



International Network
for Governmental
Science Advice

INGSA-GESDA Simulation Game

NEUROTECHNOLOGY WORLD BUILD

Governance of Revolutionary Technology

Allyn Robins (Brainbox Institute), Kristiann Allen and Grant Mills (INGSA),
Marga Gual Soler (GESDA)

3. Workshop Resources



PHOTO CREDIT: Ali Pazani - Pexels

About the Geneva Science and Diplomacy Anticipator Foundation (GESDA): An independent non-profit foundation under Swiss law and a private-public partnership with the Swiss and Geneva authorities, GESDA was created in 2019 to strengthen the impact and innovation capacity of the international community through science and diplomacy anticipation. For more information, please visit the Foundation's website: www.gesda.global

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INGSA is a New Zealand-based International Organisation hosted at the University of Auckland by *Koi Tū: Centre for Informed Futures*, and operating under the auspices of the *International Science Council*.

A: Private Bag 92019, Auckland 1142, New Zealand | T: +64 9 923 8929 | E: info@ingsa.org
W: www.ingsa.org | Twitter: [@INGSciAdvice](https://twitter.com/INGSciAdvice)



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NEUROTECHNOLOGY WORLD BUILD

Governance of Revolutionary Technology

Printing

We recommend printing one copy of this Workshop Resources Document PER TABLE OF 8







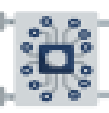
It contains:

- the TEMPLATE document that each team will need to fill out during the workshop
- Copies of the 10 CHARACTER CARDS needed to play the game. Cut these out along the solid lines and fold along the dotted lines to produce Table cards.

Response template

The blank TEMPLATE on the following page should be copied and issued to each team for each round of 'world-building' for which the workshop timing allows. It is designed to help guide participants' ideas about potential areas of intervention. Teams are encouraged to generate possible responses in each sector. Response ideas might range from awareness raising campaigns through to stringent regulations. Deciding on the 'mix' and 'level' of governance response is all part of the debate!

3. Workshop Resources

	<p>Other ideas...</p>	
	<p>Capabilities Building and Workforce Development</p>	
	<p>Building Awareness and Social Licence</p>	
	<p>Scientific and Cultural Collaboration</p>	
	<p>Intellectual Property Rights and Regulation</p>	
	<p>Targeting Investment and Funding</p>	
	<p>Hardware and Supply Chain Access</p>	

Head of Neuroscience Department – Bria National University

A relatively young and dynamic academic, who has enjoyed a lot of popular international coverage as one of the trusted faces of the neuroscience revolution. Post-PhD they had several roles in R&D within industry, including at Medormar Corp. Though this was a long time ago, they were crucial in approving Medormar's 'first-right-of-refusal' agreement with Bria University.

As a person, they are driven by prestige and public recognition and want their department to have continued high publication and community impact. One of the ways they see to do this is to attract the Leading Neurotech Researcher at Solte University with the promise of huge grant funding, thereby also weakening the competition they face from Solte University.

Medormar Corporation CEO

Medormar Corp is a large multinational headquartered in Bria, with business units in most markets, from aerospace sensors to chocolate biscuits. The CEO is regularly in the news and has a reputation for bold (some say reckless) investments. Their latest high-profile investment is in neurotechnology and the company leads competitors for investment in this field globally. They have a habit of injecting themselves into high-level negotiations on topics for which they have a commercial interest.

The CEO is an alumnus of Bria National University (BNU) and long-term associate of the Head of the Neuroscience Department at BNU. This has led to Medormar having a first-right-of-refusal with BNU to commercialise any IP produced in neurotechnology. Medormar Corp is one of the biggest causes of 'Brain Drain' of skilled workers from neighbouring countries, Solte and Wakke, but the CEO of Medormar is not bothered by this.

Minister for Science and Technology Bria Government

The Minister for S&T is one of the more socially progressive members of the Government and believes that Bria's neurotechnology sector should be used to address health and social inequality. They are worried about the dual use of the technology, yet have to promote the \$500 million investment that the government has promised in order to maintain competitive advantage. It annoys the Minister that the CEO of Medormar Corp has essentially claimed credit for the government's investment.

The Minister is attending the conference at BNU to lend support to the development of responsible principles of neurotechnology development, even if it were to inhibit the industry's profitability. Personally, they would rather be remembered for supporting ethical use of the technology than simply securing a regulation-free zone for commercial interests.

Leading Neurotech Researcher (Solte Tech University but born in Wakke)

The Leading Neurotech Researcher was attracted to the Solte Technical University by the culture of free experimentation but with a general understanding of the ethical implications of tech advancement. This differed from Bria University and Medormar Corp's focus on commercialisation pathways that threaten to make access to the technology inequitable, and also fitted better with their desire for making technologies that could improve the lives of the people of their native Wakke.

Personally, they are faced with a decision: Bria can offer huge amounts of funding for research; WK Tech in Wakke provides an opportunity to immediately start impacting lives in their home country; and Solte has been a long-term, stable, and encouraging place to work.

Vice-Chancellor Solte Technical University

The VC is towards the end of their career, but is concerned about how to keep the university globally relevant – Solte's burgeoning capacity in neurotechnology has been good for the university's reputation, but most international R&D funding and the best researchers still flow to Bria National University (BNU).

To help bolster the University's position, the VC is considering signing a deal with Medormar Corp to assist with commercialisation, an area that Solte Technical University (STU) is lacking in.

Yet the VC also wants to ensure that Solte's Leading Researcher is not lured by either BNU or WK Tech and knows this ITGO meeting is an opportunity for both to make advances to the Researcher.

Minister for Foreign Affairs (Solte)

The Minister for Foreign Affairs is one of the longest serving members of the Solte Government. In their decade of service in the role, much of their time has been managing the border situation with Bria, successfully stopping their larger neighbour from claiming the resources in the disputed region. As such, many Bria citizens are hostile to the Minister as the person they consider responsible for the tension.

Yet the Minister is invited to the ITGO meeting as Solte is involved in most of the science diplomacy agreements and initiatives of this type. The Minister is also keen to solidify Solte's growing reputation in neurotechnology, and ensure that Bria does not have an opportunity to tilt the discussions to their sole benefit.

Wakke Ambassador to Bria

Since the country of Wakke is so dependent on foreign developmental aid from Bria, the government of Wakke is always wary about being on their wrong side. Wakke has little start-up or innovation capacity, and WK Tech is their only neurotechnology company. Yet they know that if they are not at the table when it comes to meetings such as ITGO, then the benefits of the technology will pass Wakke by.

The government of Wakke is also interested in securing trade deals, aid, and investment from Solte to help reduce their dependence on Bria, and also to build relationships with Medormar Corp in the hope that they might expand into Wakke and help advance their innovation economy. Ultimately the Ambassador will support whatever position on Neurotech they think best aligns with these goals.

Chief Technical Officer – WK Tech (Wakke Tech Startup)

The CTO of WK Tech is passionate about the possibilities of neurotechnology and ensuring that the tech is available to everyone, not just wealthy elites. They have previously proposed restrictive standards of ethics and even moratoriums on research, in order to give smaller countries a chance to catch up, and to give larger governments the time and space to regulate.

WK Tech is Wakke's most successful start-up and only example of advanced neurotech research. They have been appealing to Solte's Leading Researcher to return to Wakke. If they manage this then they know that it will unlock even greater government support for the company. The CTO believes that more money will be made by enabling everyone to get 'chipped' rather than just a lucky few.

UNESCO Policy Lead for Neurotechnology (International)

UNESCO is a founding partner in the International Technology Governance Observatory so is co-hosting this meeting with Bria National University (BNU). UNESCO's main focus is on ensuring scientific cooperation and policy alignment on neurotechnology between countries wherever possible.

The Policy Lead is excited about the possibility of the technology and believes that many of the health, demographic and social challenges facing society can be minimised by smart and equitable deployment of the technology. They believe that standards and regulation should be proactive but also light-touch, and that if these are done well then they should not impede the pace of innovation and roll-out.

Amnesty International Tech Policy Director

The Amnesty International Tech Policy Director has criticised the close relationship between the Bria Government, the Bria National University, and Medormar Corp – accusing them of essentially using their citizens as test-subjects by fast-tracking commercialisation-above-all-else. The Director has also accused the Solte Technical University of abandoning its own principles by being tempted to follow in Bria’s footsteps.

‘Amnesty Tech’ believes that neurotechnology has the potential to enable massive human rights abuses, and is being developed without regard for the consequences. Nevertheless, they acknowledge its medical potential. They seek to slow the pace of research and put strong safeguards in place.

ABOUT INGSA

INGSA provides a forum for policy makers, practitioners, academics, and academics to share experience, build capacity and develop theoretical and practical approaches to the use of scientific evidence in informing policy at all levels of government.

Anyone with an interest in sharing professional experience, building capacity and developing theoretical and practical approaches to government science advice is welcome to join INGSA.

By signing up to the INGSA Network you will receive updates about our news and events and learn of opportunities to get involved in collaborative projects.

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This simulation was developed under the auspices of the Geneva Coalition on Anticipatory Science and Diplomacy, initiated in 2021 by the Geneva Science and Diplomacy Anticipator (GESDA) encompassing 14 Swiss and global institutions to empower the current and next generation of leaders with a multilingual mindset in science and diplomacy.

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