

Frugal Innovation Classroom Course

SUSTAINABILITY AND SOCIAL INCLUSION IN FRUGAL INNOVATION

MODULE 5





How to do better with less?

COURSE CONTENT

1. The business case for Frugal Innovation
2. Market opportunities for frugal innovations in Poland/Hungary/Croatia/Ireland/UK
3. Creative problem solving
4. New market development, human centered design and prototyping
- 5. Sustainability and social inclusion in frugal innovation**
6. Financial planning for innovation
7. Management of frugal innovations

Do you know that...

You can use modules in the way you wish. This course is tailored for individual needs. You can read full modules, you can focus on the main terms, which will be highlighted in each module, you can find examples or try to do the test. Either way we are sure that we will make you read more about how to profit from doing business frugally.

Icons you may come across in the course



Important term



Exeample



Test



Activity



Video



Source

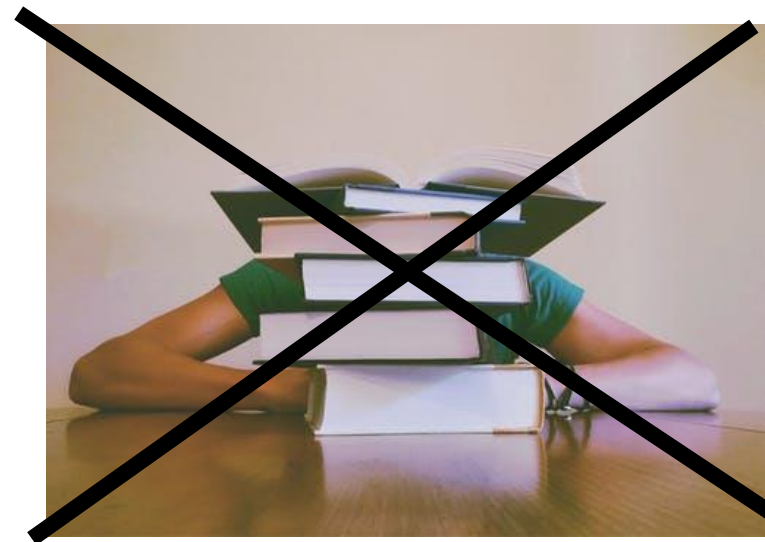
SUSTAINABILITY AND SOCIAL INCLUSION IN FRUGAL INNOVATION

Tired of books and articles, in which you cannot find practical and useful knowledge.

Start the module **Sustainability and social inclusion in frugal innovation**, which will provide you with useful information on:

- facts related to social and global environmental problems.
- bottom of the pyramid market
- product demand matrix
- global trends connected with sustainability
- examples of frugal innovation focused on environmental or social problems.

We advise you to join the whole module.



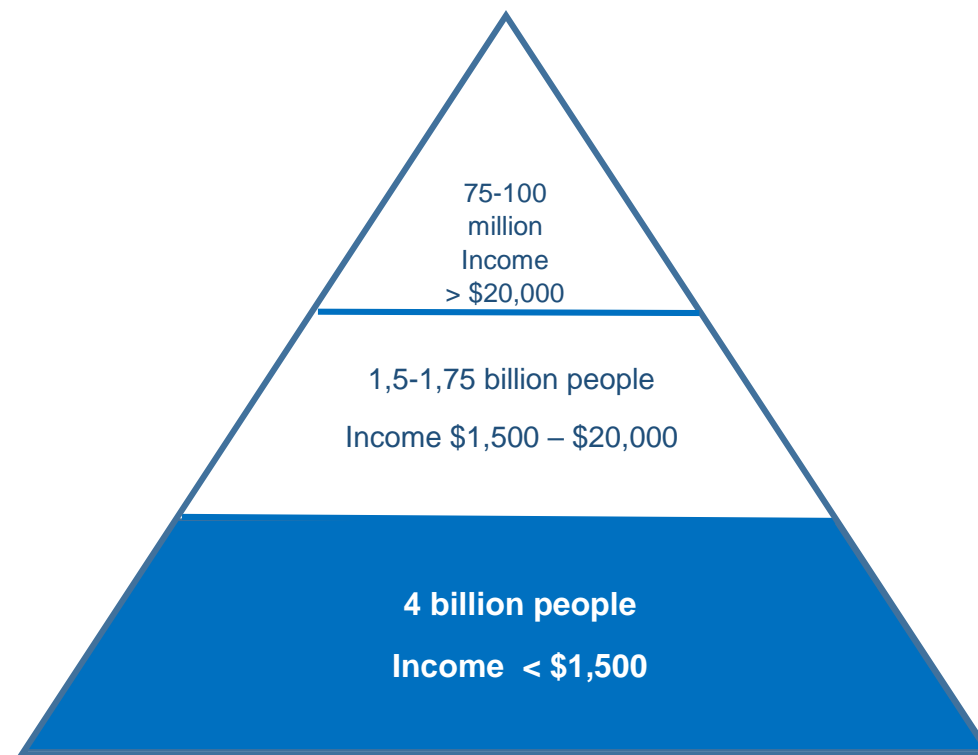


SUSTAINABILITY

Are you wondering why sustainable solutions are really needed for people and economies?

Maybe these facts below will help you to make your mind.

- 9 million people a year die due to air pollution worldwide.
- Renewable energy is only 6,3% of all available sources used globally. Coal and natural gas remains the dominant source for generating electricity (over 60%)
- People generate 1.12 billion tons of waste globally each year.
- 99% of stuff which people buy is trashed within 6 months.
- The garbage vortex on the Pacific Ocean (called North Pacific Garbage Patch) is three times the size of France (or five times the size of Poland)



Source: UN World Economic Reports



BOTTOM OF THE PYRAMID MARKET

Again, we would like you to consider some facts:

- Over half of global population's income is less than \$1,500 per year (based on purchasing power parity in US\$).
- Half the world still lacks coverage for the most essential health services.
- 663 million people lack access to an improved source of drinking water.
- 1 of every 10 people around the world experience chronic hunger.
- 98% of the world's undernourished people live in developing countries.

In the MODULE 2 we presented various frugal innovations, which help to achieve social inclusion, like Pick Vision (described in Module 2) – solution encompassing a software and high resolution camera, thanks to which a smartphone can help to help people, who live away from eye clinics and cannot afford eye treatment. Another interesting example is FoodCloud (described in Module 2) enabling the redistribution of surplus food, which was also explained in the MODULE 2.



E

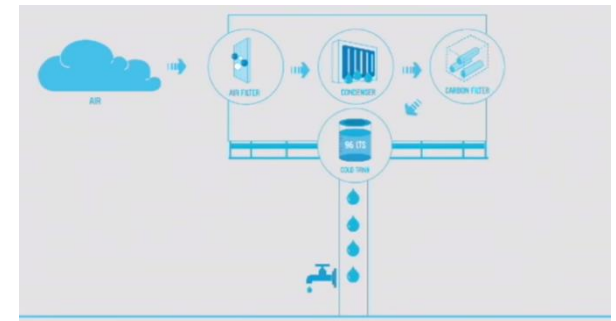
We have another fascinating example for you.

The billboard which produces water

One of the biggest problem of Lima (the capital of Peru) is the lack of water as Lima is the second largest desert city in the world (located at the northern part of the Atacama, the driest desert in the world). Paradoxically, due to the coastline location, the air humidity averages 83%, and in the mornings even 100%.

Such high humidity is used by the billboard invented on the University of Engineering and Technology of Peru (UTEC), which condenses water from the air into potable water. Such billboard produces around 100 liters of water a day.

Watch about the
Billboard



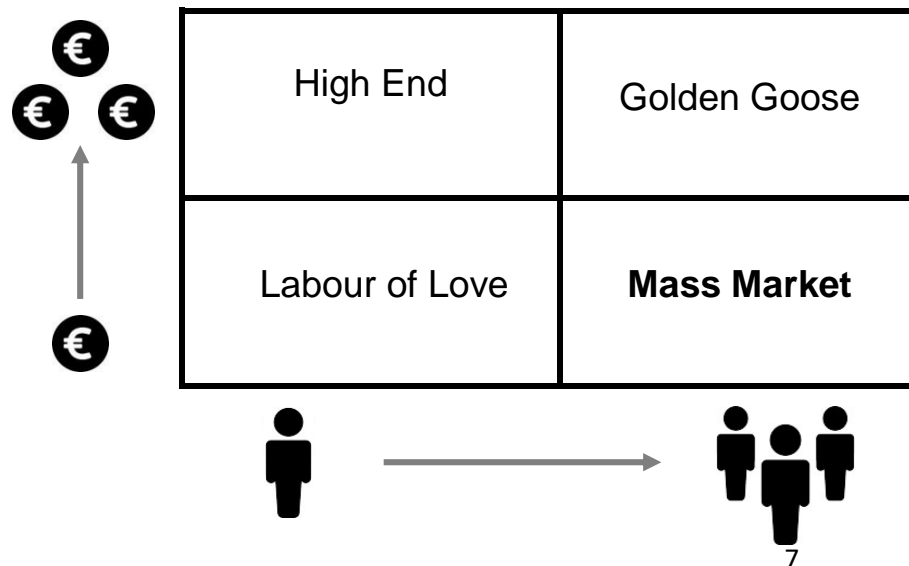
Amazing Highway Billboard Makes Drinking
Water Out Of Thin Air
https://www.youtube.com/watch?v=QT_2KABVF9E

Profitable business and affordable prices

Focusing on non-affluent consumers does not mean resigning from a business approach. The bottom of the pyramid market means to sale at low price, low margin but at high volume. Single-serve packages of washing powder, soap, toothpaste or shampoo, which are sold in emerging markets, prove such strategy. Non-affluent clients would also buy mobile phone services, if it is available at low-price. For instance in India the minute would cost a fraction of a cent.



Product Demand Matrix



Do you know that...

Bill Gates – a Microsoft founder, after reading C.K. Prahalad's book titled *The Fortune at the Bottom of the Pyramid*, sais:

"...an intriguing blueprint for how to fight poverty with profitability."

Prahalad C.K. (2006) *Fortune at the Bottom of the Pyramid: Eradicating Poverty Through Profits*, Dorling Kindersley Pvt Lt

Frugal Innovation in Product Demand Matrix

High End – products are sold at high prices but to few customers. Example: luxury cars like Rolls Royce

Golden Goose – products are sold at high prices to a mass market. Example: Apple iPhones

Mass Market – products are sold at low prices to a mass market. Example: Mc Donald's

Labour of Love – products are sold at low prices to few customers. Examples: all product/services failures

Mass Market is the target market of **frugal innovations**. Low-price products can be directed to emerging markets, where people have very little disposal budgets and also to advanced economies, where people are more and more cost-conscious customers and appreciate simple, ecological and affordable products.



Watch about how to introduce goods to masse vs niche masses

Niche vs Mass Marketing

<https://www.youtube.com/watch?v=R1wigPubZ5g>



Frugal Innovation Mindset vs. Global Trends

The specifics of frugal innovations and its emphasize on human, cost-effectiveness, environment and sustainability, builds more general frugal mindset, which should be associated with the following terms/trends:



Social innovations are new ideas that meet social needs, create social relationships and form new collaborations. These innovations can be products, services or models addressing unmet needs more effectively.

Source: http://ec.europa.eu/growth/industry/innovation/policy/social_en



Sustainability focuses on meeting the needs of the present without compromising the ability of future generations to meet their needs. The concept of sustainability is composed of three pillars: economic, environmental and social - also known informally as profits, planet and people.

Source: <https://www.investopedia.com/>

FRUGAL INNOVATION MINDSET



Corporate social responsibility (CSR)

is a business approach that contributes to sustainable development by delivering economic, social and environmental benefits for all stakeholders. CSR is a very broad concept that addresses many and various topics such as human rights, corporate governance, health and safety, environmental effects, working conditions and contribution to economic development.

Source: <http://lexicon.ft.com/>



Ecological approach

is a type of natural resource planning, management, or treatment that ensures consideration of the relationship among all biotic organisms, including human, and their abiotic environment.

Source: <https://definedterm.com>

Frugal Innovation Mindset vs. Global Trends

The following trends are also related with frugal innovations:



Circular economy - in this type of economy, the value of products and materials is maintained for as long as possible. Waste and resource use are minimized, and when a product reaches the end of its life, it is used again to create further value. This can bring major economic benefits, contributing to innovation, growth and job creation.

Source: https://ec.europa.eu/growth/industry/sustainability/circular-economy_en



Sharing economy (collaborative economy) The sharing economy is an economic model often defined as a peer-to-peer (P2P) based activity of acquiring, providing or sharing access to goods and services that are facilitated by a community based on-line platform.

Source: [Sharing Economy Definition | Investopedia https://www.investopedia.com/terms/s/sharing-economy.asp#ixzz5QsbtEmYq](https://www.investopedia.com/terms/s/sharing-economy.asp#ixzz5QsbtEmYq)

FRUGAL INNOVATION MINDSET

Spiral economy is a world “where the by-products of one organization or industry not only form a component of another one, but rather become a platform which spawns endlessly unfolding opportunities at varying scales much like the famous Fibonacci sequence”.

Source: <https://www.100open.com/towards-a-spiral-economy/>

* Fibonacci numbers - every number after the first two is the sum of the two preceding ones.



Cradle-to-cradle production is the production in which all material inputs and outputs are seen either as technical or biological nutrients. Technical nutrients can be recycled or reused with no loss of quality and biological nutrients composted or consumed.

Source: <https://sustainabilitydictionary.com/2005/12/03/cradle-to-cradle/>



Why do big companies implement frugal innovation thinking?

If you still not convinced that frugal innovation thinking and the above-mentioned trends are essential in nowadays economy, please read why frugal approach is important for big corporations.



“We will run out of water long before we run out of fuel.”

Peter Brabeck-Letmathe, Nestlé’s chairman [in:] A water warning”, *The Economists*, Novemebr 19th 2008

“We don’t want to create separate, dedicated “green” product lines. Rather we invest in innovative technologies like Water<Less and process like Wellthread that can be applied across multiple product lines, making a sustainability a core design principle for all our products.”

Michael Kobori, Levis Strauss’s vice-president of global sustainability [in:] Radjou, N., & Prabhu, J. C. (2014). *Frugal innovation: How to do better with less* (1st ed.). New York: PublicAffairs.

“Okay we’re expecting six degrees warming, three billion extra consumers on one and a half planet’s resources – this shapes the business landscape. So sustainability has gone from “it would be nice to do” to an absolutely business-critical thing to do.”

Steve Howard, IKEA’s Chief Sustainability Officer, Inhabitat Talks to IKEA’s Steve Howard, <https://inhabitat.com/interview-inhabitat-talks-to-ikeas-chief-sustainability-officer-steve-howard/>

IKEA's Vidja lamp – a success in the reduction of elements, materials and weight

"We have a lamp called the Vidja lamp and there was a design challenge there. As we redesign products we put them through a score card. With that, we eliminated 24 out of 33 elements. Clever design, we did. We lowered the weight of the product by about a half. We also reduced packaging by nearly a third in that product. We also slashed the amount of cotton – mixing it with viscose. The product was better, it was lighter and we lowered the price by more than a third to the customer. So it actually fundamentally changed the footprint of our product. The other thing – we could actually ship 128 of the lamps on a pallet rather than 80. If you can imagine from a fuel efficiency point of view – in one year you could effectively get a 60% increase in fuel efficiency just by the way you design things and pack them."

Steve Howard, IKEA's Chief Sustainability Officer, Inhabitat Talks to IKEA's Steve Howard, <https://inhabitat.com/interview-inhabitat-talks-to-ikeas-chief-sustainability-officer-steve-howard/>

method – a cleaning products supplier adopting circular economy

Method – a company established by two roommates focuses on a production of cleaning products, which are eco-friendly due to:

- Non-harmful ingredients,
- Bottles made of recycled ocean plastic,
- 100% natural product inside,
- 100% biodegradable.

In 2006 method was ranked as seventh fastest growing private company in the US by Inc. magazine. In the same year method's founders were named PETA People of The Year.

In 2013 method becomes one of the 1st companies using cradle-to-cradle production, with 37 C2C certified products at launch, among the most of any company in the world.

Source: <https://methodhome.com/>



E

Examples

Procter & Gamble's Tide Purclean Ecological Laundry Detergent

is produced using 100% renewable energy (100% renewable wind power electricity and zero manufacturing waste to landfill). P&G does not contain dyes, chlorine, phosphates, ethanolamine, and optical brighteners. The Tide Purclean's bottle is 100% recyclable and made with at least 25% post-consumer recycled materials.

Tide Purclean's won Environmental Leader Product & Project Award 2018.

More: <https://www.environmentalleader.com/2018-environmental-leader-product-project-awards/>

Unilever's Products in small packages

Surf and Mayonnaise are sold in small in small packages. For example in Spain the smallest package contains detergent for up to five washes. Mayonnaise sold in Greece is packed in large jars as well as in little packs, so that everyone can afford it.

That was the answer of Unilever for the crisis in the southern Europe and the rising poverty. This can be perceived as frugal innovation, which does not influence the production process dramatically and results in social inclusion.





Sources

Are you interested to learn more about sustainability and social inclusion in frugal innovation?

We recommend you to use the following sources:

Websites:

http://ec.europa.eu/growth/industry/innovation/policy/social_en
<http://www.who.int/>
https://www.washingtonpost.com/news/energy-environment/wp/2017/10/19/pollution-kills-9-million-people-each-year-new-study-finds/?noredirect=on&utm_term=.b050732d2bf9
<https://www.worldhunger.org/world-hunger-and-poverty-facts-and-statistics/>
<https://methodhome.com/>
<https://inhabitat.com/interview-inhabitat-talks-to-ikeas-chief-sustainability-officer-steve-howard/>

Other sources:

The Sustainable Development Goals, Report 2018, United Nations, <https://www.un.org/>

Avlonas N., Nassos G. P., (2013) *Practical Sustainability Strategies: How to Gain a Competitive Advantage*, 1st Edition, Wiley

Werbach A., (2009) *Strategy for Sustainability: A Business Manifesto*, Harvard Business Press

Videos



The Sustainable Development Goals (SDGs) Explained

https://www.youtube.com/watch?v=NkAv9L1_r1M

Sustainable development goals

<https://www.youtube.com/watch?v=RpgVmvMCmp0>

A portrait of poverty: Europe's women & children - Real Economy

<https://www.youtube.com/watch?v=O4JB7r5x0Xs>

Social exclusion (segregation and social isolation) | Social Inequality | MCAT | Khan Academy

<https://www.youtube.com/watch?v=eejmYz0O3YE>

Sustainable Development Goals: Leaving No One Behind – Examples from Papua New Guinea

<https://www.youtube.com/watch?v=3VbLlz9SaaY>



TEST

Ready for a quick TEST?

T

You can quickly verify the knowledge you gained after attending this module.

Choose the right answer (multiply choice test)

1. Bottom of the pyramid market

- a. is not important, as it relates to non-affluent consumers
- b. is important due to social and economic goals
- c. is the biggest market concerning global population

2. Economic development should be concentrated on

- a. cost effectiveness regardless other factors
- b. social aspects
- c. environmental issues

3. Circular economy

- a. is an theoretic idea not feasible to implement in practice
- b. leads to environmental disasters
- c. is an inevitable trend for the future



Ready for a quick TEST?

T

You can quickly verify the knowledge you gained after attending this module.

Choose the right answer (multiply choice test)

4. Cradle-to-cradle production

- a. Means collaborative economy
- b. Is the production in which all material inputs and outputs are seen either as technical or biological nutrients
- c. Is the production of cradles.

5. In the bottom of the pyramid market:

- a. less than one third of global population's income is less than \$1,500 per year
- b. over half of global population's income is less than \$2,500 per year
- c. over half of global population's income is less than \$1,500 per year

6. According to the product demand matrix luxury cars are:

- a. Labour of love products
- b. Golden Goose products
- c. High end products



Ready for a quick TEST?

T

You can quickly verify the knowledge you gained after attending this module.

Choose the right answer (multiply choice test)

7. Social innovations

- a. are new ideas that meet social needs, create social relationships and form new collaborations.
- b. are not profitable in nowadays economy
- c. can only be implemented in developing economies

8. Ecological approach

- a. is important in nowadays economy, as it helps to protect our planet
- b. is a type of natural resource planning, management, or treatment that ensures consideration of the relationship among all biotic organisms, including human, and their abiotic environment
- c. relates only to polluted areas.

9. In the modern world

- a. There are very few cases when people lack coverage for the most essential health services
- b. Half the world still lacks coverage for the most essential health services.
- c. 1 of every 10 people around the world experience chronic hunger

A *Activity*

IF you are not sure what changes can bring sustainable effects in your business, start with yourself. Please take a look at your closest surrounding. What can you change in your everyday routines to help protect environment or help other people.

Issue	What can I do?	What my family could do?	What my friends could do?
To reduce plastic bags	<i>Buy material bags</i>		
Support recycling			
Driving less	<i>Share a car with my friends</i>		
Using less electricity			
Other ...			

Your ideas from the table above should give you some guides what steps could be undertaken in your business.

