①社会とのコミュニケーションや信頼構築に向けた技術開発

M.Chu

A Safety Case

The safety case is an integration of arguments and evidence that describe, quantify and substantiate the safety, and the level of confidence in the safety, of a geological disposal facility

IAEA Safety Standard for Geological Disposal

- **What is behind this apparently simple statement?**

Challenges

- Extremely long time frames
- Dependence on predictive analyses
- Extrapolation of data (time and space)
- Large uncertainties

- With these challenges, how is it possible to analyse the safety with confidence?

Reliable Analyses are Feasible

- System is ROBUST (MBS)
- We do not need a single accurate prediction
- We only need to bound the behaviour
- Sound, well chosen R&D programmes are the basis for this

L.Warren

R&D AND ITS CONTRIBUTION TO PUBLIC COMMUNICATION AND CONFIDENCE BUILDING

Lynda Warren

UK CONSULTATION MANAGING RADIOACTIVE WASTE SAFELY (MRWS)

Comments on proposed technical approach

- **More R&D needed**

Comments on funding for communities

- **For R&D, information gathering and independent advice**

More R&D Needed

Need for more R&D repeated in a large number of response

- **R&D, especially on geological aspects, important to maintain public confidence**
- **R&D should be generic as well as site specific**
- **Modelling of radionuclide migration is essential**
- **R&D programme should be visible and open**

Public Engagement Packages

- Funding should cover R&D under direction of community partnership
- Funding should be provided to enable community partnership to gather information from outside sources
- Funding should be provided for the engagement of specialist advisors to clarify technical aspects for participants in local community partnerships

Conclusions

- Knowledge that R&D is continuing is a positive message not a negative one
- Especially the case if the public can help shape the R&D programme so that R&D addresses their concerns
- R&D messages – flexible programme, building confidence, sharing of uncertainties

Applying These Conclusions to the Japanese Situation

- Extensive R&D of generic sort already
- Good dissemination of results into public
- Lack of site specific research as yet is not a problem; public appreciate need for step wise approach
- However, involvement of public and other stakeholders in the R&D programme is more limited than in some other countries

Recommendations

- It would increase public confidence in the programme if they could comment on it and feed in their wishes and suggestions

- It would increase public confidence if they could receive resources to enable them to conduct their own research

T.Isaacs

No message is trusted if you don’t trust the messenger

- What the implementer does is more important than what he says
- Continuous improvement is key
- Peer review and international comparisons
- Listening and responding to public concerns
- Communication activities must include the technical staff

T.Ohe

社会とのコミュニケーション

TV番組インタビュー
- 取材　約90分
- 放映　約2分

経験から「得たもの」

取材相手の意図の理解

何を伝えられるか

誰に伝えるか

与えた印象

地下水理、土木の専門家　？

便利な辞書代わりではなく

私の知識・経験でなければ
応えられないものを明確に

信頼性構築（技術の視点）

例）　地震国の日本で生活する

何がわかっていて	何がわかっていないのか
地震の想定はできる	何時起こるかわからない

信頼できる情報 ⟶ 耐震、避難訓練、備蓄　などの防護策

100%の理解が困難な状態で　判断し行動する

地層処分　多重バリア　の考え

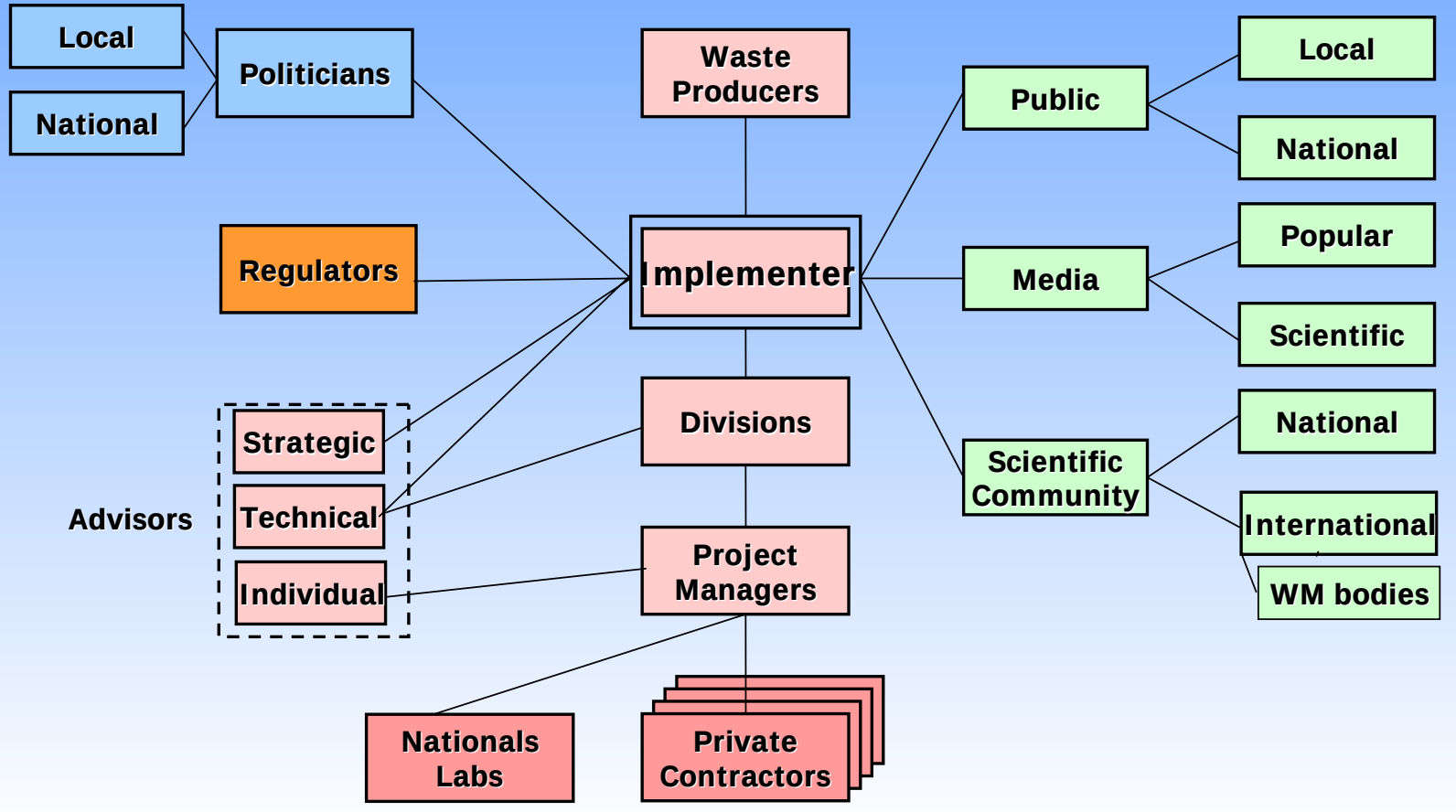
多重　→　相互作用が多様で複雑化 〈 鉄製オーバーパック ↕ 緩衝材－鉄　の相互作用による変質

定量的な判断できるもの　と　定性的判断しかできないもの　の区別

判断と行動

C.McCombie

Key Interfaces for Implementer



Implementing Bodies Should be ...

- Successful in implementing repositories!!
- Cost-effective in their work
- Accepted by a sufficiently large fraction of the community
- Recognised as competent - even by those opposing their mission
- An inspiring and rewarding place of work for their wide range of personnel
- Open and transparent in their communications