



The European Commission's science and knowledge service



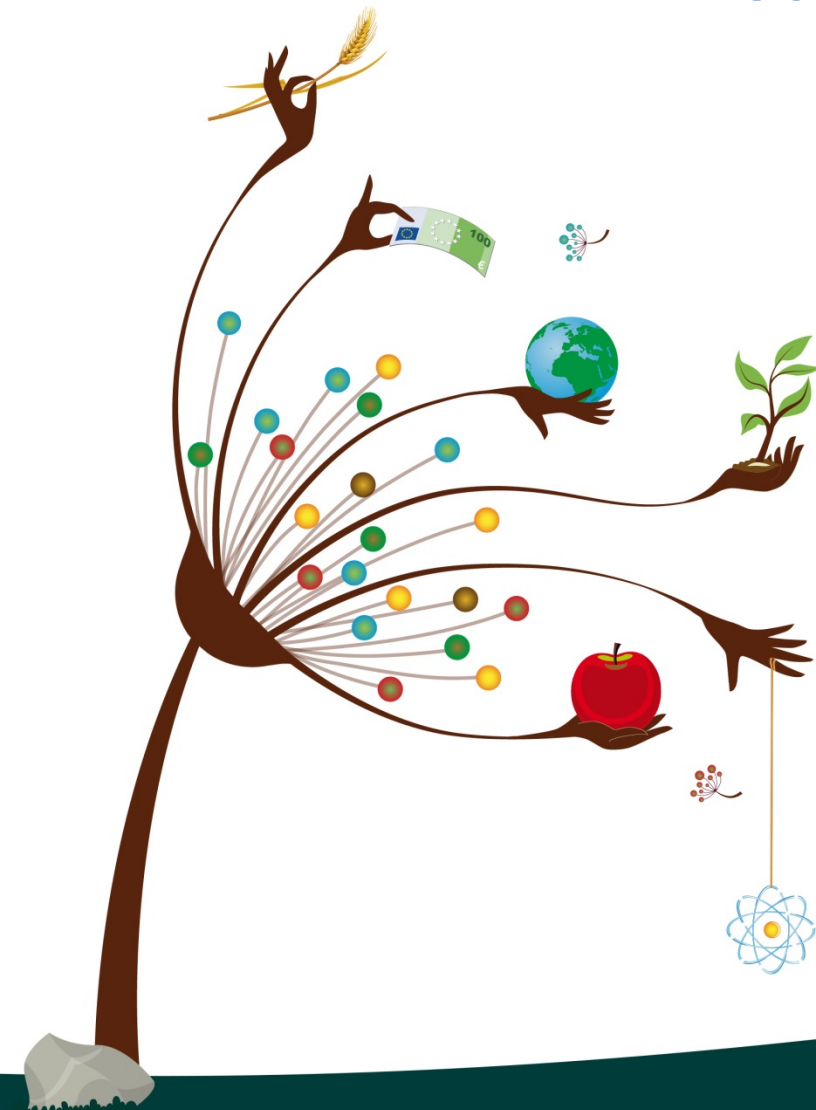
Joint Research Centre

Integrated Knowledge Management System (IKMS)

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Directorate for Nuclear Safety & Security,
JRC Karlsruhe & Petten



EURATOM Nuclear Waste Activities

EUROPEAN COMMISSION
33 General Directorates
and 11 Services

DG ..

DG DEVCO
Support outside
the EU

DG ENER
Energy

DG RTD
Research and
Innovation

DG JRC
Joint Research
Centre

...

Developing aid

Policy & Legal

R&D by MS
Actors

R&D and
Support to EC
& MS

Setting the
Policy Direction
and Co-
Funding Joint
Programming



JRC Structure

(as of 1 July 2016)

DG JRC
Joint Research
Centre

Directorate D
(Sustainable
Resources)

Directorate E
(Space, Security
and Migration)

Directorate F
(Health,
Consumer and
Reference
Materials)

Directorate G
(Nuclear Safety &
Security)

G.III.8
Waste
Management

Gunnar Buckau
Paul Carbol

G.10
Knowledge
Management

Vaidas Matuzas



Working Document for

- Development of Integrated Knowledge Management System on Radioactive Waste Management

Section 3 in

- **Programme Document – The Scientific and Technical Basis of**
- **a Future Joint Programme on Radioactive Waste Management and Disposal**

Management and Disposal under the EURATOM Programme for Nuclear Research and Training

Editors: Gunnar Buckau, Alexandra van Kalleveen, Vaidas Matuzas

Date of issue of this report: 19/03/2017

Report number of pages: 29

Start date of project: 01/06/2015

Duration: 30 Months

ial, only for partners of the JOPRAD project



Outline

- Vision and Objectives
- Knowledge
- Knowledge Management
- Integrated Knowledge Management System
- IKMS Components
 - Knowledge Handbook
 - Strategic Studies
 - Guidance
 - Transfer of Knowledge
- Financing

Vision and Objectives

VISION

An Integrated Knowledge Management System is established and implemented on a European level enabling present and future waste management programmes and generations to benefit from the Knowledge generated through past, on-going and future RD&D programmes and associated activities.

JOPRAD Programme Document, benefits:

1. To improve the **effectiveness** in the use of European research, development and demonstration (RD&D) resources to tackle common challenges in key areas ;
2. To demonstrate **scientific excellence** through the use of internationally leading Member State expertise and facilities;
3. **To develop knowledge management tools, strategic studies, good practice, and transfer of knowledge to ensure that the knowledge that has been generated over the past decades in waste management and disposal RD&D, as well as experience from the implementation of disposal programmes, is appropriately distilled, documented, maintained and kept accessible for future generations of experts;**
4. To support the development of radioactive waste management and disposal capabilities in Member States with **Less Advanced Programmes** (LAPs); and
5. To promote the accessibility of information and to improve the involvement of **Civil Society**.

Knowledge

Competence

The capability to use data, information and knowledge in order to get something done.

Knowledge

Understanding information, allowing for judgement on conclusions, past and present flaws, ..

Information

Data put in context allowing for drawing conclusions

Data

Objective descriptors of a process or system



Knowledge Management?

Managing Knowledge!

- Which Knowledge
- Managed by whom
- For whom

Which

- Initially focus on publically available Knowledge generated in the context of past, on-going and future activities within the EURATOM Research and Training Programme

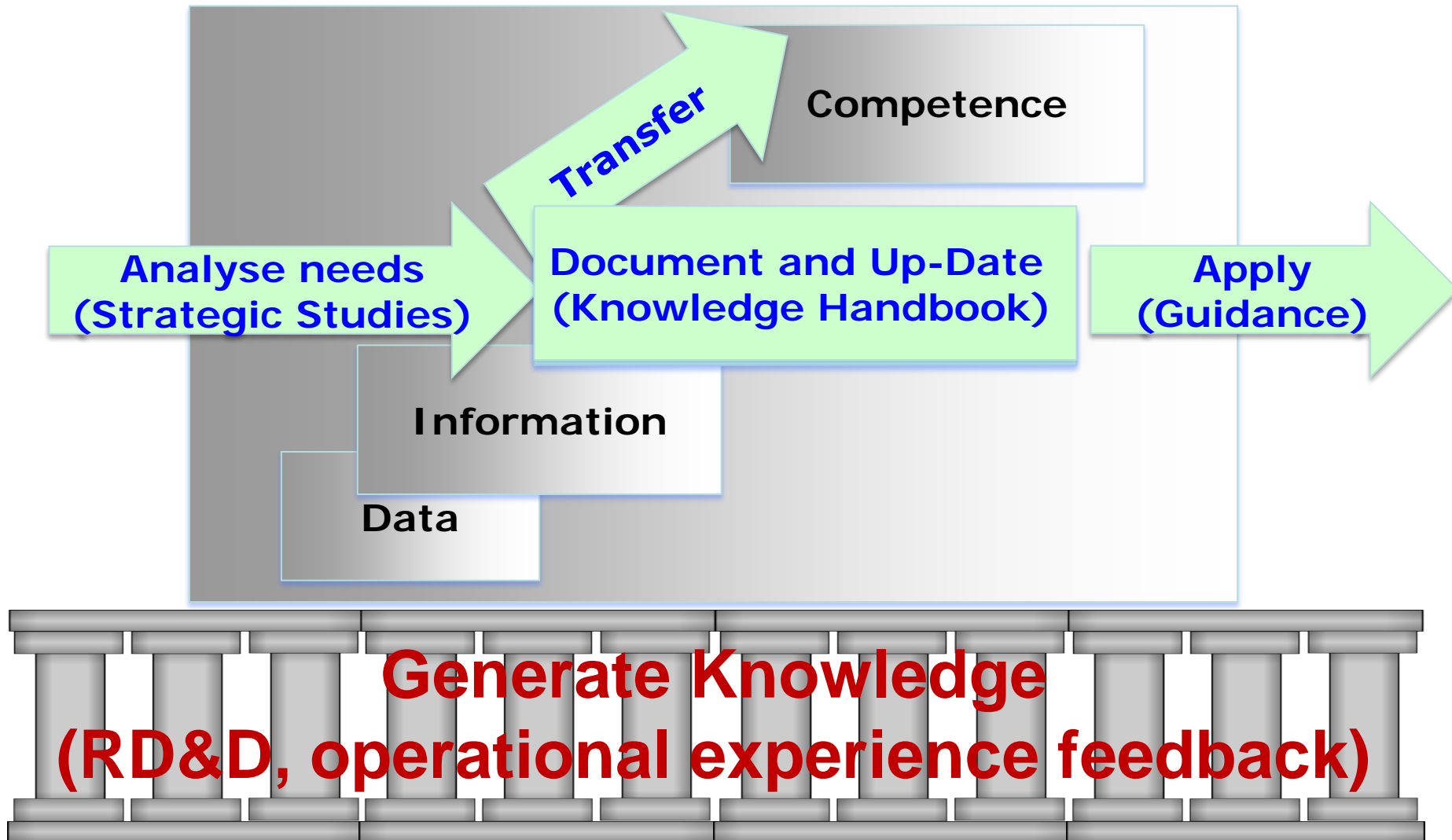
By whom

- The Joint Programming, i.e. the Community
- EC-Joint Research Centre is providing the administrative Frame

For whom

- For the Member States and its actors

Integrated Knowledge Management System?



Knowledge Handbook

- WEB Based Platform, hosted and administered by the EC-JRC
- Documenting State-of-Knowledge (SoK)
- Publishing SoK with the possibility to comment
- Up-dating of SoK when required by new Projects, new Knowledge, new Insights, comments, ..

Structure

- Pre-set where the topics are gradually provided with the SoK
- Growing organically with SoK for topics represented by R&D projects and other selected topics

Knowledge Handbook (2)

Process for establishing SoK

- Expert groups engaged following priorities programme/steering group
- Experts applying for and implementing R&D projects within the Joint Programming

In order to be inclusive:

- Circulate draft SoK document to Member States and their actors and interest groups
- Present at Public Workshops for review, assessment and feedback
- Document different/deviating/complementary views

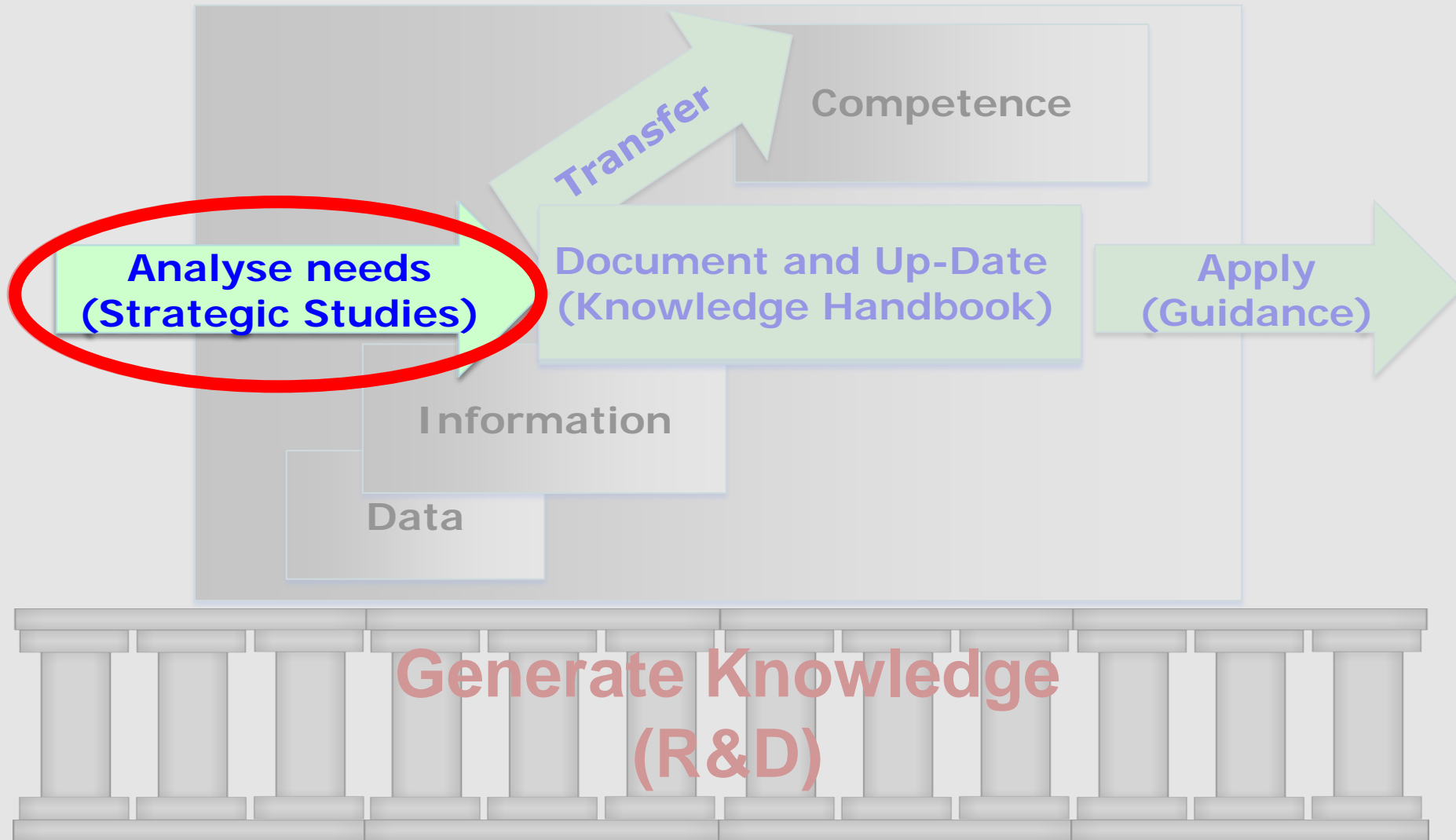
Knowledge Handbook (3)

Taking stock of previous EURATOM Framework Programmes

- Many reports from former EURATOM FP R&D projects spread over a multitude of institutional reports, scientific publications, conference proceedings,....
- Living memory of several experts involved the past decades of the programme still available

Emphasis on using expert memory in order to ensure that the extract and synthesis of Knowledge reflects the full scale of information

Integrated Knowledge Management System?



Strategic Studies

The process for implementation is well comparable to SoK documents

Aim is to identify Research and/or Development needs

Guidance

Presently no list of topics

Proposed, for example detailing of topics dealt with in the PLANDIS Guide*:

- (1) Programme Establishment,
- (2) Generic studies and Site selection,
- (3) Site characterisation and safety assessment for conceptual design,
- (4) Underground development, demonstration and construction,
- (5) Operation, and
- (6) Closure.

Transfer of Knowledge

An area that will experience development in the coming years:

- Existing training opportunities are mapped through linking with ANNETTE, ENEN+. etc.,
- Training linked with existing activities and available resources,
- Existing tools are used where feasible (for example IAEA E-Learning Tools),
- Training programme managed by staff with specialized competences, and
- Existing and new training strategy developments are monitored and investigated for their application to the present programme.

Transfer of Knowledge (2)

EURADISS workshop 2012:

- Dissemination to the expert community is already functioning well.
- Communication to Decision and Policy Makers: Room for improvement.

In the beginning: Focus dissemination within the expert community.

Working group on communication and dissemination:

- Existing tools for dissemination of scientific-technical results sufficient?
- Dissemination to different types of audiences (for example decision makers and the public)?
- New developments/tools?
- We have a major opportunity through the JP collaboration with Civil Society experts

List in Draft Joint Programming Programme Document:

- **Site Uncertainty Treatment;**
- **Site Evolution Models;**
- **Site selection;**
- **Inventory Collation & Forecasting;**
- **Safety Case Guidelines, Management & Review;**
- **Information Management (interfacing with NEA RepMet);**
- **EU Research Infrastructure;**
- Technical and Socio-political Siting Criteria;
- Evolution of Waste Inventory;
- Link to Waste Producers/Fuel Manufacturers;
- Concept Adaptation and Optimisation;
- Disused Sealed Radioactive Sources;
- Pre-licensing Management;
- Co-disposal Interactions;
- Radiation Protection Optimisation Principle;
- EU DGR Curricular.

The European Commission's science and knowledge service

Joint Research Centre

Thanks!

Directorate G - Nuclear Safety & Security
JRC – Karlsruhe



Open Question Session on JOPRAD