Introduction to the digital transformation of health and care

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DITTA Board member
DITTA is a non-profit trade association, created in 2000 and incorporated in 2012 represents more than 600 companies around the globe

DITTA covers the following industry sectors:
1. Diagnostic imaging,
2. Radiation therapy,
3. Healthcare IT,
4. Electromedical
5. and Radiopharmaceuticals

Our Industry leads in state-of-art advanced technology and provides integrated solutions covering the complete care cycle
About Peter Linders introduction

- Over 25 years involvement in IEC and ISO
- Involved in regulatory affairs since 1998
- Chair of CENELEC/TC 62
- Chair of ISO/TC 210
- Co-project leader of IEC 82304-1
- COCIR Board member & chair of TRAC
- DITTA member Board of Directors
- Involved in GHTF, IMDRF, and AHWP

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For an introduction, we want to know ...

- What is Digital Transformation?
- Is it new in Health & Care?
- What will it bring?
- Where will it end?
What is Digital Transformation?

*Wikipedia:* Digital Transformation (DT) is not necessarily about digital technology, but about the fact that technology, which is digital, allows people to solve their traditional problems. And they prefer this digital solution to the old solution.
What is Digital Transformation?

Source: EU Commission
Is it new in Health & Care?

• Well, not really – digital medical imaging is from the 1970’s, and DICOM came soon thereafter
• But, gradually, it is ...
  ➢ more than just technological changes
  ➢ a completely different way of working
  ➢ about adapting the operation rather than adopting technology
What will it bring (1/3)?

**Healthy living**: Help people to live a healthy life in a healthy home environment.

**Prevention**: Enable people to manage their own health.

**Diagnosis**: Provide first time right diagnosis with personalized and adaptive care pathways.

**Treatment**: Enable more effective therapies, faster recovery and better outcomes.

**Home care**: Support recovery and chronic care at home.

**Connected care and health informatics**: Enable consumer-patient-provider connectivity, optimized care coordination and improved population health.
What will it bring (2/3)?

Machine intelligence

Deep learning

Knowledge

Problem solving

Planning

Cognitive intelligence

Embodied intelligence

Timely diagnosis

Perception

Reasoning

Data mining

Artificial intelligence

Natural language processing

Robotic

Genomics-related intervention

Remote surgery

Patient-owned healthcare

Statistical learning

Statistical learning
What will it bring (3/3)?

cyber attacks

cross-border data
right to be forgotten
patient-owned healthcare
ethical consideration
machine learning

genetic manipulation in man

deep learning
regulatory confusion

knowledge
planning
data integrity
Privacy impact
data overload
getting lost in the data woods
availability of care

data reliability

remote mega hospitals
WHERE WILL IT END?

Where will it end?

- Prevention: lifestyle vs. health; insurance
- Robots: human companions/care deliverers
- Personal medication: how to demonstrate effectiveness?
- Semantic engines: faster diagnosis—is it more accurate?
- Data “debris”: outdated data that’s not cleaned up
- ...

Where will it end?

Source: Medical devices 2030, KPMG 2018
WHERE WILL IT END?

Thanks to Koen Cobbaert

Clinical & patient decision support with semantic engines
WHERE WILL IT END?

Where will it end?

We will need ...
THANK YOU!

www.globalditta.org