PROPOSAL TO CONDUCT A FEASIBILITY, VIABILITY, AND DESIRABILITY ASSESSMENT FOR ESTABLISHING THE AFRICAN SOCIETY OF INDUSTRIAL ECOLOGY (“ASIE”)

Industrial Ecology is an interdisciplinary field that emerged in response to the growing recognition of the interconnectedness between industrial systems and natural ecosystems. Originating in the late 20th century, Industrial Ecology seeks to model industrial processes after the efficiency and sustainability observed in natural ecosystems. It combines principles from engineering, environmental science, economics, and social sciences to optimize resource utilization, minimize waste, and reduce environmental impacts.

The International Society for Industrial Ecology (ISIE) serves as a global platform for professionals and researchers in this field, facilitating collaboration and knowledge exchange.

As a discipline, Industrial Ecology encourages a systems-thinking approach, emphasizing the cyclic flow of materials and energy in industrial processes. By promoting a closed-loop, sustainable model, Industrial Ecology aims to transform traditional linear production systems into circular, regenerative systems.

BACKGROUND OF THE PROPOSAL:

I. **The growing importance of Industrial Ecology in Africa:** Industrial Ecology (IE) can play a crucial role in Africa's sustainable development efforts by promoting resource efficiency, reducing waste, and minimizing environmental impact. As the continent experiences rapid industrialization and urbanization, the adoption of IE principles becomes increasingly important to ensure sustainable economic growth and environmental stewardship.

II. **Resource Constraints:** Africa faces significant challenges related to resource scarcity, including water, energy, and raw materials. IE offers solutions to optimize resource utilization and promote circular economy practices, mitigating the negative effects of resource constraints on economic development.

III. **Environmental Degradation:** Industrial activities in Africa often contribute to pollution, deforestation, and habitat destruction, leading to environmental degradation and biodiversity loss. By adopting IE approaches, industries can minimize their ecological footprint and transition towards more sustainable production and consumption patterns.

IV. **Climate Change:** Africa is particularly vulnerable to the impacts of climate change, including extreme weather events, droughts, and sea-level rise. IE strategies such as energy efficiency, renewable energy integration, and carbon footprint reduction are essential for mitigating climate risks and building climate-resilient economies.

V. **Social Equity:** IE promotes social equity by considering the social impacts of industrial activities on local communities, including health and livelihoods. By fostering inclusive decision-making processes and stakeholder engagement, IE contributes to more equitable and sustainable development outcomes in Africa.

THE IMPORTANCE OF FOSTERING A COMMUNITY OF INDUSTRIAL ECOLOGISTS IN AFRICA:

Establishing an African Society of Industrial Ecology (ASIE) can foster collaboration, knowledge sharing, and capacity building in the field of IE across the continent. By bringing together professionals, researchers, and policymakers, ASIE can accelerate the adoption of IE principles and practices in Africa's industrial sectors, thereby advancing sustainability and circular economy efforts. The functions of the ASIE could encompass:

I. **Knowledge Sharing and Collaboration:** Despite growing interest in sustainability and environmental management, there is a lack of coordination and collaboration among stakeholders working on IE in Africa. ASIE can serve as a platform for sharing best practices, exchanging ideas, and fostering collaboration between academia, industry, and government.

II. **Capacity Building:** Building local capacity in IE is essential for driving sustainable development and innovation in Africa. ASIE can facilitate training programs, workshops, and conferences to enhance the technical skills and knowledge of industrial ecologists, equipping them with the tools and techniques needed to address complex sustainability challenges. Furthermore, an ASIE can establish collaborative relationships with selected TVET or UT facilities to support green skills development.

III. **Policy Influence:** an ASIE can play a vital role in shaping policy agendas and influencing decision-making processes related to industrial development and environmental management in Africa. By advocating for the integration of IE principles into policy frameworks and regulations, ASIE can support the transition towards more sustainable and resilient economies.

IV. **Complementing Existing Efforts:** While there may be existing initiatives and organizations working on sustainability and environmental issues in Africa, ASIE can complement these efforts by focusing specifically on industrial ecology. By providing a dedicated platform and specialized expertise, ASIE can fill gaps in knowledge sharing, research collaboration, and capacity building within the region.

PROPOSAL:

The purpose of the proposal is to establish a collaboration between myself in my capacity as a member of the ISIE to establish a framework and the terms of reference for the appointment of a suitably qualified organisation to conduct an assessment of the feasibility, viability, and desirability for the establishment of an African Society of Industrial Ecology as a subset of the International Society for Industrial Ecology. Establishing ASIE as a subset of ISIE is a strategic initiative to promote sustainability and circular economy efforts in Africa. By fostering a vibrant community of industrial ecologists, ASIE can drive innovation, collaboration, and policy change towards a more sustainable and resilient future for the continent.

THE SCOPE OF WORK:

I. **Digital Membership Platform Design:**
   - Develop a detailed plan for a digital platform that facilitates communication, collaboration, and knowledge-sharing among industrial ecologists in Africa.
   - Explore existing digital platforms and technologies suitable for hosting the think-tank.

II. **Stakeholder Engagement:**
   - Identify and engage with potential stakeholders, including industrial ecology professionals, academia, and industry representatives.
   - Assess the level of interest and support for the establishment of the African Society of Industrial Ecology.

III. **Multilateral Event Integration:**
   - Investigate opportunities to integrate the digital platform into existing multilateral events related to industrial ecology.
   - Explore partnerships with relevant organizations to enhance the visibility and impact of the platform.

IV. **Hybrid Event Planning:**
   - Develop a plan for hosting hybrid events, combining both virtual and physical elements, to increase awareness of Industrial Ecology in Africa.
   - Identify potential themes, speakers, and formats for these events.

V. **KPIs and Outcomes:**
   - Define transparent key performance indicators (KPIs) and outcomes that align with the goals of the study.

METHODOLOGY:

The assessment will span over a duration of 6 months using the following methodology:

	TASK	**DELIVERABLES**	**DURATION**
1	Research & Analysis	Identify potential collaborators and stakeholders in Africa (Universities, Research Institutions, MNC's, Regional Bodies, Public sector).	2 months
		Conduct surveys, interviews, and focus groups with key stakeholders in the Industrial Ecology Community.	
2	Develop a preliminary framework	Explore successful digital models	2 months
		Explore best practice and governance content sharing, discussions, resource libraries, etc.	
		Provide a cost estimation for the development and ongoing maintenance of the platform.	
	Establish Key Performance Indicators	Align the objectives of the ISIE and the ASIE to generate KPI's that are aligned to the expected outcomes.	
3	Reporting & Recommendations	Final report and feedback session	1 month

OUTCOMES:

Upon approval, we aim to initiate the feasibility assessment promptly. The findings of this study will serve as a precursor to hosting the 2nd Annual Industrial Ecology Day in South Africa and Africa, providing valuable insights into the strengths, weaknesses, opportunities, and threats to Industrial Ecology in the region. The insights will include:

- A comprehensive report on the viability of establishing ASIE.
- Recommendations for the structure and functions of the digital think-tank.
- Identification of potential challenges and strategies to overcome them.
- Clear alignment with ISIE goals and objectives.

BUDGET:

The grant funding of €5000.00 will be utilised to cover the costs associated with the appointment of a service provider to conduct the study. Costs to be covered in the budget include:

- Personnel: (e.g., salaries for project coordinator, researchers, and consultants)
- Travel: (e.g., transportation, accommodation, and per diem for fieldwork and meetings)
- Materials: (e.g., software licenses, subscriptions, publications)
- Communication: (e.g., website development, hosting, and maintenance)
- Information Dissemination
- Miscellaneous: (e.g., contingency funds for unforeseen expenses)

NEXT STEPS:

- Assessment of the proposal & approval
- Finalisation of a collaborative agreement
- Draft and issue an invitation to propose and cost the feasibility, viability and desirability assessment
- Appoint a service provider
- Develop a project plan for sign off with agreed scope & parameters
- Conduct the study
- Launch the findings
- Use the study findings to plan and execute the 2nd Annual Industrial Ecology Day in South Africa and Africa.
- Leverage insights for ongoing development and promotion of Industrial Ecology in Africa.

By collaborating with ISIE, ensuring transparency, and aligning with key outcomes, the study aims to pave the way for a stronger Industrial Ecology community in Africa, ultimately contributing to the global advancement of sustainable industrial practices. We believe that this initiative will contribute significantly to the growth and development of industrial ecology in Africa and strengthen the global network of industrial ecologists.

The desired milestones for an ASIE include:

1. **Resource Efficiency and Conservation:**
   Implementing industrial ecology practices can help optimize resource use by promoting the efficient use of materials and minimizing waste. This can lead to cost savings for industries and reduce the overall environmental impact.
2. **Job Creation:**
   The development and adoption of industrial ecology practices can lead to the creation of new jobs in areas such as resource management, waste reduction, and sustainable manufacturing. This can contribute to economic growth and improved livelihoods.
3. **Innovation and Technology Transfer:**
   Encouraging the adoption of environmentally friendly technologies and sustainable practices can drive innovation within industries. The society can serve as a platform for the exchange of ideas, knowledge, and technologies, fostering collaboration and enhancing the region's competitiveness.
4. **Environmental Protection:**
   By promoting sustainable production and consumption patterns, an industrial ecology society can contribute to reducing pollution, preserving biodiversity, and protecting ecosystems. This, in turn, helps maintain a healthy environment for current and future generations.
5. **Community Development:**
   Engaging with local communities and stakeholders is crucial. The society can facilitate community-based projects that promote sustainable development, address local environmental concerns, and enhance social well-being.
6. **Education and Awareness:**
   An industrial ecology society can play a vital role in educating businesses, policymakers, and the general public about the principles and benefits of industrial ecology. This can lead to greater awareness and support for sustainable practices.
7. **Policy Advocacy:**
   Collaborating with government agencies and advocating for policies that support sustainable industrial practices can be a key role for the society. This may include incentives for eco-friendly initiatives, regulations on waste management, and standards for sustainable production.
8. **Circular Economy Promotion:**
   Industrial ecology is closely aligned with the concept of a circular economy, where resources are reused, recycled, and regenerated. Promoting circular economy practices can enhance resource efficiency and reduce the environmental impact of industries.

9. **Networking and Collaboration:**
   Facilitating networking among businesses, research institutions, and government bodies can foster collaboration for sustainable development. This can lead to joint initiatives, research projects, and knowledge-sharing opportunities.
10. **Resilience to Climate Change:**
    Implementing sustainable industrial practices can contribute to the resilience of communities and industries in the face of climate change. By reducing the ecological footprint, industries become more adaptable to changing environmental conditions.

In closing, an African society for industrial ecology can act as a catalyst for positive change by promoting sustainable industrial practices, fostering innovation, creating jobs, and contributing to the overall well-being of both society and the environment.

Thank you for considering this proposal. We look forward to your positive response and the opportunity to collaborate on this exciting undertaking.

Ends.