GNSSN IT Development and Challenges

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Department of Nuclear Safety and Security
Presentation Outline

- Introduction to GNSSN IT Platform
- Key encompassing elements
- Recent Statistics
- Governance
- Challenges
- Way ahead…
Introduction to GNSSN IT Platform

- GNSSN IT Platform (primarily RegNet and National Platforms) was hosted and maintained within the GRS infrastructure since inception. In 2009, migrated to IAEA server infrastructure.

**GNSSN technology stack:** Microsoft SharePoint 2013 (on-premises)

GNSSN integrated within the IAEA’s central user authentication and authorization system, namely **NUCLEUS**

- GNSSN constitutes of 2 parts:
  - Public area
  - Restricted area (collaboration spaces)
Introduction to GNSSN IT Platform

GNSSN IT Platform objectives:

- Sharing of knowledge, best practices and lessons learned (Technical Publications, Regional Workshops and Training Courses meeting content, Fact Sheets, Highlights, etc.)

- Supporting 4 pillars of Capacity Building
  
  - Education and Training (GETR, etc.)
  
  - Human Resources Development
  
  - Knowledge Management (National Platforms, Nuclear Safety Knowledge Base, etc.)
  
  - Knowledge Networks (Global Networks, Regional Networks, Thematic Networks)

- Promotion of upcoming events.

- Collaboration spaces for experts from various technical areas (Communities of Practice CoPs, etc.)
Key encompassing elements

- **Global Networks**
- **Regional Networks**
- **National Platforms**
- **Thematic Networks**
# Key encompassing elements

## GNSSN Elements (June 2017)

### Global Networks and Fora

- International Regulatory Network (RegNet)
  - SMR Regulators’ Forum
  - Regulatory Cooperation Forum (RCF)
  - WWER Regulators’ Forum
  - Forum for Senior Regulators of CANDU Reactors
  - Regulatory Peer Review Services online space (IRRS, OSART, ARTEMIS, etc..)

- Control of Sources Network (CSN)
- Education and Training Network in Nuclear Waste and Radiation Safety
- Nuclear Security Information Portal (NUSEC)
- Technical and Scientific Support Organization Forum (TSOF)
- Emergency Preparedness and Response Network (EPnet)
- Global Safety Assessment Network (GSAN)
- Occupational Radiation Protection Networks (OPRnet)
- Transport Safety Networks (MedNet)
- Safety and Security Communication Network (GNSSCOM)

### Regional Safety Networks

- Arab Network of Nuclear Regulators (ANNuR)
- Asian Nuclear Safety Network (ANSN)
- Forum of Nuclear Regulatory Bodies in Africa (FNRBA)
- Ibero-American Forum of Radiological and Nuclear Regulatory Agencies (FORO)
- European and Central Asian Safety Network (EuCAS)

[Liaison with regional networks external to the IAEA (e.g. the European Nuclear Safety Regulators Group (ENSREG), Western European Nuclear Regulators Association (WENRA))]

### National Level

- Each Member State has its own National Nuclear Safety Knowledge Platform) serving as an interface to the national web-based knowledge platforms.
Recent Statistics

GNSSN website has experienced an increase in users with respect to the previous reporting period. Fig. 1 shows that in 2017 there were 22,277 users, which correspond to almost 4,200 users more than in 2016.
Recent Developments

GNSSN IT platform recently incorporated various collaboration spaces for the following Nuclear Safety initiatives; some of them worth mentioning are as follows:

- **International School of Nuclear and Radiological Leadership for Safety**
  The Pilot International School on Nuclear and Radiological Leadership for Safety (herein called the Leadership School) is an IAEA initiative, supported by the EC, with the objective to develop the safety leadership potential of early to midcareer professionals.
  ([https://gnssn.iaea.org/main/sls](https://gnssn.iaea.org/main/sls))

- **Peer Reviews and Advisory Services Committee (PRASC)**
  The objective of PRASC is to assess the overall structure of all review (peer review and advisory) services offered by the Department of Nuclear Safety and Security, make recommendations for improvement.
  The IT platform for the PRASC provides collaboration space for internal IAEA staff.
  ([https://gnssn.iaea.org/main/PRASC](https://gnssn.iaea.org/main/PRASC))

- **Knowledge Management Portal on the Observations and Lessons Learned from the Fukushima Daiichi Accident**
  The portal provides access to a user-friendly online database that allows a targeted search by topic, target audience and specific IAEA Safety Standards. The database will be expanded to include observations and lessons from other sources, such as International Experts Meetings, IAEA peer review missions and advisory services, Action Plan outcome documents and conference reports.
  ([https://gnssn.iaea.org/FukushimaLessonsLearned](https://gnssn.iaea.org/FukushimaLessonsLearned))

- **ARTEMIS Review Missions**
  The IT platform provides restricted collaboration spaces for various ARTEMIS missions, wherein the participating experts and involved parties can systematically organise the advance reference material, official correspondence, preparatory meetings documents as well as the mission report.
  ([https://gnssn.iaea.org/main/artemis](https://gnssn.iaea.org/main/artemis))

- **EuCAS (European and Central Asian Safety Network)**
  The IT platform provides collaboration spaces for the thematic working groups of EuCAS, as well as facilitates dissemination of news and announcement of upcoming events for the global audience.
  ([https://gnssn.iaea.org/main/eucas](https://gnssn.iaea.org/main/eucas))
Governance

GNSSN Governance Plan drafted in 2013 and made available at the GNSSN website.

GNSSN Governance Board constitutes of the following IT entities:

- **GNSSN IT Assistant**
  A GNSSN IT Assistant is an IAEA staff member or a Member State representative, who is expected to work closely with the GNSSN Executive, the Coordinators and the Moderators in the administration, site development, and maintenance of content of assigned element(s) of the GNSSN platform.

- **GNSSN IT Administration Support Group**
  The GNSSN Platform Administration Support Group is a team of IAEA staff members and dedicated Member State representatives with a thorough knowledge and experience of SharePoint technologies and SharePoint server administration.
  (Staff from the IAEA Division of Information Technology and GNSSN IT Assistants.)

<table>
<thead>
<tr>
<th>Risk</th>
<th>Probability</th>
<th>Impact</th>
<th>Action</th>
<th>Responsible Party</th>
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<tbody>
<tr>
<td>4</td>
<td>Medium</td>
<td>High</td>
<td>Identify alternative measures and address the issue to the Network Coordinator</td>
<td>GNSSN IT Assistants</td>
</tr>
<tr>
<td>5</td>
<td>Low</td>
<td>Medium</td>
<td>Troubleshoot errors and report to IAEA Division of Information Technology</td>
<td>GNSSN Network Coordinators</td>
</tr>
<tr>
<td>6</td>
<td>High</td>
<td>High</td>
<td>Ensure responsible commitment and accountability of relevant member of the Governance Board, in particular the GNSSN platform moderators</td>
<td>GNSSN Governance Board</td>
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Challenges

- Promotion of GNSSN IT Platform among a wider audience
  - GNSSN Steering Committee to provide necessary guidance/feedback on this.

- Content management of GNSSN IT Platform and its encompassing elements
  - GNSSN Governance Board to be activated. GNSSN Governance Plan to be reviewed as necessary.

- Structure and layout of GNSSN IT Platform (public area)
  - Responsive design (accommodate various available devices such as laptops, mobiles, etc.)
  - New technologies/trends (Open Source, Office 365) to be considered.

- Structure and layout of GNSSN IT Platform (restricted area)
  - Harmonisation in terms of layout of various collaboration spaces.
  - Template based approach.

- GNSSN National Nuclear Safety Knowledge Platforms
  - Access to general public should be made available

- Leverage available features of SharePoint technologies to the fullest
  - Liaise closely with Central IT Desk of IAEA to consider enablement of available services of SharePoint technologies, with due consideration to the IAEA IT security policies.
Thank you!