

ISIE Foundation

Operational Policy Plan

June 2023

Objectives of this Operational Plan: This operational plan describes the actual and intended activities of the ISIE Foundation in support of the field of Industrial Ecology. This field addresses local and global challenges related to the acquisition and use of material resources, industrial activities in support of climate change mitigation, sustainable consumption, and urban planning, as they relate to human development on a changing planet. The focus of activities by the ISIE Foundation relates to educational programs and training activities, including for developing countries.

General comment on Anticipated Specific Plans for the ISIE Foundation: The following text relates to activities in active discussion by the Foundation in support of the Objectives presented above. These activities are not presented in order of preference, and all are viewed as potentially desirable activities in the next five to ten-year period, with more options developing in due time.

Activity Number 1: Support for Students and Junior Faculty to attend International Conferences in the domain of Industrial Ecology

The goal of this activity is to make it possible for students and junior faculty from developing countries to attend and participate in the main conference in the domain, the biennial meetings organized by universities in turn for the International Society for Industrial Ecology (ISIE). Some 800-1000 participants attend a typical meeting, but few are from developing countries due to financial constraints. Providing funding for about fifty such participants would assist them in their efforts as well as expand the reach of industrial ecology into regions of the world where the field's scientific approaches could be of great benefit. The anticipated budget for such a program is as follows:

| | |
|----------------------|----------|
| Travel per person | - € 2000 |
| Lodging per person | - € 1000 |
| Meeting registration | - € 1000 |
| Total per person | - € 4000 |

Budget for the support of fifty attendees: € 200,000

Activity Number 2: Support for Student and Junior Faculty to attend Gordon Research Conferences in Industrial Ecology

The goal of this activity is to make it possible for students and junior faculty from developing countries to attend and participate in biennial Gordon Research Conferences (GRC) in Industrial Ecology. Some 150-200 participants attend a typical GRC meeting, but few are from developing countries due to financial constraints. Providing funding for about twenty such participants would assist them in their efforts as well as expand the reach of Industrial Ecology into regions of

the world where these scientific approaches could be of great benefit. The anticipated budget for such a program is as follows:

Travel per person - € 2000
Registration, lodging, and meals per person - € 1500
Miscellaneous expenses per person - € 500
Total per person - € 4000

Budget for the support of twenty attendees: € 80,000

Activity Number 3: Support for a staff position as Director of Development

The goal of this activity is to provide support for a new full-time staff position to develop and implement plans for fund-raising and dissemination that supports the activities in the domain of Industrial Ecology, including those indicated in this plan. The salary and benefits of such a position are estimated to be € 75,000 per year. A stretch goal is to endow this position for five years: € 375,000

Activity Number 4: Support for two Student Positions to Research, Organize, and Plan for the Administration of Certification Programs in Life Cycle Assessment and Material Flow Analysis, as key methods in Industrial Ecology

The goal of this activity is to support two industrial ecology graduate students to research, organize, and work with permanent ISIE staff to design an effort in which ISIE develops teaching programs on life cycle assessment (LCA) and material flow analysis (MFA). Plans would also be developed to work with universities and industrial partners to train those who wish to be certified in these specialties, generate and administer examinations in these specialties, and certify those examinees who successfully complete the examinations. It is anticipated that examination fees would be paid to ISIE to defray part of the program costs.

Two students working for a three-month period are budgeted at € 2,000/month, or € 12,000/yr. In anticipation that this activity would require a three-year effort, the cost is € 36,000.

Activity Number 5: Support for two Student Positions to Research, Organize, and Plan for Administration of Pre-College Programs in Industrial Ecology and Global Change.

The goal of this activity is to support two industrial ecology graduate students to research, organize, and work with local and perhaps regional pre-college instructors to bring industrial ecology and global change perspectives to pre-college students.

Two students working part-time for a nine-month period are budgeted at € 2,000/month, or a total of € 36,000/yr. In anticipation that this effort might be extended to work with those in countries outside the initial test audiences, a three-year effort would cost € 108,000.

Anticipated Activity Number 6: Support for Development of a Summer School in Industrial Ecology

The goal of this activity is to develop and implement a two-week summer school for selected graduate students and faculty to learn about the latest advances and methodologies in industrial ecology. This effort would be modeled after summer schools currently held in specialties such as chemistry and biology. At each summer school the faculty would consist of world leaders (volunteers) in state-of-the-art industrial ecology, plus two staff members to administer the program and its details. The program would require a three-year period of development and would commence in 2028. The estimated cost per year is:

Support for travel and lodging for three faculty instructors and two program staff:
on site at € 5,000/month: € 25,000

Support for travel and lodging for twenty-five attendees:
Travel: 25 attendees at € 2,000/person = € 50,000, Lodging: = € 50,000, sum = € 100,000

Total for one summer school:
Instructors and staff € 25,000
Attendees € 100,000
Total € 125,000

Aspirational total for three summer schools: € 375,000

Annual Aspirational Funding Goals and Outlays

| <i>Planned activity #</i> | <i>Estimated funding needed (€)</i> | <i>Possible funding sources</i> | <i>Potential year(s) of activity</i> |
|--|-------------------------------------|---|--------------------------------------|
| 1 Student Support | 200,000 | Individual donors with focus ISIE members | 2025, 2027 |
| 2 Gordon Research | 80,000 | Individual donors with focus ISIE members | 2024, 2026 |
| 3 Development Director | 75,000 | Individual donors with focus ISIE members | 2025 (and ongoing) |
| 4 Certification LCA and MFA courses | 36,000 | Corporations | 2024 |
| 5 Pre-College Programs IE and Global Change | 108,000 | Foundations, partly national focus | 2026 |
| Summer School IE | 125,000/375,000 | Foundations | 2028, 2029, 2030 |