

Council of Scientific & Industrial Research

New Millennium Indian Technology Leadership Initiative (NMITLI)

Preamble

The New Millennium Indian Technology Leadership Initiative (NMITLI) is the largest public-private-partnership effort within the R&D domain in the country. It looks beyond today's technology and thus seeks to build, capture and retain for India a leadership position by synergising the best competencies of publicly funded R&D institutions, academia and private industry. The Government finances and plays a catalytic role. It is based on the premise of consciously and deliberately identifying, selecting and supporting potential winners. NMITLI has carved out a unique niche in the innovation space and enjoys an excellent reputation. NMITLI has so far evolved 60 largely networked projects in diverse areas viz. Agriculture & Plant Biotechnology, General Biotechnology, Bioinformatics, Drugs & Pharmaceuticals, Chemicals, Materials, Information and Communication Technology and Energy. These projects involve 85 industry partners & 280 R&D groups from different institutions. Approximately 1750 researchers are engaged in these projects. These 60 projects cumulatively have had an outlay of approximately ` 550 crore.

Objective

NMITLI seeks to catalyze innovation centered scientific and technological developments as a vehicle to attain for Indian industry a global leadership position, in selected niche areas in a true 'Team India' spirit, by synergising the best competencies of publicly funded R&D institutions, academia and private industry.

Distinctive Features of the Programme

The strategy adopted for NMITLI is to obtain an inverse risk-investment profile i.e. low investment - high-risk technology areas (with global leadership potential) with investments increasing as developments take place and the projects move up on the innovation curve with reduction in risks. Therefore, the programme has been positioned differently with certain distinctive features. These features have been evolved based on large scale national consultation and due diligence. Some of these are briefly highlighted below:

1. **A proactive programme** - Instead of funding a project based on requests/applications, the programme identifies the areas for development based on national consultation and invites best partners from institutions, academia and private sector to play a role in the development;
2. **Types of Projects:** Both 'push' and 'pull' type of projects are evolved under NMITLI, which are appropriately named as (i) Nationally Evolved Projects (NEP) and (ii) Industry Originated Projects (IOP);
3. **PPP mode** - Almost all projects are built in a public-private partnership mode;

4. **Emphasis on identifying and building the projects** - Greater emphasis is laid on identifying the niche areas and building the projects with the help of best brains in the country. A specially constituted project wise expert group builds the project by interacting with a large number of researchers and stake holders with focus on technology development;

5. **S&T inputs** - High quality technical inputs are provided at both project development as well as at implementation stage;

6. **Monitoring & review system** - A two-tier tight monitoring system is introduced to ensure realization of the objectives and deliverables. At the first level is an internal Steering Committee comprising PIs (meets once in 3 months) and at the second level an external independent Monitoring Committee comprising recognized peers (meets at least once in six months). The later committee is entrusted with the responsibilities to recommend: (i) foreclosure or modification of the project or sub component; (ii) inclusion of additional institutional / industrial partners wherever necessary; and (iii) revising the funding support to any / or all implementing partners;

7. **IP mapping** - The programme provides for continuous mapping of the IP scenario for each project and in licensing of IP with a view to building of a portfolio and achieving the leadership position;

8. **Foreclosure of projects** - the programme also provides for foreclosure of the non-performing or non-achievable project components; and

9. **Financial support** – An innovative feature of the programme is that it provides financial support to all players in the project. The financial support is in the form of grant-in-aid to the institutional partners in public domain and as soft loan with 3% interest to the private sector industrial partners having more than 50% of shareholding by Indians/Non-resident Indians and with 5% interest to the private sector industrial partners having less than 50% shareholding by Indians/Non-resident Indians but with manufacturing base in India.

10. **Positioning of the project-** The positioning of the projects is shown in Figure 1. The constant endeavor of the programme was to position the projects in the upper right most quadrant where the technology and markets are less known. Consequently, the risks and rewards associated with the projects are very high. Thus the strategy adopted for NMITLI was to obtain an inverse risk-investment profile, i.e. low investment – high risk technology areas (with global leadership potential) with investments increasing as developments take place and the projects move up on the innovation curve with reduction in risks.

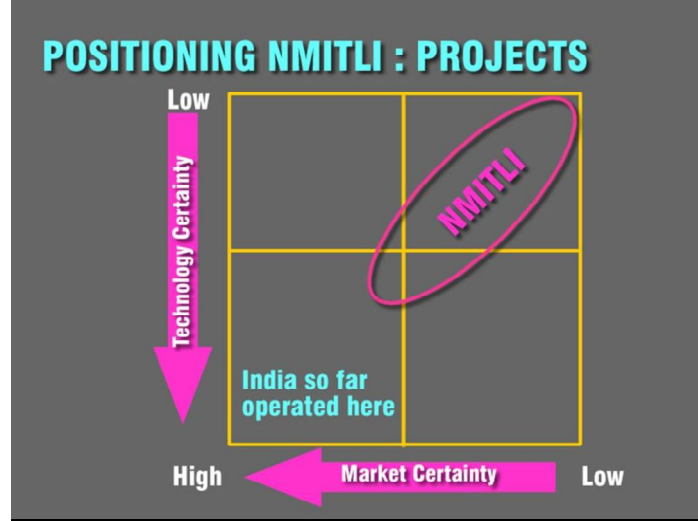


Fig. 1: Positioning of NMITLI Projects

Management structure

A dynamic and vibrant management system has been put in place to manage the Programme and projects. At the hub of the management structure is the Planning and Performance Division (PPD), which manages the entire programme. It interacts with PIs and the Monitoring Committee on one hand and the High Powered Committee, DG, CSIR and Governing Body of CSIR on the other.

Project Types

There are two broad categories of projects supported under NMITLI viz. (i) nationally evolved projects; and (ii) industry originated projects.

Nationally Evolved Projects (NEP)

The Nationally Evolved Projects follow a step-wise procedure. It begins with wide-ranging consultation to elicit ideas. The short listing of the ideas is done by a "Screening Committee" followed by selection of broad areas by the domain Expert Groups. The projectization of the areas is then carried out by "domain champions". The best players in the field are then approached and invited to participate in the project. Once the project is finalized it is reviewed and considered by the High Powered Committee (HPC). The HPC recommended projects are then considered for support by CSIR Governing Body.

Industry Originated Projects (IOP)

For this category of projects the process begins by soliciting of proposals through press advertisement and personal letters from DG, CSIR. The screening of the conceptual proposals thus received is carried out by a "committee" followed by assessment and rating of short listed ideas by the domain experts. The development of top rated two ideas in each domain is undertaken with the assistance of NMITLI designated experts. The project thus finalized are considered and reviewed by the HPC and the recommendations of HPC are considered by CSIR Governing Body in order to decide on the

projects to be supported in a given period. Last few years experience indicates that less than 5% of the projects get qualified for development under NMITLI. The companies registered in India and having more than 50% of shareholding by Indians/non-resident Indians or less than 50% shareholding by Indians/non-resident Indians but with manufacturing base in India are eligible for support under this category. However, at any given time not more than two projects of any individual company are supported.