WISE INDUSTRIAL RESEARCH ARENAS (WIRA)

Introduction
Governance and Management
How to Establish

INNEHÅLL/CONTENTS

List of abbreviations:
WISE = Wallenberg Initiative Material Science for Sustainability
WIRA = WISE Industrial Research Arena
ESG = Executive Steering Group
PD = Program Director
WD = WIRA Director

1 Introduction

The main objective of WISE Industrial Research Arenas (WIRA) is to increase the value and relevance of WISE research by strengthening and promoting collaboration between WISE researchers and researchers from industry. An important part of this is to enable and support collaborative research in challenging and complex environments, which leads to jointly identifying new research challenges. WIRA thus addresses industrially relevant system-level platforms and environments which are far beyond the reach of individual university labs and environments. By establishing these WISE state-of-the art research arenas, including infrastructures and processes, academic and industrial researchers can conduct and demonstrate theoretical and applied research tasks in challenging real-world scenarios, targeting sustainable manufacturing and use of materials.

2 WIRA Instrument

Arena concept is evolved according to these guiding principles:

- Striving for five to eight smaller arenas with a focused context.
- Seek and leverage on industrial/institutional motivation.
- Integration of WIRA in other WISE activities (e.g. WISE projects, Research School, WISE Fellows, guest professors etc)
- Several categories of arenas can be considered:
  - o Environments with high industrial or societal relevance.
  - o General-purpose technology platforms to serve increased or more efficient use of research infrastructures.
  - o General-purpose testing and evaluation platforms to serve development of standardized characterization.

In close collaboration with other activities in WISE, e.g. Research School, our ambition is to also establish networks of researchers and industrial partners. This to further nurture the establishment of strong research in areas which are deemed of high importance by Swedish industry and society.

3 Criteria and Requirements

Criteria	Arena / Environment	Arena / Technology
What	Mimic an Industrial Environment to validate how theoretical or laboratory results can be upscaled, tested, and/or explored in relevant applications. The arena must have a defined Research Challenge.	A generic Technology Research Infrastructure to explore and develop measurement and experimental setups towards efficient or standardized testing and validation.
WISE Partners	3 or more industrial partners with one taking ownership and involve at least 3 research groups.	3 or more industrial partners with one taking ownership and involve at least 3 research groups.
Affiliations	Open to other research groups and partners to participate	
Funding	Industry must fund at least 50% of total operational cost	
Expected results	Publications, journal and IPR. Yearly demonstration to WISE leadership and invited partners	Relevant and validated experimental results. More efficient usage of research infrastructure.
Duration	An Arena is approved for 3-years with possible prolongation for an additional 3-years period.	
IPR	If parties involved in an Arena judge that the "Collaboration Agreement for WIRA" is not enough, additional agreement can be setup between the parties. This will not include WISE as an entity.	

4 Governance and Management

To be completed and developed when Research Arenas have been established.

a) WISE Board is the main decision body for approval of WIRA overall strategies, Arena proposals and annual budget.

b) The ESG must approve plans and proposals before forwarded to the board for decision.

4.1   *WIRA Project Group*

A WIRA project group is the operative steering body for Arena projects, one for each WIRA.

1. Participation

WIRA Director

WIRA project manager

WISE communication officer

2. Meeting frequency – Monthly

3. Tasks

    a. status reporting, plan for communication,

    b. operative support, and

    c. administrative support for e.g. event, conferences etc.

5 Process for proposal, approval, and evaluation

5.1   *Proposal and approval process*

An arena project proposal shall cover three years of operation and the decision of the WISE Board shall cover this entire period. An application template is provided. A proposal can be forwarded at any time to the WIRA Director (WD). The proposal has two phases:

1. One-pager: short crisp presentation to communicate the main ideas to be reviewed by WD and ESG. No template.

2. Full proposal to be reviewed by WD and ESG, approved by ESG and decided by the WISE board. Template is provided.

5.1.1   Assessment criteria

One-pager description will be assessed on the following criteria:

1. Scope of the suggested WIRA and its relevance to WISE

2. Potential to attract academic researchers and industrial partners to an extent that it is fundable by WISE.

A full proposal will be assessed on the following criteria:

1. Credibility of leading company, "owner" [yes, no]

2. Budget includes at least three companies contributing with co-financing [yes, no]

3. Accessibility to described WIRA environment (facility, platform, technology, ...) [yes, no]

4. Feasibility of organisation and parties

5. Attractiveness for researchers at start [number of academic PIs at start]

6. Attractiveness for Swedish companies [number of companies with intention to participate]

7. Expected results [publications, reports and events]

5.2   Evaluation process

An arena project evaluation is performed in two phases:

1. Evaluation of establishment 12 months after start – review versus application

2. Performance evaluation shall take place at the end of the actual three-year period. An arena project can be renewed in period of three years.

   a. A new updated full proposal must be submitted.

   b. A renewed arena project will not be evaluated on establishment.

   c. Performance evaluation take place at the end of the actual three-year period

5.2.1   Establishment evaluation – year 1

Description: to evaluate and review the establishment of a project

Review: will be made against the project description as decided by the board with focus on the identified early activities and engagement of researchers and industry.

Purpose: mainly support the arena project in its establishment with resources, contacts etc. No review of research results.

Who: review is initiated by WIRA Director and performed by WD and ESG.

How: a self-assessment by the project manager presented and discussed with the review team.

5.2.2 Main evaluation – year 3

Description: evaluation of the project results against the intent of the WIRA activity as outlined in WISE strategy.

Review: will be made against defined criteria using template in section 5.2.2.1.

Purpose: to serve as basis for a decision on future funding.

Who: review is initiated by WIRA Director and performed by WD and ESG. Result will be presented to WISE board.

How: a self-assessment by the project manager according to given template, section 5.2.2.1. The result will be presented and discussed with the review team.

5.2.2.1 Template for year 3 assessment

Status report, one-page free text shall be prepared in accordance to the data points below.

Outreach

How well has the WIRA succeeded in engaging University researchers, companies, and students in activities. During the reporting period and if applicable accumulated.

i. # of universities engaged

ii. # of companies engaged as core team

iii. # of companies as associated in the arena project

iv. # of researchers engaged (academic and industry)

Activities

What is the level of activity within the WIRA? Per year and accumulated over duration of the WIRA.

i. # of ongoing research projects

ii. # of events arranged by the WIRA

Results

Academic results, patents, and contribution to commercial ideas? Per year and accumulated over duration of the WIRA.

i. # of publications filed

ii. # of conference presentations

iii. # of PhD thesis referring to the WIRA

iv. # of patent applications filed

v. # of initiated, non-WISE funded, R&D projects

Subjective assessment

Results and/or feedback which are not covered above, in free text. Describe how/when for whom demonstration of results has been performed. Plans for coming year(s) which ought to be considered. A self-assessment and/or feedback from other parties.

5.3   Process and flowchart for WIRA

Process for WIRA described in table below.

Table 1. Process for WIRA

Task/Step	Description	Responsible	Date
Upstart	Outreach – inform Swedish industry about WISE and WIRA	PD, WD	2022-06-07
Way of working	Establish a procedure to initiate WIRA establishment: Presented to WISE ESG dec 2022 Presented to WISE Board meeting #1 2023	WD, PD	2023-02-06 (Figure 1)
WIRA proposal/establishment and governance process	Presentation to Board of the process on how to submit a WIRA proposal, decision, establishment, governance and evaluation.	PD	2023-05-12
WIRA proposal/establishment and governance process	Presentation to URG of the process on how to submit a WIRA proposal, decision, establishment, governance and evaluation.	WD	2023-06-24
WIRA process decision	Process for WIRA proposal submissions, decision, establishment, governance and evaluation.	WISE board	2023-09-06
The following is intended be repeated for each proposed WIRA, respectively			
Proposal and basis – one pager written text and few slides	Prepare a pitch of WIRA theme and type of participating companies. Including a preferred timeline for establishment Presentation to WISE ESG If OK with WISE ESG presentation to WISE Board	Main industrial applicant, WD	Upon meeting request Any scheduled board meeting
Developing a full proposal – Engage participants	Engage other parties in preparation of proposal and basis for specific WIRA. At least three active industrial partners. Identify and involve academic researchers	Main industrial applicant, WD, URG	According to preferred timeline

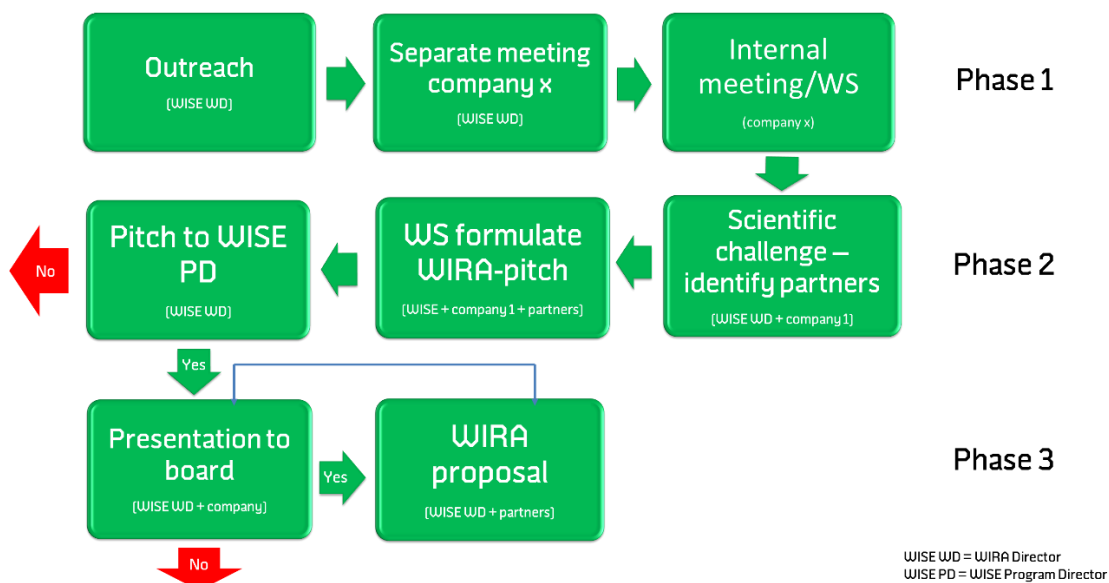|			
Writing a full proposal – proposal template	Main industrial applicant to involve other industrial parties and academic researchers in writing a full proposal following outline in proposal template. Should include a budget for first three years.	Main industrial applicant, other parties, WD	According to preferred timeline
Decision to start WIRA	Decision on funding for proposed WIRA according to above	WISE board	Upcoming board meeting
WIRA start	Kick-off meeting with participating parties and an information meeting with a broad invitation list internal as well as external the WISE community	WIRA project group, see chapter 4.1	According to proposed and decided plan
Establishment evaluation	Evaluation according to chapter 5.2.1	WD	Included in program status presentation at WISE board meeting
Main evaluation	Evaluation according to chapter 5.2.2 with purpose to serve as bases for a decision on future funding	WD	presented to WISE ESG and WISE board

Figure 1. Schematic description of procedure for information about WIRA and necessary steps to establish a WIRA.