



Refurbishment of medical devices

Contribution to Circular Economy

Refurbishment of medical systems



Refurbishment is defined as the process to restore used equipment or systems into a condition of safety and effectiveness comparable to when new. This includes actions such as: repair, rework, update and replacement of worn parts with original parts. All actions are performed in a manner consistent with product specifications and service procedures as defined by the manufacturer for that equipment or system without significantly changing the equipment's or system's performance, safety specifications and/or changing intended use as in its original registration

The good refurbishment practice

In 2009 COCIR (EU), JIRA (Japan) and MITA (USA) released a Good Refurbishment Practice manual filling a need in the healthcare market for safe and effective refurbished medical systems.

Can be downloaded at www.cocir.org



Sustainability of refurbishment

Refurbishment of used medical devices contributes to the **three pillars of sustainability**



1. Environment

Reuse is considered the most effective way to prevent waste and to save resources and energy. By extending the life-time of medical devices, refurbishment saves the resources otherwise needed for manufacturing new devices - including associated energy costs.



2. Economy

With a total turnover of more than 480 million euros, the refurbishment business contributes to economy. While still a small business facing conflicting requirements in legal framework, refurbishment has the potential to grow significantly.



3. Society/Patients

Refurbishment supplies high quality medical devices at affordable cost for hospitals and healthcare providers. Europe and North America account for 74% of the global market for refurbished medical devices. Thanks to refurbished equipment citizens and patients have access to quality imaging and diagnostic services.

1st pillar



ENVIRONMENT

Reuse is a fundamental principle of ecological thinking in a recycling economy. By preventing equipment from becoming waste by extending the service life, materials and energies required to manufacture new products are saved.



1. Refurbishment saves energy

By avoiding the production of new equipment, refurbishment contributes to save energy. DITTA estimates that around 30 MWh can be saved for each ton of refurbished medical devices.



2. Refurbishment saves CO₂

By saving energy used in the production of new equipment, reducing the mining of raw materials and decreasing associated industrial production processes.



3. Refurbishment prevents waste generation

DITTA estimates that in 2012 around 16.400 tons of used medical devices have been prevented from becoming waste, instead being shipped world-wide for refurbishment and repair. Europe and Unites States account for most of the refurbishment activities worldwide.



4. Refurbishment save resources and raw materials

Medical devices make use of many scarce raw materials thanks to their unique properties - this includes beryllium or rare earth metals. Refurbishment saves these resources and helps to ensure their supply.

Compared to new equipment,
refurbished medical equipment
results in a much lower ecological footprint.

2nd pillar



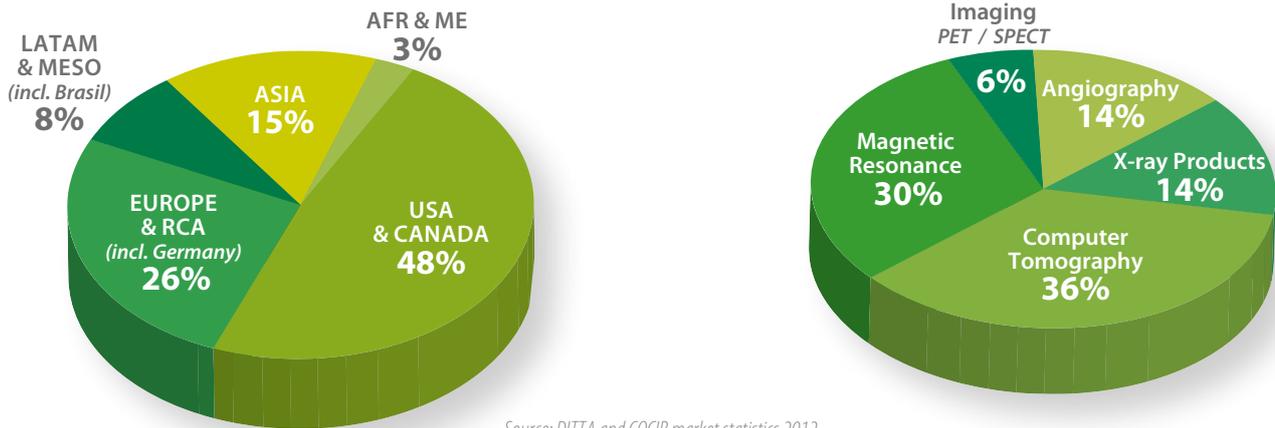
ECONOMY

Refurbishment contributes to economy

The refurbishment of medical equipment accounted for a global revenue of approximately 480 million euros in 2012. Approximately 74% of all refurbished systems are sold in both the U.S. (48%) and the EU (26%).

In 2013 refurbished medical equipment worth around 130 million euros was sold in the EU

Total Global Pre-Owned Market 2012



Source: DITTA and COCIR market statistics 2012

3rd pillar



SOCIETY / PATIENTS

Refurbishment increases healthcare access



Refurbished medical devices are cheaper than new equipment. In current times of constrained budgets and countries spending reviews due to the economic crisis, refurbished devices are an effective way to maintain access to high quality healthcare for citizens.

Refurbished MD's contribute strongly to increased access to healthcare:

- 20%-30% reduced cost for healthcare providers, while ensuring safety and high clinical performance.
- Improvement of the age profile of installed equipment allowing hospitals with limited budget to substitute their old equipment.
- Increase in quality of healthcare and safety for patients due to the reduction of the obsolescence of installed equipment.

Refurbishment ensures **safety**



Used medical devices are restored to a point of safety and effectiveness comparable to when the device was new. Refurbishment includes actions such as repair, rework, update and replacement of worn parts with original/new parts.

All actions are performed in a manner consistent with product specifications and service procedures as defined by the legal manufacturer.

The Good Refurbishment Process consists of 5 steps. All the steps are performed by trained experts using the original manufacturer's specifications.

1. Selection of equipment for refurbishment
2. Disassembly, packaging and shipment
3. Refurbishment
4. Reinstallation of refurbished equipment
5. Professional services

DITTA is the global voice for diagnostic imaging, radiation therapy, healthcare IT, electromedical and radiopharmaceutical manufacturers to better communicate, coordinate and collaborate on matters of common interest between participating associations and member companies.

DITTA enables participating associations and their member companies to work more effectively with international policymakers, organizations, professional associations and stakeholders.



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