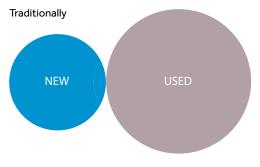




Introduction

The focus within many manufacturers today is on selling new assets¹. The current paradigm is that offering remanufactured or refurbished assets and services² negatively impact new asset sales. This phenomenon is more formally known as cannibalization. It refers to customers obtaining second life assets while they have had the required budgets to acquire new.

This whitepaper describes whether cannibalization is an issue for DLL's manufacturing partners and is visualized in figure 1. It represents the views of numerous manufacturers (OEM's) operating across the Construction, Transportation, Agriculture and Healthcare industries.



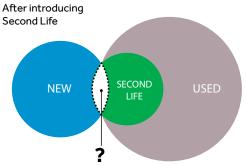


Figure 1: Visualizing the phenomenon of cannibalization

"Without selling used tractors, you don't sell new and vice versa."



Further, it elaborates on the strategic benefits for them to be involved in second life business and summarizes best practices on how manufacturers can minimize cannibalization risk.



- 1. Assets in this paper refer to equipment, systems, units or products produced by a manufacturer.
- 2. In the remainder of this whitepaper remanufactured or refurbished assets and services are referred to as second life.

Strategic reasons to engage in **second life business**



Financials

- Generate additional income from trade-ins
- Support new sales
- Increase revenues from parts and service



Competitiveness

- Increase resale values
- Improve industry competitiveness
- Protect brand image from third party brand dilution
- Overcome saturated export markets



Customer needs

- Demand for improved customer solutions
- Demand for second life assets

In order to better understand cannibalization, one must understand the economic rationale for why manufacturers are engaged in refurbishment and remanufacturing in the first place.

Financials

Generate additional income from trade-ins

Many used assets recovered via trade-ins are sold in an as-is condition to third party traders. Here manufacturers often consider used assets as a burden where little money is to be made. However margins on new assets are constantly under pressure and have continued to shrink over time. The majority of the interviewed manufacturers have acknowledged that they typically realize higher margins on second life business relative to new sales. Where third party traders or dealers originally walked away with the profits on used asset sales, manufacturers increasingly see the potential to centralize and formalize second life activities to retain profits for themselves.

Support new sales

When customers lack sufficient funds to acquire new assets, the sales force has two options; one can either let the customer potentially turn to a competitor for a solution or the better alternative is provide the customer with a second life asset. A successful track record with the second life solution may result in the customer being more eager to purchase a new model, staying loyal to the brand when larger budgets become available and consequently stimulating new sales for the manufacturer in the long term.

"Providing a positive brand experience with a refurbished milking robot may lead to the acquisition of additional Lely products (feeding robot, forage harvesting equipment etc)."



Rene Poodt Lely Taurus N.V.

"Customers buying refurbished
Magnetic Resonance-systems stay loyal
to the Philips brand and buy a new system
in a later stage when they have sufficient
budgets."



Peter van der Linden Philips Healthcare

Increase revenues from parts and service

Manufacturers and dealers want to maximize serviceable assets in the field. Whilst used assets sold typically lack a repair and maintenance contract, refurbished and remanufactured assets are frequently redeployed with repair and maintenance contracts. The majority of involved manufacturers have acknowledged that the spare parts and service business contributes significantly to their P&L. Moreover, being engaged in second life business provides manufacturers with valuable insights into the wear and tear and lifecycle of the components in their assets due to enhanced access to parts and service information over an extended period of time.

Competitiveness

Increase resale values

The quality of used assets in the market varies considerably causing a gap between the customer's expectations and their level of satisfaction. Manufacturers see refurbishment and remanufacturing activities as a tool to provide a higher quality standard that results in increased comfort for the customer and higher resale values of second life assets.

Improve industry competitiveness

A refurbished or remanufactured solution provides manufacturers with a key differentiator from competition. Being a front runner in the industry enables manufacturers to find opportunities with customer groups that have been relatively untouched. Furthermore second life engagement can be a check-the-box item when responding to asset tenders from end-customers. Simply having it available as an option creates additional selling opportunities and may bring manufacturers deals that otherwise would have gone to the competition.

Protect brand image from third party brand dilution

Third parties offering poorly "refurbished" assets can result in serious brand perception problems. Replacement of original manufacturer parts with non conforming third party components or product performance and service and quality levels not matching customer's expectations all have an impact. By centralizing refurbishment and remanufacturing activities, manufacturers can better control brand perception in the second life market.

Overcome saturated export markets

The main export markets for manufacturers are generally developing countries where the market is unsaturated and there is a high demand for high quality used assets. However, this solution is finite as these countries continue to develop and over time will increasingly demand new assets. This forces manufacturers to search for solutions to redeploy used assets in local home markets using their refurbishment and remanufacturing capabilities.

Furthermore local legislation - e.g. subsidies, import taxes and trade barriers - sometimes restricts the manufacturers' ability to redeploy used and second life assets in foreign markets.

"Eastern European subsidies (on new equipment) make it increasingly difficult for us to sell our used forage equipment in developing markets."



Norbert van Hemert Lely Netherlands N.V.

Customer needs

Demand for improved customer solutions

Not every customer is in need of a new asset. It depends on many factors, including whether the product is a core asset, that could cause an operational risk when faced with downtime. The utilization rate is a factor as well. Sometimes the product primarily serves as a back-up solution utilized only in times of capacity constraints. In these cases more competitive solutions can be provided by offering a mix of new and second life assets. Manufacturers expand their new and second life offering so the right solution is presented to the customer.

"Having a refurbished trailer offering helps us to add value in a market with limited product differentiation possibilities."



Christoph Dehne

Schmitz Cargobull Trailer Store

Demand for second life assets

Customers become increasingly critical towards their purchases. Factors like macro-economic conditions, total cost of ownership, budgets, downtime, fleet management and usage intensity causes customers to reconsider their new purchases opening up opportunities and demand for second life assets.

Minimizing cannibalization risk

An increasing number of manufacturers see the business benefits of being actively engaged in second life assets. None of the manufacturers that cooperated in this research reported any explicit negative impact on their new asset sales.

However, for many manufacturers, second life business volume currently is still a small fraction of total sales. As a result, cannibalization is not yet perceived as a large risk for manufacturers. That makes second life market positioning increasingly important in the future. Even though 100% exclusion of the risk of

cannibalization is nearly impossible, manufacturers can proactively take measures to minimize the potential impact. Several successful actions have enabled manufacturers to manage cannibalization risk. These are visualized in the checklist on page 7 and are worth taking into account when positioning a (new) second life solution in the market.

"When demonstrating at trade shows, we bring refurbished logging machines and position them next to our new product."



Pekka Ruuskanen Ponsse, Forestry

"I look at new and second life golf markets as distinct markets that have different requirements."



Fred Palmer Club Car, LLC

Sales channel

The sales team(s) of both second life and new asset sales frequently are two separate departments. Typically these teams are under different management, with their own targets and little knowledge about each other's prospects and customers. The new sales department is pushing new sales whilst they might lose customers with budget constraints to competitors in doing so. Vice versa the second life sales department offers products to customers who might as well have the budget to acquire new products. Therefore it is recommended to offer both

second life and new products via one sales channel or at a minimum ensure that the total sales force is transparent and well-informed about each other's customer base to ensure the right solution is offered to the right customer.

"By offering our MR systems via one sales channel we can apply the best consultative selling."



Sjef Gulpers Philips Healthcare

Technology

In industries where innovation levels and technical advancement are generally low, manufacturers frequently encounter situations where their refurbished or remanufactured asset model is still available new. Although this proves to be convenient for customers since spare parts are readily available, it can also become a risk. When a product model is available both new as well as refurbished, technology becomes a minor differentiator whilst customers do observe a clear price difference. In these markets it is advised to introduce remanufactured products in other markets.

"Remanufacturing the engine of a tier 3 crane is a favorable alternative to buying a new tier 4 machine. while creating opportunities for tier 3 machines that can no longer be sold due to regulatory changes."



John van Ruitenbeek Sennebogen LLC

"For us it is critical to keep innovating our endoscopy equipment further to distinguish several models and generations."



Industry lifecycle

The industry lifecycle is generally characterized by four phases; introduction, growth, maturity and decline as visualized in figure 2. In industries where the market is still a growth market, a second life product offering might be a perfect solution to satisfy customer demand. However, it is advised to closely monitor market trends as cannibalization can become a larger issue when the industry reaches maturity or decline, due to smaller demand for the asset in general.

"Globally, there are still too few MR sytems available to do all desired researches. The market is not saturated yet."



Joop van den Heuvel Philips Healthcare

Target group

Exploring unknown territory frequently implies stepping out of one's comfort zone; defining the undefined. It is advised to thoroughly explore how the second life target group is defined and how and to what extent it differs from customers acquiring new assets. Besides inquiring and brainstorming within the organization, it is recommended to test and verify second life buying criteria in the market. Ensuring minimal overlap in defined target groups of new and second life minimizes cannibalization. Read the DLL whitepaper on second life buying behaviour to learn more about the second life buying process and fresh insights for manufacturers on how to better position second life products.

"You have "weekend farmers" looking for good used tractors whereas large contractors need confidence in a tractor that is going to work at a fixed cost."



Ray Spinks AgriArgo UK Limited

Product differentiation

When engaging in remanufacturing or refurbishment activities it is important to ensure that the second life product is clearly differentiated from the new products options, specifications and level of technology in order to minimize cannibalizion risk. It is therefore advised to standardize refurbished products as much as possible and limit the options and made to order functionalities.

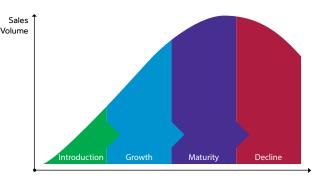


Figure 2; Stages industry lifecycle

"Capacity is what distinguishes our new tedders from older generations. Customers want to expand capacity."



Norbert van Hemert Lely Netherlands N.V.

Volumes

The manufacturers that have cooperated in this study recognize that second life sales volumes are relatively low and currently do not significantly impact new asset sales. This creates little concern for cannibalization today but requires manufacturers to be alert and monitor its effects with increasing volumes. In order to realize higher second life volumes there is a direct dependency on the quantity and quality of used products coming back at the facility. It is advised that manufacturers first look at their reverse logistics flow and make sure they have the right infrastructure to facilitate increased second life activity.

Training

Selling refurbished assets can be unfamiliar territory for many new equipment sales representatives. Manufacturers have to make sure that the sales force is comfortable selling the refurbished solution by properly educating them in offering multiple product lines to customers and in positioning second life offerings next to new. Manufacturers have to safeguard that the sales force does not go for the easy way out by selling the cheaper second life product to customers who might as well be able to acquire new.

Distribution channels

Alignment with the dealer network is a must when refurbishment and remanufacturing activities are localized at a dealer level. Potential conflicts may arise if dealers begin getting significant volumes back and in turn refurbish and redeploy the units in the market for their own P&L whilst the manufacturer pushes and aims for the right solution for the right customer.

Checklist to complement new equipment sales

Sales channel

Make sure the new and second life sales force are strongly connected and together ensure the right proposition is offered

Technology

Ensure technology differentiation between the second life and new asset.

Industry lifecycle

Carefully monitor the stages within the industry lifecycle as these change over time.

Target group

Know your customer; define the second life buyer segment and know their decision making criteria.

Product differentiation

Standardize second life products as much as possible and limit the options and made to order functionalities.

Volumes

Carefully monitor second life volumes as they increase over time relative to total sales.

Training

Train and offer the right incentives to the sales force to succesfully position second life next to new.

Distribution channel

Align with dealers on your and their second life strategies.









Closing note

The circular economy

The traditional linear economy model is based on a take, make, dispose system where raw materials are extracted from the earth, assets are made, sold, and eventually discarded by the user to potentially end up in landfill or the incinerator. The circular economy model is aimed at keeping raw materials in closed loops. This model relies on usage rather than ownership of assets. It enables manufacturers to maintain more control on their assets throughout the technical cycle and offers the potential for product services to become an increasingly important profit centre for manufacturers.

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 solutions 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. This enables manufacturers, dealers, end-users and DLL to extract more value from the quality of the assets. In line with this strategy, DLL is developing a series of whitepapers:

- "Realising opportunities of a circular business model"
- "Complement new equipment sales with pre-owned assets"
- "Sustainable returns by recovering used assets"
- "Improving pre-owned solutions by understanding the buyer"

"Pre-owned assets are increasingly viewed by customers as a cost effective solution."



Frits Engelaer

DLL International B.V.

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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