**Integration Group for the Safety Case (IGSC) Symposium 2024**  
*MOVING TOWARDS THE CONSTRUCTION OF A SAFE DGR – GETTING REAL*

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| **Abstract Number: 5** | **Session 6.1.4** |
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| **Abstract Title: Optimising the Safety Case Based on Input from Outside the Safety Case Community – Can It Work?** | |
| **Abstract (300-500 words):**  The contribution presents outcomes of the five-year project “TRANSENS: Transdisciplinary research on the management of high-level radioactive waste in Germany” which involves 16 partners from nine German and two Swiss universities and research institutions. The central feature of our transdisciplinary (td) research is the integration of non-specialists and practice actors into the research processes, taking into account their bodies of knowledge, values and expectations. The partners involved in the co-design of approaches and the co-production of results (the “td partners”) include waste management actors but also two standing groups consisting of persons from the general public recruited according to scientific standards and accompanying the project over its whole timeframe.  One of the four TRANSENS work packages explores whether this td approach has the potential to optimise the repository Safety Case. The motivation for such research is based on the observation that, while the Safety Case is well-established as a tool to support programme decisions, and its methodology is well accepted amongst specialists, other actors often express doubts and concerns about the methodology as well as about repository safety as such. The research team tried to explore the basis of these concerns and to gather input about how Safety Case methodology and tools might be improved. The research approach was structured accounting for different knowledge types of the td partners: Commencement as well as completion of the activities are based on exchanges with “actors with Safety Case experience”, i.e. Safety Case producers, reviewers and “users” as well as individuals addressing safety issues in stakeholder interactions. Of utmost importance were workshop formats involving one of the standing groups mentioned above. Additional research formats involved PhD students from repository-relevant disciplines, but with little or no “system knowledge” about geologic disposal or nuclear waste management, and attendants of participation formats in the German site selection process for HLW / SNF disposal.  While it is obvious that the results of this type of td research are not reproducible since their nature is situational and dependent on group composition, it has nevertheless produced valuable results and ideas which should be further developed by specialists. Results to be presented at the symposium include ideas about how Safety Case digitalisation can support documentation, FEP processing, scenario development, and knowledge management, as well as the presentation, comprehensibility and perception of safety and performance indicators. Lessons learned concern the role of different knowledge types and the role of our standing accompanying group as a potential proxy for the public in participation processes.  The TRANSENS project is supported by the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), on the basis of a decision by the German Bundestag, and within the funding initiative "Niedersächsisches Vorab" by the Ministry for Science and Culture of Lower Saxony (MWK) from 2019 to 2024 (grant number 02E11849A-J). | |