C-Y. CHO, H. PARK, K. CHIN, J. HAN, W. LEE, D. RYU. ***Integrated information technology for nuclear power plant lifecycle management.*** *Gerontechnology 2012;11(2):319;* doi:10.4017/gt.2012.11.02.394.00

Purpose A capital project includes construction with regard to various mechanism industries such as process plant or power plant, aside from the civil construction including city development, harbor, and airport. Losses in the US construction industry including the capital project – which is caused by the fact that the information integration has not been built– exceeded one billion dollar annually[1]. In order to solve problems of this magnitude, a number of institutes, including FIATECH, are driving the various studies on information integration in the construction industry. **Method** Although issues regarding the safety in nuclear power plant have been raised since the Fukushima nuclear accident, there is no choice but to operate the current nuclear power plant based on light-water reactor in the situation that the efficiency of alternative energy cannot compete with the economic feasibility of fossil fuels. For the safe management in terms of the original problem in the nuclear power plant, however, it is necessary to integrate the various types of information produced at the engineering, procurement, and construction (EPC) stage of a nuclear power plant and to transfer it to the operation and maintenance (O&M) stage (*Figure 1*). Because currently the Korea Hydro & Nuclear Power Co., Ltd. is not only the public utility, but also manages the EPC-stage generally, Korea is in a more advantageous position compared to other nations where the project and management are contracted to private companies in terms of the system foundation for the information integration technology. **Results & Discussion** This study analyzed the AEX-project and an iRING-adapter, and the information integration technologies regarding capital project and power plant which are not being prompted by FIATECH, EPRI and IAEA. Based on the analysis of the results, we tried to identify the information integration technology to transfer the information produced at the EPC-stage of the nuclear power plant to the O&M stage, and to establish the integrated platform development and strategy to actively link each technology element. In addition, this study tried to review the validity with regard to the identified element technology and the established strategy through interviewing experts at home and abroad.

Reference

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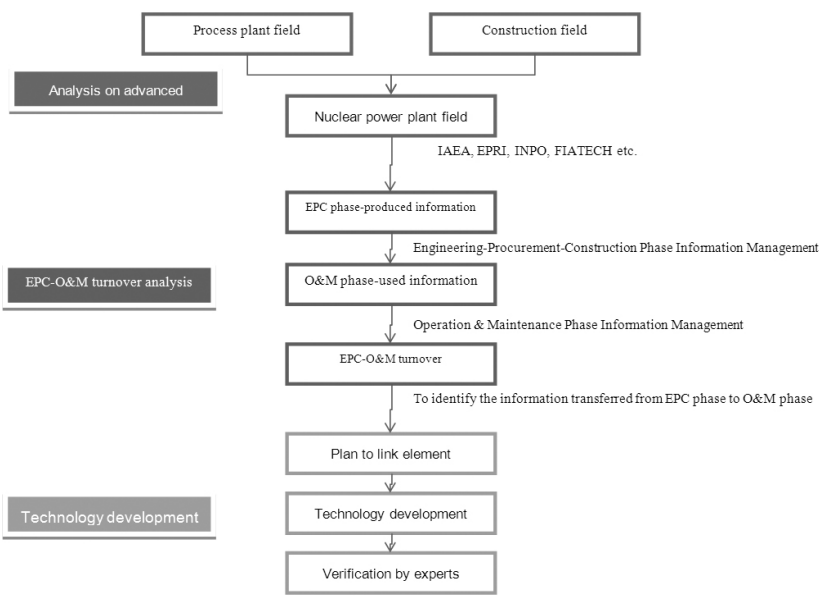

Figure 1. Information management model for nuclear power plants