

Master Class – A

Development of National Knowledge Functional Hub (NKFH)

Framework for Implementation and
Current Status



FICCI Higher Education Summit 2011
11 – 12 November 2011, New Delhi

NKFH : Objectives

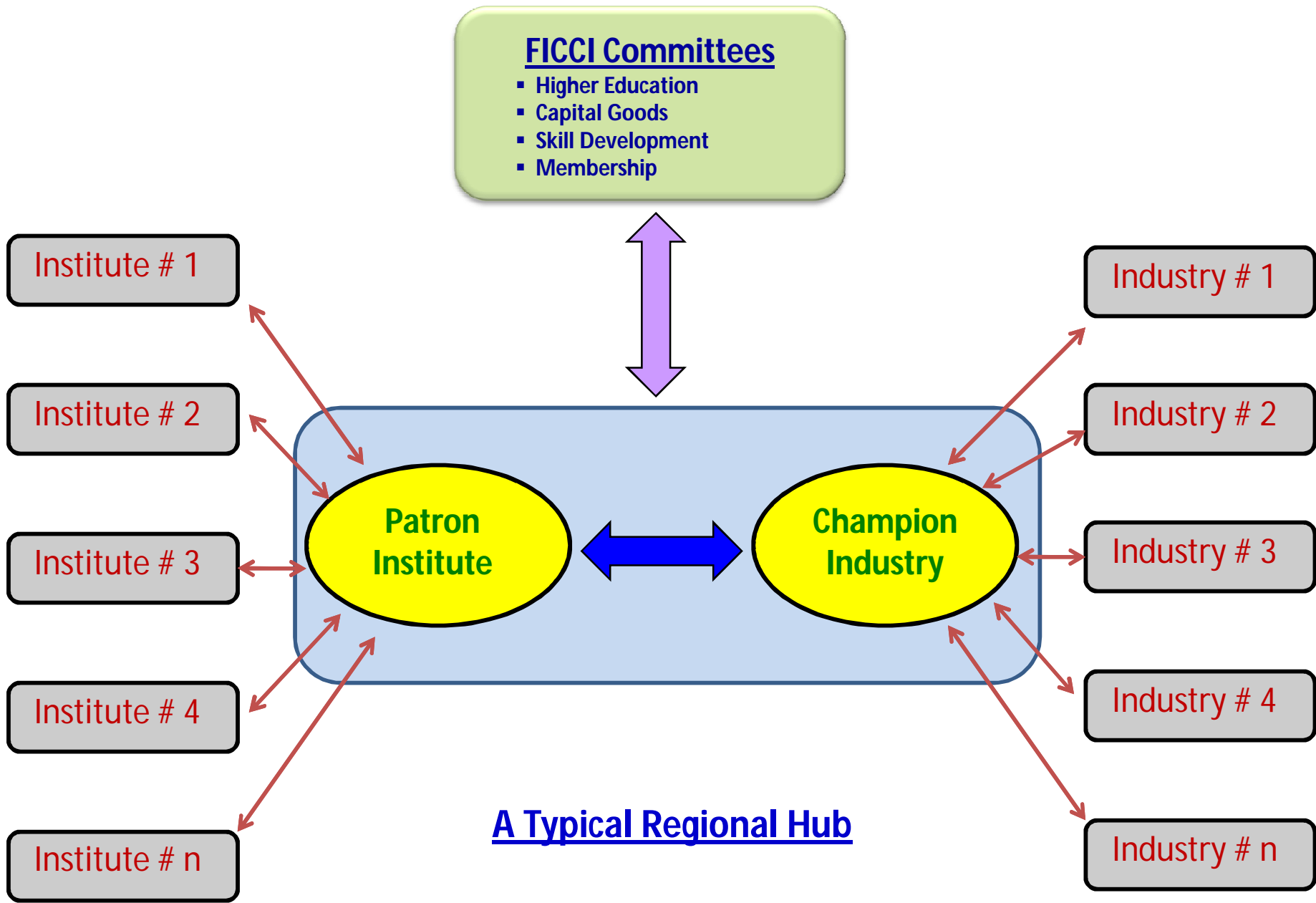
- ❑ To facilitate **Academia – Industry Linkages** for ensuring effective and efficient engagement for mutual benefits
- ❑ To enhance the **employability** of engineering graduates through development of appropriate skills relevant to the Manufacturing & Engineering Industries
- ❑ To align **higher education and research** in Engineering with the current and future **requirements of Industries**
- ❑ To enable linkage on such objectives with Central / State Governments on case-to-case basis, for specific needs
- ❑ To take up **vocational education / training** separately through **NSDC** and **FICCI – Skill Development Committee**

Key Stake Holders

- FICCI - Higher Education Committee**
- FICCI - Capital Goods Committee**
- FICCI - Skill Development Committee**
- FICCI - Membership Committee**
- Participating Academic Institutes**
- Participating Industries**
- National Skill Development Corporation**
- National Manufacturing Council**

NKFH : “Hub-&-Spoke” Framework

- ❑ **National Knowledge Functional Hubs** are envisaged to be a **collaborative framework** of **Academia and Industry**, focusing on specific **Industry verticals**
- ❑ **Leading industries and academic institutions in a region will come together as a “Hub” to facilitate mutually beneficial linkages**
- ❑ **The “Hub” will create and sustain a network of “Spokes” with other industries and institutes in the region**



Specific Action to activate a Hub

- ❑ To identify the **Champion Industries and Patron Institutes** for a Hub
- ❑ To identify a few Institutes with good set-ups and referrals as **Member Institutes**, based on the Patron Institute feedback
- ❑ To select leading Industries, who are keen on Industry-Academia interaction, as **Member Industries** (preferably FICCI Members)
- ❑ To establish the apex **Governing Council** at National Level and **Executive Committee** for each regional Hub
- ❑ To establish **Functional Committees** with mandates relevant to the Hubs
- ❑ To finalize the **Financial Model** for operating the Hub on a sustained basis

Mandate for Academic Institutes

- ❑ To develop and run **Industry-relevant curricula**
- ❑ To introduce **new courses** on topics relevant to Industries (Electives to start with)
- ❑ To solicit **pedagogical inputs from the Industry to Institutes**
- ❑ To impart **refresher courses** and training to practicing Industry Professionals through Continuing Education Programs / Summer Schools
- ❑ To offer **Workshop / Lab facilities to trainees from Industry, wherever applicable**
- ❑ To support **joint research projects** with Industry
- ❑ To enable **short-term deputation of faculty to Industry for professional enrichment**
- ❑ To facilitate **incubation** of new technology, leading to Industrial applications and commercialization

Mandate for Academic Institutes (Cont'd.)

- ❑ To apprise the industry about the state of various **research projects** being undertaken in the Institutes
- ❑ To create template seeking inputs from member Institutes where they have **specific expertise / facilities**
- ❑ To create a template for seeking Industry inputs on need for **revisions in curricula** on a periodic basis
- ❑ To help Industries in filing **Patents** and protecting their **Intellectual Property**
- ❑ To collaborate with Industries in developing **“Model” Documents** such as MoU, Collaboration Agreement, Licensing Agreement, NDA.

Mandate for Industries

- ❑ To define **specific skill sets** relevant for a given Industry vertical
- ❑ To review engineering course curricula and to recommend **improvements / revisions** periodically
- ❑ To nominate an **Industry Representative** who would have interactions with academic institutions
- ❑ To offer **employment opportunities** to engineering graduates having requisite skills and qualifications
- ❑ To offer **summer internship opportunities** to engineering students
- ❑ To offer **Industrial Projects** to students as part of Degree requirements of Graduate / Post Graduate Courses
- ❑ To carry our **collaborative research projects** with academic institutes

Mandate for Industries (Cont'd.)

- ❑ To offer short-term **industry exposure** to faculty members through joint projects
- ❑ To facilitate **guest lectures** by industry experts for the benefit of engineering students and faculty members
- ❑ To facilitate **industrial application/commercialization** of appropriate technologies generated through academic research
- ❑ To donate machinery, test rigs, prototypes, industry models and other assets to academic institutes as **"Endowment"**
- ❑ To offer **Scholarship Schemes** for bright students working on projects of mutual interest

Organization of a Hub

- ❑ Each Regional Hub is envisaged to be similar to a **Professional Society** (though it will run under FICCI control to begin with)

- ❑ There will be an apex **Governing Council (GC)** at the National level, consisting of the following members:
 - **Champion Industry Member(s)** from each Hub
 - **Patron Institute Member(s)** from each Hub

- ❑ A team of **Conveners** (comprising 3 FICCI Facilitators representing FICCI Committees on Higher Education, Capital Goods and Skill Development) will be attached to the Governing Council. This will ensure the uniformity of NKFH implementation process across all regions.

- ❑ All activities of the Hub will be handled by an **Executive Committee (EC)**, consisting of an equal number of representatives from each participating Champion Industry and Patron Institute within the Hub. Members of the GC will be in the EC of respective Hub. Depending on the number of participating agencies, the maximum size of the EC can be specified.

Organization of a Hub (cont'd.)

- ❑ **The Executive Committee will elect the following Office Bearers to discharge the operational and administrative responsibilities of each Hub. They will hold office for a specified period :**
 - **Honorary Chairman**
 - **Honorary Vice Chairman**
 - **Honorary Secretary**
 - **Honorary Treasurer**

- ❑ **The Office Bearers will be responsible for implementing the NKFH Scheme in a given Hub, based on the decisions taken by respective Executive Committees under guidance of the apex Governing Council and Conveners.**

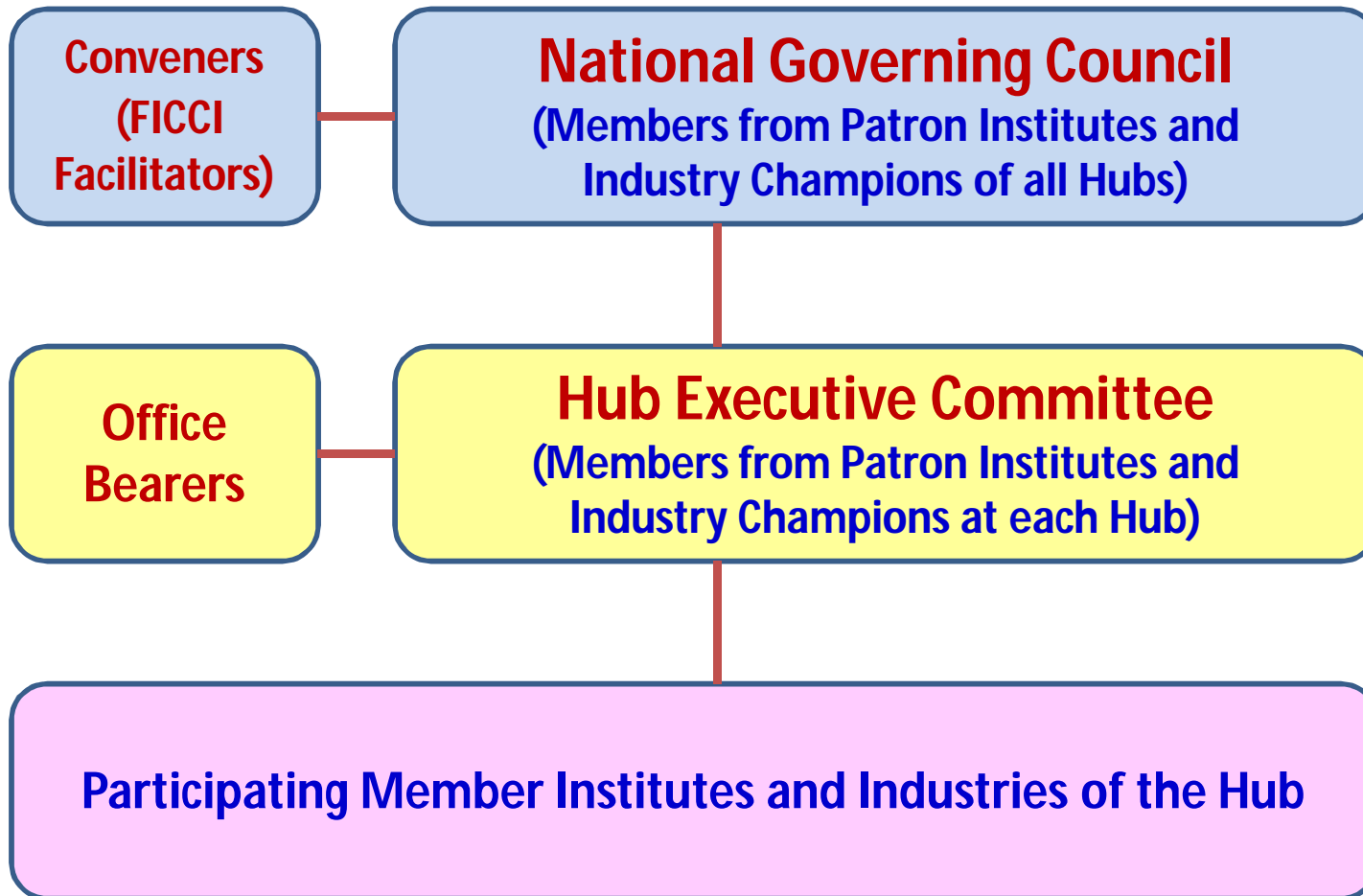
- ❑ **The structure is to be kept lean and maintained with minimum bureaucracy.**

Organization of a Hub (cont'd.)

The Following will be considered at a later date (during Phase-2 of Hub Development):

- ❑ Broad guidelines will be developed for the **Roles and Responsibilities** of the Office Bearers as well as their election process.
- ❑ The Hub may appoint one or more **Office Managers / Supervisors** to run the office activities on a day-to-day basis.
- ❑ Each Hub will have its independent **Bank Account** and will maintain audited records of all activities and transactions.

Model NKFH Structure



Timeline of Major Events on NKFH

- ❑ **10 February 2011** **NKFH Kick-off Meeting at Mumbai**
- ❑ **03 May 2011** **FICCI Seminar on NKFH Initiative at Delhi**
- ❑ **05 May 2011** **FICCI Capital Goods Committee Meeting at Mumbai**
- ❑ **20 May 2011** **Invitation Letters issued for the formation of Hubs at Western, Northern & Southern Regions**
- ❑ **08 June 2011** **Joint Review Meeting (Tele-conference) of FICCI Capital Goods / Higher Education Committees for developing activity plan**
- ❑ **14 June 2011** **Invitation Letters issued for the formation of Hubs in Dehradun & Coimbatore Hubs**
- ❑ **07 July 2011** **Draft Working Model for NKFH released for review and deliberations**
- ❑ **11 July 2011** **Review Meeting (Tele-conference) with Northern & Southern Hubs**
- ❑ **13 July 2011** **Review Meeting (Tele-conference) with Western Hub**
- ❑ **20 September 2011** **Seminar on NKFH at Coimbatore (for Southern Hub)**
- ❑ **14 October 2011** **Western Hub Meeting with NMIMS at Mumbai**
- ❑ **09 November 2011** **Seminar at New Delhi for NKFH Northern Hub and Press Meet**

NKFH : Current Status

- ❑ Regional Hubs have been formed for *Western, Northern and Southern* Region (Bangalore & Coimbatore)
- ❑ Efforts are on to identify **Member Institutes** and **Member Industries** at each of the identified Hubs, so that collaborative activities of relevance for each Hub can be started through a **“Hub-and-Spoke”** organizational structure.
- ❑ Formal launch of each of the Hubs is planned from **December 2011** onwards, with the formation of GC at National level and EC at each Hub location.

NKFH : Western Hub

Industry Champions	Patron Institutes	Members (Industries & Institutes)
<ul style="list-style-type: none"><input type="checkbox"/> Bharat Forge Ltd., Pune<input type="checkbox"/> Thermax Ltd., Pune<input type="checkbox"/> Chemtrols Industries Ltd., Mumbai<input type="checkbox"/> Hindustan Dorr-Oliver Ltd., Mumbai	<ul style="list-style-type: none"><input type="checkbox"/> NMIMS University, Mumbai	<ul style="list-style-type: none"><input type="checkbox"/> MS University, Baroda <p>(others being identified)</p>

NKFH : Northern Hub

Industry Champions	Patron Institutes	Members (Industries & Institutes)
<ul style="list-style-type: none"><li data-bbox="277 520 752 624">❑ Bharat Pumps & Compressors, Allahabad<li data-bbox="277 692 719 738">❑ ISGEC Group, Noida	<ul style="list-style-type: none"><li data-bbox="855 520 1285 619">❑ Thapar University, Patiala<li data-bbox="855 692 1323 852">❑ University of Petroleum & Energy Studies, Dehradun	<ul style="list-style-type: none"><li data-bbox="1433 520 1899 679">❑ Malviya National Institute of Technology, Jaipur<li data-bbox="1433 751 1877 855">❑ Chitkara University, Solan (HP) <p data-bbox="1433 922 1912 968">(others being identified)</p>

NKFH : Southern Hub (Bangalore)

Industry Champions	Patron Institutes	Members (Industries & Institutes)
<input type="checkbox"/> GW Precision Tools India Ltd, Bangalore	<input type="checkbox"/> Manipal Institute of Technology, Manipal	<input type="checkbox"/> R V College of Engineering, Bangalore <input type="checkbox"/> MS Ramaiah Institute of Technology, Bangalore (others being identified)

NKFH : Southern Hub (Coimbatore)

Industry Champions	Patron Institutes	Members (Industries & Institutes)
<ul style="list-style-type: none"><li data-bbox="275 523 779 624">❑ Laxmi Machine Works, Coimbatore <li data-bbox="275 695 622 796">❑ Flowserve Ltd., Coimbatore	<ul style="list-style-type: none"><li data-bbox="853 523 1368 679">❑ Amritha Vishwavidyapeetham, Coimbatore	<p data-bbox="1444 523 1787 568">(being identified)</p>

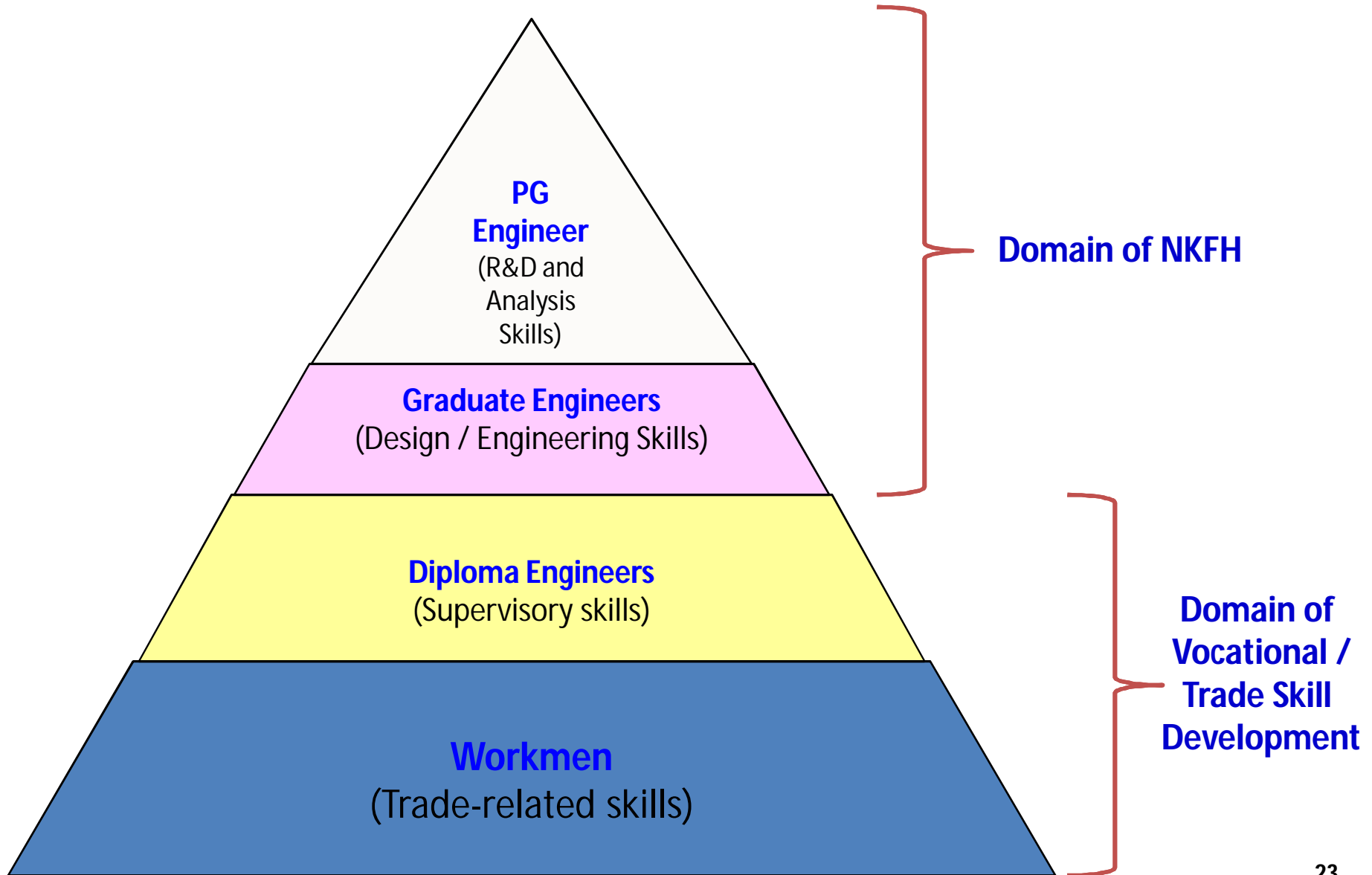
Initiative on Vocational & Trade Skills

- The **NKFH Initiative** between FICCI Capital Goods Committee and Higher Education Committee focuses on skill development of **graduate** and **post-graduate** engineering professionals.
- The Capital Goods Sector also has an important need for developing **vocational** and **trade-related skills** of the workforce.
- Capital Goods Committee has initiated collaborative work with the **Sector Skill Council** of FICCI as well as the **National Skill Development Corporation (NSDC)** covering personnel from ITI / Polytechnics

Initiative on Vocational & Trade Skills (Cont'd.)

- Large industrial organizations also have **in-house skill-building schemes** and dedicated **training centers**. It is proposed to enlarge and integrate such efforts across the Capital Goods Sector.
- Capital Goods Committee of FICCI has compiled the **specific skill development requirements** from Member Industries. The consolidated inputs will be useful in framing appropriate vocational and trade-related skill development programs at the national level.

Vocational Skill Development complementing NKFH Initiative



Long Term Vision - Organization of a Hub

- ❑ It is advisable that each Hub is registered as a **Professional Society** with the Registrar of Societies at respective location.
- ❑ The Hub as a legal entity should also obtain **Income Tax PAN, TAN and Service Tax registration** to facilitate all transactions.
- ❑ The Hub as a legal entity can also be registered as a not-for-profit **“Charitable Society”** under **Sec. 12 A** of Income Tax Act, to avail of exemption from payment of Income Tax. This will be financially beneficial for the Hubs.
- ❑ In addition, registration under **Sec. 80 G** of Income Tax Act is also advisable, as this will enable organizations to enjoy Income Tax benefits for all donations made to the Regional Hubs. This can make it easier for the Hubs to enhance their Corpus through donations.
- ❑ **Competent Legal and Income Tax experts** may be consulted for appropriate advice on these issues.

Financial Considerations *(For Phase-2 of Hub Development)*

Types of expenditure envisaged for implementing NKFH:

❑ Revenue Expenditure :

- Recurring administrative expenses for operating the Hub
- Expenses for funding special initiatives, collaborative activities, projects, seminars / conferences / training

❑ Capital Expenditure :

- Equipment and other assets for joint research projects, wherever applicable

Notes:

- It is envisaged that **office infrastructure and other facilities** for operating the Hub will be provided by the Nodal Institutes / Partner Industries in their existing campuses. No separate investments in land, buildings or office facilities is necessary.
- **Regular source of income** needs to be established to meet recurring administrative overheads of each Hub.
- **Capital investments** for research projects can be made by the participating Industry or Sponsors such as DST / DSIR and other Government Agencies.

Suggested Sources of Funds *(For Phase-2 of Hub Development)*

- ❑ Participating Industries of a particular Hub may make a **one-time contribution** to create a **Corpus**
- ❑ FICCI may also contribute some **initial funding** to each Hub, through **Sponsorships** from major industrial houses / Government agencies.
- ❑ FICCI may consider granting refundable **“Seed Money”** to a Hub for specific events or initiatives on case-to-case basis. This amount can be refunded by the Hub out of the earnings generated from the events. The remaining surplus will accrue to the Hub corpus.
- ❑ **Interest earned** from from the Corpus can be used to meet regular administrative overheads of the Hub.
- ❑ Industries from a specific sector may contribute **Endowment Funds** to enable the Institutes to develop and run customized academic courses relevant for their needs.

Suggested Sources of Funds *(For Phase-2 of Hub Development)*

- ❑ Institutes can utilize **Scholarship Funds** contributed by participating Industries to support the students' projects.
- ❑ Participating Industries can pay **Stipend** to Summer Trainees / Project Trainees associated with them.
- ❑ Academic Institutes can conduct Short-term Training Programs / CEPs utilizing **Sponsorship Funds** from DST / MHRD. Earnings from such events by way of participants' **registration fees** can be used for Hub activities.
- ❑ Member Industries and Institutes in a Hub can jointly organize public Conferences, Seminars and Workshops on a regional / national level. **Surplus funds** generated from such events after covering the expenses can be added to the Hub Corpus.
- ❑ **Intellectual Properties** generated out of joint Industry – Academia Projects in a Hub can be exploited through **Licensing** or **outright sale** of technology / patent etc. The earnings can be utilized by the Hub for future activities.

Thank You !