

"Sustain-Earth.com" is about to seek and to assist implementing appropriate approaches, on *individual, group and collective* levels, for meeting challenges in different moments, stages and contexts of our lives. Whatever we do, whenever and wherever we are at home, community, school, work, factory, farm and free time. *It is about exploring, processing, using and reusing available, yet limited, natural resources on our planet to serve and get served through manageable, traceable and coupled interactions within and between families, communities, institutions, companies, nations, across political and geographic boundaries.* It is about synchronizing our awareness, relations, needs, consumption and technology with natural processes on the planet and associated flow of essential life drivers, in particular, air, water, energy and nutrients.



The planet with its unique, rich and diverse biosphere, lithosphere, hydrosphere and atmosphere has complex evolution where these spheres served each others, and all existing living structures, through tight time-space chains of continuous interaction within and between each-other and the rest of the universe. This long-standing balance should continue in tact and in harmony.



"Sustain-Earth.com" is about how to understand all life forms in such a way that we can integrate and manage our human resources and knowledge in best possible means. *The collapse of several life phenomena on our planet as a result of "business as usual" made it IMPERATIVE to consider "Sustainability Thinking" in economy, investment, technology, industry, production, consumption, research, education, and service sectors.* Capital investment is basic in any successful business and it is even essential for any business to survive.



If so, how can economists and politicians explain maintaining the life on our planet through consuming its capital resources? We can't sustain life on our planet through unlimited and blind competition on consuming the very source of its existence, i.e. *natural capital resources*. Life on our planet didn't start "yesterday" and it shouldn't end "tomorrow". We know for sure that "yesterday" was very far away, some billions of years ago. We started, also, to understand that "tomorrow" seems not to be very far away as we thought. We are even in hurry to end our day and to keep it short in rush for "tomorrow". "Homo sapiens" developed cultures, languages and useful lithic technology through successive stages already 50 000 thousands years ago.



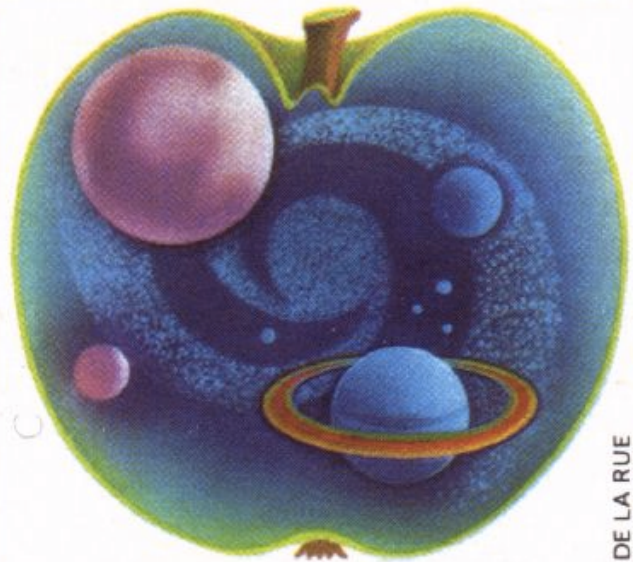
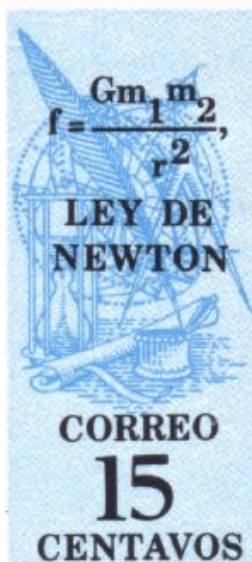
Sustain-Earth.com is about understanding assessing the pitfalls and drawbacks of previous sciences and technologies. Through observations and knowledge “Homo sapiens” mastered their existence through progress in science and technological inventions. Major transformation to new industrial eras took place, i.e. the First and Second Industrial Revolutions. These revolutions are most important in the history of humanity since domestication of animals and plants.



These changes went in different stages. The first was rather slow and lasted from the Egyptian civilization and the Arabic contributions to western science and technology (mathematics, astronomy, medicine, architecture, navigation, geography and horticulture) to one and half century before the First World War.

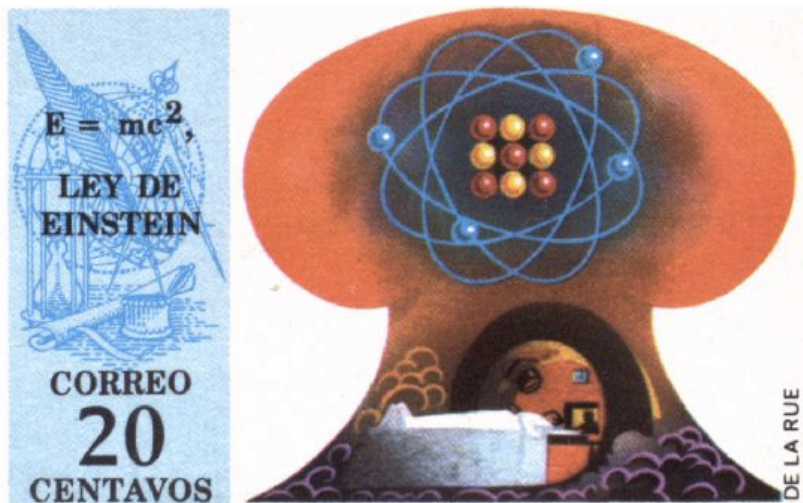


To the left. Al Khwarizmi, Iraq (c. 780 – c. 850), lived in Baghdad and worked at "House of Wisdom". Persian mathematician, astronomer and geographer worked on Hindu-Arabic numerals, introduced decimal number system to Western world. He is considered the original inventor of algebra and its propagation into European mathematics. Algebra is derived from the Latinization of "al-jabr" part of the title of his famous book where basic methods and techniques for solving equations were given.



They marked transitions to manufacturing processes in the period 1760-1840 and thereafter until the WW-I with important technological and economic growth. *The essence of the major industrial transformation in this period of human history is the discovery of the importance of water and fossil energy "coal and oil".* The First Revolution centred on steam and iron technologies and textile production while the second revolution revolved around steel, railroads, electricity, internal combustion engine, electrical power generators and chemicals and where more science-based.

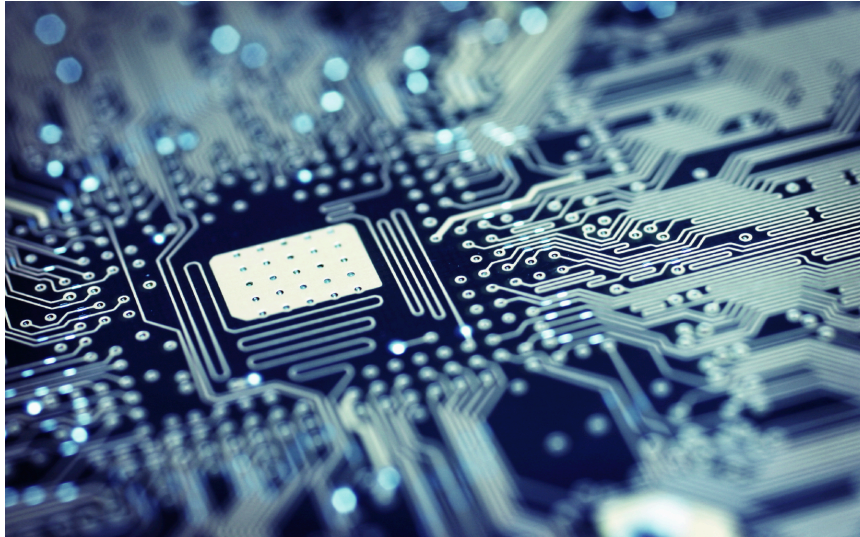
Sustain-Earth.com is about transformation towards Sustainable Technology. For the first time in human history hand production went over to machines. Water and Fossil Energy “coal” were used to produce mechanical power, e.g. steam-powered engines, ships and railways as well as many machine and steam-powered factories. Another overlapping stage began with the discovery of oil, electricity and electric motor, already in 19th century. This has fuelled fast and enormous advancement in science and technology in the 20th century, e.g. nuclear power, transistor and computer technologies.



Parallel to this, extensive energy-consuming industries and intensive growth in world economy, especially after the Second World War, caused accelerated pressures on water, fossil energy “coal and oil” and other natural resources. These pressures and the associated degradation of environmental and climatic conditions, as consequences of consumption, waste and pollution, gradually brought us to critical instabilities that are currently experienced by many of us. We started to realize that we are not successful to maintain the “dynamic equilibrium” required to keep life in a sustainable manner. Though there were enormous observations and indications of increasing number of environmental and climatic threats, we became suddenly aware of many accelerating defects on how we are miss-managing the life on our planet. In a narrow period of time, less than one human generation, we were overwhelmed with huge evidence that we are moving steadily in the wrong direction towards total collapse due to depletion of natural resources and severe pollution of water, air and soils.



Sustain-Earth.com is about making the third industrial revolution a reality. *The very question facing us now and in every moment is it too late to re-direct our ship?* Whether the answer is, yes or no, facts are still accumulating and we have to do something. *It isn't any longer what mother Earth can do for us, but it is what can we do for mother Earth to survive.* It is fine to have amazing ICT-technology, fast trains, safe and organized air-traffic, and other high-technology supported-industries that make life easier, enjoyable and more comfortable for some of us.



Nevertheless, it is an inconvenient truth to know that the majority of mobile- and ICT-users, and those feeding and serving us to enjoy and benefit from the whole width of technology, don't have access to proper education, sanitation, health, housing and other essential life-services including affordable access to clean water, energy and safe environments.



There are many gaps and missing links as well as weak, in-effective and improper vertical and horizontal communication in our societies with increasing fragmentation in strategic decision-making and contradicting interests among stakeholders in public and private sectors. *These drawbacks created an accelerating drift, if not isolation, of political systems from reality on the ground.*



Knowledge and Transfer-of-knowledge are fundamental instruments to make use of the natural resources on our planet through cross-fertilisation of cultures and civilizations. Through out human history these instruments have been essential drivers for progress. In this context, “Homo sapiens” were not always successful to implement and use peaceful means to benefit from these instruments and they were ready to go to wars and military conflicts for “progress through force” rather than “progress through understanding”. The third industrial revolution with diverse new solutions and approaches, however, is just around the corner. With convergence of communication technology “ICT” with renewable energy systems and smart management of natural resources “Homo sapiens” have emerging possibilities for major transformations towards sustainability. The new forms of Internet Communication and Information Transfer are excellent media for organising and managing the complex cross-fertilization of civilizations and cultures.

“Sustain-Earth.com” is about using knowledge to bridge and repair vertical and horizontal gaps in societies in order to counteract the existing fragmentation in “within” and “between” sector- and stakeholder-interactions.



It is about creating coherent societies with coordinated and effective channels for cooperation on all levels from essential building units in the society “individuals” to high-level key players and decision-making institutes, both nationally and internationally. It is about promoting motivation and innovation at the very base of society to its very top to enhance engaging citizens in local, national and global affairs. Existing political management policies are hierarchy-driven systems supported by conservative “Top-Bottom” scenarios. While this regulates “rights and duties” of the “Citizen” towards the “State” in terms of “production-consumptions” policies, they neither shape the citizen nor tune the systems to actively and effectively protect natural resources in terms of “saving-protecting” natural resources, i.e. increasing awareness on all levels on “consumption versus protection” rather than “consumption versus economy”.



Photo: Teddy Thörnlund, Ångström Lab, Uppsala University

Enhanced and effective engagement of all society members in “consuming-saving-protecting” policies requires gradual transfer to dynamic and interactive “Bottom-Top” strategies. It is not any longer about what the society can make for the citizen, through hierarchy-driven policies, but rather what the citizen can do for the society through democratic-driven developments where knowledge is the only lasting guarantee for shared-responsibility.



Shared responsibility “citizen-society and society-citizen” in a knowledge-based society is imperative in an ever-increasing pressure on natural resources where citizens are the primary consumers. “Citizens” and “States” are one and the same-thing and that should be the core of constructive, transparent and corruption-free world.

