COCIR 60th Anniversary  
Thursday 14 November 2019 Brussels, Belgium

Industry experience and perspectives on Circular Economy and Sustainability

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Moving from Linear to Circular Economy “no need to explain why”

Earth overshoot day

CO2 Emissions

Climate Change

EARTH OVERSHEET DAY WAS JULY 29

On That Day, Humanity Exhausted The Biological Resources Our Planet Can Renew This Whole Year. Check Out Solutions Below So We Stop Increasing The Global Ecological Deficit.
The Theory of Circular Economy…
“sounds easy, but isn’t!”
Circular Economy: Our industry and the design of complex products

the MRI example

A typical MRI unit weighs up to 10 tons
- 3,600 assemblies
- 27,000 sub-assemblies
- 120,000 component parts

Long supply chain with 5 to 7 levels
- Up to 11,000 suppliers per company across the world and 10^+ languages

High cost devices, low unit sales numbers
- Limited purchasing leverage even on 1st level suppliers

Our mantra: AVOID WASTE in all stages of the products’ life cycle
Circular Economy: The end of product life “the simplest phase”

Waste management

- Inverse logistic/take back
- Recycle valuable materials
- Recover energy

The end of life [waste] management in our industry is already well regulated and functions correctly; the opportunities for additional improvements are limited.

Hence most of our efforts are nowadays in the other product life cycle phases (design, manufacturing, transportation, use etc.):

AVOID WASTE
Circular Economy: Technological advances and the value of upgrades
“Use longer, use better”

• Every year, advances in engineering for medical imaging provide incremental gains, and an occasional major breakthrough [AI being the latest].
• Advances in technology have allowed required radiation doses to be lowered, reducing the risk to patients and health care professionals.
• Since advances in technology are often incremental, the industry offers upgrades that can help extend the life of equipment over a defined period of time.
Circular Economy: When Replacement is Necessary
“Refurbish and re-use”

- The age of the installed base of medical imaging equipment continues to increase! It is now older than ever before.
  - Consequence: higher risk of failures or breakdowns and associated delays for provision of essential medical interventions
  - Consequence: operating costs tends to be higher for the provision of medical services using older equipment [zero boil off MRI].
- Aged installed base is actively traded-in and where possible refurbished and reintroduced in the marketplace.
- The benefits to patients and clinicians of renewing the Medical Imaging Technology base are clear and irrefutable.
The sustainability challenge (financially, manpower etc.)

Drive integrated care!

**FROM**
- Focus on acute conditions
- Hospital centred
- Physician dependent
- Episodic, reactive care
- Inefficient, fragmented care
- Passive patient
- Low tech silos
- Petrified pathways

**TO**
- Focus on acute & long term chronic care
- Community centred & public trust
- Team based & professional networks
- Integrated preventive care
- Global & multidisciplinary care
- Knowledgeable patient
- Localised integrated high tech & metrics
- Change management, evidence & research

Diagnose centrally to treat locally
The sustainability challenge (financially, manpower, etc.)

Industry contribution:

Improved installed base life cycle management
The sustainability challenge (financially, manpower etc.)

Industry contribution:

Disruptive financing models

- As early as 2015, the EU Commission Expert Panel on Effective Ways of Investing in Health endorsed the new business models approach in its report on ‘Disruptive Innovation: Considerations for health and health care in Europe’.

- This highlighted the value of innovative financial models, termed “disruptive innovations”, such as Managed Services, in implementing and disseminating innovation. Managed Services are long-term partnerships between healthcare facilities and technology providers.
  - They guarantee sustainable access and availability to the latest advanced healthcare technology and equipment.
  - They also bring additional value, offering analytical insights and procedural valuations
  - Which in turn can increase operational efficiencies and improve outcomes.

- COCIR calls upon Member States and regions to encourage hospitals and healthcare providers adopt and diffuse long-term business and financial innovative models, such as Public Private Partnerships and Managed Services.