

International Centre for Frugal Innovation (ICFI)

Leiden-Delft-Erasmus Universities (LDE)



# Frugal Innovation for Sustainable Global Development LDE Minor

Are you interested to learn more about frontier innovation thinking and practices? Do you want to explore the societal relevance of frugal innovation? Are you up for a multidisciplinary challenge? Do you want to combine theory and practice in a 12 weeks field assignment in the Netherlands or abroad? If you are answering these questions affirmatively, you are the ideal candidate for this Leiden-Delft-Erasmus (LDE) minor on frugal innovation!

## *Frugal innovation*

Frugal innovations are informed by the principle of frugality. In many philosophical and religious traditions across the globe frugality is considered an important virtue, which implies low material consumption and a simple lifestyle to open the mind for spiritual goods such as inner freedom, social peace, and justice. In colloquial meanings frugality refers to the quality of being economical with (scarce) resources and materials, being sparing. In mainstream innovation thinking and practices, that mainly build upon experiences in high-income countries, the widespread availability of material and non-material resources has always been more or less assumed. This often leads to over-engineering of products, services and

systems, whereby a solution to a problem is provided in an elaborate or complicated and expensive manner, overexploiting resources, while a simpler, more affordable solution can be demonstrated to exist with (almost) the same functionality and effectiveness, and using less resources. This solution can be called a 'frugal innovation'.

## *Potential of Frugal Innovation for people and planet*

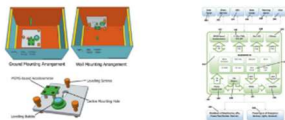
During the past decade, frugal innovation has emerged as a new discourse on innovation, challenging mainstream innovation thinking and practices in a global context in which (1) a majority of the people continues to live in contexts in which they do not have access to affordable, basic necessities such as health, housing, energy, water or food, and (2) current production and consumptions patterns, notably in the Global North, have led to overexploitation of natural resources, causing environmental degradation and climate change worldwide. Among both academics and policy makers, frugal innovation is ascribed potential to contribute to today's societal challenges such as sustainability, inequality, exclusion, and poverty, across the globe.



Leiden-Delft-Erasmus  
Universities



**A STRONG GROUND MOTION SENSOR**  
 Prof. Ravi Sankar Jaiswal, Prof. M.L. Sharma, Prof. Ashok Kumar  
 Department of Earthquake Engineering,  
 and Prof. Kamal Department of Earth Sciences



**DESCRIPTION**

**Keywords:** Low-cost accelerometer sensor, ground motion sensor, real-time ground motion.

The present invention relates to a low-cost accelerometer sensor, which is an EEW sensor. The strong ground motion sensor operates with solar light has a dual mounting facility. The sensor has inbuilt SIM card support for providing internet connectivity. It works as a simple data recorder or as an onsite earthquake early warning system or as a sensor to transmit real-time strong ground motion data to one or more servers or as a siren/relay for regional EEW system or as a combination of these. Three LED lights have been provided for quick information about the status. The sensor is provided with a web-based portal for configurations.

If going abroad, students have to finance their own travel, accommodation and living costs, unless (part of) the costs is covered by the assignment providers. The costs involved are country and context specific but between 2,500 and 3,500 Euros is a realistic estimate.

**About the minor**

This minor is offered by the Leiden-Delft-Erasmus [International Centre for Frugal Innovation](https://www.leidenuniv.nl/en/intercentre-for-frugal-innovation), and coordinated and convened by the [African Studies Centre Leiden](https://www.leidenuniv.nl/en/african-studies-centre-leiden), Leiden University.

In the first part of the minor (September-October) you will follow three courses that will introduce you to the multiple narratives on frugal innovation, applying a technological, entrepreneurial, and societal lens. You will also prepare for the group-based field assignment, which will take place between the beginning of November and the end of January, either in the Netherlands or abroad.

**What will you learn?**

In this minor you will critically explore and investigate frugal innovation discourses and its ascribed potentials. You will not only discover the various narratives on frugal innovation, you will also apply your knowledge in practice through a field assignment during which you will work with a multidisciplinary team on a real life frugal innovation challenge. This assignment allows you to combine (part of) your own study background with the knowledge and skills you acquired during the first part of the minor.

**Courses**

Frugal Innovation and Society 4 ECTS  
 Technology and Frugal Innovation 3 ECTS  
 Entrepreneurship and Frugal Innovation 3 ECTS  
 Bootcamp (Field Assignment Preparation) 5 ECTS  
 Frugal Innovation in Practice: Field Assignment 15 ECTS

**Layered admission procedure**

The minor has a layered admission procedure. A maximum of 40 students will be admitted equally divided among the three LDE universities. To allow for disciplinary diversity an equal distribution among disciplines will be aimed for.

**Registration**

Registration in eduXchange: 15 May – 31 May 13.00 hrs. 2024:

- request an eduID account
- enrol for the Minor in eduXchange
- complete a Background & Commitment form
- submit your CV

**URL links to all these documents can be found in the Leiden University Minor e-prospectus: <https://edu.nl/fv4ng>**

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Further Information on the ICFI Website:

