

**THE PATH TO  
SUSTAINABILITY**

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## Chairman's Message

Hello and welcome to our 2022 edition of WNTI Today. In this, my first year as your Chair, I want to firstly thank my predecessor, David Ohayon, for giving me a strong foundation to build upon and one which enables me to lead the World Nuclear Transport Institute on its next phase of delivery for its members.

It is timely therefore, for me to take this opportunity to share with you my aspirations and ambitions for the World Nuclear Transport Institute in, what is, a time of great potential for our industry.

The world is looking for a sustainable future with the key to this being a drive to net zero through the decarbonisation of energy production and use. Sustainable transport is clearly a significant enabler for this to be realised.

When I took up the WNTI Chair I outlined that I will be looking to drive innovation and creativity within the WNTI work programme. I remain committed to that pledge and will continue to task our Secretary General, Martin Porter, with putting the requisite arrangements in place to refresh our strategy. WNTI needs to deliver contemporary services to its members which are in keeping with the demands and expectations of current and future missions and that address the challenges of our sector. New advanced nuclear reactors, for both energy production and propulsion, will require modern policy and new transport solutions.

WNTI is already anticipating these changes and applying focus to meet the challenges. In parallel, we will advance pre-existing front-end and back-end fuel cycle priorities along with support for the transport of sources and radiopharmaceuticals. We will continue to influence beneficial regulatory change to enable the best outcomes for our members.

“  
**WNTI needs to deliver contemporary services to its members which are in keeping with the demands and expectations of current and future missions and that address the challenges of our sector.**  
 ”

Our position as the voice of the nuclear industry transport sector is strong and our interfaces with our many stakeholders remain healthy. The challenges of the pandemic have demanded new ways of working and many of these will remain with us as we seek to capitalise on some of the opportunities that virtual working has offered globally. I commend the WNTI team and all the members for their efforts throughout this challenging period. Some of our endeavours, however, are optimised by face-to-face delivery, none more so than next year's PATRAM 2022 that we will host in Nice. I look forward to joining many of you in France and in delivering our agenda.

All in all, there remains much work for WNTI to deliver in order to ensure that existing and future nuclear missions are supported by safe, secure, efficient, reliable and sustainable transport solutions and I am proud to be able to lead the WNTI as it rises to meet these expectations.

CHRIS WATSON

WNTI CHAIRMAN



“  
**I will be looking to drive innovation and creativity. The world is looking for a Sustainable future, Sustainable transport is clearly a significant enabler for this to be realised.**  
 ”

CHRIS WATSON





## Secretary General's Message

Welcome to your WNTI Today 2022 at a time where we are all moving into the 'new' normal following an unprecedented period of challenge. Throughout the pandemic I have been immensely proud of the team in the way they have shown unwavering resilience and established continuity of operations. At the time of writing, we look forward to hopefully staging our first face-to-face Semi-Annual Members Meeting in London for two years.

Having taken up the Secretary General role at the onset of the global disruption I correspondingly look forward to meeting everyone over the ensuing months.

In the time since taking up the role I have benefitted from the leadership and direction given by David Ohayon during his time as our Chair. Having welcomed David's successor, Chris Watson, to the role of Chair I now look forward to realising Chris' ambitions for driving creativity and innovation into our delivery for our members and stakeholders. Having worked with Chris for several years in both WNTI and the industry more broadly, I welcome his appointment and am excited by his perspective on our future.

These are exciting times for WNTI and the nuclear sector broadly with the opportunity to contribute to the target of net zero through decarbonisation. Nuclear and radioactive materials have a significant part to play in the future aspirations of many industry sectors, including nuclear energy, medical diagnostics, and radiography. Our mission of safe, secure, reliable, efficient, and sustainable transport is a critical enabler for these aspirations but can only be realised if we show the agility to adopt to a changing landscape. Clearly, working with Chris and our Board, I am excited to lead you at this time of change. Our recent work to inaugurate a new 'Maritime Applications and Nuclear Propulsion Working Group' is an early indication of this appetite to embrace new opportunities and, hopefully, the first of many innovative initiatives.

To deliver our ambitions, it is vitally important that we reach out to our stakeholders and seek to deliver tangible gain outcomes from our collaborative endeavours. We have many interfaces with policymakers, regulators and peer industry groups and these have been maintained, and in many cases strengthened, over the last couple of years. I am enthused by the regard that these bodies have for our WNTI and will do all I can to ensure that we maintain this position throughout my tenure as your Secretary General.

I hope that the excitement that I have for our future is shared by all and I look forward to our engagements in the coming months and years.

**MARTIN PORTER**

**WNTI SECRETARY GENERAL**



“  
**These are exciting times for WNTI and the nuclear sector broadly with the opportunity to contribute to the target of Net-Zero through decarbonisation.**  
 ”

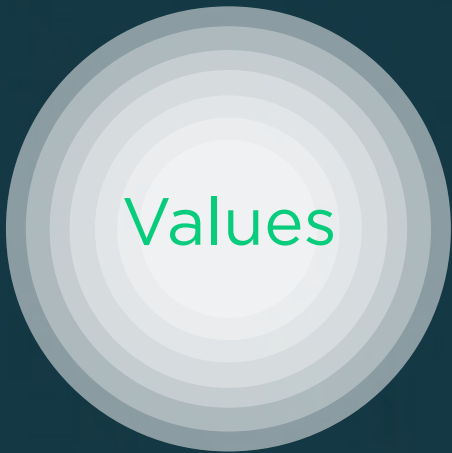
**MARTIN PORTER**



# Who we are



Our Vision is to create global awareness of the safety and security of transportation of all Radioactive Materials.



We value our members by providing a line of communication where they feel involved in every decision that is made. We pride ourselves on being diverse and inclusive, a close-knit of experienced, multidisciplinary, and expert team who are dedicated to our core objectives – ultimately driving excellence.



Dedicated to the safe, secure, efficient, reliable and sustainable transport of Radioactive Materials.

# Our Objectives

1

To promote the continued development and worldwide use of Nuclear Power:

2

To support, consult and participate in the work of governmental and non-governmental bodies in regulating and promoting safe transport of Nuclear and Radioactive Materials.

3

To maintain a forum to communicate good practice, innovation, and views.

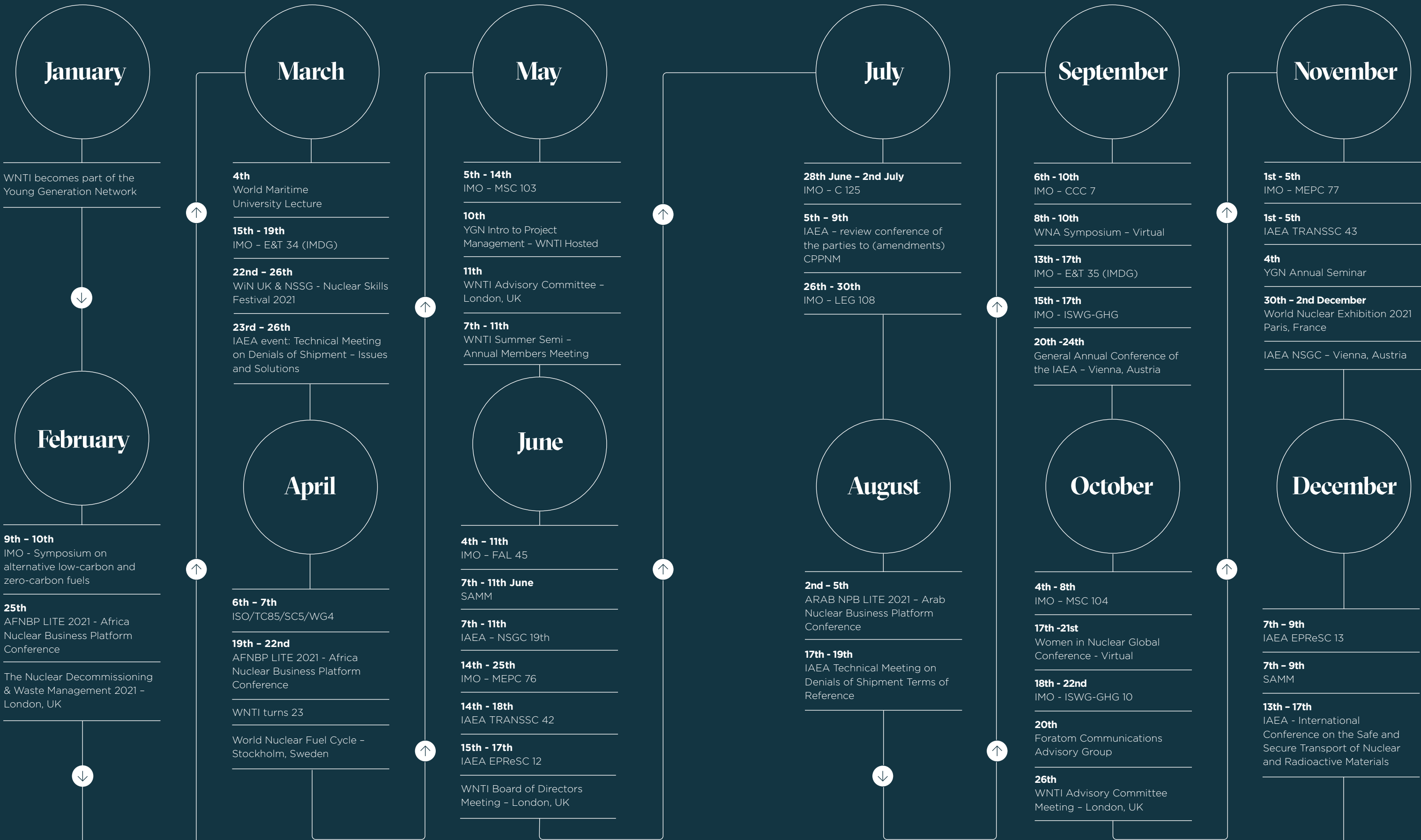
4

To support research development and testing for systems and components for transport.



OUR EVENT CALENDAR 2021

A Year in Review





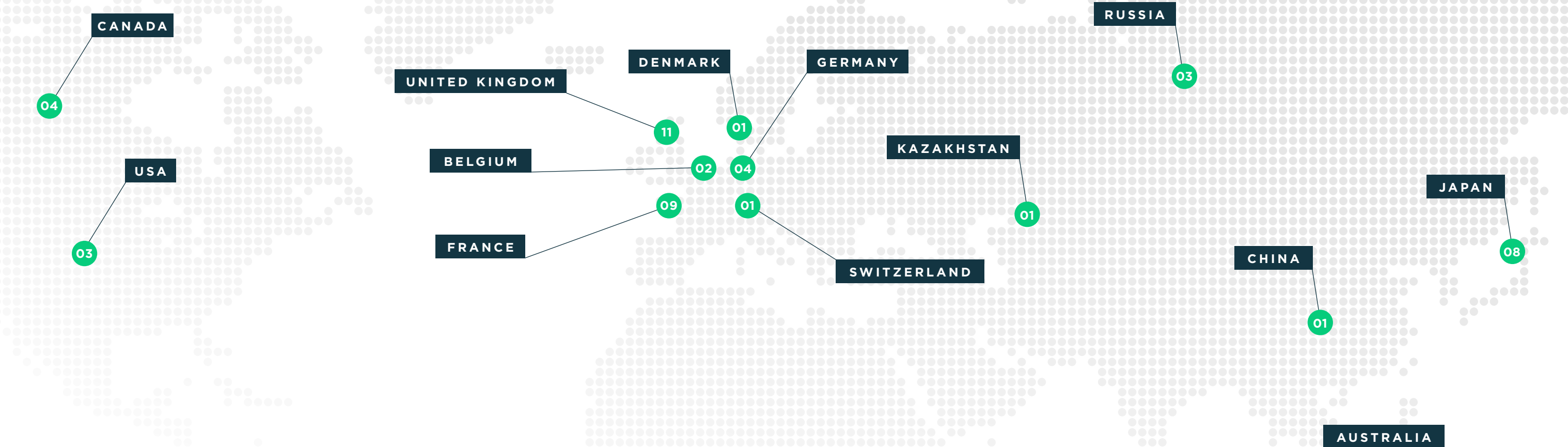
# Our Members

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# Meet Our Members

Our growing worldwide membership is open to all companies involved in nuclear transport including generators, suppliers, uranium producers, fuel cycle and other companies working in the nuclear supply chain.



- AUSTRALIA**  
BHP
- BELGIUM**  
ELINI – European Liability for the Nuclear Industry  
sa TRANSRAD nv
- CANADA**  
Cameco Corporation  
Commonwealth Independent States Navigation Inc (CISNAV)  
Nuclear Waste Management Organization (NWMO)  
TAM International Inc

- CHINA**  
Nantong CIMC Tank Equipment Co, Ltd
- DENMARK**  
Maersk Line
- FRANCE**  
ORANO  
ORANO NPS  
Assuratome  
Bureau Veritas  
CEA  
CMA CGM  
Descote s.a.s  
Électricité de France (EDF)  
GEODIS Wilson/STSI

- GERMANY**  
BGZ Gesellschaft für Zwischenlagerung mbH  
DAHER Nuclear Technologies GmbH (Nuclear Cargo & Service GmbH)  
GNS Gesellschaft für Nuklear-Service mbH  
RSB LOGISTIC Projektspeidition GmbH

- JAPAN**  
The Federation of Electric Power Companies of Japan (FEPC)  
Hitachi Zosen Corporation  
Japan Nuclear Fuel Ltd (JNFL)  
Marubeni Corporation  
Nuclear Fuel Industries, Ltd (NFI)  
Nuclear Fuel Transport Co. Ltd (NFT)  
Sojitz Corporation  
Sumitomo Corporation

- KAZAKHSTAN**  
JSC “NAC” KAZATOMPROM
- RUSSIA**  
J.S.C Atomic Industry Transport and Logistics, JSC Atomspectrans  
J.S.C Saint Petersburg “IZOTOP”  
J.S.C Techsnabexport (TENEX)
- SWITZERLAND**  
Swiss Nuclear Fuel Commission (Axpo Power AG)

- UK**  
Nuclear Transport Solutions (NTS)  
CORE POWER (UK) Ltd  
Direct Rail Services Ltd (DRSL)  
Low Level Waste Repository (LLWR)  
General Purposes Committee (GPC) for Nuclear Insurance Pools  
Pacific Nuclear Transport Ltd (PNTL)  
Radioactive Waste Management  
Rolls Royce Submarines Ltd  
Serco  
Sellafield Ltd  
URENCO Ltd

- USA**  
ALARA Logistics  
ConverDyn/General Atomics/Honeywell  
Westinghouse Electric Company

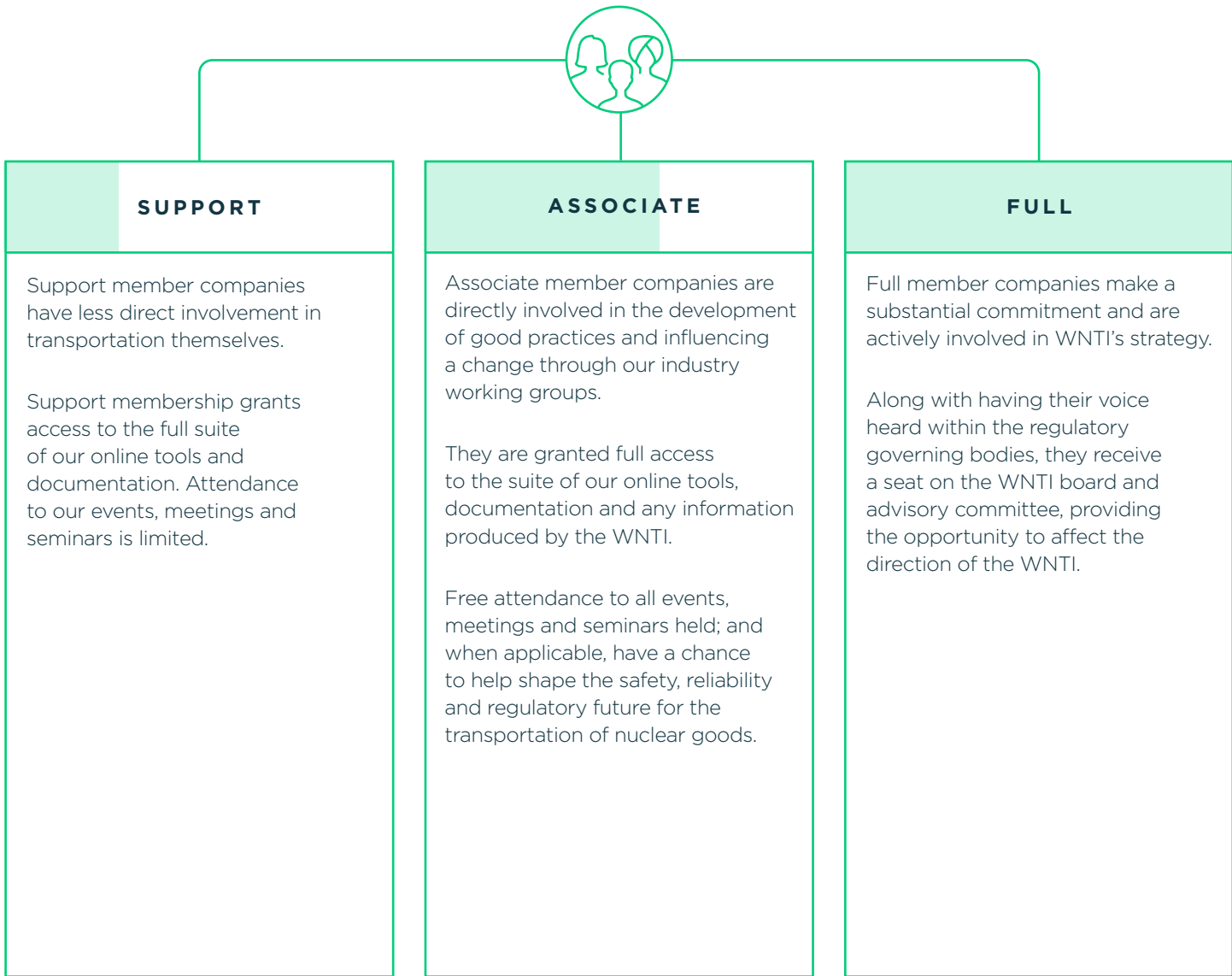
- AUSTRALIA**  
01



# Membership types

Our membership is open to all companies who share our ethos and are involved in, or which attach importance to the transport of radioactive materials for peaceful purposes; and who actively promote safe, secure, efficient, reliable and sustainable transport.

We currently have 3 member categories to choose from which vary depending upon your activity within the industry and preference of commitment.



# Benefits

The WNTI membership, offer access to several great benefits available within the organisation:

 <b>EXCLUSIVE MEMBERS PORTAL</b> Privileged access to latest reports, presentations, and regulatory recommendations through our member's only portal network.	 <b>HAVE YOUR SAY!</b> Influence decisions and outcomes for industry progression; helping your company and the global nuclear industry make a difference.	 <b>INFORMATION EXCHANGE</b> Participate in information exchange ultimately leading others in good practice via publications.
 <b>NETWORKING FORUM</b> Network within a global forum for Nuclear Transport and connect with technical experts to resolve common issues across the nuclear fuel transport industry.	 <b>OBSERVER &amp; CONSULTATIVE STATUS</b> A unique position to be represented where industry regulations are negotiated at major international forums - The United Nations International Atomic Energy Agency (IAEA), the International Civil Aviation Organization (ICAO), the International Maritime Organisation (IMO), and the International Organization for Standardizations (ISO.)	 <b>A BETTER INDUSTRY, MAKE A CHANGE</b> Support the promotion of safe, secure, efficient, reliable and sustainable and reliable transportation of nuclear and radioactive materials.

# Join us

By becoming a WNTI member, you become a part of the network that represents the collective interests of the radioactive materials transport sector and help to shape the future of green nuclear transport for the better.

For further information on how to become a WNTI member please contact: Amy Northage: [amyn@wnti.co.uk](mailto:amyn@wnti.co.uk)

# Join the WNTI Community

The WNTI is a membership and non-governmental organisation for the global nuclear transport industry.

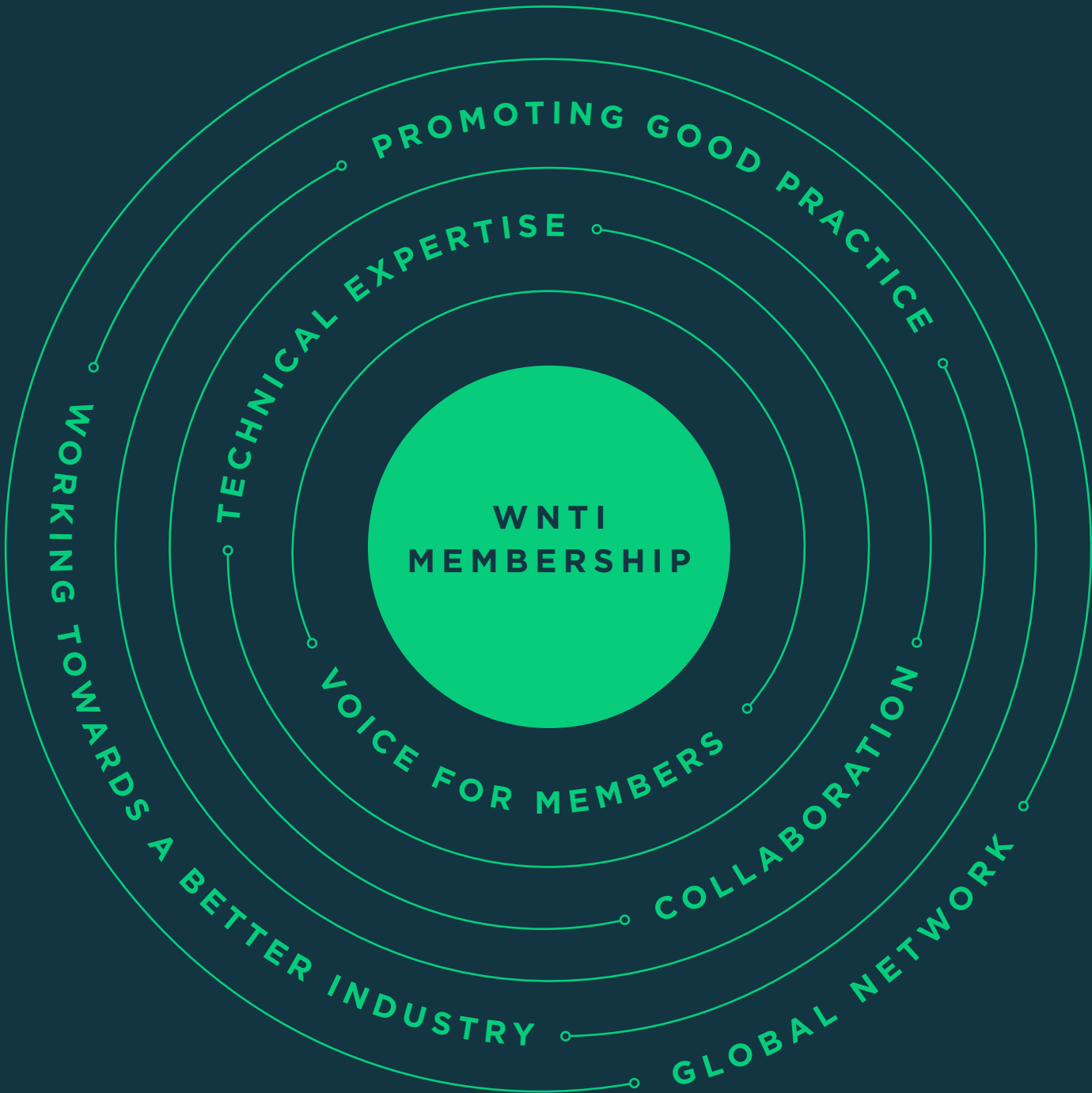
With over 20 years’ experience, we pride ourselves on being a diverse and inclusive network, that believes industry collaboration is essential for progress. We represent 50 companies providing a platform and the resources needed to help make a difference.

As an institute, we are very passionate about resolving technical challenges, lobbying policy makers, giving a voice to members, and promoting debate in the field of nuclear transport.

Our members are a group of like-minded individuals who have varying degrees of involvement with the transportation of nuclear materials and the overall fuel cycle.

“  
**WNTI aims to deliver contemporary services to our members which are in keeping with the demands and expectations of current and future missions and that address the challenges of our sector.**  
”

CHRIS WATSON,  
WNTI BOARD OF DIRECTORS CHAIR





# Our Services

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# SAMM

The Semi-Annual Members meetings (SAMM) are the highlight events for WNTI and our Members, taking place twice a year typically in May and December.

The core focus of the SAMM is around industry working group seminars, active open forum discussions and the opportunity to engage with industry professionals and technical experts within the nuclear transport sector.

We now have six bespoke working groups which provide our members a platform to:

- Exchange ideas
- Debate best practice
- Resolve technical challenges
- Share knowledge and experience
- Develop consolidated positions on current issues
- Collaborate to shape the nuclear transport industry for a sustainable future.

“

The WNTI event which provides members a global forum and meeting place to network, connect and collaborate

”

Due to the Covid-19 global pandemic and ever-changing restrictions, WNTI created an alternative way for member engagement to continue – an online virtual experience. This new platform style enabled members to remain in close collaboration and support each other throughout a difficult year.

Moving forward, WNTI’s plan is to resume face-to-face delivery; kicking off with a refreshed format at our December 2021 WINTER SAMM, tackling important industry topics such as: ‘The Nuclear Gender Commitment’; Net Zero in Nuclear; Inclusion, Equality and Diversity within the Workforce; and **Our Take on a Green Sustainable Future!**

A warm welcome awaits you all.

6

WORKING GROUPS

2

DAY MEETING

50

INTERNATIONAL MEMBER COMPANIES

100

DELEGATES

Virtual Online Platform

45+

SPEAKERS

20

PRESENTATIONS

15

COUNTRIES

Social Networking Opportunities

# Our Publications

Our working groups have a long standing relationship with International and Intergovernmental organizations, UN specialised agencies, and nongovernmental bodies during the development and revision of regulations, guides, and standards.

Our fleet of publications are available to download online!  
[wnti.co.uk/publications](https://wnti.co.uk/publications)



**FREE TO DOWNLOAD**  
A range of Standards, Guides, Fact sheets and papers



Discover our list of industry organizations we partner with [wnti.co.uk/industry/organisations/](https://wnti.co.uk/industry/organisations/)

			
<b>NAME</b> IAEA	<b>NAME</b> IMO	<b>NAME</b> ISO	<b>NAME</b> ICAO
<b>WNTI INDUSTRY POSITION</b> Observer Status - We have worked with the IAEA for over 20 years.	<b>WNTI INDUSTRY POSITION</b> Consultative Status	<b>WNTI INDUSTRY POSITION</b> Category A Liaison Organisation	<b>WNTI INDUSTRY POSITION</b> Observer Status
<a href="https://www.iaea.org">www.iaea.org</a>	<a href="https://www.imo.org">www.imo.org</a>	<a href="https://www.iso.org">www.iso.org</a>	<a href="https://www.icao.org">www.icao.org</a>



## WORKING GROUPS

## Did you know?

## UOC WORKING GROUP

Uranium ore concentrates are transported internationally by road, rail, and sea from the uranium producers to the uranium converters. These international transport routes involve large distances and in some cases many jurisdictions!

?

## SSR6 WORKING GROUP

SSR6 was originally called the ST1 WG. The first WG meeting was on 16 February 2000 and was attended by 12 people.

?

## BET WORKING GROUP

Back End Transport was originally called "Waste Transport Management Working Group". This WG was established in 2009 by WNTI!

?

## TRANSPORT SECURITY WORKING GROUP

The works informs and influences the decisions made on transport security at Intergovernmental Organisations.

?

## HEXT WORKING GROUP

HEXT Working Group launched its very first meeting on November 24th, 1999, and it was attended by 9 people, one of whom was Franz Hilbert, who still participates today!

?



WORKING GROUPS

# Overview of the Working Groups



Transport of radioactive materials is essential to provide life-saving medical treatments and to align with government Net-Zero commitments to reduce carbon emissions. The work of the SSR-6 WG helps ensure those transports continue safely and securely.



## SSR-6

The SSR-6 Working Group is the place where industry can discuss and propose potential amendments to the transport regulations, focusing on SSR-6, its associated Safety Guides, and its implementation in other modal transport regulations. This is primarily accomplished by participating on the IAEA Transport Safety Standards Committee (TRANSSC). The purpose of the working group is to help the IAEA and other regulators (such as IMO, ICAO, IATA, UNECE) provide safe and practicable rules for the transport of radioactive material.

### PRESENT AND FUTURE WORK

Successes in 2021 include driving IAEA TRANSSC Technical Expert Groups (TTEGs) discussions on fissile exceptions, criticality safety limits, clarifying definitions used within SSR-6, and proposing a new waste category. This group is also heavily engaged in development of IAEA guidance on Package Maintenance, and Ageing Management.

Ongoing and future work includes continuing to support TRANSSC discussions on the topics listed above, participating in the forthcoming revision to SSR-6 and its associated guidance documents, and updating several WNTI publications.

Transport of radioactive materials is essential to provide life-saving medical treatments and to align with government Net-Zero commitments to reduce carbon emissions. The work of the SSR-6 WG helps ensure those transports continue safely and securely.

**Chair** Bruno Desnoyers | [bruno.desnoyers@orano.group](mailto:bruno.desnoyers@orano.group)  
**Secretary** Scott Edwards | [sedwards@wnti.co.uk](mailto:sedwards@wnti.co.uk)



Transport of UF6 is essential to align with government Net-Zero commitments to reduce carbon emissions.



## HEXT

The HEXT Working Group (HEXT WG) provides WNTI members a forum to exchange information around UF6 topics, like package approvals and validations, UF6 cylinder standards, development of WNTI Publications, and technical and operational challenges. This provides a comprehensive information base on the regulatory environment and best practices for the safe handling and transportation of UF6 around the world.

### PRESENT AND FUTURE WORK

Successes in 2021 include supporting IAEA TRANSSC Discussions on HEXT related topics, including fissile exceptions for washed UF6 cylinders, and updating the following WNTI publications:

- Good Practice Guide (GPG) for installation of valves and plugs
- GPG for shipping of UF6 samples under UN 3507
- UF6 Fact Sheet

Ongoing and future work includes continuing to support TRANSSC discussions on relevant topics, creating a GPG for load securement of UF6 packages, and further support of WNTI paper revisions.

Transport of UF6 is essential to align with government Net-Zero commitments to reduce carbon emissions. The work of the HEXT WG helps ensure those transports continue safely and securely. Climate change will have limited effects on the WG, other than transportation services in general becoming more expensive compared to today's rates.

**Chair** Joel Kruehler | [Joel.kruehler@ureenco.com](mailto:Joel.kruehler@ureenco.com)  
**Secretary** Scott Edwards | [sedwards@wnti.co.uk](mailto:sedwards@wnti.co.uk)



The initiatives set out will ensure that the transport of UOC will continue to be done safely and efficiently, bringing affordable and clean energy to populations.



## UOC

We are a forum for sharing experiences, issues, and incidents so that the industry can learn from each other. We discuss and explore important aspects of UOC transport such as:

- The packaging used,
- The shipping process, e.g., the sea containers and package securing methods,
- The requirements and controls for transport, such as safety marks, shipping documents, safety data sheets and radiation protection.

### PRESENT AND FUTURE WORK

- Drafting a set of communication papers for use in case of incident or questions being asked of stakeholders.
- A set of guidelines for the standardisation of securement in sea containers and flat racks. This is in response to the issues that arise due to different requirements being set by different states.
- Reviewing the requirements for the construction and manufacture of UOC drums.

All these initiatives will ensure that the transport of UOC will continue to be done safely and efficiently, bringing affordable and clean energy to populations.

**Chair:** Marc-Andre Charette | [marc-andre\\_charette@cameco.com](mailto:marc-andre_charette@cameco.com)  
**Secretary:** Simon Chaplin | [simonc@wnti.co.uk](mailto:simonc@wnti.co.uk)





## WORKING GROUPS



**We are committed to encouraging women into the transport security industry. Gender parity brings many benefits to this industry including, greater innovation, improved productivity, and a larger pool of professionals to draw from.**

## TRANSPORT SECURITY

We offer an opportunity for our members to meet and discuss security matters and our members support one another through shared experiences and learning. We are represented at the IAEA Nuclear Security Guidance Committee (NSGC) and play an active role in other transport security related events held there.

## PRESENT AND FUTURE WORK

- The TSWG Consultancy Process has been finalised. This formalises the process for reviewing documents, including those received from Intergovernmental Organisations such as the IAEA and IMO.
- Collaborate with other organisations, such as the World Institute for Nuclear Security (WINS) to reach shared goals, such as in education and equality.
- Further investigate the development of a WNTI Transport Security Advisory Service (TSAS), and an Open-Source Intelligence Service. These services will enable our members to evaluate their transport routes and shipments to ensure the appropriate level of security is always implemented.

**Chair:** Ben Whittard | ben.whittard@ntsglobal.uk

**Secretary:** Simon Chaplin | simonc@wnti.co.uk



**The development of a new type of waste package alone, demonstrates our commitment as it will simplify operations and reduce the number of packages and shipments required. It would also align with government Net-Zero commitments to reduce carbon emissions.**

## BET

The BET WG provides a forum for the discussions on back-end transport issues with the potential to affect radioactive materials transport. In addition, the BET WG also share and publish good practices on packaging and the transport of waste materials. It develops a WNTI industry perspective on these issues and communicates these views to the IAEA when it is appropriate.

## PRESENT AND FUTURE WORK

Successes in 2021 include the sharing of knowledge and guidance on pond water chemistry and ageing of fuel and the development of new and existing WNTI factsheets.

Ongoing and future work includes defining a new type of waste package, exploring cask decommissioning methodologies, outlining key challenges and benefits to changing cask Design Authority and ownership, reviewing potential interface issues between the steps in the Back End fuel cycle and how they can be addressed.

This work will deliver a wide range of benefits for greater sustainability, including reduced wastes, lower costs, greater efficiencies as well as making the most of valuable resources. The development of a new type of waste package alone, demonstrates our commitment as it will simplify operations and reduce the number of packages and shipments required. It would also align with government Net-Zero commitments to reduce carbon emissions.

**Chair:** Ceinion Thomas | ceinion.d.thomas@ntsglobal.uk

**Secretary:** Yukio Okabe | yukioo@wnti.co.uk



INTRODUCING THE NEW WORKING GROUP



# The Maritime Applications and Nuclear Propulsion Working Group

Chaired by Mikal Boe, the maritime application and nuclear propulsions working group (MANP) launched its first meeting on the 1st of September 2021 and is focused on the use of nuclear power in the maritime environment.

This will include using nuclear propulsion on ships; floating SMR's for generation of electricity, district heating or hydrogen production; and Maritime transport of fuelled SMR's.

Task Forces will be set up to explore specific objectives, that will be reported back to the working group who will then decide on the WNTI position. These Task Forces will be able to invite experts from external organisations to attend/observe the meetings, where appropriate, if those people can add value to the meeting.

**BRIEF OVERVIEW OF THE WORKING GROUP**

The Maritime Applications and Nuclear Propulsion (MANP) working group is a forum for members to discuss and develop rules frameworks for the deployment of next generation reactors at sea.

The working group will engage with the IMO and IAEA to update current rules on nuclear deployment as well as work to ensure that these assets can be appropriately insured.



# Key areas of Improvement

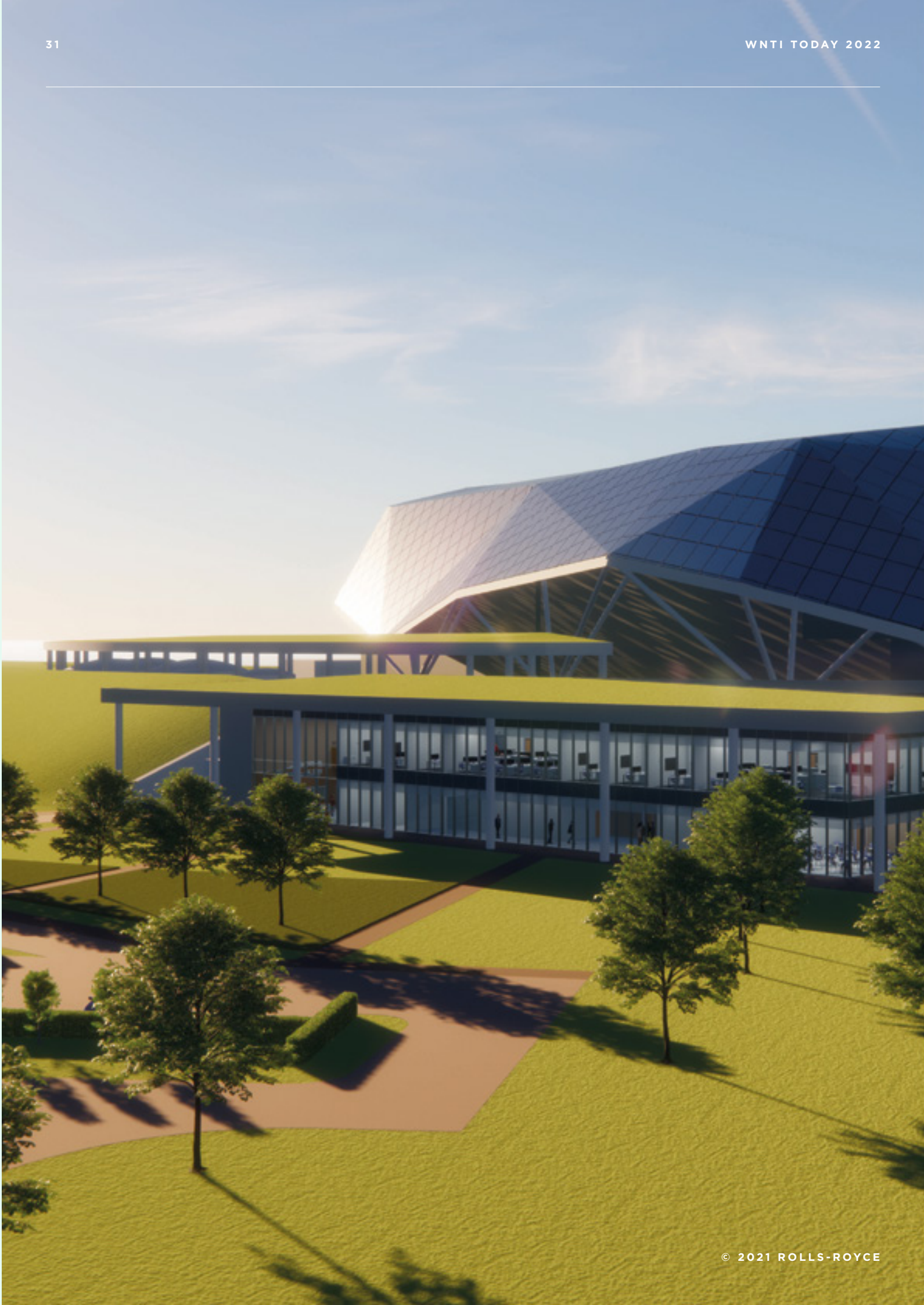
Among other topics, this Working Group will consider the following





# New Nuclear

32	How can Small Modular Reactors contribute to saving our planet?
34	Sustainable Nuclear Fuel Cycle
36	Why Net Zero?
37	#NetZeroNeedsNuclear
38	Diversity - Women In Nuclear
40	Our Pro-Sustainable Headquarters





## INNOVATION FOR A SAFER WORLD

## How can Small Modular Reactors contribute to saving our planet?

Nuclear power will play an increasing role in combating the global environmental crisis as it is a reliable and safe source of green, carbon free energy.

Traditionally, large nuclear sites with high-capacity nuclear plants have been used to generate electricity for national networks. This will continue as it has certain advantages such as site licensing. Alongside this technology, the development of Small Modular Reactors (SMR) has been gaining pace.

SMR's offer many benefits of their own. They are built in factories using production line methods that reduce costs and allow scalability. The SMR's are constructed in modules that are then taken to the site of operation where they are assembled. Modular characteristics allow flexibility to scale up to meet energy demands by adding further modules.

As well as land based, SMR's can be sited on floating platforms. Between 1968 and 1975 a small reactor, installed on a converted ship, provided electricity to the Panama Canal region.

The Akademik Lomonosov is a Floating Nuclear Power Plant operated by Rosatom. It is moored in Pevek, Chukotka, Russian Federation, where it has provided district heating and electricity since 2019.

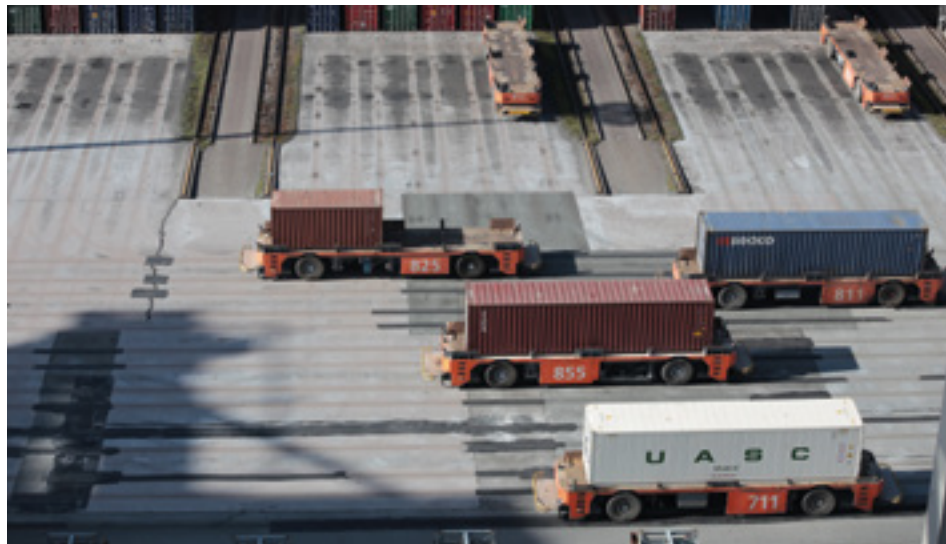
Other companies are planning similar FNPP ventures, providing electricity or heating for communities and industrial applications. This includes using the energy for hydrogen production. Hydrogen, and hydrogen derived alternative fuels, can be used to replace fossil fuels used in industry and transport.

FNPP can also be of benefit to Small Island Developing States (SIDS) as they can be easily deployed and do not require extensive use of land resources. These FNPP can also provide desalination of sea water.

SMR's can be used in disaster relief. A containerised SMR can be rapidly deployed to an area that has been hit by a natural disaster.

New nuclear technology is also opening opportunities that will see nuclear reactors replace diesel engines on ocean-going ships. Until now, nuclear powered ships have been largely restricted to military and state operated vessels using PWR type nuclear reactors.

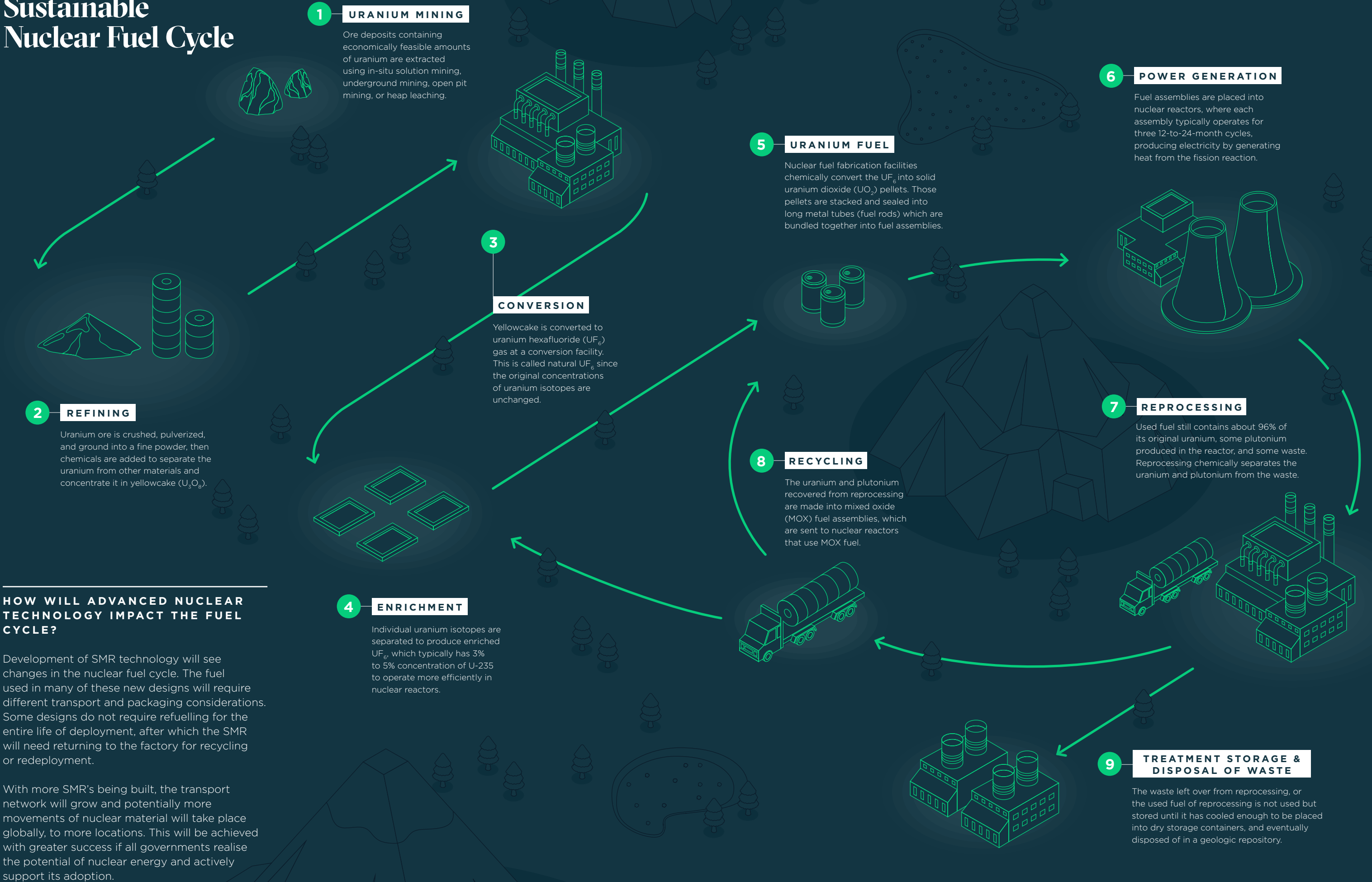
With progress being made in Molten Salt type reactors we are now entering a generation where nuclear has become a viable source of propulsion for the commercial shipping sector.



“  
**Did you know Small Modular Reactors (SMR) are defined as reactors of 300Mwe or less. This includes reactors that can provide ship propulsion, floating production of hydrogen, providing district heating in arctic regions, and as well as transportable reactors that can provide disaster relief**  
 ”



# Sustainable Nuclear Fuel Cycle



## HOW WILL ADVANCED NUCLEAR TECHNOLOGY IMPACT THE FUEL CYCLE?

Development of SMR technology will see changes in the nuclear fuel cycle. The fuel used in many of these new designs will require different transport and packaging considerations. Some designs do not require refuelling for the entire life of deployment, after which the SMR will need returning to the factory for recycling or redeployment.

With more SMR's being built, the transport network will grow and potentially more movements of nuclear material will take place globally, to more locations. This will be achieved with greater success if all governments realise the potential of nuclear energy and actively support its adoption.

# Why Net Zero?

To stabilize the worlds temperature, CO<sub>2</sub> emissions needs to approach Zero.

CO<sub>2</sub> and greenhouse gas emissions are not only caused by human activities but also energy services, industrial and agricultural activities.

Overtime, these activities have impacted our climate causing global warming. WNTI is collaborating with the New Nuclear Watch institute to produce publications that address the importance of new technologies and the role nuclear plays in our society. This joint initiative features numerous articles and the use of Nuclear applications in food and agriculture is one of many.

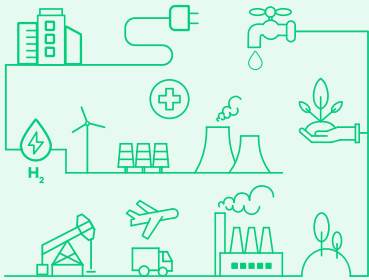


# Yes to nuclear perspectives A new joint initiative has been launched

## Nuclear applications in food and agriculture

The phenomenal opportunities that nuclear energy provides to communities are in-numerous and technology advancements play a vital role in ensuring the overall health and wellbeing of communities are met. Nuclear technologies commonly known as N-tech are being supported by the IAEA and FAO, and they not only contribute to improving energy & power production, fuel cycle and radioactive waste management, but also play a vital role in boosting human and environmental wellness through several ways. Some of these techniques used are:

- Sterilization Insect Technique (SIT); This is used to eradicate invasive pests that have a higher chance of survival due to climate change caused by anthropogenic greenhouse gas emissions. This ultimately aims at reducing reproduction of toxic insects for the greater good of the environment.
- Stable Isotope Technique used for soil and water management; Scientists can monitor soil quality and detect poor health by introducing nuclear isotopes, which help to determine when a boost in fertilizer is needed. Fertilizer however contaminates water which is harmful to man and ultimately sea life as it encourages algae growth which reduces oxygen levels in water. Scientists also use isotopes to monitor pollution levels in water.



The sustained food provisioning and a resource-efficient agriculture would be jeopardised without such use of nuclear techniques. An extended use of such nuclear techniques may well become critical in the light of new endeavours, e.g., climate change and reducing biodiversity, in ensuring sustained global food chain. Here again, nuclear science and technology proves its critical role in prosperity for all.

## CONTRIBUTORS

Ose Izore, WNTI  
Simon Chaplin, WNTI  
Luc Van Den Durpel, Nuclear - 31

In partnership  
with NNWI



To find out more about our collaboration with NNWI please visit [wnti.co.uk/news/wnti-collaboration-yes-to-nuclear-perspectives](https://wnti.co.uk/news/wnti-collaboration-yes-to-nuclear-perspectives)

# #NetZeroNeedsNuclear

In 2020 young professionals in the United Kingdom with a common vision to have a clean, sustainable, low carbon future for all, came together to advocate for nuclear energy.



The YGN received support from WNTI during the annual day seminar and dinner which took place on the 4th of November in Edinburgh. Tying in with COP26 the focus of the seminar and dinner was a transition to a sustainable future with talks ranging from decarbonising current decommissioning operations to innovating new nuclear.

For constant, reliable, clean energy, nuclear comes out top in my eyes. It can be combined with renewables to meet our Net Zero carbon targets and ensure we preserve the places we love from the devastating effects of climate change.

HANNAH PATERSON  
YGN CHAIR 2021

After launching an international call for volunteers, a team of engineers, scientists, and communicators passionate about saving our planet was formed by the Nuclear Institute Young Generation Network (YGN) to bring together the widest range of backgrounds, knowledge, skills, and experience from across the nuclear industry. The team's mission is to accelerate the ability of the world to achieve Net Zero by 2050, by driving collaboration between nuclear and renewable technology. To deliver this, the YGN has run series of activities in the run up to COP26, the UNs Climate Change Conference. Among the numerous webinars, meetings with MPs and podcasts, the YGN ran a 'Stand up for net zero' speaking competition for 16-18-year-olds.

The YGN launched a Net Zero Needs Nuclear position paper to provide politicians the facts behind nuclear energy. So far, over 100 societies and non-governmental organisations representing at least 80,000 young professionals, engineers, scientists, nuclear experts, environmentalists and concerned citizens all around the world are undersigned and it has subsequently been translated into 17 languages.

I'd really encourage people to check out our website [NetZeroNeedsNuclear.com](https://NetZeroNeedsNuclear.com), use our tool to engage with their local MPs and get involved in our social media campaigns. It's so important that we stand up for our industry and shout about the great careers and opportunities that are possible in transport solutions and the wider industry.



OUR COMMITMENT TO SUSTAINABILITY

Diversity  
Women in Nuclear

We are proud founding  
sponsors of the Women  
in Nuclear.



My aspirations to contribute to this goal are, to amplify women's voices and create safe spaces for girls to thrive as I consider gender equality an enabler and accelerator for all the sustainable development goals.

RAQUEL HEREDIA SILVA  
PRESIDENT/FOUNDER WIN MEXICO



WIN MEXICO

Although there is consensus on what sustainability entails, implementation is often unsuccessful, and it requires comprehensive coordination between numerous actors with intricate, personal, and diverse motives.

Women are amongst the most vulnerable groups, yet we continue to be underrepresented. Empowering women and girls in all their diversity is a critical action that requires the commitment of everyone. My aspirations to contribute to this goal are, to amplify women's voices and create safe spaces for girls to thrive as I consider gender equality an enabler and accelerator for all the sustainable development goals.



5 GENDER  
EQUALITY



U.N. ACCREDITED



OUR COMMITMENT TO SUSTAINABILITY

Our Pro-sustainable Headquarters

In 2018, WeWork committed to doing it’s best to remove major single-use plastics from all their buildings, which is why you will never find your ketchup or honey in a plastic bottle, and no plastic straws. We also offer meeting room spaces to our members.

**MEAT FREE**  
WeWork also has committed to being entirely meat-free, meaning they will never provide meat at any of their events or pay for meat in any meals sponsored by WeWork.

**ENERGY TRACKING**  
Energy usage across all of their buildings globally and ensure HVAC systems are switched off in any unoccupied offices.

**TRAID BOX**  
WeWork has also partnered with the charity TR Aid in all our buildings in the UK, (our TR Aid box is located on the ground floor at Aviation House) which is a charity that works to stop clothes from being thrown away and creating waste. They tackle disposal, production, and consumption by increasing clothes re-use across the UK and funding international development projects to improve conditions and working practices in the textiles industry.

**AWARD WINNING WASTE SAVING**  
Aviation House also received an award from Paper Round for recycling in 2020, recycled 24,750kg of waste, saved 30,580kg of CO2, and saved 176 trees!

**NON-TOXIC CLEANING**  
They are switching to a Chemical free cleaning system that saves water, reduces the number of plastic products shipped to other buildings, and improves air quality and occupant health by eliminating 93% of chemicals used for cleaning

**NON-TOXIC MATERIALS**  
They worked with Arup in 2019 to develop a roadmap for sourcing healthy materials identifying good-better-best standards for building materials.

**INDOOR AIR QUALITY**  
They are building a network of indoor air quality (IAQ) monitors that allow tracking and manage levels of air quality indicators like carbon dioxide (CO2).

**WELLBEING SPACES**

- Access to wellness classes and meditation rooms
- Encouraging members to take internal staircases
- Laying out offices with workstations next to windows that provide outdoor views and exposure to daylight





# Our Company

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## WNTI Online

It's been almost a year since we launched our brand new WNTI website and Members Portal.



Users from 50 different countries visited our new website



Our most read news story was New WNTI Working Group Launches ([www.wnti.co.uk/news/new-wnti-working-group-launches/](http://www.wnti.co.uk/news/new-wnti-working-group-launches/))



New resources added to the new website



Sign ups to our new Members Portal



LinkedIn Posts



Information Emails sent

## We're moving online

Every year we print over 400 copies of our annual report which is equivalent to nearly 2 trees lost each year.

Part of our commitment to sustainability is the decision to cut back on all our printed publications. All upcoming reports will be available to our members and the public online.

## Sign up now

If you haven't already and you work for one of our member organisations, you can sign up for your very own profile in our Member's Portal today! You will have access to exclusive resources, news and events across the WNTI site and receive fortnightly Information Emails so you will always be up to date with the latest industry news.

[www.wnti.co.uk/register](http://www.wnti.co.uk/register)

We are constantly working on improving our digital offerings to all our members and we have lots of exciting things coming in 2022 that we can't wait to share with you.

### Website

[wnti.co.uk](http://wnti.co.uk)

### LinkedIn

[linkedin.com/company/world-nuclear-transport-institute](https://linkedin.com/company/world-nuclear-transport-institute)



# Meet the Team

## HEAD OFFICE



**Mr. Martin Porter**  
Secretary General



**Mr. Scott Edwards**  
Regulatory & Design Specialist



**Mr. Chris Chen**  
Finance & Commercial Manager



**Mr. Yukio Okabe**  
Engineering & EPR Specialist



**Capt. Simon Chaplin**  
Maritime & Security Specialist



**Ms. Emily Midgley**  
Marketing & Communications Consultant



**Ms. Ose Izore**  
Business Process & Innovation Lead



**Ms. Amy Northage**  
Membership & Events Manager

## REGIONAL REPS



**Ms. Eileen Supko**  
Washington Office



**Ms. Katinka Theron**  
South African Representative



**Mr. Toshiro Umeda**  
Tokyo Office



**Mr. Frank Boulton**  
Australasian Representative



**Mr. Steven Shi**  
China Representative







# Governance

## BOARD OF DIRECTORS



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(CHAIRMAN)**  
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Transport  
Solutions



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Orano NCS



**Mr. Yoshihisa  
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**Mr. Peter Buchan**  
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WNTI Company  
Secretary



**Mr. Thibault  
Louvet**  
Orano TN

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WNTI Secretary  
General



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Tanaka**  
Nuclear Fuel  
Transport Co. Ltd



**Mr. Toshiro Umeda**  
Overseas  
Reprocessing  
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**Ms. Anne Presta**  
Orano NPS



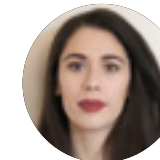
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**Mr. Adam  
Thompson**  
Nuclear Transport  
Solutions



**Ms. Assia Talbi**  
Strategy Manager  
Orano NPS



**Mr. Chris Chen**  
WNTI Company  
Secretary



OUR EVENT CALENDAR 2022

Our Year Ahead





WHEN 28 AUGUST - 1 SEPTEMBER 2022  
WHERE NICE ACROPOLIS, NICE, FRANCE

**PATRAM 2022**  
The only international event dedicated to the exchange of information for packaging and transportation of radioactive materials. Presenting a unique opportunity for industry professionals and authorities.

The 20th International Symposium on the Packaging and Transportation of Radioactive Materials will take place 28 August - 1 September 2022 in the beautiful city of Nice.

We host an average of 800 participants distributed between plenary conferences, technical sessions, poster sessions and a technical competition with awards to be granted.

The purpose of event is to gather at international level, industry experts, representatives of the competent authorities, governments, and research organizations for scientific and technical exchanges purposes, in connection with all aspects related to packaging and transport of radioactive materials.



Event Structure

- PATRAM 2022 Program will be structured around the four main themes:
- 1. Package Design, Package Performance and Safety and Security Analysis
  - 2. Operational Matters
  - 3. Institutional and Regulatory Environment
  - 4. Training and Education

patram.org



Sign up now to receive PATRAM 2022 updates

Key Dates

- ABSTRACTS SUBMISSION ENDS**  
31st December 2021
- SPONSORSHIP AND EXHIBITOR REGISTRATION OPENS**  
December 2021
- EVENT REGISTRATION OPENS**  
January 2022
- AUTHORS NOTIFICATION**  
March 2022
- PAPERS SUBMISSION STARTS**  
April 2022
- EVENT**  
28 August - 1 September 2022

P22 COMMITTEE MEMBERS/ORGANISERS





# Contact



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## Acknowledgements

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