

# Third International Conference on Nuclear Knowledge Management - Challenges and Approaches



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## NPP Information Model as an Innovative Approach to End-to-End Lifecycle Management of the NPP and Nuclear Knowledge Management Proven in Russia

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Managing engineering data for an industrial facility, including integration and maintenance of all engineering and technical data, ensuring fast and convenient access to that information and its analysis, proves to be necessary in order to perform the following tasks: (1). to increase economic efficiency of the plant during its lifecycle, including the decommissioning stage; (2). to ensure strict adherence to industrial safety requirements, radiation safety requirements (in case of nuclear facilities) and environmental safety requirements during operation (including refurbishment and restoration projects) and decommissioning.

While performing tasks (1) and (2), one faces a range of challenges: 1. A huge amount of information describing the plant configuration. 2. Complexity of engineering procedures, step-by-step commissioning and significant geographical distribution of industrial infrastructure. 3. High importance of plant refurbishment projects. 4. The need to ensure comprehensive knowledge transfer between different generations of operational personnel and, which is especially important for the nuclear energy industry, between the commissioning personnel generations. NPP Information Model is an innovative method of NPP Knowledge Management throughout the whole plant lifecycle. It's an integrated database with all NPP technical engineering information (design, construction, operation, diagnosing, maintenance, refurbishment).

### Country or International Organization

Russian Federation

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