NEXT DESIGN PERSPECTIVES 2019

By Andrea Illy, Chairman of Altagamma

Sapiens is only 200.000 years old and it represents only 0,05s - if we consider the Earth age as one day - but in a fraction of this time we have been able to create our own era, *Anthropocene*.

Anthropocene corresponds to only 40 nanoseconds (billions of seconds), which is a time in the same order of magnitude of a nuclear explosion.

Since 1850, year of the first application of fossil fuels, which triggered the first industrial revolution, thanks to an extraordinary acceleration of our *fundamental human activities*, our population grew 11 times (cagr 1,4%) and our life expectancy became 15y longer (~1/5y).

Fossil fuel consumptions grew enormously (cagr 7%) and the land covered with forest decreased by 1/3 (cagr -0,2%). In the last century, this caused a 40% increase of GHG (cagr ~0,2%), which clearly shows us that we exceeded the capacity of our Planet to "digest" the byproducts of combustion. We are simply burning too much, and we can't continue at this rhythm, or global warning will become more and more devastating, but also irreversible and self- powered. While deforesting and emitting GHGs, we might have also destroyed up to 40% of natural biodiversity, at a rate which is 100-1000 time higher than normal and increased plastic production and consumption 300 times (cagr 9%).

The human activity responsible for these balance sheet has been *extractive* production, with the exception of one: more or less one century after the beginning of *Anthropocene*, around the end of 1950, *Sapiens* made the first *generative* production, with the invention of the chip.

Already now, thanks to artificial intelligence, *Sapiens* can process amounts of knowledge which would be otherwise be impossible to access. Within the next two decades the total amount of chips will surpass the number of human neurons and bioinformatic will create the first generation of *biorgs*, which sooner or later will certainly develop the capacity to self reproduce. This time has been named *singularity*.

The essence of my message is extremely positive: not only the environmental damage we created during *Anthropocene* is relatively contained, but it's highly reversible also thanks to a kind of new semi-organic species we created…

We are talking about the highest intelligent human activities: *regenerative* production

It means using the waste of our past extractive production as resources for the new regenerative production. Are we becoming scavengers? Yes, scavengers of a very sophisticated kind. For example, the excess of heat caused by global warming is a kind of 'secondary energy' which can be used instead of extracting, while cooling the planet at the same time. This is already being done at microscale level. Thanks to illimited and free solar

energy, atmospheric carbon will become the new well, and carbon will also boost its mineral applications with new materials like graphene. We can already design a machine for that…

Ladies and Gentlemen, this is what the most influential scientist and writer since Charles Darwin – James Lovelock, the father of the theory of Gaia – described as the new era of *Novacene* in his last book.

Novacene requires us to change the way we think and design:

- We have been the effect of our Planet *abundance*, but now we reached the limit and abundance is becoming *scarcity*.
- We cannot think linearly anymore, because everything is complex and most of the time chaotic. Even the paradigms of science will have to evolve from *deterministic* to *probabilistic*.
- We cannot be *incremental* anymore, relying upon technological roadmaps.
- We need to invent new un-imaginable technologies, new machines, new ways to regenerate resources in a circular way, so that resources become infinite.

That's *radical thinking* and creativity and that's the reason-why of NEXT DESIGN PERSPECTIVES. Moreover, this this also the role of industry, as the ultimate responsible of building the society.