2022 WITSA Global Innovation and Tech Excellence Awards
Nomination Form

The 2022 WITSA Global Innovation and Tech Excellence Awards (formerly known as *the Global ICT Excellence Awards*) will be presented to select individuals, academic institutions, corporations, NGOs or governments whose use and applications of digital technologies exhibit exceptional achievement within the following broad categories:

Private Sector/NGO	Public Sector
Digital Opportunity/Inclusion Award	Digital Opportunity/Inclusion Award
Smart Cities Award	Smart Cities Award
Sustainable Growth/Circular Economy Award	Sustainable Growth/Circular Economy Award
Innovative eHealth Solutions Award	Innovative eHealth Solutions Award
Public/Private Partnership Award	Public/Private Partnership Award
E-Education & Learning Award	E-Education & Learning Award
Emerging Digital Solutions Award	Startup Ecosystem Award

In addition, a *Chairman's Award* will be presented to a nominee selected from the entire pool of candidates from all award categories.

Candidates for these Awards are nominated by ICT experts from around the world who span over 80 countries/economies. The 2022 *WITSA Global ICT Excellence Awards* will take place in conjunction with the September 13-15, 2022 World Congress on IT in Penang, Malaysia (**https://wcit2022.com/https://wcit2021.org.bd/**).

Sustainable Growth/Circular Economy Award

Award #1: Individuals, academic institutions, corporations, or NGOs
Award #2: Government authorities

Award Criteria-There is an urgent need for transition to a more sustainable and circular socio-technical systems - now is the best time when we can witness how the health of the planet is connected to the human well-being and vice versa. The most accepted definition of the sustainability is defined by the Brundtland Commission in 1987; sustainability is seen as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Circular Economy (CE) can be defined as a regenerative system in which resource input and waste, emission, and energy leakage are minimized by slowing, closing, and narrowing material and energy loops. This can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling.

As the UN's 2030 deadline for change fast approaches, we explore what role the circular economy has to play in mitigating the impacts of climate change and how the technology industry can learn from it. It is a popular idea as it places an emphasis on designing out waste and pollution, thus keeping products in use for longer and facilitating the regeneration of natural systems. Now, as the world faces an imminent

climate crisis, the IT and technology industries are starting to sit up and notice. ICT systems have influenced every aspect of modern life and the CE is no exception. Cutting-edge technologies, such as big data, cloud computing, cyber-physical systems, internet of things, virtual and augmented reality, and blockchain, can play an integral role in the embracing of CE concepts and the rollout of CE programs by governments, organizations, and society as a whole. Many countries are advancing circular electronics initiatives to encourage longer product lifetimes, but legal, policy, and economic support must exist for an open repair environment to motivate consumers to opt for repair over replacement.

This award will recognize Individuals, academic institutions, corporations, NGOs or governments that adopt effective and innovative local, regional or global initiatives that promote local production and use, local renewable energy sources, and adoption of circular and participatory practices for circularity in digital devices, software, internet access and services.

YOUR NOMINEES (limit three nominations per award category). *Please specify whether the nominee(s) are for the private or public sector category*.

Private/Public Sector: Private

Project Name: RDA DCWiz enabling Sustainable Data Centres of the Future

REASONS FOR NOMINATION (NOTE: It is important that you make a <u>detailed description</u> of the nominee and why you think the nomination is justified. The absence of a detailed summary of qualifications as they *relate* to the above-mentioned award description will make it difficult for the awards committee to make an appropriate assessment of the candidate):

SUPPORTING INFORMATION: Please send any supporting information to the address above, including information from candidate (i.e. excerpt from program description, web site print-out, press release, etc.)

Red Dot Analytics Pte Ltd (RDA), a deep-tech spin-off from Nanyang Technological University (NTU) Singapore, is a pioneer in developing Artificial Intelligence (AI) and Digital Twin (DT) technologies to improve the sustainability, agility, and resiliency of operating mission-critical infrastructures. Its award-winning cognitive digital twin platform (DCWiz) empowers data centres to digitalise, optimise and automate toward greater business resilience and environmental sustainability.

First of its kind innovation DCWiz provides organisations with data-driven actionable insights into mission-critical environments and has been proven to reduce operational complexity, carbon emissions and achieve greater energy savings. Using real-time and historical operational data from a wide range of equipment in a data centre,

the platform facilitates the creation of self-labelled operational datasets used to construct AI models and validate AI-recommended actions for risk-return profiling. This enables data centres to predict, quantify, and visualise the impact of any change before it is implemented in the physical environment. Thus, enabling better-informed decisions.

RDA harness the power of advanced machine learning algorithms for several use cases, including design/change validation, what-if analysis, PUE/CUE/WUE optimisation, capacity planning, and predictive maintenance life-cycle management for green and brown built data centres. DCwiz is highly scalable and can be configured to manage assets regardless of equipment type, vendor, or age in a single data centre or across multiple sites shifting from traditional data centre monitoring tools to impactful and actional insights for resilient operations and improve data centres' efficiency and sustainability.

RDA aims to transform mission-critical environments into Sustainable, Agile, and Intelligent with Smarter Decisions.

Website: www.rda.ai

Project References:

RDA has been deploying DCWiz in Data Centres since 2018. Our very first proof of concept partner was Alibaba Group, which currently owns 21 hyperscale Data Centres. DCWiz entered a Phase 1 proof of concept with Alibaba Group for their Data Centre in Zhangbei, China. After being deployed on their 11/11 Cyber Sales Day in 2018, DCWiz resulted in a 90% CAPEX reduction for sensors in their facilities and a reduction of OPEX spending on stress testing from one month to just a week. 11/11 in 2018 generated a sales flow of 30.75 million dollars. Alibaba had a media release shortly after the end of Phase 1, hailing DCWiz as a "…effort to move "from zero to one", as it marks the first completion of a real-time, high-precision sandbox system to help Data Centre operators validate whether a change will cause issues, thus reducing the chance of outages." Our work with Alibaba successfully showed results in which AI predictions were within 1°C. We have now finished a Phase 2 and will be entering a Phase 3 with Alibaba Group shortly hereafter.

Following our partnership with Alibaba, DCWiz was then sought after by a local partner, the National Supercomputing Centre (NSCC) Singapore. We helped them save SGD $6,000 a month on energy bills. Using DCWiz, we identified inefficiencies in physical construction design, which our system proposed low-cost adjustments to resolve. In the end, NSCC's Power Usage Efficiency (PUE) was lowered from 1.35 to 1.30 with a simple, low-cost fix.

These two key proofs of concept partners allowed RDA to jumpstart our current timeline towards a minimum viable product. Since these two deployments, we have worked with commercial clients such as a local bank and the IMDA-NTU Data Centre. We are also working with the AISG-NUS Data Centre on their design validation prior to construction as a current project. RDA at this moment is using these experiences with existing clients to complete and refine a minimum viable product that will include an increasingly short lead-time to deployment, a user access interface for facility operator usage, and to amass quality data and experience for the AI algorithm for even more efficiency and safety beyond what it already is right now. RDA future plans include a standardization of the product for widespread adoption in the data centre industry, and further modular adaptation of our core technology towards vertical industries.

Please refer to attached document for case study details

- RDA-DCWiz-Case-Brief_Alibaba
- RDA-DCWiz-Case-Brief_NSCC

Media Coverages:

- **Energy guzzlers: Data centers and the question of sustainability**

https://www.techinasia.com/energy-guzzlers-data-centers-question-sustainability

- **RDA and MVGX partner for sustainable data center development**

https://datacenternews.asia/story/rda-and-mvgx-partner-for-sustainable-data-center-development

- **A Journey to Smarter, Sustainable and Greener Data Centers of the Future**

https://www.bdxworld.com/post/a-journey-to-smarter-sustainable-and-greener-data-centers-of-the-future

NOMINEE CONTACT INFORMATION (for award follow up and coordination)

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