

## CONSIDERING THE EARTH AS COMMON GOOD: A KEY DRIVER FOR INNOVATION AND COMPETITIVENESS IN BUSINESS

Taking into account the simple evidence “the Earth is a common good” brings corporations to innovate and adapt new business models that bring more value to their products and drastically reduce their cost through the reshaping of their organization. A lecture based on win-win examples.

**Key words:** eco-innovation, innovation, sustainability, common good, ecosystems, biomimetics, competitiveness, collaborative economics.

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## РАССМАТРИВАЯ ЗЕМЛЮ КАК ОБЩЕЕ БЛАГО: КЛЮЧЕВЫЕ ДВИЖУЩИЕ СИЛЫ ДЛЯ ИННОВАЦИЙ И КОНКУРЕНЦИИ В БИЗНЕСЕ

Принимая во внимание то обстоятельство, что простые материалы, подтверждающие обоснованность тезиса «Земля является общим благом» заставляет корпорации проводить инновации и адаптировать новые бизнес-модели, которые увеличивают ценность продукции и значительно снижают ее стоимость за счет преобразования своей организации. Материалы статьи основаны на примерах взаимной выгоды.

**Ключевые слова:** экоинновации, инновации, устойчивость, общее благо, экосистемы, биомиметрика, конкурентоспособность, коллаборативная экономика.

Is sustainability the pursuing and adapting of liberalism or an alternative to it? It is often reproached to sustainability to slyly reintroduce the notion of “common good” once and for all disdained by classical liberalism based on markets that cannot explain and include this notion. It is often reproached to sustainability as well, to weigh on competitiveness by business managers, like if environmental performance was a trade of with economic performance. These short-sight reproaches lead us to think that we may have to choose between our present and our future – for there’s

no possible future without sustainability on a limited planet [1].

“Common good” include different kind of goods and services: from knowledge, science and education, to oceans, forests, water, air biodiversity or land such as South Pole... Excluded from main stream theory it nevertheless represents a big share of current GNP: the physical part of it (fisheries, forestry, hunting, and so on ...) weighs for more than 15 % of the world current GNP, and of course if services and sciences are taken into account, the weight of common good cannot be neglected. Through the ages “common good” more or less coexisted with private goods – the city walls and the castle, the church and the agora as public common places. Common goods can be classified also according to their size considered infinite or just large. More or less they are very often

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confused with their use and with what called later public goods [2]. Three attitudes have been adopted toward “common good” through the ages, whatever where the people: abuse, respect or appropriation, attitude often completed by the trusting of their ruling to states or more or less large public bodies supposed to represent the general interest [3].

a) Abuse: private fishing boats transforming “common good” fishes into private profits while destroying bio-diversity and ocean soil; air – using the air for all thermic engine providing thus pollution to all, since air stock was thought to be so big that it can locally polluted.

b) Respect: preserving a water-well in middle-east desert, a shelter in Siberian forest, knowing that another human or even ourselves may need it again. This attitude is not only based on the scarcity and rarity of the good but can be viewed as a more ethical self-restriction approach and a thinking in terms of generation and species versus a whole short term individualistic self-centered approach. Quite important because it introduces both the notion of time and the notion of “free” sharing opposed to the rationalized immediate reward which biased most of classic economics.

c) Appropriation, through ancient rewarding of soldiers and nobles but mainly enforced at the end of XVIII century to the genocides of Native Americans and Aborigines “unable” to maximize the yield of the land [4]. Basically “common good” bring us back first to question economics and its founding as a science necessarily based on human values that have nothing of scientific. Or as the Greek would have said economics organized the life of the city once “politics” have chosen its value. Therefore, the overwhelming role given to private property seen as both a value and a scientific value proven by economic is just a way of deterring mankind from asking the true questions of values. Is private property the only and best way to produce and consume? Is it an unalienable right? Do I need to owe to consume? No. Do I need to owe to exist and

fill up my highest social needs as a social being – no as far as the highest values in Measlow Pyramid are socially accepted in other ways like collaborative consumption shows it [5]. It questions also the fact that privately owned business is the best way of doing business – and that maximizing short term profit is the best indicator. Thus the universal model presented to us is not so universal and so great to resolve our problems as a species on the contrary. What model should we follow then as the interrogation is clearly set by Chinese leaders **“We were crossing the river jumping from stone to stone, but once we were half way, we realized the other bank had collapsed”** (Hu Jintao). Asian countries that are taking more leadership in the world economics bring also other point of views – two of them being indeed: thinking long term and thinking as a group and not solely as an individual.

Even in the west private property was always counterbalanced through local rights: private forest of the lord but common use guaranteed by the law for picking up fruit, mushrooms and medicinal plants as well as hunting – just the hunting and eating of certain animals was reserved to the landlord. It’s only at the end of the XVIII e century that private become private with no trespassing. [4] Our values as westerners or even more in the Slavic world were always mixing both. For after all, it is written, ***Then the LORD God took the man and put him into the garden of Eden to cultivate it and keep it (GE2:15) – and private property such as land appropriation isn’t it Cain’s sin after all? Thus prior to the Renaissance – knowledge was free and art & craftwork were not signed.*** Thus it is not to a fake economic science to dictate the values of the society we want to build. What are our real values as a species, or nations or groups, and who’s in charge? Players in the collaborative economics will say everyone – we are all players. And collaborative economics is already representing 1/6 of GNP in USA and Western Europe (*Oui-share blog 2014*).

If we manage as “good fathers” as it was recommended in liberalism theory until WW2,

then the EARTH is a good that does not belong to any of us but to all present now on it and all to come (- not to mention that we share it with other species without who we can disappear). The questions therefore even without thinking about trying to reach some kind of materialist happiness for all is how do we continue infinite growth on a limited Earth. We lack energy and raw material to support our industrial society as it is. There's no way of going back to cavemen, there's no way to accept also the appropriation of modern society by a shrinking number or the replacement of old nations by new ones at the top. Sustainability thus is not a restriction but a way to bring society and businesses new paradigms. New paradigms are the key to innovation and "blue ocean" strategies, which are well known to be the most profitable ones [5].

In the blur [6] environment created by the spreading of Information & Communication Technologies, reshaping organizations, consumers and productive systems, businesses can no longer focus on business efficiency anymore but on innovation and on being agile in order to move fast. Changes led by the environmental side of sustainability thus are a pure and solely restriction only on those who focus on business efficiency; these changes imply to be integrated into strategic thinking and therefore to have entrepreneurs drawing blue ocean strategies at the top of business in place of bean counters managing cost killing procedures. At the same time, these changes very often imply modifications in the ecosystems that a business cannot lead alone. And the best way to move them is also through their own customers changing their values to greener ones [10].

The environment load of sustainability implies to think differently and opens many opportunities for new businesses or new strategies that are both profitable for mankind and the stockholders. This environment load is well described by the OECD report – Sustainable Material Management Report published on Nov 23, 2012 pinpoints: "the fantastic increase in natural resources extraction: +65 % on the last 25 years". It insists on "the emergency to focus on natural resources productivity, to do more with less".

As people are all players now being at the same time consumers, employees and entrepreneurs, these opportunities can affect business directly or indirectly – I mean through the change in consumption.

Direct impact on business can take again different paths and are linked to the method of production, the end of life of the product and the use of the product itself: basically eco-design and industrial ecology, circular economics and sustainable products. These last ones are the hardest path to follow because it requires most of the time a complete change in the system which makes it at first not competitive with existing ones. The following examples are based on real actions taken by businesses in a French Innovative Cluster.

First example: industrial ecology and the need for a bio-based economics. Pulp and paper mills are facing critical challenges due to the serious changes in their market. Indeed ICT has been shrinking down to nothing most of written newspapers and magazines sales. Thus leading a structural overcapacity in the pulp & paper industry – plants being focus on printing paper, are not easily convertible in tissue plants. Pulp & paper mills were al-

Table 1

Key drivers for business

	Stable Environment	Blur Environment
Key drivers	Efficiency	Agility
	Cost killing	Innovation
Green sustainability	Green overload	Eco-innovation

ready doing some kind of industrial ecology by reducing their waste, having their own wood furnace and supplying energy around. Focusing on cost efficiency for a pulp plant is a drama – reducing the price of paper per tons of a few cents not worth the investment. Innovation on the paper to make it may be like some kind of new screen able to communicate with real ICT has been leading nowhere like other innovations in paper functions. Thus the only way left was to focus on process innovation to win a few cents per ton or to think differently. That's where sustainability gets into play. The opportunities are vast: building need greener material for better insulation – the first budget for energy in Europe, and all products need greener renewable materials. The challenge thus was to look at sustainability on a strategic point of view and to not hesitate to adapt, or rather to completely change the pulp & paper mill business model. An operation was launched through several of them to bring them to be mills and bio-refineries at the same time. The first one thus focused first on the process and the skills it had developed: selecting wood or

old paper and chipping them to prepare the pulp. This process can be stopped before full completion for the pulp and thus feed in wood fibers or in paper scrap two other companies to do wood insulation material or paper insulation material.

The business model was thus not only to sell pulp & paper any more, but pre-wood insulation panels and pre-paper insulation panel. The strategy was also to share the facilities and to set up joint ventures with experts in these markets, thus starting a first step toward an ecological industrial park and a close interlink of collaborations. The second step was to invest in more innovation and to extract what could be more valuable in the wood: molecules for chemistry, molecules for pharmaceutical, molecules for agro-business, nanofibers, and so on. The old strategy to burn cork and nodes for energy revealed to be an economical and environmental disaster since these were wood parts with a high concentration of polyphenols so useful in pharmaceutical and cosmetics. The same strategy was engaged with partners but requiring a higher degree of investment in research.

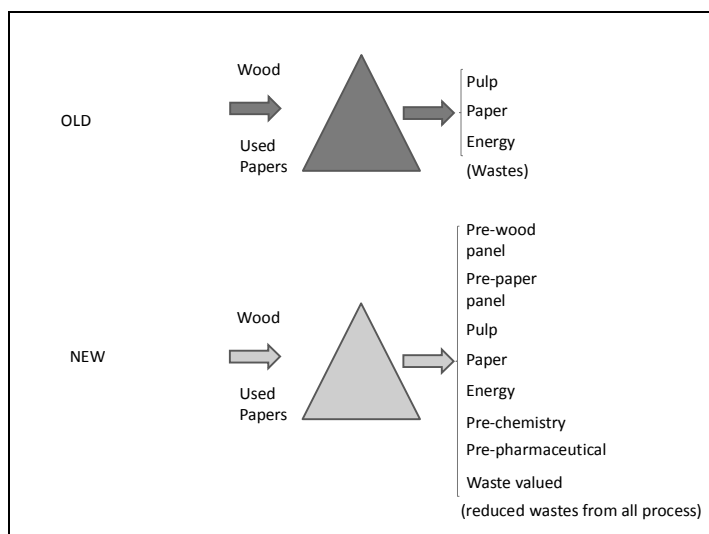


Figure 1. Industrial Ecology Business model

An industry branch thus condemned by ICT and dematerialization of the exchanges was transformed in a brilliant pillar for bio-based economics supplying the overall industry with renewable molecules and materials for building, planes and auto-motives as well as supplying with high potential molecules the healthcare branch.

“Green” Sustainability in this example can clearly be seen as a key driver for innovation and for profitability. This example shows also to the pulp & paper mills don’t play alone, but build joint ventures around them and with them, getting in a collaborative way like sustainable approach requires (enlarging the vision of all stake holders). It changes also the look on production from maximizing papers to optimizing a mix of green products – a new standard to follow.

Second example: end of life and circular economics. Located in the Vosges in France are still some textile industries doing standard fabrics such as sheets: either for hostel, or hospital and so on. Extremely modernized they fight against cheap imports. The social pressure on the use of end of life especially fabrics pinpointed the waste coming from the hostel industry. A quick answer would have been to exports sheets and racks in a low wage country or to trust them to social economics. But blame on hotel chains would be the same. This point underlines also the need for transparent information on environmental problems to alert consumers and citizens.

A small textile business had the idea as a genius to reuse old sheets to do sheets or nearly: a cradle to cradle adventure. Sheets for industrial use are made 50 % of cotton and 50 % of polyester; once they’ve been washed a number of times, cotton represents less than 10 % of the used sheet. Hostels use them with comforters although some blankets can still be found – comforters surrounded by sheet-cover have the advantage to be less risky for the transmission of infections and other problems. Comforters are filled nowadays with polyester fibers. The use for old sheets was thus quickly

identified: comforters with “free” raw materials. Investments in innovation were made to find a way to separate cotton from polyester in old sheets: resulting in polyester granulates and some dough of cotton – which has an ex natural fiber can be used as a fuel. Investments were made also to organize a proper collect of old sheets. Thus the SME created 3 spin-offs: one to collect old sheet and separate polyester from cotton, one to turn the free polyester granulates into polyester fibers, and one to produce comforters out of the fibers. The cotton dough on its side was used in wood furnace to supply the different plants with energy. Granulates and fibers can be used also for other applications with other clients.

This SME by solving its clients’ problems and taking away the burden of a tax to come on old used products ingeniously gain value and gain products made from free raw material supplied by the customers.

Eco-innovation again brought a new business model, reducing costs and bringing more revenues and more value to the clients.

Green sustainability again implied for the stake-holders from manufacturers to renters to hostels to work together to solve the problems. It also opened the manufacturing SME to a new set of industry branch through the clients. It also implies to do the product in a way so that the end of the life can be more easily taken care of, excluding thus non green cheap products. (Water used in the separating process can reveal the use of the chemicals applied to color sheets and fabrics.) Green open the way to more green and exclude cheaters – it shows also the necessary alliance from top to bottom along a chain value.

Third example: products functionality and eco-design. Eco-design when brought not only to reduce environmental impact but to rethink the product and its strategy can reveal to be a great device for corporations. Thus a furniture manufacturer for business and organization started to reshape its tables, desk, shelves and chairs according to their environmental impact. As any products, its

ranges of products have mainly 5 steps on which to look at: raw material being used, process to produce, transportation, energy used and service delivered while the product is in service, end of life. Using sustainability to also reduce the costs – first steps were taken to reduce raw materials (packaging parts used for the furniture – making parts multifunctional) reducing the space lost in transportation and imitate as much as possible the flat Ikea packages.

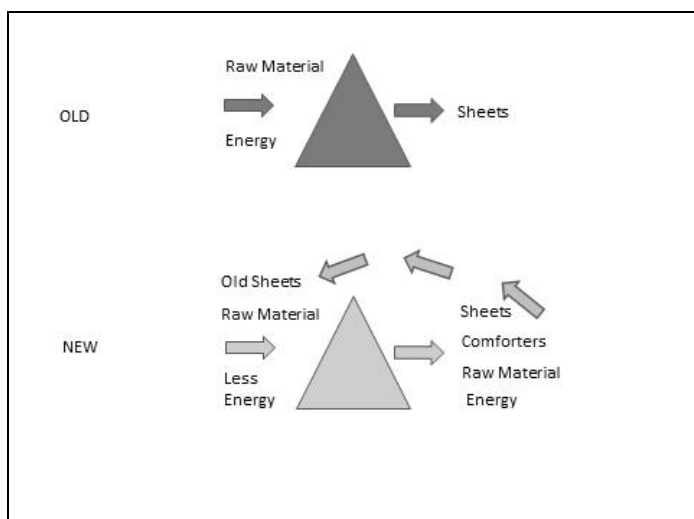
With the increase pressure on furniture (social and taxes) these ideas reveal good to be more profitable and to do some green marketing to add value to the product but that's the all. The next step like in the previous case is to include end of life of the product. Thus a new range of products were conceived keeping in mind that they needed to be stylish but really easy to recycle. Two solutions: either easy to disassemble or easy to destroy fully. This last solution was leading to the non-mixing of materials which would be hard at the moment (hard to think a whole wood or whole steel piece of furniture especially for chairs). The first solution, on the contrary led to the rethinking of furniture not only as easy to disassemble but as “lego” blocks with

interchangeable parts, and easy to replace exposed parts. Obviously since it is easy to disassemble, it is easy to revamp or trash. And if it is easy to revamp, it is better to rent then to sell. Two effects, renting turns the clients' investment in a variable cost, and shift responsibility for broken parts.

Once again sustainability improved processes, relation with clients and opened the way to a blue ocean strategy. It proved also that green can go with fashion and design. But overall, rethinking the product according to client needs and environmental needs brought a total new business model for the firm.

These examples are just 3 out of more than 50 than were launched through the cluster. All these examples even the last one underline that business by increasing its responsibility on products and its impact on environment need to imply much more stake-holders than usual in its project. That is where clustering can reveal interesting.

These three examples also prove that eco-innovation is a key driver for the adaptation of business to change [7]. They reveal also very unorthodox ways of doing business proving once again that the focus on core business claimed by financial markets is ruining the



*Figure 2. Circular Economy Business Model*

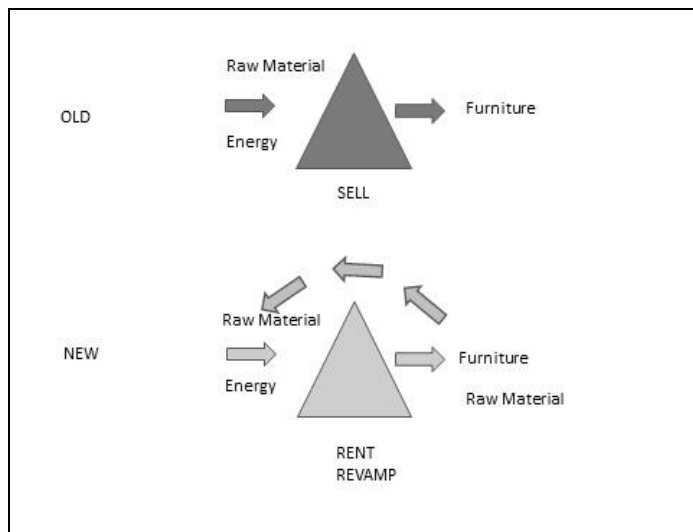
industry. It's by being able to change core business, to change of business models that thanks to sustainability these businesses turned out to be able to grow and be profitable.

These three examples also show that eco-innovation or innovation is necessary to reach the new position, but that this new position is first desired and designed through strategy [8]. Market and even more sustainable business branch strategy is a must to adapt business to its challenge. It means that we need entrepreneurs with visions and not managers with bean counting indicators to lead the industry at the moment. Shared vision and being implied and employed in a green business bring back value and motivation to employees that very often had lost faith in their jobs [9].

Indirect impact on business comes from the consumers. I won't be long on the pressure set by customers themselves but I will focus on collaborative consumption and the wide range of start-ups it boosts. Collaborative consumption has two motivations: the crisis which brings everyone to be more cautious and to look for more revenues AND the necessity to do something for the EARTH.

People implied in this also share the value that everyone can act and everyone need to be active.

Collaborative consumption is able to develop thanks to ITC networks that work like neuronal networks. What is collaborative consumption? [11]. An example will show it all. I need a driller to set-up my shelves. In the past I could either buy one or I could borrow one. On one hand borrowing in modern society where family is far and neighbors unknown has become hard. On the other hand, knowing that on its 10 year life span a driller is used in average less than an hour, more and more people think it stupid to buy one. The first move to take advantage of this spot in the market, were tools and equipment renters. The second is collaborative economics. I get in a network on the net and check who close to me in this network owns a driller. I can thus rent for cheaper and the owner can get some paid back. The risks are minimized through the public exposition of reputation. If I bring it back broken or dirty, my reputation is over and I'm excluded and vice versa if the owner rent me a dinosaur or a bad device.



*Figure 3. Service vs Product Business Model*

At first hand, it looks like unreported revenues that threaten the main players. But not only! Because through the extension of internet networks it means that the sales of these products is going to get down for the better benefit or our use of material and of the Earth but for the worse for the manufacturers. It means also that communities not only through the net but through buildings can decide to commonly invest in one vacuum cleaner (after all never used more than 15 mn per day) and many other appliances. It is reshaping our view on owning, our view of organizing our consumption and it means that manufacturers or equipment renters drastically need to rethink their business models to add new services. It means also that a product will be much more used and not so much resting on the shelf.

Since everything which is not disposable can be shared, this wave is really reshaping the economics and its funding. Even waste food can be shared or sold. Collaborative economics underlines the need for social relationship but also changes every consumer in an entrepreneur – which another way that opens the road to the end of the “salaried man”. Individuals and teams can thus develop start-ups and new offers. Today it is done through access to products manufactured elsewhere – but 3D printing encourages the manufacturing to get out of usual businesses.

The car industry reveals to be one of the most interesting examples to illustrate this move. Our cities are jammed with cars that hardly move in the jam thus prove to be useless in traffic hours but great polluters. Cars could take the place of fur as negative status symbol. Today through the sharing one can offer car pool in commuting, car pool in long distance move, rent one’s car while not using it. Special insurances have been

designed for that. Cities to be smart and green need to reshape their transportation network and support hourly “cheap” car rental – often with electric cars. The rental is a new service car manufacturers can provide. But new open source car manufacturers coming from the collaborative open source manufacturing are more competitive to offer such services. This new market does not require resale and maintenance network and small city cars are thought by such inventors as easy to fix. Smart and green cities are the culmination as a “product” of the impact of sustainability and the taking into account of the Earth as a common good and the need of mankind.

The reorganization of consumption first and production second through collaborative approaches open the lead for many new services and start-ups not all linked only to internet.

In both direct and indirect impacts, one of the conclusions of these examples is that considering the green side of sustainability impacts on business through

- its reorganization to think in cycle and not linear
- its reorganization to be more collaborative and not only competitive [12].

It underlines also that business to shift green has to be under the pressure of citizens organized through fast moving social networks. NGO are using this surely and bring back transparency as originally required by liberalism to shift business strategies.

Non-linear thinking, and collaboration through eco-systems are ideas older than the world since they are the principles developed by Nature to organize life. Biomimetic [13] thus can be steady approach to help business and local government to move forward in this direction.



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