

International Forum for Reactor Aging Management (IFRAM)

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IFRAM Background



- In order to be able to make timely and technically-defensible business and regulatory decisions, industry and regulators require best available data
- Since all organizations have limited budget/resources, cooperation with other organizations in developing needed data benefits all partners
 - All parties have access to same data, but can interpret for individual needs
- Participation in IFRAM provides an extended pool of resources and expertise to work on common problems
 - Promote global cooperation on management of reactor aging
 - IFRAM does not replace any existing cooperative efforts

IFRAM Overview



- IFRAM promotes worldwide cooperation to address nuclear power plant (NPP) aging management issues
 - Cooperation includes sharing of data and specimens as well as facilitating joint research agendas and promoting work that addresses high priority issues and concerns.
- Participation in IFRAM provides an extended pool of resources and expertise to work on common problems
 - Promote global cooperation on management of reactor aging
 - IFRAM does not replace any existing cooperative efforts

IFRAM Overview



- IFRAM's rationale is that:
 - Organizations worldwide share common challenges
 - Magnitude and scope of these challenges is beyond what any one organization can accomplish with their limited time and resources
 - Cooperation is a powerful tool to economize resources, save time, and minimize needless duplication of efforts in addressing these challenges

IFRAM Concept

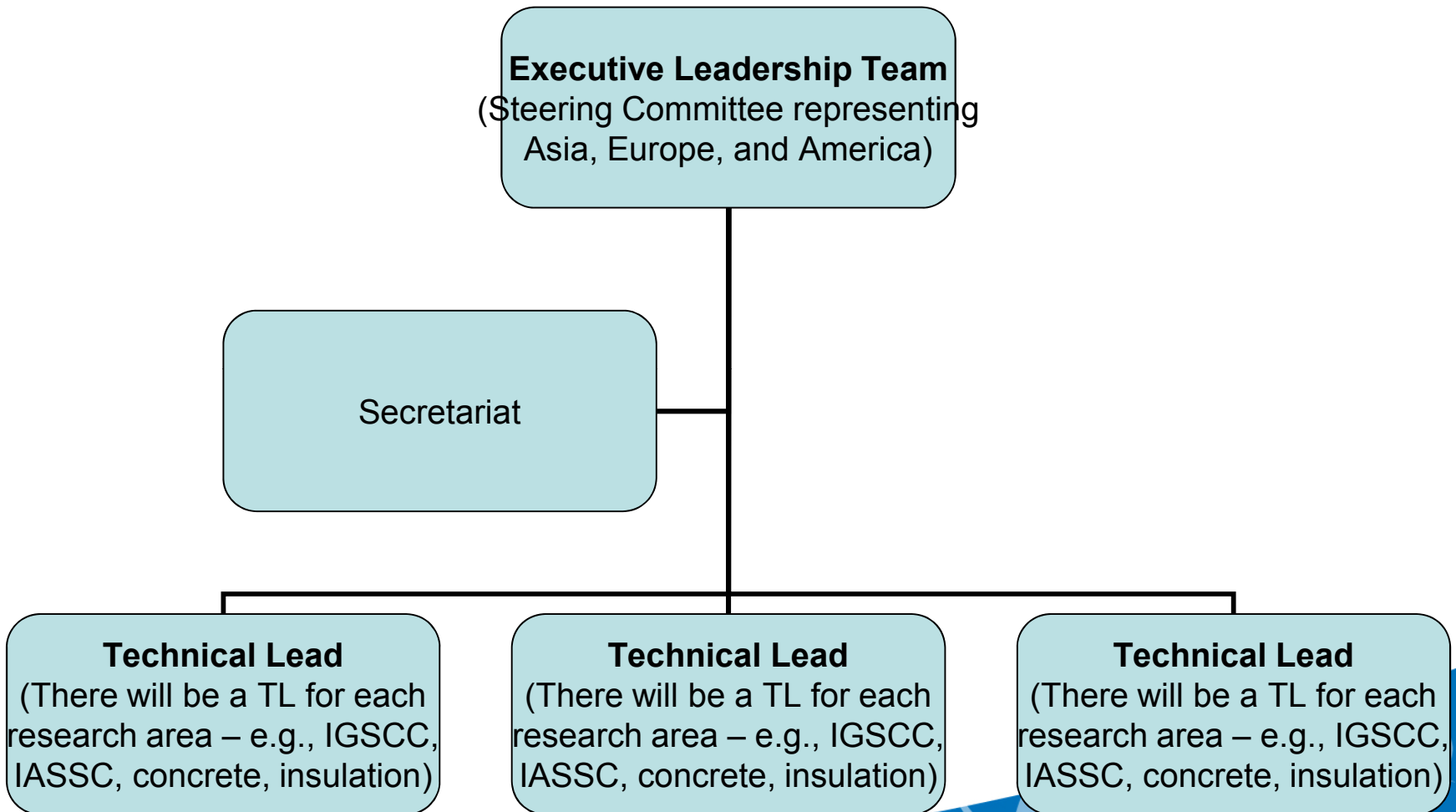
- Although IFRAM will be active worldwide, it will not be located in any specific location or organization, existing and operating in a virtual manner
 - Wherever possible, IFRAM will host meetings in conjunction with meetings planned by other groups
- While many participants will organize and lead activities, IFRAM will not need a large staff of its own.
 - IFRAM will capitalize on participants with initiative, ideas and resources to make these research activities happen
- IFRAM will be instrumental in promoting projects that involve millions of dollars while not having a budget of its own
 - IFRAM will **not** be a funding agency

Concept Behind IFRAM

- IFRAM will consolidate available information, coordinate cooperation on activities, facilitate information exchange and provide opportunities to bring together different national and regional views on topics and, where appropriate, harmonize agreed-upon best practices
- IFRAM will cooperate with many parties and cut across numerous kinds of boundaries but it will not replace any cooperation efforts that currently exist
 - Its basic role is to facilitate research and information sharing
- IFRAM is not intended to be an NRC-led (or regulatory-led, utility-led, university-led, or research organization-led) entity
 - Since membership in IFRAM is open to all organizations, leadership roles will be given those members willing to support IFRAM's goals

- IFRAM members will review on-going research projects and plans and identify and prioritize major issues to be faced for aging management
 - Its members will have an influence on approaches used to address aging management without directly controlling projects
 - IFRAM will enable world-class experts to peer-review and cooperate in developing research plans and to evaluate quality of work, thus improving research capabilities world-wide

Possible IFRAM Organizational Structure



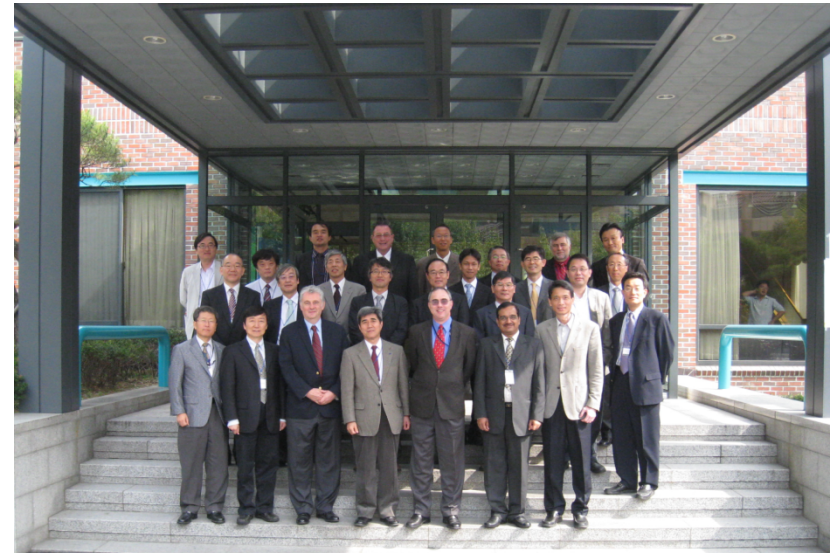
Participation Benefits

- Sharing
 - Ideas & Innovation
 - Knowledge & Data
 - Trends And Directions
 - Access To Historic Data
 - Identification Of High Priority Problems
 - Lessons Learned & Best Practices
 - Information On Successful Proactive Actions
 - Skills & Expertise
 - Who Is Doing What, Where
 - Facilities
 - Newest Technologies and Capabilities
 - Standards & Codes
- ▶ Saving
 - Time
 - Effort
 - Resources
 - Doing More With Less And Doing It Better

Asian Engagement Workshop – Seoul (Oct' 09)



- Discussed benefits of IFRAM
 - what are likely returns for participants
- Described ways national programs could be linked to IFRAM
 - how to leverage so that benefits are greater
- Described best ways for IFRAM participants to cooperate and exchange information
- Develop matrix of Asian organizations who are working on aging management research



Participants included Japan, Korea, China, Taiwan, and India

European Engagement workshop – Petten – May 2010



- Participants from IAEA, Belgium, Czech Republic, Finland, France, Germany, Hungary, Netherlands, Romania, Slovakia, Spain, Sweden, Switzerland, Ukraine, USA and EC/JRC
- Included utilities, safety authorities, TVOs and research institutes
- Agreed to form Global Steering Committee and to charter IFRAM



New PMMD Program and Information Tool Website



<http://pmmd.pnl.gov/program/forums.aspx>



Proactive Management of Materials Degradation

International Forum

The NRC Proactive Management of Materials Degradation (PMMD) Program proposed the idea to establish an "International Forum for Reactor Aging Management." The forum will be a network of international relationships that will facilitate exchange of ideas and leverage national programs which address critical aspects of the science and technology required to address the potential for the safe and economic life extension of nuclear power plants. The technical challenges in the area of PMMD are known to be significant and many questions are as yet unanswered. In addition the resources available to national programs, both financial and intellectual are finite. The program will seek to provide a framework that will establish a cooperative environment, enable coordinated research activities to be undertaken and where possible avoid unnecessary duplication of research. The program will hold periodic meetings, use electronic media, and promote networking which will seek to provide a framework to foster the identification and adoption of best practices in address NPP life management and extension.

The implementation of the International Forum is being carried out by holding engagement workshops in Asia, Europe and the U.S. Participants are invited to the workshops. The first Engagement Workshop was held in Korea in October 2009. Additional workshops in Europe and the U.S. will be held in 2010.

One of the purposes of the Engagement Workshops is to develop a proposal and charter for IFRAM. The following are draft documents which will be revised as a result of the Engagement Workshop efforts:

- [Draft Proposal for the International Forum for Reactor Aging Management \(IFRAM\).](#)
- [Draft Charter for the International Forum for Reactor Aging Management \(IFRAM\).](#)

Last Updated: March 2010

Pacific Northwest National Laboratory

Operated by Battelle for the US Department of Energy



IFRAM – Global Steering Committee



- **1st conference call – 8 July 2010**
 - Subsequent calls on/about first Monday
- **Prepare the Charter for IFRAM**
 - Strengthen regional, and build global, networks;
 - Facilitate the development, and sharing of, data, information and best practices; and,
 - Identify opportunities to leverage resources to accomplish technical and operational objectives.
- **Create the IFRAM Operations Plan**
- **Make arrangements for the IFRAM start-up event.**
 - Initiate Global Network
 - Create Tools for Sharing
 - Build Capabilities Matrix
 - Establish the IFRAM e-news letter and mailing list