BioHealth
Encouraging the Use of eHealth Security and Identity Management Standards

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European Healthcare 2006

- Europe's health sector employs 9.3% of the EC's workforce.
- Europe's health sector is worth over 8.5% of its gross domestic product. The estimated size of the European eHealth market is €20 billion.

- 50,000 people die each year of healthcare-related infections in the EC.
- The EC estimates the costs of healthcare-related infections at £1 billion a year in the UK alone.

Healthcare becoming eHealth necessitates changes

- Care
  - Patient - Doctor treatment -> shared / collaborative care
  - Acute care -> preventive care
  - Cooperation with other domains (bio-informatics, public health, social care)
  - Increased communication
  - Administrative changes
- Role of the citizen
  - Access to health related information
  - Educate the citizen
  - Personalised electronic health care records

Need for EHR, Data Protection and Privacy, Identity Management

New Developments and Requirements to be met

- Technological Advances
  - Telemedicine (e.g. tele-consultation, home-monitoring)
  - Paper-based records -> digitalised electronic health record (EHR)
  - New technologies (e.g. wireless, multimedia, RFID)
- European Challenges
  - Increased movement of citizens
  - Diverse healthcare systems
  - Healthcare systems at differing development stages
  - Multitude of languages, cultures and ethics
  - Contradictory laws

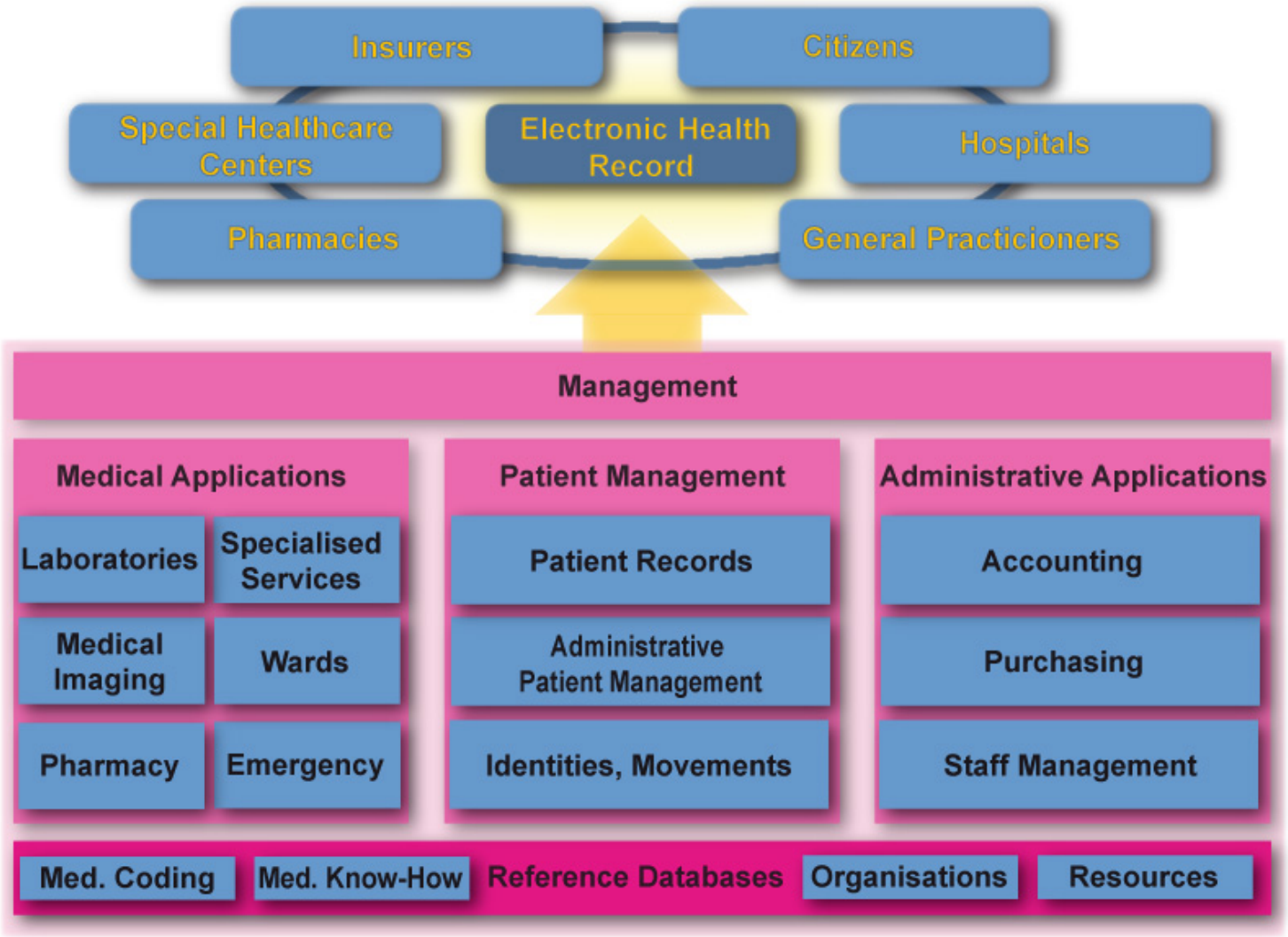
This requires secure, reliable, interoperable and standardised solutions

The BioHealth Project

- Creates awareness and acceptance on security, data protection, id management and related issues
- Informs on
  - eHealth Security Standards presenting the results of existing standardisation efforts
  - Security and Identity management pointing out special European requirements in eHealth
  - Identity management and new technologies and on critical issues connected to these
- Provides information and expert advice on standardisation related to eHealth security and facilitates the practical implementation
- Demonstrates the competitive advantages gained when applying standards
- Facilitates European and cross-boarder solutions

Thus it enforces the use of security related standards in eHealth

Security concerns all areas of healthcare



taken from: Bull Whitepaper - Modernising healthcare systems June 2005

eHealth Security requires

- **Data protection** "the implementation of administrative, technical, or physical measures to guard against the unauthorized access to data" [1]
- **Data safety** "the protection of data from unauthorized (accidental or intentional) modification, destruction, or disclosure" [1]
- **Privacy** "the subjective condition a person experiences when he or she has the power to control information about him-/herself and when he or she must exercise that control consistent with his/her interests and values" [1]
- **Safe and reliable communication**
  - Confidentiality
  - Data Integrity
  - Authenticity
  - Accountability
- **Failsafe and full-time available systems**

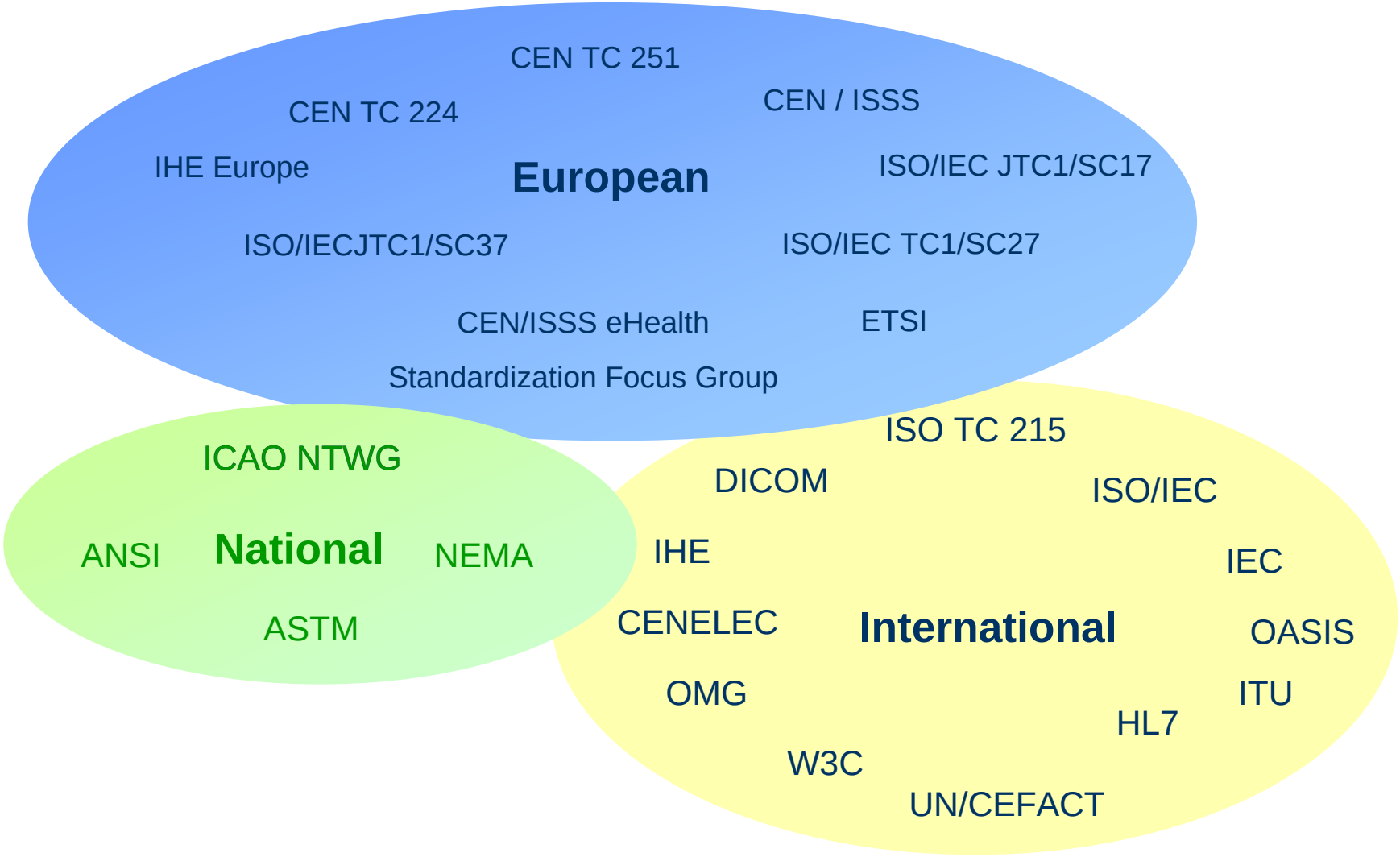
[1] Alliance for Telecommunications Industry Solutions
http://www.atis.org -accessed: 01-06-2007

BioHealth deals with the following aspects/technologies

- ***Standardisation***
  - Legal
  - Ethical
  - Technological
  - Organisational
  - Financial
  - Regional and National Differences
  - Political

- ***Technologies for Id Security***
  - Tokens
  - Biometrics
    - Fingerprint recognition
    - Face image
    - Iris Recognition
    - Hand Geometry
    - Signature dynamic
    - Voice recognition
    - Vascular biometrics
    - DNA analysis

Standards Developing Organisations concerned with eHealth security



Consortium and Competences

- **GSF - National Research Center for Environment and Health**, Germany
  Coordinator; links to academical, industrial and political bodies
- **Bull Hungary**, Hungary
  Industrial Partner; development of health related security technologies (health cards, Near Field Communication (NFC)), links to Insurance Bodies, involved in the development of the Hungarian eHealth platform
- **CNR-IBB - National Research Council of Italy**, Italy
  Convenor of ISO/IEC JTC1/SC37 WG7 (Biometrics); Expert in ethical and societal issues concerning identity management and the use of the new technologies in healthcare

Consortium and Competences

- **ITS Norway**, Norway
  Standardisation expert; involved in id management and biometrics; e-government and the definition of the Norwegian e-passports
- **IMA -Institute of Microelectronic Applications**, Czech Republic
  Small Medium Enterprise deals with intelligent security solutions, involved in many security related projects, new developments with RFID, advisor for the National Czech e-solutions
- **eHCC – eHealth Competence Center**, University of Regensburg, Germany
  Expert for Security in eHealth ; involved in many standardisation bodies and activities

By the end of 2008 BioHealth aims to have

- A training programme on eHealth standardisation
- Guidelines on eHealth standards
- Increased the knowledge and use of eHealth standards
- Set up a lasting network on eHealth standardisation

Would you like to keep up to date or participate?

- BioHealth http://biohealth.gsf.de or biohealth@gsf.de
- Innova http://www.europe-innova.org