

Capacity Building with Special Emphasises on HRD & Nuclear Knowledge Management in BATAN

First Coordination Meeting
RAS 0080
IAEA, 25 February 2018

Sudi Ariyanto

Pusat Pendidikan dan Pelatihan
Badan Tenaga Nuklir Nasional
Email: asudi@batan.go.id



IAEA Concept of Competence Building

Expert meeting RAS 0080

Sudi Ariyanto

Pusat Pendidikan dan Pelatihan
Badan Tenaga Nuklir Nasional
Email: asudi@batan.go.id





Capacity Building of BATAN: Objectives



E&T

Building
Competences

Preserving nat.
comp. on NST

Public
Outreach

HRD

Effective
Human Capital
Management

NKM

Preserving NK

Preventing NK
loss

Harvesting NK

Nuclear Network

Building
competencies

Stakeholders
involvement

Public
outreach

Increasing
public support

Capacity Building of BATAN: Activities



STTN, PDK, PDL

E&T
External

Education

Training

Public
outreach

Information
sharing

PDL

E&T
Internal

System
Improvement

Method
diversification

Infrastructure
improvement

Networking

BSDMO

HRD

Talent
Management

BSDMO

NKM

infrastructure
development

Self
Assessment

BHKK, UK

Nuclear
Network

TC IAEA

ANENT

ANSN

NSSC

FNCA

ICERR

Stakeholde
rs

Foreign
Univ

Domestic
Univ.

HRD in BATAN

Expert meeting RAS 0080

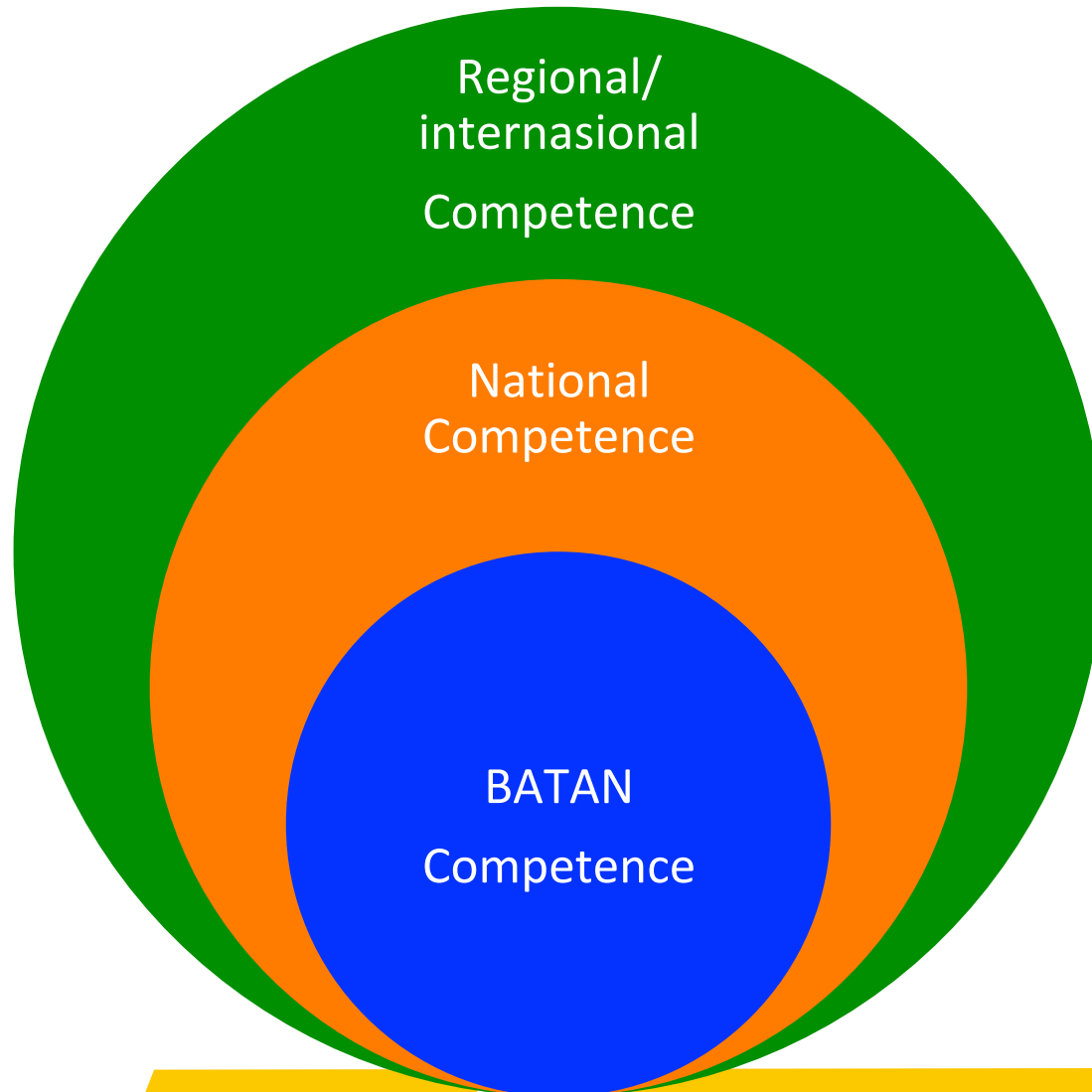
Sudi Ariyanto

Pusat Pendidikan dan Pelatihan
Badan Tenaga Nuklir Nasional
Email: asudi@batan.go.id

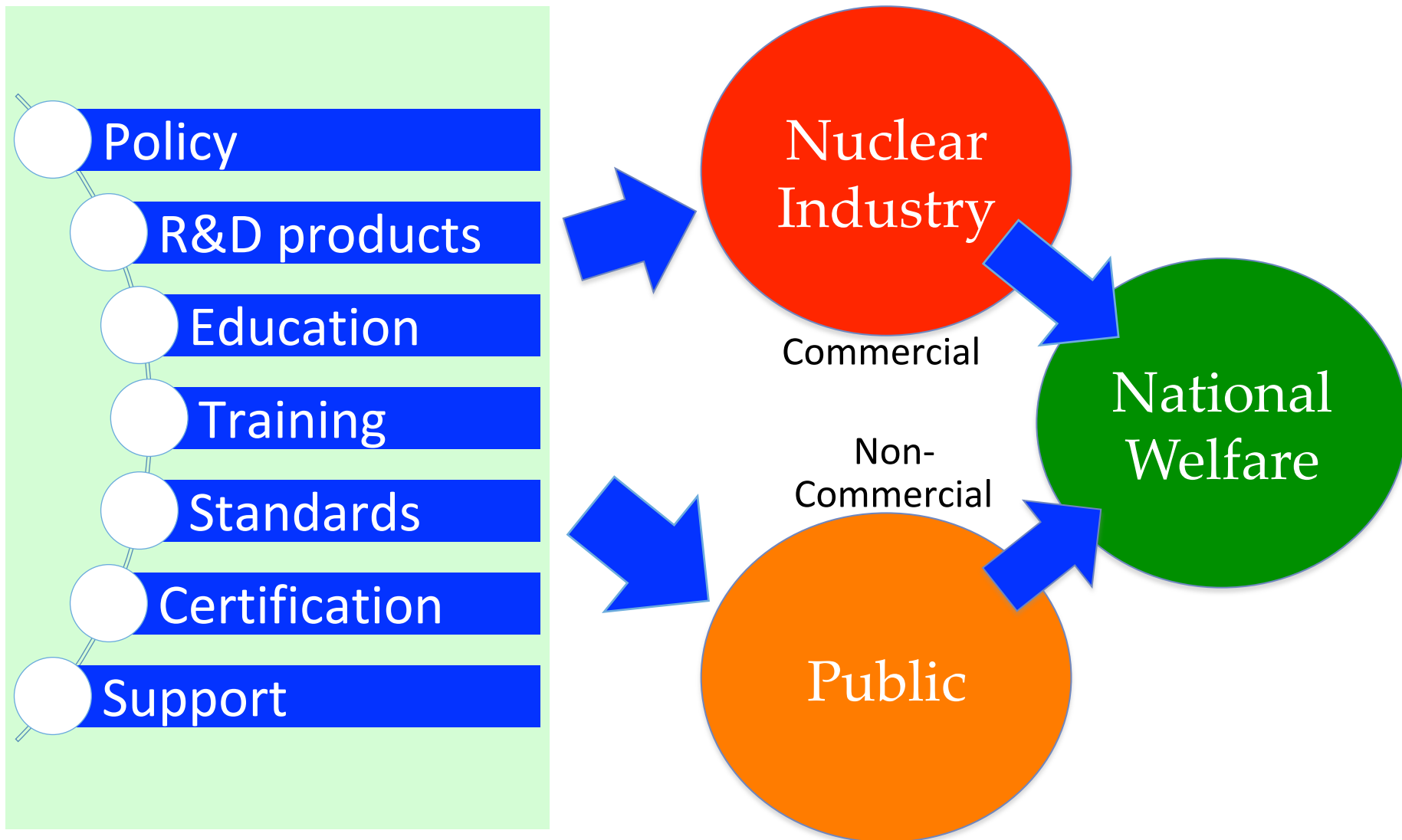


- Manpower Requirements
- Recruitment and Training
Timeframe
- Training Schemes and Certification
- Nuclear Training Center
- Standard on Personnel Competence
and Competence- Based Training
- Training implementation

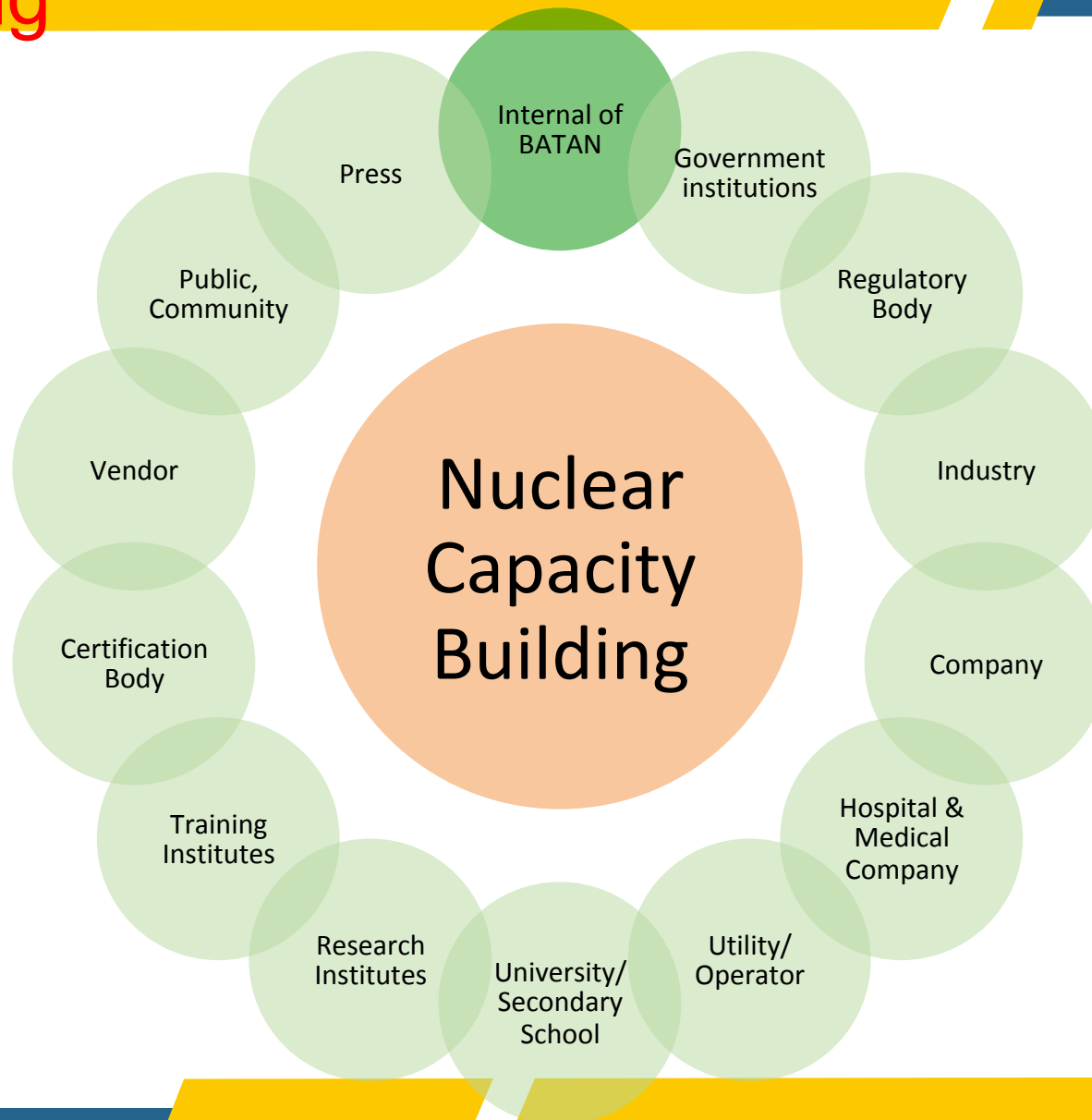
Target for Competence Building



BATAN contribution



Framework for Nuclear Capacity Building



Framework for Nuclear Capacity Building



Training Center Improvement



LION

Learning Innovation
on Nuclear

- Active participation
- Active methods

Active Learning

Online Learning

Smart Learning Space

Networking

Online Library

Learner Community

- Online portal
- Blended Learning
- Full Online Courses

- Smart Room arrangement
- Multi-monitors/ medias

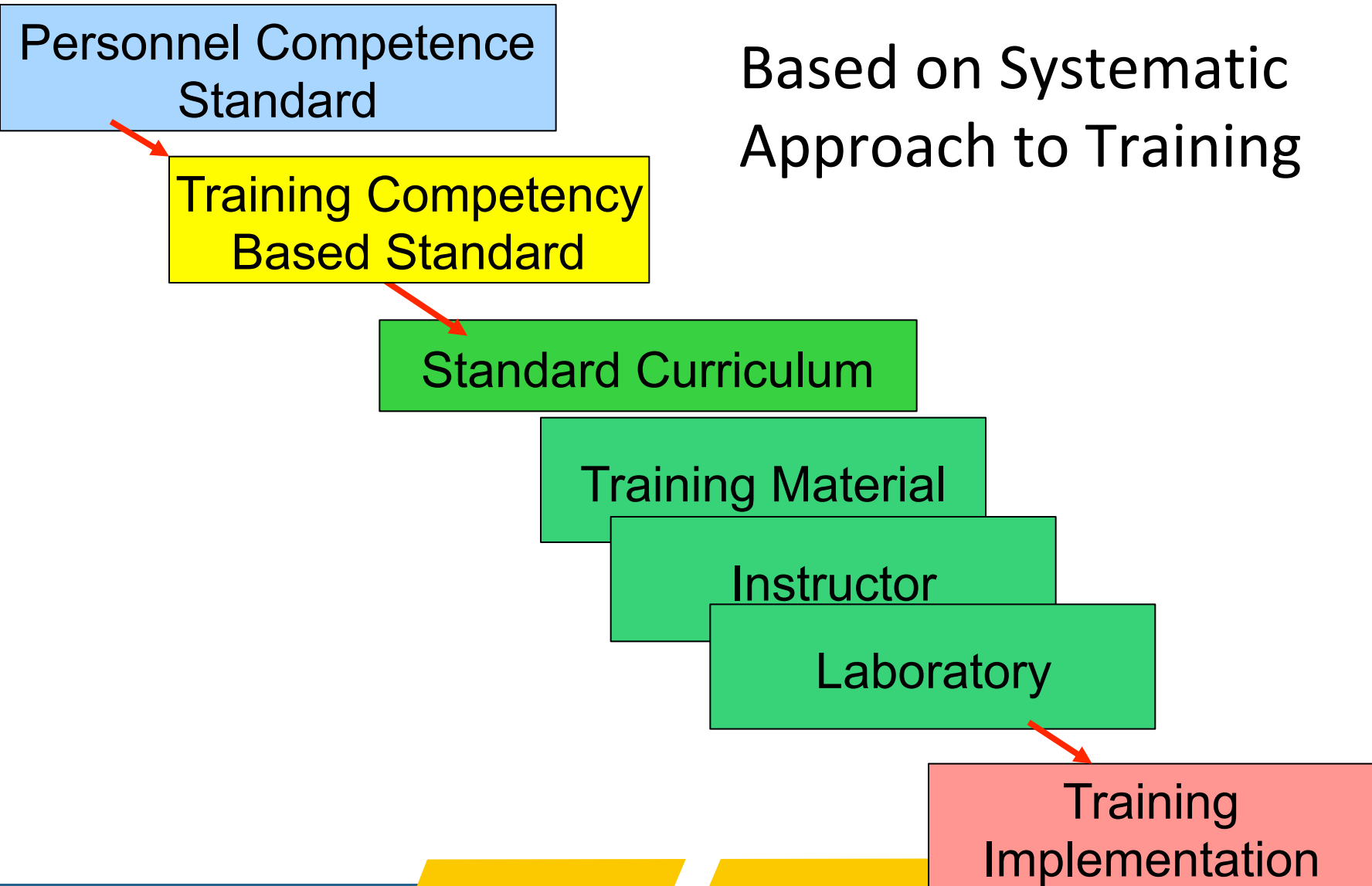
- Web-based library
- Learning Material storages
- Link to other sites

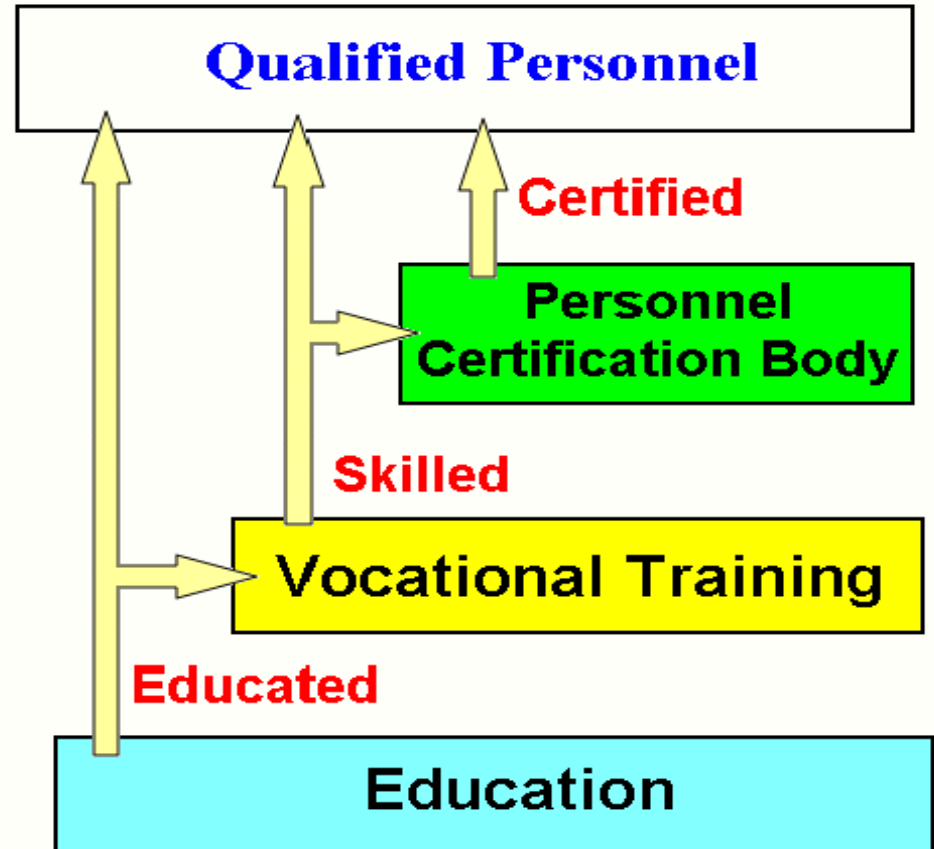
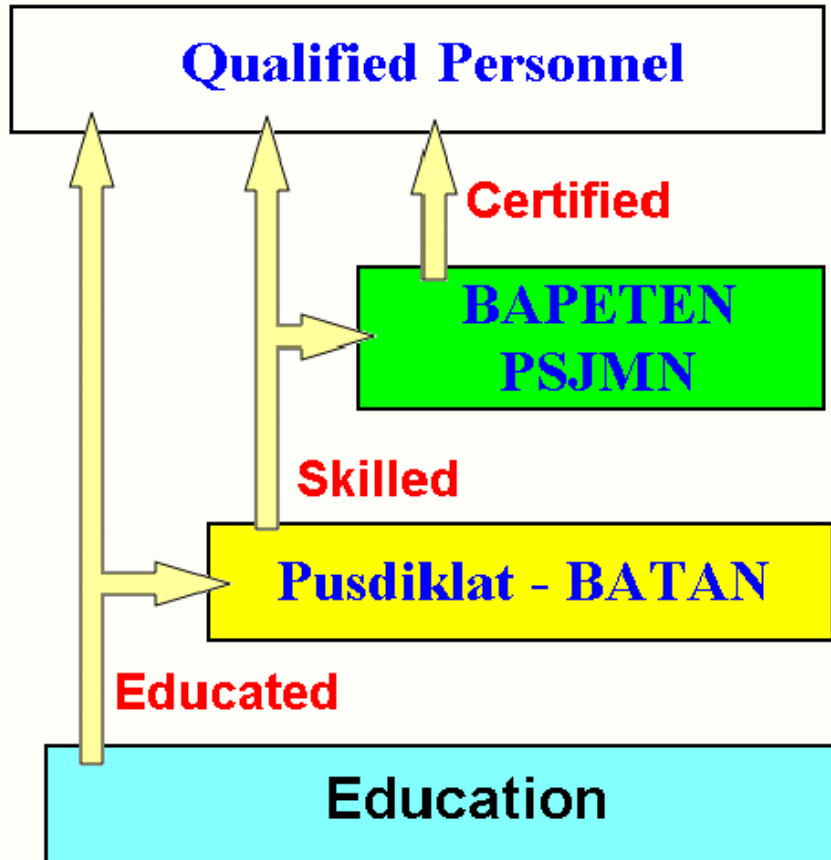
- Communication forum

Strategy for HR Training



Based on Systematic Approach to Training

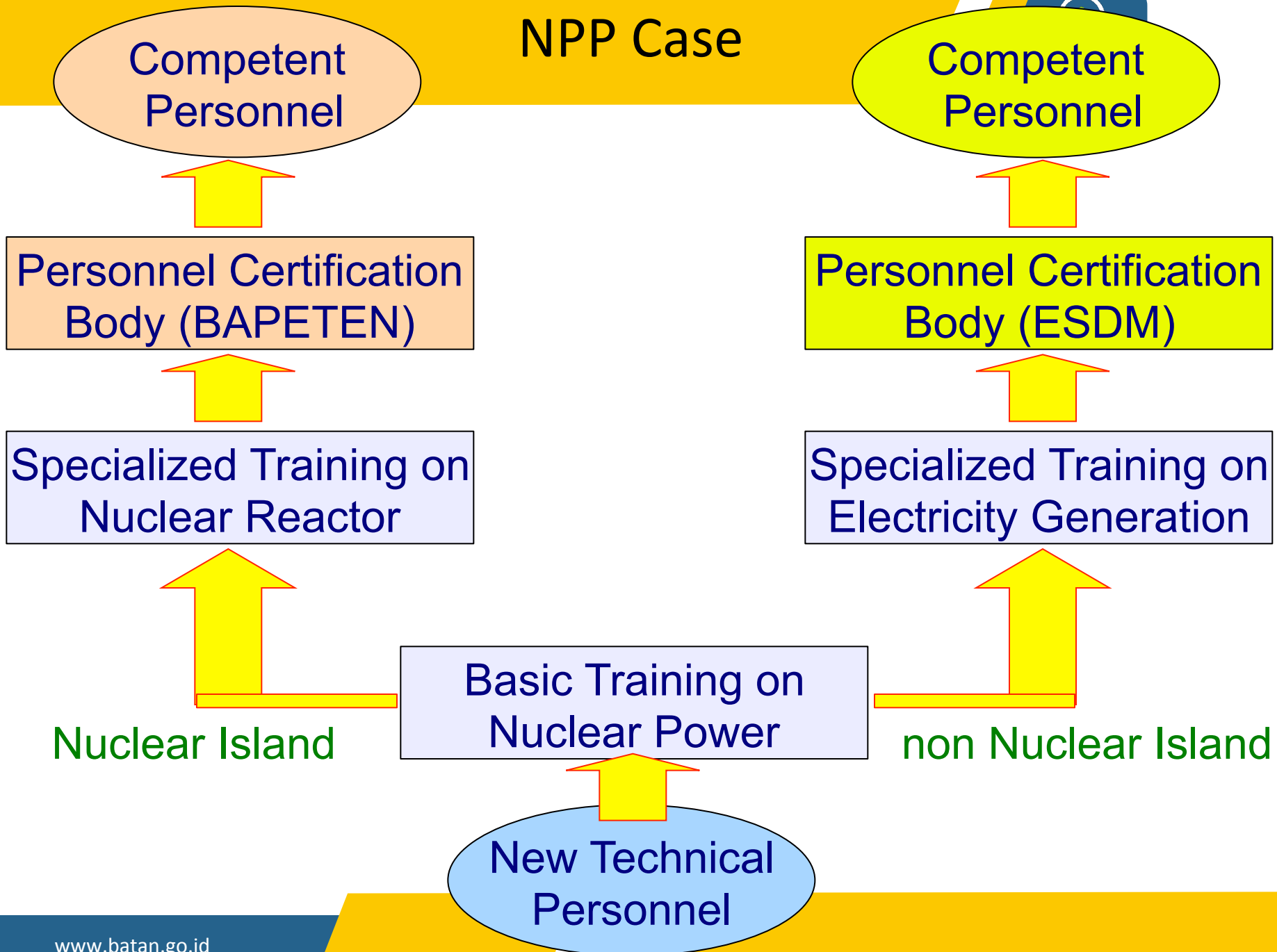




Infrastructures:

- National Education System
- Institutional Training Facilities

NPP Case



Basic Scheme of Training for BATAN Staff



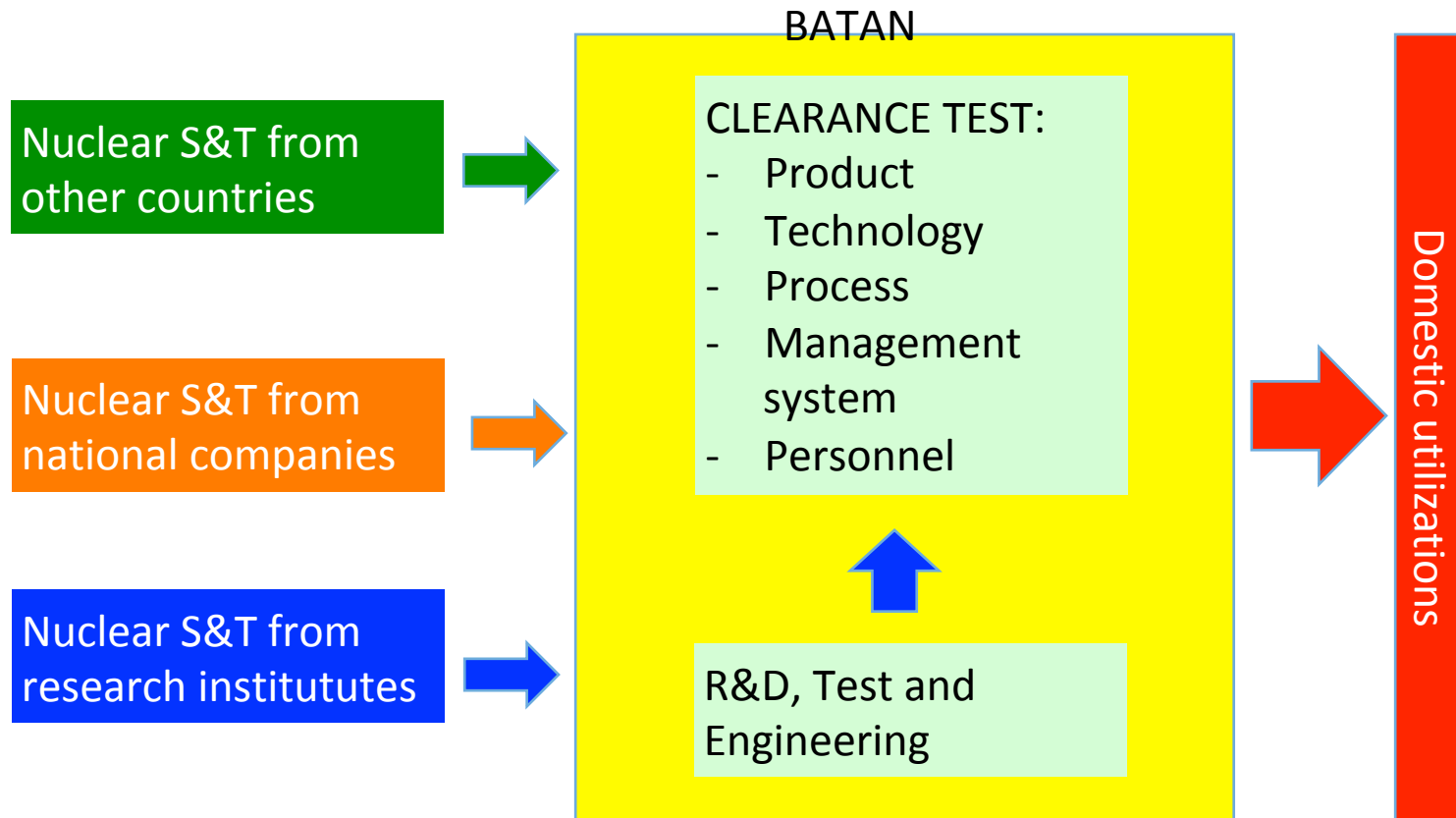
Basic (< 3 years)		Junior (3 ~ 8 years)	Senior (> 8 years)	
Radiation Protection for New Employee	Radiation Measurement and Spectroscopy	Basic Professional Training Course on Nuclear Safety (level I and II)	Radiation Protection Officer	Radiation Protection Supervisor
		Reactor Operator	Reactor Supervisor	
		Reactor Maintenance Officer	Reactor Maintenance Supervisor	
		Nuclear Material Inventory Officer	Nuclear Material Inventory Supervisor	
		Nuclear Emergency preparedness		
		Nuclear Fuel Fabrication Officer		
		Nuclear Waste Management Officer		
	Application of Nuclear Technique in Industry and Environment	Radiation Protection Officer	Radiation Protection Supervisor	
		Operator Radiography	Supervisor Radiography	
		Irradiator/Accelerator Operator		
		Irradiator/Accelerator Maintenance Officer		
		Radiological Emergency preparedness		
		Radioisotope Production Officer		
Not Safety Related Competency (Administrative, Quality Assurance, Informatics, instrumentation, etc.)				

Tasks:

- Review and provide recommendation of nuclear products and technology,
- Perform certification of person, product, process, and management systems
- Provide data / information of expertise, products, and technology in nuclear fields.

CHNT → assure personnel competence

Institutional Workflows of CHNT



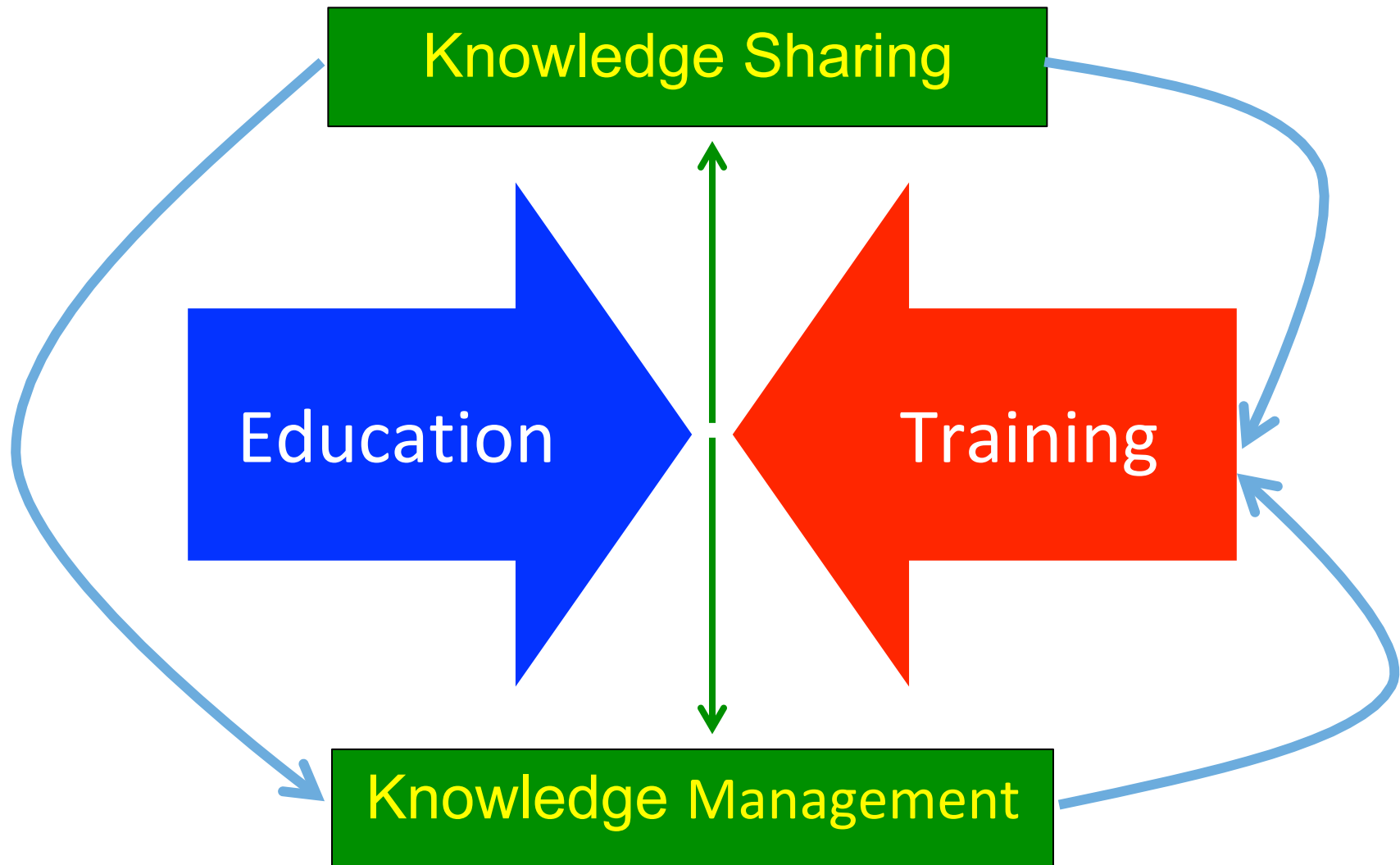
NKM in BATAN

Expert meeting RAS 0080

Sudi Ariyanto

Pusat Pendidikan dan Pelatihan
Badan Tenaga Nuklir Nasional
Email: asudi@batan.go.id





- NKM is a key factor in:
 - ensuring safe and sustainable operation of nuclear facilities
 - effective application of current knowledge to the design and construction of new nuclear facilities, and
 - development of innovative new technologies.
- NK is developed and maintained to assure operation of nuclear facilities in safe, secure and sustainable manner.
- NK should be developed, shared and transferred between generations.
- BATAN as a knowledge-based learning organization realizes the importance of implementing NKM so that it becomes a resilient and eminent organization.

Objectives



- a. Improve organizational capacity in managing intellectual assets, in the form of knowledge and experience, to be a strong organization with excellent performance, and accelerate the achievement of bureaucratic reform objectives;
- b. Improve BATAN to be a strong and superior a knowledge-based nuclear technology learning organization;
- c. Develop competence and improve human resource performance in the nuclear field;
- d. Pass down knowledge and skills in the nuclear field to the next generation to prevent loss of core and specific knowledge.

- a. Implementation of nuclear knowledge management includes all activities in BATAN
- b. NKM is focused on core and specific competencies as well as identification of critical knowledge.

Drivers to NKM application



- a. Aging of human resources and the threat of loss of knowledge and experience
- b. Aging of nuclear facilities
- c. Evolution of technology inside and outside the nuclear field
- d. New development in nuclear fuel cycle
- e. Lack of nuclear-related graduates & technicians
- f. Need of higher for nuclear facility safety
- g. NKM should be a concern at the national level

Approaches (1)

Top-down approach



Approaches (2)

Bottom-up approach

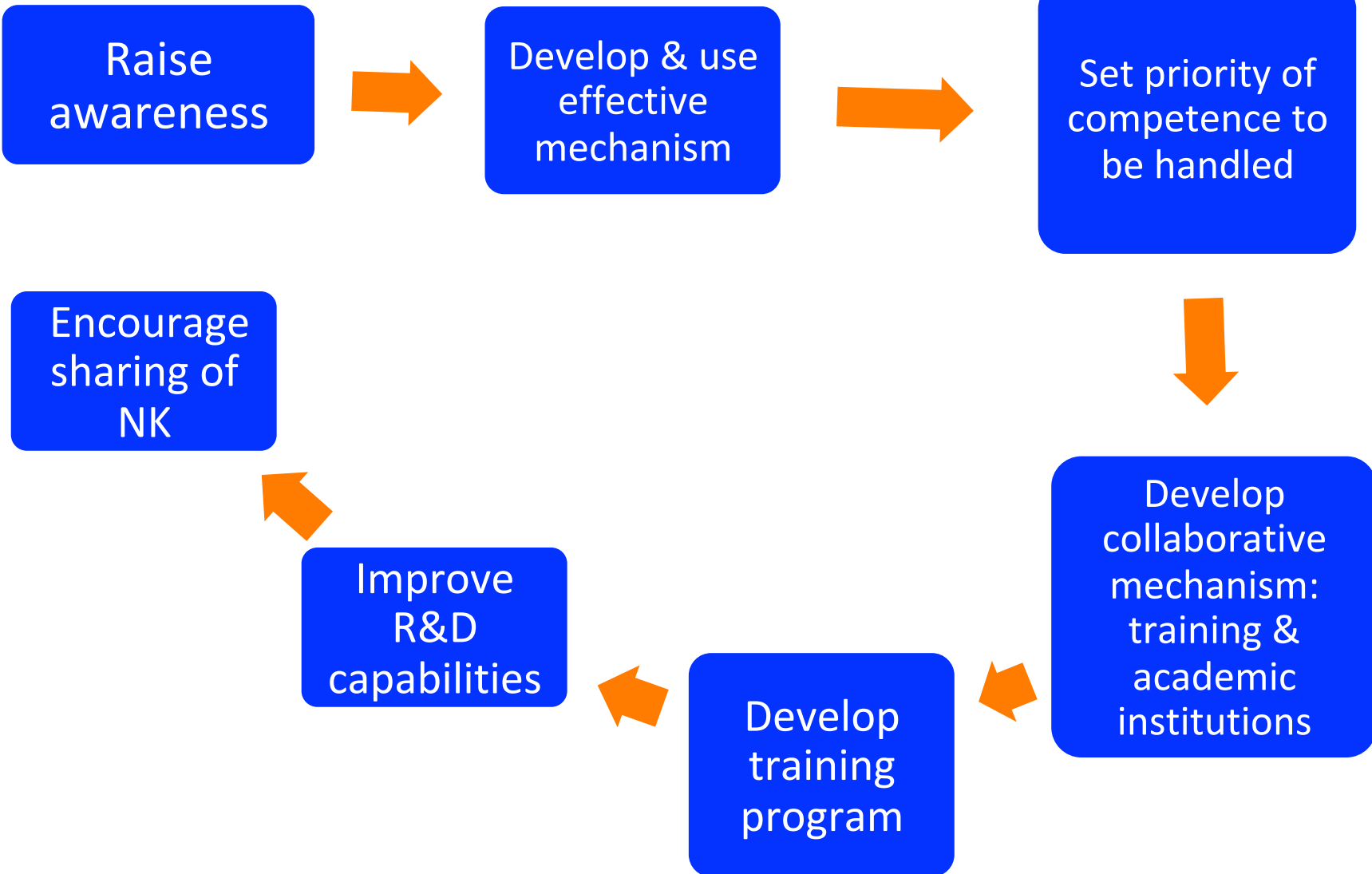


- a. Conservation of existing nuclear knowledge
- b. Share of Nuclear Knowledge
- c. Development of new nuclear knowledge

Simultaneously!



Steps of Strategy

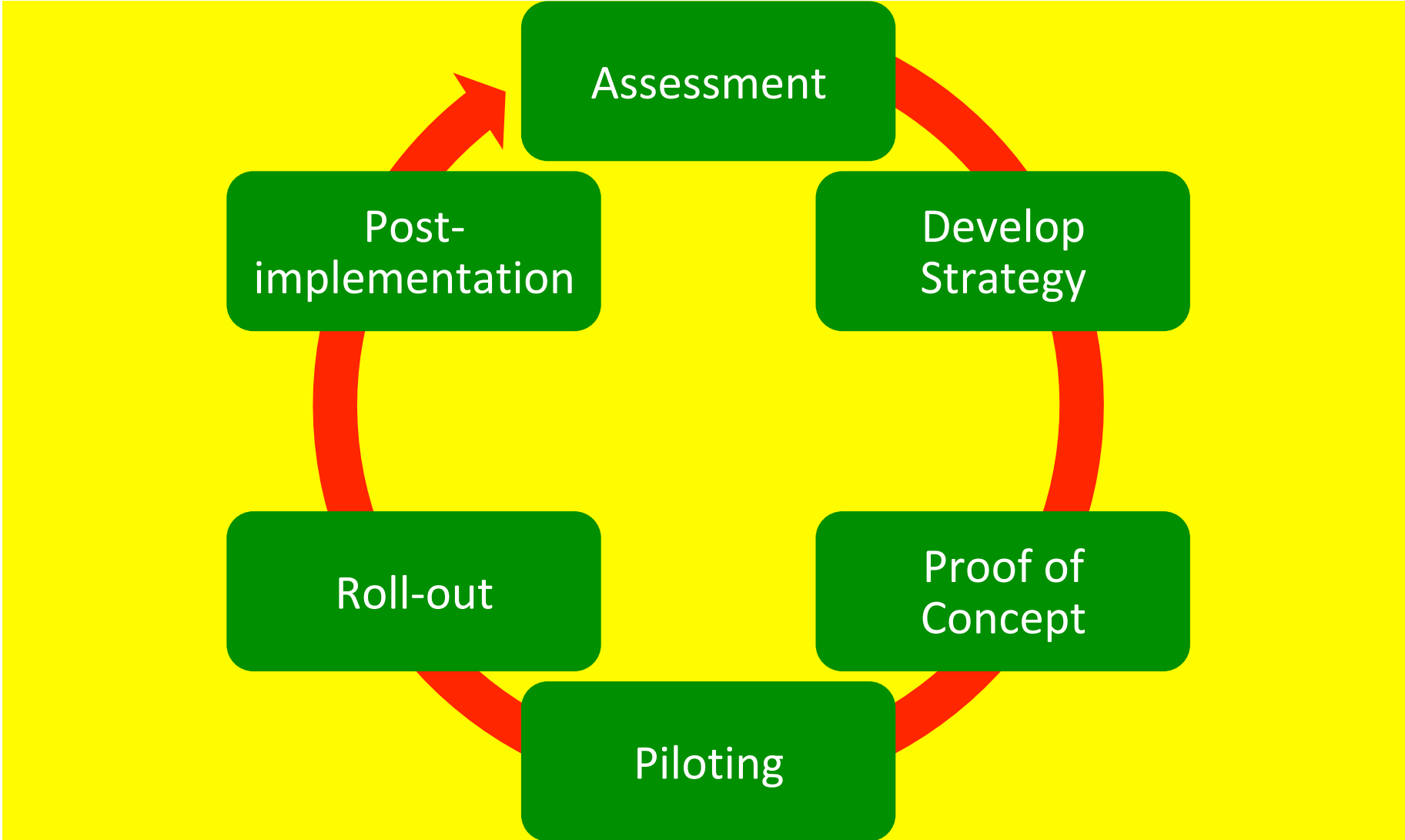


Steps of Implementation

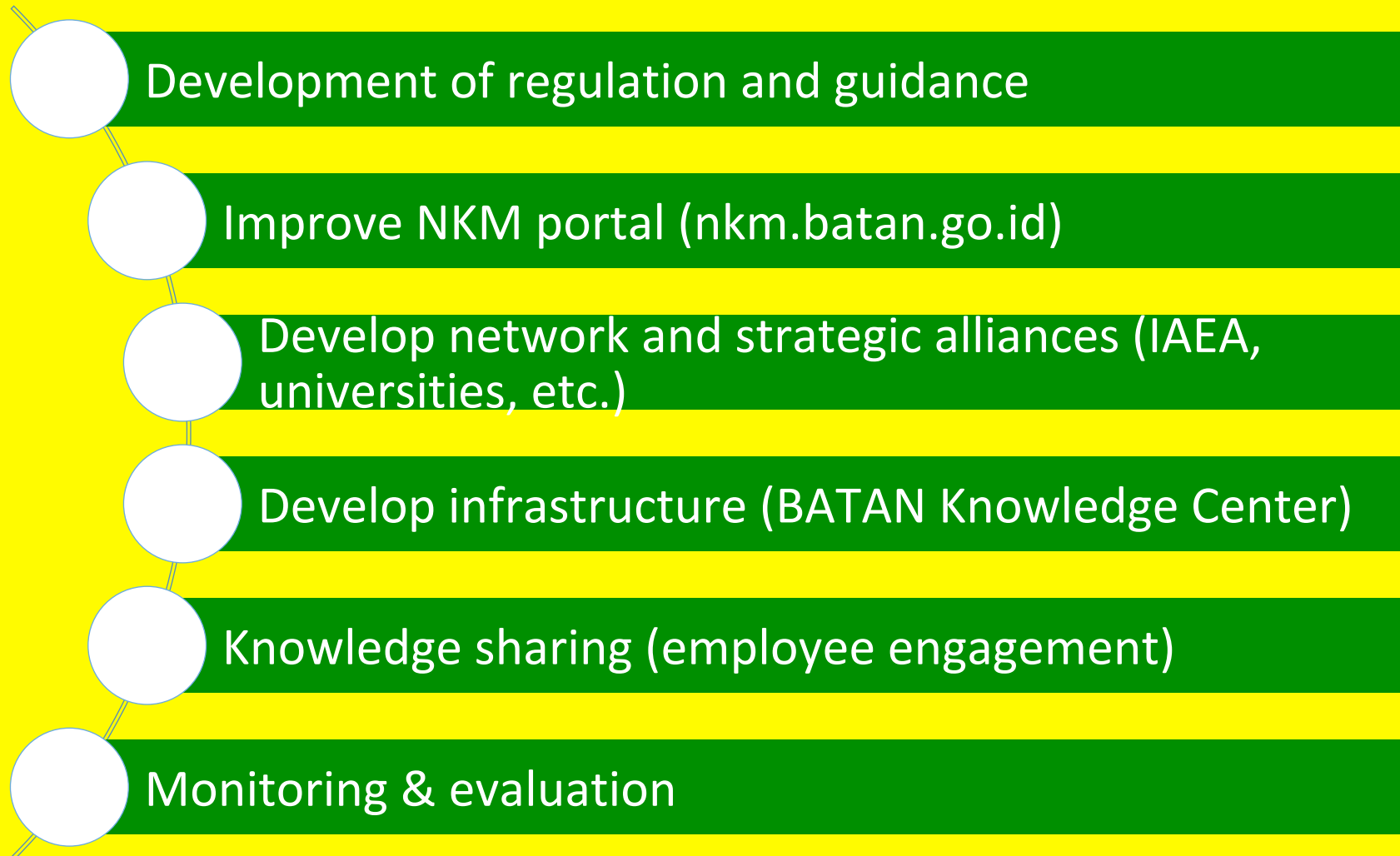


- a. Raise awareness within the organization: NK is the primary resource of the organization
- b. Develop and use effective mechanisms to acquire, maintain and transfer explicit knowledge as well as tacit knowledge
- c. Identify the main competencies to be gained and prioritized within the existing HR retirement schedule
- d. Develop a collaborative mechanism between training institutes and academic institutions to attract future employee and for retention of existing employee
- e. Develop training programs as an integral part of organizational commitment to optimize the nuclear knowledge of its employees
- f. Improve new R & D capabilities
- g. Encourage the knowledge-sharing culture to create new knowledge to ensure the continuity of knowledge

Stages of Implementation



BATAN NKM Program



Terima Kasih



BADAN TENAGA NUKLIR NASIONAL



Jl. Kuningan Barat, Mampang Prapatan Jakarta, 12710



(021) 525 1109 | Fax. (021) 525 1110



humas@batan.go.id



Humas Batan



@humasbatan



badan_tenaga_nuklir_nasional



Humas Batan