



# Frugal Innovation

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## Deep dive: Frugal innovation

'Frugal innovation' is a term increasingly used to describe an approach to innovation which is simple and sustainable. It grew out of experiences in locations where shortages of key resources required ingenious solutions to problems and where the simplicity of such innovations permits their widespread diffusion. For example the problem in many shanty towns and temporary settlements is how to provide light when there is rarely any electric power available and even if there were people could not afford it. By the simple use of an old plastic bottle with some liquid inside (containing bleach to keep the bottle clean) a window can be made in the roof through which light can pass. Alfredo Moser, a Brazilian mechanic, is credited with this idea which has diffused widely; over a million homes in Brazil now make use of this idea.

<http://www.bbc.com/news/magazine-23536914>

The underlying ideas of frugal innovation are to simplify products and services to the point where they are 'good enough' to meet widespread needs but not wasteful in terms of excess or unnecessary functions. The approach has become important in meeting the needs of the emerging world where large populations represent significant markets but where individual purchasing power is limited. The management researcher C.K. Prahalad wrote persuasively about this in his 2005 book 'The fortune at the bottom of the pyramid', arguing that whilst several billion people lived on incomes of less than \$2/day this did not mean that they did not share needs and desires for goods and services, only that the ways those were designed and delivered would need to change.

This challenge to innovation has become increasingly visible and important in many sectors, from consumer goods through to cars, telecommunications and healthcare. Different labels have been used – for example 'jugaad innovation' which refers to a Hindi word which means improvisation and flexibility to solve an urgent problem.

Navi Radjou gives a good TED talk on the approach:

[http://www.ted.com/talks/navi\\_radjou\\_creative\\_problem\\_solving\\_in\\_the\\_face\\_of\\_extreme\\_limits?language=en](http://www.ted.com/talks/navi_radjou_creative_problem_solving_in_the_face_of_extreme_limits?language=en)

There are several examples of frugal innovation approaches on the Portal - see:

- Crisis driven innovation
- Aravind eye clinics
- NHL Hospitals

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- Lifespring Hospitals
  - MPESA

Whilst frugal innovation is associated with emerging market conditions where purchasing power is low the potential for such ideas to transfer back to industrialized markets is high. GE developed a simple scanner for use in rural India which became widely successful in that context but which has since become a best-seller in other markets because of its simplicity and low cost. This idea of 'reverse innovation' is a powerful and potentially disruptive challenge to mainstream products and services.

[Useful sources include a NESTA report, 'Our frugal future', downloadable here](#)

And key books/websites associated with Prahalad and with the jugaad innovation approach.

[Jugaad innovation](#)

<http://www.thebopstrategy.com/>

<http://www.bus.umich.edu/FacultyResearch/ResearchCenters/ProgramsPartnerships/IT-Champions/default.htm#XMAP>

The ideas of reverse innovation are discussed in a book:

Govindarajan, V, Trimble, C, (2012) Reverse Innovation: Create Far From Home, Win Everywhere , Harvard Business School Press, Boston.