic voice commands in user’s local dialect.

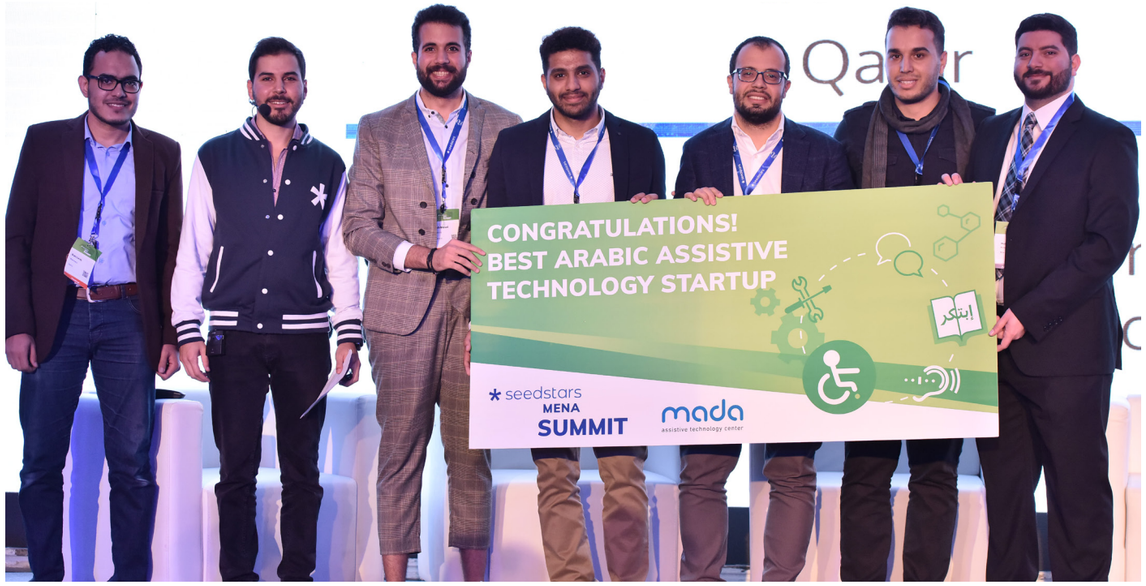
BONOCLE

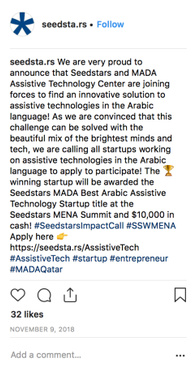
Bonocle is a handheld device utilizing braille to read digital content from electronic devices in an affordable and portable way.

Best Arabic Assistive Technology Startup Winner – BONOCL

Mada awarded BONOCLE as the Best Arabic Assistive Technology Startup (QAR 37,000) during the MADA-Seedstars event and offered expert-matter support & feedback (20 hours).

Seedstars MENA – Final Event





Innovation Guidance for PWDs and Students

Supporting Entrepreneurs with Disabilities in Qatar

In 2016, Mada launched a report on "Creating Accessible Services to Support Entrepreneurs with Disabilities in Qatar" aiming to ensure that commercial bodies such as incubation centers, commercial banks, development banks and all public and private entities, which work in the area of supporting entrepreneurs understand the needs of PWD within Qatar. The report draws upon international best practices to support PWD entrepreneurship efforts. The report outlined a number of actions that can be taken to address the needs and help entrepreneurs with disability for bringing their ideas to the market successfully.

The challenges addressed in the report includes public attitudes and expectations, inaccessible spaces and programs, and a lack of relevant business knowledge and skills, which may contribute to deterring PWDs from starting their own businesses. It offers solutions in the form of effective advisor and mentor training, financial and non-financial support, including technology support, and the many role models with a disability have successfully started businesses around the world.

Mada supports entrepreneurs with disabilities

For its part, the Mada Center has released a set of best practices in the area of supporting entrepreneurs with disabilities, which it aims will go a long way in improving the ability of people with disabilities to access relevant services provided by the government, incubation centers as well as development and commercial banks.

Throughout the world, the number of people with disabilities that are employed is considerably lower than their able bodied peers. Furthermore, in most instances where people with disabilities are employed, they find themselves stuck in low skill jobs with minimal pay. Undoubtedly, this has an adverse impact on the financial independence of people with disabilities, which in turn impacts their quality of life.

Similarly, governments miss out on the potential productivity of an entire sector of society, and end up with extra strain on social welfare programs. Society in general is also impacted by the marginalization of people with disabilities from the world of employment because this exclusion creates an inequitable environment where people with disabilities are grossly marginalized from civil society.

In addition to creating inclusive workplaces, affording entrepreneurship opportunities to people with disabilities has tremendous social and economic impact. Unlike traditional employment, entrepreneurship has the ability to offer flexibility in working hours and the potential for greater financial reward.

As such, entrepreneurship programs must play a critical role in national strategies that aim to empower people with disabilities in a way that meets sustainable development goals.

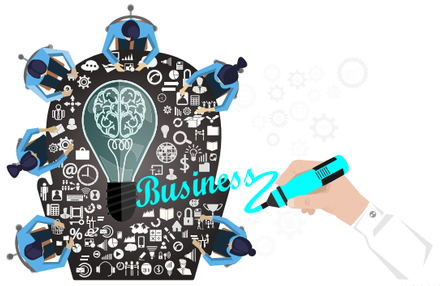
In order for people with disabilities to be able to start their own businesses, all entrepreneurial services must be provided in a fully accessible manner. In addition to that, some specialized services need to be put in to place to ensure greater access and improve the ability of people with disabilities to overcome a number of obstacles that are specifically related to their disability.

A lack of accessible services along with the unavailability of specialized expertise will most likely deter people with disabilities from starting their own businesses. However, when training, financial support and consultancy services are made available, people with disabilities are more likely to become successful entrepreneurs. Support can also come in the form of technology, ranging from pervasive business tools to a range of assistive technology tools that can improve the ability of people with disabilities to conduct business.

As such, it is important for entrepreneurial programs in the country to take into account the needs and abilities of people with disabilities. Only then, will these programs be accessible to all.

The entry of people with disabilities into the workforce as employees and entrepreneurs will provide the world with a new perspective on productivity. It will reaffirm the notion that people, regardless of ability, are able to overcome tremendous obstacles, when adequate support is made available. Through the provision of necessary support, people with disabilities will be empowered to start their own successful businesses. As such, people with disabilities will form a critical component of Qatar's economic and social growth. Therefore, investing in entrepreneurs with disabilities is important on so many levels, but will only be possible with fundamental changes to societal perceptions and attitudes.

Please visit Mada's website to read and download Mada's report on best practices on supporting entrepreneurs with disabilities.



Mada initiatives highlighted in Nafath

AT Innovation and Research for Students

During 2017 and 2018, Mada worked closely with educational institutes (schools and universities) to support research ideas proposed by students.

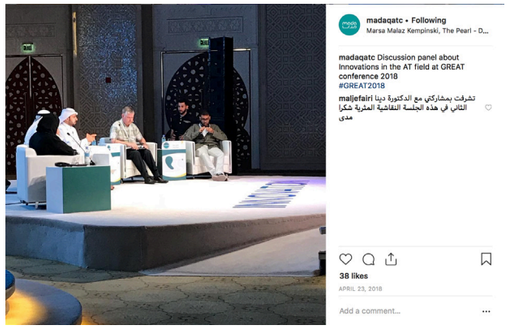
For primary schools, several student teams visited Mada Center offices to explore and discover existing solutions and devices for people with disabilities. This helps them to enhance their ideas and focus more on the real needs of persons with disabilities.

In collaboration with Hamad Bin Khalifa University (HBKU), Mada participated to the "Workshop on Supporting Individuals with Autism Spectrum Disorder (ASD) using Technology-Based Interventions (TBI)" and presented a presentation about the role of social robots to improve educational and social skills on children with autism. Moreover, Mada shared knowledge for PhD students under the supervision of Dr. Dena Al-Thani.

Success Story of Mursi Seraj

High Functioning Autism (HFA), who is very passionate about technologies and robotics. He had a dream to become a pioneer in the field of enabling low-functioning autistic children to communicate effectively through technology.

With Mada's support, he developed applications for NAO Robot to improve communication skills in autistic students. Mursi was one of the main keynote speakers at annual Mada conference GREAT 2018.



In the summer of 2017, Mursi Seraj started a month-long tenure at MADA Assistive Technology Center. The initial purpose of this tenure was to complete an academic project that had failed to satisfy the criteria set forth by the school. However, the project- the first version of which had taken an entire school year to do -was completed in two weeks. This project was a model of a smart house prototype made using electronic components. While the original project report was roughly three pages in length, the revised version he completed at MADA was five times that length, and vastly more comprehensive.

In addition to his school project, Mursi has also worked with Mada on a Social Robot project. He was motivated to pursue this project when he encountered a child with autism visiting MADA who was drawn to the robot and wanted to play with it. Mursi decided to engage the boy by programming the robot to respond to the boy's questions and actions in real-time. Mada gave Mursi the opportunity to present his prototype in an International Scientific Conference ICTA'18 held in Oman in 2017. His contributions to the Oman conference would lead him to headline the GREAT conference in April of this year, where he was able to see the impact of his work beyond the scientific community, and positively effecting the lives of PWDs.

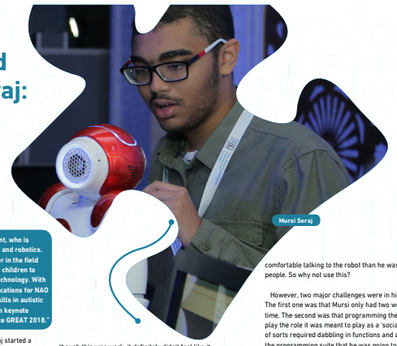
Mada provided Mursi with relevant AT resources, professional expert-matter support & user feedback (136 hours).

As a headliner and a speaker on the conference's Innovation Panel, Mursi was also able to speak about his own experience with autism as a high-functioning individual and how it informed the design choices present in the social robot program he was working on.

This realistic experiment has shown that mainstream schools are frequently neither fully educated nor equipped to deal with the needs of an autistic child and provide them with the necessary support. ICT accessibility and AT play vital role in the education of children with HFA, by providing a secure learning environment in which stimuli remains stable.

The impact of technologies on gifted high functioning children is crucial to enhance educational opportunities, develop work skills, enrich daily living experience and promote community inclusion. Finally, we must always remember that the participation of high functioning children with autism in the general education environment is essential.

The Gifted Mursi Seraj: A Success Story in the World of Technology



Mursi Seraj

Mursi Seraj is a 15-year-old student, who is very passionate about technologies and robotics. He had a dream to become a pioneer in the field of enabling low-functioning autistic children to communicate effectively through technology. With Mada's support, he developed applications for NAO Robot to improve communication skills in autistic students. Mursi was one of the main keynote speakers at Mada annual conference GREAT 2018."

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However, the project- the first version of which had taken an entire school year to do -was completed in two weeks. This project was a model of a smart house prototype made using electronic components. While the original project report was roughly three pages in length, the revised version he completed at MADA was five times that length, and vastly more comprehensive. The main reason he was able to complete this report so quickly -when it took him half a year to finish it the first time- was that even though this was work, it definitely didn't feel like it. "The relatively relaxed environment at MADA helped motivate me since I could pretty much work at my own pace with no real pressure", Mursi said.

The social robot project was one of the projects that Mursi worked on. He found it lying around and asked if he could work with it, but at first he had no real clue exactly what he was going to do with it. Shortly after that, an autistic child visiting MADA was drawn to the robot and entered Mursi's office to play with it. Mursi decided to humor the boy, programming the robot on the fly to respond to his questions and actions. And in doing so, he saw an opportunity, this child was substantially more comfortable talking to the robot than he was to other people. So why not use this?

However, two major challenges were in his way. The first one was that Mursi only had two weeks of time. The second was that programming the robot to play the role it was meant to play as a 'social trainer' of sorts required dabbling in functions and areas of the programming suite that he was going to be using for the first time and therefore knew absolutely nothing about.

"The experience was definitely incredibly fun, again primarily due to the relaxed atmosphere but also because none of the work I did there felt like work", Mursi said. It was more akin to playing a game or doing a bit of creative writing. As a result of these conditions and with the support of Mada, Mursi was able to produce a highly satisfactory prototype. The aim of this prototype was to demonstrate the potential of using humanoid robots in order to help autistic children deal with some of the greater setbacks their condition tends to come with (weak eye contact, low attention span, etc.).

Mada gave Mursi the opportunity to present his prototype in an International Scientific Conference ICTA'18 held in Oman in 2017.

"My experience in Oman was enjoyable- I got to see a new part of the world, and was able to see just how much impact my work had on the assistive technology community in the Middle East. I was able to discuss the project with high-level scientists who were able to provide me with feedback on the project from angles I had not anticipated as well as suggestions I wouldn't normally have thought of", Mursi mentioned.

His contributions to the Oman conference would lead him to headline the GREAT conference in April of this year, where he was able to see the general impact of the work he did not just on the scientific community, but the on the PWDs as well. Something he was waiting with bated breath to find out about.

As a headliner and a speaker on the conference's Innovation Panel, Mursi was also able to speak about his own experience with autism as a high-functioning individual and how it informed the design choices present in the social robot program he was working on.

"Overall, my experience working for MADA was definitely one of the most positive ones I've had, and I would gladly repeat it if given the chance". Mursi concluded. This realistic experiment has shown that mainstream schools are frequently neither fully educated nor equipped to deal with the needs of an autistic child and provide them with the necessary support. ICT accessibility and AT play vital role in the education of children with HFA, by providing a secure learning environment in which stimuli remains stable.

The impact of technologies on gifted high functioning children is crucial to enhance educational opportunities, develop work skills, enrich daily living experience and promote community inclusion. Finally, we must always remember that the participation of high functioning children with autism in the general education environment is essential.

Partner-ships

Mada has collaborated with various strategic partners to proliferate Arabic Assistive Technology solutions and Innovative ideas. The Mada Innovation Program has continually provided support, mentorship, exposure, and resources to innovators & entrepreneurs. The partnerships have facilitated an increased knowledge of Arabic assistive technology and accessibility solution needs amongst innovators & entrepreneurs in Qatar and the Arab region. Agreements were signed with the strategic innovation partners below:

seedstarsworld

Mada and Seedstars signed a partnership agreement to support Arabic Assistive Technology Startups in the MENA region to benefit PWDs and improve their lives. As part of the partnership, Mada and Seedstars launched the "Mada Seedstars Arabic Assistive Technology Award" to support emerging startups in the field and provide a cash prize and expert matter guidance for the winner. In addition, Seedstars MENA recognized Mada as the ICT Accessible partner and profiled MADA as the leading Accessibility organization in the Middle East attracting key stakeholders for potential collaborations.

Crick software

Since 2015, Mada and Crick Software collaborated to improve writing and reading skills in students with communication difficulties and learning disabilities in Qatar. Mada localized two editions (5 and 7) of Clicker software and worked actively to enable the education sector in Qatar to benefit from the solutions.

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Mada and TextHelp partnered to localize the latest version of the software TextHelp Read&Write. As part of its effort to expand the range of Arabic Assistive Technology (AT) to support the education sector in Qatar and the Arab Region, Mada has actively focused on bringing new Arabic AT to the market. Hence the partnership involves Mada to offer expertise and user-testing feedback to successfully localize Read&Write.

Mada partnered with the Arab League Educational, Cultural and Scientific Organization (ALECSO) to encourage Arabic developers to design and develop Arabic mobile applications to improve the living conditions of people with disabilities. The partnership included the launch of a special award called the “Mada-ALECSO Apps Award” during the AlecsoApps Award’17 event organized by ALECSO.

Mada signed a Memorandum of Understanding with the Digital Incubation Center (DIC) during the QITCOM 2017 event. The partnership aimed to further develop Mada Innovation Program with the help of DIC’s two-and-a-half-year business incubation program for entrepreneurs with Assistive Technology ideas. Mada is committed to supporting PWD in Qatar and providing them with the latest in Assistive Technologies to ensure they stay connected to a world with ever changing technologies.

من مبادرات مؤسسة قطر

Mada and Star of Science program partnered to promote and provide Assistive Technology related awareness and services respectively and support the proliferation of the development and availability of Assistive Technologies in Qatar and the Arab Region. “Star of Science” is an original format of Pan Arab reality TV which is dedicated to innovation and targeted for Arab families. Mada offered technical Expertise and follow up to the relevant Stars of Science participants. As part of the collaboration, Mada provided access to its offices for shooting the show.

Mada signed a Memorandum of Understanding with Qatar Incubation Center (QBIC) as part of the Mada Innovation Program to promote Arabic Assistive Technology Innovation in Qatar by providing the necessary expertise, and tools throughout their program cycle within QBIC.

Event Highlights

Qitcom 2017

CodeCamp

CodeCamp was the first-of-its-kind hackathon event in Qatar, aimed at supporting local talent and helping grow the digital economy, as to compete internationally. The CodeCamp competition attracted more than 400 participants from within and outside of Qatar. The competition began on Friday, 3 March 2017 and ended on Tuesday, 7 March 2017.

At CodeCamp, teams of young students and coders worked together over only 48 hours to develop creative technological solutions to a specific problem in four subject matter areas set by CodeCamp's partners: digital transformation (Microsoft), smart travel (Qatar Airways), e-health (Ooredoo), and assistive technology (Qatar Assistive Technology Center "Mada").

- Preliminary Round of CodeCamp: During the weekend before the QITCOM event (March 3-4, 2017) all-day preliminary rounds for CodeCamp were held to shortlist the top finalists. Out of 7 teams, 3 teams were chosen to advance for the preliminary round. Mada had nominated mentors from Mada's team to guide the successful participants towards developing a feasible solution for PWDs. Alongside with the mentors, Mada's representative took part of the judging panel for CodeCamp.
- CodeCamp Finals: CodeCamp finals was held on Tuesday (March 7, 2017) where the 3 finalist teams pitched their solutions after 48 hours of solution development. Each team developed a mobile app solution that served people with disability. As part of the partnership with Digital Incubation Center (DIC), they announced, all the top 3 teams will be awarded business incubation at DIC and the winning team would also be receiving a prize money based on milestones of solution development.

QITCOM Digital

MADA had an activity in the Digital Youth Festival at QITCOM under the name of “Talking Through Technology”. The main objective was to raise the youth awareness about how technology can help people speak if they cannot talk. The students were given a short list of simple questions and were supported by us to initiate and carry out simple conversations with each other while using only the voice output devices (Eye Gaze, GoTalk device, iPad with Ovii App or Gotalk now App).

Students aged between 10 and 14 years participated in our activity and they were very interested and fascinated by the power of Assistive Technology and how it can help people with disability to be independent and to participate effectively in the society.

Gulf Region Education Assistive Technology Conference

Mada Assistive Technology Center hosted the 2nd Gulf Region Education Assistive Technology (GREAT) 2018 conference from April 23 to 25 in Doha, Qatar. As a first of its kind conference, GREAT focused on four main domains related to Inclusive Computer Technology (ICT) and Assistive Technology (AT):

1. Education
2. Independent Living
3. E-Accessibility
4. Innovation

The conference also hosted a dedicated stream on Autism, organized in conjunction with the Qatari Autism Society.

Organized in partnership with several local, regional and international partners, GREAT 2018 featured subject matter experts from around the world who used this platform to educate and exchange information on best practices and current trends in the field technology and accessibility.

The conference hosted a number of inspirational speakers, workshops, an Interactive Exhibition, Assistive Technology Exhibition, Innovation Zone, and Innovation Theater over the course three days.

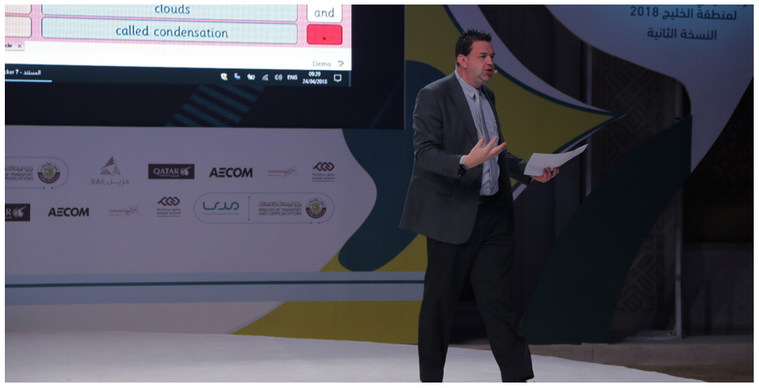
The aim of GREAT was to provide a knowledge-sharing forum by bringing together teachers, academicians and professionals to promote initiatives in assistive technologies, best practices, implementation strategies, research and education in AT in schools. This conference targeted audiences from the following fields:

- Mainstream Education Teachers
- Special Education teachers
- School Administrators
- Speech Therapists
- Occupational Therapists
- Physical Therapists
- Parents of children with special needs
- Providers of AT products
- Medical Professionals who work with PWDs
- Academicians in Higher Education in AT
- Policy Makers
- Digital Content Creators
- Web Designers and Developers
- Technology Professionals
- Innovators
- Managers of Accessibility to Public Spaces

GREAT 2018

Innovation Theater

The Innovation Theater was a platform that featured selected 12 innovative Assistive Technology solutions and concepts. It was a presentation stage comprising of short sessions that introduced the key features and applications of the solutions. This area served to provide intensive discussions, inspiring innovators & entrepreneurs to develop solutions catering to the needs of Persons with Disabilities in Qatar and the region.



GREAT 2018

Innovation Zone

The Innovation Zone shed light on 11 upcoming Arabic Assistive Technology solutions that were developed in collaboration with Mada. This zone was a unique space that offered visitors with the opportunity to explore the latest cutting-edge Assistive Technologies to enter the market place in near future. All featured solutions have been developed as part of the Mada Innovation Program which aims to grow the market for Arabic Assistive Technologies in order to widen the range of Arabic solutions available for People with Disabilities.

GREAT 2018

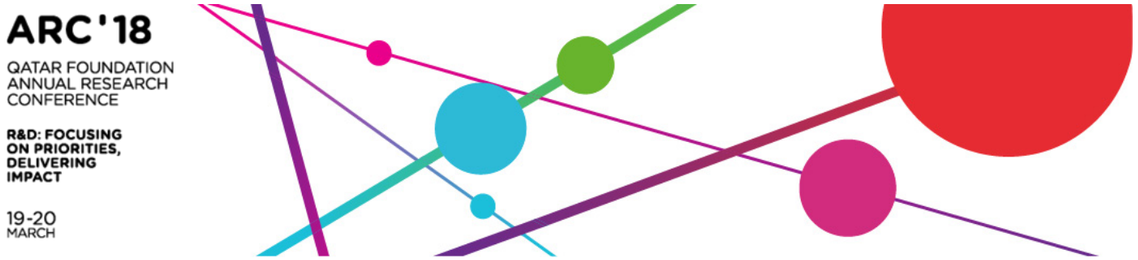
Assistive Technology Exhibition

The highlight of the GREAT Conference 2018 was an assistive technology exhibition featuring international and regional AT exhibitors. There were 13 exhibitors that participated in GREAT 2018. The participating exhibitors included representatives from 7 countries around the world including parent companies of the relevant AT and also regional & sole distributors of AT products in the Arab region. A wide range of AT solutions were exhibited which catered towards people with visual impairments, hearing difficulties, learning difficulties, physical disabilities and autism.

Innovative Assistive Technology Solutions **11**

13 **Assistive Technology Exhibitors**

Qatar Foundation Annual Research Conference 2018
QF ARC '18



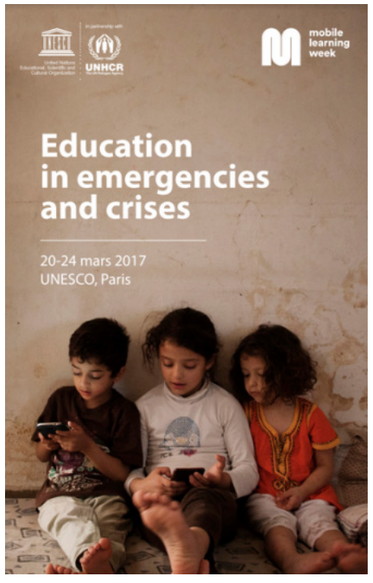
Mada participated in QF ARC'18 event held on March 19-20, 2018 at the Qatar National Convention Center. The objective of the event was to share perspectives and ideas on how research and innovation can address Qatar's greatest challenges, diversify its economy and enhance its sustainability. The event was the seventh edition of the conference organized by Qatar Foundation Research and Development (QF R&D) which was attended by international experts and thought-leaders.

Mada participated in QF ARC'18 with the following objectives:

- • Mada participate to raise awareness in Mada Innovation Program
- • Grow Research in Arabic AT to widen the range of Arabic AT solutions
- • Exhibit current Innovative AT solutions
- • Disseminate information about Innovation and Research work implemented by Mada

During the event, Mada had its own booth to showcase the latest work being done in the field of Assistive Technology and Accessibility. This platform was effectively utilized to exhibit the contribution of Mada towards the development of Arabic AT solutions including the creation of Tawasol Symbols and the work done using social robots with Mursi Seraj. Concurrently, materials related to the disseminated International Best Practices were also distributed in the Mada space. The Mada booth attracted over 200 visitors throughout the 3-day event who included professionals, PWD family members, students, social media influencers, and various representatives from health and education sectors.

UNESCO Mobile Learning Week 2017



As part of the "United Nations Educational Sceintific and Cultural Orgranization (UNESCO) Mobile Learning Week" held on March 20-24, 2017 at UNESCO headquarters in Paris, France. Mada Assistive Technology Center participated and conducted a presentation on: "Mada Center's efforts to promote mobile applications for persons with disability". Mada was introduced to the audience and the Mada Innovation Program was highlighted as the first of its kind initiative aiming to support and grow the Arabic AT and mobile applications for the people with disability. Moreover, Mada highlighted the cooperation between Mada Center and ALECSO, particularly regarding the "Mada Award for Mobile Applications for Users with disabilities" as part of the 3rd edition of "ALECSO Arab Mobile Apps Award.

The session was received with high interest from the audience (more than 30 individuals) consisting of specialist, policy makers, and innovators from all around the world. They praised the role of Mada in the region and its innovation program initiative as a pioneer in the field to support persons with disabilities to improve their lives.

Ooredoo Roadshow 2018

Mada participated in the Ooredoo Innovation Roadshow 2018 held on January 22-23, 2018. The objective of the event was to demonstrate technology, eco systems partners and showcase innovation in multiple facets of Information Communication Technology. Mada showcased the latest Arabic innovative assistive technology designed to improve the lives of people with disabilities. Mada's participation aimed also to raise awareness of the Mada Innovation Program.

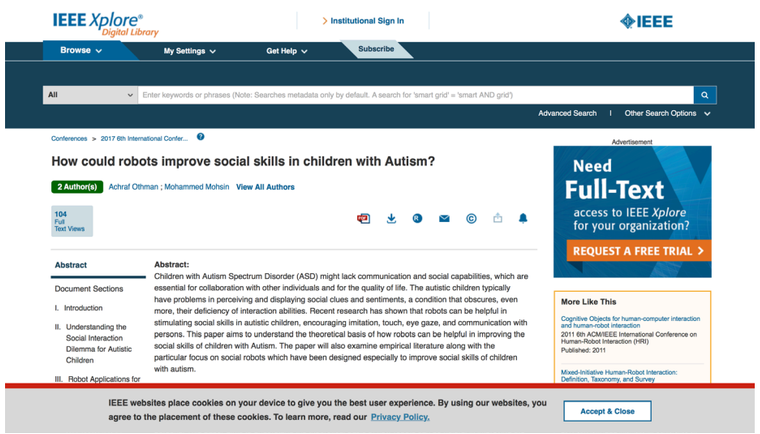
Mada aims to grow the market for Arabic Assistive Technologies in order to widen the range of Arabic solutions for People with Disabilities. All visitors to the Mada booth expressed great interest in learning about the full potential of the latest innovations in assistive technology devices. Visitors were also made aware of Mada's commitment towards encouraging innovation in the field of Arabic Assistive Technology by supporting entrepreneurs and developers to create solutions through the Mada Innovation Program of which some were also featured in Mada's corner.

Mada Center provided access to the latest information and best practices in order to ensure optimal accessibility through assistive technology. The Center also ensured access to the latest and most important technologies through building partnerships with various partners to meet international standards and facilitate the use of technological devices for persons with disabilities

International Conference on Information & Communication and Accessibility (ICTA) 2017

ICTA is a bi-annual international conference on ICT & Accessibility. The sixth edition of ICTA 2017 was held in Muscat, Sultanate of Oman. The conference explored several areas related to ICT, Accessibility of people with disabilities and education with special focus on Technology Enhanced Education for people with disabilities.

Mada participated by presenting a scientific paper entitled “How could robots improve social skills in children with Autism?”. Mada participation was a contributed towards highlighting the potential of individuals with HFA like Mursi Seraj, who also got the opportunity to discuss his prototype “Using NAO Robot to improve educational skills in low functioning children” with experts from around the world. The scientific paper “How could robots improve social skills in children with Autism?” is now indexed in well-known scientific library such as Google Scholar, IEEE Xplore and DBLP.



Raise Awareness of Arabic AT, Innovation and Research in Mada

Nafath Newsletter

Mada launched Nafath Magazine, with the aim of keeping our stakeholders and communities informed about assistive technology. Nafath digital newsletter is published every three months and is available online at Mada Website and there is also a printed version. NAFATH discusses our latest achievements, research, trends and insights into ways companies can become more accessible to PWDs. While the focus of the newsletter is on the region itself, Mada also look at international best practices and how we can learn from them to improve our offerings and enhance our community in respect to what it offers to PWDs. (Qatar Assistive Technology Center “Mada”).

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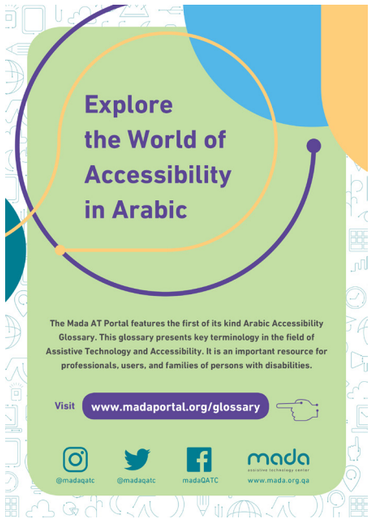
Articles in Nafath promoting Arabic Innovations, AT and Accessibility

Mada AT Portal

“Mada AT Portal” serves as a leading AT and Accessibility information resource connecting professionals, parents, AT users, and developers to e-Accessibility and assistive technology solutions. The portal provides the necessary information and data about various devices and programs that people with disabilities can use. All assistive technology products were classified according to disabilities: visual, hearing, physical, communication and learning disabilities. In addition, the portal provides detailed information on the AT solutions suppliers, beneficiaries, latest updates, and approximate prices.



Since the launch of the Mada AT Portal, its role has been to promote the development of Arabic digital content, introduce assistive technology, and encourage Qatari and Arab innovators to develop unique innovations that have greatly contributed to the empowerment of people with disabilities in all domains at the national and regional levels.

The Mada AT Portal features the first of its kind Arabic Accessibility Glossary. This glossary presents key terminology in the field of Assistive Technology and Accessibility. It is an important resource for professionals, users, and families of persons with disabilities.

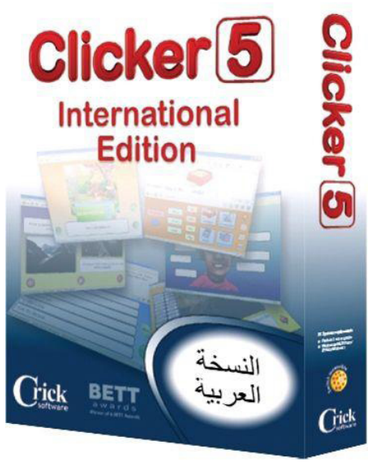
Previous Mada Supported Innovations (Pre-2017)

Clicker 5

Area of Disability
Learning Difficulties

Description
Clicker 5 is a software designed to help struggling readers, writers and English language learners to access support tools they need at school, work or home. The program can help individuals with Dyslexia, Learning Difficulties, Speech or Language Impairments, Physical Disabilities, Low Vision, Autistic Learners, and Downs Syndrome. The program has a word processor on top and a grid with different cells that contains letters, words or phrases to help children to write sentences without typing them. Additionally, it allows the user to hear before writing and even highlights the text as it's spoken. Furthermore, it allows users to write with pictures and animate their writings. Also, the program provides free learning resources as well as it allows the user to create his own sets of grids, links them, and have full-screen grids. As well, it supports voice recording, MP3 sounds and MPEG videos.

Mada has supported the development of and Arabic localization of Clicker 5.



Mada Reader Writer

Area of Disability
Learning Difficulties

Description
This product contains two applications Reader and Writer which provide reading and writing support in Arabic. Reader is a handy little program for reading text aloud. You can select text from any program, whether a news item in your web browser, a report in Word, an email or whatever you need. The text is displayed in the Reader window and is then spoken aloud automatically or as a result of selecting the Play button. When writing any sort of document, Writer helps you type more efficiently. It monitors the text you write and uses prediction to suggest words as you type. There are several options that allow you to personalize the software.

Mada has supported the development of and Arabic localization of Mada Reader Writer.

Big Keys

Area of Disability
Learning Disability, Visual Impairment, Low Vision

Description
Big Keys keyboard provides clearer larger targets, with color coding to help users in the learning process. It has 60 large keys and offers access to function keys. Big Keys are available with uppercase letters with either colored or white keys in a QWERTY keyboard layout in a US Format. Mada helped in localizing an Arabic version of the Big Keys keyboard applicable for users in Qatar and the Arab region with certain learning and/or specific visual disabilities allowing them to have better access to information and ease their communication and learning process.

Perkins SMART Brailler

Area of Disability
Blindness

Description
Smart Brailler is an AT that can be used to teach braille to individuals with blindness. The device allows sighted teachers to collaboratively work with blind students. The Arabic localized version of the Perkins Smart Brailler fills the necessary requirement for an Arabic Smart Brailler device for blind and visually impaired people. The role of Mada in Arabic localization of Brailler was to collaborate with the manufacturer to develop the necessary Arabic translation of all texts such as menu heading translation and displayed contents in screens and all guidelines to write messages from right to left.

Bookshare

Area of Disability
Learning Disability, Visual Impairment, Low Vision, Physical Disability

Description
Bookshare is the world's largest online library of accessible eBooks for people with print disabilities who cannot effectively read from printed material in the standard way because of a visual, a physical, a perceptual, a developmental, or a learning disability. Bookshare offers the world's largest collection of accessible digital books, allowing people of all ages, as well as schools and many organizations around the globe to access the books they need for school, work, career advancement, skills development and the simple love of reading in formats that work for them.

Bookshare

Mada collaborated with Bookshare by offering Arabic reading materials to help students comprehend better through accessible reading content, learn at their own pace and encourage them to read more often. The partnership also facilitated the provision of free Bookshare accounts to eligible users in Qatar.

Dolphin Easy Converter Arabic

Area of Disability
Learning Difficulties, Dyslexia, Vision Impairment, Low Vision

Description
Dolphin Easy Converter is a tool to create accessible documents and media by allowing to convert files one format to another. The solution integrates into the user's current workflows and processes requiring no previous experience in creating alternative formats.

The supported output formats are Large Print, MP3, DAISY, Audio, Braille from the input formats such as Word, PDF, text, html, scanned text and other file formats.

Mada helped in the development and Arabic localization of Dolphin Easy Converter.

Dolphin EasyConverter

Claro Read

Area of Disability
Learning Difficulties, Dyslexia, Vision Impairment, Low Vision

Description
ClaroRead is a software program that helps to read, write, and study. It supports reading any on-screen text out loud and helps improve the user's writing skills in Microsoft Word. ClaroRead Plus and Pro are able to read aloud scanned paper books and documents. The software could read content from Microsoft Word, Adobe Reader, OpenOffice/ LibreOffice and Internet Explorer with speech and highlighting for the user to follow the text as it is read out. It can also read text in email, webpages, and any other program you want by selecting with the mouse, pointing with the mouse, or capturing from the screen.

Mada helped in the Arabic localization and testing of Claro Read Arabic.

BRACI App

Area of Disability
Hearing Impairment, Deaf

Description
The BRACI app can pick up and notify the user about many different types of sounds which revolve around safety, security and comfort (e.g. safety alarms, doorbells, telephone, etc.). The notification can be sent to a compatible smart watch which can be worn by the user at all times.

BRACI app is innovative that benefits users who are deaf or hard of hearing.

Mada helped fund the development and Arabic localization of BRACI apps.

TweetDeck

Area of Disability
Physical Disabilities, Visual Impairment

Description
TweetDeck is a social media dashboard application for management and operation of Twitter accounts. TweetDeck consists of a series of customizable columns, which can be set up to display the user's Twitter timeline, mentions, direct messages, lists, trends, favorites, search results, hashtags, or all tweets by or to a single user. All columns can be filtered to include or exclude words or tweets from users. Tweets can be sent immediately or scheduled for later delivery.

Mada had helped in the development of TweetDeck to be designed as an accessible application.

GRID 2

Area of Disability
Communication Impairment

Description
The Grid 2 is a software designed for people with limited or unclear speech that allows them to use a computer as voice output communication aid by using symbols or text to build sentences. The software allows user to access the Windows desktop and other programs, with the built in Computer Control features. In addition, it allows users to send and receive email and SMS messages, browse the web, listen to music, and more. Furthermore, it supports eye gaze, switches, headpointer, touchscreen, mouse, and other options.

Mada had helped in the Arabic localization of GRID 2 by offering translation feedback and subject matter expertise.

AT Bar

Area of Disability
Learning Difficulties, Dyslexia, Vision Impairment, Low Vision.

Description
AT Bar allows to change the look and feel of webpages, increase and decrease font sizes, have text read aloud, use colored overlays, readability and a dictionary to aid reading. Spell check forms and try word prediction when writing. It is a simple tool which is available for browsers. AT Bar can help those with low vision, dyslexia, other reading difficulties as well as those who may wish to just reduce the glare of black text on bright white backgrounds.

Mada has supported the development and Arabic localization of AT Bar in collaboration with University of South Hampton in UK.

QuickRes

Area of Disability
Vision Impairment, Low Vision.

Description
This application allows to quickly change the resolution of the computer screen to low, medium or the default and back at the click of a button to help people requiring high color contrast and large fonts to use the computer more effectively.

Mada has supported the development and Arabic localization of QuickRes.

Washer

Area of Disability
Learning Difficulties, Vision Impairment, Low Vision.

Description
There are some software applications which attempt to correct for the varying types of color blindness by adjusting specific colors, however these rely greatly on the user having a standard form of color deficient vison. Washer simply renders everything underneath its window in a grey scale format, thus catering for a high proportion of color deficiencies. The software itself is very simple to use. When started it will display anything beneath the main window in shades of grey and can be dragged around the screen to select different areas.

Mada has supported the development and Arabic localization of Washer.

Sonar

Area of Disability
Learning Difficulties, Vision Impairment, Low Vision.

Description
Sonar provides an expanded ring around the mouse pointer for users who have difficulty locating the pointer. This application places a permanent ring around the pointer along with the option to vary the color of the Sonar ring.

Mada has supported the development and Arabic localization of Sonar.

VU-Bar

Area of Disability
Learning Difficulties, Dyslexia, Vision Impairment, Low Vision.

Description
VU-Bar is a software that provides an on-screen slotted ruler to distinguish each line of text. This is particularly useful for people with dyslexia, when the user skips lines or drops from one line to the next. The software allows the user to select the bar width between 25%, 50%, 75% or 100% of screen width and set the slot height to the required font size. The software also offers the option to lock the bar onto the mouse pointer for movement, as well as improved keyboard movement options.

Mada has supported the development and Arabic localization of VU-Bar.

Mouseketeer

Area of Disability
Learning Difficulties, Dyslexia, Vision Impairment, Low Vision.

Description
Mouse clicking replacement software. It can carry out left click, right click, double click, highlight and drag-drop actions.

Mada has supported the development of and Arabic localization of Mouseketeer

RapidSet

Area of Disability
Learning Difficulties, Dyslexia, Vision Impairment, Low Vision.

Description
RapidSet is a software that allows quick and easy changing of the background and font colors, without having to go through the Screen Properties dialogs.

Mada has supported the development of and Arabic localization of RapidSet.

KwikLoupe

Area of Disability
Vision Impairment, Low Vision.

Description
KwikLoupe is a screen magnifier software. Its magnification ranges from 2x to 64x with a quick locate option to position the viewing window. The tool magnifies the area around the mouse pointer.

Mada has supported the development of and Arabic localization of KwikLoupe.

Tbar

Area of Disability

Learning Difficulties, Dyslexia, Vision Impairment, Low Vision.

Description

T-Bar is a colored bar which the user can either drag around the screen or lock the mouse. This software is particularly useful for individuals with Scotopic Sensitivity. It can have ruled lines or not, depending on user's preference. The color can be chosen from pre-defined options, then tweaked by altering the red, green or blue sliders to get the preferred color, the transparency level can be adjusted, again to suit the individual. All the settings are saved between sessions for the user's convenience.

Mada has supported the development of and Arabic localization of Tbar.

Edgeless

Area of Disability

Learning Difficulties, Physical Impairment, Vision Impairment, Low Vision.

Description

Edgeless is a software that allows the mouse pointer to wrap around the screen instead of stopping at the edges. It can be configured to start at Windows startup if required. The user can choose to wrap on all sides, just horizontal or just vertical - note to maintain portability, this option must be set for each session. This software capable of supporting up to 2 monitors.

Mada has supported the development of Edgeless.

madaQATC madacenter

www.mada.org.qa