



Managing the impact of compliance on life cycle management

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Introduction

Compliance is a focus area for many, if not all, manufacturers¹ and can be described as “the concept of acting in accordance with established laws, regulations and market standards”². The critical issue is the impact of non-compliance, which can have serious civil, criminal, reputational, and/or financial consequences. Compliance is often perceived by organizations as a barrier to doing business. Yet for any organization the fact is that it is also a business necessity and, if managed well, can even create opportunities for new products & services.

Many manufacturers are currently in the process of transitioning to a circular business model in which re-use, refurbishment, remanufacturing and recycling are key to the company's strategy. At the same time, assets³ are becoming increasingly smart and connected, capturing and storing more and more (personal) data. Many manufacturers with a regional or global footprint only have refurbishment and remanufacturing facilities in certain countries, requiring cross-border transportation of pre-owned assets if they are to enjoy a second or third life.

Scope of the white paper

This white paper looks at the business and operational impact of compliance on manufacturers, dealers and resellers making the transition to a circular business model. It focuses on three compliance-related topics that have major implications for life cycle management: data protection, recycling and cross-border shipment.

(i) These topics are discussed in detail, then (ii) an overview of relevant EU and US laws, regulations, protocols and standards is provided. The paper concludes with (iii) a checklist that any company can use to map and manage the impact of compliance on life cycle management of its assets.



“I prefer to play by the book, even though this can frequently be more time-consuming and costly. It pays off in the end and gives us the right image in the market.”

Office equipment reseller.



1. The term 'manufacturer' in this paper refers to any company designing, producing and/or offering assets to end-users.
2. Tarantino, A. (2008). *Governance, risk, and compliance handbook: technology, finance, environmental, and international guidance and best practices*. John Wiley & Sons.
3. The term 'assets' in this paper refers to equipment, devices, systems, units or products produced by a manufacturer.

Data protection



Across all industries, assets are becoming increasingly smart and connected. As a result, more data is being stored on those assets than ever before.

Some of this is activity-based data on the asset's usage is probably "harmless". Personal data, on the other hand, generally includes information that should not be disclosed to the outside world. Given current and future data protection legislation, it is therefore vital to ensure data is adequately wiped before an asset changes hands between customers⁴.

In the IT and medical industries, manufacturers and resellers have been offering data-wiping services to customers for years. In other markets, such as the automotive, agricultural and construction industry, data protection was never previously seen as an issue. But nowadays cars, lift trucks and harvesters all have on-board computers that capture and store data. Buyers of pre-owned cars, for example, are frequently confronted with recent destinations of the previous owner on the navigation system or from mobile phones that had been connected to the car's Bluetooth device.

Return conditions in lease contracts often now include a clause explicitly stating that customers are responsible for data-wiping. However, many customers lack the knowhow to wipe such data from the asset. As a result, manufacturers, resellers or third parties have developed data-wiping capabilities that they offer to customers as a service.

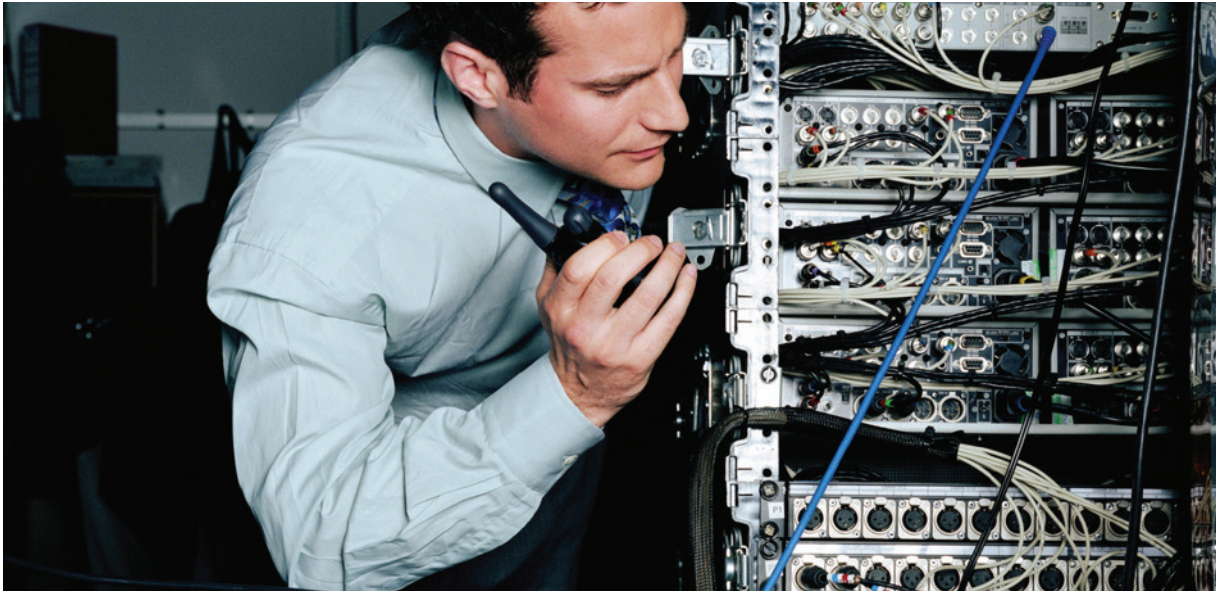


"Initially, both the operating software of the imaging machine and the patient's data were stored on one hard drive. When the hard drive was wiped or destroyed, the operations software was gone and the equipment didn't work anymore. Nowadays, medical equipment has two hard drives: one for the operating software and one for the patient's data."

Manufacturer of imaging equipment.



4. The term 'customer' refers in this paper to business end-users of assets.



(Personal) data, is in many cases stored on the asset's built-in hard drive, which can be reused or destroyed. Data-wiping can be done in three different ways:

1. The stored data is wiped using special software (software destruction), whereby the hard drive is overwritten with zeros and ones to make the stored data irretrievable. For some assets, such as IT assets, this method is the standard procedure, as it maintains the value of the equipment.
2. The hard drive is replaced and degaussed, a technique that uses a strong magnet to wipe data from the hard drive.
3. The hard drive is replaced and shredded (physical destruction) into small pieces.

At the customer's request, the service provider can provide a certificate that, on the basis of a serial number, confirms that the data has been wiped from the hard drive.

"In the EU, organizations can face fines up to 4% of their annual global turnover or €20 million (whichever is greater) if they fail to comply with relevant data protection legislation."

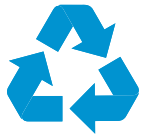
Compliance officer.



Practical implications

- Increasingly, assets in more "traditional" industries such as automotive, agriculture and construction capture and store data on the asset. Creating opportunities to develop data protection-related products & services.
- Storing operating software and captured (personal) data on separate hard drives is recommended in order to prevent the need for new operating software in the event of the hard drive being wiped.
- If your organization is EU-based and categorized as a "processor" or "controller" of data, following the introduction of the new GDPR (General Data Protection Regulation, effective from May 2018) you will be liable for any data breaches, and face potential financial penalties and/or reputational damage as a result. In addition, it will be mandatory to inform customers of cases of data breach, which brings with it operational resource implications for many organizations.

Recycling and hazardous materials handling



Existing regulations and practices for assets that have reached the end of their life are primarily focused on reducing landfill.

However, recycling and re-use are becoming increasingly important, as more and more manufacturers, dealers and resellers adopt circular economy principles. Leading them to become increasingly involved in the dismantling of assets, and separation and disposal of toxic substances and components. The question is: is this something you should do yourself or leave to the experts?

Three of the EU's most important recycling directives are (i) the End of Life (ELV) directive for vehicles, (ii) the Waste Electronic and Electrical Equipment (WEEE) directive and (iii) the Restriction of Hazardous Substances (RoHS) directive for e-waste. The recycling of IT and medical equipment is better regulated than the recycling of other assets such as cars, tractors or heavy-duty equipment because e-waste is one of the fastest growing waste streams within the EU, and in many cases includes hazardous substances.



"Pre-owned imaging machines that are imported and redeployed to a customer in the EU have to comply with the latest RoHS directive. The same holds true for pre-owned equipment that originates from and is remanufactured in the EU and then given a new serial number. From an operational standpoint, this means having to validate whether the equipment contains certain substances forbidden under the RoHS directive."

Manufacturer of healthcare equipment.





Though raw material scarcity can drive up raw material and scrap prices, many second and third life assets sold in today's B2B environment have values significantly higher than their raw material or scrap value. On the other hand, in the IT industry, many resellers see scrapping and recycling as a way to take existing volume out of the market and stimulate new asset sales. At the customer's request, recycling companies can provide a certificate of destruction to prove that the scrapped assets have been taken out of the market.

"We always remove toxic toners before sending a copier to our recycling partners. To prevent leakage of toxic materials during transport, but also to be a good corporate citizen."

Reseller of copier machines.



Practical implications

- A hard drive needs to be readily accessible. This makes removal easier, lowering labor costs. And particularly when the machine is handled by a third-party recycling company not specialized in specific asset types, this will also minimize the risk of the hard drive being forgotten.
- Remanufacturing is gaining popularity but requires organizations to comply with the most recent hazardous substance regulations. Particularly with older equipment that is remanufactured and brought to market with a new serial number, it's important to be aware that more and more substances are considered "hazardous" and not allowed in such assets.
- Many manufacturers, dealers and resellers dismantle assets, or parts of assets, before handing the materials on to specialist recycling companies. Particularly in Europe, where recycling regulation is more advanced, to carry out recycling activities you must acquire and maintain various certificates, which costs time, effort and money.
- In a circular economy, parts harvesting is key to getting more value out of the technical lifecycle of an asset. It is still unclear, though likely, whether some harvesting activities will be affected by recycling regulation such as WEEE.

Cross-border shipment



Pre-owned equipment is increasingly sourced from and sold to foreign markets, which makes cross-border shipment a necessary part of giving assets a second or third life.

One step that might seem straightforward, but can actually cause severe reputational and financial damage if not managed well, is clearing the buyer and making sure they are not on any exclusion lists. In addition, buyers must use assets for their intended purpose. In the US, hard law states that it is mandatory for organizations to “clear their buyer”, whereas in the EU this is more of a market standard, without real financial penalties if organizations inadvertently sell equipment to a buyer on the exclusion list.

“Before we close a sale, we run the buyer through a program that compares them against a real-time exclusion list. The list consists of federal- and sector-based exclusions, in addition to our own list of countries and organizations.”

Healthcare manufacturer of MR systems.





In the EU, the WEEE directive and Basel Convention have "merged" to become the Correspondents' Guidelines. These currently only apply to the IT sector, but may also impact other industries in the future. The guidelines make cross-border shipment more costly, time consuming and complex, as every pre-owned asset (with some exceptions) can only be exported or imported when all the involved countries (exporting, importing and transit) have approved the trans-border movement. Not complying with the Correspondents' Guidelines can potentially result in loss of customers, as assets lacking all the necessary permits could get stuck at Customs.

"The new Correspondents' Guidelines will make shipment and refurbishment of used electronics more bureaucratic, but will also provide commercial opportunities to support those organizations that are struggling."

Reseller of PCs and laptops.



Practical implications

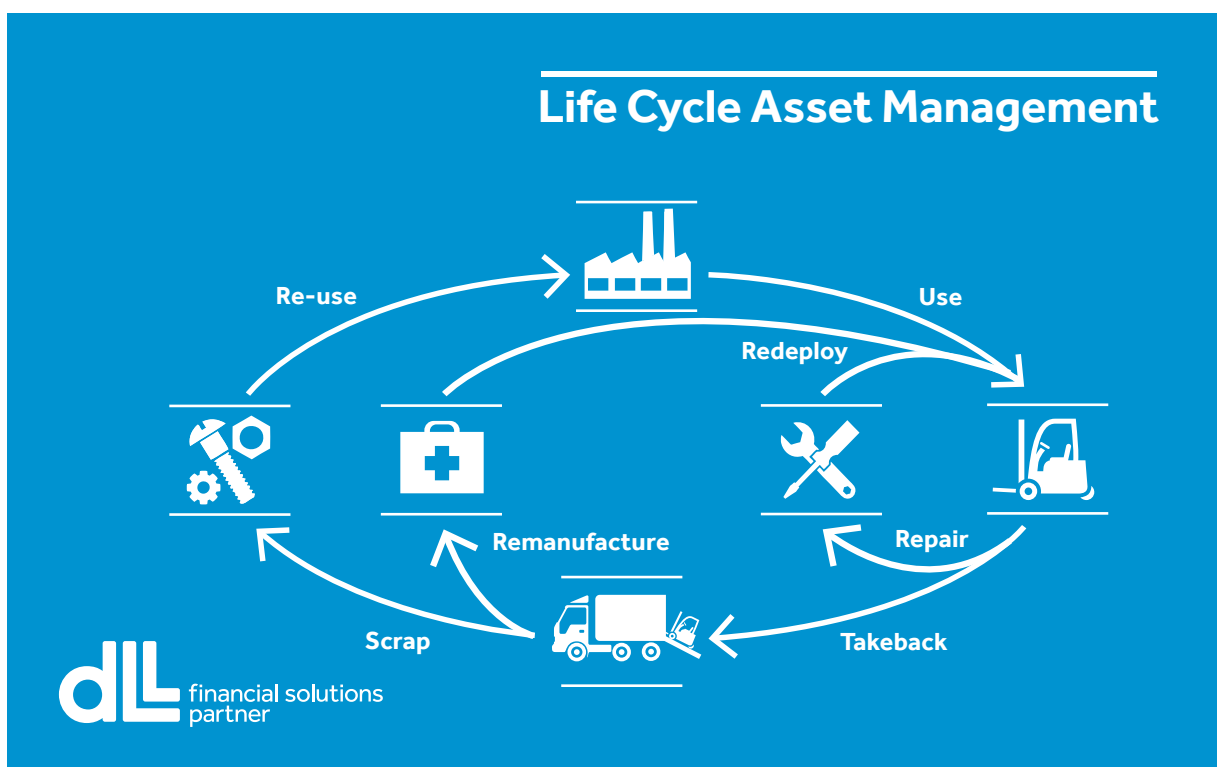
- Where organizations lack the capabilities and experience to export equipment to customers in line with relevant cross-border shipment legislation, it might be smarter selling equipment in its country of origin and leaving the exporting responsibilities to the buyer.
- It seems to be generally accepted in all countries and markets now that one shouldn't export equipment to countries and/or organizations on exclusion lists. However, exclusion lists differ per country and are dynamic by nature. So it is important to ensure you are complying with the most recent version of any exclusion list.
- In respect of new waste shipment, the Correspondents' Guidelines make refurbishment and remanufacturing at a centralized location more costly and time consuming for IT manufacturers, dealers and resellers in Europe.

Relevant legislation for the **United States** and **Europe**



Legislation in the US is mostly arranged at a state or local level, while federal laws are often industry-specific. In the EU, relevant laws for life cycle management tend to be more harmonized across the member states.

As shown in the previous chapters data protection, recycling and hazardous materials handling, and cross-border shipment are part of life cycle asset management (picture below). For the different life cycles, different legislation is in place in the European Union and the United States. Legislation with regards to data protection in the EU is currently changing and cross-border shipment legislation is newly implemented. Therefore, it is important to stay involved in these compliance related alerts now and in the future. Additionally, corporate awareness needs to be up-to-date for example by appointing a compliance officer, but also the execution should be in line with the legislation.



The tables below give examples of relevant legislation that manufacturers, dealers and resellers must take into account when managing the lifecycle of their assets in the United States and Europe.

Data protection

Region	Name	Description	Link
US	FTCA	The Federal Trade Commission Act concerns authorizing organizations to process and use (personal) data captured and stored on an asset.	https://www.ftc.gov/enforcement/statutes/federal-trade-commission-act
US	HIPAA	The Health Insurance Portability and Accountability Act is an industry-specific law that applies to organizations with access to medical information, and obliges them to treat this information discretely.	https://www.hhs.gov/hipaa/for-professionals/privacy/index.html?language=es
EU	GDPR	The General Data Protection Regulation comes into effect on 25 May 2018, harmonizing data privacy laws across EU member states. It will apply to any company processing personal data of EU subjects. Amongst other things, it obliges them to inform customers of a data breach.	http://ec.europa.eu/justice/data-protection/

Table 1: The specific legislation for data protection in the US and EU

Recycling and hazardous materials handling

Region	Name	Description	Link
EU	WEEE directive	The Waste Electronic and Electrical Equipment directive aims to decrease the environmental impact of electronic waste. Some countries implemented a WEEELABEX certificate that proves companies handling electronic waste are compliant with the directive.	http://ec.europa.eu/environment/waste/weee/index_en.htm
EU	RoHS directive	The Restriction of Hazardous Substances directive requires manufacturers to avoid specific chemicals in their production processes, and is particularly relevant to electronics.	http://ec.europa.eu/environment/waste/rohs_eee/index_en.htm
EU	ELV directive	The End of Life Vehicles directive applies to registered vehicles under 3500kg (except mopeds and scooters) and requires importers and disassemblers to ensure at least 95% of the vehicle is recycled or reused.	http://ec.europa.eu/environment/waste/elv/

Table 2: The legislation for recycling and hazardous materials handling in the EU, since the US has no federal legislation in place

Cross-border shipment

Region	Name	Description	Link
EU	Correspondents' Guidelines	The WEEE directive and Basel Convention have merged into the Correspondents' Guidelines. Under which, in principle, all pre-owned assets (with some exceptions) are considered waste. These assets can only be exported or imported when all involved countries (exporting, importing and transit) have approved the trans-border movement.	http://ec.europa.eu/environment/waste/shipments/guidance.htm

Table 3: The legislation for cross-border shipment in the EU

Checklist on managing the impact of compliance on life cycle management



Learn & map

- Investigate what compliance-related (i.e. data protection/recycling and hazardous materials handling/cross-border shipment/other) topics impact your life cycle asset management strategy.
- Determine which laws, regulations and market standards affect your organization, and if this varies per region.
- Be aware of potential reputational or financial damage associated with non-compliance. Market standards often "only" result in reputational damage, whereas laws can have a significant financial impact on your organization.



Develop & manage

- Assess if there are any third-party expert companies who could support your organization in complying with relevant laws, regulations or market standards.
- Decide if you want to outsource management to a third-party supplier or develop capabilities in-house (which could also be an opportunity to develop a new product or service for your customer base).



Monitor & adapt

- Perform regular audits and differentiate in your auditing strategy between those capabilities that are developed in-house and those sourced via third parties.
- Proactively benchmark your company against other organizations and industries to better understand what new topics, laws, regulations and market standards could potentially impact your organization in the future.
- Ensure somebody in your organization is responsible for monitoring changes to existing and new regulations, laws and market standards. Implement any necessary adjustments to your business practices.

Extract more value from your equipment and technology with DLL

Create second and third life revenue streams for your equipment and technology while supporting the circular economy. DLL actively supports manufacturers and their distribution partners with financial solutions for **reused, refurbished and remanufactured equipment.**

Learn more about the world's leading vendor finance partner:
www.dllgroup.com



DLL has offices in more than 30 countries throughout Europe, North America, South America, Australia and Asia. The company is part of the Rabobank Group. 5/18



Closing note

DLL is a global vendor finance company with more than EUR 30 billion in assets. Founded in 1969 and headquartered in Eindhoven in the Netherlands, we provide asset-based financial solutions to the Agriculture, Food, Healthcare, Clean Technology, Construction, Transportation, Industrial and Office Technology industries. We work closely with global equipment manufacturers and their distribution partners – from authorized distributors and independent dealers to resellers – to provide financial products & services that help them achieve sustainable, profitable growth. By combining customer focus with deep industry knowledge, we deliver sustainable solutions for the complete asset life cycle, including commercial finance, retail finance, and used equipment finance. We are a wholly-owned subsidiary of Rabobank, a Dutch bank headquartered in Utrecht.

DLL Life Cycle Asset Management

DLL recognizes the opportunity to obtain value during the full technical life cycle of assets (Life Cycle Asset Management). This is accomplished by providing tailored financial products & services such as:

- Operational lease
- Fleet management
- Stock finance
- Second Life finance
- End-of-life treatment

These include repair, maintenance, refurbishment and remanufacturing services by DLL's manufacturing partners. Enabling manufacturers, dealers, end-users and DLL themselves to extract more value out of an asset's qualities.

At DLL, it is our passion to find original, integrated solutions that help to resolve real-world challenges. We constantly think about how we can be a financial solutions partner every step along the way for the business we work with in order to help our customers to rethink how we use and get most out of our assets together.

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