

# **Policy of ORIC**

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Higher Education Commission  
R&D Division

## **OFFICES OF RESEARCH, INNOVATION AND COMMERCIALIZATION (ORICs)**

*Transforming invention (pure knowledge) into innovation (products, production processes)*



# **Policies of Offices of Research Innovation & Commercialization (ORICs)**

## **Introduction**

As technologies have grown more sophisticated and emerging industries have become more high-tech, universities have become more important players in the processes of invention, innovation, and commercialization.

To be sure, bringing innovations to market has not been the main historical role of university-based researchers. Instead, university researchers quite appropriately concentrate on basic science. But the ultimate aim of scientific research, after all, is to improve the human condition and so aiding the transfer and commercialization of discoveries serves the interests of the inventor and society. "Since the Industrial Revolution, the growth of economies around the world has been driven largely by the pursuit of scientific understanding, the application of engineering solutions, and continual technological innovation" (National Academy of Sciences and National Academy of Engineering 2006). Ideally, university structures should support all aspects of this process, from invention to innovation, as well as commercialization. Hence office research Innovation & Commercialization is responsible for facilitating and supporting the discovery and innovation process on their respective campuses.

As universities become more entrepreneurial and look toward technology transfer into non-traditional fields, there is a need for alternative conceptualizations of technology transfer that are more accurate and realistic than the traditional linear model and that are generalizable to the nuances of the university to which they are applied.

## **Vision**

The office's vision is to enable and lead Pakistan's transformation to a knowledge-based economy dependent upon innovation and entrepreneurship.

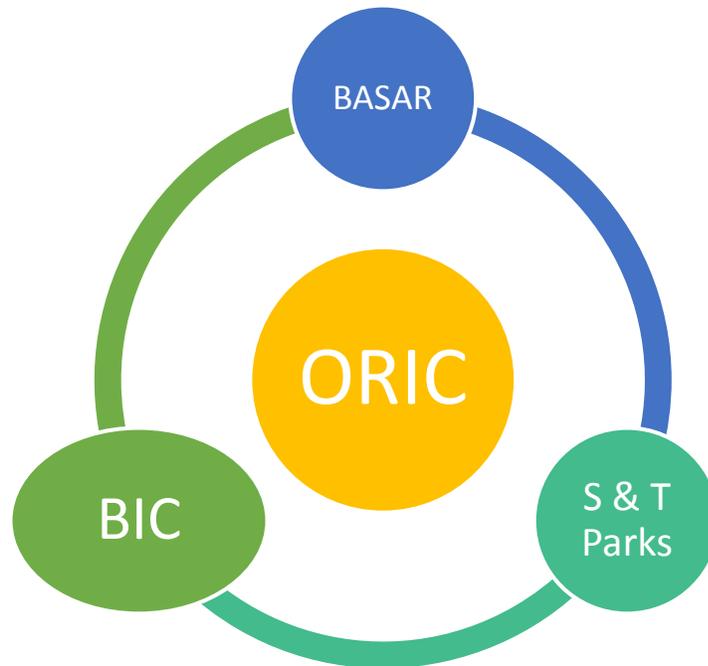
## **Objective**

Grow our research and economic development efforts and output as to improve our industry competitiveness using university innovations and becoming the driving force behind research and economic development for Pakistan.

## Responsibilities of the ORIC

The Office of Research Innovation and Commercialization are being establish to link research and commercialization from the University with emerging and existing firms across Pakistan and around the world. As an umbrella Work closely with the researchers, chancellors and on campus Incubators & S&T Park, the office also serves as a conduit to local, regional and federal partners to ensure research results aid the growth of Pakistan's economy.

Each ORIC will develop it mechanism for research commercialization and will establish a Business/Technology Incubator to work closely for innovation and entrepreneurship.

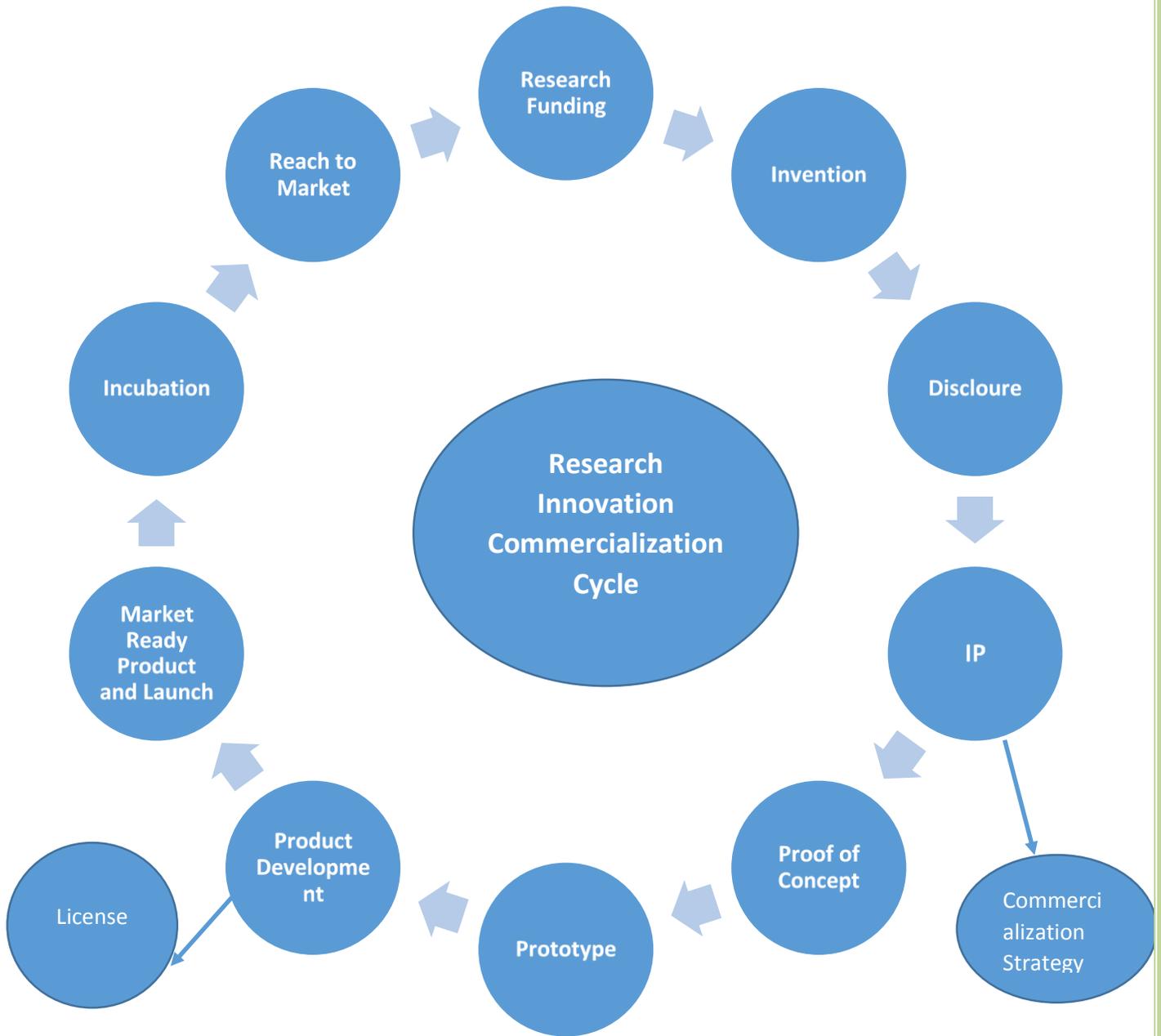


## ORIC Role

ORIC consist upon three important wings

- a. Research Development and operation
- b. Innovation
- c. Research Commercialization/entrepreneurship

ORIC activities will revolve around the following research cycle to ensure research impact on economy and society.



The mechanism for conducive environment and to give strong platform is developed by merging different bodies working in an institute. The board of advance studies and research or office of sponsored research will support wing one research development and operation. While wing 3 will consist upon a Business or Technology Incubators. These incubators will support research commercialization and will provide a platform for university industry research linkage.

Incubators will be established with HEC support in the institutions where ORIC has shown satisfactory performance, based upon the Score Card, in last two years.

### **Services Offered**

- Fund raising for research
- Provide information to faculty about various available research grants
- Link faculty with relevant industry
- Help and guide on patent filing and licensing
- Interface between faculty and the commercial sector
- Work with patent counsel to assess patentability/licensing
- Evaluate markets for commercialization of inventions
- Identify potential licensees
- Negotiate terms of licenses
- Assist with negotiating problematic sponsored research agreements
- Help faculty start companies

### **Intellectual Property Administration**

- Funding for patent applications
- In-house preparation and filing of provisional patent applications
- Market analyses of university intellectual property
- Data management
- Policy analysis development
- Administrative support

### **The Development of outsource Data Base by the university**

Preparation/development of data base of research donors/funding agencies, industrial links, and mentors will be the responsibility of the ORIC.

The administrative structure of the Office for Research reflects its key functions:

#### **Director (full time)**

Manage and enhance the research activities of the university, develop Research policies and priorities, work for fund raising for research, mobilize faculty, business community and industry for research commercialization and serve as an effective advocate for research with the university and to its broader community of stakeholders and supporters.

The ideal person should have an entrepreneurial mindset and 10 years' relevant experience. Secondly, must have strong ties with the local government, business/industry, entrepreneur, university and social communities. Finally, proven leadership experience in managing and growing non-profit organizations. He will also implement the strategy and business development plan required to execute program initiatives to enhance the progress of the ORIC. The position also manages the operational aspects of the ORIC. He will work in close liaison with the board of advance studies and research / office of sponsored research, Business/technology Incubators and University Science & Technology Park (if any).

- Monetize royalty streams from licenses
- Draft and monitor department budget
- Oversee IP webpage, in conjunction with the web committee
- Work with Development Office to promote Institute IP success stories. Utilize success stories to leverage commercialization efforts.
- Collaborate with the Principal Liaison for Technical Marketing and Licensing on the commercialization of the Institute's IP in coordination with manager industrial linkage.

*Other duties as assigned.*

### **Manager of Research Operations & Development (full time)**

The Research Office supports the externally and internally sponsored projects of the institution by providing pre- and post-award support to PIs and ensuring compliance with Temple and sponsor regulations. The person will work in close liaison with the board of advance studies and research or office of sponsored research.

- Develop, maintain, and communicate pre- and post-award administrative procedures for externally sponsored projects.
- 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)
- Support faculty regarding contracts, progress reports, NCEs, and other sponsor-related grant actions.
- Support faculty regarding post-award grant management, including projections, effort allocations and reporting, human resources, consultants, and close-outs.
- Coordinate internal and external reporting needs, including maintenance of HEI's database.
- Develop and maintain the award process web pages.
- Work with the Director of Research Strategy to set goals and responsibilities within the research office and to monitor procedural efficiencies.

- The Manager of Research Development provides overall vision to the institute research portfolio. The focus of this position is to foster collaborations among research faculty across departments and colleges, and to support the mentorship of junior faculty. 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
- Identify a programmatic strategy for research that promotes multidisciplinary collaboration within the university.
- Develop a structure for mentorship of junior faculty.
- Facilitate collaborations among faculty through identifying overlapping research interests and providing opportunities to communicate.
- Provide information about the grant process to faculty including study section procedures, interpreting reviews, and identifying appropriate funding mechanisms.
- Develop and maintain research cores and infrastructure within the institute including web pages, internal grant review procedures, and statistical support.
- Communicate with Development at both university and college levels about research initiatives and strengths.
- The ideal person should have six years' relevant experience working for research and track record of management of research projects, organization or research donor agencies

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).

Six years relevant experience as above is mandatory

### **Manager of University-Industrial Linkages and Technology Transfer (full time)**

Promote the development of public-private partnerships in support of university research, link the university's research community with the needs and priorities of the corporate sector, develop opportunities for applied research and explore opportunities for technology transfer and the commercialization of university research.

The ideal candidate will have three key attributes: First is a proven track record of entrepreneurship either as a start-up entrepreneur, or working in an environment supporting entrepreneurs. Second, strong ties with the local government, business, entrepreneur, university and social communities. Finally, proven leadership experience in managing and growing non-profit organizations. Six years' experience with Business/industry is mandatory.

### **Manager Intellectual Property/ Legal Services (full/part time)**

He will work and support the university research boards, ORIC and TIC/BIC and will be responsible for:

- Review and analyze all new invention disclosures

- Identify and establish collaborations and/or licensing agreements associated with the Institute's intellectual property.
- Identify potential synergies for University with non-profit research Institutes and academic licensing offices
- Actively license university technology
- Enhance culture of IP capture, including an ongoing evaluation of Institute research for IP potential.
- Track the success of university technology in the hands of licensees
- Conduct collaborative research agreement review for PIs conducting research under a contract with outside institutions
- Oversee any litigation that may arise related to Institute IP

Manage any infringement matters that may arise related to Institute IP

- Monetize royalty streams from licenses
- Draft and monitor department budget
- Oversee IP webpage, in conjunction with the web committee
- Work with Development Office to promote Institute IP success stories. Utilize success stories to leverage commercialization efforts.
- Collaborate with the Principal Liaison for Technical Marketing and Licensing on the commercialization of the Institute's IP in coordination with manager industrial linkage.

Other duties as assigned.

## EDUCATION AND CERTIFICATION

Law graduate with specialization in IPR

## EXPERIENCE AND KNOWLEDGE

3-5 years of relevant experience is required.

**Manager Business Incubator:** *(position full time apply where ORIC has an incubator for Business Development and spin outs)*

Manager will develop an organizational plan and recruit the necessary resources to grow the operation. The ideal candidate will have three key attributes: First is a proven track record of entrepreneurship either as a start-up entrepreneur, or working in an environment

supporting entrepreneurs. Second, strong ties with the local government, business, entrepreneur, university and social communities. Finally, proven leadership experience in managing and growing non-profit organizations. He will implement the strategy and business development plan required to execute program initiatives that will enhance the reputation of the Incubator. The position also manages the operational aspects of the Incubator Program and works with member companies in aiding them in achieving their goals and objectives. Successful candidates will have a MBA Degree or equivalent with six years relevant experience.

*\*incubator will have its separate frame work/TOR.*

## **Space Requirements for ORIC**

Following Space / offices are required to run these offices:

- ✓ One meeting/conference room
- ✓ Reception area for Administrative assistants
- ✓ One private office for Director
- ✓ One office shared by Manager of research Operations & Development and Accountant
- ✓ One office for Manager of University-Industrial
- ✓ One office shared by HR officer, publications and communications specialist.

*\*Business Incubator or technology incubator will have its separate staff & space requirement*

## **Supporting Staff**

**3 Research Associate (full time)**

**3 Administrative Assistant (full time)**

**1 accountant (full time)**

**1 Publication/ Communication specialist (part time)**

## **ORIC Funding**

The Office of Research Innovation and Commercialization is dedicated to commercialize university technologies - one of the biggest challenges to that mission is funding. To proactively combat the constant obstacle, the office will need to formulate different funding programs for faculty, students and innovations in all stages of the discovery process.

The Higher Education Commission provides initial research funding for faculty to do applied research in their specific area of work to leverage funds and enhance long-term quality and quantity.

The 15% overhead of all the HEC funded research projects will go to support ORIC functions. While HEC will provide grant for establishment of ORIC in recurring budget under

need grant for new initiatives. For establishment of any incubator under ORIC separate funds will be provided. The approval of establishment of incubation center will be based upon the university R&D strength and equal regional distribution.

### ***Incubator Funding:***

Incubators will be funded under a separate framework developed for Business Incubation Centers which provides proof-of-concept or gap-funding for faculty members focused on development, testing, prototype construction, or market analysis of innovating technologies emerging from the campus.

## **ORIC Monitoring System**

To ensure quality the annual assessment of the ORIC office will be carried out on prescribed evaluation form/ Score Card developed for this purpose.

### **Training for the ORIC Staff**

In order to achieve the stated target and objectives, we definitely need to have expertise and require to have trained HRs in ORICs. It is therefore, mandatory to equip the managers of ORICs with the necessary tools and techniques to not only administer the research activities of an HEI but also to contemplate the relevance of research being carried out in universities with the market needs and then to commercialize these research results.

### **Link of Universities ORIC, Business Incubators and Research Parks;**

The University will have an ORIC and business incubators which may connect to the network of Research Park, each designed to help faculty, entrepreneurs and businesses collaborate to move innovative research to the marketplace.

### **Universities Research Parks key responsibilities:**

- Development of strategic marketing alliances with economic development allies regionally and country wide
- Project management, negotiation and execution of ground leases within University System
- Special focus on tech-oriented job creation and commercialization of university System technologies