



# Foundation for Innovation and Technology Transfer



## Annual Report

2017-18

“Foundation for Innovation and Technology Transfer (FITT) is an industrial interface organisation established at the Indian Institute of Technology Delhi (IITD) as a Registered Society on 9<sup>th</sup> July, 1992. FITT has been operating in a mission mode to foster, promote and sustain commercialisation of science and technology and has been devising innovative ways to create partnerships and linkages with business and community to enable knowledge transfer for economic and societal benefits.”

# *What's inside?*

03 | Director's Report

17 | Appendices

## **Appendix I**

List of IPR Applications Filed During the Financial Year 2017-18

04 | Key Activities, Projects and Initiatives

## **Appendix II**

IP Licenses Executed during the Financial Year 2017-18

12 | Organisation

## **Appendix III**

Select Development/Investigative Projects Undertaken During the Financial Year 2017-18

13 | Financial Highlights

27 | Annual Accounts

## **Appendix IV**

Corporate Members

# Director's Report

Completing 25 years as a self-sustained non-profit body is a noteworthy milestone in the journey of any organisation. The Foundation for Innovation and Technology Transfer (FITT) which is a leading technology commercialisation organisation from academia has surpassed this milestone and is in the midst of expanding its repertoire of activities. Its broad charter, capability and capacity helps FITT to make smooth transition to different verticals. It's more of a functional matrix now given the varied yet overlapping nature of the activities at FITT. The continued support of the academic community at IIT Delhi helps the team at FITT to contribute significantly more than just efficient delivery of services.

The dynamics of industry-academia relationship largely determines FITT's approach in shaping partnerships for knowledge transfer and economic development. The varied roles of FITT can be seen in enabling innovations, industry partnerships, R&D programs, licensing, industry visits etc. This is necessitated by the key agenda of the Foundation to transfer technology and also inspire industrial orientation in teaching and research. Importantly, FITT offers flexible and convenient formats for external engagement by academics from IIT Delhi. The FITT's newsletters - *FITT Forum* and *Technopreneur Bulletin* showcase some of the best IIT Delhi has to offer in terms of its expertise, knowledgebase and infrastructure as well as other opportunities towards research collaboration.

FITT is of the firm belief that strong cooperation between the Government, Academia and Industry can help in creating effective policy tools and strategic methods to tackle various challenges facing the country in its development journey. Directed research and innovation programs can lead to impactful solutions in the areas of manufacturing, infrastructure, cleanliness, water, energy, financial inclusion etc. There is strong interest in the new themes of Industry 4.0, AI/ML, Block-Chain, Cyber-security etc. In this context, FITT plays an important role in exploiting the research capability

at IIT Delhi by creating effective outreach channels. FITT provides superior program management services and is steadily increasing its operational landscape which, while encouraging, is challenging it to attain higher levels of effectiveness and success in its stated mission. FITT has helped in the filing of over 700 patents for IIT Delhi and works to increase the licensing deals. Over 90 technologies have since been commercialised

Towards fostering innovation-led start-ups, FITT operates an active Technology Business Incubation program at the Institute. This flagship support program is amongst the leading techno-entrepreneurship set-ups in the country. As on date, there are 22 technology start-up companies resident at the incubator out of about 85 units admitted so far. Omnia Information, Cutting Edge Medical device and Valetude Primus healthcare are the three start-up companies that have exited towards further development, scale-up and commercial operations. Several government support programs of BIRAC, DeitY, DST and TDB are being facilitated by FITT for enabling regional economic growth through techno-entrepreneurship and, we see great interest amongst the targeted groups. The Pfizer – IIT Delhi Innovation and IP program is an interesting industry sponsored innovation support program being in operation here. FITT has now embarked on the mission to establish Research Parks on IIT Delhi's campuses to deepen industry engagement, enhance R&D programs and greatly augment the start-up ecosystem.

FITT strives to initiate, build and sustain external partnerships and keeps on strategizing for increased value creation and thus, maintains its' special position at IIT Delhi.





# Key Activities, Projects and Initiatives

## Outreach and Engagement

FITT has been working as an interface organisation at IIT Delhi over the last twenty five years. The evolving relationship between industry and academia has supported knowledge transfer and technology commercialisation. The engagement with industry and other organisations is sustained by continued efforts towards various developmental collaborations and other partnership opportunities.

1. FITT organises/facilitates visits by high level delegations for exploring various cooperation opportunities:

A high level delegation of seven Spanish companies visited FITT on Oct 13, 2017 to discuss possibilities for collaboration in the area of water technologies.



A Russian delegation led by Mr Vsevolod Rozanov, Chairman Sistema-Asia, visited FITT on May 22, 2017 to interact with the startups and discuss start-up exchange programs.



Delegates from African Universities visited FITT's TBI on Sept 11, 2017 to understand the incubation model and its operation.



2. FITT facilitates active industry-academia dialogue and enables mutual visits to explore partnership prospects. In pursuance of this goal, industry representatives are regularly invited for presentations, highlighting their priority R&D areas to faculty groups in the Institute and opportunities for collaborative work with IIT Delhi. Several contract R&D projects and consultancy assignments have been conducted at the Institute under the aegis of FITT. During the FY 2017-18, there have been a number of visits to FITT by senior people from organisations like Pfizer, Samsung, Prayag Polytech, TCS, HPL, Havells, Uflex, Lakshmikumar & Sridharan, Ornate Solar, MG Motors, ONGC, BPCL, JBM etc.
3. The Ministry of Skill Development and Entrepreneurship (MoSDE) has instituted the National Entrepreneurship Awards Scheme (NEAS) with IIT Delhi (through FITT), as one of its implementing partners to recognise the efforts and achievements of exceptional entrepreneurs and those individuals and organisations who are working in the field of entrepreneurship development.

4. Power System Operations Corporation Ltd (POSOCO), a government of India enterprise, in association with FITT has been implementing the POSOCO Power System Awards (PPSA) since 2013. PPSA is a part of this CSR initiative which aims to reward excellence in the broad area of power systems. During the 6<sup>th</sup> edition of this award, (PPSA - 2018), 15 awardees were shortlisted in Doctoral category and 15 candidates in the Master's category. The Doctoral awardees received a cash prize of Rs. 1,00,000/- each and the Masters' awardees received a cash prize of Rs. 40,000/- each.



Awardees of PPSA- 2018 were felicitated by Prof Ashok Gupta, Deputy Director(O), IIT Delhi on March 16, 2018

5. FITT has promoted the Women Entrepreneurship and Empowerment (WEE) program supported by the Department of Science and Technology (DST) at IIT Delhi. This program supports grant upto Rs. 5 lakhs. WEE classes are conducted during the weekends at IIT Delhi with the global industry experts mentoring the woman entrepreneurs. During the 2<sup>nd</sup> phase of this WEE program 10 women were shortlisted for grant-in-aid.
6. FITT is in association with Pfizer India, for implementation of the Pfizer – IIT Delhi Innovation and IP Program. This unique partnership model is designed to provide incubation support upto Rs. 50 lakhs to healthcare based innovators/startups and Rs. 3 lakhs for IP protection. Several innovators and start-ups have benefited from this program.
7. FITT in partnership with Samsung Research & Development Institute, Delhi had organised

'SMARTATHON 2017' on December 1, 2017 at IITD. This event was aimed at generating interest within the student community in cutting-edge technology domains such as Artificial Intelligence and Swarm



Winners of SMARTATHON 2017 were felicitated by Prof M Balakrishnan, Deputy Director, IIT Delhi, and senior officials from Samsung R&D Institute

Intelligence for Natural Language Processing. Students from different IITs and other top technical institutes across the country also participated in the event. The winning team members were awarded with *Samsung Galaxy Note 8*, *Samsung 43" LED Smart TV*, and *Samsung J7*.

8. The biannual FITT newsletters – FITT Forum and FITT Technopreneurship Bulletin serve as information diffusion channels addressing inter alia, contemporary technical issues, new developments and available opportunities for collaboration, and support for entrepreneurship. The information reaches a wide spectrum of several hundred industrial units, R&D organisations, government agencies, academic institutions and others.
9. FITT is registered as a CSR Implementing Agency Hub with National Foundation for Corporate Social Responsibility, IICA, under the ministry of Corporate Affairs.
10. A research park has been planned on the campus by IITD with FITT providing the anchor role in conceiving/enabling the creation of appropriate infrastructure and operationalising the system within a framework to be adopted by the institute.



## Methodised by FITT

- FITT along with SkyQuest Technologies Consulting Pvt Ltd conducted study and prepared a report for Department of Biotechnology, Ministry of Science and Technology, GoI regarding the Status of Technology Transfer Facilities in Public/Private Sector Academic/Research and other Institutions including Industry Associations and SMEs.



Action seminar on IP Management and Technology Transfer organised by FITT at IIT Delhi on August 2, 2017

- Several mentorship programs for start-ups were also organised during the FY 2017-18. Some of them are listed below:

Debjani Ghosh, President NASSCOM interacting with startups during her mentorship program on September 6, 2017 organised by FITT at Bharti School, IIT Delhi



Special mentorship session for Bio-tech start-ups was organised by FITT at IIT Delhi on June 2, 2017



Mr Ramesh Abhishek, Secretary, DIPP presided over the session on "Strengthening Entrepreneurship Ecosystem" on January 8, 2018 at IIT Delhi



## Visits & Lectures

- Some examples of Dr Wali's visits and lectures during the FY 2017-18 are mentioned below:
  - Keynote speaker for the session on "Startup Infrastructure in India" during the 4<sup>th</sup> India International MSME & Startup Expo 2017 on August 25, 2017
  - Lecture on "Creativity to Entrepreneurship" at JK Lakshmipat University, Jaipur on September 13, 2017
  - Lecture on "Innovation and Technology Transfer" at CSIR HRDC, Ghaziabad on January 20, 2018
  - Speaker at CSIR-IMTech Con 2017, Chandigarh on October 4, 2017
  - Dr Wali was a speaker at the Deshpande Gopalkrishnan Symposium, IIT Madras on "Innovation and Entrepreneurship" during January 28-29, 2018
  - He was a panelist for the session on "Innovation to Commercialisation" at TiECon at Chandigarh on March 9, 2018

## IP & Consulting

Scientific and technological advancement is an important catalytic factor in industrial development and economic progress. An indicator of such programs is the creation of intellectual property and the IPRs. The Institute encourages protection of intellectual assets to foster innovation and create opportunities for wealth creation. FITT facilitates and manages the Institute IPR activities. It receives information, carries out analysis and due diligence and processes the invention disclosures for formal registration as patents, designs etc. Bulk of actual filings, though are outsourced to the professional attorney firms. The list of 105 IPR applications filed during 2017-18 is given in Appendix-I (Page 17).



Dr Malathi Lakshmikumaran, during her IP awareness session on September 8, 2017 organised by FITT at IIT Delhi



IP Awareness lecture by Mr Amit Shukla, Consultant SIDBI, IIT Kanpur organised by FITT at IIT Delhi on November 27, 2017

FITT is mandated to transfer technologies developed at IITD for commercialisation. During 2017-18, 10 IP licenses were executed (as given in Appendix-II- Page 22).

However, FITT is working on a few more technologies for transfer.

It is an accepted fact that technology development and its subsequent transfer to industry from an academic institute are often best accomplished through pursuance of short to medium term problem solving investigative projects. Such projects help in establishing mutual confidence and working relationships. A lot of thrust has been put on such projects by IIT Delhi faculty and FITT has facilitated in their effective execution. This activity has been growing over the years. During the financial year 2017-18, 51 technology development/transfer projects worth Rs. 1207.84 lakhs have been contracted. Some of the development projects undertaken during 2017-18 are mentioned in Appendix III (Page 23).

## Innovation and Enterprise

- a. FITT is responsible for operating the Technology Business Incubators at the Institute Campuses.

The Technology Business Incubation Unit (TBIU) primarily aims to promote partnerships with new technology entrepreneurs and start-up companies. As part of the incubator program, subsidised modular space is provided to new entrepreneurs, first generation start-up companies or technology based organisations for setting up an office or work station or a prototype laboratory within the campus, with the purpose of:

- i) Promoting interaction with, and technology/expertise resourcing from the members of academic staff and research scholars of the Institute, and
- ii) Incubating novel technology and business ideas into viable commercial products or services.

Permitted activities in the TBIU include product development, product innovations, software testing simulation and prototyping, pilot experimentation, training and similar other technology related work, in which there exists homology with the Institute.

The Biotechnology Business Incubator Facility (BBIF) has also been established by FITT, with support from BIRAC facilitates specialised equipments, experimental facilities IP guidance, market linkages etc to the bio-tech start-ups.

FITT takes pride in offering to the budding techno-entrepreneurs an ambient ecosystem that nurtures new age businesses. Hand-holding, networking, managerial and material support etc are easily forthcoming for the truly innovative forays.

The administration and management of the incubation units is vested with FITT, yet, an institute level empowered committee (known as TBIU Board) overseas the program. The Board as on March 31, 2018, comprised of:

### **TBIU Board (as on 31<sup>st</sup> March, 2018)**

1. Prof V Ramgopal Rao, Director, IIT Delhi, Chairman
2. Prof A Gupta DD(O), IIT Delhi, Member
3. Prof M Balakrishnan, DD (S&P), IIT Delhi, Member
4. Prof BR Mehta, Dean (R&D), IITD, Member
5. Prof VK Agarwal, Dean (Infrastructure), IIT Delhi, Member
6. Sh Y Andlay, MD, Nucleus Software Pvt Ltd., Member
7. Sh HK Mittal, Scientist "G", & Head, NSTDEB, DST, Member
8. Dr S Bajaj, Founder & Director, Cygnus Hospitals, Member
9. Dr A Wali, MD, FITT, Convenor

Another high level committee, the Standing Screening Committee screens and evaluates the incubation proposals from innovators/start-ups for admission to the TBIU. This committee comprises both faculty scientists and industry experts to ensure due diligence of the technology business incubation proposals.

- b. The following start-ups (Involved/Faculty) have been resident at (TBIU) during FY 2017-18:

#### **1. Creditas Solutions Pvt Ltd**

(Dr S Hegde, AM)

The startup was incubated in the TBIU from February, 2015 to June 2017. This company is focused on developing an on-line platform for debt negotiation and settlements. It works on development of a portal which shall integrate debtor and creditors for recovery of dues/bad assets.

#### **2. Omnia Information Pvt Ltd**

(Prof Mausam, CSE)

An initiative taken by alumni of IIT Delhi, IIM A and NIT Bhopal the venture is working successfully in the area of big data analytics based affordable internet and information solutions. The startup aims to provide low-cost internet to consumers and actionable analytics to providers. It also aims to reduce the cost of network delivery through cloud- based, remotely manageable plug and play devices. The startup is resident in the TBIU since June, 2015.

#### **3. Sakosh Biotech Pvt Ltd**

(Prof TK Chaudhuri, KSBS)

The venture was incubated in BBIF, from February 2015 to May 2017. It proposes the development of lateral flow immunoassay based diagnostic rapid card tests for infectious disease. It plans to prepare all reagents in-house which shall help in expansion of product range.

#### **4. Cutting Edge Medical Devices Pvt Ltd**

(Prof S Anand, CBME)

This startup is working on portable urine protein analyser-SCINTILLA, a battery run device rechargeable with solar panel. The company was incubated in the BBIF from February, 2015 to February, 2018.

#### **5. Rapid Diagnosis of Bacterial gastroenteritis at resource poor setting**

(Prof V Perumal, KSBS and Prof R Elagovan, DBEB)

This proposal submitted by Prof V Perumal and Prof R Elangovan has been sanctioned BIG grant and was incubated in the BBIF from March, 2015 to May, 2017.



#### **6. Valetude Primus Healthcare Pvt Ltd**

(Prof R Elangovan, DBEB)

The startup which is incubated at the BBIF since January, 2016 is working in the area of developing a portable device (iMC2) for rapid and early detection of infectious diseases (typhoid). The startup has been awarded with the Pfizer – IIT Delhi Innovation and IP Program.

#### **7. Botlab Corporation Pvt Ltd**

(Prof R Chatterjee, Physics)

Botlab is building unmanned aerial vehicles for aerial inspection and temperature profiling. The company is resident in the TBIU since July, 2016.

#### **8. Vizara Technologies Pvt Ltd**

(Prof S Chaudhury, EE)

Vizara Technologies is incubated in the TBIU since October, 2016. The company is providing knowledge-based virtual reality and augmented reality solutions in various domains such as heritage preservation, tourism, real-estate, security and smart city governance.

#### **9. Vecmocon Technologies Pvt Ltd**

(Prof AK Jain, EE)

The startup is engaged in the design and development of Electric Smart Vehicles. The company is incubated at the TBIU since August, 2016.

#### **10. Brownbag Corporate & Social Sustainability Pvt Ltd**

(Prof SK Mishra, CAS; Prof S Sahany, CAS; Prof V Pant, CAS)

The startup is incubated in the TBIU since January 2017, the company is working towards finding climate solutions for sustainable development.

#### **11. Luminasic Pvt Ltd**

(Prof M Sarkar, EE)

Luminasic is into developing of ASICs for CMOS image sensors. The company is incubated in the TBIU since January, 2017.

#### **12. Testright Nanosystems Pvt Ltd**

(Prof J Joseph, Physics; Prof SR Kale, Physics)

Testright Nanosystems is focused in the development of high performance analytical

spectrometer. The startup is incubated at the TBIU since February, 2017.

#### **13. Aquasense Global Pvt Ltd**

(Prof AK Gosain, CE)

The startup is incubated at the TBIU since February, 2017 under the mentorship of Prof Gosain. Aquasense is focused in the area of finding pragmatic solution for water measuring devices.

#### **14. Nanoclean Global Pvt Ltd**

(Prof AK Agarwal, TT; Prof M Jassal, TT)

The startup is incubated at the TBIU since February, 2017. The startup has successfully developed a Nasofilter, a nano-respiratory filter which gives protection against the finest particulate pollutants in the air for at least eight hours and hence reduces the risk of respiratory diseases.

#### **15. Cerelia Nutritech Pvt Ltd**

(Prof V Koul, CBME)

The startup is incubated as a part of the Pfizer – IIT Delhi Innovation & IP program at the BBIF since May, 2017. Cerelia is tackling maternal malnutrition through frugal innovation.

#### **16. Virmat Pvt Ltd**

(Prof D Joshi, CBME)

Virmat is incubated as part of the Pfizer – IIT Delhi Innovation & IP program since May 2017. The startup is developing physical simulator for Endoscopic Third Ventriculostomy (ETV) and ventricular shunt placement.

#### **17. Clensta International**

(Prof AS Rathore, CHEME)

The startup which is incubated since May, 2017 address accessible hygiene concerns whilst contributing in resolving global water crisis as well.

#### **18. Phase Laboratories Pvt Ltd**

(Prof K Khare, Physics)

Phase lab has been incubating at the TBIU since July 2017 and is working on diagnostic application development using novel High Resolution Digital Holographic (DHM) technology.

### 19. Ariant Technologies and Research Pvt Ltd

(Prof S Jha, ME)

This startup is working on electric fuzes for ammunition to be used by Army, Navy and Ordnance factories. The startup is incubated in TBIU since November, 2017.

### 20. Kriya Labs Pvt Ltd

(Prof N Singh, CBME)

This startup is incubated in the TBIU since December 2017. Kriya Labs is developing products and processes to produce affordable, high-quality and eco-friendly value added products from waste natural materials/fibres.

### 21. Flexmotiv Technologies Pvt Ltd

(Prof JP Khatait, ME)

The startups is incubated in the TBIU since March, 2018 and is developing Flexcrutch-a novel under-arm axillary crutch.

### 22. Floly Pvt Ltd

(Prof S Kumar, Physics)

Floly is incubated at Sonipat Residential Incubator (SRI) since March, 2018 and developing FOOZx - a peer to peer advertising platform.

### 23. Matisoft Cyber Security Labs Pvt Ltd

(Prof B Lall, EE)

This startup under the mentorship of Prof B Lall, Dept of Electrical Engineering is into developing intelligent security software. Matisoft is incubated at the SRI since March, 2018.

c. Towards leveraging the Institute's forward looking agenda, FITT has adopted several programs to enrich the entrepreneurial ecosystem and technology commercialisation efforts at the Institute. Seed support in the broad area of IT is also forthcoming under the Department of Information Technology (DIT) program - "Technology Incubation and Development of Entrepreneurs" (TIDE) scheme in operation with FITT. Similarly, the MSME scheme "Entrepreneurial and Managerial Development of SMEs through Incubators" has been dovetailed with the incubation program at the Institute to promote emerging technological and knowledge based innovative ventures that seek the nurturing of ideas from professionals beyond the traditional activities of MSMEs. FITT is also a beneficiary of the grant assistance of Rs. 1crore from the Technology Development Board (TDB) for the specific purpose of providing early stage financial support to start-up units incubated at TBIU. Towards accomplishment of the program objectives, FITT organised several awareness workshops disseminated promotional material and processed application proposals.

FITT and NS Raghavan Centre for Entrepreneurial Learning (NSRCEL), IIM Bangalore has instituted a joint mentoring program for start-ups at their respective incubators. Both the parties have agreed that a team of mentors from the alumni community of both the institutes will help in mentoring start-ups in the domains of technology and management.



FITT, IIT Delhi signed MOU with NSRCEL, IIM Bangalore to provide joint mentorship to start-ups on January 19, 2018



- d. The Department of Biotechnology, Government of India has selected FITT as one of the five BIG Partners in the country under a novel program called Biotechnology Ignition Grant (BIG) Scheme to support start-ups and scientist entrepreneurs from research institutions towards commercialisation of research resultants by providing early stage grants for development and maturation of their discoveries/inventions into marketable products. The BIG scheme is designed to establish and validate proof-of-concept and enable creation of spin-offs. During the last financial year the 11<sup>th</sup> call for proposal commenced from July 1, 2017 and ended on August 16, 2017 and the 12<sup>th</sup> call started from January 1, 2018 and closed on February 15, 2018.
- e. The BioNest, program of BIRAC, which is under implementation at FITT, will provide seed grant upto Rs. 30 lakhs to the biotech start-ups.
- f. Under the NIDHI-Seed Support System (NIDHI-SSS) program of DST, introduced in the year 2017, FITT provides funding to incubated start-ups upto Rs. 1 crore. So far 6 incubatees have been supported by seed funding to the tune of Rs. 2.80cr.
- g. The Deferred Placement Policy (DPP) offered by IIT Delhi is being implemented by FITT for students who opt out of placement in order to inculcate their start-up idea. A student must opt for deferred placement in the final semester of the pre-final year and is eligible to sit for placement after two years if their start-up is not successful. Selected innovative ideas are eligible for incubation at the TBIU. In the year 2017-18, 6 applicants have been shortlisted under DPP.

### Professional Development Programs

Consistent with its objectives towards knowledge transfer, a program called “Professional Candidate Registration” is under operation by FITT towards outreaching the academic options amongst the targeted professional segments in industry, research and academia. Through this program suitably qualified candidates can undertake a single professional course module of relevance at IIT Delhi and thus enhance their knowledge and skill set. A total of 58 candidates

participated in this program during I & II Semester of 2017-18. This is a program that promises good capacity building potential in the targeted Delhi NCR region.

### Corporate Membership

The key endeavour of FITT is to have a formal and effective relationship with its industry partners on a mutually supportive basis. As a mechanism to formalise this relationship, FITT offers corporate membership to industry, industry associations and industrial research institutions on the payment of nominal annual fees. Corporate members receive information about Institute programs and other opportunities for collaboration regularly. In addition, they enjoy a variety of complimentary services and opportunities for partnership. Appendix-IV (Page 26) lists a few of our corporate members.

### Global Internship Program

Since 2012, FITT has been offering a Global Internship Program in Engineering Design and Innovation to students and professionally qualified engineers. The program runs throughout the year and provides training in project planning, requirements analysis, specification generation, design iteration management, team work and ethics, behaviour management, team building, group etiquette and communication skills. Apart from a full set of technology modules, it also uses specially designed training modules in ethics, history through heritage sensitisation/heritage walks and lessons from mythology to teach culturally-conscious and effective engineering practices.

### FITT Awards

Foundation for Innovation and Technology Transfer (FITT) has instituted two awards, at IIT Delhi one each for PhD and MTech/MS thesis adjudged as the best Industry Relevant Projects.

### Recognition

FITT is recognised (by DSIR) as Scientific and Industrial Research Organisation (SIRO). As a SIRO, FITT is eligible for full custom duty exemption for import of capital goods, raw materials and technology know-how that are required for execution of R&D programs. FITT also functions as the recognised Outreach Centre of DSIR for its innovative programs.

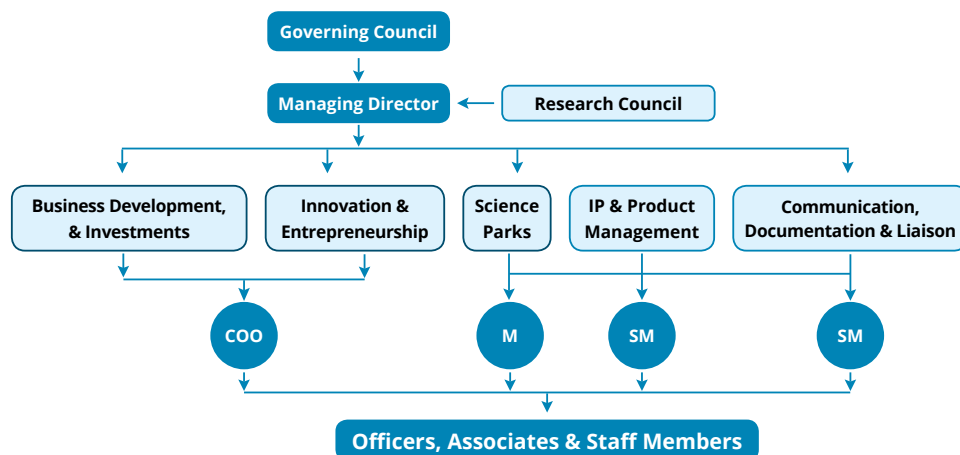


# Organisation

## Organisation Structure

The Management of FITT is vested with a full time Managing Director. The policy guidelines for operations are provided and overall control is exercised by the FITT Governing Council. The broad organisation structure is given in the organisational chart in this section.

### FITT Organisation Chart



**COO** : Chief Operating Officer

**SM** : Senior Manager

**M** : Manager

## Governing Council

The Governing Council of FITT comprises representatives from Industry Associations/Industries, nominees of IIT Delhi Senate and Board of Governors. In addition, there is one nominee of the Ministry of Human Resources Development. The corporate members of FITT elect one member each from three categories (A, B & C) respectively. The Director of IIT Delhi is the ex-officio Chairman of the FITT Governing Council, and the Dean, IRD, IIT Delhi is an ex-officio member. The Managing Director is the ex-officio Member-Secretary.

### Governing Council (as on 31<sup>st</sup> March, 2018)

**Prof V Ramgopal Rao**

Director, IITD, Chairman (Ex-officio)

<b>Prof SK Sopory</b> Member, BOG, IITD, Member	<b>Prof BR Mehta</b> Dean (R&D), IITD, Member (Ex-officio)
<b>Prof PVM Rao</b> ME, IITD, Member	<b>Prof S Mukherjee</b> ME, IITD, Member
<b>Prof AN Bhaskarwar</b> CHEME, IITD, Member	<b>Mr M Kumar</b> Head (Ent. and Inno.), Tata Trusts, Member
<b>Mr N Kohli</b> President, A.S.K.M.I., Member	<b>Ms D Ghosh</b> Yes Bank, Member
<b>Mr N Arya</b> ED, JBM Group, Member	<b>Mr S Gande</b> Executive Vice President, Axiscades Engineering Technologies, Member
<b>Mr KK Dhar</b> Director, Waterneer Biokube Technologies, Member	<b>Mr J Bihani</b> MD, Bihani Mfg Co Pvt Ltd, Member
<b>Dr A Wali</b> MD, FITT, Member-Secretary (Ex-officio)	

### Research Council (as on 31<sup>st</sup> March, 2018)

**Dr A Wali**

MD, FITT, Chairman

<b>Prof R Khosa</b> CE, IITD	<b>Prof AN Bhaskarwar</b> CHEME, IITD
<b>Prof AK Ghosh</b> MSE, IITD	<b>Prof K Khare</b> PHY, IITD
<b>Prof A Kumar</b> CARE, IITD	<b>Dr K Saha</b> CTO, Samsung Research Institute
<b>Prof AK Gosain</b> CE, IITD	<b>Mr N Kohli</b> President, ASKMI
<b>Mr S Banerjee</b> MD, UOP	<b>Mr D Sekhon</b> MD, Kritikal Solutions
<b>Mr A Das</b> Executive Director, CII	<b>Mr N Saxena</b> Deputy Secretary General, FICCI
<b>President, IITD Alumni Association</b>	<b>Secretary, IITD Alumni Association</b>

**Mr KK Roy**  
COO, FITT Member- Secretary



# Financial Highlights

# Agarwal Sumit & Associates

CHARTERED ACCOUNTANTS

## FORM NO. 10B

[See rule 17B]

### Audit report under Section 12A(b) of the Income tax act in the case of charitable or religious trust or institutions

I have examined the balance Sheet of **M/s Foundation For Innovation and Technology Transfer, AAAJF0001G [name and PAN of the trust or institution]** as at **March 3, 2018** and the Profit and loss account for the year ended on that date which are in agreement with books of account maintained by the said trust or institution.

I have obtained all the information and explanations, which to the best of my knowledge and belief were necessary for the purposes of audit. In my opinion, proper books of accounts have been kept by the head office and branches of the above named trust visited by me so far as appear from my examinations of the books and proper returns adequate for the purposes of audit have been received from branches not visited by me, subject to the comments given below:

In my opinion and to the best of my information, and according to information given to me, the said accounts give a true and fair view:

- (i) In the case of the balance sheet of the state of affair of the above named trust as at 31/03/2018 and
- (ii) In the case of the profit and loss account, of the profit or loss of its accounting year ending on 31/03/2018

The prescribed particulars are annexed here to.

*for* **AGARWAL SUMIT & ASSOCIATES**  
Chartered Accountants

**SUMIT AGARWAL**

Membership No. : 529357

FRN : 0028240

1505, 3, WAZIR NAGAR KOTLA

MUBARAKPUR

NEW DELHI-110003 DELHI

Date : 28/09/2018

Place : New Delhi

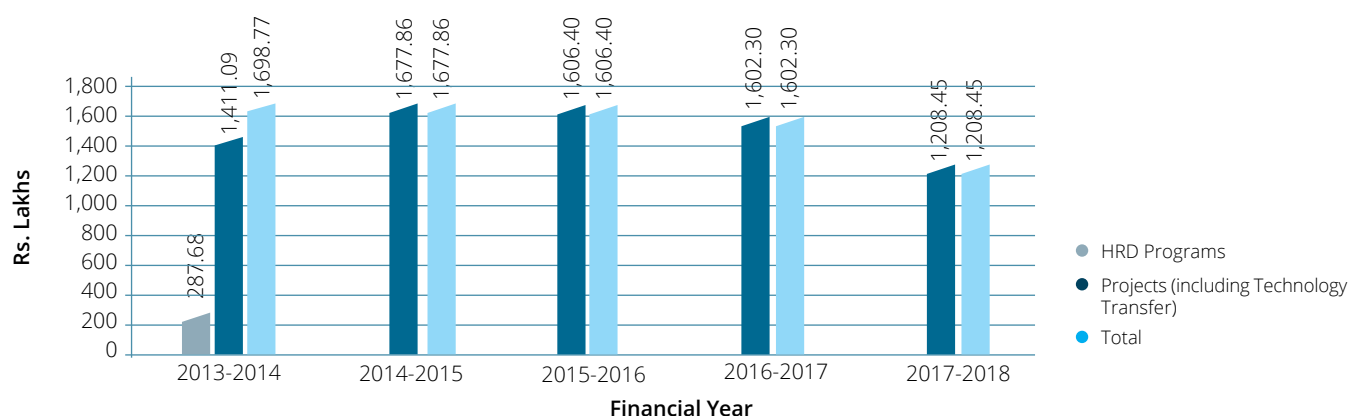




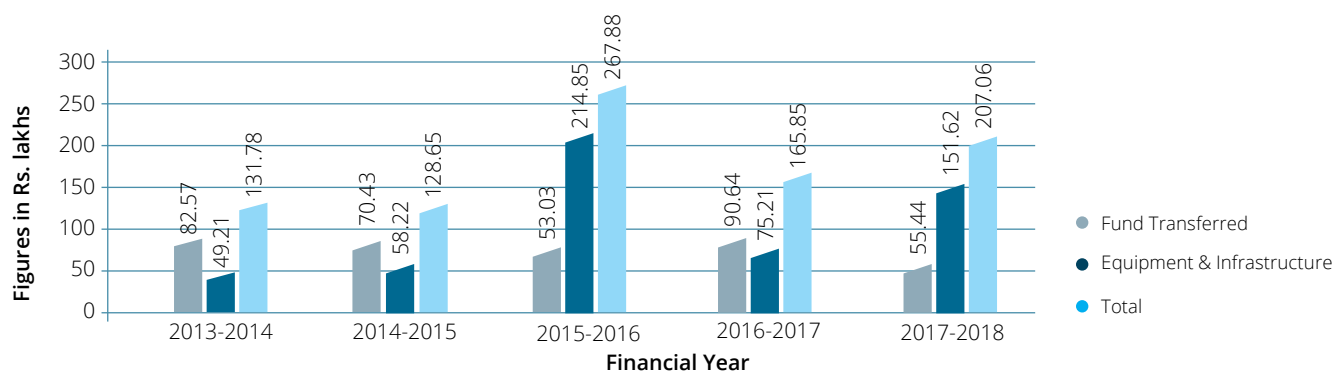
(Figures in Lakhs of Rupees)

	2013-14	2014-15	2015-16	2016-17	2017-18
<b>Investments</b>					
Bank Deposits and Bonds	3,403.50	3,603.50	3,621.50	4,241.50	4,053.00
<b>Earnings</b>					
(i) Interest	281.21	345.86	246.97	431.12	294.17
(ii) Projects/Other Activities	87.63	82.45	107.61	116.28	175.75
(iii) Corporate Membership Fees	2.30	2.04	5.10	5.55	2.01
<b>Expenditures</b>					
(i) Capital	1.84	1.59	0.50	0.14	3.90
(ii) Operational/Promotional/ Administrative	147.33	167.40	168.37	185.89	257.61
(iii) Rent for Office Premises (Payable to IIT Delhi)	5.27	5.27	2.63	7.90	5.40
<b>Operational Growth (%)</b>					
Fund for Transfer to IIT Delhi (Project Activities)	82.57	70.43	53.03	90.64	55.44
Assets Generated for IIT Delhi out of project activities administered by FITT	49.21	58.22	214.85	75.21	151.62
Value of Projects Contracted/ Other Activities at FITT	1,698.77	1,677.86	1,606.40	1,602.30	1,208.00

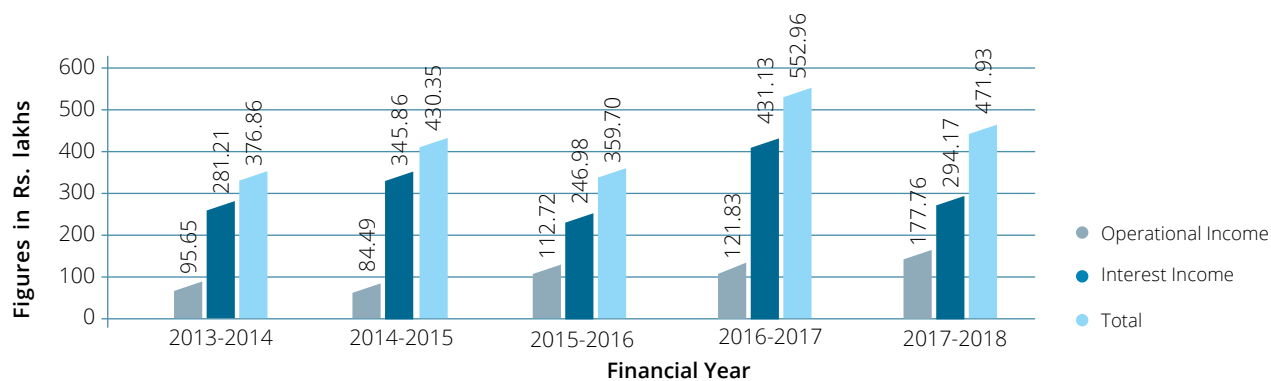
## Value Of Major Activities Undertaken By FITT



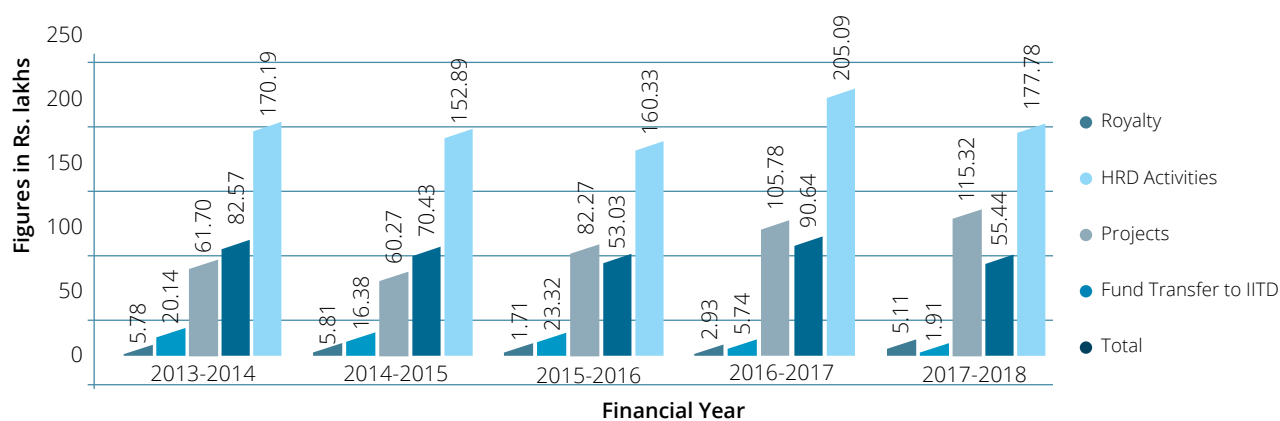
## Assets Generated For IIT Delhi



## Income Profile Of FITT



## Resource Generation For FITT & IIT Delhi



## List of IPR Applications Filed During the Financial Year 2017-18

S No	Title	PI/Dept
1	Development of infection resistant nano-functional polyurethane material and a product thereof	Prof B Gupta, TT
2	Magnetorheological finishing tool with electromagnet cooling	Prof S Jha, ME
3	Method for management of two secondary underlay multiuser downlink networks	Prof S Prakriya, EE
4	Facile method for controlled pore filling	Prof V Dutta, CES
5	Smart Case	Prof S Mukherjee, ME
6	System for supplying polishing fluid	Prof S Jha, ME
7	Formation of thin film like assembly by solvent non-evaporative method using centrifuge	Prof S Basu, CHEME
8	Hybrid Microgrid Synchronisation and Desynchronisation with Utility Grid and Diesel Generator	Prof B Singh, EE
9	A system for controlling speed of a switched reluctance motor	Prof B Singh, EE
10	Position estimation and starting of a sensorless brushless DC motor	Prof AK Jain, EE
11	A system-on-chip with in-built mechanism and method for identification of faulty components in the system-on-chip	Prof SR Sarangi, CSE
12	Non-mechanical tracking solar concentrator	Prof DS Mehta, PHY
13	Anode structure for optoelectronic devices	Prof VK Komarala, CES
14	Swirling device for reduction of erosive wear in pneumatic conveying belts	Prof VK Agarwal, ITMMEC
15	Center Of Excellence Biopharmaceutical Technology	Prof AS Rathore, CHEME
16	Infinity Helix (logo)	Prof AS Rathore, CHEME
17	Nano filtration assisted process for ethanol fermentation of lignocellulosic hydrolysate	Prof GP Agarwal, DBEB
18	Process and composition imparting multifunctional properties to fabrics	Prof S Mukhopadhyay, TT
19	Bioactive and insect repellent polyethylene films and filaments based on Neem oil encapsulated Halloysite Nanotubes (HNT)	Prof M Joshi, TT
20	Microfluidic chip for neurotransmitter detection	Prof SK JHA, CBME

Continued on next page



Continued from previous page

S No	Title	PI/Dept
21	Always-taut cable driven parallel manipulator and a vehicle simulator based thereon	Prof S Mukherjee, ME
22	An algorithm of controlling closed loop rehabilitation devices	Prof A Mehndiratta, CBME
23	Nasal filter with nanofibres and a process thereof	Prof AK Agarwal, TT
24	Ionic liquid based support for manufacture of peptides	Prof S Upadhyayula, CHEME
25	A process for preparation of a peptide	Prof S Upadhyayula, CHEME
26	Compact coiled flow inverters as in-line mixers	Prof KDP Nigam, CHEME
27	A single stage solar PV array fed water pumping system	Prof B Singh, EE
28	Multi-purpose charging station for E-Rickshaws in rural areas	Prof B Singh, EE
29	A flame retardant composition and applications thereof	Prof W Ali, TT
30	3D bioprinted scar tissue model	Prof S Ghosh, TT
31	Polypropylene composites and method for preparation thereof	Prof AK Ghosh, MSE
32	Biosensing Devices	Prof MJ Kuma, EE
33	A loop power flow controller for DC distribution networks	Prof S Mishra, EE
34	Molecularly modified schottky barrier diode	Prof R Singh, PHY
35	Neural network classifier	Prof Jayadeva, EE
36	A single sensor based Maximum Power Point Tracking (MPPT) technique for battery charging	Prof B Singh, EE
37	Process and system for nano-finishing a surface	Prof S Jha, ME
38	Bending of orthopaedic plates	Prof S Jha, ME
39	Fifth-order generalised integrator based reduced sensor topology for three-phase two-stage grid integrated solar photovoltaic system	Prof B Singh, EE
40	Process to produce $\delta$ -decalactone by integrated fermentation and catalytic processing of biomass	Prof MA Haider, CHEME
41	Exoskeleton device for upper limb rehabilitation	Prof A Mehndiratta, CBME

Continued on next page



Continued from previous page

S No	Title	PI/Dept
42	Tactile feedback in laparoscopes	Prof S Mukherjee, ME
43	Capillary electrophoresis microchip for beer and wine quality testing	Prof SK Jha, CBME
44	A photo-voltaic fed single input dual output DC/DC converter system for driving load	Prof B Singh, EE
45	Synergistic combinations of natural antimicrobials encapsulated in the porous PLGA particles and their application in food preservation	Prof S Saha, MSE
46	Methods for enhanced expression of human serum albumin	Prof S Mishra, DBEB
47	Manta ray interface for neonates	Prof PVM Rao, ME
48	Diagnosis of subclinical mastitis in dairy animals	Prof S Kar, EE
49	A system for obtaining multi-directional view images	Prof SM Ishtiaque, TT
50	A biocompatible triblock copolymer and methods thereof	Prof V Koul, CBME
51	Molybdenum trioxide and nano silicon chips for acetone detection	Prof S Dhanekar, CARE
52	Thin Capacitively-Coupled Thyristor (TCCT) for ultra-high sensitivity biosensing applications	Prof MJ Kumar, EE
53	Process for Shikimic Acid production	Prof AK Srivastava, DBEB
54	Magnetic enrichment of magnetically marked analytes	Prof R Elangovan, DBEB
55	Co-operative Movement for Photovoltaic Irrigation (CMPVI) based Irrigation System	Prof S Mishra, EE
56	Bipolar impact ionisation mosfet (I-MOS)	Prof MJ Kumar, EE
57	Method, system and apparatus for multilingual and multimodal keyword search in a mixlingual corpus	Prof A Kumar, CARE
58	A process for preparing three dimensional porous scaffold and the three dimensional porous scaffold formed thereof	Prof RK Srivastava, TT
59	A novel green micro-emulsion for controlling fungal wilt diseases	Prof S Sharma, CRDT
60	Polypeptide sequency and composition thereof	Prof G Goel, CHEME
61	Alveolar distraction device	Prof D Kalyanasundaram, CBME
62	A recombinant vector comprising a fusion DNA for cell surface display, and uses thereof	Prof P Srivastava, DBEB

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Continued from previous page

S No	Title	PI/Dept
63	3D Neuron Model	Prof M Suri, EE
64	Flexible and stretchable conductors and method of fabrication thereof	Prof AK Agrawal, TT
65	Magnetic enrichment of magnetically marked analytes	Prof V Perumal, KSBS
66	A method of file compression and decompression using polar codes	Prof M Bhatnagar, EE
67	Cantilever sensor device based on suspended metal oxide and silicon nanostructure and fabrication method thereof	Prof S Dhanekar, CARE
68	Robotic apparatus/manipulator with Two Degrees of Freedom (RCM point) for carrying out invasive surgery, actuated using Capstan Drivers	Prof JP Khatait, ME
69	Device for oil spill control	Prof AN Bhaswarkar, CHEM
70	A novel device for measuring pressure pulses based on Applanation Tonometry	Prof S Roy, AM
71	A combination lock with a limited trial and resetting mechanism	Prof S Aravindan, ME
72	Air Purifier	Prof SK Sinha, ME
73	Agrobacterium derived cell penetrating peptides as nanocarriers	Prof A Chugh, KSBS
74	A power distribution system for supply of uninterrupted power	Prof S Mishra, EE
75	ePrasav Graph: Smart phone based labor monitoring	Prof K Paul, CSE
76	Physical layer security in a wireless communication channel	Prof R Bose, EE
77	A process of preparation of ordered cell metal foam	Prof PM Pandey, ME
78	A process of manufacturing of a thermally bonded core sheath structured hybrid yarn	Prof R Alagirusamy, TT
79	A system and method for ultrasonic assisted magnetic abrasive finishing with pulsating current	Prof PM Pandey, ME
80	A three phase grid synchronised microgrid system	Prof B Singh, EE
81	A self-configurable surgical armrest	Prof S Mukherjee, ME
82	Liquid distributors for three phase applications of monolith catalysts and substrate	Prof S Roy, CHEME
83	Fire retardant nano-composite composition	Prof M Joshi, TT
84	A process for producing super clean coal	Prof DK Sharma, CES

Continued on next page



Continued from previous page

S No	Title	PI/Dept
85	All-optically pumped semiconductor optical amplified	Prof MR Shenoy, PHY
86	Hydrogen fueled multi-cylinder spark ignition engine generator for electrical power generation	Prof KA Subramanian, CES
87	Organelle - Targeting Nanocarrier	Prof A Chugh, KSBS
88	A formulation for stabilizing bio-therapeutics	Prof AS Rathore, CHEME
89	A two-step process for extraction of essential oil and curcumin from turmeric rhizomes	Prof SN Naik, CRDT
90	Redox flow battery system with improved energy efficiency and method of operating thereof	Prof A Verma, CHEME
91	Nanocomposite photocatalysts	Prof N Khare, PHY
92	Magnetic Capturing of rare cells	Prof R Elangovan, DBEB
93	Recyclable smart mesh for on demand separation of oily water	Prof JP Singh, PHY
94	A system and method for control and ripple reduction in SRIM based DFIG-DC Generation System.	Prof AK Jain, EE
95	A nano-adsorbent for removal of lanthanide ions from water and associated methods.	Prof AK Ganguly, CHY
96	Optimisation of supplementary battery-assisted energy harvesting nodes	Prof S Prakriya, EE
97	Process for enhanced production of recombinant human serum albumin in E.Coli through Chaperone assistance	Prof TK Chaudhury, KSBS
98	Larvae and egg detector	Prof R Bose, EE
99	3D printed construct for correcting bone defects and stem cell delivery	Prof S Ghosh, TT
100	Process for conversion of Sulfur Trioxide and Hydrogen production	Prof S Upadhyayula, CHEME
101	Catalyst composition for conversion of Sulfur Trioxide and Hydrogen production	Prof S Upadhyayula, CHEME
102	A Medicament for the treatment of diseases by Biofilm forming microorganisms	Prof SE Hasnain, KSBS
103	Apparatus and process for fabricating natural fibre based flexible thermally bonded yarn for thermoplastic composite reinforcement	Prof R Alagirusamy, TT
104	Agrobacterium derived cell penetrating peptides as nanocarriers	Prof A Chugh, KSBS
105	A portable and affordable scanning stand for multi-utility applications	Prof M Balakrishnan, CSE



## IP Licenses Executed during the Financial Year 2017-18

S No	Title	PI	Dept/ Centre	Client
1	A device and a process for conversion of biogas to a fuel gas with enhanced thermal efficiency	Prof VK Vijay	CRDT	SS Gas Lab Asia Pvt Ltd
2	Magnetic capturing rare cell	Prof R Elangovan	DBEB	Valetude Primus Healthcare Pvt Ltd
3	Evanescent wave based illumination	Prof R Elangovan	DBEB	Valetude Primus Healthcare Pvt Ltd
4	Magnetic enrichment of magnetically marked cells	Prof R Elangovan	DBEB	Valetude Primus Healthcare Pvt Ltd
5	Odour prevention device	Prof VM Chariar	CRDT	Ekam Eco Solutions Pvt Ltd
6	A composition for enhancement of pathogenicity of paecilomyces lilacinus	Prof S Sharma	CRDT	Care Pro Bioscience Pvt Ltd
7	A biopesticide for termite control	Prof S Sharma	CRDT	Care Pro Bioscience Pvt Ltd
8	A process for generating magnetically controlled ball end smart abrasive laden shape for finishing 3D intricate shaped surface	Prof S Jha	ME	NanoX Precision Machine Pvt Ltd
9	Protein stabilizer and activity enhancer	Prof B Kundu	KSBS	Prof B Kundu
10	Audio tactile graphic	Prof M Balakrishnan	CSE	Anaavaran Tech Pvt Ltd



## Select Development/Investigative Projects Undertaken During the Financial Year 2017-18

S No	Title	PI	Dept/ Centre	Client
1	Feasibility study of monolith reactor technology for process applications	Prof S Roy	CHEME	Corning Incorporated
2	Microemulsion fuel towards sustainable energy	Prof AN Bhaskarwar	CHEME	Department of Science and Technology (DST)
3	High power phase shifter for airborne IFF applications	Prof SK Koul	CARE	LRDE CV Raman Nagar
4	Conformal phased array antenna for airborne IFF applications	Prof SK Koul	CARE	LRDE CV Raman Nagar
5	RP- measurement on chip inductor and development of equivalent circuit	Prof SK Koul	CARE	JP Institute of Technology
6	Air pollution status for north India cities	Prof S Dey	CAS	Centre for Environment Energy Development
7	Investigation on strength loss of high tenacity polyethylene tape yarn in twisted configuration and 3 strand code	Prof R Chattopadhyay	TT	Reliance Industries Ltd
8	Face recognition tool	Prof B Lall	EE	Centre for Development of Telematics (C-DOT)
9	Acoustic and structural analysis, design and detailing of a noise barrier boundary wall for Indira Gandhi International Airport (IGI), New Delhi	Prof V Matsagar	CE	Delhi International Airport Limited (DIA)
10	Browning and odor prevention in biofillers using sacrificial compound	Prof S Saha	CPSE	Lafiny Technologies Pvt Ltd, Karnataka
11	Use of multivariate data analysis for process monitoring and improvements	Prof AS Rathore	CHEME	Jonhson & Johnson Pvt Ltd
12	Identification of chemical nature of hard sulfur and their source in Insoluble sulphur	Prof R Khanna	CHEME	Oriental Carbon & Chemicals Ltd
13	Research project- "Improving operational efficiency of Bus systems and addressing data gaps in vehicular emissions management"	Prof G Tiwari	TRIPP	Shakti Sustainable Energy Foundation
14	Collaborative research project- "Performance-based seismic design guideline for buildings isolated with cost-effective FRP-based rubber bearings"	Prof V Matsagar	CE	Shastri Institutional Collaborative Research Grant (SICRC)
15	CP-"Process audit of 45 MGD STP Kondli"	Prof VK Vijay	CRDT	Delhi Jal Board
16	Technology Licensing of - "Odorless urinal technology"	Prof VM Chariar	CRDT	Ekam Eco Solutions Pvt Ltd

S No	Title	PI	Dept/ Centre	Client
17	Towards robust audio zooming system for smartphone	Prof L Kumar	EE	Samsung India Electronics Pvt Ltd
18	Swarm intelligence based attack detection in IoT environment	Prof R Bose	EE	Samsung India Electronics Pvt Ltd
19	Illumination of bank's heritage building located at Chandani Chowk, Delhi	Prof M Sarkar	EE	State Bank of India
20	Hydrogen storage using colloidal gas aphrons (CGAs) & CGAs-loaded with metal hydrides	Prof AN Bhaskarwar	CHEME	ONGC Energy Centre
21	Development of a numerical model for the determination of mould thermal stresses and distortion	Prof P Talukdar	ME	R&D Tata Steel Ltd
22	Consulting service to audit the implementation by the states of the directions issued by the Supreme Court Committee on road safety (Group 2 & Group 4)	Prof G Tiwari	TRIPP	DIMTS
23	Development of high performance controller for EV Moto	Prof AK Jain	EE	Creative Electronix
24	Development of a numerical model for the determination of mould thermal stresses and distortion	Prof P Talukdar	ME	R&D Tata Steel Ltd
25	A study of Assistive Technology (AT) related to visual disabilities in India: challenges, missing links and way forward	Prof PVM Rao	IDDC	WHO
26	Social Innovation for women entrepreneurship	Prof J Kumar	IDDC	UNDP
27	Design of evaporative condensers and other improvements related to heat transfer	Prof PVM Subbarao	ME	OMEGA ICEHILL Pvt Ltd
28	Advice to Pashupati Extrusions Pvt Ltd with respect to manufacturing of PET/ Polyester chips from PET waste/scrap by glycolysis process	Prof R Khanna	CHEME	Pashupati Extrusions Pvt Ltd
29	Consultancy for specification and scope definition of following (A) RADWIN Base Station/Subscriber Unit and (B) Multiplexer Acteli	Prof B Lall	EE	Brightstar Telecommunication India Ltd
30	Implementation of system architecture of Visible Light Communication – PAN to facilitate multi-user access and mobility	Prof B Lall	EE	Velmenni Research & Development Pvt Ltd
31	Automating therapy for children diagnosed with Autism Spectrum Disorder	Prof AP Pratosh	EE	SM Learning Skills for Special Needs Pvt Ltd
32	Correlation between sealability and deformation of an elastomeric seal	Prof S Roy	AM	Schlumberger India Technology Centre Pvt Ltd
33	Determination of the power source in home appliances	Prof AK Jain	EE	LG Soft India Pvt Ltd



## Select Investigative Projects Involving Foreign Contribution During the Financial Year 2017-18

S No	Title	PI	Dept/ Centre	Client
1	Development and commercialisation of biotech therapeutic products	Prof AS Rathore	CHEME	Biocon SA, Switzerland
2	Low carbon cement – Phase-II	Prof S Bishnoi	CE	Swiss Agency for Development and Cooperation, Switzerland
3	Study of community design for traffic safety in India	Prof G Tiwari	TRIPP	International Association of Traffic and Safety Sciences, Japan
4	Organisation of Workshop on “Closed loop green technologies for rural communities”	Prof VK Vijay	CRDT	University College London, UK
5	Research Project- “Integrated Health, Education and Environmental (HEE) intervention to optimise infant Feeding through schools and Anganwadi network in India”	Prof VK Vijay	CRDT	University College London, UK
6	Feasibility/PoC study using neuromorphic hardware	Prof M Suri	EE	Tradeson General Trading LLC, Dubai
7	Application of ALD coating of APIs and lyophilised biotherapeutic	Prof AS Rathore	CHEME	Applied Materials Inc, USA
8	Neuromorphic PoC Study	Prof M Suri	EE	Fiber One Asia Pte Ltd, Singapore
9	Study of folding and misfolding/aggregation of TGFβ on membrane surfaces	Prof S Deep	CHY	AMT Inc, USA
10	Algorithmic framework for MEMS sensor fusion applications- Phase-4	Prof A Kumar	CARE	ST Microelectronics, USA
11	Onsite technical feasibility of BVPC solar cells, South Korea	Prof V Dutta	CES	Euro Alliance SA, Switzerland

### Events at FITT



November 1, 2017: UK-India roundtable discussion on innovation campuses, science parks and incubators organised by FITT



November 6, 2017: Workshop on “Engineering healthcare through venture development & commercialisation” organised by FITT in association with SamCircle

## A few of our Corporate Members includes:

- Autolek
- BSES Yamuna Power
- Dabur India
- SRF
- Havells India
- JBM Group
- Maruti Suzuki India
- Munjal Showa
- Prayag Polytech
- SP Singla Constructions
- Sona Koyo Steering
- Trivitron Healthcare
- Vardhman Textile
- Bihani Manufacturing
- Ornate Solar
- Victor Forgings
- Wonder Polymers
- Fresenius Kabi Oncology
- Allied Industries
- Bonanza Consultants
- C3i Consultants India
- Campusknot
- Faros Simulation Systems
- Indore Colour Organics
- JLJ Financial & Management
- Kritikal Solutions
- Lakshmikumaran & Sridharan
- Mbit Computraining
- Naga Fragrance
- New Life Pharmaceuticals
- Shubhkarma Udyog
- Dabur India Ltd
- Srisol
- Sri Sarvana Fabs
- Maan Infrastructure
- Edge Motion Controls
- Cosmos Advanced Diagnostics
- Pluss Advanced Technologies
- Napino Auto and Electronics
- Applied Research International
- Academy of Industrial Management
- Security Printing and Minting Corporation of India
- Waterneer Biokube Technologies
- UFLEX



23<sup>rd</sup> AGM of FITT, presided by Prof V Ramgopal Rao, Director IIT Delhi was held at IITD on December 20, 2017

### Abbreviations

AM : Department of Applied Mechanics	CHEME : Department of Chemical Engineering	EE : Department of Electrical Engineering
BSTTM : Bharti School of Telecommunication Technology and Management	CHY : Department of Chemistry	HUSS : Department of Humanities and Social Sciences
CARE : Centre for Applied Research in Electronics	CSE : Department of Computer Science and Engineering	IDDC : Instrument Design Development Centre
CAS : Centre for Atmospheric Sciences	DBEB : Department of Biochemical Engineering and Biotechnology	ITMMEC : Industrial Tribology
CBME : Centre for Biomedical Engineering	DOD : Department of Design	KSBS : Kusuma School of Biological Sciences
CES : Centre for Energy Studies	DMS : Department of Management Studies	ME : Department of Mechanical Engineering
CRDT : Centre for Rural Development and Technology	DMSE : Department of Material Science and Engineering	PHY : Department of Physics
CE : Department of Civil Engineering		TT : Department of Textile Technology





# Annual Accounts

# Foundation for Innovation and Technology Transfer

Balance Sheet as at 31<sup>st</sup> March, 2018

In Rs.					
Particulars	Schedule No	Rs	31.03.2018	Rs	31.03.2017
<b>Source of Funds</b>					
1 Corpus Funds Seed Money			16,200,000		16,200,000
2 Reserves and Surplus	1		230,946,325		210,346,021
3 Research and Development Fund	2		63,972,330		60,030,060
4 Other Fund	3		86,951,124		26,401,087
			<b>398,069,779</b>		<b>312,977,168</b>
<b>Application of Funds</b>					
1 Fixed Assets	4				
(A) Gross Block		8,210,525		8,725,921	
(B) Less: Depreciation		861,749		905,571	
(C) Net Block			7,348,776		7,820,350
2 Investments	5		405,300,000		424,150,000
3 Current Assets Loan & Advances	6	332,568,763		180,570,449	
Less: Current Liabilities	7	347,147,760		299,563,631	
Net Current Assets			(14,578,997)		(118,993,182)
			<b>398,069,779</b>		<b>312,977,168</b>

Notes to the financial statements

14

The schedule referred to above form an integral part of the accounts

As per our attached report of even date

Agarwal Sumit & Associates  
Chartered Accountants  
FRN: 028240N

For Foundation for Innovation and Technology Transfer

Sd/-  
**Sumit Agarwal**  
(Chartered Accountants)  
M. No. 529357  
Place: New Delhi  
Date: 28.09.2018

Sd/-  
**K K Roy**  
(Chief Operating Officer)

Sd/-  
**Anil Wali**  
(Managing Director)



# Foundation for Innovation and Technology Transfer

Income and Expenditure Account for the year ended 31<sup>st</sup> March, 2018

In Rs.			
Particulars	Schedule No	31.03.2018	31.03.2017
<b>Income</b>			
Technology Development/Projects	8	150,404,260	190,825,953
Other Income	9	35,516,099	43,851,273
		<b>185,920,359</b>	<b>234,677,226</b>
<b>Expenditure</b>			
Technology Development/Projects	10	138,169,552	179,381,691
Research & Technology Support	11	1,661,143	171,075
Establishment Expenses	12	19,719,706	14,114,279
Patent & Copyright		83,137	5,192
Information Support Services		189,266	297,969
Corporate Films		442,551	189,644
Award/Scholarship		100,000	100,000
Depreciation	4	861,749	905,571
Administrative Expenses	13	4,092,951	4,504,721
		<b>165,320,055</b>	<b>19,967,0142</b>
<b>Excess of Income Over Expenditure</b>		<b>20,600,304</b>	<b>35,007,084</b>

Notes to the financial statements

14

The schedule referred to above form an integral part of the accounts

As per our attached report of even date

Agarwal Sumit & Associates  
Chartered Accountants  
FRN:028240N

For Foundation for Innovation and Technology Transfer

Sd/-  
**Sumit Agarwal**  
(Chartered Accountants)  
M. No. 529357  
Place: New Delhi  
Date: 28.09.2018

Sd/-  
**K K Roy**  
(Chief Operating Officer)

Sd/-  
**Anil Wali**  
(Managing Director)



## Schedules Forming Part of the Balance Sheet

In Rs.					
	Particulars		31.03.2018		31.03.2017
<b>1</b>	<b>Reserves &amp; Surplus</b>				
	Capital Reserve		2,555,812		2,555,812
	General Reserve		207,790,209		172,783,124
	Excess of Income Over Expenditure		20,600,304		35,007,085
			<b>230,946,325</b>		<b>210,346,021</b>
<b>2</b>	<b>Research &amp; Development Funds</b>				
<b>2 (i)</b>	<b>FITT Project Promotion Fund</b>				
	Opening Balance	13,171,037		13,236,037	
	Add: Additions during the Year	175,000		60,000	
		13,346,037		13,296,037	
	Less: Utilised during the Year	1,000,000	<b>12,346,037</b>	125,000	<b>13,171,037</b>
<b>2 (ii)</b>	<b>FITT Consultant Fund</b>				
	Opening Balance	20,383,744		18,459,896	
	Add: Additions during the Year	3,983,464		5,368,918	
		24,367,208		23,828,814	
	Less: Utilised during the Year	2,965,728	<b>21,401,480</b>	3,445,070	<b>20,383,744</b>
<b>2 (iii)</b>	<b>FITT Department Development Fund</b>				
	Opening Balance	22,604,424		18,614,416	
	Add: Additions during the Year	4,131,746		5,121,522	
		26,736,170		23,735,938	
	Less: Utilised during the Year	647,772	<b>26,088,398</b>	1,131,514	<b>22,604,424</b>
<b>2 (iv)</b>	<b>Central Administrative Fund</b>				
	Opening Balance	53,510		53,510	
	Add: Additions during the Year	355,267		1,019,699	
		408,777		1,073,209	
	Less: Utilised during the Year	359,987	<b>48,790</b>	1,019,699	<b>53,510</b>
<b>2 (v)</b>	<b>IIT Student Welfare Fund</b>				
	Opening Balance	94,000		94,000	
	Add: Additions during the Year	-		-	
		94,000		94,000	
	Less: Utilised during the Year	-	<b>94,000</b>		<b>94,000</b>

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In Rs.					
	Particulars		31.03.2018		31.03.2017
<b>2 (vi)</b>	<b>Fitt Administrative/Welfare Fund</b>				
	Opening Balance	3,723,345		2,779,562	
	Add: Additions during the Year	373,966		943,783	
		4,097,311		3,723,345	
	Less: Utilised during the Year	103,686	<b>3,993,625</b>	-	<b>3,723,345</b>
			<b>63,972,330</b>		<b>60,030,060</b>
<b>3</b>	<b>Other Fund</b>				
<b>3 (i)</b>	<b>TBIU - TIDE SEED Fund Repayment</b>				
	Opening Balance	3,137,281		4,363,313	
	Add: Additions during the Year	1,032,734		343,612	
		4,170,015		4,706,925	
	Less: Utilised during the Year	-	<b>4,170,015</b>	1,569,644	3,137,281
<b>3 (ii)</b>	<b>TBIU - MCIT SEED Fund Repayment</b>				
	Opening Balance	4,393,601		4,393,601	
	Add: Additions during the Year	-		-	
		4,393,601		4,393,601	
	Less: Utilised during the Year	-	<b>4,393,601</b>	-	<b>4,393,601</b>
<b>3 (iii)</b>	<b>TBIU - Fund (3% Royalty/Shares Buy-Back/Deferred Loan)</b>				
	Opening Balance	7,248,309		6,591,069	
	Add: Additions during the Year	-		657,240	
		7,248,309		7,248,309	
	Less: Utilised during the Year	-	<b>7,248,309</b>	-	<b>7,248,309</b>
<b>3 (iv)</b>	<b>TBIU - Fund (Maintenance Charges)</b>				
	Opening Balance	668,091		664,484	
	Add: Additions during the Year	-		20,107	
		668,091		684,591	
	Less: Utilised during the Year	668,091	-	16,500	<b>668,091</b>
<b>3 (v)</b>	<b>TDB - SEED Fund Repayment</b>				
	Opening Balance	1,432,490		1,245,428	
	Add: Additions during the Year	1,582,938		679,024	
		3,015,428		1,924,452	
	Less: Utilised during the Year	90,276	<b>2,925,152</b>	491,962	<b>1,432,490</b>

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In Rs.					
Particulars		31.03.2018		31.03.2017	
<b>3 (vi)</b>	<b>BIRAC-BIG A/C</b>				
	Opening Balance	7,928,917		(258,290)	
	Add: Additions during the Year	51,076,628		51,691,862	
		59,005,545		51,433,572	
	Less: Utilised during the Year	28,631,640	<b>30,373,905</b>	43,504,655	<b>7,928,917</b>
<b>3 (vii)</b>	<b>BIRAC-BBIF-A/C</b>				
	Opening Balance	1,592,398		2,506,120	
	Add: Additions during the Year	97,450		151,975	
		1,689,848		2,658,095	
	Less: Utilised during the Year	161	<b>1,689,687</b>	1,065,697	<b>1,592,398</b>
<b>3 (viii)</b>	<b>DST-NIDHI A/C</b>				
	Opening Balance	-		-	
	Add: Additions during the Year	45,250,455		-	
		45,250,455		-	
	Less: Utilised during the Year	14,100,000	<b>31,150,455</b>	-	-
<b>3 (ix)</b>	<b>BIRAC SEED Fund A/C</b>				
	Opening Balance	-		-	
	Add: Additions during the Year	5,000,000		-	
		5,000,000		-	-
	Less: Utilised during the Year	-	<b>5,000,000</b>	-	
			<b>86,951,124</b>		<b>26,401,087</b>

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#### 4. Depreciation Schedule of Fixed Assets

Block of Assets as per the Income Tax Act, 1961									
S No	Particulars	Rate	Gross Block				Net Block		WDV as on 31-03-2018
			WDV as on 01-04-2017	Deletion of Assets	Addition of Assets > 180 Days	Addition of Assets < 180 Days	Total As on 31-03-2018	During the Year 2017-18	
1	Computers	40%	15,619			259,096	274,715	58,067	216,648
2	Furniture & Fixtures	10%	182,984			76,882	259,866	22,142	237,724
3	Air Conditioners	15%	78,765				78,765	11,815	66,950
4	Photocopier	15%	71,886				71,886	10,783	61,103
5	Projector	15%	106				106	16	90
6	Office Equipments	15%	118,490		24,497	29,700	172,687	23,676	149,011
7	FITT Extn. Office	10%	53,519				53,519	5,352	48,167
8	TBIU Office Module	10%	143,020				143,020	14,302	128,718
9	TBIU - Synergy Bldg	10%	7,155,962				7,155,962	715,596	6,440,366
	<b>Total</b>		<b>7,820,350</b>	-	<b>24,497</b>	<b>365,678</b>	<b>8,210,525</b>	<b>861,749</b>	<b>7,348,776</b>

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In Rs.					
	Particulars		31.03.2018		31.03.2017
<b>5</b>	<b>Investments</b>				
	Deposits with Scheduled Bank		355,300,000		374,150,000
	Science Park Contribution		50,000,000		50,000,000
			<b>405,300,000</b>		<b>424,150,000</b>
<b>6</b>	<b>Current Assets, Loans and Advances</b>				
	Balance with Scheduled Bank				
	Canara Bank	13,775,349		6,694,424	
	SBI-1968	109,439,423		36,507,921	
	SBI FCRA Account	7,930,073		4,443,457	
	SBI-TDB-1376	26,215,739		290,276	
	SBI-BIGS	37,905,058		13,153,630	
	HDFC IMARC	-		23,152	
	HDFC APMC	-		5,625,863	
	HDFC BANK	53,806,469		49,417,643	
	HDFC BANK-BIRAC SEED Fund	5,000,000			
	SBI BBIF-1330903	2,713,661		2,616,211	
			<b>256,785,772</b>		<b>118,772,576</b>
	Tax Deducted at Source (Refundable)		24,476,238		22,731,230
	Development Support		412,670		287,670
	Security Deposit		294,054		4,087
	Staff Advance		600,029		141,998
	R & D Infrastructure - Research Park		50,000,000		38,632,888
			<b>332,568,763</b>		<b>180,570,449</b>
<b>7</b>	<b>Current Liabilities</b>				
<b>7 (i)</b>	<b>Project Account</b>				
7 (ia)	Opening Balance Ongoing Projects	150,232,485		178,112,503	
	Add: Transferred From Hold Projects	3,206,101		4,862,622	
	Add: Receipts During The Year	182,635,000		179,417,994	
		336,073,585		362,393,119	

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					In Rs.
	Particulars		31.03.2018		31.03.2017
	Less: Utilised during the Year	138,169,552		179,381,691	
	Less: Transferred to Income & Expenditure A/C	12,234,708		11,444,262	
	Less: Transferred to Hold Project	19,776,576		21,334,681	
	<b>Closing Balance Ongoing Projects</b>		<b>165,892,750</b>		<b>150,232,485</b>
7 (ib)	Opening Balance Project Advance	(8,455,884)		(4,611,155)	
	Add: Increase in Project Advance	(4,171,526)		(9,665,173)	
		(12,627,410)		(14,276,328)	
	Less: Decrease in Project Advance	6,672,690		5,820,444	
	Closing Balance of Projects on Hold		<b>(5,954,720)</b>		<b>(8,455,884)</b>
7 (ic)	Opening Balance of Projects on Hold	63,243,005		46,770,947	
	Add: Increase in Projects on Hold	19,776,576		21,334,681	
		83,019,581		68,105,628	
	Less: Decrease in Projects on Hold	3,206,102		4,862,623	
	Closing Balance of Projects on Hold		<b>79,813,479</b>		<b>63,243,005</b>
			<b>239,751,509</b>		<b>205,019,606</b>
<b>7 (ii)</b>	<b>Other Current Liabilities</b>				
	Opening Balance Other Current Liabilities	94,544,025		82,794,612	
	Add: Increase in Other Current Liabilities	139,571,049		142,399,831	
		234,115,074		225,194,443	
	Less: Decrease in Other Current Liabilities	126,718,823		130,650,418	
	Closing Balance Other Current Liabilities		<b>107,396,251</b>		<b>94,544,025</b>
	<b>Total [7 (ia) + 7 (ib) + 7 (ic) + 7 (ii)]</b>		<b>347,147,760</b>		<b>299,563,631</b>
<b>8</b>	<b>Technology Development/Projects</b>				
8 (i)	Projects and Development Funds		138,169,552		179,381,691
			<b>138,169,552</b>		<b>179,381,691</b>
<b>8 (ii)</b>	<b>Income from Technology &amp; Development/Projects</b>				
	FITT Overhead Charges from Projects		11,532,569		10,577,546
	Seminar/Workshops/HRD Programs		191,190		574,000
	Royalty Income		510,949		292,716
			<b>12,234,708</b>		<b>11,444,262</b>
	<b>Total [8 (i) + 8 (ii)]</b>		<b>150,404,260</b>		<b>190,825,953</b>

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In Rs.					
	Particulars		31.03.2018		31.03.2017
<b>9</b>	<b>Other Income</b>				
	Corporate Membership Fee		201,000		554,700
	Interest on Income tax refund		5,579,286		-
	Interest on Banks Deposits/Bonds		22,718,050		37,154,234
	Interest on Savings Account		6,698,646		5,958,709
	FITT BBIF & TBIU Operating Income		4,695,505		180,530
	I-TEC-SONIPAT		640,000		-
	Misc. Income		4,970		3,100
			<b>35,516,099</b>		<b>43,851,273</b>
<b>10</b>	<b>Technology Development/Projects</b>				
	Project Research & Development Expense		129,150,109		166,867,769
	Transferred to Project & Development at Source		9,019,443		12,513,922
			<b>138,169,552</b>		<b>179,381,691</b>
<b>11</b>	<b>Research &amp; Technology Support</b>				
					-
	TBIU Account		1,661,143		171,075
			<b>1,661,143</b>		<b>171,075</b>
<b>12</b>	<b>Establishment Expenses</b>				
	Children's Education Allowance		15,000		60,000
	Employee Provident Fund-Employer Share		1,213,288		1,098,347
	Gratuity Account		759,600		-
	Honorarium/OTA		7,350		13,800
	House Lease Rent		881,808		694,800
	Medical Expenses		279,838		221,570
	Medical Insurance		104,439		98,644
	Pay & Allowances		16,458,383		11,927,118
			<b>19,719,706</b>		<b>14,114,279</b>

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In Rs.					
	Particulars		31.03.2018		31.03.2017
<b>13</b>	<b>Administrative Expenses</b>				
	Audit Fees		25,000		40,000
	Bank Charges		24,617		40,679
	Books & Periodicals		6,297		5,291
	Communication Expense		164,880		130,975
	Contingent Expenses		295,308		140,060
	Conveyance Expense		334,008		235,429
	Electricity Charges		367,221		513,176
	FITT BBIF Operating Expenses		642,081		3,540
	FITT TBIU Operating Expenses		337,780		209,441
	Membership & Subscription				12,000
	Printing & Stationery		119,191		64,629
	Professional Fees		408,948		1,401,200
	Recruitment Expenses		71,672		107,541
	Rent Expense		539,506		843,592
	Repair & Maintenance		269,945		157,808
	Seminar & Meeting Expenses		58,182		34,744
	I-TEC Sonipat-Expenses		212,406		107,910
	Travelling Expenses		141,792		414,236
	Interest On Tax		14,649		13,078
	Office Expense		59,469		29,392
			<b>4,092,951</b>		<b>4,504,721</b>

## 14. Notes to the Financial Statements

### 1. Significant Accounting Policies

#### i. Accounting Convention

The Financial Statements of Society has been prepared under the Historical Cost Conventional methods. Society has been maintained accounts under cash system rather than accrual basis but some statutory accounts has been maintained under accrual basis.

#### ii. Fixed Assets and Depreciation

Fixed assets are valued at cost and Depreciation on fixed assets is provided on Written Down Value method in accordance with the rates and provisions of the Income Tax, 1961.

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### iii. Revenue Recognition

During the year, the Society recognises applied fund towards expense and transfer to its development funds and project as income of Society.

Income from Research Projects, Seminars, Consultation, etc. recognised on rendering of the service and receipt of the costs, FITT services charges, Overheads, Royalty income which are transfer from various project funds has been treated as income of trust.

Interest income on deposit is accounted on receipt basis consistently.

### iv. Investments

1. Investments are valued at cost.
2. Equipment purchased for the project are deployed for industrial projects and kept at the laboratories at IIT(D). On the conclusion of the project as per FITT's " Guidelines for handling consultancy proposals".
3. Service Tax has been paid to the credit of Government as per invoice raised by FITT.
4. Previous year's figures have been regrouped/reclassified wherever considered necessary to make them comparable with those of the current year.

As per our attached report of even date

Agarwal Sumit & Associates  
Chartered Accountants

For Foundation for Innovation and Technology Transfer

Sd/-  
**Sumit Agarwal**  
(Chartered Accountants)  
M. No. 529357  
Place: New Delhi  
Date: 28.9.2018

Sd/-  
**K K Roy**  
(Chief Operating Officer)


Sd/-  
**Anil Wali**  
(Managing Director)










**Foundation for Innovation and Technology Transfer (FITT)**  
**Indian Institute of Technology Delhi**

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