

# Formulation of IR Programme 2007-2010

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IRMF Meeting, 17 May 2006

# The Timetable

- 24 May Orientation with MAC WG
- **Jun – Oct** **Consultation to identify needs**
- Nov – Jan Develop project proposals – 150%
- Feb MAC WG select 125% for public consultation
- **Mar – May** **Public consultation**
- Jun/Jul Decision conference
- Jul – Sep Develop final programme document

# Consultation Methods

- Focus groups related to key markets
- Visits to key organisations
- Discussions in user group meetings
- Get input from key conferences & workshops
- Online questionnaire on IR website
- Questionnaire mailed to membership of user groups

# NMS Review Changes

- Get ministerial approval for direction & budget early
- Develop plans for 3+3 years
  - First 3 years in detail
  - Further 3 years in outline
- One of only 5 Knowledge Base programmes
  - Links to DTI Technology Strategy & OGD priorities
  - Others: Physical; Chemical & Biological; Engineering & Flow; Materials & Thermal
- + Supporting & over-arching: SSfM; International; KT (incl. MfI)
- More focus on innovation & impact
- Up to 5 years horizon

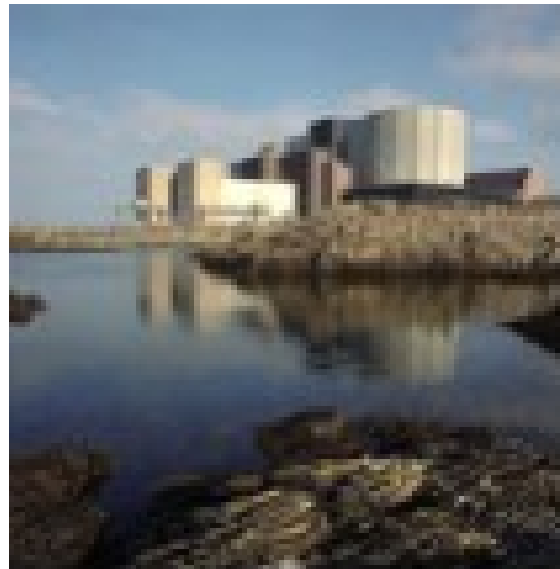
# NMS Review

## Changes 2

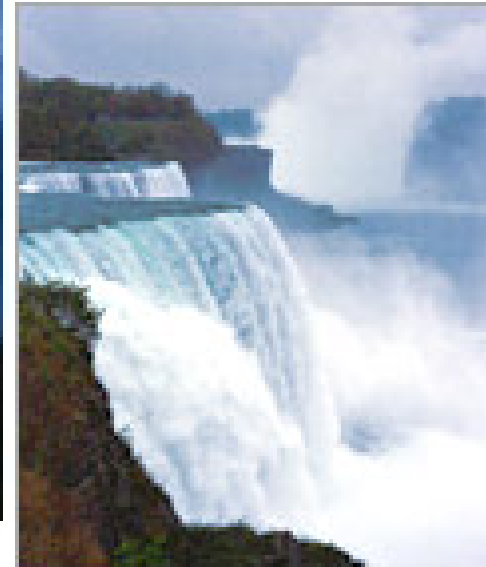
- 3 new Metrology R&D programmes
  1. Healthcare & Security
  2. Advanced Manufacturing & ICT
  3. Transport, Energy & Environment
    - Collaborative & co-funded (MET-like)
    - Strongly linked to DTI Technology Strategy
    - Market focus rather than measurement area focus
    - 5 to 10 year horizon
- New “Quantum” programme
  - NMS long term research – 10+ years horizon

What markets should NMS IR impact?

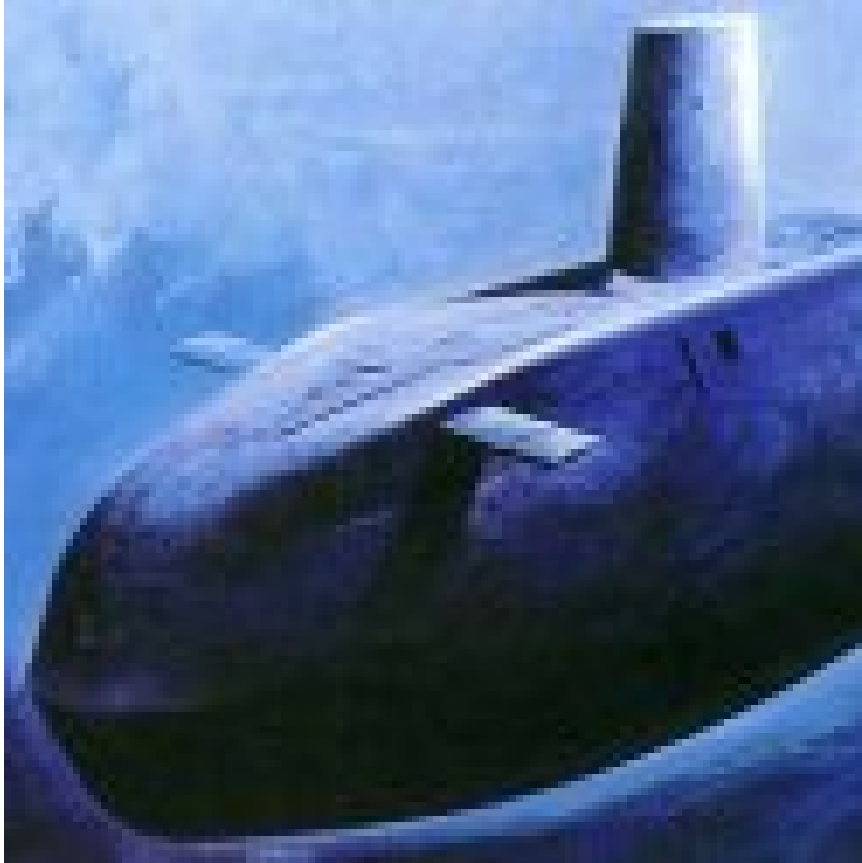
# Nuclear Decommissioning



# Keeping the Nuclear Option Open



# New Nuclear Submarines



# Replacing Trident



# Homeland Security



# Emergency Planning

## Planning for a dirty bomb

### Biodosimetry issues



(AFP PHOTO)



(AFP PHOTO)

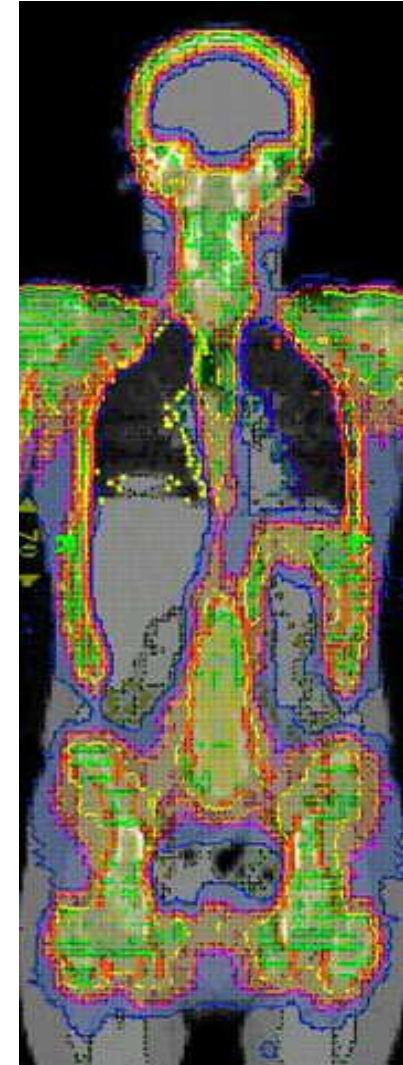
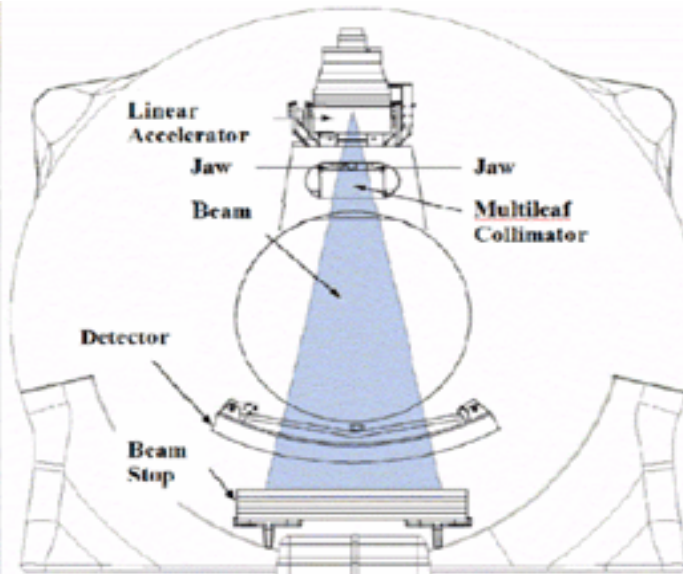


(LONDON POLICE)

# Space – Satellites or Men to Mars?



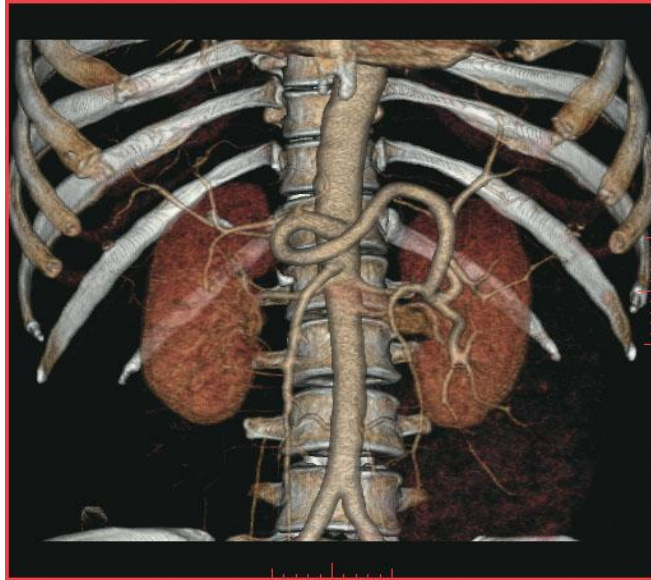
# Cancer Therapy



- Photon, Electron, Proton, Ion beams
- Brachytherapy (HDR, LDR, Ophthalmic)
- Nuclear Medicine

# Imaging

- X-ray
- CT
- PET
- PET/CT



# Sterilisation



# Other Uses of Radiation

- Food irradiation – what, when where?
  - Materials processing
  - Radionuclide production
  - Others?
- 
- What new markets & needs should we explore?

# Technology Changes

- Internet-enabled metrology
- Smaller, more robust instruments, e.g. spectrometers
- More powerful computers and grids
- Digital signal processing
- Monoclonal antibodies in nuclear medicine
- Proton and light ion therapy
- Electronic brachytherapy, tiny X-ray tubes
- Brachytherapy with microspheres
- Increased emphasis on small fields: IMRT, IGRT, Tomotherapy
- Combining imaging modalities: MRI, CT, PET, Ultrasound,...
- New cyclotron & synchrotron facilities

# What should we not do?

- How can we create space to do new things?
- What can we do differently?
- What is no longer necessary?
- What can others in the UK do instead?
- What might we devolve to other NMIs?

# Get Involved

We want your views

Please engage in the consultation