

GNSSN Plenary Meeting  
**BUILDING CAPACITY AND SUSTAINING RESULTS**  
Conference Room C3, VIC, 16 September 2015

**Workforce Planning and  
Human Resource Development**  
Presented by Shahid Mallick, NS

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# KEY CHALLENGE FOR HUMAN RESOURCES

- Key challenge is to achieve initial competence, and then sustainability, of Human Resources to support a nuclear power programme
- Requires the coordination, and cooperation, of all national stakeholders (government, education sector, industry, international bodies)

# HUMAN RESOURCES 'ROADMAP'

There are three main steps to achieving sustainable **competence** in Human Resources for any programme:

1. Developing the necessary Human Resources Infrastructure (including Workforce Planning)
2. Building Capacity
3. Developing and sustaining **competence**

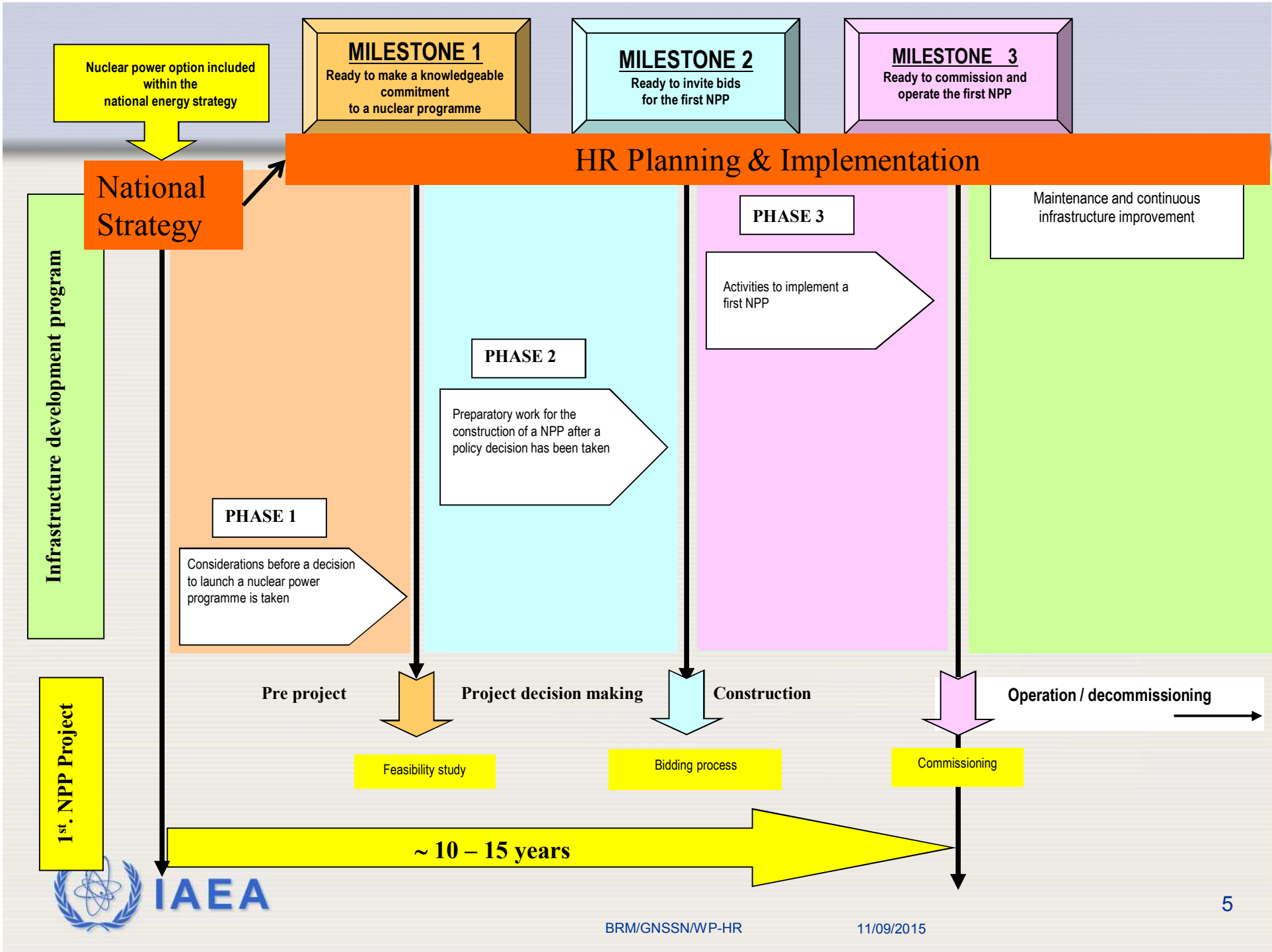
For newcomer countries, IAEA support is mainly focused on steps 1 & 2 and for operating countries the focus is in step 3.

# 1. HUMAN RESOURCES INFRASTRUCTURE

The first step is to develop workforce plan to estimate the needs of a national nuclear power programme, and therefore understand what infrastructure is required.

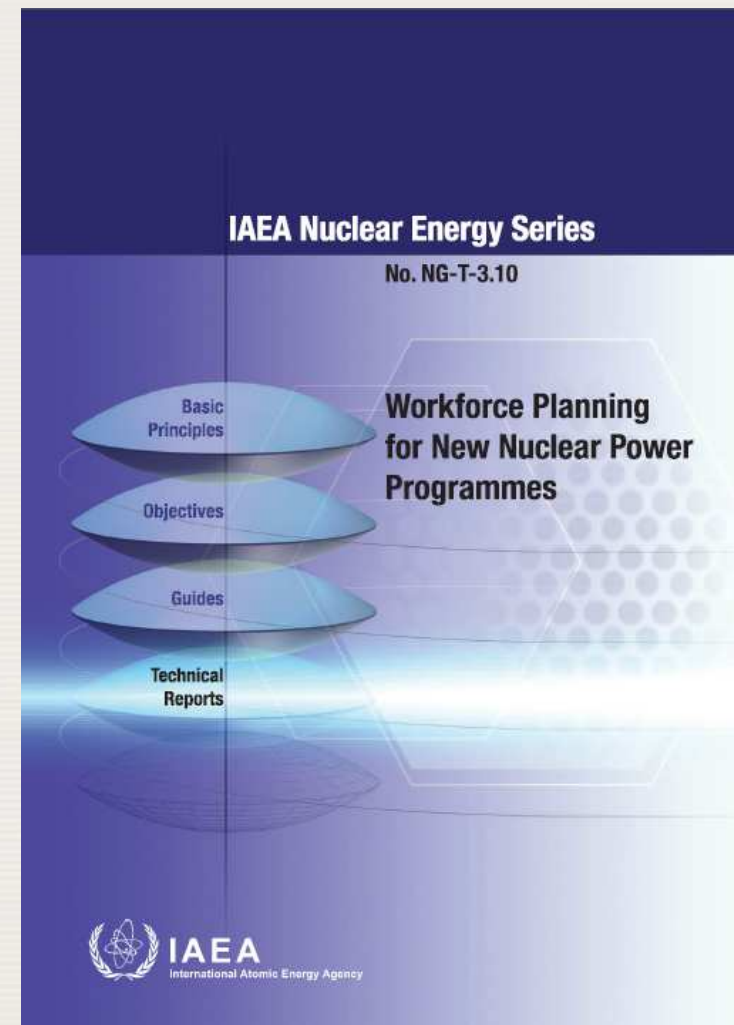
The necessary HR Infrastructure for a nuclear power programme includes:

- Secondary (and primary) education system with strong maths and sciences components, to prepare for, and stimulate interest in, Engineering careers
- Technical/Vocational schools to create good skilled artisans/technicians in different engineering and technical disciplines
- University programmes for (nuclear) Science and Engineering professional staff (and allied professions e.g. Chemistry, Business, Finance, Human Resources, etc.)
- Creating 'Outreach' programmes to engage students in nuclear programmes and stimulate career interest.



# IAEA Support for Step 1

- IAEA provides direct workforce planning support through guidance documents, expert missions and review services.
- Also rolling out the Nuclear Power Human Resource (NPHR) modelling tool, to help MS understand the components of a nuclear workforce



# IAEA Support for Step 1 (cont'd)

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- Through a Regional TC programme, we are piloting new science curricula activities in a number of newcomer countries
- Through various national TC projects, we are supporting MS in developing university nuclear curricula, using expert missions and experienced lecturer exchange programmes
- NKM Section provides expert missions and review services to evaluate existing programmes, as well as providing guidance on curricula development, and the new Nuclear Management Masters programme (INMA – International Nuclear Management Academy)

# 2. CAPACITY BUILDING





# IAEA Support for Step 2

- General Capacity Building through Fellowships and Scientific visits
- Development of tailored programmes to meet individual Member States needs
- New E-learning Series based on the Milestones approach with 12 downloadable modules already available and 4 more in development.
- Various training programmes from Executive Leadership with MIT, through Senior Management with Argonne national Laboratory (US) and France, and programmes with Korea, China and others





**Slide 10**

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**LD1**

This picture will have to be adjusted to accommodate Nuclear Security information added to the next slide.

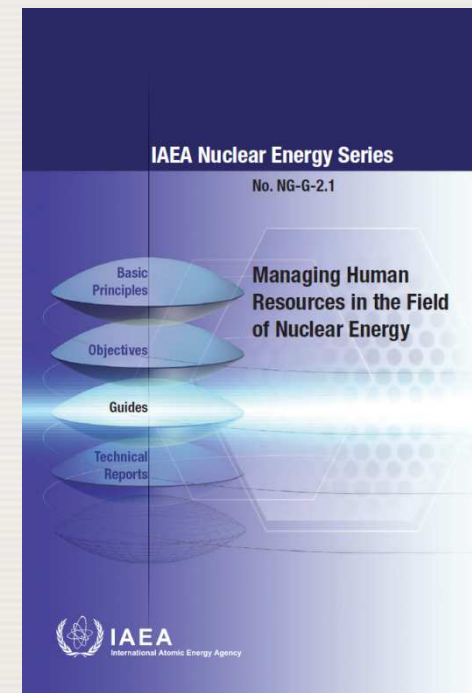
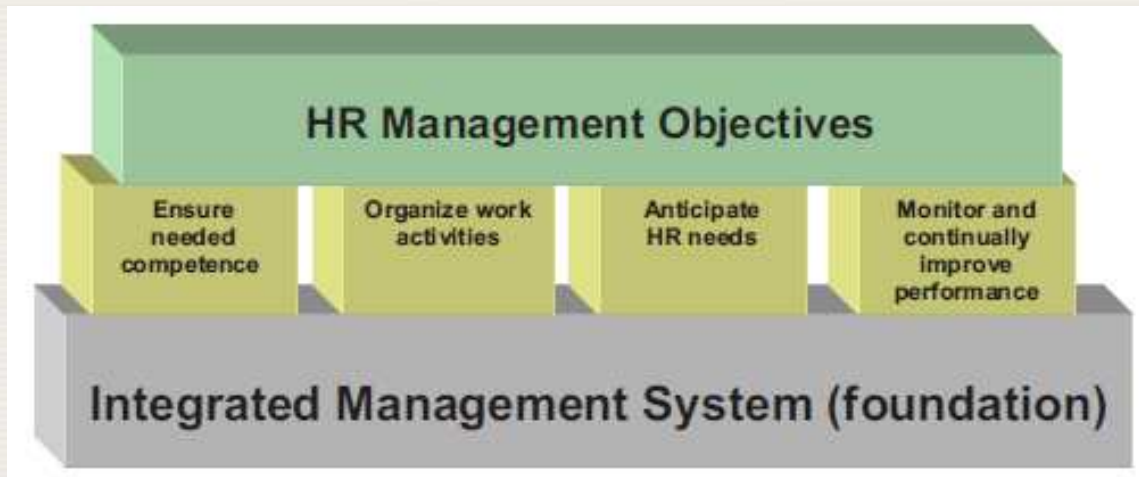
LAMBERT, David, 2013-10-18

# 3. BUILDING & SUSTAINING COMPETENCE



# IAEA Support for Step 3

Main guidance contained in IAEA NE Series Document “Managing Human Resources in the Field of Nuclear Energy” (NG-G-2.1)



# IAEA Support for Step 3 (cont'd)

- IAEA receives guidance from Biennial Technical Working Group on Managing Human Resources (TWG-MHR) ~ 20 MS participate
- Develops various guidance and technical documents
- Conduct topical Technical Meetings/ Conferences to exchange experience and good practices (joint with NS/ other departments as appropriate.)
- Review services – Human Resources components in INIR (Integrated Nuclear Infrastructure Review) missions for newcomer countries and SALTO (Safety Aspects of Long Term Operation) missions for operating countries
- Ad-hoc support/ review missions on request of member states, based on specified needs (e.g. SAT – systematic approach to training)

# SUMMARY

- IAEA provides a variety of tools and services to support human resource development, many provided through Technical Cooperation projects.
- Support is based on IAEA guidance documents but can be tailored to MS needs.
- A variety of training programmes are offered for different levels, focusing on Leadership and effective management (not technology subjects, which should be vendor specific).

# THANK YOU..... ANY QUESTIONS?



*...atoms for peace.*

<http://www.iaea.org/NuclearPower/Infrastructure/elearning/index.html>

