

19th EAN WORKSHOP – JOINT WITH THE PODIUM PROJECT

INNOVATIVE ALARA TOOLS

KICK-OFF DOCUMENT

Context and objectives of the workshop

- To present recent and emerging innovative “ALARA Tools” that apply in the different steps of the ALARA process.
- In particular, help in the dissemination of the PODIUM project’s ALARA tools on the optimization of occupational exposure via personal dosimetry using computational methods.
- To investigate the benefits of these innovative Tools for ALARA, and also identify potential limits and obstacles.
- Explore more broadly how innovative ALARA tools and the innovation may (re)shape the ALARA process for the next years: ALARA, toward a (r)evolution?

Proposed topics and presentations

Proposed Session	Proposed presentations
1. Setting the scene	
2. ALARA Tools in the characterization and first evaluation of exposure	• Manuela (advanced 3D characterization material in NPP) • Gamma-Scan / Gamma camera • Tools for external exposure evaluation? • Tool for internal exposure evaluation (alpha injection, medical field) • Input from EURADMED • ...
3. ALARA Tools in the planning and decision	• PODIUM inputs • Software: Panthere or VISIPLAN (modelization of work in NPP): • Taking into account Multi-criteria / holistic approach (from UK?) • Decision Aiding Tools: ex. Advanced screening method for building materials • Organisational tools? • ...
4. ALARA Tools for the follow-up and feedback	• PODIUM inputs • Database and their use: GE Healthcare system? • EDF advanced monitoring of activities (tele-dosimetry etc.) • Innovative Tools for education & training (via EUTERP?) • ...

- A caveat is that the speakers should not only present their ALARA tool but also be explicitly directed to explain and value of these contribute and benefit to the ALARA process (and where). The potential limits of the tool should be recognized.
- The workshop shall not be a catalogue of tools: what could be the link(s) between the tools?
- Presentation from ‘external’ speakers on topics such as data/information management, ethical, juridical etc. issues may be also looked for.



Proposed Working Groups

1. The development of innovative ALARA tools has the potential to bring many benefits to the ALARA process and optimization. But what are they in practice?
Are there specific challenges in the ALARA process that may be resolved by innovative ALARA tools (under development or to be developed)?
2. On the other side, are there specific issues that may limit the development and/or the use of innovative ALARA tools?
 - over-complicated tools in practice?
 - technical limitation,
 - regulation/juridical,
 - ethical, data management etc. ?And how to overcome?
3. What is the role of the radiation protection expert if he/she is gradually replaced by ALARA tools?
4. There is currently a lot of effervescence in the research and innovation: deep-learning and autonomous intelligence, big data, etc. Have these the potential to shape – and how – the ALARA process in the next years?