

Sci-TechKn  *Fest*
2.0 2022
THE DEEP TECH *REVOLUTION*

Call for Collaborators

A GUIDE TO PARTICIPATING IN SCI-TECHNOFEST 2.0
& TIPS FOR CREATING VIRTUAL EXPERIENCES



Get Involved



Are you a company, organisation or institution that provides products, services and/or conducts research in the areas of science, technology, and innovation (STI)? Or do you, as an individual, have amazing and fascinating STI to share with learners?

Look no further, Sci-TechKnoFest 2.0 powered by **NIHERST** is for you!

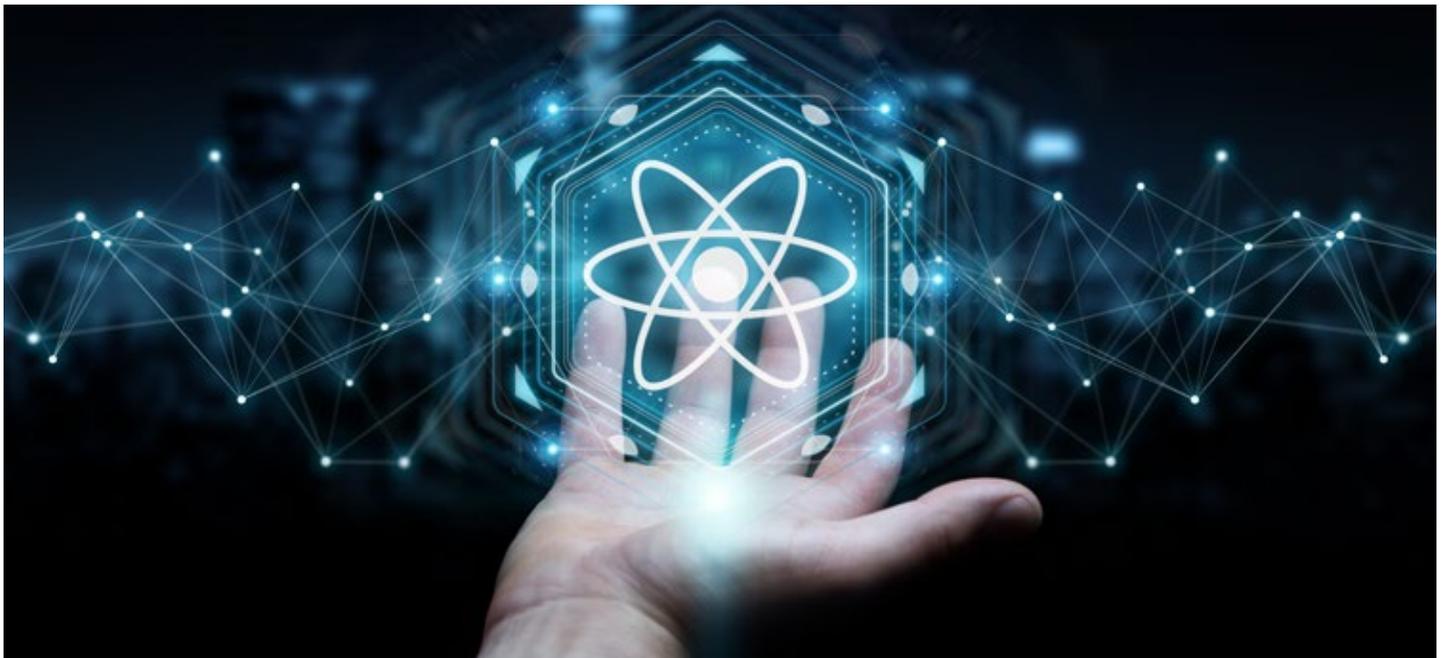
With our platinum social investment partner, **Shell Trinidad and Tobago Limited**, this **virtual edition** is designed to guarantee the safety of all stakeholders.

The 2022 Sci-TechKnoFest, fondly called Sci-TechKnoFest 2.0 (STKF 2.0), will be accessible with just the click of a button via an immersive online event platform.

That's right! With just a few clicks, audiences will be able to access an interactive world of **Science, Technology, Research, Engineering, Arts, and Mathematics (STREAM)** activities, presentations, conversations, and experiences.

With an expected regional engagement in the tens of thousands, this **seven (7) day** festival will take place over the period **21st – 27th March, 2022**. This fun-filled week of virtually delivered interactive activities and performances that celebrate the excitement of STREAM in the Caribbean region is **FREE** of charge and caters to all, from preschool to senior citizens.

STKF 2.0 Theme



As previous festivals, there is also a theme attached to STKF 2.0 – ‘**The Deep Tech Revolution.**’ In addition to its classic communication of educational content in STREAM areas, STKF 2.0 is intended to highlight and provide a space for discussion and education about Deep Tech and the emerging technologies it powers; identifying how we could all prepare for and benefit from understanding the radical effects it will bring to our lives.

COVID-19 has expedited these changes, rapidly increasing the crucial role advanced technology will play in our lives. Now is the time for digital transformation and leveraging the use of Deep Tech applications.

The 2020 global pandemic of COVID-19 changed our lives and the world we live in forever. This historical pandemic has accelerated

the demand for technology in multiple fields and industries and triggered approaches on how we can optimise the use of technology to accommodate the needs of this new world, as the way we work, travel, communicate, and spend time will never be the same again. It’s important to imagine the world we may find ourselves in, in the very near future...

According to MIT Deep Tech Bootcamp co-founder, Joshua Siegel: “A ‘Deep’ Technology was *impossible yesterday, is barely feasible today, and may soon become so pervasive and impactful that it is difficult to remember life without. Deep Tech solutions are reimaginations of fundamental capabilities that are faithful to real and significant problems or opportunities, rather than to any one discipline.*”

STKF 2.0 Theme



Deep Tech movements include **Artificial intelligence (AI)**: A machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. (OECD 2019).

Extended Reality (XR): An umbrella term for all technologies that extend the reality we experience by either blending the virtual and “real” worlds or by creating a fully immersive experience – augmented reality (AR), virtual reality (VR) and mixed reality (MR). (Forbes 2019).

3D Printing: Also known as additive manufacturing, it is the construction of a three-dimensional object from a CAD model or a digital 3D model.

Internet of Things (IoT): A term which describes physical objects that are embedded with technologies which enable them to connect and exchange data with other devices over the Internet, without the active involvement of individuals.

Blockchain: A form of distributed ledger technology that acts as an open

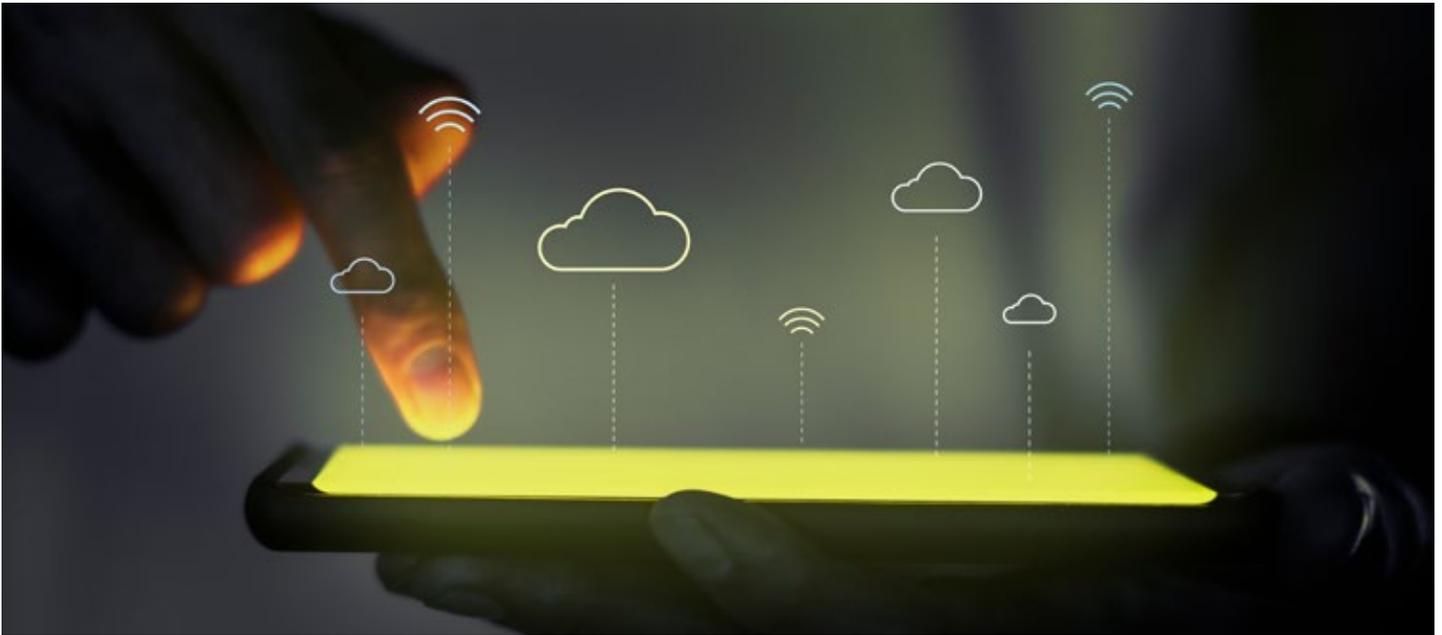
and trusted record of transactions from one party to another (or multiple parties) that is not stored by a central authority. (OECD 2018).

Autonomous vehicle: Self-driving, driverless or robot cars that can sense their environment and move safely with little or no human input.

Quantum computing: The exploitation of collective properties of quantum states, such as superposition and entanglement, to perform computation. The devices that perform quantum computations are known as quantum computers.

The beginnings of these revolutions are already here – they’re happening around us right now! The emerging technologies produced out of these applications are gradually integrating themselves into our daily lives. They are transforming how we will function in the next decade: manufacturing will change, as will agriculture, sales, design, logistics, finance, medicine, work, life – everything. We live in a world increasingly dominated by technology and those who recognise that this is where the opportunities lie, will succeed.

Collaborate with Us



As a collaborator, you will have opportunities and increased confidence to reach and engage your target audiences and showcase your products, services and/or research through the vehicle of STKF 2.0. The regional science festival also has the potential for you to recharge and energise relationships and partnerships with various stakeholders and the community at large.

We are looking for inspiring virtual experiences; thought-provoking discussions and panels, creative performances, and short films, engaging hands-on experiences, interactive exhibits and engaging talks, games, literature, and videos, that educate and bring STREAM professionals and audiences together with other relevant voices to help us deliver our festival in March 2022.

You will be responsible for conceptualising, planning, and hosting your own content during the festival. You will have the creative freedom to develop your activity suitable for virtual delivery; **pre-recorded material and real-time (live) interaction are both options**. Whatever you choose, we highly recommend that your proposed virtual experience:

- **Stimulates Curiosity** – sparks interest in STREAM and inspires audiences
- **Promotes Innovation and Creativity** – is engaging, fun and showcases STREAM, innovation, and creativity
- **Incorporates Interactive Learning** – utilises interactive and/or hands-on learning STREAM activities

Creating Virtual STREAM Experiences

Showcasing and communicating STREAM is easier than you think. Here are some 'Think About' guidelines for you to consider when you are conceptualising and bringing your experience to life.



There is a world of possibilities when it comes to planning your content. Whatever you decide, keep in mind that the festival ultimately aims to engage everyone and showcase the relevance of STREAM in their daily lives. It's also an opportunity to present and discuss new areas of research and provoke thought about issues raised by science, technology, and innovation.

Here are some example options to consider:

- Showcasing your science, technology, and innovation research, products, and services and/or share the behind-the-scenes action that give audiences insight into your operations and help them to understand your goal and impact
- Focusing on factors that drive the economy, with emphasis on the correlation between your science, technology, and innovation area(s) and economic development
- Incorporating the theme, *The Deep Tech Revolution*, by highlighting Deep Tech trends, your creation/ use of its emerging technologies

and/or linked research and sustainable applications in the context of our current environment and adapting to the 'post-COVID' world

- Demonstrating STREAM concepts and its application to our everyday lives
- Presenting new research, new ideas and interesting angles on STREAM topics, taking into consideration the moral and ethical implications of science and technology on society
- Sharing career paths – e.g., telling kids and parents what it's like to be a STREAM professional and help them to see that STREAM is important and presents lucrative opportunities
- Selected collaborators will be required to submit content, for review of relevance and appropriateness. Your content must be family-friendly and safe and Intellectual Property rights and permissions must be approved (where applicable) for sharing and public use.

Creating Virtual STREAM Experiences

2

Think About Your
FORMAT



The COVID-19 pandemic has certainly imposed limitations on the delivery of the festival experience – we've gone entirely digital. We know what you're thinking: *How much can one really do in a virtual environment?* Our response: *You'd be surprised.*

When planning your experience, keep in mind that learners absorb information through their sensory mechanisms – seeing, hearing, touching, etc. As such, a good experience will usually incorporate a variety of modes to engage as many people as possible and encourage some level of 'participation'. In the virtual environment, 'participation' can range from communication-based, e.g., discussions and dialogue, to authentic learning, e.g., immersive VR/AR (Virtual Reality/Augmented Reality) and Do-It-Yourself interactive simulations and hands-on activities. Authentic learning is the interface between *'true to life' tasks, activities, and practices and their replicated counterparts in virtual environments, such that learners are forced to engage and react in a similar manner as they would in a "real" situation.* (Reiners, 2014)

Whether your experience is pre-recorded, live or a mix of both, keep your audiences active. Remember they will be at home experiencing the festival so think carefully about how you can

get them engaged with your experience immediately. A design tip to increase engagement and interactivity levels is to include gamification elements in your experience. *Gamification is the use of game mechanics to digitally engage and motivate people to interact with key information and resources.* Examples include scavenger hunts, quests/challenges, and digital games. Making use of digital interactive tools such as *Kahoot!*, *Mentimeter* or *Slido*, can also be a great way to engage audiences. The virtual event platform will also provide opportunities to gamify your experiences.

Some common virtual experience formats are listed below. You can also consider combining them to deliver unique experiences.

- Presentations/Talks
- Panel Discussions
- Debates
- Performances/Shows (including cultural)
- Videos, Short Films and Episode Series
- Workshops
- Digital Brochures/Posters
- Competitions and Challenges
- Virtual Exhibits, e.g., web-based activities and simulations, VR/AR

You should also consider ways for audiences to continue to learn more about your topic, after the festival. e.g., directing them to your personal or organisation's website.

Creating Virtual STREAM Experiences



3 Think About Your AUDIENCE



The festival is open to all audiences, from preschool to senior citizens. Your virtual experience can either cater to a specific audience within this range, e.g., university students, teens, senior citizens, etc.; or simply be adaptable and suitable for all ages.

Generally, Sci-TechKnoFest audiences are made up of interested members of the public assumed to have minimal or no expert level of scientific or technological knowledge. However, there are also those who may expect a lot of scientific detail and explanation. Some may be more interested in non-scientist perspectives while others may

be interested in the ethical and societal implications of the various topics being explored and discuss. There are also those who may be underrepresented in STREAM careers and industries, so you may choose to appeal to specific target groups as well, e.g., addressing gender gaps by catering an experience specific to a gender. What we do know is that across the board, our audiences usually expect to learn something new, feel entertained or both.

Though we cannot guarantee an audience for any specific experience, we can assure that the Festival will be heavily promoted and that we will do our best to provide additional publicity and support for experiences that are booking slowly.

Creating Virtual STREAM Experiences



4 Think About Your ABILITIES

Make sure that you have enough persons to conduct your virtual experience effectively, and to staff your virtual space (where applicable). You can consider having an expert on hand during reasonable hours and let visitors interact with real scientists and/or engineers.

To boost engagement, ensure that persons are pleasant and inviting with the abilities to captivate and keep participants interested. Smile and keep the lines of communication open; this is especially useful when presenting in a virtual environment. The virtual event platform will contain a variety of

features that you may choose from to interact one-on-one with your audiences at scheduled intervals.

To get you brainstorming, click the hyperlinks below to be inspired by ideas from other recently hosted virtual science festivals:

- [Sample Experience 1](#)
- [Sample Experience 2](#)
- [Sample Experience 3](#)

Submission of Proposals



Submit your [Virtual Experience Proposal Form](#). Please provide enough information as possible, so that we have a full understanding for your activity.

If you have more than one proposal, please use a separate form for each entry you would like us to consider for inclusion in the festival programme.

If you'd like to participate, but aren't sure whether you fit, feel free to reach out via email to scitechknofest@niherst.gov.tt.

STREAM is bigger than you think. STREAM is a way of thinking and includes social sciences, arts about science, science about arts, humanities

based on data, business based on data, and much more. This is an opportunity to show our nation and region the breadth and depth of the work we all do in our various STREAM fields. *Sometimes it is enough to remind everyone that STREAM is not separate to but is also a part of broader culture.*



Review and Selection Process



Keep in mind that spots in the festival programme are limited so we must be selective. In reviewing the proposals, we will be asking ourselves such questions as:

- Is the experience interesting, relevant, innovative, imaginative, and inspiring?
- Does the experience complement our existing programme and/or festival theme?
- Is the experience likely to be popular and attract a good audience?
- Does the experience demonstrate a commitment to best-practice science communication?
- Is the experience of high-quality to audiences?
- Is the experience accessible and inclusive?
- Will the experience help audiences understand that science is a part of their everyday life and something that is relevant?

During the review phase, you may be contacted by a member of our Festival Committee to discuss your submission in more detail. After selection is complete, we will notify you of the outcome of your submission via email.

If you have any questions that have not been answered in this supporting information, please contact us at scitechknofest@niherst.gov.tt. You can also visit the NIHERST website to obtain more information and view the Call for Collaborators FAQ.



Sci-TechK'n  Fest
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THE DEEP TECH *REVOLUTION*



Head Office

Level 13, Ministry of Education Towers

No. 5 St Vincent Street, POS

Trinidad and Tobago, W.I.

Ph: (868) 625-6437, (868) 624-4611

National Science Centre

Corner Churchill Roosevelt Highway and

Old Piarco Road, D'Abadie, Trinidad

Ph: (868) 642-6112, (868) 642-9371



niherst.gov.tt