



INDUSTRY PLATFORM

New Initiative in Biotechnology & Lifesciences

DRAFT



Department of Biotechnology
Ministry of Science & Technology
Government of India

FICCI

Federation of Indian Chambers
of Commerce and Industry

Towards Fulfilment of Goals of National Biotechnology Development Strategy

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INDUSTRY PLATFORM

Background

There is global movement towards knowledge-based economy that requires focus on scientific research, technological development and innovation. In fact, a key factor in growth and global competitiveness of India will be its ability to innovate and create processes and products.

Research is becoming more and more expensive owing to increasing complexity, which requires integration of research efforts at national level. This necessitates public-private partnerships in the field of science. The increased partnerships would have a powerful and specific effect on the innovative capability of the industry, especially in multi-disciplinary research through establishment of identified frame work of required services, infrastructure, increased human resources and bringing together the industry and research institutions through Industry Platforms. The Platforms would bring together the various stakeholders, which would improve the regulatory and administrative environment conducive to applied research.

The concept of Industry Platforms is based on the structure and experience of European Technology Platforms (ETPs), which are essentially public-private partnerships that promote sectoral research, and development programmes through a long term Vision and Strategic Research Agenda (SRA).

The Industry Platforms are to be industry driven and academia partnered. The Government will provide financial support for getting the Industry Platforms operational within a specified time frame. The Government will, if required, also provide guidelines and facilities, but will not be a lead partner in this endeavour. There would be contribution to the Platforms by the industry for dedication to the purpose, as suggested in the brainstorming meeting, on the subject held at Mumbai on April 3rd, 2008.

Each Platform shall, in a collaborative effort, involve all key stakeholders for creating an environment of knowledge sharing and joint innovation. It shall identify the strengths and challenges of the particular sector in order to enhance the competitiveness through joint application of state of the art technologies and high levels of innovation. The platforms would thus facilitate sharing quality science amongst members.

This concept was discussed for the first time on July 9th, 2007, in the Federation House, FICCI and subsequently in April 2008, wherein it was agreed that the Platform would aim to achieve cost effective development and commercialisation through shared resources. It was agreed that the Industry Platform should not focus on one individual company, but should voice the industry concerns at large.

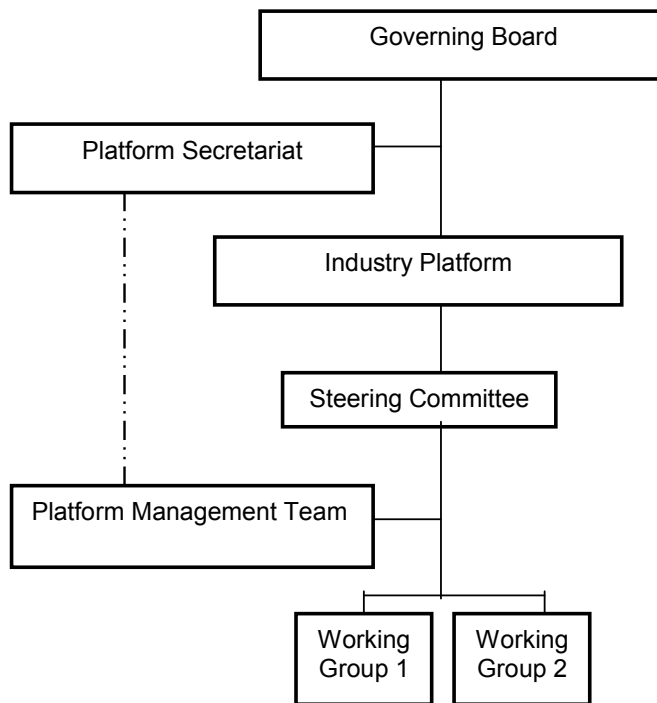
The general consensus was that there should be focus on applied sciences as in development of drought tolerant and pest resistant crops, Cardio-vascular appliances and third generation stents, development and creation of common facilities such for proteomics and genomics, for data profiling of diseases, genetic maps of crops, developing improved crop strains for higher yields etc.

Six areas namely, Agri-Biotech, Bio Pharma, Medical Devices and Implants, Industrial Biotechnology, Stem Cells and Nanobiotechnology have been identified in the aforementioned two meetings.

Blue Print of the Organizational Structure

Organogram of Industry Platforms

The Industry Platform structure is derived from the existing ETPs and the suggestions we have from the Indian industry. The stakeholders (Industry and academia) have expressed the view that the platform should evolve the guiding principles for Platform functioning and for resolving issues that may interfere in collaborative research and development efforts. The blueprint and the organogram of the proposed Industry Platform is as follows



Governing Board

Governing Board shall be the apex decision making and steering body for all the sectoral Industry Platforms. It shall be chaired by Secretary, Department of Biotechnology. A co-chair shall be nominated from industry to conduct business in chairman's absence. There would be 20 other members in the Governing Board who would be business leaders, representatives of FICCI, research organizations, Government regulatory bodies, chairmen of the Industry Platforms, civil society and the policy planners.

Functions

The Board shall have the advisory role and shall form an important link between the Industry Platforms, business leaders (national and international), scientific organizations and the policy planners. It shall also foster much needed collaboration and integration between the

sector specific Industry Platforms to promote multidisciplinary research. Cross sectoral partnerships are important for research and innovation and to increase chances of achieving funding through competitive bidding either through Government schemes or other funding agencies like financial institutions. The plethora of funding sources (national and international) would help create synergy between national and international innovation systems.

The Board will meet at least twice a year. The Board and the sector specific Steering Committees of the Industry Platform, will meet in joint session once a year. The Board can invite experts from relevant fields to participate in the Board meetings to ensure objectivity in discussions.

The final decision for supporting projects would lie with Governing Board based on the recommendations of the respective Steering Committee. The Governing Board would also look at the common issues such as research facilities, services, regulatory matters, policies that are limiting factors across the industry. These would be issues such as knowledge sharing on global regulatory practises in IPR and licensing.

Steering Committee

The roadmap for research and innovation of each Platform would be its agenda known as the Strategic Research Agenda (SRA). The strategic research agenda will be made with the aim to develop an edge over other countries and identifying the generic issues that adversely affect the industry and its competitiveness.

Development of the SRA shall be the responsibility of the Steering committees of individual Industry Platforms. This would require identification and assessment of the sectoral strengths as well as of the challenges.

Functions

These Committees would mobilize the sector in a participatory manner to strengthen its innovative character. It would identify the long-term goals of the Industry Platform through the development of Platform Vision and Mission for the next 30 years. It would also establish the framework / parameters / boundaries for its functioning. SRA would be evolved by active participation of industry, research organizations, academia and other stakeholders. Ownership of ideas generated by the Platforms was an area of concern raised in the Industry meet held on April 3rd 2008. These would be owned by the individual Platforms.

Steering Committees will assess industry needs, interests, and limitations and propose next steps for innovation related research initiatives. Some issues raised by different sectors are-

Bio Pharma

- Databank of company capability and interest for sharing information and infrastructure between the members
- Arbitration cell with focus on the capability in biotech to enable and enforce credibility and to tackle issues of IPRs, licensing and other related matters.
- Databank profiling the diseases in our country and mapping of unmet medical needs and patient population
- Indian biodiversity characterization bank of herbal medicine and its quality control

- Common library with access to all publications and its e-management

Agri Biotech

- Working on drought resistant crops as 80 million hectares in the country are drought prone
- Improving the pest resistance in crops such as against
 - Sucking pest – Aphids, Jassids, white fly, Thrips & mealy bug
 - Lepidopteron pest
- Development of molecular maps

Industrial Biotech

- Facility for proteomics and genomics to improve the microbial strains
- Focus on increasing the yield
- Focus on Thermo enzymes which are crucial for postindustrial processes

After publication of the SRA, the Industry Platform would mobilize researchers and industry partners while also building links with funding agencies at national and international level to achieve the SRA objectives and its implementation. The committee will comprise of a chairperson and 8-10 technical, scientific and industry professionals as well as the policy planners. Close links with the policy planners will ensure focus on the SRAs of the Platforms, which are ultimately based on societal needs. Additional members may be nominated by the Governing Board in order to ensure smooth operation of the Platform. The Steering Committee will be chaired by Industry representative nominated by the Governing Board / elected by the Steering Committee members. It will report to the Governing Board and would meet 4-6 times a year.

Platform Management and Working Groups

It was felt by the Industry that two types of working committees are required. One with and to implement the directives of the Steering Committees, the other to provide information related to issues that govern best practices, knowledge sharing and for communication within and outside the platform on the activities and achievements through seminars, websites etc. These discipline specialisation committees shall be the Steering Committees and Working Groups of the platform while the other would be the platform management and the platform secretariat managed by FICCI.

Working Groups

Each Platform will constitute smaller Working Groups. The Working Group members would be drawn from members of the Steering Committee and invitee members of the Governing Board. These groups shall implement the SRA developed by the Steering Committees. Working Groups constituted by the Steering Committee, will be disbanded after completion of the specific objective.

Functions

It will focus on specific areas and develop an implementation plan for the SRA of the sector specific Platforms.

Platform Management Team

The Industry Platforms shall be administratively managed by individual Industry Platform management headed by a Manager. Secretariat managed by the FICCI for the purpose will assist the Platform management in its functioning. Responsibility for constitution of the management team would vest with respective Industry Platforms. Scientific advice would be provided by experts to be nominated by Platform members. The Platform management would also take measures for communication, educative training and innovation

Functions

It would convene meetings, organize conferences, seminars, workshops with a view to mobilize the stakeholders of the sector, speed up innovation, secure funding, educate on preparation of good project proposals to increase possibilities of funding, set up selection criteria for partners in a consortium, IP strategies, set up mechanisms for technology transfer and other issues, as they emerge. These would be networking events for the Platform as a whole bringing together representative of industry, the research institutions, academia, funding agencies and policy planners.

Platform management would also set up communication channels to create awareness about the Platform activities. The external communication could be with policy planners as well as with the public at large. This would help encourage further development, validation and regulatory acceptance of tests based on research. Internal communication amongst Platform members is vital for its sustenance. Increasing awareness among technology producers of the requirements of end-users, providing end-users with swift access to the latest technological developments and their applications would be essential. The management will also promote wider dissemination, education and public awareness of the role of sectoral Industry Platform. Communication could be through newsletters, website, printed material etc. It can also have the option of setting up task forces for pressing or emerging issues with the approval of Steering Committee. It would offer comprehensive information about various funding programmes, policies and ongoing research in the sector.

Platform Secretariat

The Secretariat managed by FICCI will have the provision to hire experts to manage the activities.

Functions

The Secretariat will provide professional, administrative and organisational support including public relations. With the help of Platform management team the platform secretariat will work to bring focus on integrating activities of the platforms and establishing contacts with relevant stakeholders.

The Secretariat would also identify best practices and share them amongst different Industry Platforms. It will develop and exploit effective communication strategies to promote technology transfer and innovation. Communication strategy will evolve through active interface with the Governing Board, Steering Committee and Working Groups.

Industry Platforms Membership Benefits

The research areas detailed in the SRA and the implementation plan will be open to the industry for submitting project proposals. The members can identify partners themselves and submit a joint proposal. Platform meetings/website can help in forging partnerships on the mutually agreed terms and conditions. The advantages of participation are

- Members of an exclusive group involved in the future evolution of Biotechnology sector nationally, through identification of challenges and participation in national level projects. The vision and the strategic research agenda are the deliverables and the platform activities will be prioritized based on these.
- Forum to voice and provide inputs to national policy planners
- Access to an extensive network of potential industry partners, public funded institutes and their infrastructure and manpower.
- Opportunity of manpower development through participation in research projects at national level.
- Access to facilities such as for testing and validation. Some ideas from the industry are
 - Data bank profiling of disease and mapping of unmet medical needs and patient population in relation to that
 - Indian biodiversity characterization bank
 - Access to technology, genes and other biological material
 - Genetic maps for crops of National Importance
- Access to international scientific journals and publications based on the suggestion of a common library with access to all publication and e-management
- Opportunity for national and international exposure through participation in seminars, symposia and workshops in the sector. Membership is open to all with a nominal annual fee of Rs. 25000/-

Funding Schemes for Industry Platform projects

Initial funding to come from Government, but the industry contribution is critical for seriousness and continued participation. The percentage for industry funding will be established by the Steering Committees and Governing Board.

- For effective running of the Platform and the secretariat, funding support will be provided by the DBT in the initial phase, in addition to membership fee contribution received from the industry.
- Banks and other financial institutions
- Industry contribution to collaborative projects
- Existing Government funding schemes

Industry Platform – FAQs

- Why Industry Platform
- What is Industry Platform
- What does it do
- Industry Platform Deliverables
- Why become members

Why Industry Platform

So far agenda for scientific research has been set by the Public Institutions. This is important but not a total solution. Each stake holder has a set of research questions, and the Industry Platform offers an opportunity to address industry-driven research questions in defined areas. It ensures that knowledge generated through research is transformed into products and services through flexible use of resources. It seeks to unite stakeholders by

- Covering the complete Economics Value Chain
- Bringing together technological know-how, industrial players, small and medium enterprises, the financial sector, national and regional public authorities, research community, universities, non-governmental organisations and the civil society
- Reaching consensus on a common vision and approach for development of the identified technologies

What is Industry Platform

It provides a framework to bring together stakeholders to define medium to long-term research and technological development priorities for the benefit of Industry. It also defines markers for achieving them and the associated time frames for long-term sustainable competitiveness. The salient features are :

- Facilitates industry driven research agenda
- Promotes discovery and innovation in the area of Lifesciences and Biotechnology through Public-Private Partnerships
- Offers an efficient and flexible working mechanism to develop research agenda and meet the timelines of an emerging technology-intensive industry.
- Recognizes the criticality of high intensity research for the market.

What does it do

- Foster effective public-private partnerships involving public research institutions, industry, financial institutions, regulatory authorities, policy-makers and civil society
- Organizes regular meetings for brainstorming, consultations, idea generation on specific Research Agenda and modality for its implementation
- Maintains an Idea Bank based on discussions and consultations at various fora and makes it available to the members.
- Evolve a cost-shared partnership model for research projects available for all stages, starting from innovation to Market
- Plays role in shaping benchmarks, networking and collaborations at regional, national and international level
- Provides access to stakeholders in all relevant areas for the industry including Project Management, Intellectual Property Right Issues, Legal, Regulatory and Industry related issues as well
- Provides a forum for stakeholders to articulate on policy issues pertaining to
 - Regulatory and administrative barriers to commercialising the results of research
 - Future education and training needs to help ensure the effective implementation of the technologies developed

Deliverables of the Industry Platform

- Shared vision of all stakeholders through their active involvement
- Research Agenda in the different sectors of Lifesciences and Biotechnology
- Build a critical mass of research and innovation

- Extend networking opportunities to members
- Mobilise public and private resources
- Train, communicate and disseminate information related to Industry platform

Why become members

- For networking with industry, public institutions and access to the network of potential R&D partners and domain experts
- To access public funded institutions, their infrastructure, equipment and manpower through pooling of resources for projects
- To get support for idea generation and project formulation
- To avail time bound project approval cycles, fast track funding, efficient systems for project review and management
- For transparent functioning by systematic sharing of information
- For an opportunity to develop manpower
- For access to reports in specific research areas
- To voice an opinion on
 - Research priorities
 - Constraints faced by a sector
 - Future education and training needs