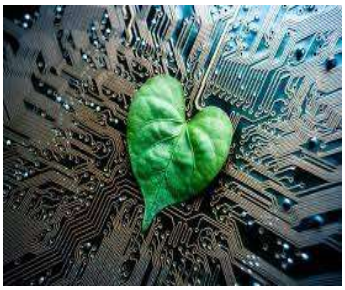
# Top Tier Impact Technology Roundtable Dinner



**Date & Location:** September 26th, 2022, Istanbul

**Organized by:** İlkay Demirdağ, Top Tier Impact Istanbul Ambassador

**Meeting Report:** Prepared by Sustainfinance (By Ayşe Kaşıkcı, Kübra Koldemir, İlkay Demirdağ)

**Attendees:**

1. Ata Uzunhasan, Galata Business Angels Official, Managing Director
2. Baris Karakullukcu, Türkiye İş Bankası, Next Generation Entrepreneurship Group President
3. Bulut Arukel, Figopara, CRO
4. M.Bülent Özçengel Softtech, CEO
5. Çağda Çelikbilek, IBM Turkey, Z Stack Leader
6. Cem Leon Menase, captanomy, Founder
7. Cem Soysal, iNVENTRAM!, CEO
8. Emre Dura, Microsoft, Global Partner Solutions Deputy General Manager
9. Esen Girit Tümer, InfiniTech & Essential AI, CEO
10. Halil Aksu, Digitopia, CEO & Founder
11. Hulusi Berik, Keiretsu Forum, Turkey President
12. Imran Gurakan,MBA, Leap Investment, CEO
13. Kubra Koldemir, SustainFinance, Founder
14. Mehmet Ünal New Media Artist, Founder, Neva XR and Tilde Studio
15. Serhat Cicekoglu, Sente Ventures, Founder

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Digital strategy and sustainability are increasingly important and intertwined. Today, digital technologies are being used to measure and track sustainability progress, optimize the use of resources, reduce greenhouse gas emissions, and make possible a more circular economy while enabling innovation and collaboration.

The biggest challenges in combating the climate crisis and sustainable development are revealing the climate effects, developing adaptation and mitigation policies in this direction, conducting fragility analyzes, and developing solution proposals. To overcome these difficulties, it is vital to reveal the risks for the systems affected by climate change, investigate the adaptation processes, develop adaptation suggestions, and develop sustainable development strategies at national and regional levels. The way to implement these adaptation suggestions and strategies into practice is by implementing innovative approaches and groundbreaking technologies.

**Question: Which technologies do you think are critical in achieving Turkey's 2053 net zero emission targets?**

Regarding the realization of Turkey's “2053 Net Zero Emissions” targets, it was concluded that more robust use of renewable energy sources needs to be prioritized.

The fact that Turkey is not benefiting enough from solar and wind energy resources was a handicap that needed to be resolved. In the discussion, it was also drawn to attention that no concrete steps were taken on the issue of "green hydrogen," which has now become a popular concept and found place globally.

In addition to energy sources, it is also imperative to store energy in a climate-friendly way. The greater use of developing technologies in this regard is a factor that will accelerate the processes.

Furthermore, using nanotechnologies that can contribute to reducing greenhouse gas emissions is one of the critical technologies in reaching ESG targets.

Innovations in technologies such as artificial intelligence, machine learning, and cloud computing are also important, especially in measuring and using costs more effectively. This helps us to achieve more with fewer resources.

The following technologies were emphasized as being crucial for a sustainable future:

- regenerative farming,
- food systems,
- fusion technologies,
- energy efficiency,
- waste management,
- carbon emission measurement and tracking, and
- quantum computers.

Furthermore, it was concluded that to reach the 2053 targets, systemic and structural changes were necessary.

It was stated that financial services and insurance companies need to establish systems for measuring the carbon footprint of the corporations they invest in or extend loans to. It is not enough when they only calculate the emissions from their own operations.

It was discussed how biodiversity loss could be tracked thanks to artificial intelligence technologies globally. Still, there are no proper systems or technologies that tie the destruction to individual companies causing those externalities.

While companies working for the right purposes should use the right technologies more accurately, they face fundamental issues that must be fixed.

It is essential to measure sustainability progress on the level of individuals and corporations; (personal and corporate footprint). Setting targets and monitoring progress towards targets without losing focus is necessary.

Another key emphasis from the attendees was the importance of creating consciousness and awareness in society. One way of doing this is by adding topics such as energy-water saving, recycling, and ESG to the education curriculum in all schools from early age.

Finally, the discussion led to the conclusion that measuring and monitoring carbon footprints and setting targets to reduce them will directly impact the market shares of various brands.

On the commercial side of businesses, it was emphasized how these measures could impact corporations' profitability and how startups can financially become more viable and increase their business potential.

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Our traditional production/manufacturing systems (e.g., food systems) built after World War 2 have predominantly used technology for higher volume production and continuous productivity improvement. However, some production systems today do not meet high ESG standards.

**Question: How can we use technological developments such as blockchain, artificial intelligence, robotic process optimization, and data and processing applications not to produce higher volumes but to reduce negative environmental and social impacts?**

The following suggestions and examples have been highlighted:

- There are three vital factors for the continuation of human life. These are air, water, and food. A human being can live an average of 3 minutes without air, an average of 3 days without water, and an average of 3 weeks without food. Unfortunately, half of the food produced is wasted before it reaches our tables. Technologies should be used to reduce these inefficiencies, act against food waste, and use energy more efficiently.
- Sustainability activities should be monitored transparently, and resource use should be optimized. Also, sustainability efforts could just imitate nature because nature has a way of constantly renewing itself. Everything has a purpose and value; everything is used, and waste becomes a resource.
- To create awareness for sustainability, art could be a vehicle as well. For example, sensors were placed on a random store's floor. The intention was to generate energy through the employees simply walking in the store. This was created and presented as an art where the system updated carbon data every 15 minutes. Conservation of nature and forecasting technologies against natural disasters is critical.
- Another example was given from a relatively recent and increasingly popular agriculture concept: The sustainability-focused think tank SustainFinance has written an article on this subject, published on the Financial Times Sustainable Views platform. The article talks about how regenerative farming can make a difference in protecting nature and biodiversity and creating a sustainable food system. Instead of a more homogenized field planting system, a more heterogeneous system can be established. Consider, for example, an olive tree field. In the traditional farm, the whole area is covered only with olive trees, but in a regenerative farm, compatible species can be planted in the same field. This allows the farmer to bring nature and

variety to the field, creating a new ecosystem where nature acts as a natural fertilizer. Therefore, pesticide use can be reduced or eliminated, and soil conditions can be improved.

- With the help of barcode system and blockchain technologies., it is possible to follow the digital barcode system's source and emission rates of consumer products. For example, when a product is bought from a supermarket, carbon emissions from bringing it to the shelf, its nutrition levels, and production details can be chased.
- A technology to identify the actors or market participants who are greenwashing would be beneficial. The reason is that any information that is instead a noise than reality puts us far away from our own targets.
- It was also emphasized that the best optimal solutions could be reached if competitors in a sector feed each other and collaborate rather than fight to gain more market share.
- It was stated that societal views and perceptions are changing, and "Society 5.0" has been mentioned as an example.

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Impact investments aim to create positive and measurable social and environmental impact and financial return.

**Question: How can technology be used to create and measure impact? What would be your suggestion to take action in transitioning to impactful technological investments?**

The following suggestions and examples have been highlighted:

- Based on the principle of "You cannot manage what you do not measure," technological advances should be used to see where Turkey currently stands regarding the net zero targets and what progress we are making.
- Country realities differ and every country should define specific sectors of focus. For example, agriculture should be one such sector in Turkey. Another thought provided by participants was that trainings conducted on social entrepreneurship and impact investing could be critical in increasing awareness of sustainability topics on an individual level. On an investor level, activities should be organized to teach the investment community how the financial return is achieved with an impact lens. This requires specific skills in balancing and aligning investments. Monitoring supply chain emissions is another crucial area. Developing technologies for Scope 3 emission measurement is necessary, as in many sectors, corporations do not measure or report the impact of externalities on their supply chains. Here is an example from the food industry: 80 percent of the adverse effects on nature in this industry are created within the supply chain and not in the food companies' own operations. Yet currently, most food companies have not developed systems that measure and monitor what is happening in their supply chains. Therefore, any impact investment that has been made may need to be questioned by impact investors if the corporation cannot provide supply chain data. The following conclusion was also emphasized: "Capital follows regulation, and corporations follow the capital." Therefore, if there is one crucial area that needs to be checked and fixed, that is regulation". The potential of impact investments had been estimated to be around 15.2 billion USD in 2015, yet by the end of 2020, the estimate was increased to 2.3 trillion USD. Impact investments are still seen as a niche area and not as

mainstream investments. Therefore, there is time until we can attract the scale of attention for impact investing we hope for.

- However, as generations change, the motivation for new ventures is moving in this direction. Consequently, they are expected to increase gradually.
- A key concept is that impact investing should not be identified or mistaken as a not-for-profit activity, and focus on financial returns should be integral.
- The meeting ended with the conclusion that impact investment would end up being “Investment 5.0”.