ETSI AI Conference 2024

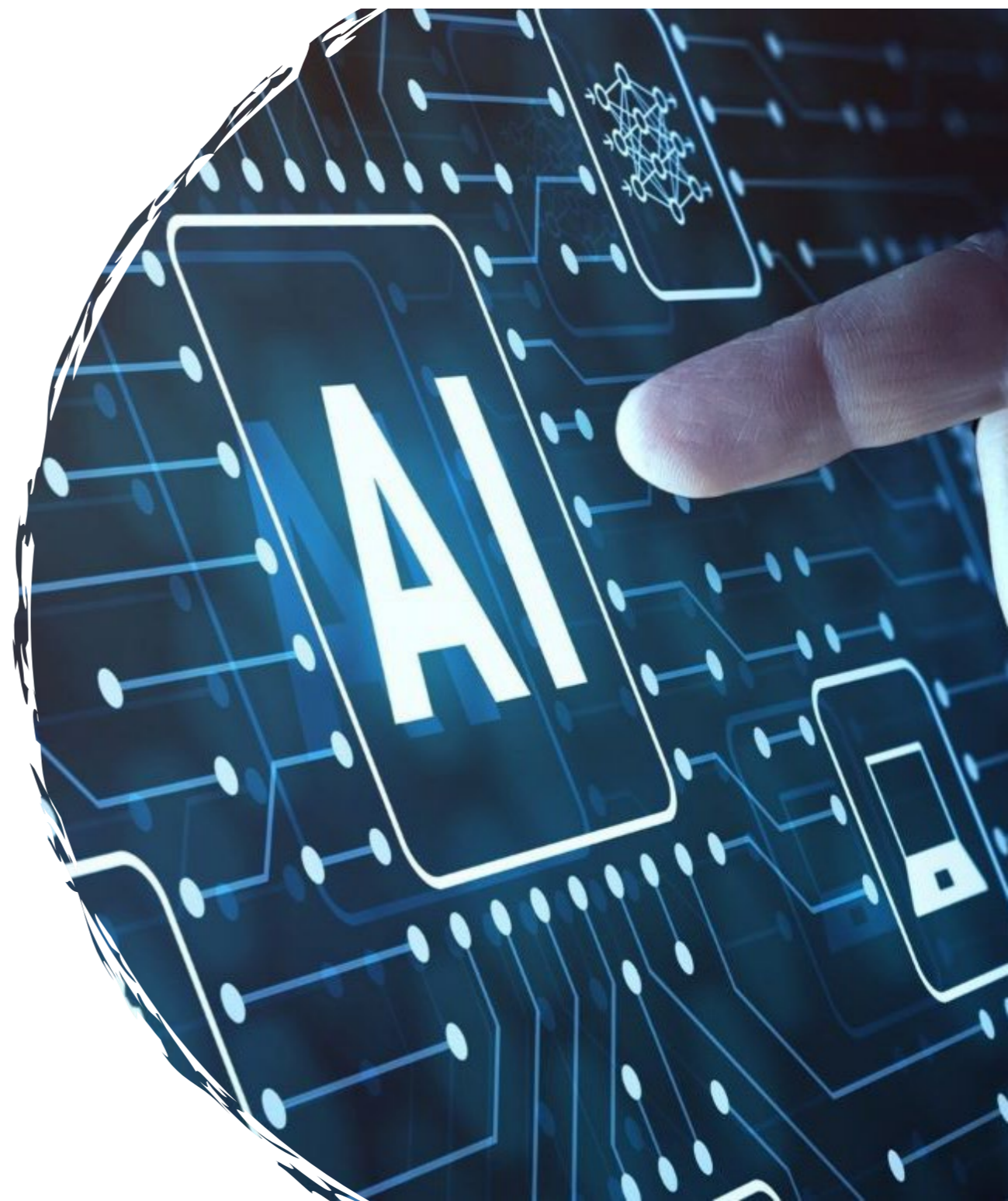# ETSI TC eHEALTH and AI

NEW HORIZONS
2024

Presented by: Suno Wood, EG4U,

Chair, ETSI TC eHEALTH,

06/02.2024

14:15 – 16:00 SESSION 6: Applications of AI in Various Sectors

Chaired by Suno Wood, ETSI TC eHealth Chair

- 14:15 **AI in eHealth - New Horizons**

- 14:35 **Managing the European Airspace with AI**
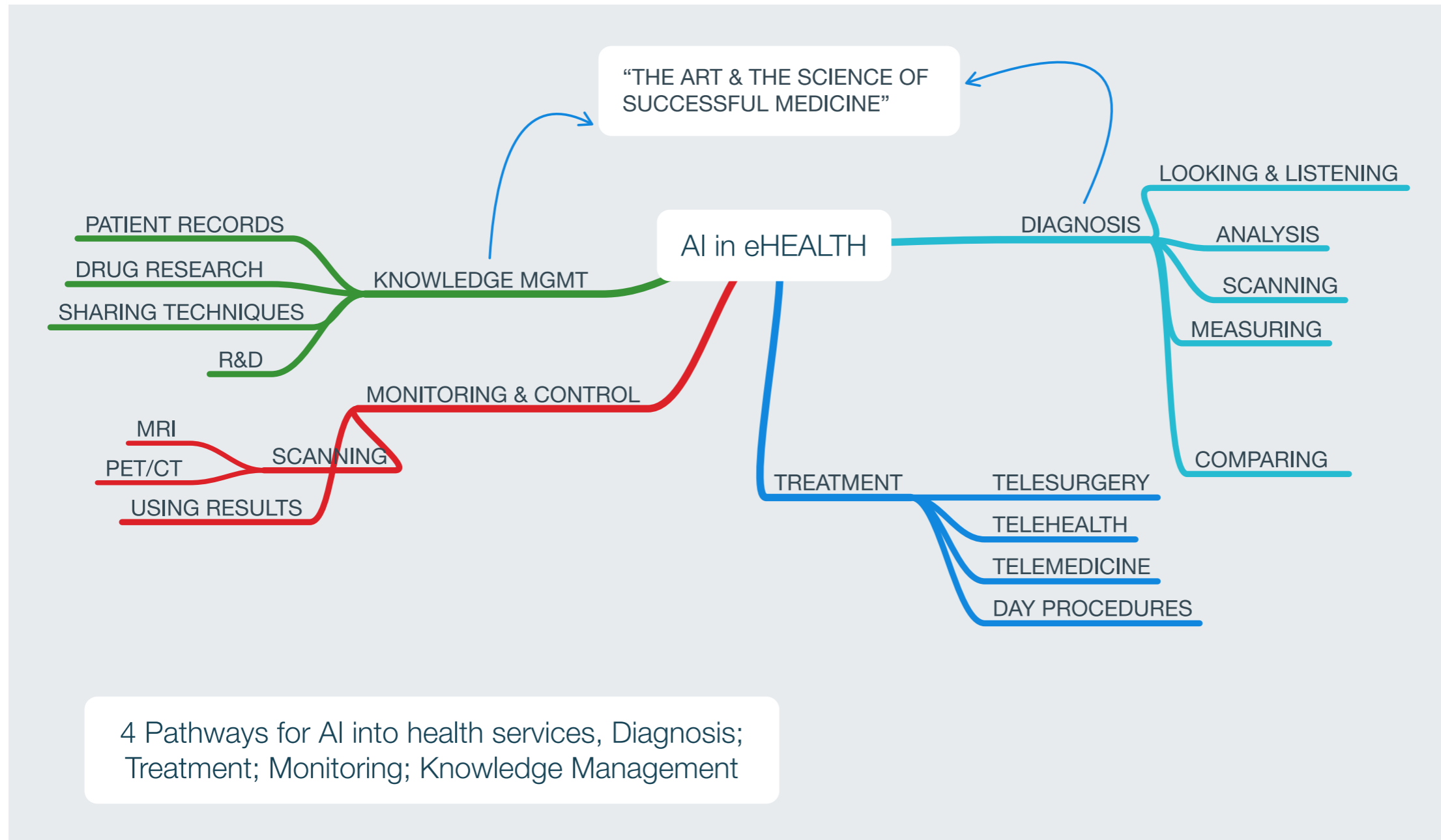Benjamin Cramet, PETER Sandra, EUROCONTROL

- 14:55 **AI in Automotive**
Niels Skov Andersen, ETSI TC ITS Chair (Intelligent Transport Systems)

- 15:15 **Potentials and Challenges of Industrial AI**
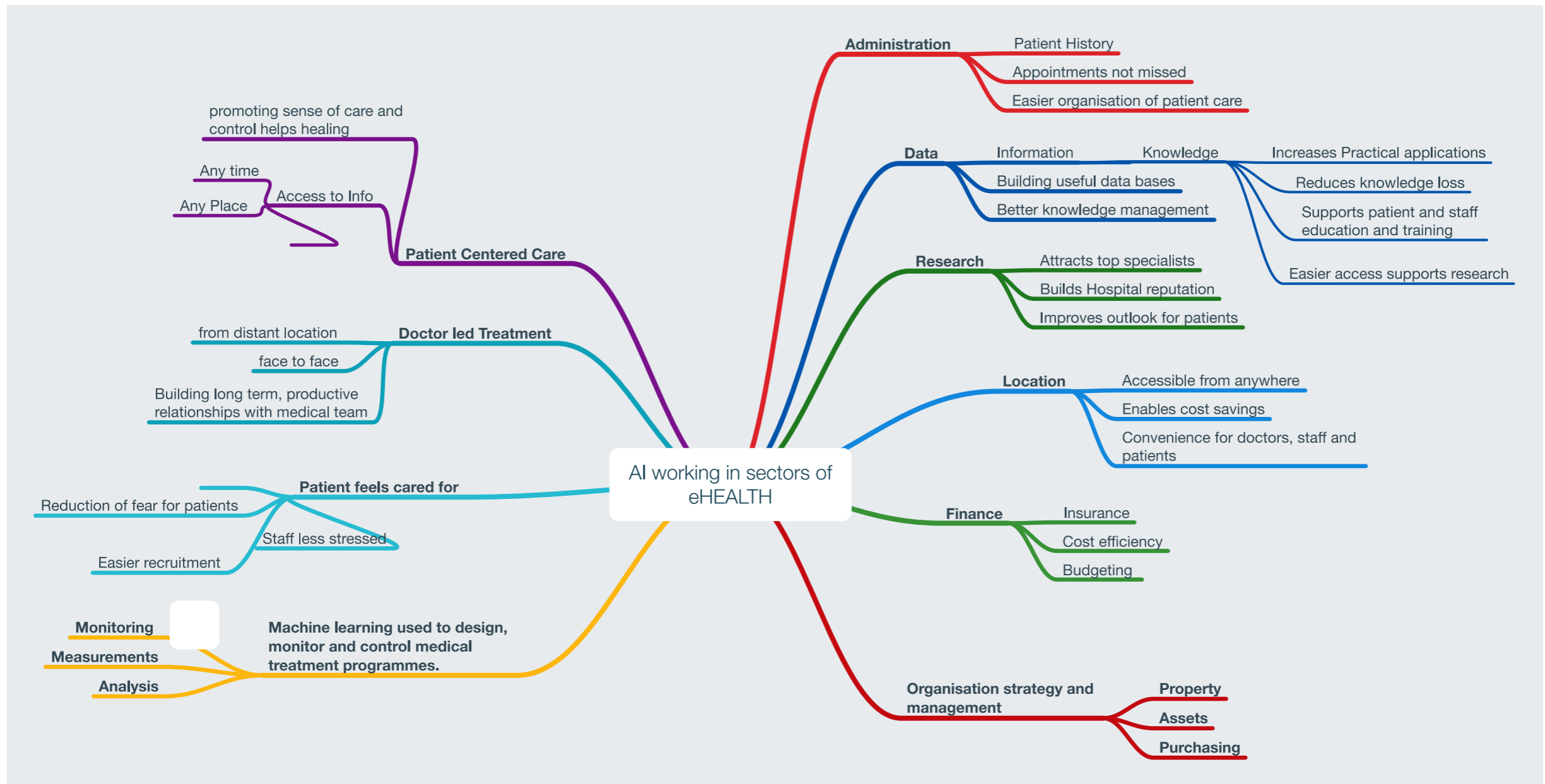Marco Ulrich, ABB

- 15:35 Q&A / **Panel discussion** with the session' speakers

What do we have in common?

Healing results from a combination of Medical Arts & Sciences. AI will unite the two.

"THE ART & THE SCIENCE OF SUCCESSFUL MEDICINE"

AI in eHEALTH

DIAGNOSIS
- LOOKING & LISTENING
- ANALYSIS
- SCANNING
- MEASURING
- COMPARING

KNOWLEDGE MGMT
- PATIENT RECORDS
- DRUG RESEARCH
- SHARING TECHNIQUES
- R&D

MONITORING & CONTROL
- SCANNING
  - MRI
  - PET/CT
  - USING RESULTS

TREATMENT
- TELESURGERY
- TELEHEALTH
- TELEMEDICINE
- DAY PROCEDURES

4 Pathways for AI into health services, Diagnosis; Treatment; Monitoring; Knowledge Management

Where AI can provide advantage!

AI working in sectors of eHEALTH

Administration
- Patient History
- Appointments not missed
- Easier organisation of patient care

Data
- Information
- Building useful data bases
- Better knowledge management
  - Knowledge
    - Increases Practical applications
    - Reduces knowledge loss
    - Supports patient and staff education and training
    - Easier access supports research

Research
- Attracts top specialists
- Builds Hospital reputation
- Improves outlook for patients

Location
- Accessible from anywhere
- Enables cost savings
- Convenience for doctors, staff and patients

Finance
- Insurance
- Cost efficiency
- Budgeting

Organisation strategy and management
- Property
- Assets
- Purchasing

Patient Centered Care
- promoting sense of care and control helps healing
- Any time
- Any Place
- Access to Info

Doctor led Treatment
- from distant location
- face to face
- Building long term, productive relationships with medical team

Patient feels cared for
- Reduction of fear for patients
- Staff less stressed
- Easier recruitment

Machine learning used to design, monitor and control medical treatment programmes.
- Monitoring
- Measurements
- Analysis

What is 'eHEALTH in practice' and why is AI important for medical technology and patient care?

In White Paper 33 we stated:

Very little of ICT is eHealth specific, all of eHealth depends on ICT.

A network must meet the requirements of an eHealth request for security, latency, delay, reliability and throughput or it will not be allowed to transport the eHealth information. If eHealth is to be ubiquitous then all technical specifications for the communications infrastructure have to be eHealth ready and designed with the eHealth domain in mind.

In short ICT standards should be designed with the assumption that they will be applied in a health environment and as part of a global ICT solution to evolving health issues.

This global solution will be driven by the development of AI.

ETSI TC eHealth is actively supporting this with our meetings, workshops and written advice.

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eHealth: Factors in the health services market which set the scene for AI to flourish

o Health care providers now have access to the most brilliant and advanced understanding of medicine and its attendant technologies but often struggle to put it to use.

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o The role of technology in medical services needs to be better understood and supported. Why?

  o Provision of medical services is under strain across the world.
  o Increasing demand from increasing populations is difficult to satisfy
  o Costs are prohibitive
  o Staff levels are not being maintained.

o It is clear that AI technology can resolve some of the issues but it needs investment and above all, commitment to ongoing development and training, to be successful.

o Areas of interest for the introduction of AI include, all traditional areas of diagnostics and treatment with a particular focus on data provision and handling; pharmaceuticals; insurance; monitoring and personal programs for patient centric treatment; remote consultation and closer relationships with skilled practitioners; software solutions; implementation and training.

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o The list is endless! Standards definitely have a role to play! They will be essential to improvement in all aspects of health care provision.

A significant market gain is possible with implementation of AI in eHEALTH

- The Covid-19 pandemic hit about 8% of the global population, about 7 million people died, and it resulted in a spike in healthcare across the planet of hundreds of millions of days.

- There are only about 15 million doctors in the world and their number is declining. This is clearly an insufficient number to cope with our present medical needs.

- Appropriate technology, when used with appropriate controls, can augment the availability of health professionals. About 9% of world GDP goes to healthcare. IoT has an opportunity to access a large part of this market and to grow the figure.

  - Further details and slides are available to you on the TC eHealth portal, "What we do!"

Why join us in ETSI TC eHEALTH?

We may be a small technical group but we are consistently looking for new ways of working and of recruiting more members!
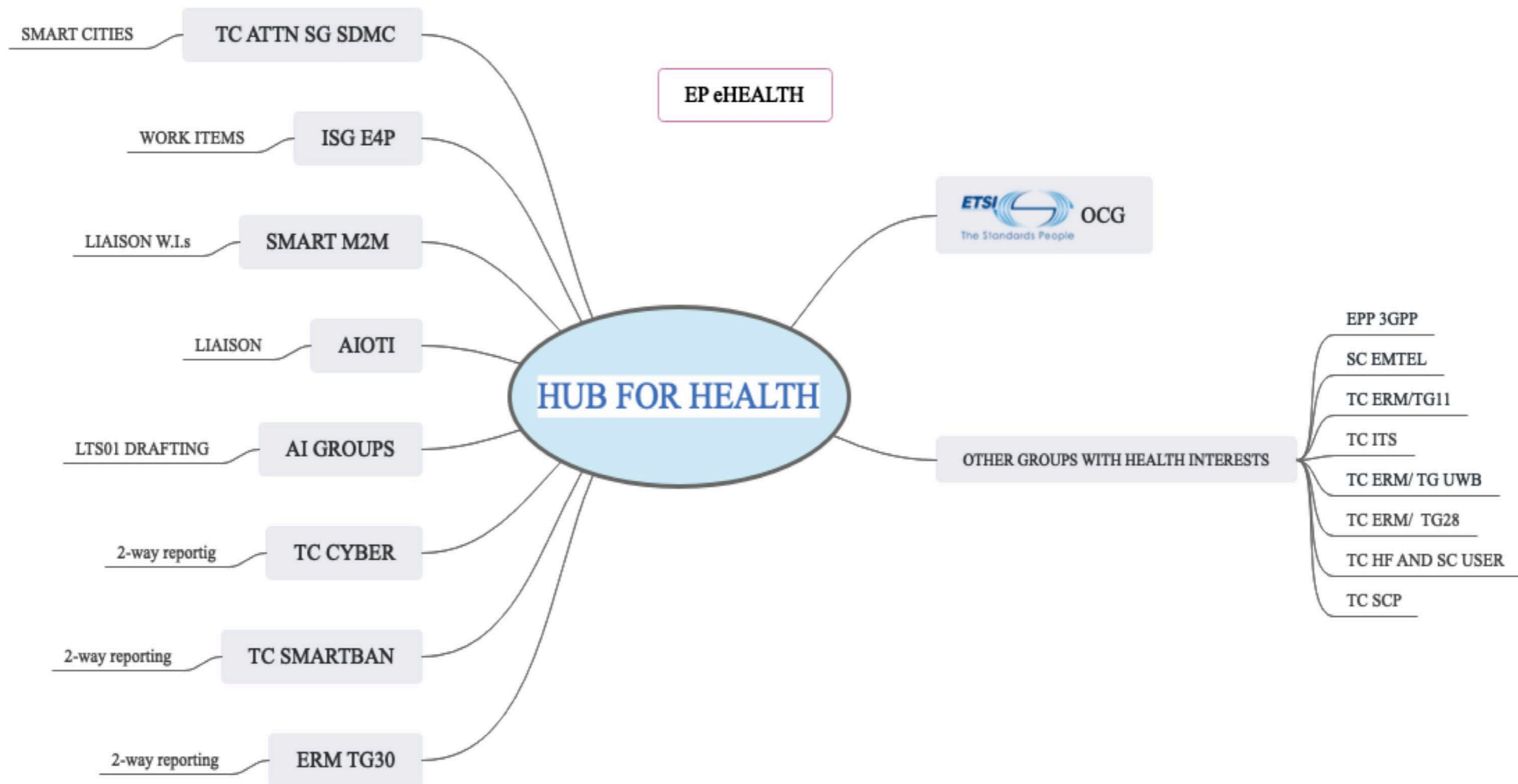
New opportunities are many!

Workshops and Open Meetings - special themes? These are of special interest to external organizations. How do we recruit new groups?

Articles for ENJOY! Previous articles have enjoyed success - remember the challenge we launched during the Covid crisis?
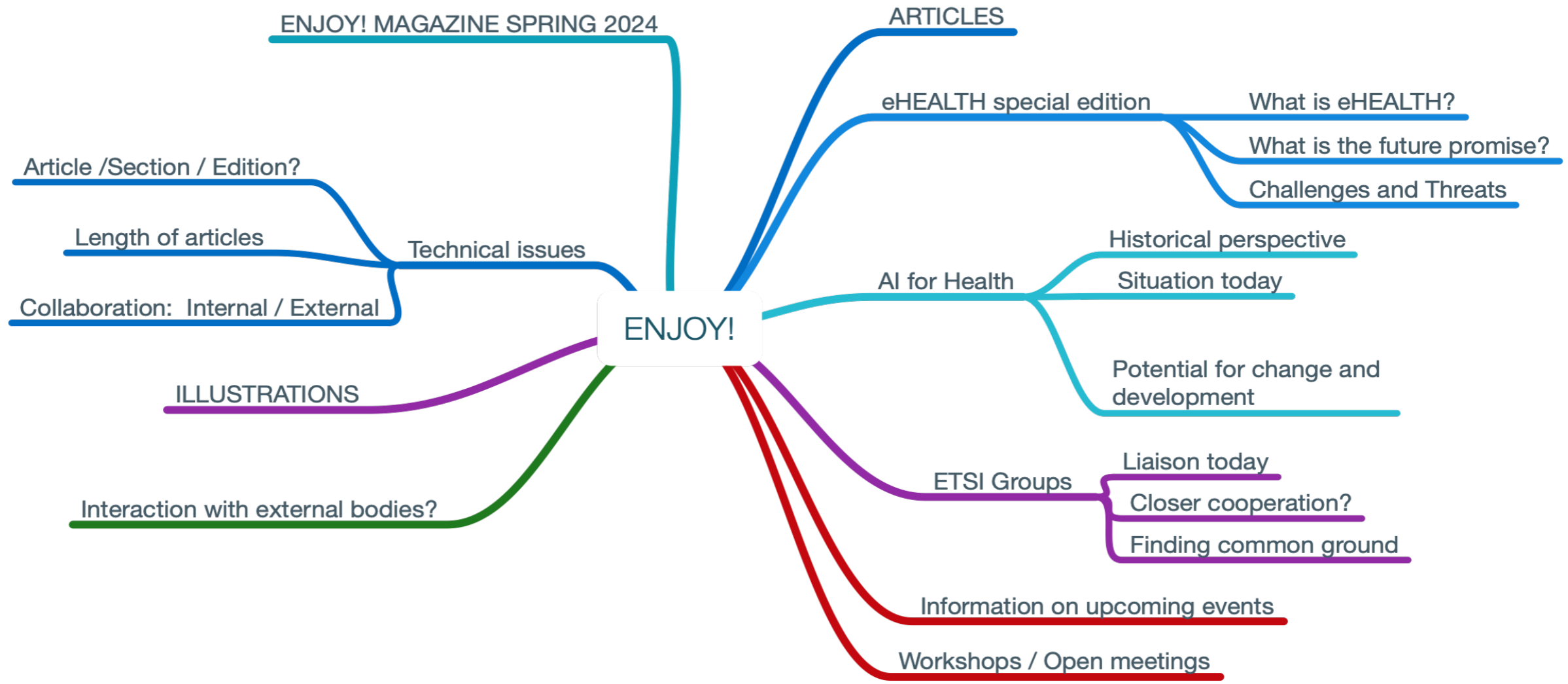
Our **'Hub for Health'** offers the chance to meet and brainstorm new ways of benefiting from the latest developments in both health and AI

"Hub for Health" - "Debating AI" to be hosted by TC eHEALTH in 2024 just as we debated issues raised by Covid-19 in 2020-2022

Our contact list for the Hub in 2021!

Brainstorming to consider new plans for articles!

ENJOY! MAGAZINE SPRING 2024

ARTICLES

eHEALTH special edition
- What is eHEALTH?
- What is the future promise?
- Challenges and Threats

Article /Section / Edition?

Length of articles

Technical issues

Collaboration: Internal / External

AI for Health
- Historical perspective
- Situation today
- Potential for change and development

ENJOY!

ILLUSTRATIONS

ETSI Groups
- Liaison today
- Closer cooperation?
- Finding common ground

Interaction with external bodies?

Information on upcoming events

Workshops / Open meetings

ENJOY !

POSSIBLE ARTICLES FOR eHEALTH special edition : ENJOY! MAGAZINE SPRING 2024

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What is the future promise?
Challenges and Threats

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A Wish list for AI to tackle for eHealth!

Make the trains run on time!

But seriously!!

Patients struggle with 'ordinary' practical societal challenges.

AI is giving us the opportunity to make 'joined-up solutions' especially in the organisation of appointments and release from hospital.

Continue to improve medical records and data retrieval:

    The demand is for 'Patient-Centric treatment'

    We need to identify, involve and train the users!

We welcome new enquiries to the group!

ETSI

Thank you for your attention

Any further questions?

Contact me:

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