IAQ Doctoral Academy

A global platform for increased and sustained competitiveness using quality as a strategic weapon through incessant collaboration between Industry and leading academic institutions

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IAQ Doctoral Academy

- **Vision:**
  - **To develop quality leaders of tomorrow on a global platform who can make a difference to the quality of products and services in their businesses.**
- **Goals of the Doctoral Academy:**
  - **The Doctoral Academy, with the support of doctoral candidates, will produce a series of books, practitioner-focused articles, as well as academic papers in top-tier quality management and quality engineering journals.**
  - **The Doctoral Academy will act as a pillar to support the review process of articles submitted to the flagship journal to be developed under the leadership of Dr Grace Brannan and team.**
  - **To host a research and practice-led annual conference showcasing the research outputs of the Doctoral Academy, as well as the outputs of various Think Tanks and colleagues in the IAQ. The conference will be used as a platform for sharing best-in-class practices in quality management.**

IAQ Doctoral Academy

- **An Academy which aims to *bridge the gap between theory and practice* of Quality Management through world class research projects executed by doctoral students on a global platform.**

- **The Academy can *attract candidates from anywhere in the world* who will be working in industry and tackle real world problems provided to them.**

- **Doctoral candidates are *admitted to a university anywhere in the world* but should be recognised by the IAQ.**

We already know that this works…

- Founded 2012 in Sweden
- IAQ Academicians Mats Deleryd, Anders Fundin and Lars Sorqvist were among the founders
- Involves 11 Swedish universities
- Industrial Network – Volvo, ABB, Astra Zeneca, Electrolux, SKF, StoraEnso, Epiroc, Polestar etc.
- Lead by SIQ and IAQ Acd. Anders Fundin
- Common and aligned research
- Common Doctoral supervision and courses

IAQ Doctoral Academy

- **The *project will either be fully funded by a company* where the student is based for carrying out the research project or partially funded by a company and an associated university partner.**

- **The project will be *supervised by an academic and a practitioner from the IAQ along with an industrial mentor* who is a senior manager in the sponsored organisation.**

- **The nature of the research project will be decided in consultation with the sponsored organisation along with the supervisory team.**

Entry Requirements

- **Candidates should *have a first degree in science, business, or engineering* discipline with a first-class or second-class honours from a reputed university in their respective country**
- **Candidates should *provide evidence of English proficiency* (TOEFL or IELTS scores of 6.0 overall are required, with no less than 5.0 in every category)**
- **Candidates should *submit a research proposal* for the area of study they would like to pursue, and this should be approved by the industry sponsor and the supervisory team**
- **Candidates who meet the criteria will be *interviewed by a panel* of three to four people**

Collaboration between the Sponsor and the Academic Institution

- The doctoral *candidate gets enrolled into a recognised university* in consultation with the sponsor and the supervisory team
- The *tuition fee will either be paid by the sponsor to the academic partner* (100% company sponsorship) or waived by the respective academic partner (50:50 sponsorship between the company and academic partner)
- The *total studentship or bursary will be decided in consultation* with the company and the supervisory team
- The *student will be based in the sponsored organisation* for 4 days and one day should be dedicated to research activities in the academic institute.
- Supervisory team: primary supervisor, second supervisor and mentor from the organisation

Doctoral Program

- **The *primary academic supervisor should be from an IAQ-recognised academic institution*. The secondary supervisor can be either from another IAQ recognised university or an IAQ Academician with reasonable research credentials.**

- **The *curriculum for the Doctoral Program will be decided by the relevant academic institution* (supervisory team) and the IAQ Doctoral Program committee.**

- **A *handbook of the Doctoral Program* will be produced by the IAQ Doctoral Academy**

- **All Doctoral students will have an *annual review process* in the presence of both the industry supervisor as well as academic supervisory team to ensure the satisfactory progress of the candidate**

Doctoral Program

- **All candidates should *complete all core (mandatory) and elective modules* from the course curriculum**
- **The topics for the Doctoral Program should be *approved by the IAQ Doctoral Program committee***
- **All potential *candidates should develop a research proposal* outlining the nature of the problem to be investigated, some background information from the literature, and the research gaps. Further details will be available in the Doctoral Program handbook.**
- **Students might have an *opportunity to work in different sites* and this implies working in a different country. The sponsored company, along with the supervisor of the relevant academic institution, should help the candidate in acquiring the required visa.**

Doctoral Program

- **All Doctoral students in years 1, 2, and 3 will get an *opportunity to present their work at the Annual Doctoral Symposium*. Both poster sessions and paper presentations are welcome.**

- **Year 1 students should develop a literature review paper showing the state-of-the-art findings as well as the fundamental gaps that will be addressed through the research**

- **Year 2 students should present the early findings of the field work (e.g.: results of interviews with leading experts or early findings of a case study)**

- **Year 3 students should present the key findings from their research and the novel contribution of their research to practice, in particular.**

- **All candidates will be mentored to develop manuscripts for leading practitioner journals throughout their Doctoral program. The list of journals will be outlined in the Doctoral Program Handbook**

Student's Doctoral Journey within the IAQ Doctoral Academy

Admission to the IAQ Doctoral Academy

- Screening applications of potential candidates
- Checking the entry criteria against the candidates' credentials
- Review the candidates' Research Proposals
- Successful candidates will be interviewed
- Select the candidates and send out letters of appointment to the Doctoral Academy

Year 1: Project Kick-off

- Registration with the appropriate university
- Project kick-off meeting with the supervisory team
- Revision and Submission of Research proposal for its approval
- Placement of student in the sponsor company
- Attend all relevant courses and get required credits
- Development of literature review paper
- Present the literature review paper at the Annual IAQ Doctoral Academy Research Conference
- Annual Review Process (candidate and committee)

Year 2: Project Progress…

- Development of Research Methodology (Research Design, Philosophy, methodology, etc.)
- Data collection strategy and planning
- Decide on the choice of research methods
- Data collection and analysis
- Development of second paper for a peer-reviewed journal based on the findings of the study
- Annual Review Process

Year 3: Project Progress…

- Development of a conceptual framework/model
- Model testing and validation with experts
- Development of the third paper based on the framework or model
- Writing up of the Doctoral Thesis
- Presentation of the work at the IAQ Doctoral Academy Research Conference
- Final Defence of the Thesis

Graduation

IAQ Alumni Association

IAQ Doctoral Ambassadors in helping IAQ scholars with publications

Key Deliverables of the IAQ Doctoral Program

- **Promote Interdisciplinary Research in Quality Management and Operational Excellence:** To foster interdisciplinary research in quality management and Operational Excellence, integrating insights from product design and development, engineering, manufacturing, service, the public sector, and embracing digital transformation and AI-driven analytics.
- **Enhance Industry Collaboration and Real-World Applications:** To build strong partnerships with industries to ensure that research and practice are aligned with real-world needs, enhancing the relevance and practical application of quality management theories and methodologies.
- **Support Sustainable Development Goals:** To contribute to the achievement of the UNSDGs through quality management principles, practices, tools, techniques, and frameworks. We also expect many Doctoral projects to support the IAQ's global studies on quality and sustainability, and the future framework we are working on with colleagues in the IAQ.
- **Develop Global Quality Leadership:** To prepare global leaders in quality management through our Doctoral Program, especially in diverse cultural and organizational contexts. There are just a handful of papers on Quality and Leadership topics, and this gap needs to be addressed, and “Leadership for Quality” as a topic needs to be understood better, especially in the era of Digitalization.

Key Deliverables of the IAQ Doctoral Program

- **Promote Research Excellence and Innovation:** To advance the field of quality management through innovative research, contributing to both theoretical and applied knowledge, and addressing emergent challenges in a rapidly evolving global landscape.
- **Foster a Collaborative and Inclusive Learning Environment:** To create an inclusive, collaborative, and supportive learning environment that encourages diversity of thoughts, interdisciplinary interaction, and mutual respect among students, faculty, and industry partners.
- **Cultivate Cutting-Edge Skills and Knowledge:** To equip Doctoral students with advanced skills in Quality 4.0/5.0, OPEX 4.0/5.0, etc., ensuring they are prepared to address contemporary challenges of tomorrow in quality management.
- **Extending the scope of Quality Management to all sectors:** Although quality management practices and concepts have been widely adopted in many manufacturing sectors of all sizes, more research needs to be done on the use of quality management concepts in the public sector and voluntary or non-profit organisations.
- **Encourage Lifelong Learning and Professional Development:** To foster a culture of continuous improvement and lifelong learning, future quality professionals must be upskilled in not only the current practices but also in digitalization tools.

Implications for Academia, Industry and IAQ

Implications for Academia

1. **Enhanced Interdisciplinary Research:** The IAQ Doctoral program will aim to break down silos between academia and industry and will promote the culture of co-operation and a growth mindset.
2. **Curriculum Innovation:** Universities will have the opportunity to innovate their curriculum and contemporary themes of quality management through research and practice.
3. **Increased Global Collaboration:** Facilitates global academic partnerships, enhancing the institution's international profile.
4. **Attracting Diverse Talent:** The program can attract a diverse pool of international students from varied backgrounds, and this would assist the academics to understand the impact of culture and leadership styles on quality performance.
5. **Raising Academic Standards:** The collaboration between three parties (IAQ, Industry, and University) can help raise the quality of teaching in many academic institutions.

Implications for Academia, Industry and IAQ

Implications for Industry

1. **Access to Cutting-Edge Research:** Industries will benefit from access to the findings of cutting-edge research projects carried out within the IAQ Doctoral Academy.
2. **Talent Pipeline:** The Doctoral program will create a pipeline of highly skilled professionals who are well-versed in the latest QM practices and associated digital technologies for driving quality and performance.
3. **Problem-Solving Partnerships:** Collaboration between industry and academia via IAQ can help in solving chronic real-world quality and process-related problems through academic research.
4. **Corporate Social Responsibility and Sustainability:** Graduates will be equipped to develop and implement sustainable and socially responsible practices, aligning with corporate goals.
5. **Expert Academic input and resources:** Industry will get free input from an academic supervisor as well as an IAQ mentor who will act as a mentor to the project.

Implications for Academia, Industry and IAQ

Implications for IAQ

1. **Reinforcement of IAQ's Leadership:** Establishes IAQ as a leader in quality education and research, aligning with its mission to advance quality knowledge and practices globally.
2. **Expanded Network and Influence:** Helps expand IAQ's network, fostering connections with academic institutions and industries worldwide.
3. **Contribution to the Quality Body of Knowledge:** The program will contribute significantly to the body of knowledge in quality management, reflecting IAQ's commitment to the field.
4. **Increased Membership Value:** Enhances the value proposition for IAQ membership by being directly involved in shaping the next generation of quality professionals on a global platform.
5. **Global Impact on Organisational Excellence:** Through the IAQ Doctoral Academy, IAQ can make an impact on organisational excellence through the utilization of the skills and expertise of Doctoral students.