

What do “ants, Galileo & Gandhi” have to do with business?

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You are probably wondering what on earth have “ants, Galileo and Gandhi”¹ to do with business. The metaphor behind “ants, Galileo and Gandhi” provides a powerful, and yet simple, insight into how to develop a paradigm for ecological business. The simplicity arises from the fact that the wisdom required to develop ecologically sustainable societies, including business organisations, already exists. The simple message that is shared in this article is especially valuable at a time when Mauritius is gearing up for its National Cleaner Production Centre.

Towards a participative business model

The template for running a business can be summed up by the Policy-Strategy-Resource-Tactics (PSRT) model. This model is an extension of the PSR troika outlined by Davies.² *Policies* outline the organisation’s objectives, thereby prescribing its operational domain.³ *Strategy*, in terms of it being a corporate statement of intended action, is a design or plan of how the goals, as articulated by policy, will be achieved. Strategy in this sense addresses the execution of policy. Without *resources*, strategy cannot be implemented and it remains a mere intention. *Tactics* refer to the details of implementing a strategy and are expressed in action plans. At this operational level, planning for action, organisation of resources, and control measures (feedback and feed-forward) are undertaken. Leadership is crucial at all levels of the PSRT model.

The PSRT model is still valid in our quest for ecological sustainability. However, the embodiments of Policy, Strategy, Resource and Tactics must be defined in new and creative ways for sustainability. The issue at stake here is not whether you can reengineer current processes. Rather, the question is whether the way business is conducted and how the economy works can be reinvented. The model in Fig. 1 illustrates a five-step organisational decision-making model for achieving sustainability.⁴ In this model, the organisation is treated as a sub-system that operates and interacts within a web of other sub-systems

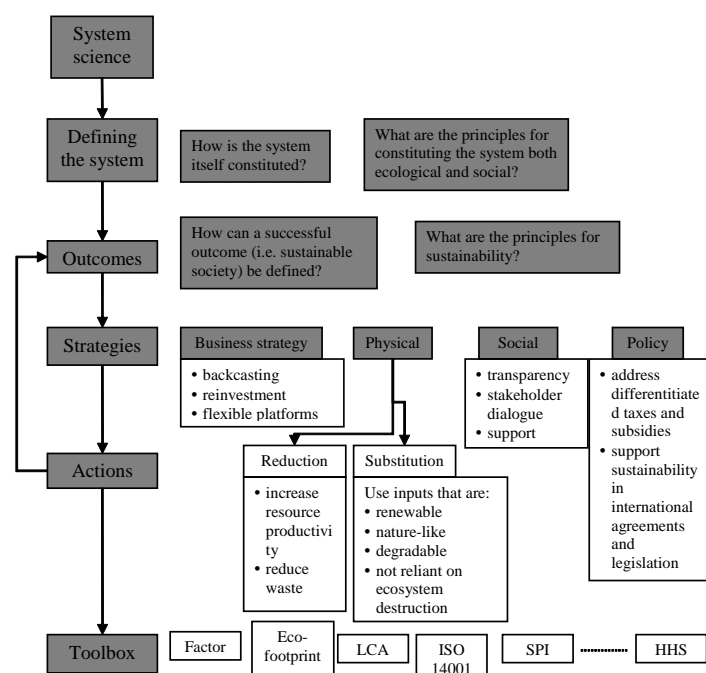


Figure 1. Overview of an ecologically sustainable development approach for business in the new paradigm.

¹ The idea for this article arose while reading *Ants, Galileo, and Gandhi: Designing the Future of Business through Nature, Genius, and Compassion*, Ed. Sissel Wage (Greenleaf Publishing, Sheffield, UK, 2003).

² Warnock Davies, *Understanding Strategy, Strategy & Leadership* 28(5), 25-30 (2000).

³ Policy should precede strategy. It is a mistake to suggest otherwise, as is quite often the case in the literature.

⁴ K.-H. Robèrt et al., *Strategic Sustainable Development: Selection, Design and Synergies of Applied Tools*, Journal of Cleaner Production 10(3), 197-214 (2002).

and systems. The transition to the new business paradigm that is grounded in the principles of ecological sustainability requires that the system first be defined followed by an articulation of the principles by which the outcomes and success of the system are to be measured.

The grouping of “Ants, Galileo, and Gandhi” offers a metaphor for generating a new perspective on the dynamics of business. This metaphor provides a clear insight into how the new business paradigm will be achieved: mimic nature by operating like ants, innovate like Galileo to catalyse a paradigm shift, and lead with compassion like Gandhi.

Operate like Ants

Ants symbolize the lessons to be learned from Nature and the dependence of individual beings on broader, complex systems. Individual actions in an ant colony occur within the context of complex dynamics. The impacts of one ant’s work are most accurately understood within the efforts of the entire colony to build an adaptive and resilient community – i.e. for the common good of the colony that simultaneously fosters better chances of survival of individual ants. Life as it is today has evolved over 3.8 billion years. The intricate, synergistic, adaptive and resilient web of life that has emerged over this time period provides the template for designing ecologically sustainable social systems, including business organizations and economies. The Andean shaman will say, “Take refuge in Nature and you will find that there is nothing to look for, that everything has always been there, waiting to be discovered”.⁵

The transition to sustainable living should, in principle, be clear and simple since the wisdom is given to us by organisms, like ants, that live in mature ecosystems.⁶ These organisms (1) use waste as a resource, (2) diversity and cooperate to fully use the habitat, (3) gather and use energy efficiently, (4) optimize rather than maximize, (5) use materials sparingly (only what is needed), (6) do not foul their nest (i.e. pollute their habitat), (7) do not draw down on resources (i.e. maintain natural capital and ecosystem services on which their existence hinges), (8) remain in balance with the biosphere, (9) run on information shared through positive and negative feedback loops, and (10) shop locally (this is the most energy efficient strategy). It is good cause for concern that most current business practices and economies do the exact opposite. One major problem is that our economy performs linear transformations of materials and energy into products, whereas Nature’s ways are cyclic. The lessons learned from ants provide a way to harmonisation with Nature, and show what the characteristics of the prototypical sustainable business will be.

You may be thinking that all of this is a Utopian nonsense. Of course not! The successes of Interface Incorporated,⁷ the industrial symbiosis park at Kalundborg, Denmark (see below), and the city of Curitiba⁸ in Brazil are glaring examples that echo Nature’s principles of operation.

Innovate like Galileo

A new perspective on the economy and businesses must be based on continuous questioning, theorizing, and testing with Galilean rigour. Since sustainability is a state that we wish to achieve, our quest for ecological living should aim to build adaptability and resilience in social systems. A crucial aspect of that innovation will no longer be driven by the past, but attracted by the future. This future will embrace the basic tenets of sustainability outlined above. Viewed as

⁵ Luis Espinoza Chamalú, *The Gate of Paradise: Secrets of Andean Shamanism* (Gateway Books, Bath, UK, 1998).

⁶ Janine M. Benyus, *Biomimicry: Innovation Inspired by Nature* (Perennial, New York, 2002), pp. 274-275.

⁷ *Ants, Galileo, and Gandhi*, pp. 17-30.

⁸ P. Hawken, A.B. Lovins and L.H. Lovins, *Natural Capitalism: The Next Industrial Revolution* (Earthscan, London, 2001), pp.288-308.

emerging properties within the broader matrix of ecology and society, ecologically innovative business practices and a post-growth economy will be fostered by five pre-conditions:⁹

1. *New voices* – Top management (and policy makers) must give up its monopoly on strategy creation. Stakeholders, in all their diversity, will contribute to strategy creation, making it a deeply participative and democratic undertaking. This element spells out what Einstein meant by “The significant problems we face cannot be solved by the same level of thinking that created them”. This is sufficient reason for “gestalt switch”;
2. *New conversations* – Opportunities for new insights are created when one juxtaposes previously isolated knowledge in new ways. For instance, can waste produced by one process be used as input for another process? Businesses will complement each other and they will share resources. A text book example is the industrial symbiosis at Kalundborg, Denmark, between the Statoil refinery, Asnaes power station, Novo Nordisk pharmaceutical plant, Gyproc plasterboard factory, local community and local farms¹⁰;
3. *New passions* – Unleashing the deep sense of discovery that resides in almost every human being, and focusing that sense of discovery on the search for sustainability is another prerequisite. Individuals will embrace change when they are empowered to contribute to this unique and exciting sustainable future;
4. *New perspectives* – Everyone in the business organisation will have to search constantly for new ways that help the company to re-conceive itself, the value it delivers to society, and the way it defines its competitors. The following questions will have to be at the forefront of strategy formulation: Does it (the business) use only the energy it needs? Does it run on renewable energy? Does it fit form to function? Does it recycle everything? Does it reward cooperation? Does it bank on diversity? Does it utilize local expertise? Does it curb excesses from within? Does it tap the power of limits?
5. *New experiments* – The manifestation of creativity in Nature happens at the intersection of chaos and order. Innovative strategies for sustainability will happen at the junction of concepts like emergence, self-organization and complex adaptive systems. The new experiments will be part of living and conducting business ecologically, where learning will be characterised as experiential.

Lead like Gandhi

Yet collaboration and innovation alone are the ingredients of many unsustainable businesses. Further, mimicking Nature in itself does not necessarily lead us to sustainability. Remember that the first airplane was built by replicating the flying action of birds. Today, the modern aeroplane is one of the most polluting means of travelling. The distinguishing element needed for ecologically sustainable businesses is best expressed through the determination, focus and compassion of Mahatma Gandhi (and other leaders), who succeeded in bringing about fundamental shifts in society. The transition to sustainability will require similar bold visions and uncompromising compassion for all life. We need a change of heart, whereby our actions will be driven by an ecological ethics grounded in equity and fairness, rather than the maximization of individual utility.

Compassion is also a pre-requisite for answering “*Does the business tap the power of limits?*” honestly. Our current economy and businesses have taken the constraints and limits posed by Nature as a challenge, rather than a cornerstone for designing social institutions ecologically. In the name of “progress”, the *modus operandi* has been to tame and engineer Nature. Only compassion for Life can curtail this “frontier mentality”.

⁹ Gary Hamel, *Strategy Innovation and the Quest for Value*, Sloan Management Review, Winter 1998, 7-14.

¹⁰ *Eco-industrial Strategies: Unleashing Synergy between Economic Development and the Environment*, Ed. Edward Cohen-Rosenthal (Greenleaf Publishing, Sheffield, UK, 2003), pg. 19.