

Plenary Meeting of the Global Nuclear Safety and Security Network

Promoting science-based safety: Aims, Objectives and Working Method of the TSO Forum

*Jacques Repussard,
TSO Forum Chair
IRSN. France*

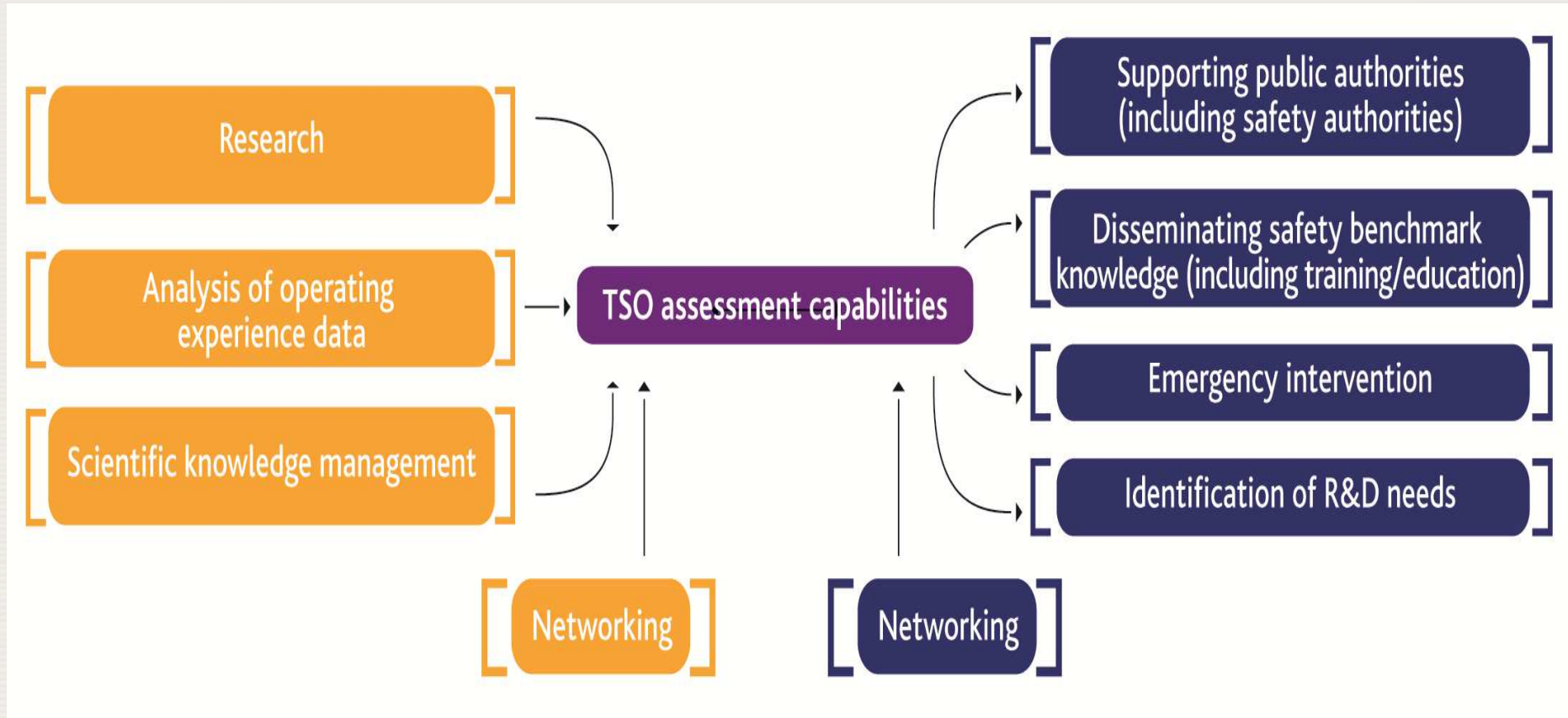


IAEA

International Atomic Energy Agency



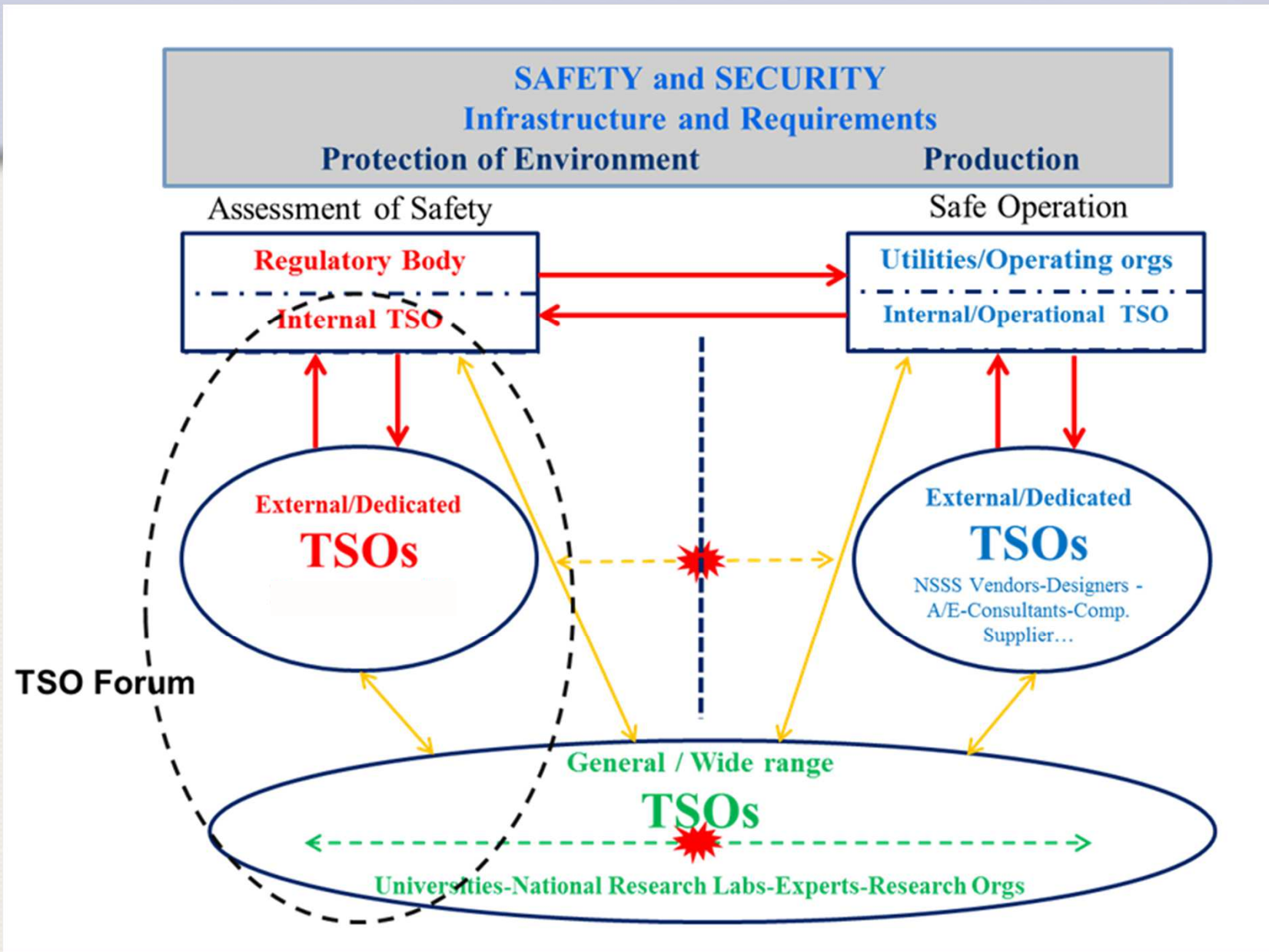
Nuclear safety is science-based and requires networking



Global Nuclear Safety and Security Network (GNSSN) :

Establishment of a network dedicated to TSOs : the TSO Forum (TSOF)





TSO Forum objectives

- The International Conference on Challenges Faced by Technical and Scientific Support Organizations (TSOs) in Enhancing Nuclear Safety and Security, which was held in Tokyo in October 2010, concluded that the IAEA should foster the establishment of a Forum dedicated to nuclear safety infrastructure development issues related to scientific and technical support
- It was recommended that the TSO Forum would:
 - Achieve scientific excellence
 - Address from a science based point of view the technical expertise requirements associated with important issues related to nuclear safety and security at nuclear facilities, such as the assessment of safety in generation III NPPs
 - Facilitate the international availability of state-of-the-art expertise resources in the fields of nuclear safety and security, radiation protection and radiological emergency response
 - Contribute to the worldwide harmonization of nuclear safety practices on the basis of the highest standards
 - Foster the reciprocal provision of certain services by TSOs, in particular in the fields of professional training, assessment, research and peer review
 - Meet regularly in between the international TSO conferences



First steps to establish the TSO Forum

- **2011 :**
 - 11-13 July: Establishment of the Technical and Scientific Support Organizations (TSO) Forum, Vienna
 - 21 September: Announcement of its creation during the Round Table on Nuclear Safety And Security Knowledge Networking, Vienna
- **2012:**
 - 18-20 January: Technical Meeting to Constitute the Steering Committee (SC) of the TSO Forum (TSOF), Vienna
 - 6-7 September: 2nd Steering Committee, Berlin
- **2013:**
 - 7-8 March: 3rd Steering Committee, Vienna
 - 19 September: 4th Steering Committee, Vienna
- **2014:**
 - 27 March: 5th Steering Committee, Vienna

TSO Forum Work Plan structure

1. Consolidating the TSO Forum
2. Clarifying the role of TSO's in enhancing nuclear safety in an international environment
3. Supporting the IAEA Nuclear Safety Action Plan
4. Integration of security aspects
5. Role of IEC and how TSOs can help to achieve IAEA objectives
6. Preparing the Beijing Third TSO Conference



1. Consolidating the TSO Forum

- Attracting new Member States (including for Radiation protection)
- Deepening TSO interactions on technical issues (eg: organize some SC meetings at TSO locations with a video link to Vienna?)
- Continuing the practice of topical invited presentations at SC meetings, and organizing technical visits at TSOs sites
- Web site development, within the GNSSN context
- Updating the existing information on training and tutoring
- Planning for one yearly plenary meeting of the TSO Forum, with a IAEA TSO conference every 4 years to extend the outreach of the forum initiatives and results.



2. Clarifying the TSO functions in enhancing nuclear safety in an international environment

- Fully include TSO roles and functions in IAEA Safety Guides:
 - Draft a Safety guide on TSOs
 - The Draft DPP was refused by Coordination Committee
 - Include TSO principles in a broader document, a new Safety Guide called DS472 « Organization, Management and Staffing of the Regulatory Body »:
 - Some regulatory bodies perhaps consider this inappropriate if they consider that they should aim to be self sufficient in expertise (conclusions of a recent consultancy meeting). ***However, a fact is that no RB in the world operates directly wide ranging research labs and experimental capacities which are indispensable in the long term to maintain state of the art expertise capability. Most RB's therefore use external expertise support, in one way or another, and this is normal.***

Elaborating a new approach?

- Fully include TSO roles and functions in IAEA Safety Reports or TecDocs:
 - Draft a Safety Report or a TecDoc from NS
 - Participate on the updating of the existing TecDoc 1078 from NE

Enhanced legislation and regulation, notably in Europe

- ***The latest revision of the Nuclear Safety Directive adopted by the Council of the European Union goes a step further towards harmonizing safety approaches and practices.***
 - It recognises the importance of technical science based considerations in nuclear safety.
 - It lays down common bases for shared technical approaches to nuclear safety.
 - It acknowledges the role of technical support in regulating safety and the importance of safety assessment.
- ***This recognition of the importance of scientific expertise at the EU level paves the way for EU action to ensure improved access to TSO assessment capabilities and for an enhanced contribution of the TSO community (in the widest sense) to the consolidation of the harmonization of nuclear safety processes in Europe on the basis of state of the art scientific knowledge.***
- ***Next step : IAEA ?***



How could the IAEA community formally recognize and promote nuclear safety expertise and the added value of its international networks?

Some facts:

- Scientific and technical expertise is indispensable for effective implementation of RB missions,
- State of the art expertise is necessarily bred from a much wider community than that of exclusive RB's,
- International networks gathering expertise sources on expertise issues benefit to nuclear safety enhancement worldwide,
- Nuclear safety expertise providers must also abide by values contributing to the RB independence of judgment,
- There is a worldwide shortage of such expertise, and that many newcomer countries face difficulties to access expertise and to develop it at national level,
- Different types of organisation co-exist in the world for the provision of expertise, the national TSO formula being one of the possible models

Should lead the IAEA concerned community (CSS, Secretariat, Regulatory Forum, TSO Forum) to :

- **Consider it a priority** to establish agreed guidelines on **scientific and technical expertise in support to RB's missions**, consolidating and extending the existing documentation,
- **Request that such guidelines ensure compliance with existing IAEA standards and guidance, and to avoid direct or indirect recommendations on a particular type of organisation at national level**

➔ **On the basis of such consensus a new DPP could be drafted**



3. Supporting the IAEA Nuclear Safety Action Plan

- ***Nuclear safety research:*** The TSO Forum and its members could contribute to the tasks defined in the Action Plan, in cooperation with NEA. This could be further elaborated during the IEM on this topic in the spring 2015.
- ***Nuclear emergency planning and response:*** The TSO Forum should work closely with IAEA/IEC for the enhancement of the Agency's capability, and to enhance « technical interoperability » during nuclear emergency situations
- ***Lessons learned from the Fukushima accident:*** a summary on contributions of TSO Forum members sent for a compilation
- **Ongoing feedback on the implementation of IAEA Safety Standards**



4. Integration of security aspects

- A working group (Finland, France, Germany, Italy, Korea, Russia) chaired by France (J. Jalouneix, IRSN)
 - to prepare a document « Safety and Security interfaces in emergency situations”
 1. *General considerations about safety and security interfaces*
 2. *Exercises and crisis management, the French approach experience*
 3. *General statements in emergency situations*
 - to submit this document to the Nuclear Security Office and then to the Coordination Committee

5. Role of IEC and how TSOs can help to achieve IAEA objectives

- TSO Forum members are encouraged to register their means in the RANET base and participate in emergency exercises, inter-laboratory and meetings organized by the IEC
- The TSO Forum Secretariat identifies the scientific IEC actions that can be undertaken by the Forum to support the IEC and put on the website any document relating to the IEC and RANET



6. Preparing the Beijing Third TSO Conference

- **6 March 2013: 1st Programme Committee in Vienna**
 - Draft the session structure / topics of the Conference
 - Promotion of the Announcement of the Conference on the IAEA website
- **9-11 October 2013: 2nd Programme Committee in Beijing**
 - Objectives:
 - to finalise the list of invited speakers
 - to draft a guidance for speakers
 - to review contributed papers
 - to propose outcomes of the Conference
- **7-11 April 2014: TSO Conference planned in Beijing**
 - President: Mr. Terry Jamieson from CNSC, Canada
 - Vice-Presidents: - Mr. Zongming Li from MEP/NNSA, China
 - Mr. Benoit De Boeck from BelV, Belgium



The upcoming TSO Conference 2014

- **The TSO Conference continues the pathway established by the two preceding conferences on this subject**, which were held, respectively, in Tokyo, Japan, in 2010 and in Aix-en-Provence, France, in 2007.
- Like these earlier conferences, the forthcoming one will play a vital part in the national and international efforts made to ensure the effectiveness of nuclear safety and security regulatory systems and will focus, in particular, on prerequisites and ways for maintaining and **strengthening the actions of TSOs in supporting the enhancement of safety and security worldwide.**

The 2014 edition is organized by the International Atomic Energy Agency (IAEA) and will be hosted by the Government of China through the Nuclear and Radiation Safety Centre (NRSC).

International Conference on Challenges Faced by Technical and Scientific Support Organizations (TSOs) in Enhancing Nuclear Safety and Security

Strengthening Cooperation and Improving Capabilities

27–31 October 2014
Beijing, China

Organized by the
www.iaea.org/meetings
CN-214

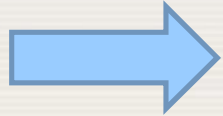
Hosted by the Government of China
through the
Nuclear and Radiation Safety Centre of the National Nuclear Safety Administration
State Nuclear Security Technology Center, China Atomic Energy Authority
Radiation Monitoring Technical Center of Ministry of Environmental Protection
Suzhou Nuclear Safety Center, Suzhou Nuclear Power Research Institute
Beijing Review Center of Nuclear Safety



The main issues of the TSO Conference 2014

As a follow up to the conclusions of the first Conference held in France, the second TSO Conference in Tokyo in 2010 sought to achieve key objectives :

- to develop a common understanding of the responsibilities, needs and opportunities of TSOs;
- to promote International Cooperation and Networking between TSOs;
- to foster capacity building and the work of TSOs in countries embarking in nuclear program, or in those with limited as well as extensive experience.



It is important for the global safety community to maintain and continuously develop TSO functions, which should be adequately recognized in national regulatory systems (whatever the organizational model chosen).



TSOs have to rely on adequate human and financial resources to contribute to scientific risk-oriented research; relevant operating experience analysis; capacity building, professional educational and training courses; knowledge management.

Those elements still remain keys in ensuring nuclear safety on sound scientific bases.



ETSON participation in the TSO Conference 2014

ETSON partners participated in the following activities:

- Preparation of the technical programme for the conference with active representatives of ETSON members in the Program Committee of the conference;
- Presentation of scientific papers at the conference: lectures will be given on ETSON experience and recent activities in special publications devoted to the conference;
- Dissemination of all information about the Conference:
 - an official announcement of the conference published on the ETSON website
 - the 13 ETSON members disseminated it in their national countries;
- Sponsorship of a Welcome Reception for information exchange with the conference participants
- Presentation of ETSON activities through an ETSON/ENSTTI booth



Thank you for your attention

