

THE END OF OWNERSHIP

The Lease Society

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The lease society: the end of ownership

Aligning the innate conflict of interest between consumer and producer

Offering an economic rationale for resource efficiency

Enhancing service and cost transparency

In short, the leasing society resets the economy to benefit everyone

CONVERGING INTERESTS

An ever-increasing amount of jobs and welfare for an ever-increasing amount of people. In seeking prosperity through a linear, dump and carbon intensive economy, we will inevitably hit a wall. Unless we revise our way of doing business. The leasing society, a model that allows customers to buy services and producers to retain ownership, is an example of a disruptive new business model.

The documentary *The Light Bulb Conspiracy* illuminates the fact that the current detrimental logic of markets is deliberately sustained by producers. The film starts with a report of the 100th birthday of a lamp that has continuously burned since the first decade of the 20th century. Nearly 20 years after the so called Centennial Light Bulb was installed, lamp bulb manufacturers realized how their very existence would be thwarted if they went on making light bulbs that burned on forever. Together they adopted standards to light bulb manufacturing, including that light bulbs could burn 1000 to 1500 hours at most, thus protecting their business models.

Today we are accustomed to frequently replacing our light bulbs, casually discarding the burned out bulbs. Likewise, ladder free pantyhose or an unbreakable ceramic shaver could be developed, were it not for being the end of a company's business.

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This form of '**planned obsolescence**', as the film puts it, became a foundation of economics. The relentless production associated with this model arguably fosters labour and economic growth but at the same time, it puts nature beyond its limits and bolsters a designed-for-dump society. A 2010 Business Week article highlights how Walmart embraces this logic as their modus operandi. Walmart here, 'is criticized by suppliers that it forces down quality standards.' For instance, according to the CEO of a lawn mowers manufacturer, 'continuing to supply Walmart meant gradual but irresistible corrosion of the very qualities for which (the factory) was known' (Dukes, Geylani & Liu, 2010).

However, we are starting to realise that the road towards a fully deregulated waste economy will not lead to bliss, as little as the rejection of the market as an allocation mechanism will.

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The leasing society aligns the interest of the consumer and the producer, and does so in a way that is also beneficial to the environment.

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Yet, history has shown that a planned economic model knows a far grimmer side. The lesson of politics today therefore, is to let capitalism do their work in a way that serves mankind.

Moreover, the woes of capitalism are revealing. Economic stability today relies on endless economic growth and endless consumption, whereas ecologic stability is connected with the moderation of these matters. This quandary is unwanted and unnecessary. Unwanted, not only out of environmental and development considerations, but also because today an increase of GDP growth is no longer associated with an increase in happiness (Jackson, 2010). Unnecessary, because there are vibrant ideas to create and capture value and enforce growth in a non-environmentally harmful way. This booklet will elaborate on one of the possible initiatives seeking to align consumer and producer's interests: the lease society.

AFFORDABLE QUALITY IN A LEASING SOCIETY

In a lease society, the producer accounts for rendering services instead of supplying goods. The underlying assumption is that consumers want the service offered by a product and not the physical material of the product itself. Consumers buy a service through monthly fees instead of buying a product outright. A performance provider, the producer will have lower expenses as the supplied light bulb lasts longer. Replacement and reparation will likewise be arranged by the producer.

The incentive to supply inferior products, hence, is gone. This solves the light bulb conspiracy. The leasing society aligns the interest of the consumer and the producer, and does so in a way that is also beneficial to the environment.

Along with ownership, the producer retains the responsibility of a product throughout its entire lifespan, including its design, use and removal. Embracing this model will bring us closer to a circular economy. Companies will have to consider the entire lifecycle of the product. It will be in the economic interest of a company to make their products more durable, easier to detach and more recyclable. Leasing can pull sustainable products out of the niche quagmire. In the leasing society, if rolled out correctly, sustainable and designed to last goods will be affordable for everybody. As sustainability consultant Eric Lowitt argues in his forthcoming book:

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It's always seemed like a car manufacturer could make a car able to last a century. Replace a battery here, a component there, but otherwise the car could be shared across generations. Of course 'planned multigenerational sharing' of cars would cripple car companies' business models. Above all else, how many people are willing to spend the equivalent of a small house to buy a car

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Now the most deprived people have a bare necessity to choose the cheapest option, unwillingly sustaining the linear dump society. If people are enabled to lease products, they can enjoy any good without an unaffordable upfront investment, prompting producers to elongate the lifespan of their products.

INVERTING THE ECONOMIC RATIONALE

In an economic realm where extending a product's lifespan is paramount to profit, companies have no incentive to launch - say - a fancy new tablet computer every few months. For example, a tablet computer manufacturer can outpace its competitors if it supplies a single durable device that can be employed by receiving monthly fees during its whole leasing period.

Not only the producer benefits, there is also something in it for the consumer. To stick with the example of the tablet for a moment: instead of having to worry about an unsalable

electronic device that hasn't even lived to be one year old because the highly improved 2.0 version is already launched, customers can embrace the comfort of leasing a hyper-durable lifespan-lasting tablet (or laptop, or Smartphone) on which the versions 2.0, 3.0 and

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As a market exists for people that want a grey unbreakable television, there is a market for televisions that can be taken, replaced and revamped every two years or so.

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so forth are rendered as a service. Innovation through software is stimulated.

Yet, it would be beneficial if at the same time the parts of the device that are most sensitive to tangible innovation – that is, for instance: the screen and the battery – can be detached and upgraded easily.

Perhaps, for monopolists, the enticement of this model is low because their current business model already yields outstanding result. But as we will underpin, the model is very apt for companies that either want to enter a market or want to diversify from their competitors. Chapter 3 of this booklet offers an example for both cases.

THE LONG WAY HOME

All of this is not to present the leasing society model as a panacea or silver bullet, but the encompassing implications of the model make it worthwhile to be explored further.

Sometimes, it is argued that the very model of leasing impedes innovation, because once a customer gets on board he or she will pay their fees anyway - regardless of the provision of updates for their product. This is a fair point, but still companies can develop lease bargains for the more demanding customers, including for those eager to enjoy the newest innovation. As a market exists for people that want a grey unbreakable television that lasts for years that renders the service 'TV programs', there will be a market for people who want a television that can be taken, replaced and revamped every two years or so. The leasing market is still apt to cover the full range of customer's desires.

Leaseurope, the trade association representing the European leasing and automotive rental industries, even argues: 'in our experience, we precisely find that leasing allows customers to access the latest technology. If they were required to buy goods, they often wouldn't be able to afford the large initial capital outlay'¹. This

¹ Personal correspondence

gives us further evidence that leasing is not impairing innovation as such, and might as well bolster it. For other products, like car tyres or shavers, the update question won't be applicable because the service desired from the product is (practically) unalterable. Here, a simple reparation that restores the original characteristics of the product will suffice and products will not be handed in before either lessee does no longer desire the product's service, or the product itself has reached a stage of depletion.

Collaborative Consumption access is better than ownership

BOX 1

On average, cars sit idle for 23 hours a day. Furthermore, cars manufactured for long distances or even off-road ventures are used for five minute rides to the local supermarket – as efficient as slicing your bread with a samurai sword. Initiatives like ZipCar – a car sharing company – therefore, tap the market of rented cars, connecting desires to vehicles. Manufacturers have already developed small light-weight vehicles for mobility in cities and for short distances.

Admittedly, these cheap and ultra-practical cars yet face one burden: consumer acceptance. The public may deem the cars not fancy enough, perhaps because they are associated with cars for the disabled.

Campaigns and political measures that benefit and/or encourage the use of purpose-aware cars may turn the tide. In the meantime, other examples of what is known as 'collaborative consumption' are afoot in innumerable branches.

Of course, some practices like the library and the laundry have been around for ages, but today it is also possible to rent fancy clothes via Renttherunway.com; to rent tools (why do you, your neighbour and your neighbour's neighbour need to own an expensive drill when all you want is a hole in the wall from time to time?); and to barter books and CD's and DVD's (or, alternatively: manuscripts, music and films).

All of this is bolstered by ICT developments, easing and enabling the right allocation of products. As a New York Times article put it: 'sharing is to ownership what the iPod is to the eight-track, what the solar panel is to the coal mine.'²

² For more info, watch the Rachel Botsman TED lecture on collaborative consumption or consult the book "Collaborative Consumption" by Eric Lowitt – forthcoming; see works cited section.

WORKS ON THE LEASING SOCIETY

Many readers might find similarities between the Lease Society and earlier works by prominent thinkers. Indeed, the Lease Society concept has found inspiration in several well-known concepts. This section locates the leasing society in the broader debate on economy and business models.

TO HAVE AND HAVE NOT

Literature on ownership is almost as old as literature itself. More than two thousand years ago Aristotle mused that: 'True wealth is the use of things, not their possession'. In the American law, the right of self-defence includes the right to protect property 'as long as the measures are proportionate'. The underlying assumption is that the right to use physical things to the exclusion of others and the right to inviolability of the body, are equally unalienable. This is in accordance with the old adage of owning your own labour and

the fruits thereof. John Locke considered this as ‘the natural right of ownership’.

Conversely, Oscar Wilde phrased it - eloquently as always – ‘the recognition of private property has harmed Individualism [...] by confusing a man with what he owns [...]. So that man thought that the important thing was to have, and did not know that the important thing is to be’. The current planned obsolescence economy is still subject to these logics.

BACK TO THE FUTURE

Not only in literature, but also in real life dealings, a service oriented economy is not new. Focus on performance has held sway in the past. Not so long ago, one would pay for music per song in a juke-box; one visited a shoemaker to mend his or her footwear and hired a handyman to patch up the couch.

But as welfare grew, along came reckless consumption and relentless production. We are now living in a society that people buy several pairs of shoes a year; the couch is dumped even before it is worn and shelves are crammed with CDs never played and clothes never worn. We are in an era of stuff. A perpetual carrousel of goods has to be kept in circulation to keep the economy running.

At times of crises, elites seek ways to incite people to shop more. ‘Stimulating consumption’ has become a synonym with economic growth and mistakenly with grander well-

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being. However, this booklet will show that the tide is turning for the better through developments that enable and encourage a dematerialized economy.

A NEW LEASE ON LIFE

But let us first elaborate on the leasing literature a little deeper. In 1993, Paul Hawken advocated that ‘what we want from a product is not its ownership per se but the service the product provides’. He imagines a society:

‘(w)hen you bought a refrigerator, a television, or a car, you would buy the license to use and operate it. The license would be transferable so that you could give or sell it to a friend if you wanted to. But the product could not be disposed or thrown away. It would have to be returned by the (...) manufacturer or retailer. Retailers of consumer products would become “de-shopping” centres where customers would drop off the products no longer needed and obtain newer ones.’ (pp. 78-79).

In a similar vein, Heiskanen and Jalas present the concept of the producer as a ‘fleet manager’. They advocate that ‘product life can be extended in a financially profitable way if manufacturers turn to selling the use of the product rather than the product itself’ (2000). Therefore, the maker is spurred to design more durable products and taking care of the maintenance so that the product can be held in use as long as possible. To be sure, the authors claim that ‘longer utilization of goods refers to the product life extension, *but also services related to remanufacturing and remarketing of goods*’.

A further argument for companies to shift to models that sell performance instead of ownership is delivered by Stahel (2012): ‘in times of rising resource prices as forecast, corporations retaining ownership of their goods and embedded resources over the full life of their products gain a high future resource security and resource price guarantee and a competitive cost advantage against through-put-based competitors’.

AT YOUR SERVICE

Leasing business models can be located within the broader discussion on product service systems (PSS). Mathias Brandstotter et. al from an Austrian think-tank (2003) define this term as follows: 'a PSS consists of tangible products and intangible services, designed and combined so that they are jointly capable of fulfilling specific customer's needs. Additionally, PSS tries to reach the goals of sustainable development'. Hence, it can be seen as a broad business approach that can be tacked to virtually every economic action that includes a service. Libraries, laundries, carpooling and bike-sharing schemes are the traditional examples of a PSS.

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The Dutch sustainability professor Arnold Tukker has done some vigorous work on the concept of PSS. He presents eight types, lodged in three categories (Tukker, 2004, see also Baines et. al, 2007). The clusters include:

1. Product oriented services

The customer purchases a product (for instance a photocopier) and simultaneously buys a series of services that guarantee functionality (for instance maintenance, technology updates and reparations). Ownership appertains to the consumer, who pays a one-off fixed price for his or her product. Xerox, a photocopy company, was a pioneer in this business model.

2. Use-oriented services

This category encapsulates leasing as well as models of renting, pooling and sharing. Ownership here, retains to the producer and

the customer pays a fee for the use of a product. Leasing upholds the adage of possession over property whereas sharing and pooling, sometimes equally appropriate to obtaining resource efficiency goals, stresses the importance of access over ownership.

3. Result oriented services

The customer buys a specified service from the producer, with no pre-determined product involved. For instance, a company offers a 'maximum harvest loss', instead of selling pesticides or it sells 'pleasant light' instead of a light bulb. In both cases the supplier is free to choose any means that lead to the bargained result - for instance: enhancing fertility rates, offering soil and light analysis or playing with curtains and lamp shades respectively.

The leasing society model can, in this typology, thus be warehoused in the second category, though some appliers of leasing show overlap with product or result oriented services in their business approach. For instance, InterfaceFlor started off as a pioneer in leasing, i.e. use-oriented services, but while facing some problems with financing and contracts, they have now shifted their business model towards product oriented services. Some other disruptive companies see more benefit in selling a service without pre-determined product, which belongs to the third cluster. None of this is lamentable, because all three models guide companies to a more resource efficient way of business-doing.

ADHERENTS OF THE LEASING SOCIETY

Michael Braungart and William McDonough herald an era of eco-leasing, in their universally well-known and critically acclaimed Cradle to Cradle book. They draw up their experiences with a 'rent-a-solvent' concept, the service of renting chemical used to remove grease from machine parts. 'The idea behind rent-a-solvent', they elaborate, 'was to provide a degreasing service using high-quality solvents available to customers without selling the solvent itself; the provider would recapture the emissions and separate the sol-

vent from the grease so that it would be available for continuous reuse. Under these circumstances, the company had incentive to use high-quality solvents (how else to retain customers?) and to reuse it, with the important side effect of keeping toxic materials out of waste’.

In 2002, UNEP published a booklet ‘Product-service systems (PSS) and sustainability’. They defined a PSS as ‘the result of an innovation strategy, shifting the business focus from designing and selling physical products only to selling a system of products and services which are jointly capable of fulfilling specific client demands’. The booklet suggested that the potential of PSS should be verified on a case to case basis, and they give this a start by offering a number of service purveyances, varying from carpooling to an organic vegetables subscription system.

In 2007, leasing constructions formed 2% of the solar panel sales in California, in 2011 this percentage amounted 33%. The company owns, insures and maintains the solar panels and the homeowner pays a monthly rate over a 20-year period (Korosec, 2012). In Europe, this ‘double sustainable’ idea of solar panel leasing, albeit not as rapidly ramping as in the American market, may also be on the verge of a breakthrough.

A 2012 Ellen MacArthur Foundation paper suggested: ‘High-end washing machines would be accessible for most households if they were leased instead of sold, customers would save approximately one third of the cost per wash cycle, and the manufacturer would earn roughly a third more in profits. Over a 20-year period, replacing the purchase of five 2,000-cycle machines with leases to one 10,000-cycle machine would also yield almost 180 kg of steel savings and more than 2.5 tonnes of CO₂ savings.’ Leasing washing machines is already possible, for instance for students in shared apartments³, but developing a super durable washing machine lease model for households would be a really interesting leap from a resource efficiency perspective.

³ <http://www.meolease.nl/>

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Up till this point however, the vast majority of companies have abstained from truly embracing sustainable consumption, as seen by their corporate behaviours and the limited range of sustainable produced products they offer. Part of the solution may rest in moving beyond a self-limiting mindset that the only way to interact with ‘sustainability conscious consumers’ is through offering products that fall into the eco-niche category. Leasing can make designed to last products profitable for a wide range of producers and payable for a wide range of consumers.

How then, will the leasing costs be composed? In general, by paying off costs for the product itself, service costs, eventual experience costs and interest. Companies thus, yield profit from their product only after the production costs are repaid⁴. Therefore, admittedly, it would be hard for a leasing society to emerge without having sustainability minded banks on board.

THE LEASING SOCIETY: A MISNOMER?

Some have suggested leasing is not the correct term to use for the new paradigm, because its economic association is doing injustice to the broader alliance between economy and ecology that leasing engenders (Blaauboer, 2012). Furthermore, sometimes product loans lasting longer than a given period of time are legally deemed renting instead of leasing. We would therefore be open for suggestions for other terms to signify the phenomenon.

⁴ Sometimes, it is argued that on top of services, experiences should be considered as an important intangible value creator. Pine and Gilmore (1999) denote how experiences should be taken serious as a new source of value creation and differ from services like services differ from goods. Hence, a PSS or lease fee can be deconstructed as being

To conclude, for those well-up in finance, leasing in a lease-society resembles the financial concept of operating leasing, that is: a construction where the lessor retains the leased asset on its balance sheets and where the lessee receives a single invoice for all the costs related to the use of the asset - including services (Leaseurope, 2012). As opposed to, financial leasing transfers all risks to the lessee, and the product is shown on the lessee's balance sheet (Ibid.).

Seas too far to reach? Red Ocean and Blue Ocean strategies

According to a book by W. Chan Kim and Renée Mauborgne there are two ways for companies to create new products and services: competing over current demand and creating new demand. These two radically different notions are described by Kim and Mauborgne as 'Red Oceans' and 'Blue Oceans'. In the red ocean modus operandi, the company looks at the product offering of its competitors and aims to differ from them by offering a cheaper price or becoming niche. The characteristics of Red oceans include fast commoditization and 'bloody competition'.

Most, if not all, companies aiming to enter sustainable markets deploy red ocean strategies. Blue oceans strategies do not look at competition but rather at alternative approaches in order to reach new consumer groups. In a famous example a brand of imported wine was aimed at non-wine drinkers. It aimed to change the behavior of non-wine drinkers. In blue oceans, demand is created rather than fought over. Competition is irrelevant because the rules of the game are being changed.

This is a fundamental shift in perspective. It's a shift that makes sense both from the business and the natural resources perspective. For example: instead of asking how to make cars more efficient we're asking what kinds of services would free people from the daily need for cars; instead of looking at the technical aspects of insulation and heating we're asking what kind of services would free consumers from the need for extra space for infrequent guests and storage of temporarily unused stuff⁵.

A CHANCE TO DIVERSITY

Thinking in terms of performance to counter ecological footprint escalation could be the hallmark of the 21st century.

New ways of growth will have to be supported. Partly, this is a task for policy makers. However, the good news is technical, industrial and business developments that lead to less material intensive production and consumption are already afoot in the private sector. They include: the tendency towards dematerialized built-in services, the rise of the 3D printer and the urge of companies to move up in the value chain in order to survive.

SEND IN THE CLOUDS

On a technical level, there is a notable trend towards dematerialization. The demise of analog databases in offices and libraries as well as the decline of answering machines, electric alarm clocks, stop-watches and pocket calculators – now standard services on most mobile phones – shows how multiple services can be built into smaller products; the rise of the music service Spotify shows that services are moving to ‘the cloud’ (Weber et. al, 2009). Moreover, social media enables consumers to stand up against the foreseen end of life of products via internet. In the Netherlands, a ‘repair cafe’ has been opened to fix the often minor defects of home appliances that otherwise would have been discarded (see box).

In industry, the emergence of the 3D printer, heralded by The Economist as the ‘third industrial revolution’, forms an example of how ‘the lines between services and manufacturing are blurring’. Made to measure manufacturing that adheres closely to the customers’ desires becomes economically affordable. Like the aforementioned digital revolution has freed offices from card indexes and a myriad of small electronic devices, the factory of the future could be moved to the office and design can be done on personal computers. This leads to a decentralization of production.

As a consequence, less people will be involved in manufacturing, but as The Economist argues, this keeps down labour and production costs, which entices producers to move parts of the supply chain of a product back to rich countries.

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SUSTAIN COMPETITIVENESS

As Baines et. al (2007) argue, the popular advice to manufacturers is that they should move up in the value chain and focus on service and knowledge to sustain competitiveness. Tukker & Tischner (2006) offer the example of Douwe Egberts (DE), originally a mere coffee supplier. For DE, this was a dependent position since clients who brewed coffee on a traditional hot plate-based coffee machine could switch brand overnight. When this realization descended, DE decided to sell a full-fledged coffee service. The company developed a model that provided for the coffee machine, the coffee proper and the guarantee of a freshly brewed cup of coffee of high quality. They outpaced coffee machine manufacturers that took no effort to improve their business model and concomitantly extended their share as coffee suppliers. Moving from a lower gear in the value chain to a generic service supplier in a certain branch thus strengthens the strategic position of a company considerably.

Conversely, Hewlett Packard, Cisco System and – lately – Microsoft have attempted to challenge Apple's hegemony in the iPad market, facing considerable problems in designing a device that can compete with the system stability and delights of the iPad against a comparable price (see Financial Times, June 23, 2012). Thinking in

terms of business models instead of copying the Apple case might have engendered more success. One can imagine that whereas Apple's gadget scores high on fanciness, user friendliness and system stability, but low on sustainability, durability, services and beneficial upfront costs, a competitor can focus exactly on those consumers that see the latter characteristics as decisive in choosing a product. Launching a long-lasting piece of hardware that sells or leases a 'continuity of an up-to-date iPad service' instead of the device itself, might have been a blue ocean strategy for Apple's competitors to diversify in the tablet computer market.

Make my day: The rise of the 'Repair Café' in the Netherlands

"We throw away vast amounts of stuff in Europe. Even things with almost nothing wrong, and which could get a new lease on life after a simple repair;" claims the Repair Café's website, a Dutch grassroots initiative for patching up worn or broken goods.

"The trouble is", the text continues, "lots of people have forgotten that they can repair things themselves or they no longer know how. Knowing how to make repairs is a skill quickly lost. Society doesn't always show much appreciation for the people who still have this practical knowledge, and against their will they are often left standing on the sidelines. Their experience is never used, or hardly ever."

The Repair café re-esteems the value of reparation knowledge – and that of partly broken goods. Having gained attention from a myriad of media including New York Times, the café wants to put focus on the possibility of getting things repaired. Normally, it is cheaper and, as we have learned from the section on The Light Bulb Conspiracy, more beneficial for the producer to let the customers come back into the shop to replace their worn goods. Reportedly, printers are manufactured with a built-in chip that prompts the device to malfunction after 6000 copies or so, so that replacement is the only option.

Only the few lucky and astute enough to know about how to de-block the chip and/or repair the printer will escape this pre-configured dump & consume pattern. In the age of the dump society the Repair Café is an excellent example of a rising and vigorous counter movement to in a bottom-up fashion, reclaiming the position of re-cycle in the re-use, re-cycle and re-vamp mantra.

A SHEER GEOPOLITICAL NECESSITY

There are two bothersome things with current resource prices: they are too expensive and too cheap...

On the one hand, there is an incentive for companies to use virgin resources every time they manufacture a product. External (environment) costs are not reflected in the price of commodities, so that in the end the local environment and local residents pay for our thirst for resources. On the other hand, as a recent report of the Ellen MacArthur Foundation shows, the costs of commodities have been sharply increasing since 2000. Partly, this price increase is the result of rampant protectionism and resource nationalism of powers that possess coveted raw materials. Europe should prevent it has no dog in this fight.

Mine, mine, mine

Recently, The Economist reported on growing resource nationalism in Africa, where governments claim more and more power and profit over their minerals. China, the primary investor in wind energy in 2001, has also chosen a position. The country possesses 95% of the rare metals produced in the world that are required to manufacture wind turbines, electric cars and mobile phones etc. This advantage is cleverly exploited with export-limiting measures on raw materials.

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Protectionism and resource nationalism become rampant. Europe should prevent it has no dog in the fight.

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In March of this year Europe made a case in the World Trade Organization along with Japan and the USA against China's resource domination. Nonetheless, even if China is admonished, it will not address the underlying problems. A resource-poor and import-dependent continent, Europe is and will be in a weaker position in land grabbing games. Europe has to find another way to diversify. Our continent is strong in ideas and innovation, and still is a leader in renewable energy. Europe has to employ its own strengths.

In concrete terms this means moving to a circular economy to reduce import dependency. A considerable amount of the materials we need to develop a (self) sustainable economy is already around in our (old) TV's, phones as well as cars; and metals have an eminent recyclability. Today, only one in three products containing metal, contains more than 25% recycled materials (Unep, 2011). However, as a SITA report published in 2012 suggests, this does not necessarily mean that metals are being recycled efficiently.

A stimulation to derive valuable materials in a correct way is lacking. Once a product is ready to be discarded, it is not brought back to the manufacturer, but ends in a drawer, attic or landfill. Even if a producer got his product back the knowledge to recycle valuable materials is often lacking, and reuse in the second hand market is more profitable anyway⁶.

⁶ Admittedly, (and righteously) it is argued that reusing is better than recycling, but in practice it turns out that a reused car or mobile phone is likely to end up on a landfill, poisoning the soil and prompting poor local people to derive raw materials in unhealthy and damaging ways to earn a negligible amount of money.

On top of that, after years of intensive mining, easy obtainable raw materials are gone. As a result more and more water, energy, landscape disruption, hazardous labour and greenhouse gas emissions is needed to mine metals of less and less quality. Mining a tonne of copper currently demands 300 tonnes of waste, further evidence that both the environmental and financial costs of mining shall rise in the following years.

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A circular economy would be more environment-friendly, more humane and would help us to retain valuable materials that would otherwise be exported or dumped. The circular economy helps us to meet sustainability goals for a climate neutral European Union in 2050. Without a sound resource efficiency strategy, this ambition will not work out as planned.

For example, a single wind turbine requires 300 kg of neodymium, a rare metal that can be found in laptops, mobile phones and batteries of electric cars.

A second example, to tap 15% of the European energy from solar panels that have to be built in the Sahara, a quantity of copper that equals 13% of the total copper production of the 20th century is required (Sprecher, 2010). The battle against climate change is essentially a battle about resources.

To attain the 2050 goals designers, manufactures, banks and the waste-industry should bundle their power to forge and foster circular business models and the leasing society might be a very apt candidate to resolve the quandary. The next chapter dwells on the regulatory steps politicians can take towards a leasing society.

Stop the rock: Rotterdam harbor as a resources hub?

BOX 4

So will raw material policy of Europe in the next decade be about doing a lot with as little virgin commodities as possible? It may indeed be helpful to anticipate on this situation. A tax shift to resources can be an interesting new income source for governments and a huge incentive to re-use the raw materials that are already ashore.

What does this import impediment entail for the export economies in Europe, such as Rotterdam, the location of the biggest harbor of the continent?

This depends on the agility of the harbor to tweak new developments in its own advantage, argues the The Hague Center for Strategic Studies (HCSS, 2012). The center argues that as a recycling country, the Netherlands is well-positioned in developing and capturing value through resource circulation. Likewise, the Amsterdam based sustainability and research think thank IMSA (2012), foresees Rotterdam harbor becoming a resource hub.

A logistic junction in the Netherlands, the harbor is an excellent location to bundle successful business cases, technology, knowledge and data. However, within the limited margins of the current legal framework – designed for the linear economy – creativity is required. The good news is that through the ages the Dutch economy is renowned for its abundance is openness and the aptitude to make money out of rendering services. Import quota or taxes can be a welcome push for Rotterdam harbor and the Dutch economy as a whole.

STEPS TOWARDS A LEASING SOCIETY

Many roads lead to Rome...

There is more than one way to enable the leasing society model.
In this chapter, we highlight the following measures:

- Redefining growth
- Transparency
- Regulations
- Taxes
- Extending producer's responsibility

But let us also stress at this point that politicians only have or should have a relative power in conveying business models to companies. The primary role of politicians is to appeal to a company's creativity and agility. The most adaptive company will win, but this of course, is nothing new in economy.

REDEFINING GROWTH

Growth is a term that has been subject to discussion for a very long time. On the one hand, growth represents stability and prosperity, in a growing economy there is space for improvement of infrastructure, healthcare, education and so forth. The controversy of growth measured in GDP, however, lies primarily in the things that are not measured. In 1968, Robert Kennedy argued:

"Too much and too long, we seem to have surrendered community excellence and community values in the mere accumulation of material things. Yet the gross national product does not allow for the health of our children, the quality of their education, or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages; the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage; neither our wisdom nor our learning; neither our compassion nor our devotion to our country; it measures everything, in short, except that which makes life worthwhile."

An increase of growth today is not necessarily associated with an increase in happiness. Western countries saw their economy grew with several dozens of percentage points, whereas happiness rates remained equal, or even declined. Calls to enhance growth however, are more ubiquitous than ever. The circular economy urges a decoupling of economic growth from the quantity of production and links it to real progress and prosperity. This is possible. In 2011 in the Netherlands, carbon emissions decreased while growth augmented (Volkskrant, June 9th 2012). Growth can take place in non (environmentally) damaging ways.

Measuring economic growth by wealth instead of GDP, can help to accelerate attention for just growth, i.e. real prosperity. In 2011 the European Parliament carried a resolution that prompted the European Commission to conceive a new compass for growth (ENDS Europe, 2011). A 2012 UN Report on inclusive wealth attempts to measure wealth instead of gross domestic product⁷. In our recommendation we will champion a further adoption of new strategies of gauging growth.

TRANSPARENCY

Information is power. Companies keep a lot of information on products hidden, especially if they contain toxic, rare or unhealthy substances. If consumers obtain insight into this information, they are enabled to make better choices. Uniformity in product labelling would be paramount to enhance the power of consumers. There is a role for politics to siphon this information from producer to consumer.

Furthermore, in the business to business sector information openness is equally vital. Businesses should have insight once they buy a more sustainable, durable or recyclable product. Companies could turn this knowledge into purchase decisions to prompt their suppliers to develop goods that meet the envisaged sustainable and/or social criteria. However, not every business to business purchaser will be in the position to, for instance, compel Chinese or Indian suppliers to deliver sustainable goods. Therefore, political regulations that standardise the requirements of products are necessitous. These requirements can also encompass social guidelines (i.e. a ban on buying products manufactured in harsh labour circumstances).

Governments can set the right example in their own purchase decisions.

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Information is power. There is a role for politics to siphon this information from producer to consumer.

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⁷ <http://www.ihdp.unu.edu/article/iswr/>

Ramon Arriata (2012), sustainability director of Interface Floor, mentions the concept of Environmental Product Declaration (EPD). EPDs tell you the ecological footprint of a product with regards to each life stage. But no matter how you present sustainable ecolabels, they have to be universal and based on proper measurements. Only then, transparency can contribute to a market that rewards sustainable products.

REGULATIONS

The European Union bundles a range of diverging economies. Germany for instance, is pre-eminently relying on manufacturing, whereas the Netherlands is an export-country and Eastern Europe relies on agriculture and import. Attuning these diverging models to obtain a circular economy requires a Europe-wide approach and uniform legislation.

In some countries rest flows from production processes are considered 'waste' and they have to comply with very strict (REACH) criteria. In a leasing society, rest flows would be considered resources. This demands a new standardisation.

New modes of financing should be developed when implementing the leasing model. In the first place because the development price of a leased good will be gained back only after a couple of years. Banks and manufacturers may wish to partner together to develop flexible financing solutions. What's more, consumers will be laden with dozens of leasing contracts they have to manage. Websites or apps should be designed to bundle the contracts and render oversight. After all, as for the consumer, leasing is attractive as long as it serves his or her comfort.

On top of that, regulations on leasing should foster - or at least not stymie - a circular leasing society. As a spokesman of a Dutch electronics company indicated in an interview with the author, it can be

cumbersome that sometimes, products can be leased for no longer than two years. Indeed, this would be a major burden for a durable device oriented leasing society, and in the recommendations section of this booklet we will advocate the revision of this type of regulations.

Other local regulations govern that once the leasing agreement ends, products have to be sold for takeover against the current market value. Of course, in a fully developed leasing society this would not be an issue since the producer retains ownership, but some people that venture into a partial leasing model would rather agree a takeover price beforehand.

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Taxes should not tax what you want to foster, but punish unwanted effects instead. In that vein, a Value Extracted Tax could be more appropriate than a Value Added Tax.

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A further detrimental factor may be the pending modifications of the IASB (International Accounting Standards Boards) that could change leasing standards for the worse. To address the alleged issue of lessees not recognising a liability the proposals suggest that leased assets and liability should always be on the balance sheet of a lessee, also in operating leasing. One of the consequences of this model is that the single, all-inclusive, monthly invoice comfort for receiving a service may no longer be possible to provide due to accounting complexity (Leaseurope, 2012). If adopted, the complexity of these rules could deter companies from embarking on leasing and could become an obstruction for the emergent leasing society; a society in which comfort, cost transparency and no ownership are central pillars.

Speaking about cost transparency, a May 2012 issue of the Dutch magazine HP/De Tijd deemed leasing telephones ‘unethical’ since it would pile up a lot of costs that were not visible at first glance. Espe-

cially the youth, the author argued, would be prone to fall into this trap. To forestall this problem, consumer rights should be adjusted to safeguard full transparency in costs. Leaseurope commented on this issue, 'leasing companies are precisely an excellent source of information on the many cost components inherent in using an asset – with leasing, you can make sure that you actually stay within a fixed budget of x€ per month for so much usage of an asset, so you can control your costs very tightly'⁸. So with the right measures, leasing can be rather advantageous for clients who want to have their costs mapped out.

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Consumer rights have to shift from ownership protection to service and cost protection.

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Even more puzzling, consumer rights with regard to ownership are laid down too firmly to make leasing viable. If a consumer refuses to return the product that he or she possesses at the end of a leasing term, the producer has to canvas time-consuming and expensive procedures to get his product back. Hence, consumer's protection should be revised rather than loosened or tightened in order to bolster a leasing society. It has to shift from ownership protection to service and cost protection.

TAXES

Arguably, taxes should 'not tax with things that you want to foster, [but] punish unwanted effects instead' (Stahel, 2012). We don't want to penalise labour, yet we tax income. We don't want to penalise consumption, yet we tax purchases. In that vein, a Value Extracted Tax (VET), taxing energy and resource use, could be more appropriate than a Value Added Tax. The VET enhances taxes on freshly extracted resources and lowers those on labour. This fosters circular business models and entices companies to hire manpower for labour intensive service such as maintenance, reparation, updates

⁸ Personal correspondence

and recycling since labour becomes cheaper.

A corollary of this measure would be that the competitiveness of the regional (circular) economy will be increased compared to the global industry, meaning less transport volumes and distance, i.e. less greenhouse gas emissions. The already emerging tendency of shorter supply chains and more flexible businesses as a counter-movement to moving entire business branches to low wage countries can, with help of a VET, become more general (Stahel, 2012).

An important reason for the fact that leasing in the business to consumer market is not as widespread as in business to business (although it is a trend that, particularly in IT, consumable/consumer assets are increasingly used for both business and private applications), is because monitoring individuals is much more labour intensive and expensive than managing large fleets. The combination of VET and leasing therefore can create new jobs and make them affordable for the demanding party.

In sum, VET can help to keep labour, supply chains, and resources on the continent and thus boosts the European economy. Still, there are a few important aspects of VET that require a further examination (at what point in the supply process do you want to impose these taxes? How do governments receive money when the full economy is circular? How can we prove a VET would have the desired effects?). The author of this booklet is very interested in further research and development on this model.

EXTENDING PRODUCERS RESPONSIBILITY

You cannot unscramble an egg. Yet, in the manufacturing world goods can be fabricated in a way that enables the maker to re-extract processed valuable resources. This chance is not always seized. Discarded LCD TVs is the fastest-growing stream of electronic waste in the EU, with a growth rate of 28 per cent every five years,

flat screens cannot or are very hard to be recycled (SITA, 2012). To prevent these types of waste escalations, producer's responsibility must already be considered in the design phase. Firmer criteria for product design covering extractability of valuable resources should be formulated. Design to last, not to dump.

Eric Lowitt suggested another interesting route to obtain a leasing society - the imposition of a household equivalent of the Emission Trade System:

"[the public sector] could enact a policy like the EU ETS for households to govern their consumption behaviours. Households could find themselves with a choice. They could purchase products outright and be responsible for the product's environmental impacts annually. Or they could lease products, deciding instead to enjoy the benefits of the product while 'parking' financial responsibility for the product's environmental costs on the manufacturer."

This is also a chance to let external cost retain to the producer. We have seen leasing guides producers towards eco-design, appropriate waste management and dematerialized services. If we can manage to make producers responsible of externalities, i.e. unpaid environmental and social costs, there will be an important incentive added: the incentive to govern the ecological footprint of a product throughout the whole production process.

All in all, the leasing society model that encompasses all the aforementioned effects might still be far off. But it is, at least in theory, an apt model to let growth go hand in hand with sustainable stewardship. That alone makes it worthwhile to explore the leasing model to its full extent.

RECOMMENDATION

In this booklet, we have offered a look into the world of the leasing society, a society that doesn't own. Leasing has the theoretical and practical aptitude to address a range of sustainability questions, consumer considerations and offers competition and diversifying chances for businesses (see best practices section - below).

We are well underway.

The last section of this booklet offers a wide range of practices that evince how leasing can be successfully applied.

What is more, in November 2012 the Wuppertal Institute will launch a study on the feasibility of extending the leasing society to other sectors, primarily the business to consumer section.

If you want to learn more, do not hesitate to join our LinkedIn group, mentioned in the colophon section of this booklet.

For the moment, our recommendations to attain the leasing society are:

Policy recommendations:

- * In a service economy, labour has to be considerably cheaper. Lower taxes on labour and enforce a Value Extracted Tax / resource tax instead.
- * Forge awareness of the leasing society model.
- * Match knowledge and resources of consumers, companies, banks, designers, waste managers etc.
- * Practice what you preach: adopt a more performance oriented lens in governmental purchasing and tendering.
- * Enforce measures that bolster a circular economy (regarding waste, eco-design etc.)
- * Make purchase choices more insightful through label standardization and the introduction of a raw materials passport.

Legal recommendations:

- * Adjusting the REACH criteria to a society with less waste streams and more streams of raw materials.
- * The European IFRS guideline is subject to pending adjustments. These should be withdrawn.
- * Reviewing local accounting framework standards to enable the leasing society.
- * Shift consumer protection from ownership protection to service and cost security.

Further research recommendations:

- * Investigate the consumer acceptance of more durable, more purpose-aware products and of the abolishment of ownership vs. using comfort.
- * Develop new ways of measuring growth, observing environmental and social questions
- * Map out resource efficiency benefits of leasing.

BEST PRACTICES

This chapter will highlight leasing models applied in practice. The list is far from extensive, and examples of successful leasing models and the like can also be found in the industries of footwear (Puma), washing machines (MEO), electronic devices (Scala), electric cars (Athlon Car Lease), LED-lights (Rentalite), aircraft engines (Rolls Royce), tools (Neighbour Goods), containers (Mauser), carpets (InterfaceFlor, Desso), medical devices, pesticides, clothes (Rentherunway), boilers and solar panels. Below we elaborate on a number of leasing success stories.



Dutch company KPN: mobile phoneleasing for enhanced service and financial transparency

An interesting business to consumer example is KPN. The Dutch telephone company embraced a leasing model for mobile phones with a central position for services and transparency. In this new business approach the customer leases a full-fledged mobile phone service that includes the device as well as the subscription. The orientation on service means the customer is exempt from having to bother about all possible events that may happen to the device. If a telephone breaks, falls or gets lost, a handyman performs a reparation or delivers a swap. KPN emerged a fleet of vans to render this service anywhere in the country within four hours.

At the end of the phone's lifespan, KPN takes back the device, provided that it is still working. The recollected products are either refurbished for reuse or lodged in the pool for swap devices, engendering resource efficiency benefits. The second advantage associated with KPN's leasing business model is cost transparency. The user is enabled to choose a full package that includes exactly the phone service that connects to his or her preferences, and will have an immediate insight in the outline of costs.

A PIONEERING BUSINESS MODEL

A provider rather than a manufacturer, KPN is not enabled to manage the entire supply chain of the telephones it delivers. Moreover, KPN's purchase power is too modest to prompt Samsung or Apple to assemble phones that meet for instance durability and sustainability requirements. Further political measures can help to foster integral lifecycle management, including design for disassembly and sustainable disposal. Yet, the KPN leasing model, with its service oriented and user-friendly features, can be a pioneer in the new generation of business to consumer models and has the aptitude to be nurtured for a far broader range of products.



Michelin: the path of least resistance

Pay for your tyre purchases as you use the tyres. Michelin offers tyre leasing programs or truck and busses owners with payment on a price per mile basis. Michelin offers service programs ranging from advice on your in-house program to full service for your fleet. Variability in tyre performance, irregular purchase costs and unpredictable damage rates lead to swings in costs that may have negative effects on one's cash flow. This goes to show that the cheapest up-front option is not always the most durable option in the end.

A NEW ECONOMIC RETIONALE

At this moment, durability and quality of Michelin tyres work against Michelin because consumers do not always understand that paying more now means paying less in the long run. Furthermore, the considerable influence of tyre quality on fuel costs is not always taken into account. As a result, tyre vendors are prompted to manufacture cheap low-quality tyres. Last but not least, durable tyre means less tyre recycling and less raw material consumption.

Paying per kilometre solves the typical conflict of interest between a company and a client. It is an incentive to supply durable tyres. This promotes sustainability and paves the way for even bigger paradigm shift: sharing. If goods are shared they will provide more utility and service for the same quantity.



Chemical Leasing: Applying knowledge where it's needed

In literature, chemical leasing is deemed as a very promising solution to handle dangerous and hazardous substances with the required prudence and keeping hazardous materials out of waste stream. Performance, rather than ownership is central. SAFECHEM, a subsidiary of The Dow Chemical Company, has conceived a business model that sells surface cleaning solutions instead of chemicals. This paradigm shift enhances transparency and innovation and renders a spectacular reduction of the environmental impact of the chemical processes.

For instance, only 20 years ago, it took 754 kilograms of solvents to remove 100 kilograms of oil from metal surfaces. Then regulations were enforced that prompted companies to shift to closed cleaning machines which resulted in a reduction of almost 600 kg of solvents. SAFECHEM took this step further by introducing a chemical leasing model, reducing the consumption to less than 10 kg.

And whereas, of course, the sales of chemicals decrease in this model, selling solutions enables Dow to capture the value of delivered services instead of relying on the volume of chemicals sold. Charging a fee per cleaned part or per defined time period, the model also offers a high degree of cost transparency for the customer.

Chemical leasing is also emerging in other chemical industries, such as the textile industry. Here, the leasing model engenders the reduction and reuse of process water and helps to avoid the release of micro-pollutants and nitrogen compounds.

But scaling the Dow/SAFECHEM success story to a broader range of chemical practices will not happen overnight. The process requires a high degree of alignment amongst all business partners along the supply chain and also demands a level of awareness and confidence on the side of the customer. But Dow/SAFECHEM are working continuously to optimize the business model.

A FULLY CIRCULAR AND GENERIC MODEL

Clearly much thinking remains before we decide to adopt a lease society model. Steps needed range from building the social sector's level of fluency, let alone familiarity with such a model, to attuning the necessary legal frameworks, such as easing restrictions on waste flows (that are tantamount to material flows in a circular model). A recent article by Vander Velpen and Hoppebrouwers (2012) highlights other areas in need of careful consideration, such as proprietorship, legislative streamlining, quality assurance and allocation of risk demand. These steps are vital to attain a fully circular and generic leasing model, but early results from areas ranging from chemical leasing to car sharing (think Zipcar in the US) are striking and promising.

The German window manufacturer Schüco is currently developing a new business model in which the company no longer sells windows but rather sells a lease-like 'see through' insurance for the benefit of both customer and producer. With this business model Schüco ensures customers the best and most optimal window solution now and in the future.

In Schüco's business model, the customer owns the rights to the windows, while Schüco owns the materials. And when it will be economically reasonable to upgrade or replace the windows it will be done. By that, the customer is guaranteed the latest in window technology e.g. embedded solar technology etc. At the same time Schüco gets its materials back and is able to reuse them in the next generation of windows. And even more important Schüco changes the relationship with the client from a one time contact to a steady contract rooted relation that offers opportunities for re- and cross sales across Schüco's product portfolio.

In addition, Schüco has made an effort to optimize their materials environmental characteristics in order to secure a material cycle where "waste equals food" so that used windows can be used for production of the next generation of windows.

In this way, Schüco started a process that will ensure a sound material cycle to the benefit of customers and its affiliation with the company while saving Schüco a lot of energy and money through the recirculation of its materials⁹.

⁹ Source: FORA (2010) 'Green Paper: Green business models in the Nordic Region'.

BMA chairs: sit back and enjoy

“Have a comfortable seat for 35 ct. a day”. Simply put, this represents the business model of BMA chairs. The Dutch company is apt to manage its entire supply chain, including design and disassembly. A business to business supplier, BMA is used to managing large fleets but it also successfully applies leasing to small orders.

The model entails an extended product responsibility, and therefore the company is incited to design more modular products, that is: products that can be customized as well as revamped at any given point with easily detachable and replaceable parts.

Since the end of the leasing period of a chair does not necessarily coincide with the end of the product’s life, taken-back products are pooled and made fit for a second usage loop. In its second lease on life, a chair is not rented but sold with a deposit. Eventually, the worn chair will be brought back to the factory and recycled.

The company is not only a pioneer in business models. It has sought an alliance with engineers and researchers to develop the so-called Smart Chair, a seat that collects information of the user’s sitting customs. This does not only yield user-specific information on ergonomics, but also enables a company to invoice per sitting time, bringing pay for usage time within hand reach.

Nonetheless for the moment, BMA faces considerable problems with the implementation of the leasing model. This includes: divergent product lifespan, low awareness of how leasing can be mutually beneficial and reluctance on the customer-side of leasing one single chair instead of an all-encompassing office equipment.

Therefore, the company still offers the possibility to buy chairs in the traditional way. But having embraced a focus on quality, customized services and recycling, it vehemently believes that leasing can be a winning model in the future.

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