

ORIC Policy Frame Work & Five Year Strategic Plan

2022-25



Office of Research Innovation & Commercialization
University of Home Economics, Lahore

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1. EXECUTIVE SUMMARY

The University of Home Economics (UHE), previously College of Home Economics, Lahore, was established with the cooperation of the University of Oklahoma, USA in 1955 to educate Pakistani females in Home Economics and allied fields. At the time of establishment, university of Oklahoma USA assisted this institute in curriculum development, teachers training and infrastructural support. Since then, the College of Home Economics is considered a top priority choice for female students to study various specialized degree programs with unique and diverse skill sets. Keeping in view, the contribution of this college in female wellbeing, in 2017, the Provincial Legislatures of Punjab, upgraded the status of College of Home Economics from college to university by passing UHE act.

The University of Home Economics is planned to be a tier 4 research university aiming to produce commercial knowledge having excellent socioeconomic impact. There is one community college, five academic faculties sub divided in to 24 departments covering a range of study areas from natural & social sciences to arts & humanities and applied technologies. To facilitate the research all necessary administrative departments are also established with full time dedicated human resource including the Office of Research Innovation and Commercialization (ORIC).

The Office of Research, Innovation and Commercialization (ORIC) established in UHE as per the guidelines of the Higher Education Commission (HEC) of Pakistan with the aim to create socioeconomic impact of the knowledge created through the research & innovation carried out by the UHE faculty and students. The ORIC-UHE is governed by ORIC Steering Committee (ORIC-SC) consisting members from academia & Industry in order to bridging the gap between knowledge production and market needs. ORIC at UHE is further divided in two wings that are “Research Management” & “Innovation and Commercialization”. The end objective of both the ORIC wings are quantified in a 5-year strategic plan with year wise phasing and targets like “Research Projects Applied & Granted”; “Funding Secured & Received”; “Travel Grants”; “Industry Linkages”; “Conferences, Workshops & Trainings Conducted”; “Consultancy to Industry”; “Securing Intellectual Property Right” and “Licensing of the IP Rights”.

2. INTRODUCTION:

As a newly established institution, the University of Home Economics, Lahore (UHE) envisages itself as Pakistan's leading industry lead institute and for its domestic and global recognition. At this stage, it is critical to set and follow the high standards in R&D so that our institution emerges as an engine of socio-economic growth for our beloved country. In this context, the research dimensions of UHE are set to be an institution that aims to work for socioeconomic growth and development by providing new products, value addition to existing products, import substitution, indigenous capacity building and problem-based solutions for the industry and general public.

The Office of Research, Innovation and Commercialization (ORIC) established in UHE as per the guidelines of the Higher Education Commission (HEC) of Pakistan, is serving as the research and innovation hub catering to all the activities pertaining to research and commercialization. ORIC is providing all the necessary support to the faculty and students enrolled in the university.

3. VISION:

The ORIC is the key to enabling UHE for serving as an innovative fulcrum of learning that encourages to explore of the new ambit of research, diffuses knowledge, and promulgate imagination, innovation, and entrepreneurship

4. MISSION:

ORIC is committed to developing and expanding the advancement in Home Economics, proselytizing skills, and guaranteeing transparency in research by effectuating eminence in teaching, research, academia-industry linkages and outreach activities on national and international levels thus fostering an entrepreneurial environment.

5. STRATEGIC GOALS:

The ORIC's strategic plan focuses on the following main areas;

- Devising the university's strategic research dimensions and policies
- Enhancing the diversifying external grants for R&D and Commercialization
- Promotion of innovation by the protection of IP rights of the UHE researchers
- Providing effective communication to all its stakeholders
- Strengthening of the Academia-industry linkages
- Inculcation of the entrepreneurial culture among the UHE graduates
- Commercialization of the university research and products through technology transfer and business incubation.

6. VALUES:

6.1. Altruistic:

We provide selfless support to the UHE research community right from the conception of the idea to the exploration and translation of the research outcomes.

6.2. Diverse:

We foster a research & commercialization community from wide-ranging areas of Art and Design, Textile Design, Interior Design, Food Sciences, Nutrition & Health Promotion, and other departments mend to be established in UHE in the future.

6.3. Collaborative:

We promote a culture of collaboration across the UHE research & commercialization community, building relationships with partner national and international HEI's and joining hands with the industry.

6.4. Equitable:

We ensure fair processes to provide equal access and opportunity to participate in the ORIC activities.

6.5. Ethical:

We uphold the highest standards of professional conduct, commitment and research integrity.

6.6. Innovative:

We support innovation through value addition in the existing technologies and products to address the real-time issues of our stakeholders for a better tomorrow and make sure of continuous improvement in our daily operations.

6.7. Transparent:

We make sure honesty and transparency in all administrative and financial matters in a decent manner.

7. KEY STAKEHOLDERS OF ORIC STRATEGIC PLAN:

ORIC strategic plan is widely applicable to;

- UHE faculty and researchers
- UHE students
- Industry
- Higher Education Commission (HEC)
- National / International funding agencies



FIG 1: STAKEHOLDERS FOR THE ORIC

8. KEY CHALLENGES:

8.1. Performance Matrix:

According to the changing parameters by the HEC with the need of the hour, the faculty is desired to be involved in innovative research, getting IPs, commercialization of research, generate income from research. Whereas in contrast, the faculty performance is evaluated on the number of research papers published, the number of students supervised, the number of workshops/conferences attended *etc.* This contradiction is a huge hurdle between the desired outcomes and should be addressed.

8.2. Conflict of Interest:

With the changing research dynamics, the faculty is ought to be entrepreneurs by starting faculty spin-offs to commercialize their research outputs. On the other hand, the faculty members are unable to do such activities the employees of public sector universities.

8.3. Communication Gap between the Academia and Industry:

The industry remains unaware of most of the university research and the university remains unable to communicate their research outcomes to the industry-leading to poor communication.

8.4. Lack of Trust between Academia and Industry:

The industry is reluctant to invest in R&D at the domestic level and prefers to import the products/technology instead of developing the products/technology at the local level. The

industry needs to be realized the potential of the university researchers and should be convinced for investing in R&D. The technologies/products developed by the academia are the output of the research which is mostly not in line with the industrial needs. These technologies remain limited to the university itself and fail to attain commercialization and move to the decline stage. Such kind of technology/product development at universities leads to the lack of interest and trust in academic research by the industry.

8.5. Incentives for Industry:

There are no incentives for the industry to invest in R&D. It takes a huge investment to develop the technology in terms of equipment and high-cost machinery to develop indigenous solutions. Therefore, typical risks are involved in investing in technology/product development.

8.6. Incentives for Faculty:

Research and development demand a deep understanding of the recent advancements in a particular field from the faculty members. This is a very time-consuming and challenging task and demands a lot of energy and encouragement. Faculty needs to be incentivized in terms of financial as well as career growth by putting their best in R&D for innovative research and development.

9. ORIC FUNCTIONS:

9.1. Research Operations and Management:

ORIC is committed to supporting the externally and internally sponsored projects of the university and providing pre-and post-award services to the research community and funding agencies. The responsibilities of this wing are to;

1. Develop, maintain, and communicate pre- and post-award administrative procedures for externally sponsored projects
2. Support faculty with grant proposal submissions in conjunction with Sponsored Projects Administration (budget development; award documentation; administrative portions of proposals; internal approvals; monitor issues around effort, cost share, space needs, and tuition remission)
3. Support faculty regarding contracts, progress reports and other sponsor-related grant actions
4. Support faculty regarding post-award grant management, including projections, effort allocations and reporting, human resources, consultants, and close-outs.
5. Coordinate internal and external reporting needs, including maintenance of HEI's database.

6. Develop and maintain the award process web pages.
7. Work with the departmental research strategy to set goals and responsibilities within the research office and monitor procedural efficiencies.
8. Provide overall vision for the institute's research portfolio
9. Develop programs and activities that will increase funding for research from all public and private sources, establish and maintain excellent relationships with donors and stakeholders, oversee proposal development and submission
10. Develop and maintain research cores and infrastructure within the institute including web pages, internal grant review procedures, and statistical support
11. Oversee all aspects of the operation and development of the ORIC including research administration (Budgeting, auditing and accounting, human resources, management and maintenance of facilities and equipment, implementation of research contracts and human resources)

9.2. Innovation and Commercialization:

This wing is dedicated to promoting innovation and commercializing the university research outputs. The main responsibilities of this wing are to;

1. Impart the basic knowledge of intellectual property among the UHE research community
2. Build the capacity of the UHE research community regarding different IP rights
3. File the patent applications and liaison with the Intellectual Property Organization (IPO), Pakistan
4. Liaison with the industry by promoting public-private partnerships in the field of research and development
5. Strengthen university-industry linkages to streamline research priorities according to the industry's need
6. Exploring the opportunities for technology transfer and commercialization of university research outputs
7. Identify and establish collaboration and/or licensing agreements associated with the institute's intellectual property.
8. To identify the opportunity of contract research and liaise with concerned faculty members.
9. Work with the communication office to promote the university's IP success stories and use those stories to leverage commercialization efforts.

10. Oversee any litigation that may arise related to Institute IP Manage any infringement matters that may arise related to Institute IP

10. ORIC ORGANOGRAM:

UHE ORIC observes staff policy with the following hierarchy;

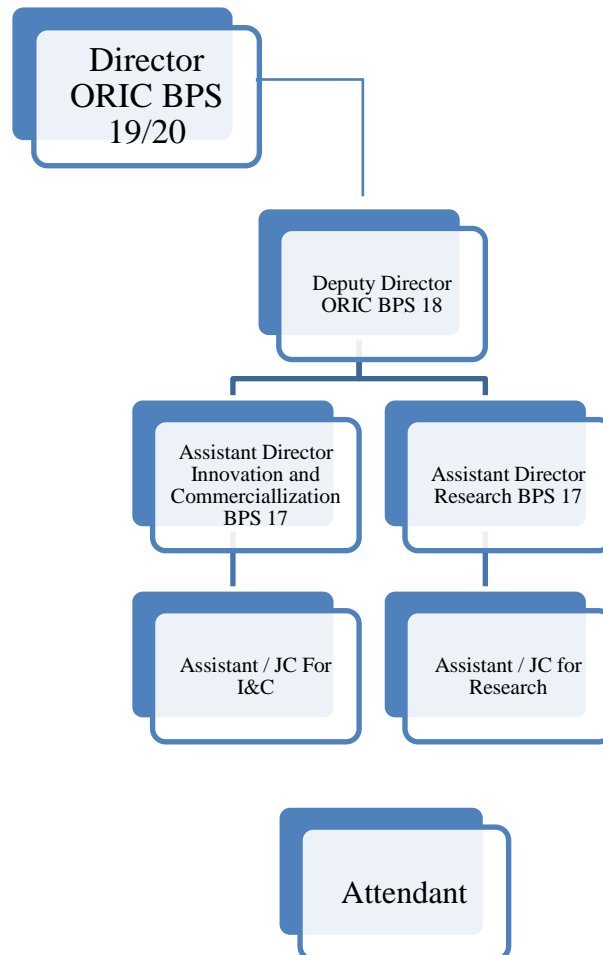


FIG 2: ORGANOGRAM FOR ORIC



FIG 3: STRATEGIC FRAMEWORK FOR RIC

11. STRATEGIC FRAMEWORK:

11.1. Research:

UHE has already mend to adopted the model of a Research-Intensive University. Since the university has some strong footprints in teaching applied subjects' areas like Food & Nutrition, Art & Design, Textile & Fashion, *etc.* In these areas, there is great potential to develop new technologies and products for domestic and international markets. Further, UHE is in the development phase alike the future departments and faculty in these departments will be expanded by considering the research aptitude which will defiantly boost the research and development activities in UHE.

i. Research Objectives:

1. To ensure a conducive research culture favorable for the university, faculty/researchers and other stakeholders.
2. To play an advisory role to the government, industry and relevant stakeholders based on research findings
3. To extensively contribute to the national R&D by securing more research grants from public and private organizations

ii. Research Strategies:

1. A robust ORIC policy is developed to regulate, facilitate and encourage the university faculty and researchers. ORIC team will ensure its implementation
2. The university's research-oriented policies will be reviewed and updated from time to time
3. The coordination level with donor agencies will be improved
4. Capacity building of the faculty members will be done by research grant experts through workshops/seminars to win grants
5. Collaborations will be strengthened with other research-intensive universities/institutes having identical themes
6. Social and Innovation Club comprised of faculty members from different departments of the university will be launched for the promotion of multi-disciplinary research, enhancing research grant opportunities, providing training and supporting each other for project preparation
7. The research culture would be continued to support in the form of research incentives to the faculty members and ORIC management for research grants, research awards/recognitions, etc
8. A mechanism of project monitoring and evaluation will be developed for effective and timely research completion
9. ORIC will encourage and coordinate with the faculty to arrange workshops/seminars and research material for sharing research outcomes with the stakeholders
10. Social media appearance would be more focused on sharing new knowledge/products/technology with the relevant community.
11. The database for the research management system would be updated and operationalized.

11.2. Innovation:

Innovation is the keyword in the modern era. Pakistan is facing huge challenges socially, environmentally and economically and all of them require innovative solutions. Universities are the nucleus of quality education, research and innovation. It is equally important to protect the university's intellectual development to get the maximum advantages and to avoid the drainage of the R&D resources.

i. Innovation Objectives:

1. To create an institutional environment favorable for innovative research and IP culture among university faculty and researchers
2. To protect the university's intellectual developments

ii. Innovation Strategies:

1. A robust IP policy is developed to regulate, facilitate and encourage the university faculty and researchers and their innovations. ORIC team will ensure its implementation
2. Interactive sessions with focused discussions will be arranged with the faculty to create awareness and realize the importance of intellectual property rights
3. Capacity-building workshops on different domains of intellectual property like Patents, Copyrights etc. shall be arranged for the faculty and students
4. Incentives to the faculty/researchers and ORIC management on the award of patents and letters of recognition from university management shall be given
5. UHE IP policy shall be implemented in letter and spirit and policy revision as per HEC requirements
6. Advanced trainings regarding IP management for the ORIC official(s), faculty and potential students shall be arranged

11.3. Commercialization:

A successful technology transfer and commercialization culture require and build on a strong foundation of fundamental and applied research. UHE is well-positioned to facilitate the technology transfer and commercialization of all forms of intellectual property leading to positive societal and economic impacts. Since new technologies are products being developed at an increasing pace through innovative research and development, it is imperative to develop a robust and effective framework for the commercialization of innovation in a timely and effective manner.

i. Commercialization Objectives:

1. To strengthen the Academia-Industry Linkages to devise an effective mechanism for the commercialization of the university research to enhance the societal impact and economic turnovers
2. To generate revenue for the university and RIC sustainability

ii. Commercialization Strategies:

1. Capacity-building sessions for the faculty regarding the technology/product commercialization process and business plan development shall be organized
2. Academia-Industry joint sessions shall be organized to identify and minimize the gaps
3. Frequent industrial visits to enhance the interaction and one-to-one matchmaking of the faculty members with the relevant industry shall be arranged

4. Consultancy policy shall be developed and implemented in the university to tailor all the matters involving private consultancies and other services to its stakeholders
5. Identification of the invention disclosures and possible licensing for resource generation
6. UHE shall establish a private limited company to cater to the needs of commercialization and all the necessary operations
7. A robust commercialization policy is developed to regulate, facilitate and encourage the university faculty and researchers. ORIC will ensure its implementation
8. Entrepreneurship policy shall be developed in consultation with the steering committee to initiate the faculty spin-off companies as well as student start-ups under the banner of Business Incubation Center
9. Effective measures and efforts shall be carried out to increase the number of licensing agreements for the existing pipeline projects as well as future projects, as the research infrastructure of the institution is rising continuously
10. Industrial linkages shall be strengthened by carrying out commercial activities through outsourcing university facilities and increasing income sources

12. ORIC Key Performance Indicators (KPI), Action Plans and Year Wise Targets

Key Performance Indicators		Year wise Targets						
		BaselineData	2022-23	2023-24	2024-25	2025-26	2026-27	
1. Research Support								
i.	Number of research Submitted	1	5	10	15	20	25	
	Projects	Approved	1	2	4	8	10	12
		Completed	0	1	1	2	4	8
ii.	Number of joint research projects	0	1	1	2	2	3	
iii.	Volume of R&D funding secured(Rs. Million)	0	5	10	10	10	10	
iv.	Research links established with other universities, industry, government, or NGOs.	20	30	35	40	45	50	
v.	Number of Contract research awarded by industry or government organizations	0	1	4	6	8	10	
vi.	Volume of Contract research awarded by industry or government organizations (Rs million)	0	15	7	8	9	10	
vii.	Acceptance ratio of proposals	1:1	5:1	5:1	5:1	5:2	5:2	
viii.	Research grant opportunities identified and circulated to faculty	1	10	10	10	10	10	
ix.	Consultancy opportunities identified and circulated to faculty	0	1	1	2	2	3	
x.	Consultancy contracts executed through ORIC	0	1	1	2	2	2	
xi.	Number of Civic Engagement Events / Initiatives on Issues of Public Concern	0	3	6	9	12	12	
2. Innovation and Commercialization								
i.	Number of IP disclosures	0	0	0	1	1	1	

ii. Number of IPs Filed	0	0	0	1	1	1
iii. Number of IPs granted	0	0	0	0	0	1
iv. Number of IP licensing negotiations initiated	0	0	0	1	1	1
v. Number of non-exclusive or exclusive license agreements signed	0	0	0	1	1	1
vi. Number of research products /process / prototype gone into prefeasibility / industrial scale testing or prototype development	0	0	0	2	3	5
vii. Science/Arts Products or Any Creative Activity Performed/ Displayed at National or International Level	0	1	2	2	2	3
viii. Number of visits by representatives of industry or community members regarding potential research subjects	0	1	2	3	4	5
ix. Number of agreements signed for collaboration with industry, government	0	1	2	4	4	5
3. Sustainability and Capacity Building						
i. Annual research revenue generated by ORIC (PKR Million)	0	0	0	1	2	3
ii. Yearly revenue earned from licensing, royalties, policy advocacy, or other academic activities	0	0	0	0.5	1	1
iii. Number of Trainings / Workshops/ Seminars / Conferences Arranged by ORIC on Research, Innovation & Commercialization, etc. for Faculty, Researchers and Research Students	0	1	2	2	2	2
iv. Number of Exhibitions / Showcasing Events / Industry Linkages Fair / Seminars / Industry or IP & Licensing Stimulus Arranged by ORIC	0	1	2	2	2	2
v. Number of Trainings / Workshops/ Seminars on Research, Innovation, & Commercialization etc. for and attended by ORIC Personnel	0	1	2	2	2	2

13. INCENTIVES

13.1. Incentives to ORIC Management

As per the HEC ORIC policy, the RIC staff will be incentivized for above- average compliance with the devised KPIs in the following areas;

i. Contractual research funding secured

On the successful securing of funding and actual receipt/release of PKR 1 million from any public or private funding organization for carrying out an R&D project or contractual research, the ORIC management will be incentivized at 1% of the total funding secured during a fiscal year on the achievement of the target. Any overhead mentioned in the research project budget will also be considered the budget of ORIC.

ii. Revenue Generation from Research Commercialization

If ORIC management can generate any amount of revenue from research or commercialization, the management will be paid 10% of the total revenue received during six months' period. This incentive is independent of other incentives.

13.2. Incentives to Faculty Members

1. Any faculty member engaged in contract research or industrial collaborative research or helped his/her students in the launch of a business will be awarded one gross salary on successful completion of the project
2. Faculty member/s involved in the most viable business ideas will be awarded certificates from the institutional head in recognition of the hard work done on commercialization
3. Business ideas of such faculty member/s may also be given preference while awarding the research grants sanctioned by HEC
4. These faculty members may also be nominated to attend seminars /workshops /conferences arranged nationally as well as internationally, on a preference basis

13.3. Incentives to Students

Entrepreneurship orientation and motivation should be started immediately after admission to Bachelor's class. Early semesters should carry a maximum of content on entrepreneurship. To incentivize students for their involvement in innovation, and think about entrepreneurship as a career, the following incentives may be helpful:

1. Students with strong business ideas/innovations will enable the KPI. Hence the incentives are targeted toward motivating the students. Student(s) with the most viable business idea will be supported for business plan competition. The best three ideas will be awarded up to PKR 100,000/-

2. Students involved in the most viable business ideas will be awarded certificates from the institutional head in recognition of the hard work done regarding commercialization
3. These students may also be nominated to attend seminars/workshops/conferences arranged by HEC, nationally as well as internationally, on a preference basis
4. ORIC-BIC will provide space to the startup for up to 1 year, or until they are ready to set up their business
5. ORIC-BIC will provide the startups with the necessary support to facilitate the commercialization process
6. Students will be facilitated a break in studies, in order to pursue a start-up business

14. MONITORING & EVALUATION

Compliance with all the Key Performance Indicators (KPIs) will be monitored and evaluated by the ORIC-SC. The ORIC-SC will strictly ensure compliance with the targets set in the strategic plan.

15. REVIEWS AND UPDATING

The ORIC team in consultation with ORIC-SC will continuously review the ORIC strategic plan on annual basis. ORIC office will keep improving and updating the strategic plan as per need to be in a better position for the achievement of devised KPIs. All the amendments in the strategic plan will be approved by the ORIC-SC.