



Our democracies have bugs, lack user-friendly features and under-perform. Above all, they are in need of major upgrades. Political and economic systems are failing us because they are structured vertically through top-down hierarchies. Instead we need to adopt a new economic system, driven by principles related to "act local, think global" philosophy. In this stimulating opinion piece, Lorenzo Fioramonti, director of the Centre for the Study of Governance Innovation, in South Africa, shares his vision about creating a highly integrated horizontal economic system.

The Linux approach to human and ecosystem wellbeing



Democracies are in dire need of an upgrade to deal with social complexity

Current versions of democracy are a bit like the DOS operating system in the 1980s. In the best cases, they may hold the promise of a more user-friendly Windows beaconing on the horizon. But forget about a participatory, interactive Linux system. Our democracies have bugs, lack user-friendly features and under-perform. Above all, they are in need of major upgrades.

Top-down is passé

Governments are unable to address continuously evolving challenging conditions, while the economic system reinforces imbalances, proving completely inadequate to innovate. This is the very system deciding what products and services to deliver, by whom, when, using what resources, producing what kind of waste and for whose benefit.

The failure is so severe that within this century human civilisation and the ecosystems are at risk of substantial degradation, if not collapse. Scientists have warned that the [sixth mass extinction](#)—the fifth killed the dinosaurs—may have already started.

Political and economic systems are failing us because they are structured vertically—through top-down hierarchies. Not only does this make them unaccountable, but it makes them inefficient at dealing with social complexity. Vertical structures are also unstable and susceptible to cascading failures; top-level dysfunctions can easily propagate through the system in a domino effect. Think of the 2008 financial collapse, for example.

Nature's way

Fortunately, nature shows us a way forward. Take, for example, the human immune system. It is an intelligent decision-making system, replete with sensors and signal processing mechanisms. Decisions are typically made at the local level, with meso- and meta-level coordination occurring via a limited number of shared, distant interactions.

This type of complex systems exist throughout biology and ecology. All of them have been fine tuned by eons of evolution to a point of optimum stability and function.

Anthropomorphically speaking, “act local, think global” is a recurring theme among biological complex systems. In terms of decision-making, these systems are deeply democratic and consensus-oriented. Decisions benefit both the parts and the whole. Important: decision-making is collaborative, cooperative, and inclusive—essentially all cells send signals to their environment and receive signals back too.

Nature's complex systems have already inspired a host of innovations designed to address the shortcomings of existing political and economic models. Structures of any scale, ranging from local groups, cities, organisations, and some progressive government agencies have already begun to experiment with complexity-oriented solutions. These include participatory budgeting, local and crypto-currency systems, public banking, buy-local and invest-local programmes and peer-to-peer lending. Others pursue initiatives such as smart cities and villages, open-source development, open-design, open-data, farmers markets and small organic farms, cooperative and socially responsible business models as well as crowdfunding.

Horizontal governance

We need to move beyond our vertical governance structures, which force us into obsolete and wasteful economies of scale, output-oriented growth and trickle-down development. Instead, we

need to build a highly integrated horizontal economic system. This approach would be driven by localised forms of participation and championed by small businesses.

International indicators, such as the recently launched [UN Inclusive Wealth Index](#), confirm that human capital is the most valuable resource for development in the 21st century. Efficiency in the horizontal economy is therefore about adapting to local needs, valuing people and building networks of small scale economic activities in as many fields as possible.

The horizontal economy will blend boundaries between producers and consumers ('prosumers'). They will be driven by integrated production solutions, smart transport and distribution system, new approaches to the care economy (healthcare, education, etc.), community development and resources fostering--as opposed to resources extraction. A variety of activities in personal services industry can also be added to the list.

We now have technologies, which support economic integration through horizontal scaling. That way, local initiatives can still interact regionally and globally. For example, the diffusion of [local](#) and [complementary](#) currencies--most of which are digital--spans from small to medium-size European towns to rural villages in Africa.

Further recent developments in new technologies may very well provide the type of opportunities for the localisation of highly integrated industrial systems. That's the case with 3D printing or energy production through small-grids powered by renewable resources. Technology experts, such as [Jeremy Rifkin](#) and [Chris Anderson](#), believe that this is likely to constitute a new industrial revolution structured on lateral power.

This approach is best summed up by [Joe Kraus](#), one of the leaders of the dot.com boom of the late 1990s. In his views, the availability of new manufacturing technologies makes the shift from the vertical to the horizontal economy easier than ever. This is because they help diversify production and multiple markets for local producers. "The 20th century was about dozens of markets of millions of consumers," he was once quoted by a [BBC magazine](#), "The 21st century is about millions of markets of dozens of consumers."

In the end, what the horizontal economy aims to pursue is a system of distributed governance, reinvigorating citizens' inputs into both political and economic processes. In a sense, it is the Linux approach to human and ecosystem well being.

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