

**Department of Higher Education  
Ministry of Human Resource Development  
Government of India**

**CONCEPT NOTE ON ESTABLISHMENT OF DESIGN INNOVATION CENTERS**

**SUMMARY**

The Ministry of Human Resource Development is working on a number of initiatives to harness the creativity and to create an eco-system of innovations in schools as also in our institutions of higher learning. The National Innovation Council (NInC), formed under the Chairmanship of Mr Sam Pitroda, has suggested the establishment of 20 Design Innovation Centres during the XII Five Year Plan as also one Open Design School and one institution for facilitating training of trainers. The NInC has also suggested that each institution must have a pedagogic charter that promotes independent thinking and creates a new generation of innovators. The key guiding principles, mainly to be embedded in the pedagogic charter would be to promote flexibility, autonomy, creative leadership and development of curriculum in consultation with prospective user industries and other institutions.

The strategic importance of design for national and industrial competitiveness is now universally recognised. Value addition through innovations in designs can play a pivotal role in enhancing the competitiveness of both manufacturing and service industries.

In view of above, the Ministry of Human Resource Development proposes to set up 6 Design Innovation Centres (DICs) in accordance with XII Five Year Plan document and National Innovation Council during the current financial year 2012-13. Later, the number of such Design Innovation Centres would be scaled up to 20 during the XII Five Year Plan period (2012-2017). It is envisaged that these Design Innovation Centres would not only focus on the spread of design education but would also propel the R&D activities in Design that becomes the catalyst for devising innovative solutions to societal challenges particularly in the grand challenge areas that suit the Indian conditions.

The Design Innovation Centres to be set up in the current financial year 2012-13 would be co-located in the established Institutions drawing faculty, infrastructure etc. already available with the institutes. Later, some of them may be located in the Institutions which are in the process of being established like the new IITs. The structure, course content, course design, shall be innovative and tailored to the objectives. The DICs shall not be set up as the regular centres/schools in Institutions.

The DICs shall be free to network and partner with other institutes depending upon their area of work. They would adopt a Hub and Spoke model with the Lead Institutes acting as the mentor while synergizing and

leveraging the potential of the institutes at the field level.

The courses offered from the DICs will not have a specific science or engineering specialization focus but they will be allowed to have specific application focus such as bio-design, inclusive innovation, assistive technologies, sustainable energy technologies etc. These courses would be available to students from very early stages of their programmes to imbibe design and innovation culture.

Presently many knowledge creating activities do not go beyond institute corridors, therefore, the DICs will also provide a necessary eco-system and resources to students/faculty to take their ideas beyond a first successful prototype to a pre-production prototype. The Design Innovation Centres will also play a crucial role in promoting industry sponsored and community driven projects

Though, Design and Innovation are concepts without boundaries, as they are based on multi-disciplinarily and open learning approach, the DICs may endeavour to specialize either in some broad sector or in their geographical areas of operation.

Since the XII Five Year Plan is yet to be approved, therefore, the first 6 Design Innovation Centres would be established in centrally funded institutions so as to avoid the difficulty of fund flow from the Ministry. The funding support would be offered to the lead institution based on their project report. It is expected that the lead institution will also partner with industry as also with other funding agencies for the Center. It is also expected that the Centres would become self-sustaining over a period of time.

## **1. INTRODUCTION**

- 1.1 President of India in her address to Parliament on 4th June 2009 had underlined the importance of the knowledge society in which we live today and had mentioned that creativity, innovation and enterprise hold the key to people and nations realizing their potential. Hon'ble President had also mentioned that the Government will ensure that its policies for education and science and technology are imbued with a spirit of innovation so that the creativity of a billion people is unleashed and that the next ten years would be dedicated as a Decade of Innovation.<sup>1</sup>
- 1.2 Education, being the crucible in which Innovations are forged, the Ministry of Human Resource Development is working on a number of initiatives to harness the creativity and to create an eco-system of innovations in schools as also in our

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<sup>1</sup>Para 46 of the Address of President of India to the Parliament ([www.pib.nic.in/newsite/erelease](http://www.pib.nic.in/newsite/erelease))

institutions of higher learning. Some examples of the innovations taking place in the Higher Education sector include the formation of University Innovation Cluster at Delhi University; Meta University comprising of institutions such as Delhi University, Jamia Millia Islamia, IIT-Delhi and JNU who have come together to offer students a collaborative and multidisciplinary learning experience; Technology Enabled Learning including 'Virtual labs' and 'e-learning' through National Mission on Education through ICT. It may be mentioned that more than 400 universities and 20,000 colleges have already been provided connectivity and are ready to harness the potential offered by e-learning systems. The establishment of Design Innovation Centres is conceived as another step in the innovation agenda of the Ministry.

- 1.3 The National Innovation Council (NInC), formed under the Chairmanship of Mr Sam Pitroda, has also focussed on the importance of innovation in education which is being seen as a means of creating sustainable and cost effective solutions for people at the bottom of the pyramid, and is as an important strategy for inclusive growth in developing economies. According to the National Innovation Council "Promoting creativity and incentivizing innovations through our educational institutions is a first step towards broadening and deepening the impact of innovations in our society and economy".<sup>2</sup> The Innovation Council under the Chairmanship of Mr Sam Pitroda has suggested the establishment of 20 Design Innovation Centres during the XII Five Year Plan as also one Open Design School and one institution for facilitating training of trainers. NIC has also suggested that each institution must have a pedagogic charter that promotes independent thinking and creates a new generation of innovators. The key guiding principles, mainly to be embedded in the pedagogic charter would be to promote flexibility, autonomy, creative leadership and development of curriculum in consultation with prospective user industries and other institutions.<sup>3</sup>
- 1.4 The strategic importance of design for national and industrial competitiveness is now universally recognised. Value addition through innovations in designs can play a pivotal role in enhancing the competitiveness of both manufacturing and service industries. It may be mentioned here that the Government of India had approved the National Design Policy, on 8th February 2007 which envisages the collaborative development of the design profession. The National Design Policy also envisages preparation of a platform for creative design development, design promotion and partnerships across many sectors, states, and regions for integrating design with traditional and technological resources; global positioning and branding of Indian designs and making '**designed in India**' a by-word for quality and utility in conjunction with '**Made in India**' and '**Served from India**'; raising Indian design education to global standards of excellence; and creation of original

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<sup>2</sup>Innovation in Education ([www.innovationcouncil.gov.in/](http://www.innovationcouncil.gov.in/))

<sup>3</sup>Design proposals by the National Innovation Council (May 2012)

Indian designs in products and services drawing upon India's rich craft traditions and cultural heritage.<sup>4</sup>

- 1.5 In view of the above, and in accordance with XIIth Five Year Plan, the Ministry of Human Resource Development proposes to set up 6 Design Innovation Centres (DICs) during the current financial year 2012-13. Later, the number of such Design Innovation Centres would be scaled up to 20 during the XII Five Year Plan period (2012-2017). It is envisaged that these Design Innovation Centres would not only focus on the spread of design education but would also propel the R&D activities in Design that becomes the catalyst for devising innovative solutions to societal challenges particularly in the grand challenge areas that suit the Indian conditions.

## **2. OBJECTIVES**

- 2.1 The basic purpose of setting up Design Innovation Centres is to promote
- Culture of innovation and creative problem solving
  - Knowledge sharing and collaboration amongst industry, academia, Government Institutions, research laboratories, etc.
  - To serve as a location for the industrial collaborators to encourage their new product development in the campus using the in-house facilities
  - To serve as a place that imparts design based education and practice systematic design through projects
  - To focus interdisciplinary design – focused innovation and creativity
  - To facilitate interdisciplinary design-focused education, research and entrepreneurial activities in order to create commercial opportunities and build partnerships between academics and industry.
  - To promote, nurture and advance the culture of design and innovation in the country leading to significant contributions and breakthroughs impacting quality of human life.
  - To create an ecosystem facilitating students and faculty to take their innovative ideas from classrooms/labs to market/people.
  - To facilitate evolution of new models of academia- industry interactions as well as academia-social interactions and develop institutional networks for innovations in the thematic areas.
  - To promote innovations which are both inclusive and disruptive.
  - To build a flagship programme in the area of design and innovation which can be replicated in other institutes/universities in our country
  - To promote all forms of innovations in the complete value chain from process to product, including innovation as a discipline itself.

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<sup>4</sup>National Design Policy ([www.dipp.nic.in/policies/national-design-policy](http://www.dipp.nic.in/policies/national-design-policy))

- To promote increased interactions/collaborations with institutes/organizations worldwide working in this area

2.2 **all the proposed Design Innovation Centres would not be engaged in pursuit of all the above objectives rather the Design Innovation Centres would be encouraged to select a few of the objectives for themselves and pursue them for visible outcomes.** For example, one of the Centres could engage in promotion of design education, curriculum design and pedagogy; some others may engage in the rural sector particularly to meet the challenges of agriculture, rural health and sanitation; some would of course engage in industrial design, process design and manufacturing. In short, the Design Innovation Centres would not be clones of one another but would also have innovative structures relating to the objectives which they wish to pursue.

### 3. PRESENT CAPACITIES IN DESIGN EDUCATION

3.1 There are a few institutions, both within the Ministry of HRD as also outside this Ministry, which are engaged in design education. They include the National Institute of Design (NID); the Indian Institutes of Technology – Bombay, Delhi, Kanpur, Guwahati, Hyderabad, Bhubaneswar; Indian Institutes of Information Technology, Design and Manufacturing, Jabalpur and Kancheepuram; Indian Institute of Fashion Technology, Schools of Planning and Architecture. Other than the centrally funded institutions, certain State Universities, such as MS University, Baroda, also have strengths in art and design education. There are also some private institutions such as Symbiosis Institute of Design, Pune, Srishti School of Design, Bangalore, MAEER's MIT Institute of Design, Pune, who have strengths in design education. Thus, the Design Innovation cuts across technical institution and liberal arts institutions as also centrally funded, state funded and purely private institutions. Some of these institutions and their proposals are described below:

#### 3.2 NATIONAL INSTITUTE OF DESIGN

National Institute of Design which was set up in 1961 at Ahmedabad, offers four year Graduate Diploma Programme in Design (GDPD) in 8 disciplines including Product Design; Furniture and Interior Design; Ceramic and Glass Design; Graphic Design; Animation Film Design; Film and Video Communication; Exhibition Design; Textile and Apparel Design.

NID also offers Post-Graduate Diploma Programme in Design (PGDPD) with specialisation in different disciplines including - Product Design, Transportation Design, Furniture and Interior Design, Ceramic & Glass Design, Toy Design and Development; Graphic Design, Animation Film Design, Film & Video Communication, Exhibition Design; New Media Design, Software and User Interface Design, Information and Digital Design; Textile and Apparel Design,

etc. NID also has a vast client service and research output. Although NID has since spread its operation to Gandhinagar for post-graduate courses and also has a R& D campus in Bangalore, the proposed new campuses of NID could not come up during the XI Plan.

### 3.3 **INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY**

The Industrial Design Center (IDC) at Indian Institute of Technology Bombay is amongst the premier Design Institutes of the country. IDC has been focusing on core areas like agriculture, medicine, rural development etc. Within the Center, Shenoy Innovation Studio has been set up to help industries in innovating continuously by designing methodologies tailored to their specific condition and needs. **IIT Bombay has submitted a proposal for establishment of the Design Innovation Centre which would have extensive field orientation with emphasis on transforming Engineering / Technology driven prototypes into socially useful and commercially viable products for the community essentially in the field of livelihood, Agriculture, education, and craft. The emphasis would be on innovation of need based and cost effective products. The approach would be bottom up with inputs coming from the real life situation. The Design Innovation Center could be setup on a hub and spoke model.** It would leverage the benefits of resource persons across the similar institutes through networking.

### 3.4 **INDIAN INSTITUTE OF TECHNOLOGY, DELHI**

IIT Delhi has a long tradition of working towards design and innovation. There are quite a few examples of innovative products and solutions from IIT Delhi which have reached the industry and the society. Indian Institute of Technology, Delhi has also submitted a proposal for setting up a **Design Innovation Centre which will offer Courses that have specific ‘application focus’ such as bio-design, inclusive innovation, transport system design, assistive technologies, sustainable energy technologies etc.** The Centre is expected to run at least six Under Graduate and Post Graduate Courses with an enrolment of about 40 students per course.

### 3.5 **INDIAN INSTITUTE OF TECHNOLOGY, GUWAHATI**

IIT Guwahati is the only IIT to offer Bachelor of Design Programme. It has a full-fledged Department of Design, offering Degrees in Bachelor of Design, Master of Design and Ph.D Programme in Design. IIT Guwahati has submitted a proposal for setting up and running a Design Innovation Center. The proposed Design Innovation Center aims to provide technical expertise as well as infrastructural support for the development of new products for Automotive industries, Domestic appliances, Computers, Toys, Machines and Drives, Medical and Bio-medical industry etc. **The Center is also expected to focus on designs specific to the North-east region of the country. Interventions in handlooms, handicrafts,**

**local tools, agriculture and horticulture equipment, food preservation, sericulture, transportation etc. are also planned.**

**3.6 INDIAN INSTITUTE OF TECHNOLOGY, HYDERABAD**

The Institute started functioning in the year 2008 with a vision that it will be a cradle for inventions and innovations and will seek to advance knowledge in science, technology and liberal arts. It is committed to the mission of being recognized as ideators and leaders in higher knowledge and research. Since IIT Hyderabad is committed to the cause of innovations and is a developing IIT, it would be good idea to incorporate a Design Innovation Centre within the institute at the initial state itself. **The proposed Centre can address the issue of adequate availability of design faculty through active networking with other IITs and premier research institutes.**

**3.7 INDIAN INSTITUTE OF TECHNOLOGY, BHUBANESHWAR**

The inception of a new IIT at Bhubaneswar is a good opportunity for the introduction of design studies in eastern India. There are several areas in the industrial and craft-based sectors that could benefit tremendously from the infusion of design thinking. With this in mind, the Institute has proposed the setting up of a programme in design education. One significant addition to the proposed programme is the inclusion of liberal arts studies at the Center proposed at IIT Bhubaneswar. A creative and liberal arts environment, with grounding in design, science and technology at the IIT, would offer a rich and integrated learning opportunity to young students. The Master-Plan for IIT Bhubaneswar has already allocated space for the setting up of the proposed School of design and creative arts.

**3.8 INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN & MANUFACTURING, JABALPUR**

PDPM-IIITDM Jabalpur was established in 2005 with a focus on education and research in IT enabled Design and Manufacturing. Right from its inception, the Institute has been working on evolving a curriculum to deliver interdisciplinary and action-oriented educational programmes at tertiary and higher levels. The Institute has also taken initiatives to transform the undergraduate curriculum with a focus on creativity and design. The interdisciplinary nature of the programme helps students and faculty think beyond traditional disciplinary boundaries. The Institute is also orienting its R&D activities to promote translational research for bringing ideas from mind to market.

The Institute offers a Master of Design (M.Des.) programme and Doctoral (Ph.D.) programme in Design focusing on the outside-in approach towards designing solutions. The emphasis is on thinking at the systems level while developing solutions for user centred design. The Institute has its research programme in Design with the true spirit of Liberal Design education within a rigorous framework. The design programme concentrates on developing

knowledge based design professionals who would become the problem solvers, and who can effectively use different design methodologies.

### **3.9 INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN & MANUFACTURING, KANCHEEPURAM**

IITDM, Kancheepuram was established in 2007 with the mandate of pursuing design and manufacturing oriented engineering education and research and to facilitate and promote the competitive advantage of Indian products in global markets. The Institute offers interdisciplinary academic and research programs that integrate engineering design, manufacturing and management with information technology. The institute has strength in IT and IT enabled design and manufacturing education and research and is currently offering novel UG and PG programs which focus on IT and design and manufacturing aspects in the core engineering sectors.

### **3.10 INDIAN INSTITUTE OF SCIENCE, BANGALORE**

Established in 1909, Indian Institute of Science is a premier institution offering a variety of Master's degree programs in Engineering, an integrated Ph.D.(post-B.Sc.) program in Sciences and Ph.D. programs in a wide spectrum of disciplines in science and engineering. The Institute also has a 4-year undergraduate program leading to a B.S. degree, with an opportunity for students to obtain a broad foundation in science, including an exposure to research. The Institute has proposed a Design Innovation Centre at IISc to:

- i. Produce faculty and practitioners in Design
- ii. Create and develop content for teaching and learning design on-site and on-line
- iii. Support development of market-ready products from proofs of concept prototypes
- iv. Incubate indigenous products into marketplace through licensing and start-ups

The Innovation Center will be a facility where budding practitioners and teachers in Design can immerse themselves through the entire cycle of product development.

The deliverables of the proposed Center, as proposed by IISc will include Masters (30 per year) and PhD (6- 10 per year) in Design as also e-Content for teaching/learning Design on- line; Summer workshops for design faculty from other institutions.

### **3.11 CLUSTER INNOVATION CENTER@ DELHI UNIVERSITY**

Delhi University has established an Innovation Center @DU. It is the first University of the country to launch an academic Cluster Innovation Center (CIC) which commenced on 3rd September 2011. CIC now provides a platform to University of Delhi and all its partners to forge mutually beneficial linkages to initiate and assist innovation activities and act as a catalyst and facilitator. Its primary objective is to create an ecosystem that connects and facilitates various stakeholders on all aspects of the innovation process including training and support. By promoting innovation, channelling various incentives that benefit the cluster, CIC acts as an incubating body managing the growth of innovation in this ecosystem.

It is expected that CIC can act as a hub for Innovation activities – facilitating and development of ideas into innovative applications that can benefit society directly or can be marketed successfully.

- 3.12 As already mentioned, the above list is not exhaustive and there are a number of state institutions like MS University, Baroda, as also some private institutions who have strength in design education.

#### **4. CONSULTATIONS WITH STAKEHOLDERS**

- 4.1 As mentioned in Para 1.3 above, the idea of setting up Design innovation Centres originated from the National Innovation Council. National Innovation Council had also sent a proposal to the Planning Commission in May 2012 to consider setting up 20 Design Innovation Centres co located in the institutes of national importance, one OPEN Design School and one Institute for facilitating Training of the Trainers in Design in the Twelfth Five Year Plan.
- 4.2 Earlier, in a Meeting held at the National Innovation Council in Jan 2012, the Ministry of HRD supported the idea of co locating the Design Innovation Centres in the existing institutions of national repute like the IITs, IIITs etc. This was again reiterated in a Meeting held at the Planning Commission under the Chairmanship of Shri Sam Pitroda in Feb 2012.
- 4.3 XIIth Five Year Plan Document mentions that Design-centred innovation is a force multiplier that can help the country move up the value chain, making Indian industry globally competitive. In this context, a National Initiative for Design Innovation would be launched in the Twelfth Plan. Under this initiative, 20 new Design Innovation Centres (DIC), one Open Design School (ODS) and a National Design Innovation Network (NDIN), linking together all these schools, would be set up.
- 4.4 MHRD had also conducted a meeting on 23<sup>rd</sup> July, 2012 and invited the following 9 Institutions with Project Proposals and cost estimates for setting up DICs: IITs (Delhi, Bombay, Kanpur, Hyderabad and Guwahati), IIITD&M (Jabalpur and

Kancheepuram), and Indian Institute of Science, Bangalore and University of Delhi. In the said Meeting, Adviser, (Education) Planning Commission had informed that this initiative is not meant to provide more funds to existing Industrial design centres or existing institutes for design under the Ministry of HRD which in any case receive significant central funding and can undertake these activities from normal central funds. This initiative should not be seen as merely scaling up the activities in these institutions, but spread it to more institutions (particularly to State or even Private institutions) and create an overall ecosystem for design and innovation in the higher education. These centres / institutes should not be isolated centres, but function as a hub-and-spoke network for innovation between existing institutions, industrial centres and new centres established under the initiative. The intention is to create an ecosystem for innovation and not just some centres for innovation.

- 4.5 The proposals of different central institutions and the above suggestions have been taken into account while formulating this concept note.

## **5. MODEL OF DESIGN INNOVATION CENTERS**

- 5.1 As recommended by the National Innovation Council:

- i. Some of the Design Innovation Centres (DICs) can be set up by co locating them in existing publicly funded Institutes of national repute like IITs and NITs to be able to optimally utilize the existing resources and to address the issue of availability of faculty and land. This would also help in networking and will reduce the start-up time.
- ii. In the new IITs now under construction, the DICs could be integrated into the larger infrastructural development of the institution.
- iii. The training of teachers for design education can be housed in IISc.

- 5.2 In view of the above, it is proposed that the Design Innovation Centres to be set up in the current financial year 2012-13 would be co-located in the established Institutions drawing faculty, infrastructure etc. already available with the institutes. Some of them can also be located in the Institutions which are in the process of being established like the new IITs.

- 5.3 The structure, course content, course design, shall be innovative and tailored to the objectives. The DICs shall not be set up as the regular centres/schools in Institutions.

- 5.4 The DICs shall be free to network and partner with other institutes depending upon their area of work.

- 5.5 The DICs can focus on Product Design, industrial Design, Process Design or System Design with the outcomes aligned to the needs of the society.

- 5.6 Each Center will offer courses in design and innovation which will be different from those offered by individual departments. The courses to be offered by Center

will be multi-disciplinary and participatory in nature. Projects to be done in teams will consist of students from different specialization who are expected to work under the mentorship of faculty from diverse departments/centres/schools to tackle social and industrial problems. The courses offered from the Center will not have a specific science or engineering specialization focus but they will be allowed to have specific application focus such as bio-design, inclusive innovation, assistive technologies, sustainable energy technologies, etc. These courses would be available to students from very early stages of their programmes to imbibe design and innovation culture. Some of these courses will be primarily for undergraduate students and another set of courses are those which can be taken by both undergraduate and postgraduate students. The Center over a period of time is expected to run at least six courses of this nature to undergraduate and post graduate students with an enrolment of about 40 students per course.

- 5.7 The Design Innovation Centres will play a crucial role in promoting industry sponsored and community driven projects. Working closely with the community, the DIC can identify industry and community based needs/ideas which require multi-disciplinary problem solving skills and which can be addressed within an academic setup as a part of courses and projects to be offered by the Center. Depending on the nature of problem and deliverables, these can be multi-semester project courses each building over previous ones
- 5.8 They would adopt a 'Hub and Spoke' model with the Lead Institute acting as the mentor while synergizing and leveraging the potential of the institutes at the field level.
- 5.9 Creating Eco-System for Translation into Business Venture: Presently many knowledge creating activities do not go beyond institute corridors. Taking an innovative idea from proof of concept stage to market/user/society/industry requires a compelling ecosystem which will be put in place as a part of Center activities. The DICs will try to fill the gap between a successful laboratory prototype and a committed business venture, by playing an active role in promoting an intermediate stage of translational research & development to bridge this gap. In other words the DICs will provide a necessary eco-system and resources to students/faculty to take their ideas beyond a first successful prototype to a pre-production prototype.
- 5.10 Though Design and Innovation are concepts without boundaries as they are based on multi-disciplinary and open learning approach, however the DICs may endeavour to specialize either in some broad sector or in their geographical areas of operation.
- 5.11 The DICs over a period of time shall strive to be self-sustaining.

## **6. LINKAGES WITH NKN & NDINK**

- 6.1 There is a need to create an educational system that encourages lateral learning through broad exposure to a multitude of related and unrelated disciplines, rounded off with specialist knowledge and training in a specific discipline. As

mentioned in para 1.2, the Ministry is already leveraging the advantages of NKN. The proposed Design Innovation Centers will also leverage the **National Knowledge Network (NKN)** to connect various design, academic, research and governmental organisations and individuals to build a virtual community of design experts, resources and new business models for the future.

- 6.2 The proposed DICs will also link with the **National Design Innovation Network** which is a proposed network of design schools that would work closely with other leading institutions of industry, academia, NGOs and government to further the reach and access to design education and practice, and would be open for interaction with the general public.

## **7. GOVERNANCE AND FINANCING**

- 7.1 As already mentioned in paras 5.3 and 5.8, the Design Innovation Centres will not be established as a regular school in an institute but will be established on a 'Hub and Spoke' model with the lead institution identifying 1-3 partner institution(s). The partnership would be based on the objectives being pursued by the institution(s).
- 7.2 The lead institution and partner institutions could be either working in any specific sector or working in a particular geographical region or working towards mutually identified niche areas.
- 7.3 An attempt will be made to ensure that there is multi-disciplinarily particularly between technology and liberal arts disciplines and that the 'Hub and Spoke' involves some State institutions as well.
- 7.4 First 6 Design Innovation Centres would be established in centrally funded institutions so as to avoid the difficulty of fund flow from the Ministry.
- 7.5 The funding support would be offered to the lead institution based on their project report. It is expected that the lead institution will also partner with industry as also with other funding agencies for the Center. It is also expected that the Centres would become self-sustaining over a period of time.

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