

Low-tech: which objects, which approach?

happiness crafts cycling

frugal

sufficiency DIY local

low-tech

creative activists

eco simplicity cooperation eco-housing

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FONDATION



Definition(s)

An approach to innovation within environmental constraints, incorporating social and environmental considerations, which can be applied to objects, services or systems.





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Objects / services / systems

LOW-TECH • the art of technological discernment

Strong sustainability

1 Sufficiency

Refocus on essentials and seek a technological optimum: the lowest technological intensity and greatest simplicity that meet needs with high reliability.

Collective resilience

4 Maintainability

Allow users to maintain and repair it themselves as far as possible, using standard parts and materials.

Cultural transformation

7 Empowerment

Enable as many people as possible to take ownership, giving citizens and territories greater power to act.

2 Efficiency

Minimise energy and resource use, from raw material extraction to end of life, including production, distribution and use.

5 Accessibility

Offer the greatest possible ease of use.

8 Connectedness

Encourage sharing knowledge and skills, cooperation, solidarity, social cohesion and links between communities.

3 Long-term viability

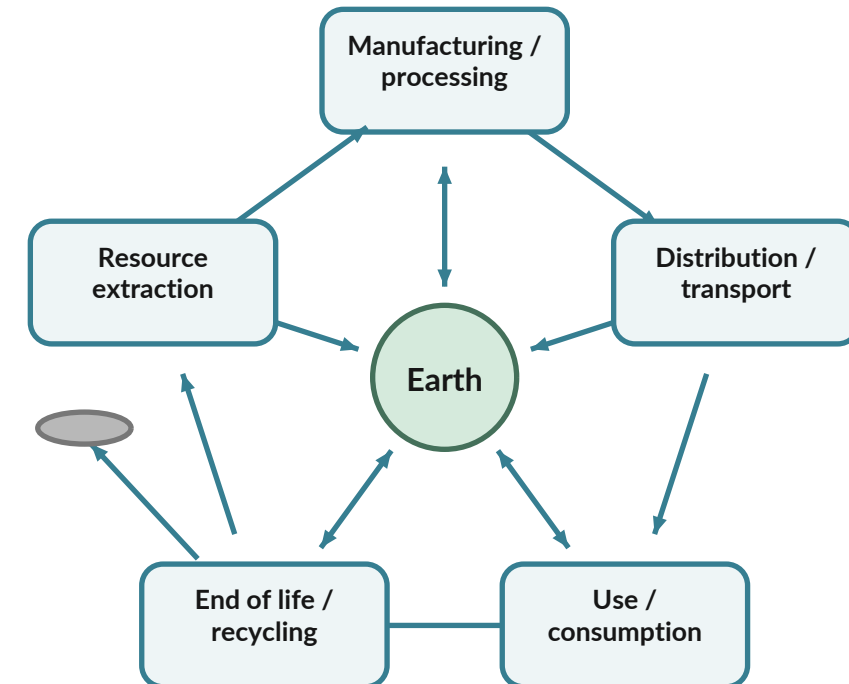
Ensure technical, functional, ecological and human viability in the short, medium and long term.

6 Autonomy

Use resources extracted and processed as locally as possible.

9 Simplification

Reduce socioeconomic and organisational complexity by reflecting on needs and vulnerabilities.





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Ambivalence and relativism

Can an object unquestionably be described as low-tech? What about carbon fibre, or even steel or aluminium?

It would be more relevant to speak of lower-tech, placing the system along a technological continuum.





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Relativism across time and place

A system considered obsolete today may once have been at the leading edge of the technological continuum.

One part of the world may have developed technologies far ahead of those in neighbouring regions.

The Romans had civil engineering technologies whose sophistication was unmatched elsewhere.

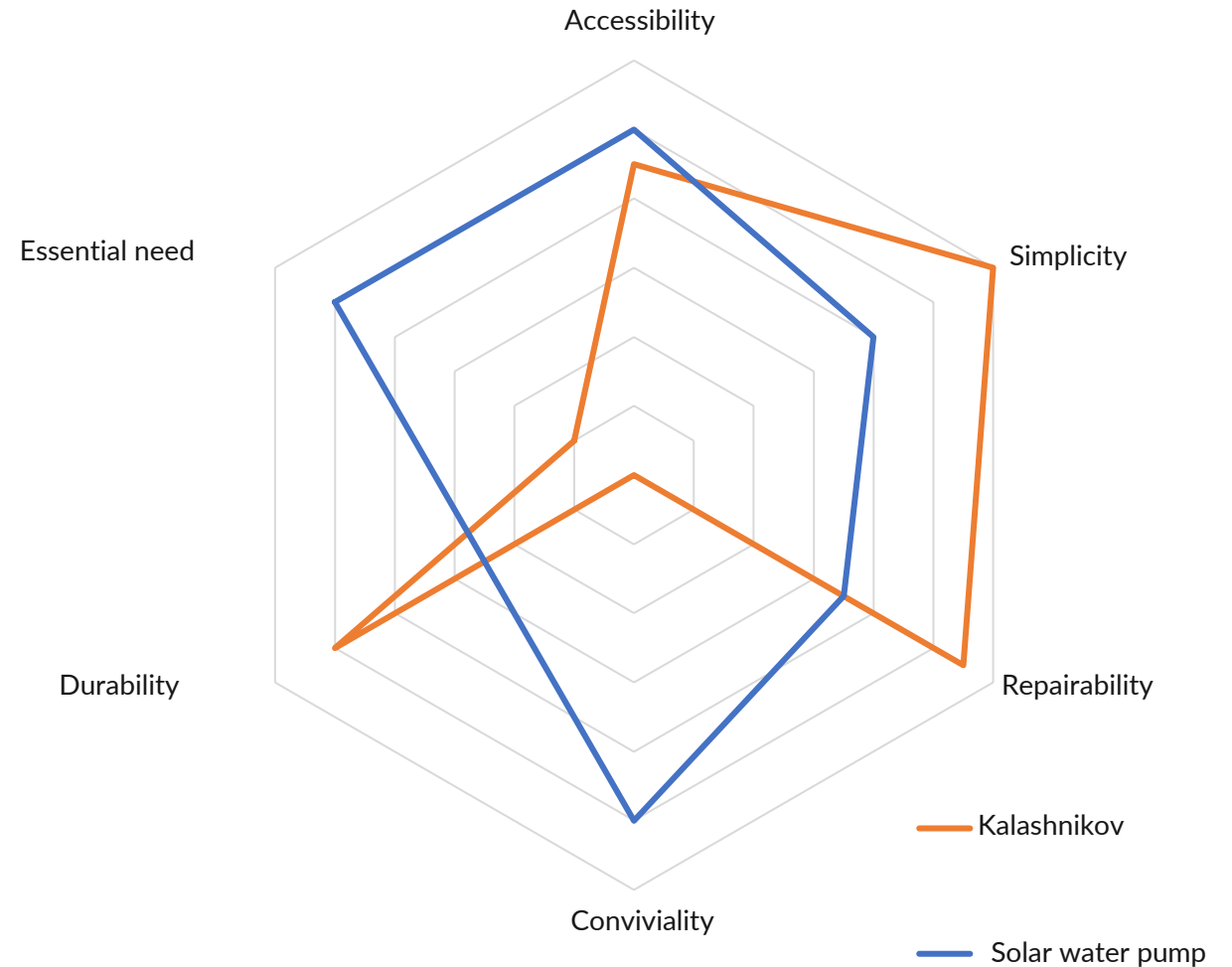




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Low-tech systems

With the same resources, it is often possible to design different objects with specific characteristics. A governance process is therefore needed to allocate resources and discuss which characteristics to prioritise.





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What democratic trade-offs?

Sometimes two objectives cannot be pursued at the same time because they may contradict each other.

Should we favour a system that lasts or one with a lower environmental impact? Could the trade-off differ from place to place, depending on local environmental degradation or other factors?





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Accessibility

Fewer machines does not necessarily mean lower costs: machines are simply replaced by human labour, which has a cost.

Moreover, durability requires better-quality materials.

Accessibility also means being able to find the necessary materials locally.





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Simplicity

Is permaculture simple? Not using machines does not remove the need for expertise and knowledge.

In fact, the more low-tech a system is, the more it requires a shared scientific culture.

Simplicity also enables techniques to become commons and to be passed on within and between communities.





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Repairability

A low-tech approach must consider repairability from the design stage. But should the object be repairable by its user? By the local community? By a specialist? Will repairs require many resources? Once the object can no longer be repaired, is it easy to recycle?





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Conviviality

A convivial technology is one that is not indispensable, expands people's scope for action and does not subjugate others through a monopoly.

Sparta's military technologies subjugated both its neighbours and the Spartans themselves, as they became increasingly dependent on military force, and on other city-states, to suppress the helots' rebellions.





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Essential and non-essential needs

Given the same resources, we should discuss not only the system itself but whether a particular use of it is essential or non-essential.

Designing a device to provide hot water for a home would, in principle, take priority over using that same device to heat a swimming pool.





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Innovation and low-tech

Innovation has a place in a low-tech approach, but it is of a different kind.

Its purpose is not to generate monopoly income from innovation, but to meet existing or new needs and spread technologies so they become commons, particularly to address collective problems.

This raises the question of profit-generating ownership, especially patents.





Which ways forward?





Face structural, cultural and financial obstacles, individually and collectively, and develop effective strategies to overcome them.





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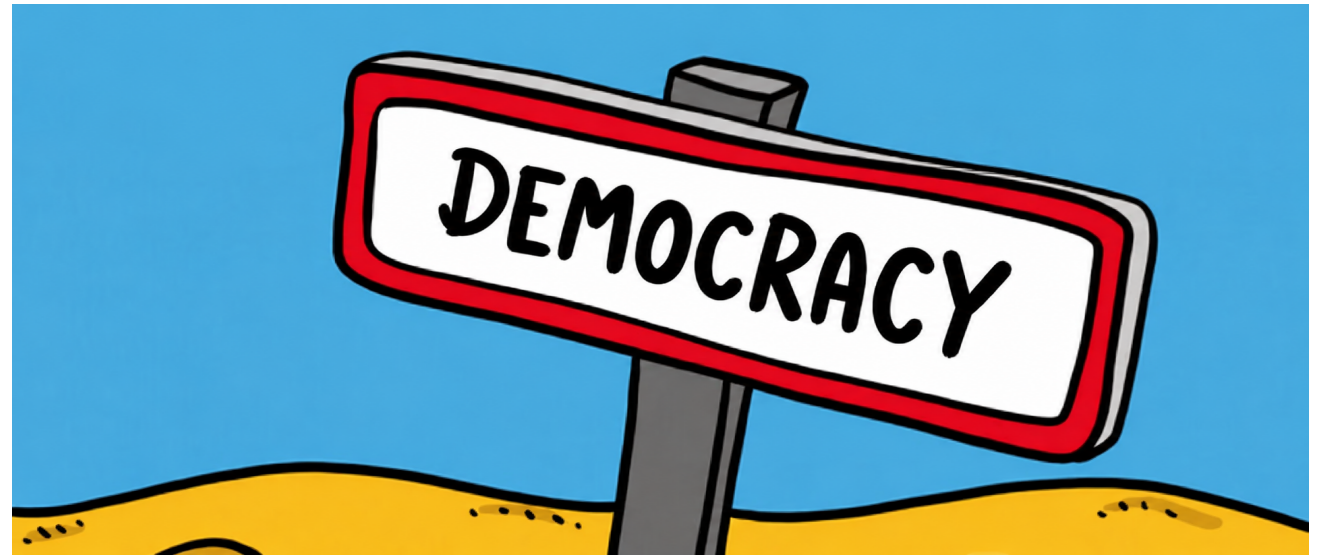
Develop and support a local, non-market economy which, freed from the imperative of profit, can design objects, services and systems consistent with a low-tech approach.





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Rethink and relocalise economic governance to prioritise long-term investments compatible with the environment's physical limits and sustainability, alongside other objectives such as equality.





What are your ideas?

