International Organisations
In the digital age

Stuart Mitchell

Stuart.Mitchell@ecmwf.int
ECMWF - Introduction

• European Centre for Medium-Range Weather Forecasts
• Founded in 1975
• 22 Member States and 12 co-operating states
• Collaboration with national meteorological and hydrological services
ECMWF - Introduction

• Mission:
  – Scientific and technical research into numerical weather prediction
  – Produce numerical weather forecasts
  – Monitor the earth-system
  – Maintain an archive of meteorological data

• Located in Reading, UK

• Approximately 300 staff

• One of the six coordinated IOs
ECMWF & technology

• Use of technology has been core to ECMWF’s mission from the start

• NWP relies on:
  – high performance computing (Supercomputers)
  – Handling large quantities of data

• Current HPC is provided by two Cray XC40s

• Current meteorological archive approximately 100 Petabytes

• Computing department supports all technology in use (HPCs, data archive, servers, PCs, etc)
ECMWF Employment conditions

• Defined in staff regulations
  – 40 hours per week, Monday to Friday
  – Most staff are office based, but explicitly defined hours for shift working

• No official policy or mechanism for flexitime (yet)

• Limited flexibility in working arrangements delegated to line managers
What is the digital age?

- Official definition is 1970s onwards
- Maybe better to refer to “digital generations”?
- Driven by technology developments (Moores law)
- Faster, smaller, higher capacity, higher bandwidth
- Affects workplace and society in general – IOs are not immune
Industry & social trends

• IT and Telecommunications industry constantly changing
• Domestic technology changing rapidly
• Generational differences in experience
ECMWF Organisational IT (& BYO)

• ECMWF provides desktop PCs for all staff
• ECMWF provides laptops as required for job purposes (on-call, senior management, travel, etc)
• ECMWF provides iPhones as required for job purposes
• Remote desktop function enables flexible working
ECMWF Organisational IT (& BYO)

• Limited policy for BYO (bring your own) devices
• Personal iPhones and iPads can be used if ECMWF policies enabled
• Other personal devices can be used but only by complying with security policy
ECMWF and social media

- No explicit policy about staff use of social media – left up to individuals
- ECMWF has twitter and facebook presence, but they are limited in use
  - Communication with the public is a function of our Member State met services
- Copernicus project related activities make more use of social media
Security in the digital age

- ECMWF ISGB (InfoSec Governance Board) created
  - Organisation wide
  - Representatives from all departments
- InfoSec policy in development (supersedes previous security policy)
- Information Security Officer position created
- Firewalls provide protection for internal network
- Access through firewalls only possible with token-based authentication
Collaboration in the digital age

• Human communication relies on: words, voice and body language – why VC important

• Video based tools have allowed:
  – Collaboration reducing travel
  – Recording lectures and training courses
  – Live streaming of events – workshops, seminars

• Copernicus project has added separate offices
Collaboration in the digital age

• Web technology is very important for delivering services and knowledge sharing
  – ECMWF has extranet, intranet, wikis, charts, etc
Employment conditions – private life

• Sometimes referred to as work/life balance
• Facebook started using phrase “work/life merge” recently
• Social media can blur distinction between work and private life
• Multiple communication channels – email, web, social media