

A Structured Approach to Introduce the Knowledge Management Practice in a National Nuclear Research Institution in Malaysia

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In 2002, the Government of Malaysia has launched the Knowledge Management Master Plan with the aim to transform Malaysian from a production-based economy to a knowledge-based economy. Seven strategic thrusts were developed [1]. One of which was to dramatically increase capacity for acquisition and application of science and technology in all sectors. Knowledge-based economy strengthen Malaysia capability to innovate; adapt and create indigenous technology; and design, develop and market new products, thereby providing foundation for endogenously driven growth. By 2020, Malaysia expects to become a contributor, rather than a consumer of knowledge and technology.

In June 2003, the 2nd National S & T policy was launched. The policy puts in place programmes, institutions and partnerships to enhance Malaysian economic position including the quality of life of the people [2]. Seven strategic thrusts and several specific initiatives for each strategic thrust were developed. Many of the initiatives developed emphasize on the important roles of national research institutions (NRI) in the knowledge based economy.

The Malaysian Institute for Nuclear Technology Research (MINT) as a national research institution is thus expected to make significant contributions to the knowledge economy. MINT is established in 1972 and its main responsibility is to promote the application of nuclear technology in various socio-economic sectors including industry, agriculture, manufacturing, health, radiation safety and the environment. Its core competency is R & D in nuclear science and technology.

Malaysia has always considers the international and regional technical cooperation programs such as the International Atomic Energy Agency (IAEA), Regional Cooperative Agreement (RCA) and Forum for Nuclear Cooperation in Asia (FNCA) as one of the important mechanisms for Malaysia to acquire knowledge and technology from more advanced countries. Some specialised technologies are acquired through other mechanism such as bilateral cooperation.

Over the years, MINT has been consciously and unconsciously implementing the knowledge management (KM) initiatives. MINT to a certain extent has been successful in knowledge acquisition and exploitation from more advanced countries as well as in knowledge generation and in the knowledge application and diffusion to the socio-economic sectors.

Nevertheless, for MINT to sustain the image, the trusts, the credibility and the professionalism that the institution holds, as the promoter of the application of nuclear and related technologies for economic development, MINT recognizes the need to

implement knowledge management (KM) practices in a more structured manner [3]. Recently KM practice was initiated in the Planning and External Relation Division in view of its responsibility for the management of technical cooperation program, which involves management of large volume of information both from external and internal sources. The information is of various natures, namely, technology, policy, financial, resolutions, strategies and action plans, projects proposals, meeting reports. There is always a challenge for the division to get the right information to the right people at the right time.

The division has embarked on piloting a project to introduce KM practice within the division. The objective of this project is to implement KM practices as a process for the division to develop right culture to manage information for increased responsiveness or adaptability, innovation, competency and efficiency through collaborative problem solving and participative decision making.

The project is to be conducted over 12 months period in 5 phases, namely, preparation, official launching, implementation, sustainability and maturity (a progressive journey).

- Phase I: Preparation: involves KM familiarisation program. It includes the implementation of activities such as the formation of KM team, formulation of K-policy, identification of issues/problems and key performance indicators (KPI), formation community of practice.
- Phase II: Official Launching:
- Phase III- Implementation: involves the implementation of 5 keys focus areas, namely, K-identification, K-acquisition, K-application, K-sharing and K-development. It includes the implementation of activities such as identification of existing initiatives and technology, execution of knowledge need analysis, carry out 'learning history', organisation of KM forum, carry out collaborative problem solving and participative decision making.
- Phase IV- Sustainability: involves the implementation of 5 keys focus areas, namely, K-creation, K-preservation and K-Measurement. It includes the implementation of activities such as evaluation of KPI, revising the project, improvement and recycling the project.
- Phase V – Maturity: is the Progressive Journey. It includes the implementation of activities such as team members motivation, project monitoring and nurturing culture of KM.

It expected that at the end of the project, in addition to developing knowledge culture for the division, some best practices and lessons learned can be developed, documented and disseminated to ensure smart decisions are repeated and mistake avoided. Once KM practice is successfully established in the Planning and External Relation Division, the practice can be extended and applied to other divisions with the aim to eventually transform MINT into a knowledge organisation.

[1]. Knowledge Management Master Plan, Malaysia, September 2002

[2]. The Second National Science and Technology Policy and Plan of Action, Malaysia, June 2003

[3] 'Certificate in Knowledge Management' JT Frank The Knowledge Management Specialist, Course Materials, Version 12, Malaysia, February 2004.