

**UNIVERSITIES PROMOTING LINKAGES FOR
IMPACTFUL TRAINING, INNOVATION AND
TECHNOLOGY TRANSFER IN AGRICULTURE
(UPLIFT-AG)**

UNIVERSITY-INDUSTRY COLLABORATION

**BASELINE STUDY
REPORT 2025/2026**



**Funded by
the European Union**



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1 INTRODUCTION

1.1 Erasmus+ Project

Agricultural Higher Education Institutions (HEIs) in Kenya, Rwanda, Burundi, and Zimbabwe are mandated to deliver high-quality agricultural training, produce impactful research, and facilitate the effective transfer of knowledge and technologies. However, their ability to fulfil this mandate is significantly constrained by several systemic challenges. Chief among these are agricultural curricula that are misaligned with labour market needs, and pedagogical approaches that are largely theoretical, lacking interactive elements and meaningful engagement with agricultural industry and agribusiness practitioners.

Most agriculture-related curricula fall short in equipping graduates with critical skills for employability and entrepreneurship. They also often overlook essential perspectives on research, innovation, and the commercialization of intellectual property relevant to the agricultural sector. Compounding these issues is the limited collaboration between HEIs and the agricultural sector collaborations that are vital for contextualized teaching, relevant research, and effective technology transfer.

In addition, bureaucratic inefficiencies, outdated management systems, and poorly enforced institutional policies have resulted in substandard service delivery, which discourages potential partners. Many HEIs also lack the mechanisms and capacities required to identify, protect, and commercialize their intellectual assets. While some institutions have established innovation incubation centres and technology transfer offices, these units typically operate below optimal capacity.

“By 2035, 450 million Africans will enter the labour market, and 75% of them will do jobs that do not exist yet.”

Jutta Urpilainen, European Commissioner for International Partnerships

The project Universities Promoting Linkages for Impactful Training, Innovation and Technology Transfer in Agriculture (UPLIFT-Ag) seeks to address these challenges by strengthening the institutional effectiveness of agriculture-teaching HEIs in the four African partner countries. The project aims to:

- Enhance collaboration between HEIs and stakeholders in the agricultural industry;
- Introduce improved, practice-oriented teaching methods, including co-teaching arrangements with industry professionals;
- Design and implement innovative, market-relevant curricula that foster employability and entrepreneurship;
- Build the innovation and entrepreneurial capacities of HEIs by establishing and strengthening innovation incubation centres and technology transfer offices.

UPLIFT-Ag is implemented through a partnership model that brings together nine HEIs across Kenya, Rwanda, Burundi, and Zimbabwe, in collaboration with three European HEIs based in Germany, Italy, and Denmark, alongside a wide array of non-academic actors in the agricultural sector.

The project is funded by the European Education and Culture Executive Agency (EACEA) through the Erasmus+ programme,

under the call ERASMUS-EDU-2023-CBHE. The project (Grant Agreement No. 101129421 - UPLIFT-Ag) has a total budget of EUR 789,900 and will run for 36 months, from 1st December 2023 to 30th November 2026.

The project is structured in four work packages:

- WP 1: Project coordination and management
- WP 2: HEI-industry networking and collaboration
- WP 3: Identification and integration of innovative teaching methods in agriculture teaching curriculum
- WP 4: Strengthening innovation and entrepreneurial capacity of HEIs

The present baseline study report was developed as part of work package 2.



Figure 1: Project team at the kick-off meeting in Nairobi in February 2024

Website:

<https://uplift-ag.org/>

Project Coordinator:

Prof. Maina Mwangi
School of Agriculture and Environmental Sciences
Kenyatta University

Partners:

Kenya

Kenyatta University
Chuka University
Taita Taveta University

Burundi

The University of Ngozi - Burundi
University of Burundi

Rwanda

University of Rwanda
University of Lay Adventists of Kigali

Zimbabwe

Chinhoyi University of Technology
Zimbabwe Open University

European Union Partners

Università Politecnica delle Marche
Neu-Ulm University of Applied Sciences
University of Copenhagen



1.2 Project-specific objectives

The UPLIFT-Ag project is designed to help the agricultural partner universities in Kenya, Rwanda, Burundi, and Zimbabwe become more effective in driving food security, creating inclusive employment and income opportunities, and contributing to national economic and social development.

The project focuses on three core objectives:

1. Improving agriculture teaching methods by involving industry in co-teaching;
2. Enhancing collaboration between HEIs and the agri-industry;
3. Strengthening the capacity of incubation centres and technology transfer offices within HEIs. In partnership with the European partner universities, UPLIFT-Ag supports HEIs and industry actors to co-design curricula, adopt interactive teaching methods, and jointly identify research and innovation priorities. Each country hosts regular roundtables to foster collaboration, and each HEI develops systems to protect and commercialize intellectual property.

Through these efforts, UPLIFT-Ag builds more responsive, practice-oriented, and entrepreneurial agricultural education systems.

1.3 Agricultural higher education in Africa: Context and challenges

Agriculture is a key economic sector in Kenya, Rwanda, Burundi, and Zimbabwe, contributing between 10% and 30% of national GDP (FAO, n.d.; Trading Economics, n.d.). Despite its importance, the sector faces major challenges such as food insecurity, climate change, and underperformance by smallholder farmers, who produce most of the region's food (IFAD, 2013). With global food demand expected to rise by up to 56% by 2050, more resilient and sustainable agricultural systems are urgently needed (Sear-chinger et al., 2021).

Innovation and knowledge are key to this transformation. HEIs are expected to provide leadership, skilled graduates, and research-driven solutions. Yet, many HEIs in the region are underperforming due to outdated curricula, weak links with industry, and limited capacity for innovation and entrepreneurship.

Despite recent growth in the higher education sector, institutions face significant financial and structural challenges. Reliance on government funding, staff shortages, poor infrastructure, and limited digital capacity exacerbated by the COVID-19 pandemic have exposed institutional fragility. The quality of agricultural education has suffered, with graduates often ill-prepared for employment or enterprise due to rigid, theory-heavy teaching and little industry engagement.

Most HEIs lack effective systems for research commercialization, and few operate functional innovation hubs or technology transfer offices. Curricula are often outdated and disconnected from industry needs, failing to keep pace with global developments in agri-tech, entrepreneurship, and sustainability.

Nonetheless, there is an opportunity for reform. The diverse levels of advancement among HEIs in the region and partnerships with European institutions open pathways for experience sharing and capacity development. To remain relevant, HEIs must innovate, align with industry, and strengthen their role in driving sustainable agricultural transformation.

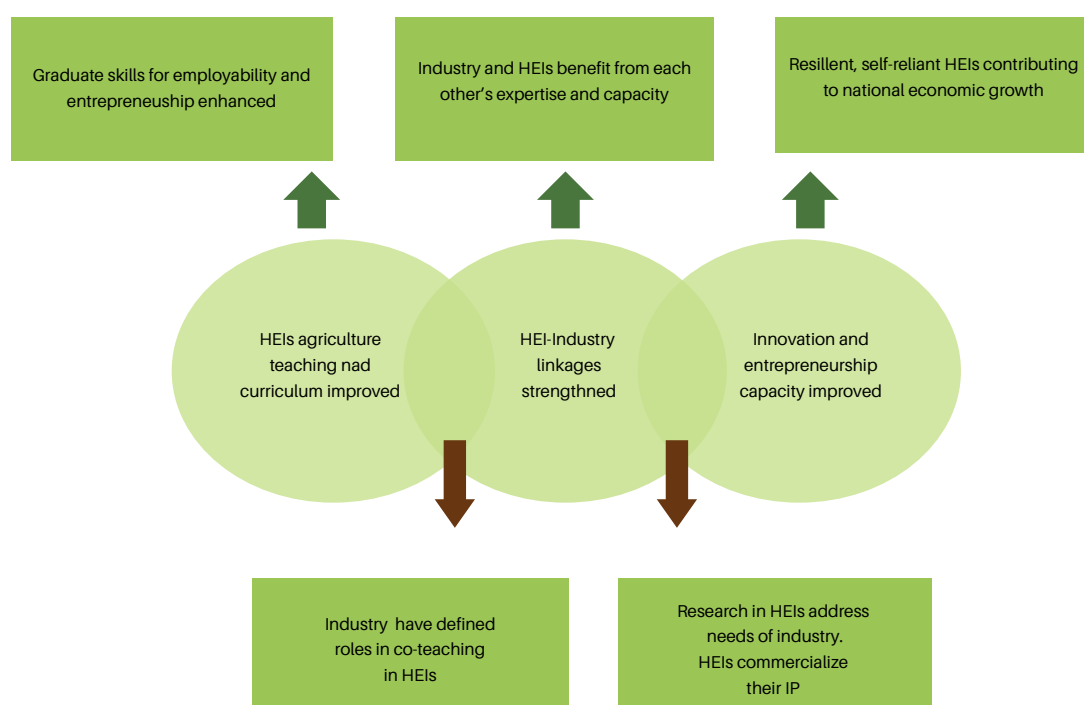


Figure 2: Project Specific Objects

2 METHODOLOGY

2.1 Purpose of the baseline study on HEI-industry networking and collaboration

This baseline study aims to assess the capacity of HEIs to build and utilize partnerships that enhance teaching, research, innovation, and technology transfer in agriculture. The specific objectives are to:

- Identify barriers faced by HEIs in forming and sustaining effective partnerships.
- Analyze the role of partnerships in curriculum development, research, and agribusiness support.
- Map existing types, models, and best practices of HEI-industry collaboration.
- Use the Graz Model for Integrative Development (Mader, 2009) as a framework to assess partnership dynamics.
- Facilitate knowledge exchange among HEIs through a validation workshop.
- Develop a practical partnerships manual/toolkit to guide future collaboration.

Data was collected through a structured survey administered online to individual scientists, HEI decision makers, and industry partner representatives.

2.2 Theoretical background

A quantitative survey questionnaire was developed based on the following theoretical framework:

2.2.1 The Graz Model for Integrative Development

The Graz Model for Integrative Development, see fig. 3, serves as the foundational framework for the baseline study on university-industry collaboration within the UPLIFT-Ag project. The model provides a comprehensive structure to assess and guide the sustainability transformation of HEIs.

It emphasizes five interconnected dimensions: leadership and vision, social networks, participation, education and learning, and research integration. By evaluating these areas, the model facilitates a holistic understanding of how HEIs can evolve to meet societal and economic challenges through enhanced collaboration and innovation. This approach aligns with the objectives of the UPLIFT-Ag project, aiming to strengthen the role of African HEIs in driving sustainable agricultural development.

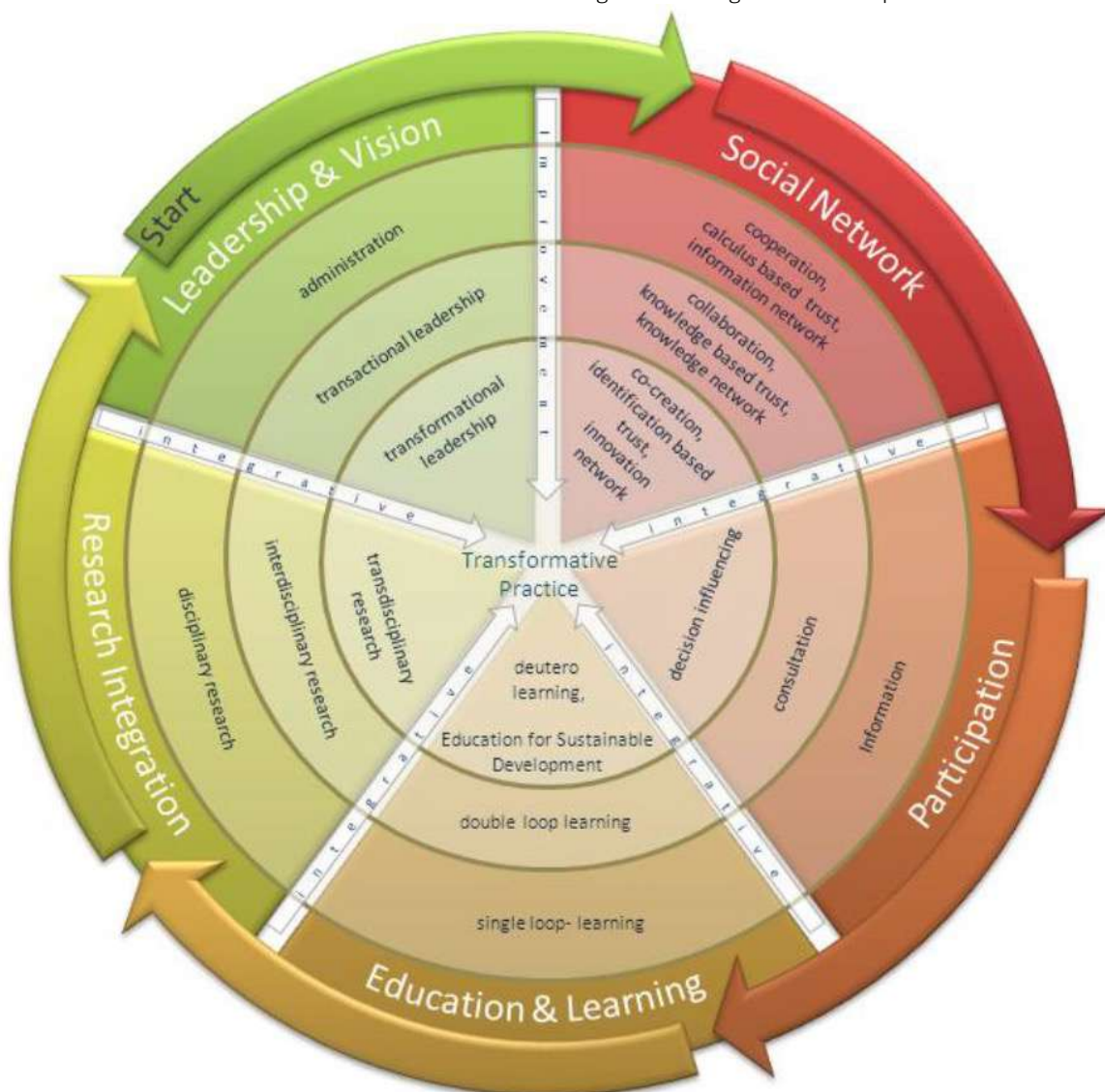


Figure 3: The Graz Model for Integrative Development (Mader, C., 2015, p.7).

2.2.2 Forms of university-industry relationships

Universities and industry engage through a broad spectrum of collaborative approaches, ranging from informal exchanges to structured institutional partnerships. At the informal end, collaboration may take place through academic spin-offs, individual consultancy (whether paid or voluntary), information exchange forums, collegial interactions at conferences, joint or guest lectures, and personal contact between academic and industry professionals, including co-locational arrangements. More formal personal engagements include student internships and sandwich courses, students' participation in industrial projects, scholarships and fellowships, joint supervision of postgraduate research, staff exchange and secondments, sabbaticals, hiring of graduates, and shared use of research facilities such as laboratories and databases.

Some collaborations are facilitated by intermediary entities such as institutional consultancy units, liaison offices, technology transfer organizations, government agencies, or industry associations acting as brokers. More targeted institutional arrangements include contract research agreements, licensing of intellectual property, cooperative research projects, university equity in start-ups, exchange of research materials, co-developed curricula, and joint research programmes—either as partners or subcontractors. Broader institutional agreements may include long-term partnerships, endowed chairs, advisory boards, industry-funded academic positions, or general research grants and donations. In addition, structural arrangements such as innovation and incubation centres, science and technology parks, university–industry consortia, and cooperative research centres further strengthen long-term collaboration and knowledge exchange.

Classification of forms of university-industry collaboration (adapted from Ankrah & Al-Tabbaa, 2015, p. 391):

Personal Informal Relationships

- Academic spin-offs
- Individual consultancy (paid for or free)
- Information exchange forums
- Collegial interchange, conference, and publications
- Joint or individual lectures
- Personal contact with university academic staff or industrial staff
- Co-locational arrangement

Personal Formal Relationships

- Student internships and sandwich courses
- Students' involvement in industrial projects
- Scholarships, Studentships, Fellowships and postgraduate linkages
- Joint supervision of PhDs and Masters theses
- Exchange programmes (e.g. secondment)
- Sabbaticals periods for professors
- Hiring of graduate students
- Employment of relevant scientists by industry
- Use of university or industrial facility (e.g., lab, database, etc.)

Third Party

- Institutional consultancy (university companies including Faculty Consulting)
- Liaison offices (in universities or industry)
- General Assistance Units (including technology transfer organizations)

- Government Agencies (including regional technology transfer networks)
- Industrial associations (functioning as brokers)
- Technological Brokerage Companies

Formal Targeted Agreements

- Contract research (including technical services contract)
- Patenting and Licensing Agreements (licensing of intellectual property rights)
- Cooperative research projects
- Equity holding in companies by universities or faculty members
- Exchange of research materials or Joint curriculum development
- Joint research programmes (including Joint venture research project with a university as a research partner or Joint venture research project with a university as a subcontractor)
- Training Programmes for employees

Formal Non-Targeted Agreements

- Broad agreements for U-I collaborations
- Endowed Chairs and Advisory Boards
- Funding of university posts
- Industrially sponsored R&D in university departments
- Research grant, gifts, endowment, trusts donations (financial or equipment), general or directed to specific departments or academics

Focused Structures

- Association contracts
- Innovation/incubation centers
- Research, science and technology parks
- University-Industry Consortia
- University-Industry research cooperative research centers
- Subsidiary ownerships
- Mergers

2.2.3 Barriers to university-industry collaboration

The framework developed by Rossoni, A.L. et al. (2023) provides a robust foundation for classifying and understanding barriers to university-industry collaboration, supporting the analysis of data from both HEIs and their industry partners. The framework examines barriers through three theoretical lenses: the triple helix and entrepreneurial university model, relational social capital and value creation, and technology transfer alongside cultural differences.

Rossoni et al. (2023) emphasize the crucial role of building relational social capital and offering tax incentives to encourage industry engagement in innovation through academic partnerships and suggest that barriers to collaboration in research, development, and innovation can be mitigated by initiating smaller projects and progressively increasing their complexity. Table 1 details the specific individual barriers within the structural categories of this framework.



Categories			Barriers
Comprehensive	Detailed	Dualistic	
Cultural	Misalignment	Orientation	Differences in objectives between the parties. University research is highly oriented towards pure science. Differences between research and enterprise environments. Low level of application of RD&I production to companies activities. Disparity between university knowledge and the demands of companies. Failure to recognize business value. Differences in positions and time options between the industry and academia. Industry delays the dissemination of research results.
Cultural	Capability	Orientation	Inequitable interactions and low initial social investment. Research institutes prefer to work alone.
Cultural	Contextual	Orientation	Low level of knowledge about the benefits that can arise from cooperative interactions. Poor attitude towards the partner. Perception that academia is not sufficiently competent for cooperation. Perception of academic status and capabilities.
Cultural	Contextual	Transaction	Perception that intellectual property is not important in the particular research field.
Cultural	Misalignment	Orientation	The research is not linked to industrial interests/needs. Leave of absence of the researcher in relation to the activities of the industry.
Cultural	Misalignment	Transaction	Universities need publications Potential conflicts with industry regarding patents
Cultural	Governance	Orientation	Collaboration with people from different organizations
Cultural	Motivation	Orientation	University researchers are not motivated to cooperate. Absence of incentives and working conditions. Absence of mechanisms to encourage cooperation. Collaboration is detrimental to career progress. Collaborations conflict with teaching/research duties.
Institutional	Capability	Transaction	Lack of planning and infrastructure
Institutional	Contextual	Orientation	Absence or low profile of technology transfer offices in universities. Absence of mediators. Ignorance of legislation and mechanisms for financing innovation and university-industry relations. Lack of appropriate policies to integrate knowledge-related activities
Institutional	Contextual	Transaction	Inconsistent support from political leaders. Socioeconomic reality (tax, legislation and the cost of doing business in the country) Difficulty in finding innovative companies. Lack of government funding. Lack of financial resources in general.
Institutional	Misalignment	Transaction	Industrial liaison offices tend to exaggerate the results of research or to have unrealistic expectations
Institutional	Governance	Orientation	Lack of appropriate mechanisms of communication and collaboration

Compre- hensive	Detailed	Dualistic	
Institutional	Governance	Transaction	Bureaucracy. Perception of business risks. High staff turnover and poor industrial strategy. Lack of established procedures in the university for collaboration. Rules set by universities or government funding schemes.
Institutional	Motivation	Transaction	Difficulty of finding partners at universities.
Operational	Capability	Orientation	Difficulty of contacting individuals in the industry.
Operational	Capability	Transaction	Lack of preparation of company persone
Operational	Misalignment	Orientation	Insufficient face-to-face contact
Operational	Governance	Orientation	High levels of formality in conversations.
Operational	Governance	Transaction	Quality of managerial leadership.
Operational	Motivation	Orientation	Lack of autonomy to work with the industry.

Table 1: Description of barriers to UIC, reproduced from Rossoni, A.L. et al, 2023, n.p.

2.3 Sample description

Data was collected from three distinct stakeholder groups via an online survey, which was distributed through the networks of six African HEIs between April and July 2024:

1. Individual scientists and lecturers at African HEIs
2. Decision-makers at African HEIs (e.g., Heads of Department, Heads of School, Heads of College, Deputy Vice Chancellors, and Vice Chancellors)
3. Industry partner representatives (practitioners at any hierarchical level)

2.3.1 Individual scientists

- Data gathering period: 09.04.24 – 06.07.24
- Questionnaire started: 245
- Questionnaire completed: 212

Burundi answers: 63

University of Burundi – 49
University of Ngozi – 11
Polytechnic University of Gitegal – 1
Ecole Normale Supérieure – 1
Military Academic University – 1

Kenya answers: 40

Chuka University – 25
Kenyatta University – 11
Taita Taveta University – 4

Rwanda answers: 90

University of Rwanda – 81
University of Lay Adventists of Kigali – 8
Integrated Polytechnic Regional College – 1

Zimbabwe answers: 19

Chinhoyi University of Technology – 5
Zimbabwe Open University – 6
Great Zimbabwe University – 4
Gwanda State University – 2
Bindura University of Science Education – 1
Marondera University of Agricultural Science and Technology – 1



Figure 4: Individual scientist respondents by country

For how many years have you been working in this university?

Number of responses: 212

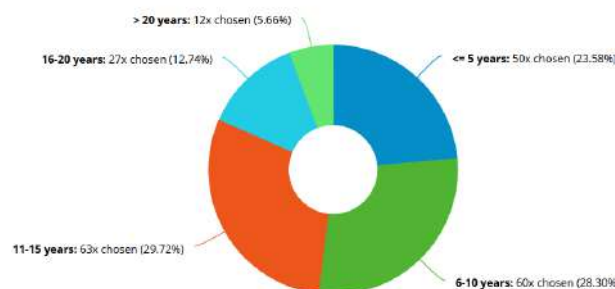


Figure 5: Individual scientists respondents' years of university affiliation

2.3.2 Decision makers at African HEIs

- Data gathering period: 16.04.24 – 04.07.24
- Questionnaire started: 65
- Questionnaire completed: 53

Burundi answers: 11

University of Burundi – 8
University of Ngozi – 3

Kenya answers: 14

Ohuka University – 5
Kenyatta University – 5
Taita Taveta University – 4

Rwanda answers: 23

University of Rwanda – 17
University of Lay Adventists of Kigali – 6

Zimbabwe answers: 5

Zimbabwe Open University – 2
Midlands State University – 1
National University of Science and Technology – 1
Zimbabwe Council for Higher Education – 1



Figure 6: Decision maker respondents by country

For how many years have you worked in this decision making role?

Number of responses: 53

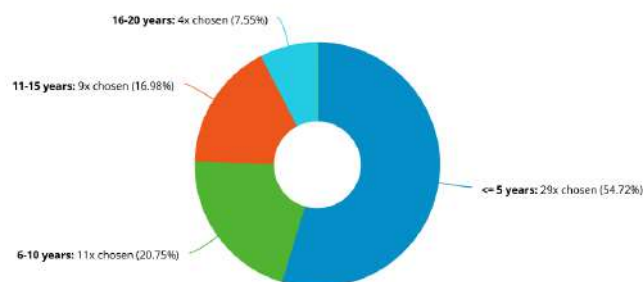


Figure 7: Decision maker respondents' years of workplace affiliation

2.3.3 Industry partner representatives

- Data gathering period: 10.04.24 – 08.07.24
- Questionnaire started: 159
- Questionnaire completed: 109

Burundi answers: 10

Kenya answers: 16

Rwanda answers: 32

Zimbabwe answers: 24

Country not identified answers: 27

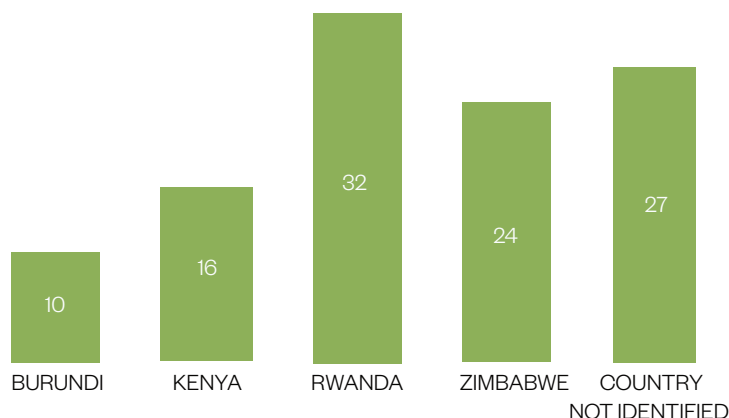


Figure 8: Industry partner representative respondents by country

For how many years have you been working in this company?

Number of responses: 109

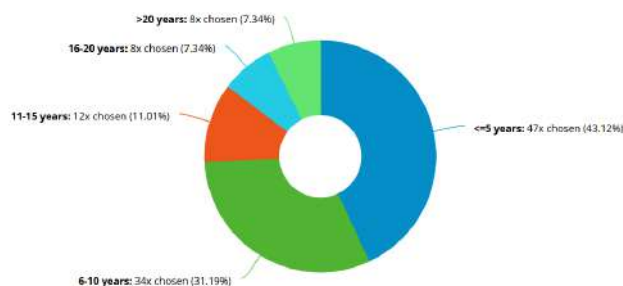


Figure 9: Industry partner respondents' years of workplace affiliation



How many employees (incl. contract workers) are working in your company?

Number of responses: 109

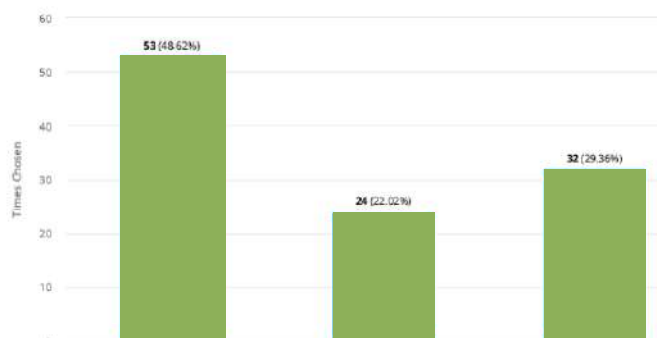


Figure 10: Industry partner representative respondents by number of employees

What are the main business areas of this company?



Figure 11: Industry partner representative respondents by main business areas

3 RESULTS AND RECOMMENDATIONS

3.1 Informal relationships

3.1.1 Individual lecturers' results

Which of the following personal informal relationships have you experienced between yourself and relevant representatives of industry partners in your fields of research and/or teaching?

Number of responses: 212

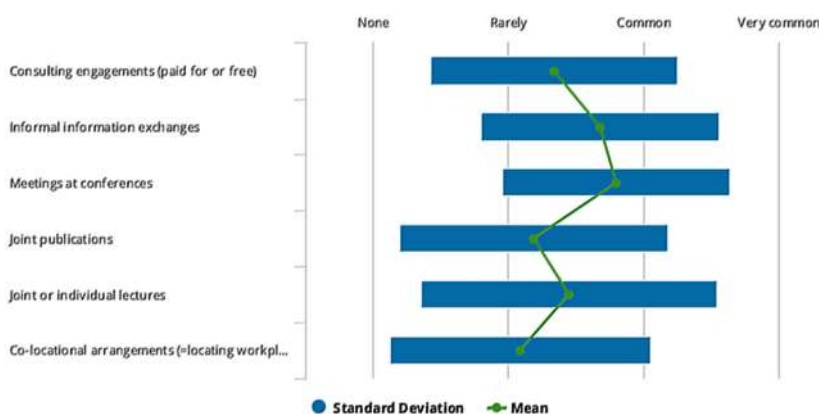


Figure 12: Scientists personal informal relationships

OTHER FORMS OF PERSONAL INFORMAL RELATIONSHIPS EXPERIENCED:

- Joint research initiatives and collaborative grant applications
- Collaboration with national and international research institutions and universities
- Exchange of academic expertise, including supervision and fellowships
- Involvement of industry professionals in guest lectures and training sessions
- Development and delivery of targeted workshops and practical demonstrations
- Coordination of student internships, industrial attachments, and field visits
- Industry engagement in graduate recruitment and talent

identification

- Participation in community outreach, service activities, and development initiatives
- Collaboration with public institutions, local authorities, and professional associations
- Regular communication through formal channels such as email, phone, and meetings
- Use of digital platforms and social media for professional networking and engagement
- Informal professional interactions and networking through community and past contacts
- Site visits to agricultural and food industry enterprises for applied learning
- Joint initiatives with industry on applied research, innovation, and curriculum development

3.1.2 HEI decision makers' results

Which of the following personal informal relationships have you experienced between yourself and relevant representatives of industry partners?

Number of responses: 53

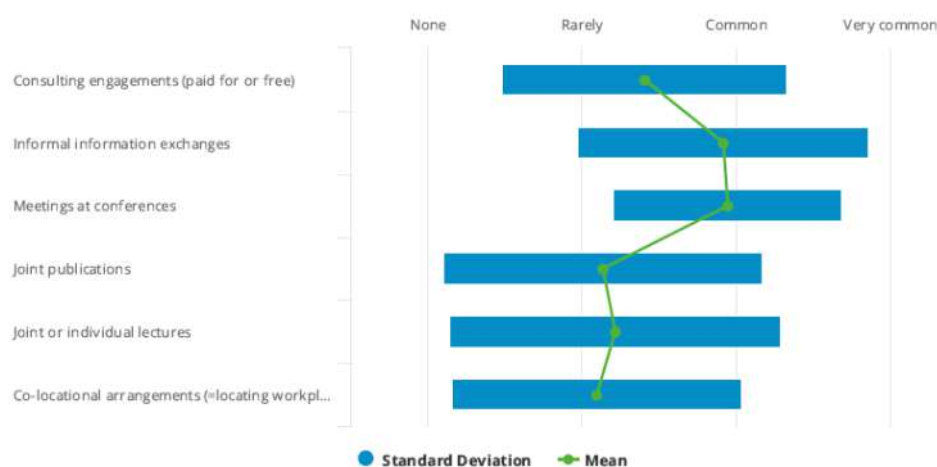


Figure 13: HEI decision makers' personal informal relationships

Other forms of personal informal relationships experienced:

- Laboratory analysis
- Co-supervision of postgraduate students
- Joint coordination of student internships
- Participation in meetings and technical working groups
- Engagement in seminars, workshops, and conference organization
- Joint development of research proposals
- Career advisory support for students
- Community engagement activities, including leadership and capacity-building trainings

- Collaboration with cooperatives
- Involvement of guest speakers and industry exhibitors
- Communication through phone calls, emails, and WhatsApp messaging
- Professional relationships with alumni working in public and private sectors
- Opportunities for sports and leisure activities
- Learning experiences related to organizing academic conferences

3.1.3 Industry representatives' results

Which of the following personal informal relationships are existing between you / your company and relevant members of university departments or schools/colleges?

Number of responses: 109



Figure 14: Industry partner representatives' personal informal relationships

Other forms of personal informal relationships experienced:

- Engagement through laboratory tests conducted in university labs
- Participation in training programs and further academic studies
- Contribution to curriculum development initiatives
- Coaching and part-time tutoring of students
- Hosting and supervising students during internships and industrial attachments
- Interaction with university staff during student assessments
- Provision of career advice and consultations on job opportunities
- Joint research ventures and commercialization activities
- Involvement in research projects related to health and disease diagnostics
- Participation in field visits and off-station agricultural activities
- Technical support such as farm visits and procurement advice
- Weekend visits to assist customers with agricultural services
- Engagement through professional relationships with former colleagues and professors
- Networking during events such as agricultural exhibitions

3.1.4 Summary

The survey results reveal a consistent pattern across all three target groups regarding the nature of informal relationships, with similar responses reported. Notably, industry partners tend to report slightly more negative experiences, whereas decision makers generally express more positive perceptions of these relationships. Informal interactions commonly occur through meetings at conferences and casual information exchanges. However, more formal collaborative activities—such as joint publications, lectures, or shared workspaces—are relatively uncommon. Additional forms of engagement frequently cited in open-ended responses include joint research proposal writing, field visits involving students to companies, community engagement initiatives like co-operatives, and guest presentations by industry partners. These findings suggest that while informal connections are widespread, deeper or more structured collaborations remain limited.

3.1.5 Recommendations

- Provide opportunities for joint or individual lecture engagements / guest presentations of industry representatives in universities
- Provide dedicated networking platforms (physical events and/or online interest groups) for specific topics of interest to both groups
- Conduct active management of and communication with alumni
- Systematically gather and share contact data of relevant industry partners in the university (on department or school level)

3.2 Formal relationships

3.2.1 Individual lecturers' results

Which of the following personal formal relationships have you experienced or initiated with relevant representatives of industry partners?

Number of responses: 53



Figure 15: Scientists' personal formal relationships

Other forms of personal formal relationships experienced:

- Collaborative research projects involving universities, industries, and research institutions
- Joint development and implementation of grant proposals and project initiatives
- Industry-supported student internships, practical training, and use of facilities for research
- Consultancy services provided to NGOs, government agencies, and private companies
- Participation in roundtables, validation workshops, and professional seminars
- Industry engagement in academic activities such as public talks, guest lectures, and thesis supervision
- Shared use of laboratory and field research resources for

applied research and training

- Exchange of knowledge through conferences, publications, and expert networks
- Industry input on curriculum relevance and employability-focused training
- Initiation of partnerships through formal channels and stakeholder networking

3.2.2 HEI decision makers' results

Which of the following personal formal relationships have you experienced or initiated with relevant representatives of industry partners?

Number of responses: 53



Figure 16: HEI decision makers' personal formal relationships

Other forms of personal formal relationships experienced:

- Laboratory analysis and shared use of research facilities
- Joint research initiatives, including borrowing research sites and industry-university research cooperation
- Collaborative proposal writing and participation in curriculum review processes
- Short-term industrial attachments for students
- Opportunities arising from industry visits to the university, often leading to new collaborations

- Participation in organized meetings and work-related collaborations
- Engagement through board memberships, international training facilitation, and corporate social responsibility (CSR) initiatives
- Regular interaction with small-scale partners seeking technical support, fostering long-term partnerships

3.2.3 Industry representatives' results

Which of the following personal formal relationships have you experienced or initiated between yourself / your company and relevant members of university departments or schools/colleges?

Number of responses: 109



Figure 17: Industry partner representatives' personal formal relationships

Other forms of personal formal relationships experienced:

- Supervision of university students in agricultural projects
- Occasional training sessions for students
- Company pays for laboratory services provided by the university
- Existing Memorandum of Understanding between Chuka University and Ideal Concept Farms Limited for collaboration and support
- Collaboration with research institutions that have formal agreements (MoUs) with universities
- Participation in academic and industry conferences
- Engagement in supervision and professional networking
- Collaboration on joint projects, including information exchange
- Research on coffee farming practices and identification of optimal coffee varieties
- Training of farmers in best agricultural practices
- Leadership roles in collaborative initiatives
- Consultations with university lecturers on ongoing projects
- Initiation of partnerships between universities and private sector partners
- Project-based partnerships with universities
- Participation in workshops and related academic-industry activities

3.2.4 Summary

The survey indicates a similar pattern of evaluations among the three target groups concerning formal relationships, with scientists and decision makers showing almost identical responses. Industry partners tend to assess certain formal collaboration options more critically, particularly regarding scholarships, joint thesis supervision, and reciprocal use of university and industry facilities, often rating these as rare or non-existent. Common formal interactions include student internships, involvement of students in industrial projects, and the hiring of graduates by industry partners. Conversely, less frequent are sabbatical periods for lecturers, staff exchange programs, and joint thesis supervision. Additionally, collaborative research projects were frequently mentioned in open-ended responses, highlighting an area of ongoing formal cooperation.

3.2.5 Recommendations

- Provide opportunities for joint or individual lecture engagements
- Utilize formal internships of your students to actively seek contact and exchange with representatives of the hosting organisations/businesses
- Create joint, applied research-oriented topics for Master's and/or PhDs thesis together with industry representatives
- Create collaborative research topics and project proposals with funding for both sides (ideally)
- Open specific university labs/facilities for industry partner usage
- Create formal consulting engagements between university faculties/departments and industry partners for specific topics
- Provide recognition for university staff actively engaging with university partners

3.3 Relationship building by third parties

3.3.1 Individual lecturers' results

Which of the following Third Parties have supported the relationship building between you and relevant representatives of industry partners in your fields of research and/or teaching?

Number of responses: 212

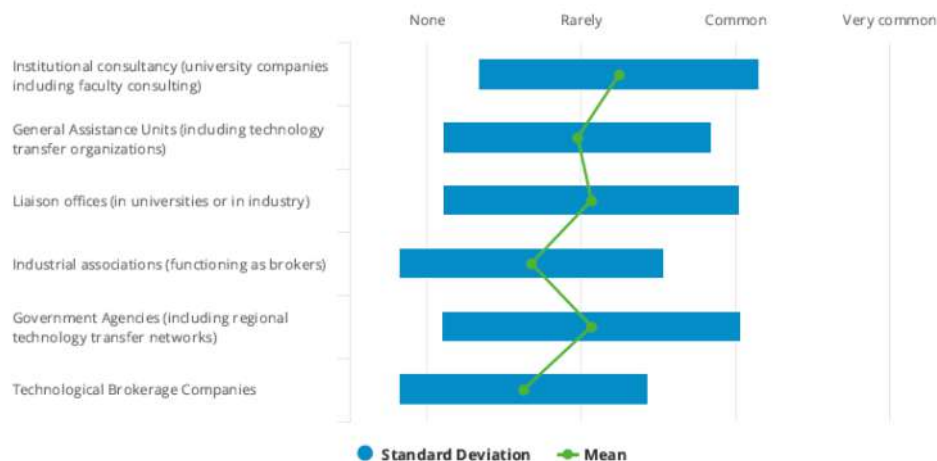


Figure 18: Scientists' Third Party support

Other third parties which supported the relationship building:

- Academic supervisors, university staff, and personnel from partner universities (local and international)
- Government representatives at local, county, and national

levels, including embassies and public institutions

- Research institutes and professional associations
- NGOs and international development organizations (e.g., FAO, USAID, Rockefeller Foundation)

3.3.2 HEI decision makers' results

Which of the following Third Parties have supported the relationship building between university members and relevant representatives of industry partners?

Number of responses: 53



Figure 19: HEI decision makers' Third Party support

Other third parties which supported the relationship building:

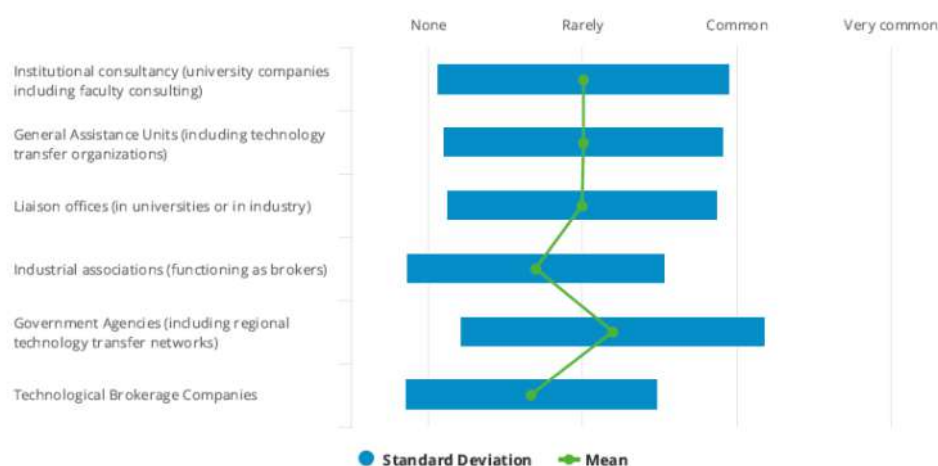
- Collaborations with NGOs and research support institutions
- Engagement with the Directorate of Career Development and the Alumni Office

- Support for cooperative development initiatives
- Industry linkages that facilitate student engagement and exposure
- Development of relationship-building and networking skills

3.3.3 Industry representatives' results

Which of the following Third Parties have supported the relationship building between you / your company and relevant members of university departments or schools/colleges?

Number of responses: 109



:Figure 20: Industry partner representatives' Third Party support

Other third parties which supported the relationship building:

- Experience sharing during conferences with support from organizations such as CNTA and BBN
- Personal contacts and informal interactions with university staff
- Engagement with private organizations, churches, and non-governmental organizations
- Collaboration with local farmer associations
- Partnerships with NGOs that support training and capacity building
- Interaction with private sector entities, particularly those focused on agriculture

3.3.4 Summary

The survey results show that all three target groups have a very similar evaluation of relationship-building support provided by third parties. However, industry partners and individual scientists tend to view these support options slightly more critically compared to decision makers. Among the various types of support, institutional consultancy and government agency assistance receive the highest overall ratings, though these ratings remain relatively low. Additionally, respondents frequently mentioned the involvement of non-governmental organizations (NGOs) and international organizations as important third-party contributors to relationship building.

3.3.5 Recommendations

- Enable the Technology Transfer Office (TTO) of the university to act as facilitator for university-industry networking (physical and virtual) platforms
- Position the TTO as a source of relevant information (on research fields, patents, facilities, available public funding support, etc.) specifically also to industry representatives



3.4 Institutional agreements

3.4.1 HEI decision makers' results

Which of the following formal institutional agreements are existing between your university, your school/college or your department and relevant industry partners?

Number of responses: 53

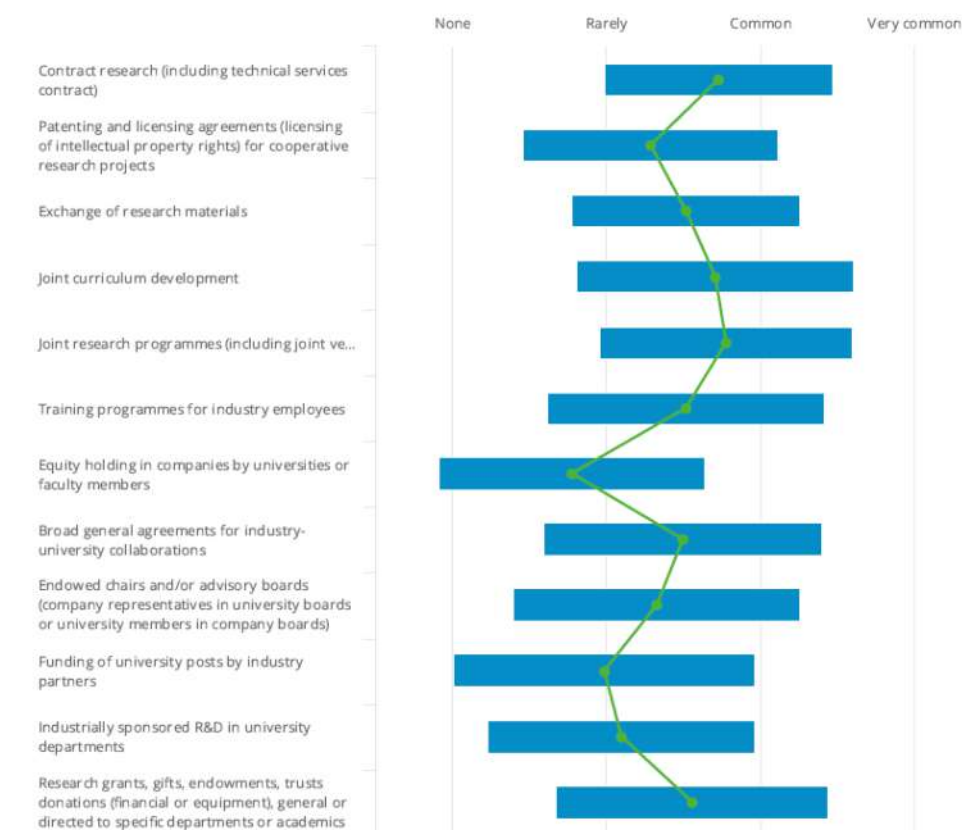


Figure 21: Formal institutional agreements

Other forms of formal institutional agreements existing:

- Signing of Memoranda of Understanding (MoUs) for mutual benefit in areas such as seed production, training, research, and staff/student mobility
- Establishment of articulation agreements to support academic collaboration
- Fellowship and competition programs initiated by industry with student participation opportunities



3.4.2 Industry representatives' results

Which of the following formal institutional agreements are existing between your company and relevant university departments, schools/colleges or universities?

Number of responses: 109



Figure 22: Industry partners' formal institutional agreements

Other forms of formal institutional agreements existing:

- Collaboration with institute linked to University of Ngozi
- Farms used as student training facilities
- Formal agreements with foreign and local universities for technology development project
- MoUs with local universities on project funding
- Trial demonstration partnerships with government and private research institutions

3.4.3 Summary

The survey reveals a similar pattern of evaluation regarding formal institutional agreements from both decision makers and industry partners, though industry partners tend to assess the existence of such agreements more critically. Training programs for industry employees are relatively common according to both groups. In contrast, arrangements such as university or faculty equity holdings in companies and industry funding of university positions are relatively rare from both perspectives. Additionally, Memorandums of Understanding were frequently mentioned as a common form of formal agreement in the open-ended responses.

3.4.4 Recommendations

- Offer more and relevant training programmes for industry employees (e.g. certificate courses, short courses, etc.)
- Utilize these training programmes for industry employees to increase and improve the contact database and the individual relationship networks
- Offer chairs in university boards (where legally appropriate) to industry managers
- Create contract research engagements for specific topics between industry partners and university representatives

3.5 Joint university-industry structures

3.5.1 HEI Decision makers' results

Which of the following joint university-industry structures are existing between your university, your school/college or your department and relevant industry partners?

Number of responses: 53

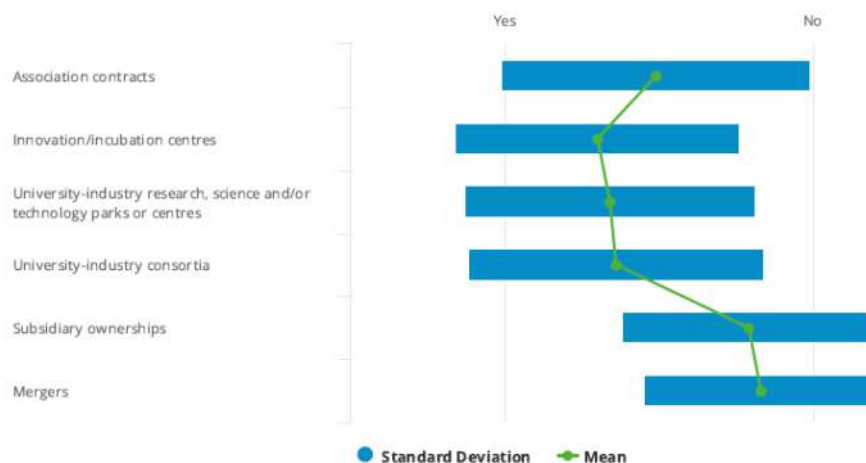


Figure 23: Joint university-industry structures

Other forms of joint university-industry structures existing:

- Collaboration on environmental initiatives such as roadside beautification and tree planting as part of corporate social responsibility efforts

- Signing of Memoranda of Understanding to support joint activities
- Promotion of innovation through knowledge exchange between the university and industry sectors

3.5.2 Industry representatives' results

Which of the following joint university-industry structures are existing between your company and relevant university departments, schools or universities?

Number of responses: 109

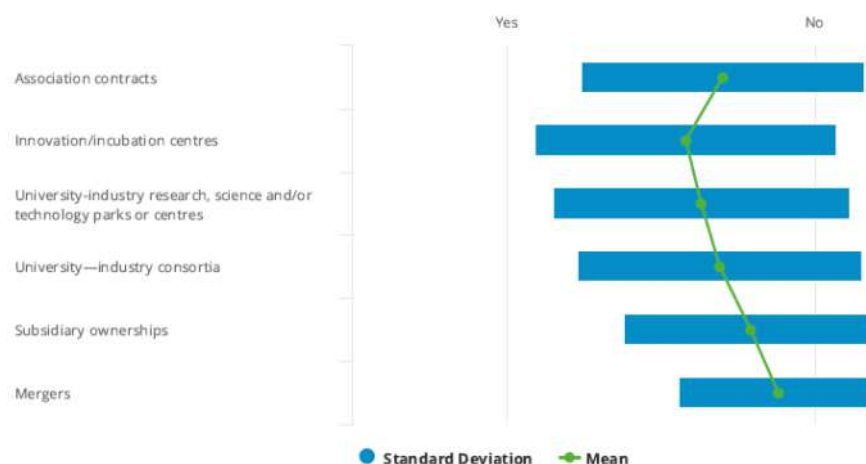


Figure 24: Industry partners' joint university-industry structures

Other forms of joint university-industry structures existing:

- Memorandum of Understanding (MoU)
- Use of resources
- Partnership request from company to university
- Internship opportunities



3.5.3 Summary

Both target groups (university decision makers and industry representatives) show general similarities in their evaluation of existing joint university-industry structures. However, industry partners tend to be more critical than decision makers regarding most of these options, particularly the first four assessed. Innovation and incubation centres receive the highest ratings from both groups, while mergers are rated the lowest by both.

3.5.4 Recommendation

- Offer co-working spaces for industry partners / representatives in university innovation/incubation hubs to foster networking

3.6 Reducing barriers to effective collaboration

3.6.1 Individual lecturers' results

How often did you experience the following barriers to effective collaboration between university members and industry partner representatives?

Number of responses: 212



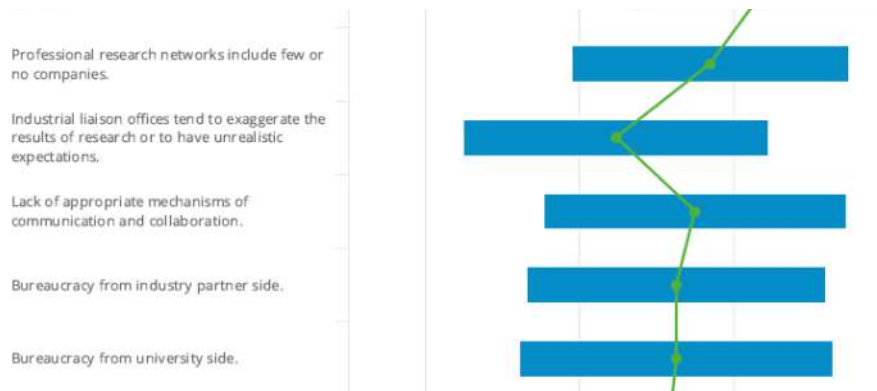


Figure 25: Scientists' experienced barriers

Other relevant barriers for cooperating with industry partners experienced:

- Lack of clear collaboration channels, mediators, and consistent project management
- Limited funding, resources, and technological infrastructure in universities
- Frequent leadership changes and weak institutional continuity
- Mistrust, misaligned goals, and past negative experiences between academia and industry
- Industry concerns over confidentiality and low perceived

value of academic research

- Poor communication, language barriers, and lack of clear contact points
- Limited awareness of mutual benefits and existing university capabilities
- Lack of incentives or motivation to collaborate, especially on the industry side
- Timing issues and reluctance to change existing practices
- Policy misalignment, low public investment, and weak governance frameworks

3.6.2 HEI Decision makers' results

How often did you experience the following barriers to effective collaboration between university members and industry partner representatives?

Number of responses: 53

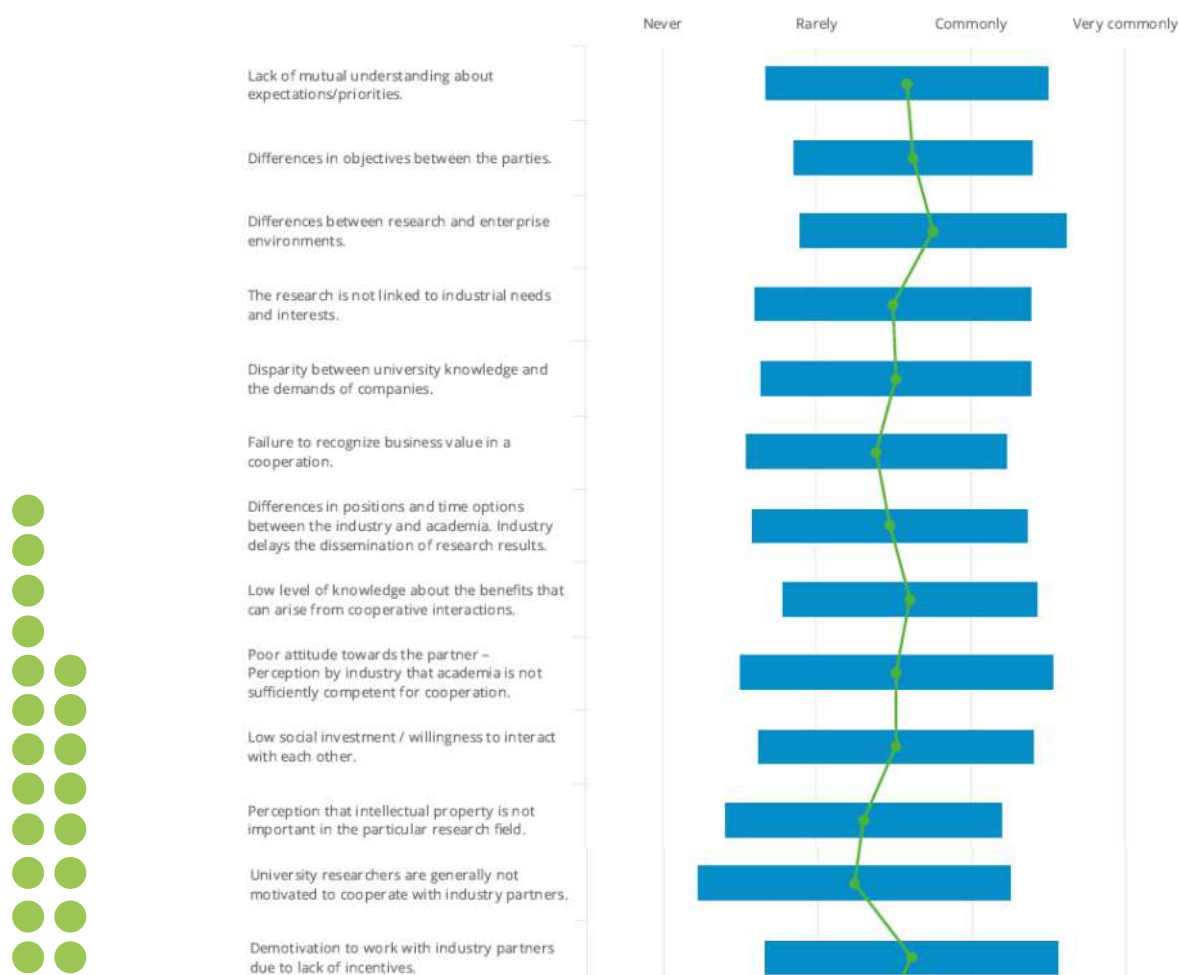




Figure 26: HEI decision makers' experienced barriers

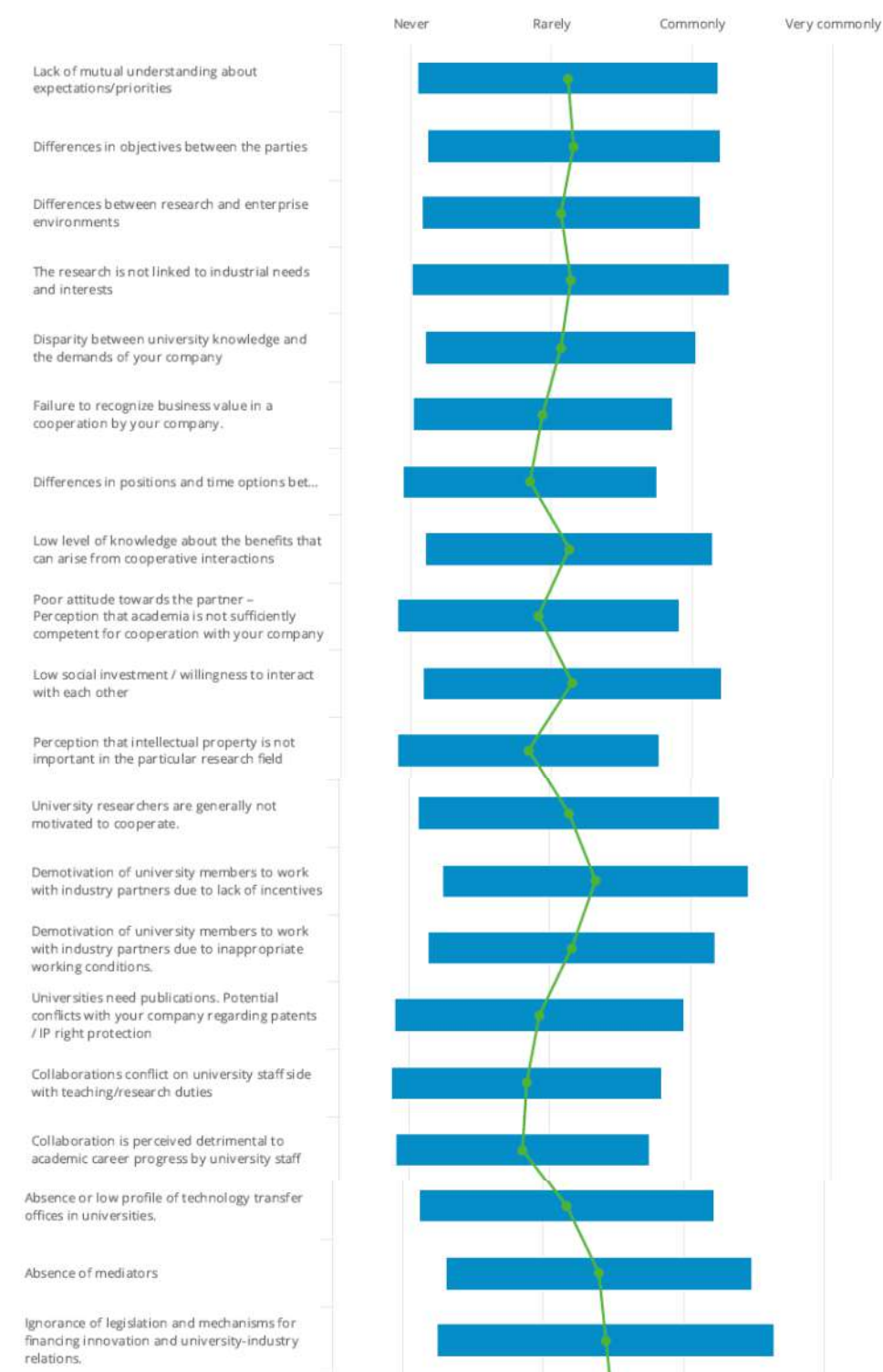
Other barriers observed:

- Limited understanding of mutual benefits and expectations in collaborations
- Inadequate interaction platforms and occasional duplication of institutional roles or mandates
- Insufficient funding to support collaborative activities
- Limited face-to-face engagement between partners
- Misalignment of goals and priorities between academic and business-oriented stakeholders
- Varying levels of social capital affecting the strength of partnerships

3.6.3 Industry representatives' results

How often did you experience the following barriers to effective collaboration with university partners?

Number of responses: 109



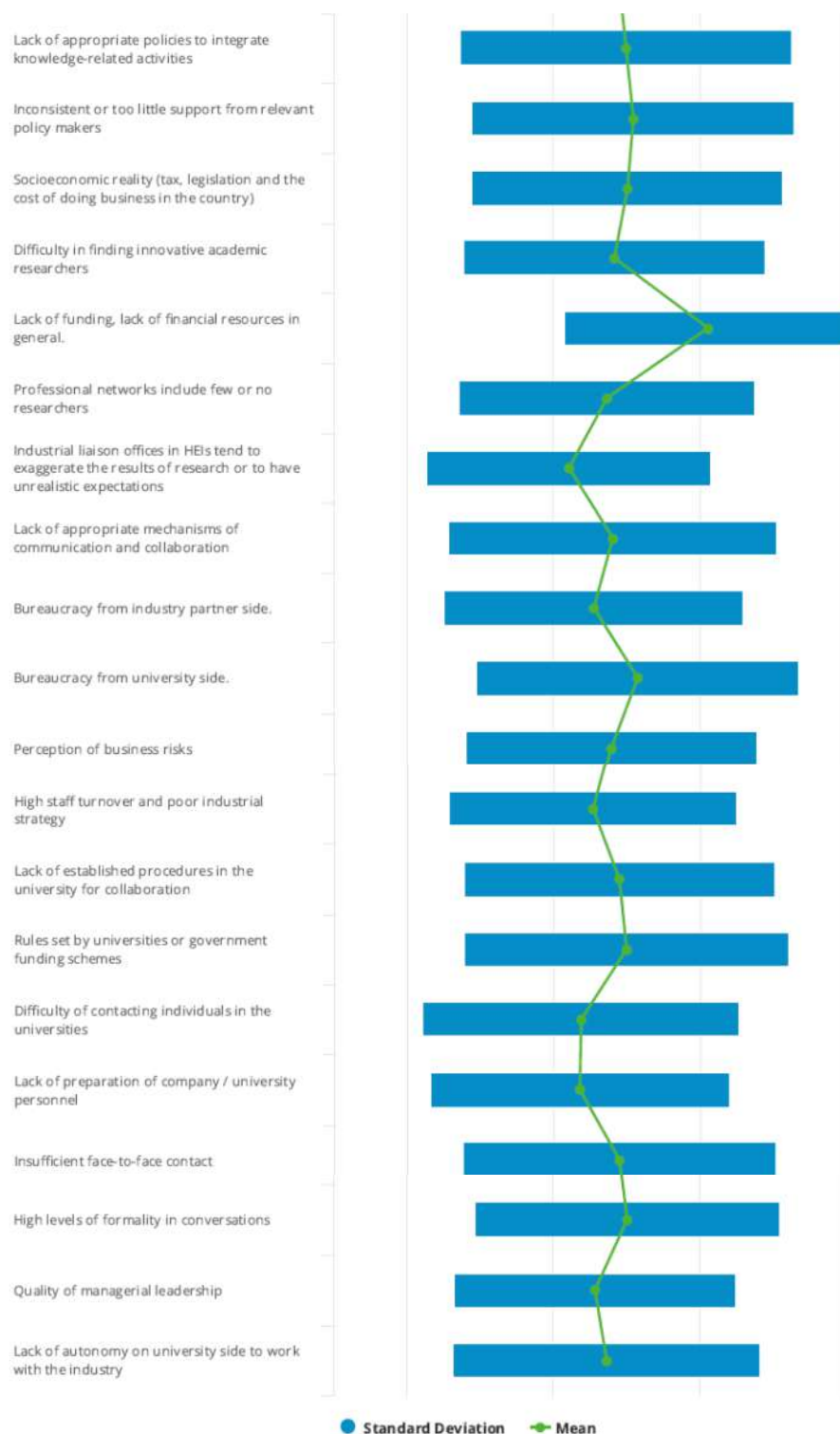


Figure 27: Industry partners' experienced barriers

Which other relevant barriers for the cooperation between universities and industry partners have you experienced?

- Lack of professional industry–university relationships; need for win-win system
- Insufficient information; universities show low interest in cotton sector
- Challenges in policy implementation
- Limited time for engagement
- Weak organizational and reporting skills
- Limited interaction areas and shared priorities
- Low interest in current and future agricultural investments; focus on traditional crops/livestock
- Lack of incentives or funding for university alumni projects
- Transport facilitation issues
- Many companies lack required infrastructure
- Poor problem-solving and cooperation
- Insufficient government financial support; weak policy enforcement
- Low quality of work from some students
- Technological gaps between universities and industry; need for university retooling

3.6.4 Summary

The survey reveals a similar pattern of evaluations regarding barriers to effective collaboration across all three target groups. Industry partners generally perceive these barriers as less critical compared to scientists and decision makers. Commonly experienced barriers include lack of funding and financial resources, limited inclusion of companies in professional research networks, and inadequate communication and collaboration mechanisms. In contrast, barriers such as collaboration hindering academic career progress, unrealistic expectations from industrial liaison offices, and the perception that intellectual property is unimportant in certain research fields are reported relatively rarely. Additionally, respondents frequently mentioned a lack of information exchange, communication, motivation, and interest as further obstacles to collaboration.

3.6.5 Recommendations

- Provide adequate financial means / compensation / incentives to foster collaboration and collaborative projects
- Provide more and more targeted networking & exchange opportunities
- Create easy-to-use processes / policies to enable effective university-industry collaboration (to avoid the barrier of bureaucracy)

4 LESSONS LEARNED

The survey highlights a broadly shared understanding of university-industry collaboration across scientists, decision makers, and industry partners, though nuanced differences exist. Informal relationships are common and fostered primarily through conferences and casual exchanges, yet they rarely evolve into deeper, structured collaborations. Industry partners often report more critical views, especially regarding formal mechanisms such as joint thesis supervision, staff exchange, and shared facilities, which remain underutilized. Formal interactions more commonly involve internships, applied research projects, and student engagement. Support structures like institutional consultancy and government agency involvement are rated modestly overall, with NGOs and international organizations also playing a recognized role. Formal institutional agreements, such as training programs and MoUs, are moderately established, though more strategic forms of collaboration—like equity holdings or industry-funded positions—are rare. Innovation centers and co-working spaces are positively viewed, while bureaucratic and communication-related barriers persist.

While informal and student-focused collaborations are relatively well-established, deeper, more strategic and institutionalized partnerships remain limited and face barriers including lack of funding, communication gaps, and insufficient support mechanisms.

4.1 Role of Policy Instruments

To address these gaps and foster more effective university-industry collaboration, the strategic use of a wide range of policy instruments is essential. Drawing on OECD (2019), 21 policy instruments can be categorized into financial, regulatory, and soft measures, see Table 2. Financial instruments—such as R&D grants, tax incentives, innovation vouchers, and funding for joint research labs—can lower the economic barriers to collaboration. Regulatory tools—including IP regulation, sabbatical schemes, and open access requirements—can shape the enabling environment. Soft instruments like networking support, outreach activities, and training programs can build trust, shared understanding, and relational capacity.

The survey findings suggest that many of these instruments remain underutilized or unevenly implemented. A more systematic and integrated deployment of these tools—tailored to national and institutional contexts—could significantly enhance both the scale and quality of university-industry relationships, particularly in areas like co-created research, mobility between sectors, and long-term strategic partnerships.



Figure 28: UPLIFT-Ag consortium representatives during benchmarking visit at Neu-Ulm University of Applied Sciences in November 2024

Financial instruments	Regulatory instruments	Soft instruments
R&D innovation subsidies/grants for industry-science research	IP regulations publicly-funded research	Outreach activities to raise awareness of science-industry opportunities
Tax incentives for companies purchasing research from universities	Regulation of spin-offs founded by researchers & students	Training programs on knowledge collaboration
Grants for IP applications from universities	Sabbaticals & mobility schemes for researchers to work in industry	Collective industry-science roadmapping & foresight
Financial support to academic spin-offs	Career rewards for researchers engaging in knowledge collaboration	Guidelines, standards & codes of conduct for science-industry collaboration
Financial support for universities to host industry researchers	Open access & open data provisions for publicly-funded research	Networking support to build science-industry linkages
Public procurement of university research		
Innovation vouchers for R&D services from universities		
Performance-based funding systems for university linkages with industry		
Public-private partnerships creating joint research laboratories		
Funding of infrastructures & intermediaries for collaboration		

Table 2: 21 policy instruments; adapted from OECD (2019), *University-Industry Collaboration*. New

4.2 Key Recommendations

- Strengthen personal and institutional connections through guest lectures, alumni engagement, and shared contact databases.
- Expand student-centred collaboration via internships, joint thesis topics, and applied research projects.
- Improve infrastructure and access by opening labs, creating co-working spaces, and facilitating formal consulting and contract research.
- Enhance support structures by empowering Technology
- Transfer Offices, offering training for industry, and recognizing staff mobility and engagement.
- Reduce barriers and boost collaboration through financial incentives, streamlined processes, and targeted networking opportunities.



5 References

- Ankrah, S., Al-Tabba, O. (2015). University-Industry Collaboration: A Systematic Review. Article in SSRN Electronic Journal. DOI: 10.2139/ssrn.2596018, <https://www.researchgate.net/publication/314562766>
- FAO. (n.d.). FAO in Kenya. Food and Agriculture Organization of the United Nations. <https://www.fao.org/kenya/fao-in-kenya/kenya-at-a-glance/en/>
- IFAD. (2013). Smallholders can feed the world. International Fund for Agricultural Development. https://www.ifad.org/documents/38714170/40706188/Smallholders+can+feed+the+world_e.pdf
- Mader, C. (2015). Leadership for Sustainability in Higher Education - ELTT Handout Series Part II. <https://www.researchgate.net/publication/284188818>
- OECD (2019), University-Industry Collaboration : New Evidence and Policy Options, OECD Publishing, Paris, <https://doi.org/10.1787/e9c1e648-en>.
- Rossoni, A.L., de Vasconcellos, E.P.G. de Castilho Rossoni, R.L. (2023). Barriers and facilitators of university-industry collaboration for research, development and innovation: a systematic review. *Management Review Quarterly*. <https://doi.org/10.1007/s11301-023-00349-1>. Springer.
- Searchinger, T., Waite, R., Hanson, C., & Ranganathan, J. (2021). Creating a sustainable food future. *Nature Food*, 2, 133–134. <https://www.nature.com/articles/s43016-021-00322-9>
- Trading Economics. (n.d.). Burundi - Agriculture, value added (% of GDP). <https://tradingeconomics.com/burundi/agriculture-value-added-percent-of-gdp-wb-data.html>





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