IMPRENDITORIA

INNOVATION ON POINT

(Idea Incubation)

Prepare yourselves for the beginning of the new year, as the competition has begun, and the group of bright young minds has boarded the next plane to their destination. With the release of the problem statements on our platform this midnight, we are thrilled to officially announce the start of the much-anticipated **IMPRENDITORIA: Innovation on Point**, a fascinating tour of ideas.

PROBLEM STATEMENTS

PROBLEM 1 : Renewable & Clean Energy

BACKGROUND

Within the next several years and decades, the 1.5-degree objective can only be met if the percentage of fossil fuels is reduced and the amount of renewable and clean energy is quickly expanded worldwide. The need for innovative solutions is increasing, resulting in a surge in investment.

CHALLENGE

The Intergovernmental Panel on Climate Change (IPCC, 2018) estimates that about 70% of all greenhouse gas emissions worldwide, that are leading to climate change, come from energy-related activities. This is mainly from fossil fuel combustion for heat supply, electricity generation and transport, as well as energy-related activities in the industrial sectors.

- Innovation in the wind, solar, hydropower, biofuels, wave, tidal and geothermal energy as well as energy storage
- Negative emissions technologies
- New industrial processes to replace fossil fuels with renewable energy to reduce greenhouse gas emissions from the industrial sector
- Innovative renewable energy technology and business models for a livable built environment, particularly in urban areas, and integrated transport systems
- Reducing the greenhouse gas emissions from road-based vehicles, aviation and shipping by using renewable energy technology and alternative business models
- Renewable energy technology and services for increasing universal energy access and reducing energy poverty
- Digitalisation to facilitate low carbon energy transitions

PROBLEM 2 : Recycling & Reduced Waste

BACKGROUND

Annual construction waste is expected to reach 2.2 billion tons globally by 2025 and very little is recycled or reused. As much as 30% of all building materials delivered to a typical construction site can end up as waste. Adaptive reuse projects result in more positive environmental, social and governance metrics. Jobs created by recycling and reuse outnumber traditional waste disposal jobs. Do we need innovative solutions to how we can recycle and use more?
Electrical and electronic waste is one of the fastest-growing waste flows both in Sweden and globally. It is also a waste group that can cause serious adverse consequences. The use of electric cars and heavy electric vehicles is growing. Moving forward with ever-increasing amounts of vehicle batteries, the waste needs to be handled, both from a pure waste perspective as well as from a resource security perspective. How can we find new solutions to collect, reuse and recycle?

CHALLENGE

- Design that enables future reuse
- Building design - Flexible, demountable buildings
- Product design
- Products that are developed for reuse.
- Interim storage and reconditioning
- Collection
- Business models that ensure the user return the battery
- High processing level recovery
- Examples of technologies to recover more materials
- Improved sorting
- Recycle back into batteries

PROBLEM 3 : Carbon Capture & Storage

BACKGROUND

To return to a more stable climate, we need to remove some of the carbon we've already released. Capturing and sequestering carbon is key to battling all the many effects of climate change. Without removing carbon from the atmosphere, we just fix the symptoms of the problem, not the root cause. We need not only to stop increasing CO2 emission but also to remove some of the carbon we've already released. If we can build viable companies addressing carbon capture and sequestration, bringing the ppm-level of CO2 in the atmosphere back down, we can make an impact on the root cause of climate change.

CHALLENGE

- Think about creating a viable company, not only how to capture and sequester carbon. Our global institutions are made for profitable companies; it's simply easier to handle a viable company.
- In order to make an impact over time, this company must be financially sustainable.
- Ways to capture or sequester some carbon; not necessarily a huge chunk of our enormous problem, just some of it. Start there.
- Examples as per the Exponential Roadmap report can include furthering reforestation methods and regulations, smarter agriculture, use of biochar as CO2 sinks and fertilizers, use of CCS with storage under the seabed as in Norway or injections into aquifers at large depths.

PROBLEM 4 : People-Centric Infrastructure

BACKGROUND

By 2050, urbanization combined with the overall growth of the world's population could add another 2.5 billion people to urban areas in 2050. About 90% of this increase will happen in Asia and Africa. Pressure on the land resources and urban space is immense with high population densities, leading to congestion, low-quality urban environment, pollution and low safety. How do cities leverage Transit-Oriented Developments and build on assets such as public spaces - streets, open spaces, and public buildings - to enhance the livability and vibrancy of neighbourhoods.

CHALLENGE

- Approach TOD and public space management comprehensively with an enabling legal, institutional, and regulatory environment – not just focusing on infrastructure development.
- Develop innovative financing mechanisms with respect to land pooling that benefits all stakeholders.
- Plan for high-quality urban spaces that are in line with expected population densities and designed to be accessible, walkable, enjoyable, and safe for all.
- Harness the potential of the private sector through public-private partnerships and ensure sufficient financing for such schemes.
- People-centric mobility is about the commuter – the person undertaking a journey on a daily basis. Make that experience more sustainable, more connected and more efficient.

PROBLEM 5 : The Future of Food - Healthy Food, Sustainable Planet

BACKGROUND

Feeding 10 billion people by 2050 with a healthy and sustainable diet will be impossible without transforming eating habits, improving food production, and reducing food waste. The world's diets must change dramatically. More than 800 million people have insufficient food, while many more consume an unhealthy diet that contributes to premature death and disease. The daily dietary pattern of a planetary health diet consists of approximately 35% of calories as whole grains and tubers, protein sources mainly from plants - but including approximately 14g of red meat per day - and 500g per day of vegetables and fruits. Moving to this new dietary pattern will require global consumption of foods such as red meat and sugar to decrease by about 50%, while consumption of nuts, fruits, vegetables, and legumes must double. Unhealthy diets are the leading cause of ill-health worldwide and following the diet could avoid approximately 11 million premature deaths per year.

CHALLENGE

- Transformation of the global food system is urgently needed as more than 3 billion people are malnourished (including people who are undernourished and overnourished), and food production is exceeding planetary boundaries - driving climate change, biodiversity loss, pollution due to the over-application of nitrogen and phosphorus fertilizers, and unsustainable changes in water and land use.
- Diet and food production must radically change to improve health and build the resilience of the biosphere.
- Transforming how we produce and what we eat will require bold moves and experimentation.
- Innovations will need to push consumer values toward more sustainable and healthy diets while also having the potential to be replicated and scaled up to influence legislation and regulatory environments.
- Designing and operationalizing sustainable food systems that can deliver healthy diets for a growing and wealthier world population presents a formidable challenge.

Titles that need to be included in abstract:

- **Introduction/Objective**
- **Problem Statement addresses**
- **Basic Idea**
- **Principle**
- **Innovation**
- **Methodology**
- **Social Relevance**
- **Potential Impacts**

Fasten your seatbelts, and prepare to take off with all of your enthusiasm to discover your potential as the Ideathon is all set to be live and dusted.

Best wishes!