



Sustainable Competence  
in Advancing Healthcare




## COCIR **SELF-REGULATORY INITIATIVE** FOR MEDICAL IMAGING EQUIPMENT

# 3<sup>rd</sup> ANNUAL FORUM

# RESOURCE EFFICIENCY AT MEDICAL DEVICE INDUSTRY

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**COCIR SELF-REGULATORY INITIATIVE  
FOR MEDICAL IMAGING EQUIPMENT**

**MAGNETIC RESONANCE EQUIPMENT  
MEASUREMENT OF ENERGY  
CONSUMPTION 2011**

REVISION x 5  
DATE 2 June 2012  
APPROVED 2 June 2012

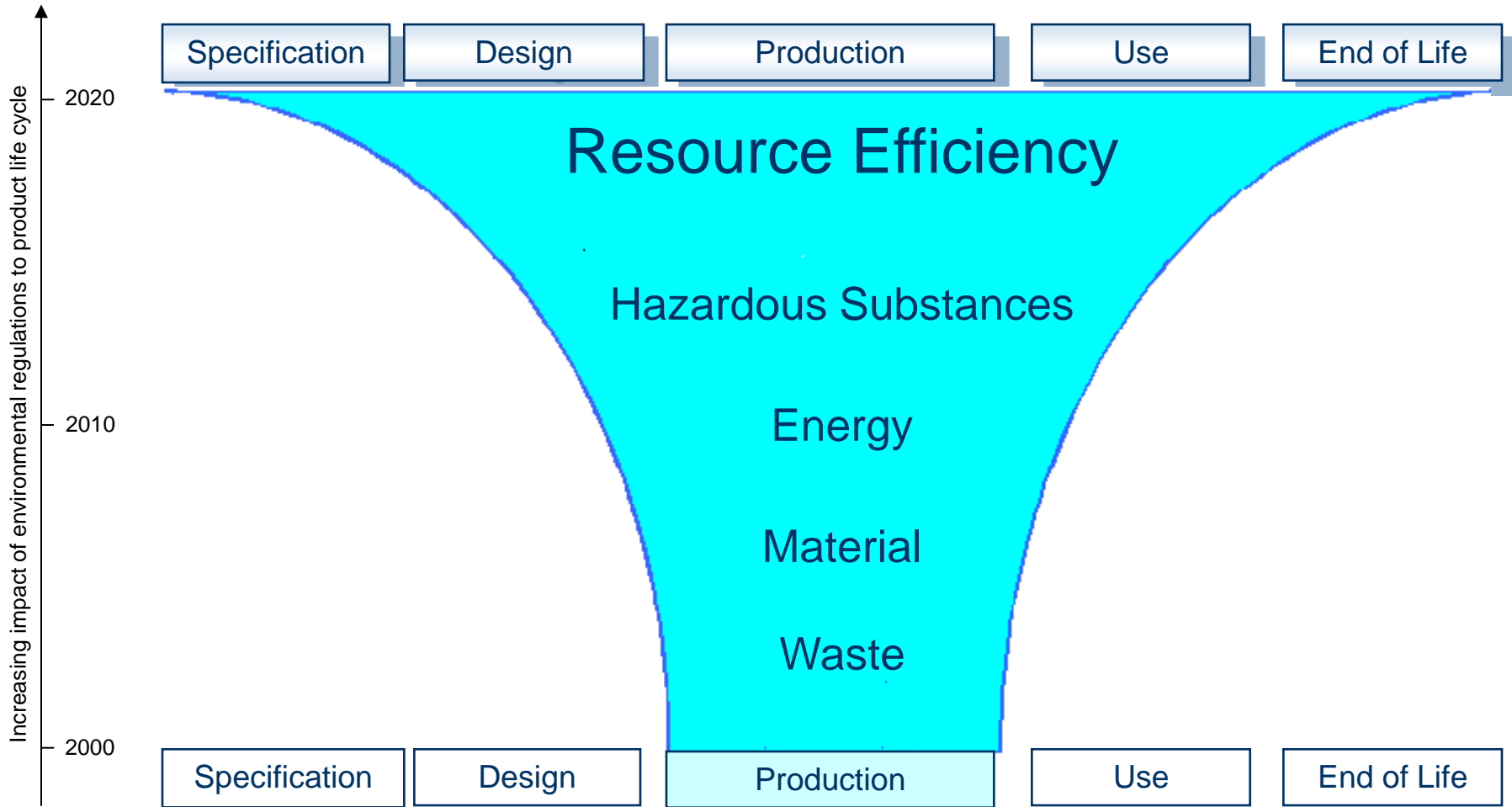
**COCIR**  
SUSTAINABLE COMPETENCE IN ADVANCING HEALTHCARE

European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry





# RESOURCE EFFICIENCY WILL IMPACT THE WHOLE PRODUCT LIFE CYCLE!





# ENVIRONMENTAL LEGISLATION (WORLD WIDE) - IMPACT TO MEDICAL DEVICE INDUSTRY, PART 2

Topic	Business Impact
<b>ErP:</b> Ecodesign of products to minimize environmental aspects	<h2>Losing flexibility for product design and innovations for healthcare!</h2>
<b>RoHS:</b> Restriction of hazardous substances, e.g. lead, cadmium)	
<b>REACH:</b> Evaluate and register chemicals)	
<b>Dodd-Frank-Act:</b> Reporting about conflict minerals from Congo	
<b>WEEE:</b> Reduce, collect, and recycle old electric and electronic equipment after useful live	
<b>GPP:</b> Green Public Procurement Criteria for medical devices	
<b>Resource Efficiency:</b> Road Map from the European Commission	



# ENVIRONMENTAL LEGISLATION (WORLD WIDE) - IMPACT AND ACTIVITIES OF THE MEDICAL DEVICE INDUSTRY

Topic	Business Impact	Activities
<b>ErP</b> Ecodesign of products to minimize environmental aspects	Increase of 2 – 4 % manufacturer costs (e.g. for design changes); worst case: no market access	“COCIR ErP Self-Regulatory Initiative” to protect degrees of freedom in product design and choosing internal processes
<b>RoHS</b> Replace hazardous substances, e.g. lead, cadmium	Affects 80% of total revenue; extra costs to replace RoHS substances; worst case: no market access	Driving exemptions together with COCIR
<b>REACH</b> Evaluate and register chemicals	Approx. additional 350.000 EUR per substance/ application for additional evaluation and registration procedures	Establishing practical solutions (e.g. BOMcheck) to ensure compliance and reduce costs
<b>Dodd-Frank-Act</b> Conflict minerals	Extra cost for getting evidence about conflict minerals	Establishing practical solutions , together with trade associations
<b>WEEE</b> Reduce, collect, and recycle old electric and electronic equipment	Extra costs for additional take back processes	Establishing practical solutions for product take back systems; sharing COCIR best practice on refurbishment
<b>GPP</b> Green Public Procurement Criteria for medical devices	Additional requirements for PLM, extra costs and time	Working closely with European Commission to get reasonable criteria
<b>Resource Efficiency</b> Road Map from the European Commission	Additional requirements for PLM	Developing Road Map “Resource Efficiency at Healthcare”



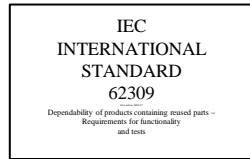
# BALANCE OF BENEFITS AND RISKS NO ROHS SUBSTANCES – NO IMAGING MEDICAL DEVICES

- As medical devices manufacturer we have to balance the benefits and risks (e.g. of using RoHS substances) in a health care setting looking at effectiveness, safety and environment.
  - For example, clinical benefit vs. the risk of environmental harm
- Medical device industry needs freedom and flexibility to use RoHS and other hazardous substances for innovative products, where the benefit to patients outweighs the environmental risk.
  - Example: If we use cadmium in a CT detector, we can improve the diagnostic image quality and reduce the radiation dose at the same time!
  - And: We are supporting saving lives!
- Hazardous Substances (e.g. RoHS substances) should be available for use - **if** justified by risk/benefit analysis
  - Risk assessment is a formal and well understood process already undertaken by the medical device industry



# COCIR ENVIRONMENTAL ACHIEVEMENTS SO FAR HEALTHCARE INDUSTRY IS PRO-ACTIVE!

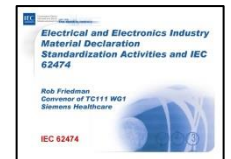
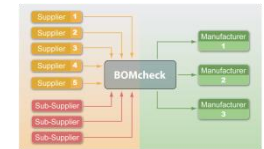
2000	Product related Environmental Protection (Policy, Strategy, measures)
2002	Take back systems, End of Life strategies
2004	Product Standard IEC 62309
2006	Environmental Product Declaration
2007	Product Standard IEC 60601-1-9








# COCIR ACHIEVEMENTS SO FAR – HEALTHCARE INDUSTRY IS PRO-ACTIVE!

2008	BOMcheck
2009	Self Regulatory Initiative (SRI)
2011	Product Standard IEC 62474
2014	RoHS Exemption (ongoing over 14 years!)
2014	Resource Efficiency



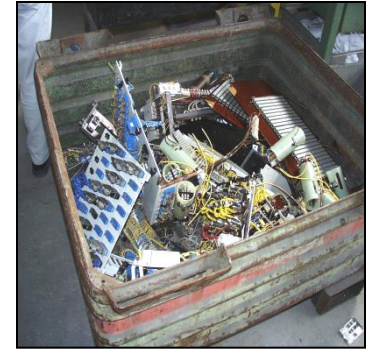
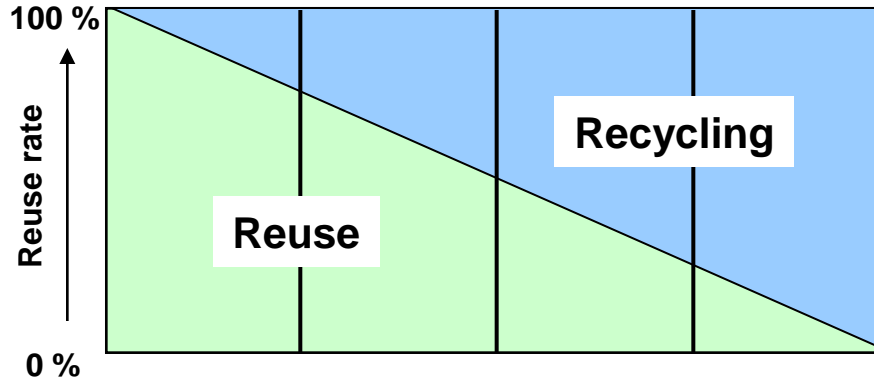
# RESOURCE EFFICIENCY IS COVERING SEVERAL STRATEGIC TOPICS

Avoid looming material risks	Sustainable material use	Sustainable material management
<div style="display: flex; justify-content: space-between;"> <span>acute</span> <span>strategic</span> </div>		
<p><b>Reduce dependence on critical materials</b></p>  <ul style="list-style-type: none"> <li>▪ <b>concerned by (upcoming) legal requirements</b> <ul style="list-style-type: none"> <li>➢ RoHS exemptions</li> <li>➢ potential RoHS candidates</li> </ul> </li>   <li>▪ <b>affected by acute supply risks</b> <ul style="list-style-type: none"> <li>➢ shortages</li> <li>➢ strongly increasing prices</li> </ul> </li> </ul>	<p><b>Extend lifecycle</b></p>  <ul style="list-style-type: none"> <li>▪ <b>of systems and components</b> <ul style="list-style-type: none"> <li>➢ maintain</li> <li>➢ repair</li> <li>➢ refurbish</li> <li>➢ re-use</li> </ul> </li>   <li>▪ <b>of materials / raw materials / production waste</b> <ul style="list-style-type: none"> <li>➢ recycle</li> <li>➢ re-use</li> </ul> </li> </ul>	<p><b>Strategic optimization of material use</b></p>  <ul style="list-style-type: none"> <li>▪ <b>avoid dependence on critical materials in</b> <ul style="list-style-type: none"> <li>➢ in product development</li> <li>➢ in sourced parts</li> </ul> </li>   <li>▪ <b>regular material assessment</b> <ul style="list-style-type: none"> <li>➢ price - performance - recyclability</li> </ul> </li>   <li>▪ <b>economic use</b> <ul style="list-style-type: none"> <li>➢ reduce demand by economic material solutions</li> <li>➢ save materials by disruptive innovations</li> <li>➢ optimized supply chain</li> </ul> </li> </ul>

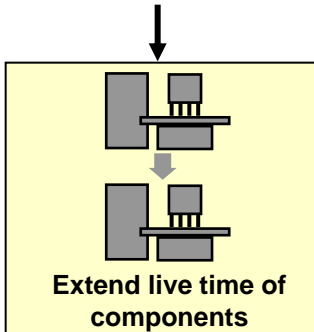




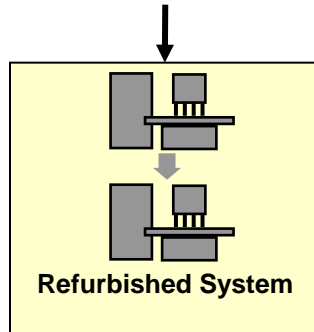
# STRATEGY FOR SUSTAINABLE MATERIAL USE MEDICAL DEVICES



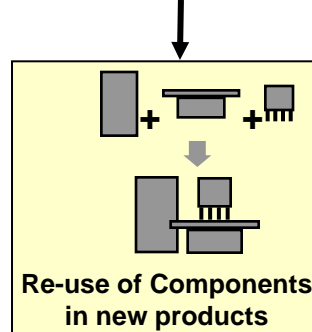
**System Upgrade**



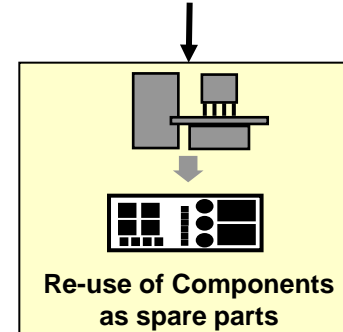
**Refurbishing**



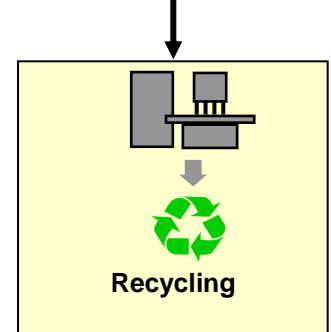
**Reuse**



**Spare parts**



**Recycling**





# COCIR IS PRO-ACTIVE IN ...



- See the whole picture
- Understand the business need
- Focus on solutions
- Collaborate with organizations and act pro-active
- Drive the harmonization of global regulation & standardization processes (e.g. reuse, refurbishment in countries)
- Think outside the box