Coping with the monster that has risen up over its creator: The hi-tech sector as a solution to the global crisis

Mobilizing the hi-tech sector to ensure a sustainable world by solving the problems caused by the development and use of modern technologies

Summary

In 2015, the General Assembly of the UN published a list of 17 interlinked Sustainable Development Goals (SDGs) related to the protection of the environment and human society https://sdgs.un.org/goals . The **mission** was to find an efficient way to address and solve environmental problems within the framework of an urgent last-minute attempt to save our planet before it is too late.

Since then, many efforts have been made in the last seven years to force governments to take the necessary actions. Many objectives have been defined and set. However, execution **has not** come close to satisfying the needs nor meeting expectations.

These disappointing results can possibly be attributed to the built-in obstacles that exist in democratic regimes (and, of course, in non-democratic regimes) when trying to apply such operational approaches, a result of national and international political constraints that inhibit asynchronous and non-coherent global actions.

The absurdity is patently clear already: the moment that governments and their agencies will finally see fit to become mobilized and take action, that is to say, that moment when everyone worldwide will be fully aware of the acute problems that threaten our existence, will turn out to be one moment *after* the critical moment. **By then, it will already be "too late."**

"We cannot solve our problems with the same thinking we used when we created them"

~~ A. Einstein

In the hope of returning the mission to a proper, efficient and feasible path, this paper presents a different approach: **The Private Hi-tech Sector Initiative, with the endorsement and support of governments.**

Members of the private hi-tech sector – supported by national and international governments and by government agencies – will be mobilized to assume the lead and execute the mission in a coherent and synchronized manner

The actors: the hi-tech sector. We believe that the hi-tech sector has the necessary qualifications to cope with the myriad of problems and the ability to accept responsibility for this mission. This is because:

- It is a well-defined sector with an extensive common denominator across many countries globally.
- It is especially conscious of the fact that most of the environmental problems are a result of the very same technologies developed by them, paradoxically, even for good and humanitarian purposes.
- Although in relative terms the hi-tech sector is a small percentage of global industry, in absolute terms it comprises many people spread over many countries.
- In almost every country, the hi-tech population and company headquarters are in specific, dedicated areas and are in close proximity to one another.
- Hi-tech personnel are generally highly educated, motivated, skilled, and determined. They are accustomed to working in a team dedicated to accomplishing a well-defined mission. When motivated and managed appropriately, they are ready and able to contribute coherently and can generate a powerful force.

The support: government bodies. To meet the goals we are proposing, governments and government agencies will have to:

- define specific objectives to relay to the IT sector
- support them by ensuring appropriate regulations and legislation
- offer attractive incentives to obtain operational coherence in the desired direction.

Background

The problem

It is a fact that technologies **develop exponentially**. Without doubt, the number of new technologies developed within the last decade is much higher than the number of technologies developed within the last century. However, the evolution rate of nature and humankind and is much slower. The consequence of this is that a **gap** has developed

between the two that, and not surprisingly, this gap is also growing exponentially. This fact is part of our contemporary lives, but the time has come to seriously consider the manifestations resulting from this, because the rate of technological growth has now escalated to levels that are so high that they threaten humanity.

On the one hand, we human beings are happy to exploit these technologies to raise our standard of living and improve our wellbeing. On the other, the sheer number of products and their accompanying environmental impact, whether from the manufacturing processes or the mountains of waste they generate, are having an **adverse and seemingly irreversible impact** on the environment. We can already see the frightening results. Many areas of the environment have already been damaged beyond belief, and if appropriate measures are not taken, this negative impact may spiral out of control.

One change that already seems to be in a cyclic spiral is that of **climate change**. Other environmental disasters that are in progress include escalating **pollution**, the mounting destruction of a multitude of **ecosystems** and natural habitats, an increasingly rapid **extinction** of flora and fauna, disruptions in the **water cycle**, and more.

What has been attempted

Many attempts have been made by the centralized UN organization and/or national governments to halt these disastrous events, unfortunately without too much success. The reason for this may be because when the execution of any program is placed in the hands of any government sector, political constraints become major obstacles.

Despite real efforts, the damage is intensifying.

Alternatively, many organization have tried to tackle the problem(s) by raising awareness about the severity of the various problems and hoping that organizations, institutions, government bodies and individuals will mobilize to effectively join forces. However, this effort has not yet proved fruitful: it does not seem likely that this sort of action will prove coherent enough to engage and organize the many entities required to make it work.

The sad truth seems to be that by the time everybody becomes mindful enough of the damage to be willing to join forces, effectively and generously, it will be too late to repair it!

A different – non-governmental – approach:

the Private Hi-tech Sector Initiative

Now is the last moment to act! A different approach is needed. We, the world population, must recognize the failure of the attempts made by national governments to overcome the dangers associated with humanity's wanton progress. The time has come to recognize that these critical problems cannot be solved by trying, again and again, to depend on government-sponsored solutions. This has been tried – not once, not twice, but many times – and the result has been a resounding failure.

A different, novel approach is called for, and once designed, it must be adopted and implemented as quickly as possible.

Psychological/social aspects

It is a logical and natural move to use the technologies and related bodies involved in the development, utilization and commercialization of those very self-same technologies, to solve the problems created by them. In other words, makes sense to employ technology in this bitter war to modify existing technologies and ultimately develop novel, advanced technologies especially for environmental protection based in the 17 SDGs defined by the UN.

The worldwide hi-tech community, although a relatively small slice of the total global industry, is very significant on an absolute basis. It is estimated that this community will be much more powerful to impose and make the expected changes because its profile is characterized by relatively young, skilled and educated people who have already demonstrated impressive achievements. These people are already aware of environmental problems outlined by the SDGs and will be motivated to influence others and take an active part in coping with this mission.

Our Vision

To see a stop to the damage presently being caused to the environment, including a halt to the process of climate change.

To see the environment restored as much as possible given the damage already sustained.

To ensure the complete cessation of all processes that have a negative effect on the environment.

Mission and Objective

To elaborate, analyze, and **propose** a new and practical **approach** and rationale for a **Private Hi-tech Sector Initiative** and provide appropriate arguments and realistic validations to show how this approach will prove more effective and more efficient than past attempts.

To **define** who are the **candidates** that will be able to undertake this mission and have the power and capability to work in a coherent way to efficiently cope with and overcome the problems.

To **outline** a feasible **structure** for the initiative: What will be the guiding principles? What is the structure and realistic operational mode of such an initiative?

To **develop** and coordinate an appropriate **metrics** to measure achievements both globally and within each participating country.

Proposed method and principles of the initiative: Basic principles and operational activities

Initial stage

The first iteration of this initiative will require recruiting a core of selected people and forming a basis to carry out discussions and debates on the following:

- the initiative and the overall rationale
- optimal implementation policy
- projected operational mode
- associated metric techniques to measure participation and achievements
- methods to monitor the initiative's execution.

Possible participants and their basic roles

1) **The UN** should provide the visionary dimension and act as a catalyst to challenge and encourage the participation of different countries. The entire initiative will be launched, mentored, coordinated and monitored globally by an appointed UN agency.

   The UN will organize and coordinate the national government agencies and institutions globally by:

   - Defining the country's objectives. These may be modified from time to time.
   - Defining the operational principles.
   - Observing, mentoring and monitoring the countries' performances on the global level.
   - Organizing events and publicity on a global level to expose the actions carried out by the countries.

2) **National government agencies and institutions** will support, assist, regulate and provide incentives to the private and institutional hi-tech sectors in their own countries. Participating governments will manage the initiative at national levels.

   Each country's government will provide the necessary ambient conditions for the entire initiative and the individual role-players by:

   - Providing management assistance.
   - Introducing local regulations that will facilitate the actions required.
   - Preparing an incentives plan.
   - Observing, mentoring and monitoring on the national level.

- Organizing events and publicity on a national level to expose the actions carried out by each country.

- Reporting to the relevant UN agency.

3) **Hi-tech and other sectors.** These include individual private and institutional hi-tech sectors entities operating on national and international levels, plus some other role-players (listed below).

   The pivotal operational executors of this initiative will be those in group 3. They will be the focal point of the initiative. They include:

   i. Technology-oriented start-ups

   ii. Technology-oriented corporates and large companies

   iii. Other specific corporates and large companies. The reason they are included in this initiative is because today almost all of them use novel technologies and advanced manufacturing equipment, especially in the developed countries. *Note: large manufacturing companies of traditional consumer goods in developing countries are excluded from this initiative because they are, for the most part, low-cost labor oriented.*

   iv. Other role-players

Following are detailed descriptions of the roles, basic principles and operational activities to be adopted by this group of participants.

Technology-oriented start-ups

- If the routine business activities of the start-up have any negative impact on environment, the start-up will demonstrate how this negative impact will be neutralized and then carry out the changes required.

- The start-up will be required to address *at least one* of the 17 SDGs, either as part of their routine business operations and/or as extra activity.

- The start-up will be required to mention the concern addressed and how they are handling it in their AoA (Articles of Association).

- The start-up will be required to offer educational programs related to environmental protection and to society for its employees and ensure that their employees participate.

- The start-up will report on their SDG-related activities in its annual report audited by the CPA.

- The tax authorities will be required to address, take notice and keep records about the SDG activities of each start-up company as presented in their annual reports.

Technology-oriented corporates and large companies

(hereinafter referred to as “company”)

- If the routine business activities of the company have any negative impact on the environment, the company will demonstrate how this negative impact will neutralized and then carry out the changes required.

- The company will be required to appoint at least one full-time executive who will assume responsibility for the company’s activities related to environmental protection and society. This individual will report directly to the CEO.

- The company will be required to address *several* of the 17 SDGs, either as part of their routine business operations and/or as extra activities.

- The company will be required to offer educational programs related to environmental protection and society to its employees and ensure that their employees participate. If the company is conducting intrapreneurial programs, they will be carried out within this framework.

- If the company is utilizing a Corporate VC arm, it will be required to show that this arm will follow the behavior imposed on regular VC funds, as described below.

- A description of the SDGs and related activities will be included in the annual report of the company audited by the CPA.

- The tax authorities will be required to address, take notice and keep records of the SDG activities of each company as presented in their annual reports.

Other corporates and large companies

- Will be required to follow the same instructions as those listed above for technology-oriented corporates/large companies.

Other role-players

a) Universities and institutes of applied research

- Will encourage their relevant departments (engineering, exact sciences, social sciences, etc.) to carry out applied scientific research related to the SDGs.

- The TTO (Technology Transfer Office) will communicate in a pro-active interactive fashion with one or more hi-tech start-ups, corporates or large companies for the purpose of industrialization of the SDG-oriented applied research results.

- Both parties, the academic institution and the industrial company, will be credited for this action and process.

b) Venture Capital Funds

- At least 10% of the managed funds during the VC fund's life will be invested in companies dedicated to developing technologies in profit-oriented companies and businesses that are dealing with SDGs.
- At least 5% of the managed funds during the VC fund's life will be invested in one or more NGOs that deal with SDGs.
- All the above will be reported in the annual report audited by their CPA.

c) Corporate Venture Capital Funds

- Same as regular VC funds.

d) NGO's and Venture Philanthropy

- Will be judged and credited on their SDG-related activities on a case-by-case basis.

e) Educational programs

The initiative will involve educational programs at global and national levels. The principles of the relevant educational programs will be prepared by the UN and the content will be adapted and localized by each national government, as needed. These programs will emphasize the background, objectives and operational methods, with an accent on:

- related education for values
- related education for skills.

Evaluation and metrics at macro and micro levels

Appropriate methods will be developed by an appointed committee of the UN party, based on the level of compliance with one or more SDGs.

Incentives for performance

An appropriate incentive program will be developed by the UN party and will provide "quantitative points" for relative and absolute contributions to the initiative. This will include a practical compensation method for individual bodies that accumulate a certain number of points, to be implemented and carried out by national governments. This is in addition to the publicity the body will gain, as a result of their participation in the initiative.

Implementation

An initial pilot plan will be carried out

- with the participation of the IT sub-sector of the hi-tech sector
- in 10 developed countries.

After a pre-defined period of operation, the initiating body will

- study the outcomes to draw conclusions
- correct observed shortcomings
- expand the initiative to the other hi-tech sub-sectors
- expand the initiative to additional countries.

Conclusion

The future of planet Earth cannot anymore be taken for granted. The window of opportunity for halting the wanton environmental destruction is quickly closing. Action is required and is required NOW to secure the future of our only home.

We believe that this **Private Hi-tech Sector Initiative,** when carried out with the UN endorsement and with support of governments worldwide, and based on the principles described above, will be a positive, groundbreaking plan to secure the Earth's future.

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This paper was authored by the IFIP IP3 Global Industry Council, a forum where ICT Leaders from around the globe consider aspects which affect the ICT profession, and all organizations who deploy digital technologies. It is a call to the UN and its agencies to consider new approaches when working with government and global business to implement and measure the SDGs. Several large companies already report on their efforts in their sustainability reports, but this must become the norm. Startups should also be encouraged to think about sustainability from inception, and investors have a role to play in promoting and supporting this.

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