



# NEWSLETTER

July-Dec 19

**TURNING ON THE INNOVATION ENGINES IN  
HEALTHCARE & BIOMEDICINE**



Ignite focuses on fourth industrial wave tech and on ecosystem development initiatives to fulfill its mission of creating a knowledge economy in Pakistan. Our national network of incubators nurtures startups, while our SEED Fund provides grants to innovative deep tech projects and startups. DigiSkills.pk will deliver 1 million trainings in the future of work by 2020.



# MISSION

To fix the innovation value chain in Pakistan

## NIC Program

Accelerating the entrepreneurial ecosystem by nurturing startups and engaging them with investors and corporations

## Digiskills.pk

Creating a populace that is learning continuously with initiative

## SEED Fund

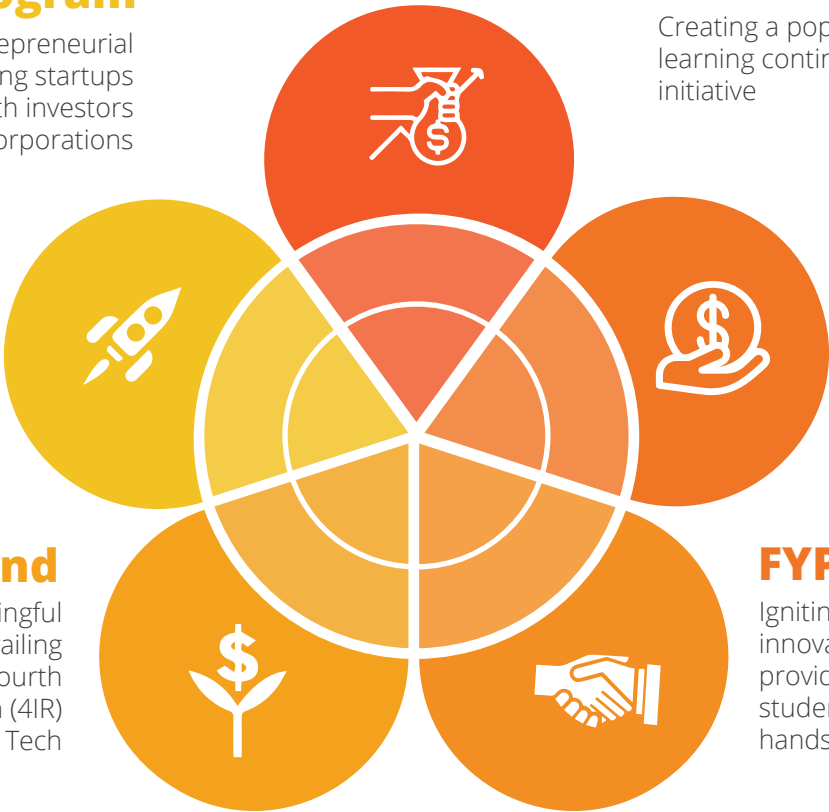
Solving meaningful problems and availing opportunities with Fourth Industrial Revolution (4IR) Tech

## FYP Fund

Igniting university innovation and providing final year students with hands-on skills

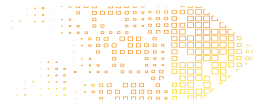
## Outreach

Ignite Outreach engages corporates, professionals, entrepreneurs, academics, media and policymakers with Ignite programs and informs them about the importance of innovation and the challenges and threats posed by the 4IR





Startup Portal



# NIC Program

Accelerating the entrepreneurial ecosystem by nurturing startups and engaging them with investors and corporations

**National  
Incubation  
Center**  
Dream. Build. Rise  
Funded by Ignite, MoITT

**NIC LAHORE**  
Funded by Ignite, MoITT

  
**NIC Peshawar**  
Funded by Ignite, MoITT

NATIONAL  
INCUBATION  
CENTER  
**NIC  
KHI**  
Funded by Ignite, MoITT

**NiC** QUETTA  
Funded by Ignite, MoITT

5

Number of  
Incubation  
Centers

12,305

Jobs Created

PKR  
**1,068**  
million

Revenue  
Generated

PKR  
**4,428**  
million

Investment  
Committed

125

Awards

480+

Females  
Empowered

120+

Mentors



Scan to Signup

# Digiskills.pk

Poverty alleviation through future of work - creating a populace that is learning continuously with initiative

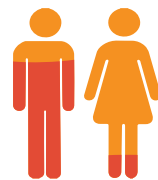
Training Program for **1 million** people in the future of work

**615,000+**

Overall Trainees

**782,000+**

Overall Enrollments



**78%**

Male

**22%**

Female

**249,000**

Batch 4 Enrollments

**\$223,475**

(up to Feb 2019)

Batch 2 Earnings





Get Funding

# SEED Fund

Solving meaningful problems and availing opportunities with Fourth Industrial Revolution (4IR) Tech



816 Proposals worth  
PKR 17,525 M Received



150 Proposals worth  
PKR 2,571 M Approved



19% Proposal Acceptance



16 On-going Projects



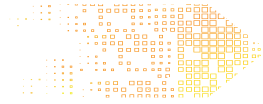
18 International Patents  
Filed



14 Excellence Awards at  
Scientific Forums



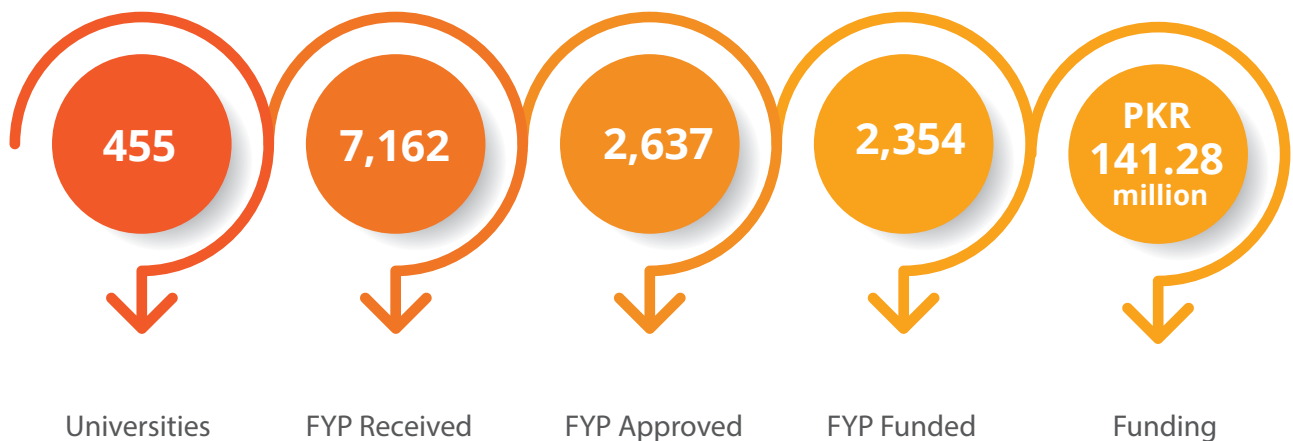
FYP Portal



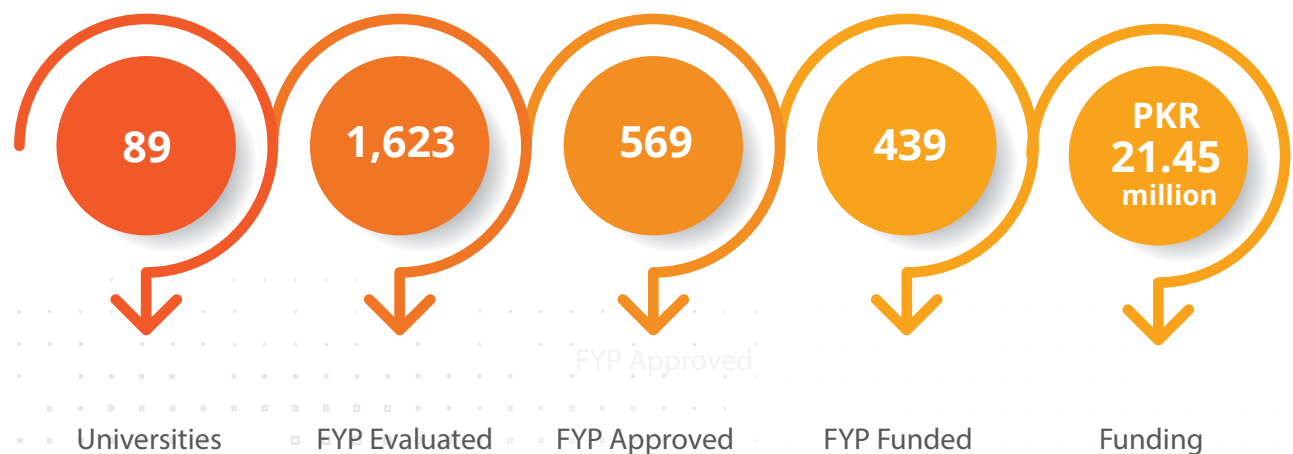
# FYP Fund

Igniting university innovation and providing final year students with hands on skills

## 2011-18



## 2017-18

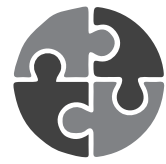


# VALUES WE LIVE BY



## DATA DRIVEN

Transparency,  
learning &  
decision making



## DIVERSITY

Evolution  
through diversity  
& inclusion



## NO TITLES

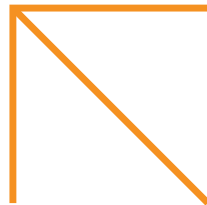
Clash of ideas & continual  
learning with humility



## TAKING PAIN

Reach out to the  
marginalized & underserved

# CEO'S REVIEW



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Ignite seeks to solve the most meaningful problems in Pakistan and avail global opportunities through innovation based on Fourth Industrial Revolution (4IR). Innovation is the transformation of ideas or inventions into products or services that impact society. Over the last many decades, innovation around the world has been driven by startups, which are new companies with innovative business models and technology, seeking to transform industries. Ignite incubates startups, funds them, runs its own startup, DigiSkills.pk and also funds university innovations. Following are some notable examples of Ignite achievements over the last one year:

**Poverty alleviation** has been the cornerstone of our new initiatives, Bakhbar Kissan was one of 8 startups that received a total Ignite funding allocation of Rs 203 million. Employing precision agriculture, it will utilize satellite imagery and drones to dispense fertilizers and pesticides, doubling yield of small farms by Feb 2020. Byoniks is developing patentable tech, which will provide non-intrusive and pain free kidney dialysis at a fraction of the current cost by July 2020. Ignite also worked with PM Advisor on poverty alleviation to introduce high impact tech measures in the national strategy. An electrical surgery instrument developed by NIC Peshawar incubatee, Aprus, has now performed around 100,000 surgeries across KPK at a fraction of the cost of imported equipment, making it affordable for the poor. NIC Lahore incubate, Fine Living have also acquired venture capital (VC) funding. It provides essentials like cooking utensils and monthly rations to hawkers and daily laborers on daily and weekly installments, with sales crossing Rs.15 million with healthy profits

Major milestones in existing projects include the filing of 9 nanotech USA patents by NIC Lahore incubatee, Pak Vitae, which has developed a very low-cost quality drinking water filter. By the end of the year 2020, 1 million additional Pakistanis are expected to have access to clean drinking water on a regular basis. By the end of the year 2021, 10 million Pakistanis, South Asians, and Africans are expected to have the same access. Ignite funded Mera Maweshi was launched; it uses Artificial Intelligence (AI) to provide cattle-disease diagnostics to small farmers on their smartphones, which drastically reduces death incidents of livestock that can turn a small farmer's life upside down. NIC Quetta incubatee, Smart Helmet, uses Internet of Things (IoT) for poisonous gas detection, location and environmental monitoring to guide illiterate miners to safety. Thousands currently lose life and limb annually in horrific mining accidents.



**Job creation** has been the hallmark of Ignite initiatives which include provision of training in marketable intermediate digital skills to over 776,740 enrolled trainees, many of whom are now self-employed and earning foreign exchange through freelancing across the country. Already an estimated USD 14 million have been earned. The NIC network created an additional 9000 jobs. NIC Islamabad incubatee, Mauqa Online, obtained VC funding to expand its job creation and digital financial inclusion services for the illiterate across the country.

**Environment:** Pakistan is becoming water starved and over 80% of water is used for agriculture. In new initiatives, Aqua Agro, NIC Karachi incubatee, is launching an AI and IoT based water monitor that reduces consumption by 50%, at a cost affordable to small farmers i.e. Rs 30,000 for a 5-acre holding. Agri yield increases by 30% as fertilizer and pesticide is not stripped away by excess water. NIC Peshawar incubatee, Smart Tubewell, is now managing water delivery far more intelligently at several locations in KPK. NIC Lahore incubatee is designing a new jet engine, which eliminates contrails in jet engine exhausts, that cause up to 20% of global warming. NIC Karachi's Trashit converts organic waste to fertilizer and is handling 2 tons of daily waste in Karachi.

**Other Major Initiatives & Milestones:** Ignite has partnered with Pakistan Aeronautical Complex, Kamra, to help build a local aeronautical components industry that can plug into global supply chains. Ignite has joined Agha Khan Medical University to bring latest medical innovations to Pakistani and global healthcare through incubation, funding, clinical trials, regulatory approvals and partnerships. Facebook has set up an Augmented Reality (AR) and Virtual Reality (VR) Lab in NIC Lahore. AR/VR is expected to be a high growth area over the next decade with applications in education, training, maintenance, and gaming. Ignite has partnered with Japan External Trade Organization (JETRO), to bring Pakistani innovations to Japanese conglomerates operating in the country. Ignite has funded blockchain based international remittances and Know Your Customer (KYC), which are expected to launch in Feb 2020.

Major milestones in existing initiatives include launch of Ignite funded Electrocure in 2 power distribution companies (DISCOS). Electrocure saves 90% of electricity transmission line losses and theft. Ignite funded Orbit, an AR based education platform has now expanded to over 60 schools in the USA and Europe. NIC Islamabad's Deaftawk acquired foreign funding and is now offering its sign language and interpretation services to the deaf community across Pakistan and also overseas.



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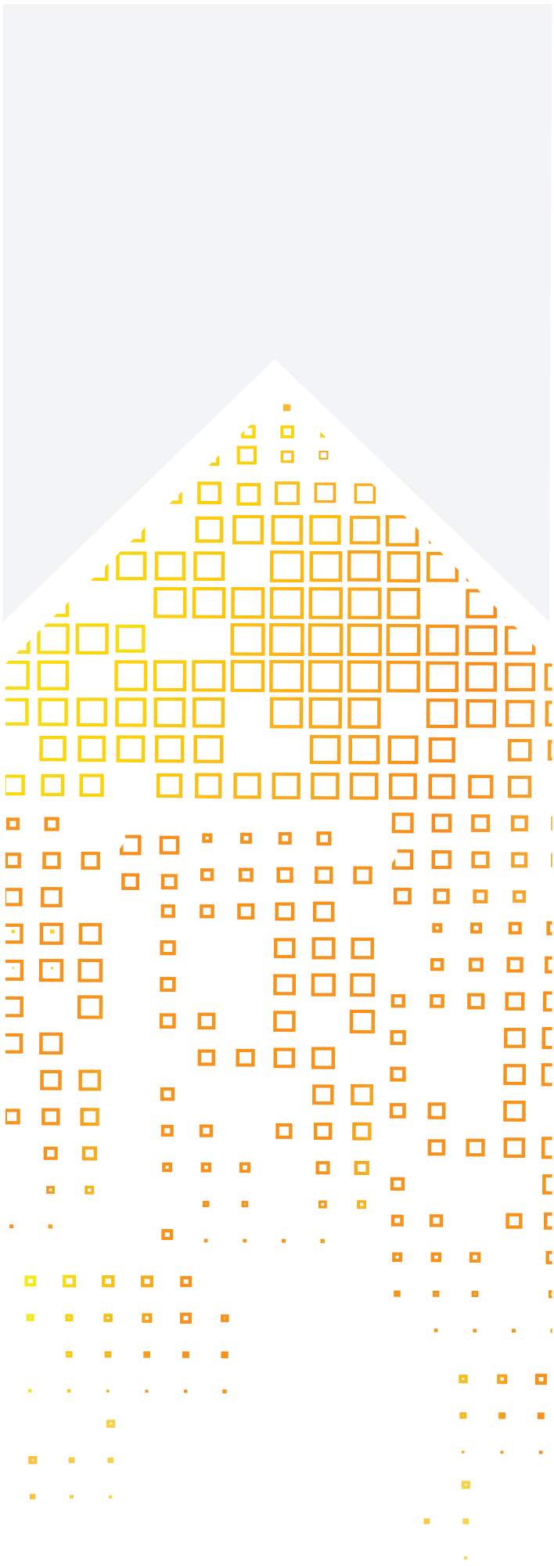
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# HIGHLIGHTS

## Turning on the Innovation Engines in **Healthcare & Biomedicine**



With the motive to bring together expertise and creativity from multiple industries, the Ignite National Technology Fund and Aga Khan University have signed a milestone Memorandum of Understanding (MoU) to jointly support startups developing innovative ideas in healthcare and biomedicine.

## Improving Access to Early Stage Financing with **Ignite Jiddat Investment & Support Fund**

Taking another significant step towards strengthening Pakistan's entrepreneurial ecosystem, the Board of Directors of Ignite, under the leadership of Chairman Shababat Ali Shah, has approved to conduct a feasibility study through the Planning Commission of Pakistan, for establishing Jiddat Investment & Support (JIS) Fund.



## Ignite SEED-funded Knowledge Platform Raises **\$2 million in Equity Investment**



Since receiving funding from Ignite SEED Fund, Knowledge Platform has emerged as Pakistan's leading education technology company. Closing an over-subscribed Series-A funding round, Knowledge Platform has received \$2 million in equity investment, with investors including the country's leading VC firm Lakson Investments Venture Capital (LIVC) and the country's largest school network, Beaconhouse School System.

## Ignite NIC Program Startups Shine at P@SHA ICT Awards 2019



Five awards were clinched by Ignite NIC Program Startups at the P@SHA ICT Awards 2019 in various categories - Aprus Tech (Health and wellbeing); Learning Pitch (Education Technology); Girlythings (Indigenous Services) and PakAgriMarket (Agriculture). SEED Funded project Optera Digital was declared the runner-up under Marketing Solutions category. NIC Islamabad's startup Qumuq came second in the Transport category.

## 14 Graduating Startups of NIC Peshawar added PKR 120 million to National Economy

14 startups from diverse industries, graduated from NIC Peshawar, which since its inauguration in January 2018, has played a monumental role in the development of KP's entrepreneurial ecosystem, reflected in the impact created by NIC Peshawar's graduating startups in the form of 470 direct and 1900 indirect jobs; PKR 192 million raised in investment and exponentially increased revenue to greater than PKR 120 million.



## LinkGiz All Set to Tackle Trash with 'Smart Bin'



LinkGiz, a startup emerging from one of the world's most polluted cities, Karachi, has come up with a way to modernize and manage waste disposal through their 'smart bin'. Equipped with sensors, the bin does not only manage timely disposal of the garbage, but also detects the quantity as well as nature of the garbage, among other factors.



## Bioniks: Artificial Limbs made using Biomedical 3D Printing



The dynamic duo behind Bioniks built a 'robotic prosthetic arm' - something that started out as a final year product has evolved into a startup. The prosthetic arm created by Bioniks is fitted with sensors that enable users to move the limb by simply thinking about the movements.

## A Step towards Promoting Inclusion: DeafTawk receives Grant of \$80,000 from GuarantCo

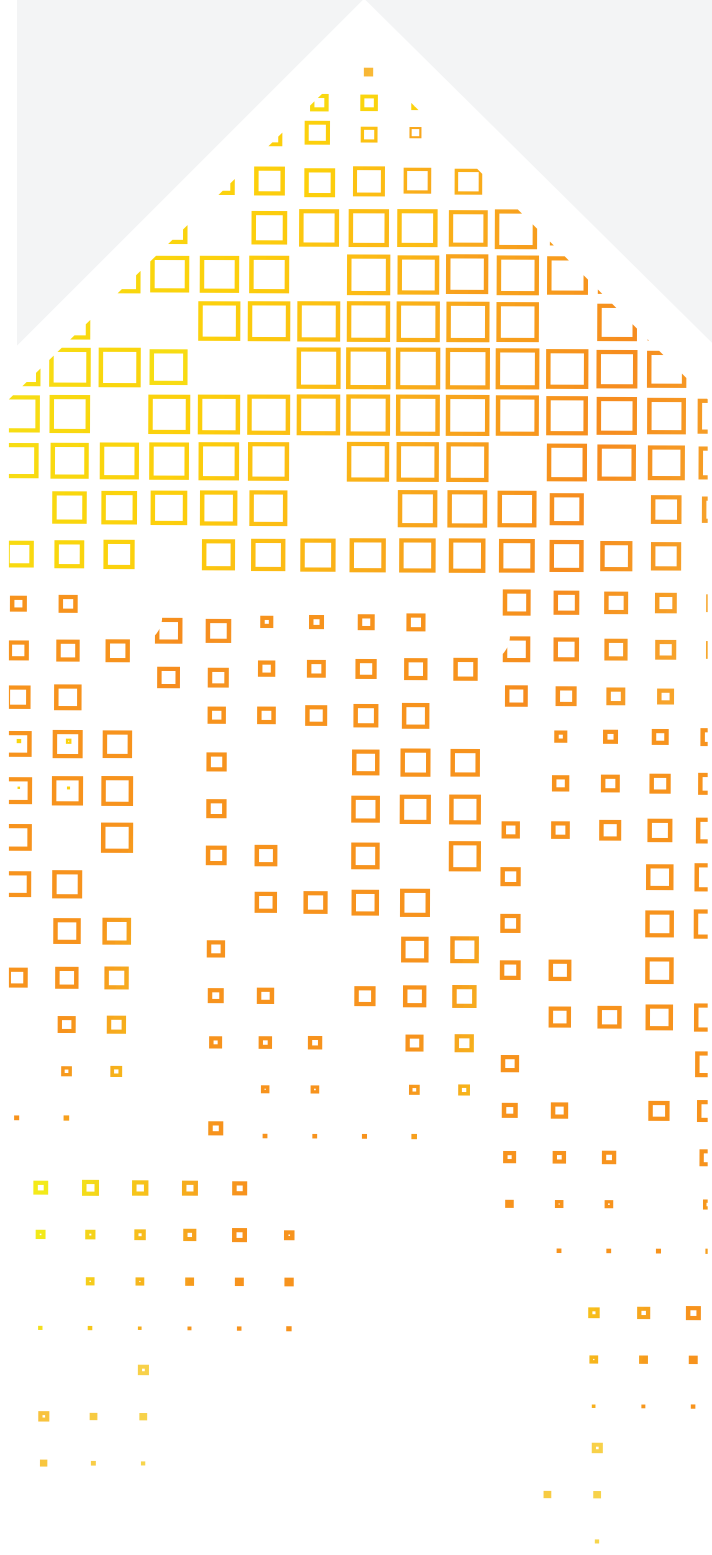
On a mission to promote inclusiveness for the deaf people through sign language services, DeafTawk received a grant of \$80,000 from GuarantCo, which would allow significant steps to be taken to be more inclusive towards people who have hearing impairments. DeafTawk is a startup incubated at Ignite-powered NIC Islamabad under the Jazz xlr8 program.



## Ignite Powered Startups Steal the Show at Pakistan Startup Cup 2018-19



For the 2018-19 edition of Pakistan Startup Cup, two startups from NIC Peshawar took home the prize - NanoIT Solutions, which won the first prize (PKR 1 million) and Aprus, which won the third prize (PKR 500,000). DeafTawk, from NIC Islamabad, took home the second prize (PKR 750,000). Pakistan Startup Cup is the flagship program of The Indus Entrepreneurs Islamabad, organized in collaboration with the US Embassy in Pakistan - top entrepreneurs from all over the country submit their ideas and compete for the big prize.



**IN FOCUS**

## Turning on the Innovation Engines in Healthcare and Biomedicine: Ignite and AKU Partner up

The Ignite National Technology Fund and Aga Khan University have signed a Memorandum of Understanding (MoU) to jointly support startups developing innovative ideas in healthcare and biomedicine.

The MoU was signed by Ignite CEO, Yusuf Hussain and AKU's President Firoz Rasul at AKU Centre for Innovation in Medical Education, home to the AKU Innovation and Incubation Space, i2s. The event was attended by the Federal Minister for Information and Technology, Dr. Khalid Siddiqui.

"The modern knowledge economy thrives on creativity and the pooling together of expertise from different industries. Partnerships are an essential tool that bring together the most committed people to tackle pressing problems around them and to explore global trends and opportunities." - **Dr. Khalid Siddiqui, Federal Minister for Information and Technology**



The agreement will see AKU offer its facilities as well as the expertise of its faculty to Ignite existing and future startups, enabling them to develop meaningful ventures and partnerships in the healthcare sector. In return, Ignite will support startups being matured through AKU i2s. In the long-term, AKU and Ignite will also support one another in establishing a specialised healthcare and biomedicine incubator in the country.

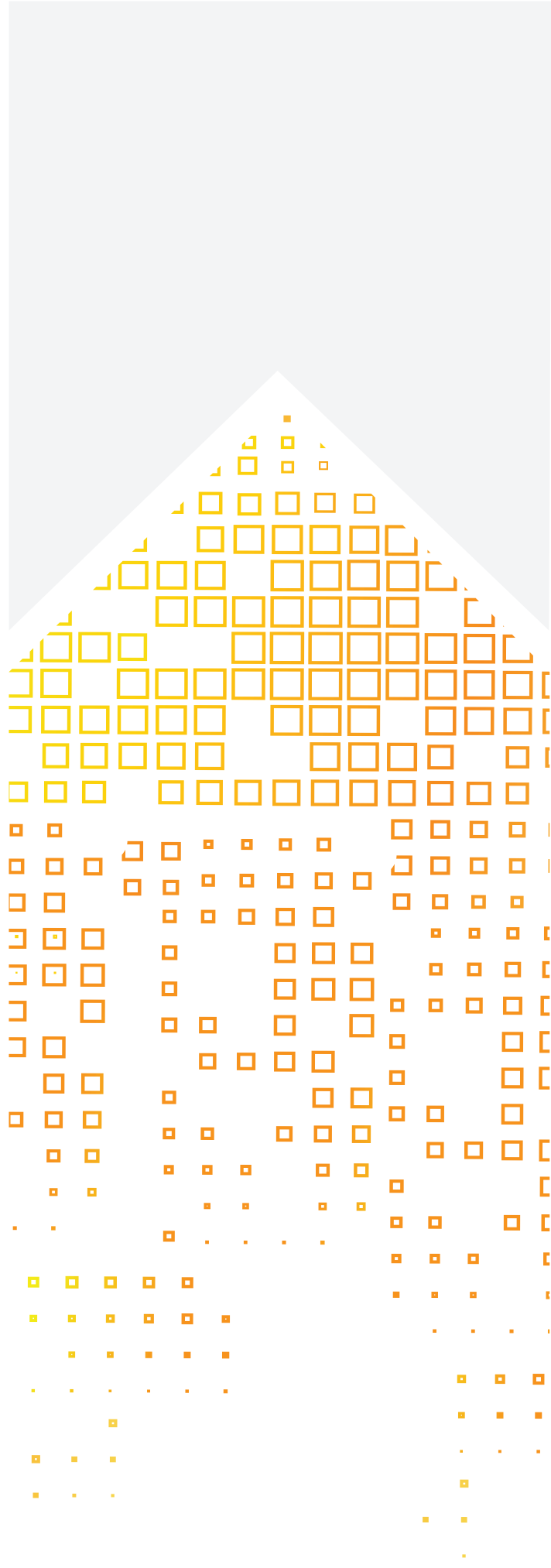
"This partnership will allow us to address the entire value chain of deep health tech innovation including lab facilities, trials, regulation, incubation, mentorship, and funding with the objective of targeting domestic and foreign markets with world-class Artificial Intelligence, Augmented Reality, Internet of Things and other Fourth Industrial Revolution-based products." - **Yusuf Hussain, CEO Ignite**



"We share a spirit of collaboration and an openness to new ideas which are key ingredients for innovation. Universities are engines of innovation and this partnership will give ambitious innovators access to the expertise they need to develop low-cost, sustainable solutions to today's healthcare challenges." - **Feroz Rasul, President AKU**







# NIC PROGRAM

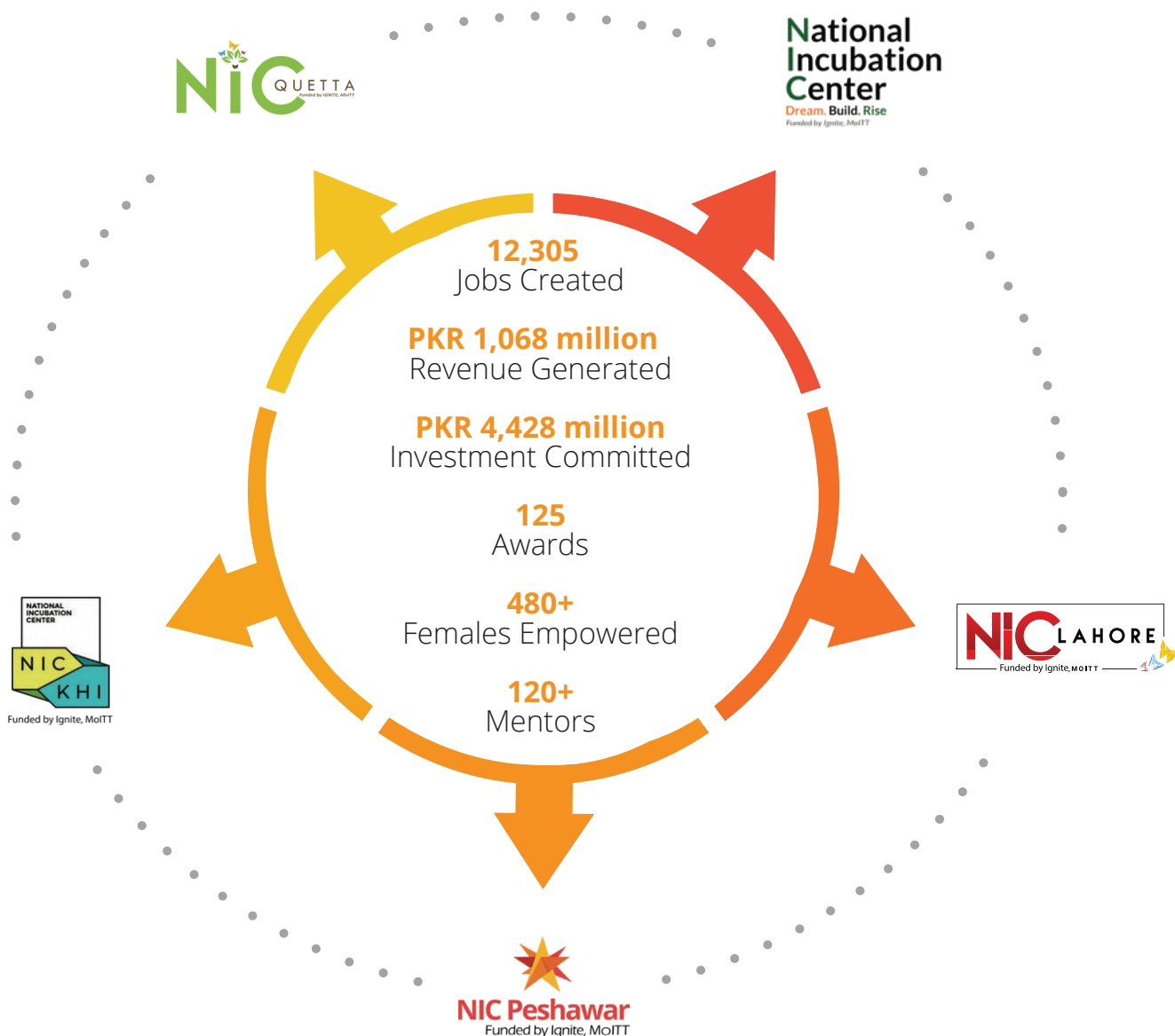
# NIC PROGRAM



Startup Portal

Our national network of incubators across Pakistan (Islamabad, Lahore, Peshawar, Karachi and Quetta) nurtures startups and engages them with investors and corporations. Ignite startup portal gives single point data access to national and international venture capitalists interested to invest in Ignite startups.

## Overall Impact





2,073

Jobs



PKR  
412  
million

Revenue



PKR  
551  
million

Investment  
Committed



35

Awards

## Star Startups

### DeafTawk | Interpretation services

Bridging the communication gap between the deaf community and the general public in real-time via sign language interpreter

### Mauqa Online | Domestic Help

Financial inclusion of illiterate using picture-based user interface

### Xylexa | AI in Diagnostics (Healthcare)

Early diagnosis of breast cancer with 30% more accuracy and 10 times quicker

### Noerric | IoT

Removing the human error from sports

### Augment Care | Health Tech

On-the-go medical advice leveraging mobile technology



640

Jobs



PKR  
224  
million

Revenue



PKR  
2,772  
million

Investment  
Committed



13

Awards

## Star Startups

### Pak Vitae | Health

10 million to have access to clean drinking water by 2020 using cheap nanotech filter

### Aero Engine Craft | Aerospace

Eliminates contrails that cause up to 20% of global warming

### Fine Living | Lifestyle

Essentials for daily wage earners and hawkers on daily payments

### SE Drop | Manufacturing

Recycling the industrial waste water through a small and efficient plant

### Vceela | E-commerce

Connect artisans directly to local and international market while cutting out the middlemen



**489**

Jobs



PKR  
**196**  
million

Revenue



PKR  
**167**  
million

Investment  
Committed



**35**

Awards

## Star Startups

### **Aprus** | Health (Medical Equipment)

10k + surgeries in 80+ clinics with electro-magnetic instrument, modulated by Artificial Intelligence (AI)

### **BERA** | E-commerce

Channeling the centuries of heritage into modern high fashion peshawari chappals

### **Darewro** | Delivery System

Delivering goods from B2C, C2C and C2B through a wide network of delivery vehicles backed by a call center

### **Nano IT** | AR/VR, Artificial Intelligence

Real touch in gaming, robotics and tourism through AR-VR motion platforms using motion simulators

### **Eleven.pk** | E-commerce

Online retail store evolved from social media retail shop to a portal progressing to production of high-demand products



8,898

Jobs



PKR  
200  
million

Revenue



PKR  
900  
million

Investment  
Committed



33

Awards

## Star Startups

### Aqua Agra | Agriculture

Saves 50% of irrigation water, while increasing yield by 30% for 2 crops, 10x cheaper than drip irrigation

### Bykea | Transport & Logistics

All in one app for transportation, food, delivery and payment services that saves time and money

### DOT Incorporation | Health

Data driven mental health solution addressing the needs of all beyond geographical boundaries

### Iota Pakistan | IoT

Bringing a digital revolution in customers' lives, commercializing all Internet of Things (IoT) oriented products and solutions that have the capacity and power to revolutionize your "way-of-life"

### Encore Pay | Software

It fulfills all business needs: digital banking, bill payments, merchant payments, wallets, money transfers etc.





205

Jobs



PKR  
36  
million

Revenue



PKR  
38  
million

Investment  
Committed



9

Awards

## Star Startups

### Eye Smart Helmet | Manufacturing

Detects and monitors poisonous gases, temperature, humidity and miner health profile, showing warnings and alarms, and helping rescue and retrieval

### WECO | Manufacturing

Increasing poultry production through an exclusively designed innovative thermostat for hatcheries

# Ignite NIC Program Startups Shine at P@SHA ICT Awards 2019

Five awards were clinched by Ignite NIC Program Startups at the P@SHA ICT Awards 2019. SEED Funded project Optera Digital was declared the runner-up under Marketing Solutions category. NIC Islamabad's startup Qumuq came second in the Transport category.



## **Aprus Tech**

### **Category: Health and Wellbeing**

Aprus is an electrosurgical instrument that has been developed to remove tumors, cut tissues, and seal blood vessels with increased hygiene and precision. Over 100 units of this device have been deployed across clinics and hospitals in KPK and have been utilized in over 90,000 surgeries. It has also established an R&D Lab with raised investment of PKR 30.5 Million.

## **Learning Pitch**

### **Category: Education Technology**

Learning Pitch's mission statement is to make quality education affordable and accessible to anyone anywhere. Learning Pitch aims to disrupt the education sector of Pakistan through innovative use of digital technology by developing an online education platform. These lectures are accessible through the Internet over a state-of-the-art learning management system.

## **Girlythings**

### **Category: Idigneous Services**

Girlythings produces and delivers a kit that provides women with immediate menstrual care in case of an emergency. Additionally, it encourages conversation over stigmatized and tabooed topics such as menstruation encouraging better care for women.

## **Pakagrimarket**

### **Category: Agriculture**

The startup is digitizing the agri-value chain by connecting farmers to the input market through Agri-directories and farmers to the output market through 'Buy and Sell' components of the platform. The company has partnered with Telenor, which extends its agri-directory service to prospected 5 million featured phone users via USSD and IVR service. It has also recently partnered with Daily Pakistan for content delivery.

# Ignite (MoITT) Powered Startups Steal the Show at Pakistan **Startup Cup** 2018-19

For the 2018-19 edition of Pakistan Startup Cup, two startups from NIC Peshawar took home the prize - NanoIT Solutions, which won the first prize (PKR 1 million) and Aprus, which won the third prize (PKR 500,000). Pakistan Startup Cup is the flagship program of The Indus Entrepreneurs Islamabad, organized in collaboration with the US Embassy in Pakistan - top entrepreneurs from all over the country submit their ideas and compete for the big prize.

DeafTawk from NIC Islamabad – with their sign language service for the deaf community through an online video platform – was declared the second prize winner and took home PKR 750,000.

“This clean sweep showcases rapid progress of the NIC program. Inshallah, the trajectory will sustain.”  
- **Yusuf Hussain, CEO Ignite**

Federal Minister for Education and Professional Training, Shafqat Mahmood and Ambassador of the United States of America to Pakistan, Paul W. Jones were the guests of honor at the prize distribution ceremony. The duo was left mesmerized with the pitches during the grand finale and appreciated the winners.



## Muse becomes the first Pakistani startup to be selected amongst Top 6 EdTech Startups at the Global Education and Skills Forum

SABAQ, an NIC Karachi based startup has taken it upon themselves to rethink the education system. The goal is to make education more engaging and more accessible. Muse, their flagship product was developed on the pillars of modern technology and powerful storytelling. Their hard work has got them recognized amongst the top 6 EdTech startups at the Global Education and Skills Forum in Dubai.



## Bykea secures \$5.7 Million Series A Investment

Bykea, a technology platform for on-demand transport and related services, a startup accelerated at NIC Karachi, has completed a \$5.7 million Series A round of financing from Pakistan's first VC fund Sarmayacar and institutional investors from South East Asia and the Middle East. The financing will be used to fund Bykea's expansion in ride-sharing, express delivery and conversion of cash for digital use, for both consumers and businesses across Pakistan.



## Closet Features in Idea Cororon Ka

On 11th August 2019, Closet, a startup incubated at NIC Karachi participated in Idea Cororon Ka in Lahore. Closet is an online fashion rental marketplace, helping people not just save money, but earn passive income from the comfort of their home. They received a grant of PKR 4.85 million from USAID Small and Medium Enterprise Activity (SMEA) during the show.



## Female Startup Founders from NIC Karachi shine during the SCWomenInTech Competition

Standard Chartered conducted a program focused on female entrepreneurs in which five teams were selected from a pool of the best 18 teams previously shortlisted - these startups went through the SCWomenInTech programme for two months, where they were offered coaching, mentoring and business management skills to grow their businesses to the next level. Three of NIC Karachi startups, that is, Closet, Dot Mind Unlocked and Trashit made the cut.





## StoryKit Runs Pilot with UNESCO

Storykit, a startup of NIC Lahore, was recently featured in a short documentary for UNESCO. The StoryKit program, which introduces children to reading by building their engagement with stories through participation in interactive storytelling and games, piloted its program for UNESCO in two private school systems in Lahore. StoryKit adopts an Activity Based Learning method and also promotes reading habit in children - the program that was run in the aforementioned schools, helped children with self-confidence, improved communication skills while also increasing school attendance and enrollment.



## Ayeco Wins Big at Idea Cororon Ka

A startup of NIC Lahore, Ayeco was founded in 2017 and it has launched Pakistan's first smart wheelchair, called GoBee. It is the only company in Pakistan which is locally manufacturing health tech assisted devices. Ayeco has also developed a walking stick, called the Smart Cane, especially for visually impaired people. The founders of Ayeco recently appeared on Idea Cororon Ka and received an investment of PKR 12 million.



## Dubai's Falcon Network invests in NIC Karachi startup **Saaya Health**

Saaya Health, a startup which offers AI-powered emotional health solutions for organizations, has just received funding from the Falcon Network, which is a Dubai-based group of investors, focusing primarily on high-growth enterprises.



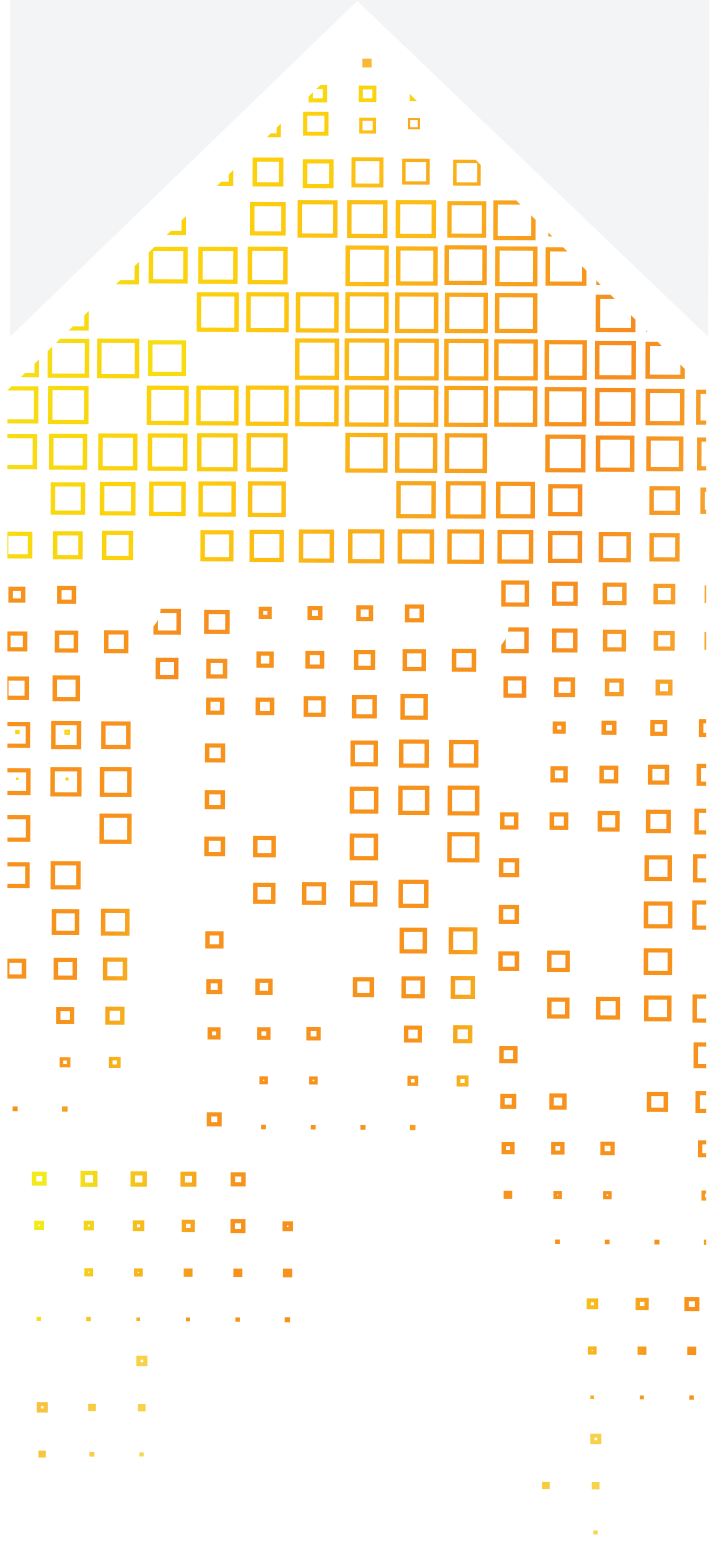
## Bioniks won in Falling Walls Lab **FCCU** **Lahore 2019**

Recently, Bioniks went on to compete and win in Falling Walls Lab FCCU, a winner competing with other winners from all around the world. Bioniks has managed to occupy a unique niche, utilizing state-of-the-art, unconventional technologies for producing highly advanced, brain controlled prostheses that have a special touch of warmth, bringing life to lifeless limbs.









**DIGI**SKILLS.PK



# DIGISKILLS.PK

Poverty Alleviation through Future of Work



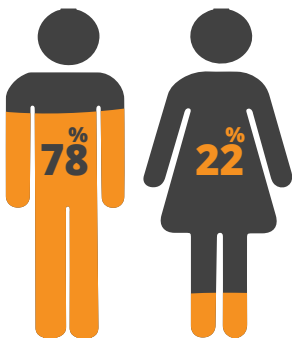
Scan to Signup

## VISION

A digitally literate population with marketable digital skills, gainfully engaged in a vibrant economy through dedicated, committed and excellent training.

## MISSION

To offer one million Pakistanis the opportunity to gain marketable digital skills that can transform them into successful freelancers, employees and entrepreneurs.



Overall Trainees  
**615,000+**

Overall Enrollments  
**782,000+**

# INFORMATION SESSIONS

**Total Footfall: 5,949**



# EARNINGS SNAPSHOT

A glimpse of the performance of individuals from the 2nd batch of DigiSkills.pk



**\$14**

Per day new  
earnings for first  
time freelancers

**25,160**

Course  
Completions



**5,494**

Male



**680**

Female

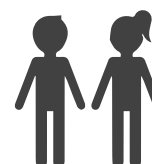


**13,978**

Individuals

**5,057**

Youth (21-30)



**3,234**

Existing  
Freelancers

**2,940**

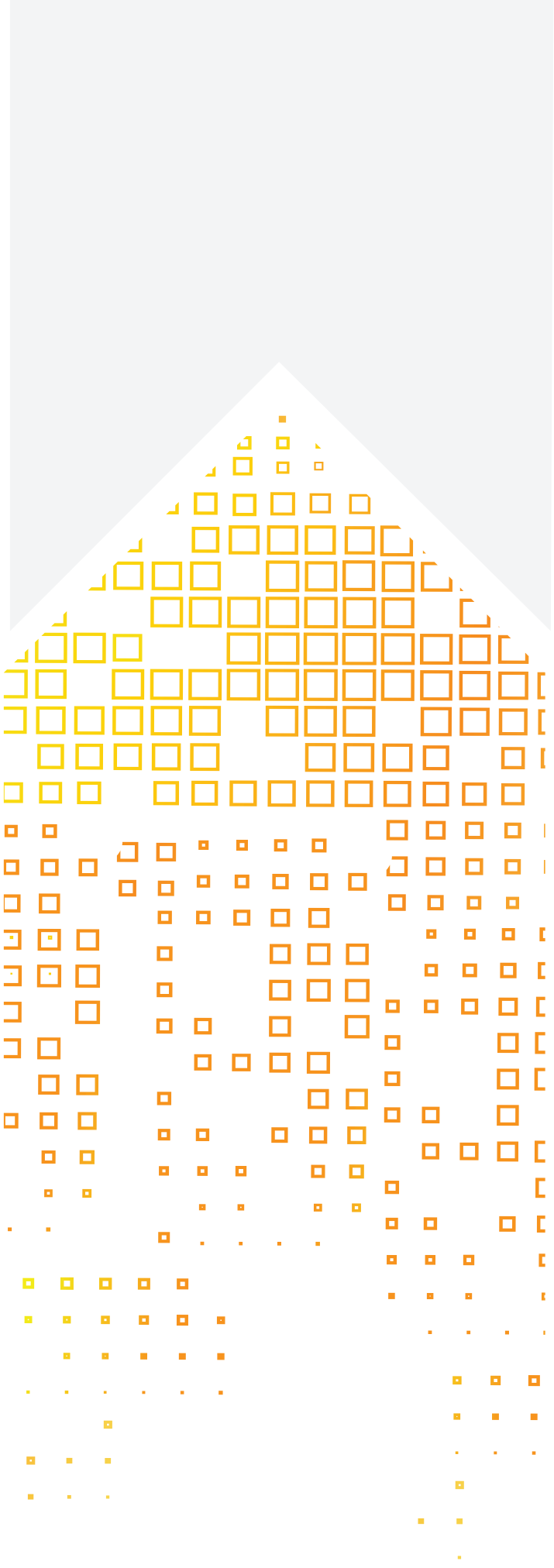
New Freelancers

**\$223,475**

Total Earnings  
(up to Feb 2019)

Notes:





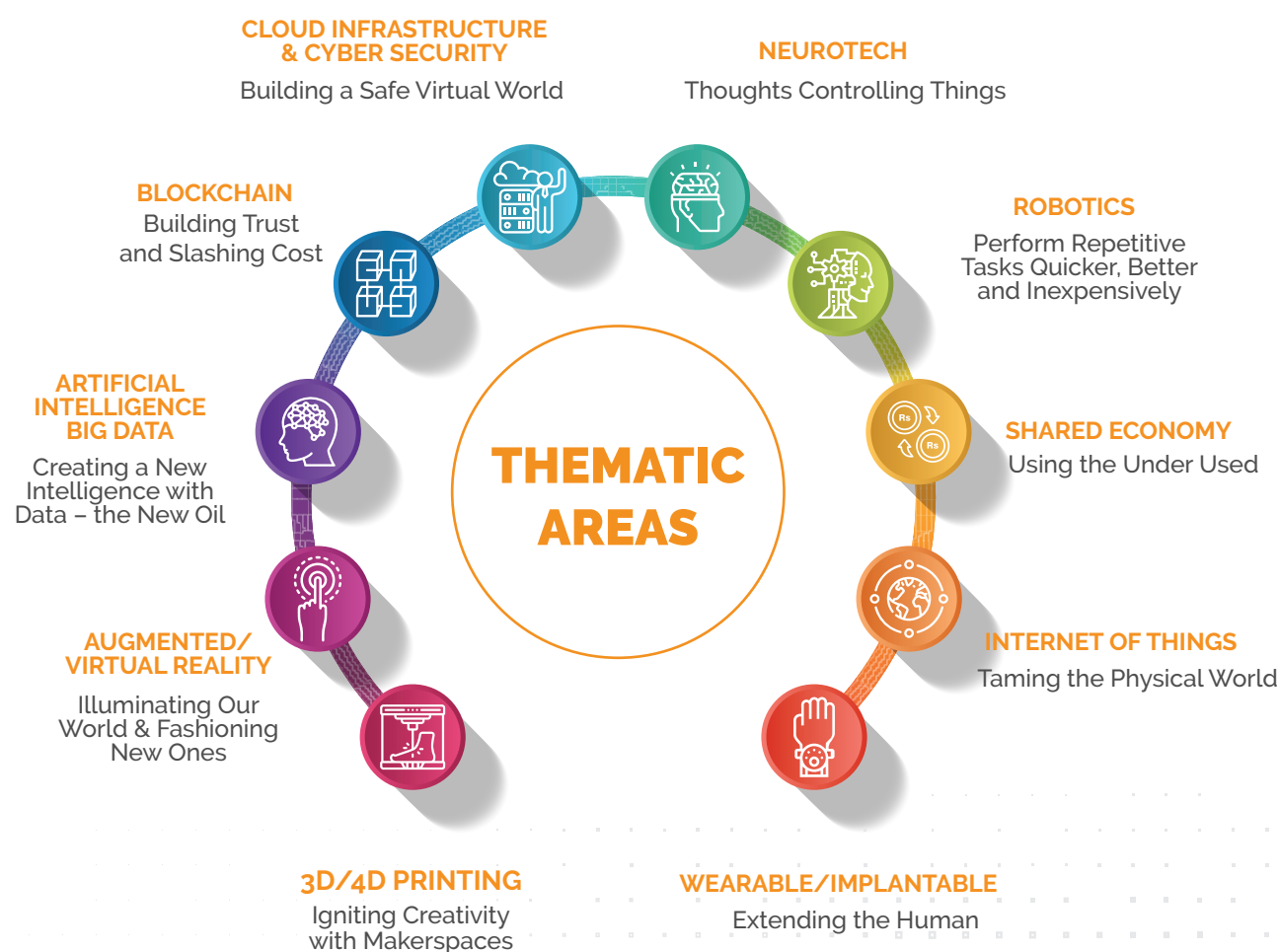
# SEED FUND



Get Funding

# SEED FUND

Funding startups and innovative projects that utilize 4th industrial wave tech to solve local problems and target global opportunities.





# SEED Funded Projects

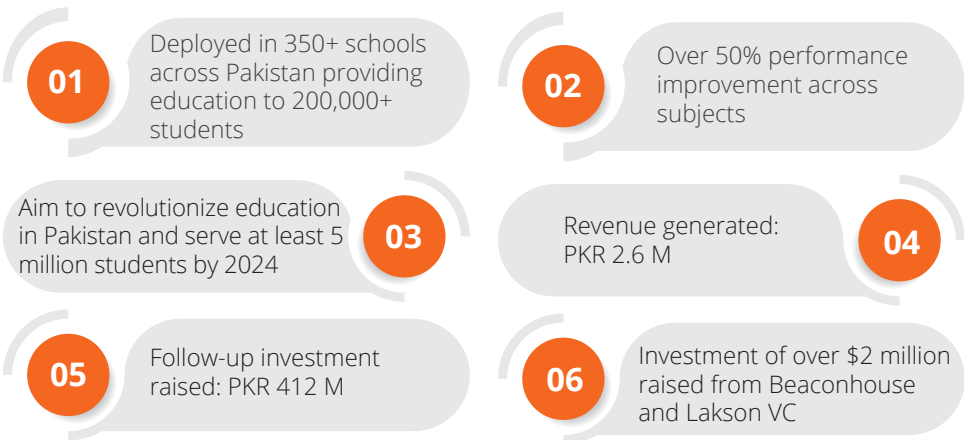
## Knowledge Platform: Using Digital Means to Enhance STEM Education

An innovative edtech startup, Knowledge Platform’s aim revolves around providing quality education to middle school students by developing engaging, curriculum-aligned science content, designed to raise curiosity and awareness and promote conceptual understanding. This content is delivered in schools through Knowledge Platform’s award-winning blended learning solution Learn Smart Classroom and is also accessible through the Learn Smart Pakistan (their free platform for all Pakistani students). Their digital curriculum includes video content, activities and games, assessments and comprehensive digital taxonomies – and are available in both English and Urdu.

Vertical:  
Education



Funding: **PKR 28.59M**



### Awards

Best in E-learning Award – Pakistan Software Houses Association  
**P@sha Awards 2017**



# Electrocure's Solution to Reduce Electricity Losses

Electrocure by CISNR brings users a meter-less smart metering system, with continuous surveillance of the distribution lines, providing theft-proof and reliable electric supply, hence offering a governance tool for electricity data management. The unaccounted for electricity loss in Pakistan equates to around PKR 350 billion annually. With its solution, ElectroCure aims to address electricity theft arising from meter tampering, theft from transmission and distribution lines, and billing irregularities; this system will also eliminate the need for meter readers, eradicating the practices of bribery and other unlawful actions resulting from human intervention.

Vertical:  
Energy



Funding: **PKR 25.46 M**



## Multi-dimensional, Real-time Consumer Metrics from Techlets

Through building Pakistan's first cloud-based Big Data and Artificial Intelligence SaaS (Software as a Service), Techlets aims to develop comprehensive user profiles to help businesses improve the allocation of their limited marketing budgets and other resources to enhance the overall returns on their investment. Ignite support helped Techlets grow from a 2-persons team to a cash flow positive company of 30+ team members. Techlets reported more than PKR 70 Million in collective revenues and has over 20+ SME partners. Ignite SEED funded venture saw 4x ROI and is growing at a steady pace now with the support of clients and partners, both nationally and internationally.

**Vertical:**  
**Big Data**  
**and AI**



**Funding:** **PKR**  
**19.08M**

01

People impacted: 177k

02

Revenue generated: PKR  
50 M

Follow-up investment  
raised: PKR 10 M

03

## Mera Maweshi: Livestock gets Diagnosed in Rural Pakistan using Artificial Intelligence

Mera Maweshi, which can be used as a stand-alone app on a computer and also on Android-based phones, offers an alternate way of diagnosing and treating livestock, with an aim to study, investigate, design and implement an Artificial Intelligence-based disease diagnosis system for livestock owned by farmers in rural Pakistan. It will also provide a provision to veterinary doctors to contribute in enhancing the knowledge-base of the system, ultimately resulting in accurate diagnoses and effective treatments.

**Vertical:**  
**Agriculture/**  
**Food/Livestock**



**Funding:** **PKR**  
**4.39M**

01

Increasing dairy production  
and cattle life with AI based  
bovine disease diagnostics.

02

250+ farmers using Urdu  
mobile UI apps.

## Byonyks: Pakistan's First Portable Kidney Dialysis Kit

Byonyks is Pakistan's first biotechnology startup that exclusively focuses towards developing affordable healthcare devices using state-of-the-art medical technology. Byonyks' solution is low-cost, hassle-free and does not pose any health risk and neither does it require constant supervision, as in hemodialysis. The existing process used to perform the same function is not only painful, expensive and time consuming, but it also exposes the patient to other life-threatening diseases. With the help of its partners in this project, Byonyks plans to manufacture Automated Peritoneal Dialysis (APD) machines in Pakistan for both local use and export. This will be the first machine of its kind to be made in Pakistan.

**Vertical:**  
**Healthcare**



**Funding:** **PKR**  
**28.70M**

01

Innovative Peritoneal Kidney Dialysis Machine aims to reduce cost, time and pain of kidney patients. Pakistan will be able to export globally as it will be FDA (USA), CE (EU) approved device.

02

Prototype to be completed by June 2020.

## Diagnosis of Tuberculosis becomes Faster with Portable Optical Sensor

Dr. Muhammad Imran Cheema at the Bio-Agri-Photonics (BAP) Lab at LUMS, has created a device, which would enable the healthcare sector to perform rapid, non-invasive and on-site diagnosis of Tuberculosis (TB). This process provides a novel TB sensor, which is non-invasive, accurate, sensitive, and label free. By developing an easy-to-use, non-invasive optical sensor, immediate TB diagnosis can be provided without the aid of specialized laboratory personnel. This is also easily portable to remote areas where there is lack of healthcare infrastructure.

**Vertical:**  
**Healthcare**



**Funding:** **PKR**  
**31.81M**

01

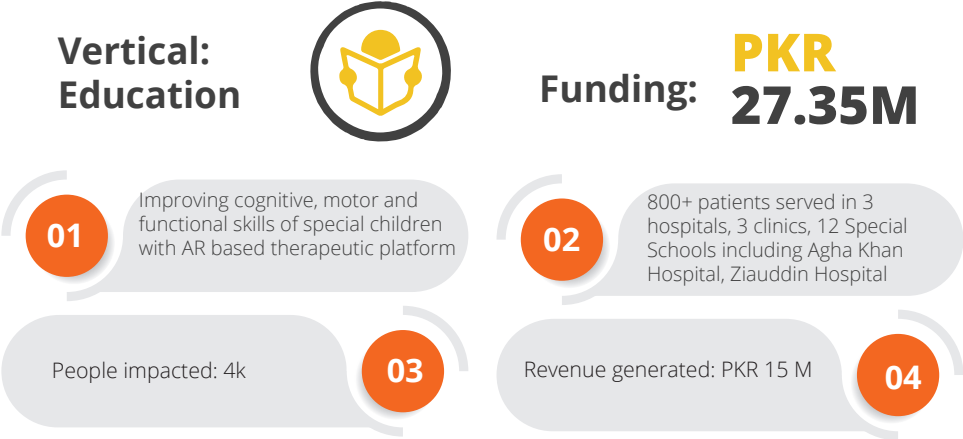
Non-invasive optical sensor for TB diagnosis without the aid of specialized laboratory personnel which can be portable to remote areas.

02

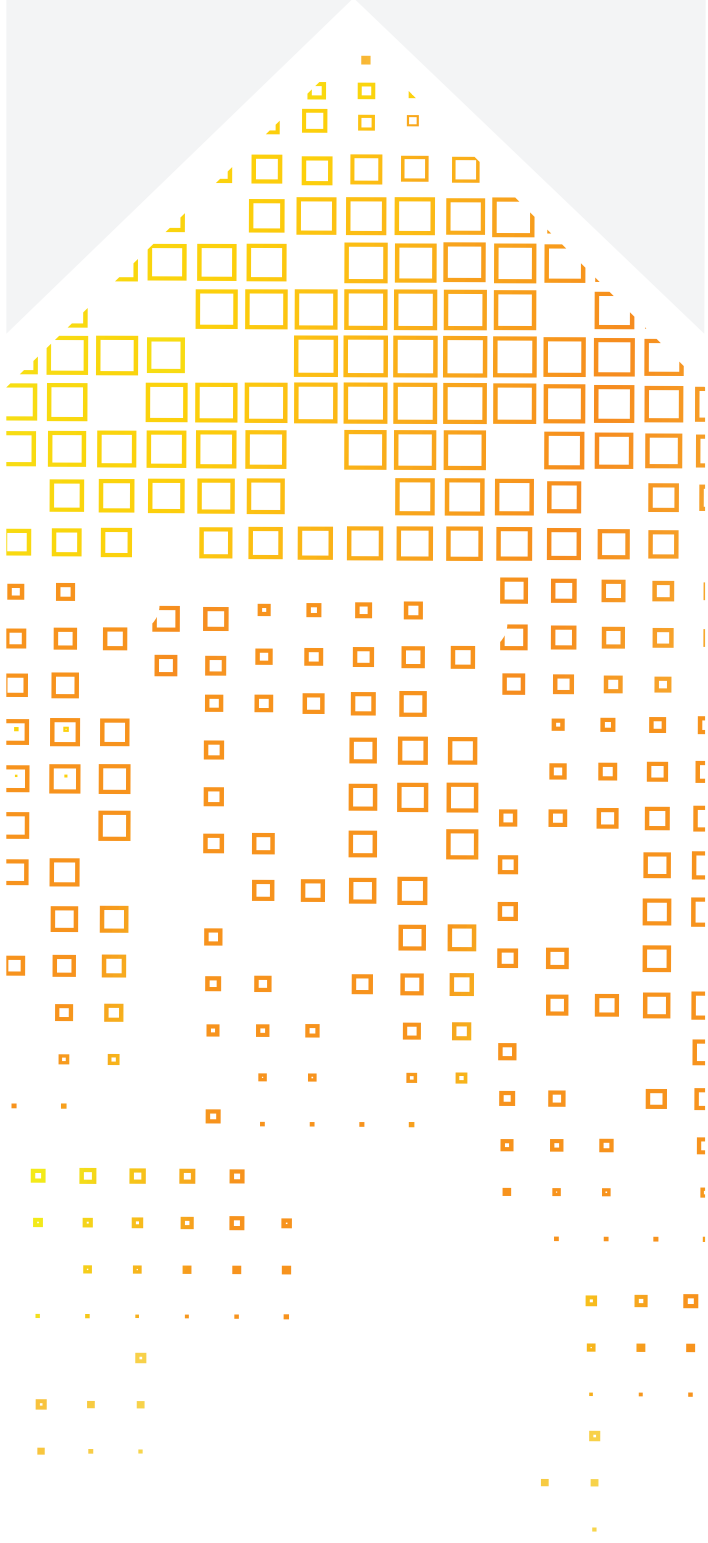
End product to be completed by Feb 2020.

# Augmented Reality Enabled Learning with WonderTree

WonderTree is using technology to redefine special education and therapy, making it cheaper, effective, measurable and more accessible, aiming to cater to people with neurological disabilities in Pakistan and abroad. Wonder Tree specializes in developing augmented reality-based games for the therapy and education of children with special needs. The startup, which is also last year's champion from Pakistan at the Global Entrepreneurship Summit at Stanford University, is a platform that uses augmented reality gaming for development of motor, cognitive, and functional skills of people with special needs.







**FYP** **FUND**



FYP Portal

## NATIONAL GRASSROOTS

### ICT RESEARCH INITIATIVE (NGIRI) – FINAL YEAR PROJECTS

The program aims to assist final year undergraduate students of ICT related disciplines by providing them with financial assistance for developing prototypes/working models of their Final Year Projects (FYP) in order to promote R&D and innovation at grassroots level. The program is being executed since 2011-12 and so far, six phases of the program have been rolled out successfully.

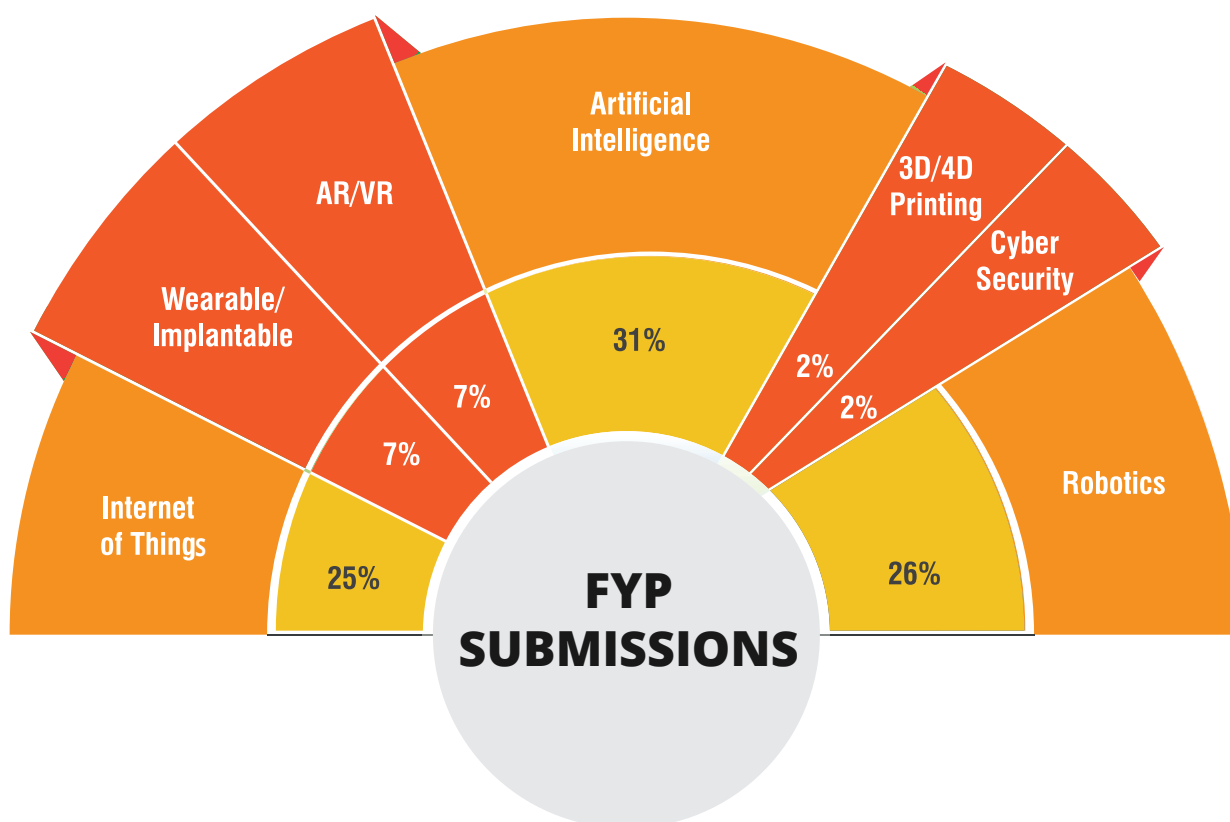
## SUMMARY - NGIRI 2011-18

YEAR	UNIVERSITIES	FYP EVALUATED	FYP APPROVED	FYP FUNDED	DISBURSEMENTS (PKR IN MILLIONS)
2011-12	68	785	272	272	15.27
2012-13	78	1016	418	418	31.70
2013-14	72	1247	430	430	25.13
2014-15	75	1324	436	436	29.59
2015-16	76	1167	512	359	18.14
2017-18	89	1623	569	439	21.45



## FYP SUBMISSIONS BY TECHNOLOGY - (NGIRI 2017-18)

During the year 2017-18, sixth (6th) phase of the program was rolled out. A summary of FYP submissions by technology is provided below:



## National Championship 2017-18

Under NGIRI 2017-18, National Championship among top rated nominated Final Year Projects (FYP) was held in Islamabad. A total of 38 final year projects competed during the championship and various stakeholders from industry and academia also extended their expertise as mentors and judges.



# WINNERS OF NGIRI 2017-18:

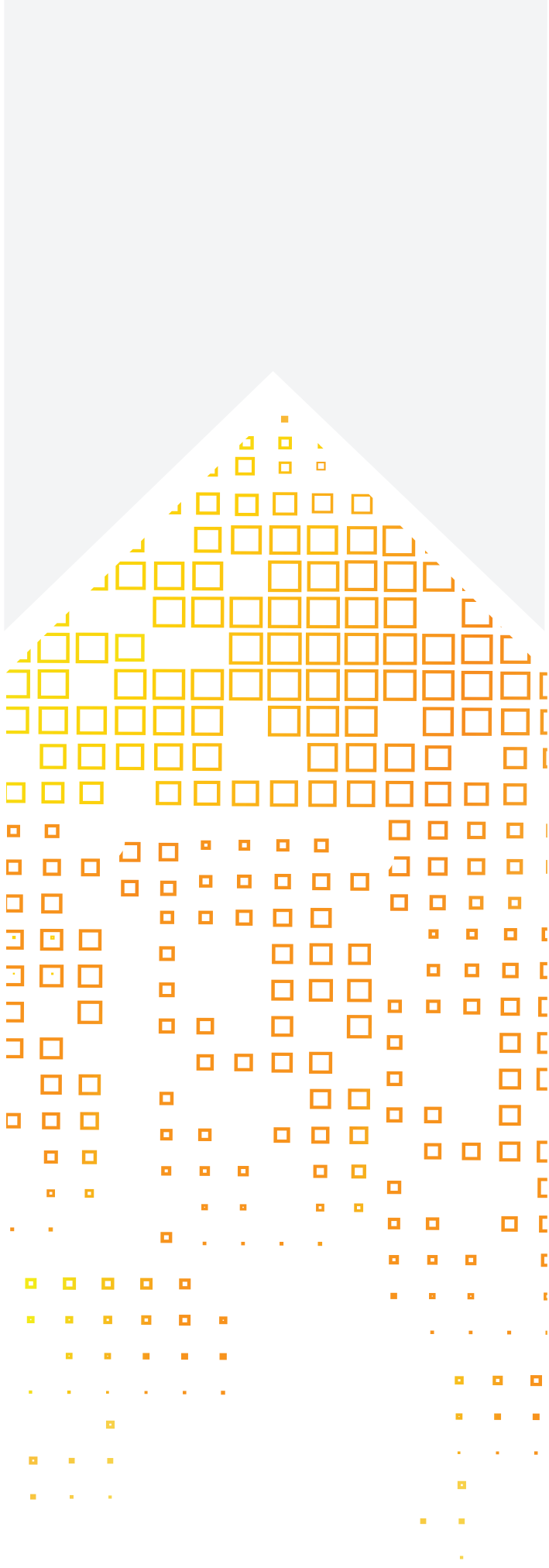
POSITION	FYP TITLE	UNIVERSITIES	PRIZE MONEY (PKR)
National Champion	White Coal Machine: Converts organic garbage into white coal	Usman Institute of Technology, Karachi	500,000
First Runner Up	Control & Operation of Micro-Grid: Microgrid to smooth electricity fluctuations	University of Manage- ment & Technology, Lahore	375,000
Second Runner Up	Crypto Currency Predictor	GKI of Engineering Sciences & Technology, Tapi	250,000

## Eye Smart Helmet, a Startup that Emerged from the FYP Fund

An idea that initially started as a university test project in 2016 at the Balochistan University of Information Technology, Engineering and Management Sciences (BUIEMS) has now become a full-fledged startup that won a PKR 14 million grant from Pakistan’s High Education Commission (HEC) in 2019. Eye Smart Helmet by Ali Gul, a startup, currently incubated at NIC Quetta, made its debut by winning first runner up prize worth PKR 300,000/- at National Championship 2017 - National Grassroots ICT Research Initiative (NGIRI) - Final Projects. On a mission to save the lives of coal miners, Ali Gul has designed



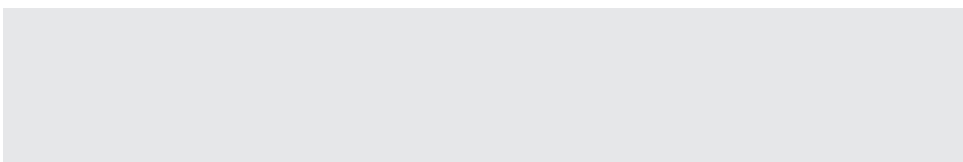
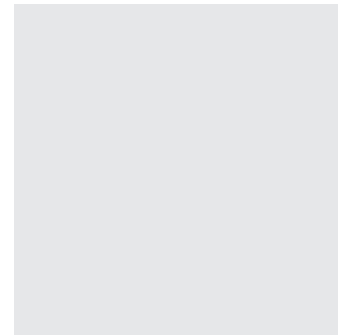
a smart helmet that uses sensors to monitor coal mine conditions and levels of toxic gases. It also keeps track of real-time location and the vital signs of miners and predicts danger through the use of AI.



# OUTREACH

## IT Minister's Forum for Youth, Innovation, Industry & Ease of Doing Business During ITCN ASIA 2019

Inaugural session of IT Minister's Forum for Youth, Innovation, Industry & Ease of Doing Business took place during 19th Edition of ITCN Asia from 17 - 19 September 2019 at Expo Center Karachi. At its pavilion, this year Ignite showcased its SEED funding, Digiskills.pk and 10 startups from its national network of incubators, having two startups from each incubation center. The startups showcased included: Automated Irrigation and Aasaan Booking (NIC Quetta), PIXCILE and Medworks (NIC Karachi), Aero Engine Craft Private Limited and TRYDAN Pvt Ltd (NIC Lahore), Augmentcare and MimAR (NIC Islamabad), Nano Hive and Tutors Gateway (NIC Peshawar). Around 500 people from all walks of life visited the Ignite Pavilion and took keen interest in its various funding streams alongside different products and services developed by startups. Dr. Khalid Maqbool Siddiqui, Federal Minister for IT & Telecom and Mr. Shabahat Ali Shah, CEO National Information Technology Board (NITB) and Chairman Ignite Board of Directors, visited Ignite pavilion and interacted with the startups.



## NIC Karachi Graduates its First Startup Cohort

NIC Karachi organized a graduation ceremony for its first cohort of startups at its facility at NED University. CEO National Information Technology Board (NITB) Mr. Shabahat Ali Shah was the chief guest during the ceremony, which was attended by tech entrepreneurs, business leaders, professionals and students. The 17 graduating startups span a variety of industries, including, education, agriculture, commerce, waste disposal and robotics. Launched in 2018, NIC Karachi is an Ignite – MoITT funded incubator that is operated by LMKT in collaboration with NED University, HBL, PTCL and PPAF. The Center aims to incubate over 200 next-gen businesses in five years.



## 14 Graduating Startups of Ignite-funded NIC Peshawar added Rs. 120 million to National economy

NIC Peshawar hosted the Inaugural Graduation Ceremony to celebrate the achievements of its startups from the first and second cohort. Dr. Khalid Maqbool Siddiqui, Federal Minister for Information Technology and Telecom, was the guest of honor for the ceremony, which was attended by the senior members of the Khyber Pakhtunkhwa Government, Ignite as well as prominent leaders from Pakistan's startup ecosystem. Operated by LMKT in collaboration with PTCL, NIC Peshawar is an initiative funded by Ignite and Ministry of IT and Telecom. Since its inauguration in January 2018, altogether, the graduating startups have created more than 470 direct and 1900 indirect jobs, raised over PKR 192 Million in investment and increased their revenue exponentially to more than PKR 120 Million.



# Ignite-Funded Platform all Set to Revolutionize

## Influencer Marketing in Pakistan

Influencers of Pakistan Islamabad Forum co-hosted by Techlets Pvt. Ltd. and Google Business Group Islamabad, formally launched an Artificial Intelligence based Influencer Marketing automation system to help Pakistani SMEs and Digital influencers find, manage and measure influencer collaborations to boost online sales.

Techlets was SEED funded for PKR 19 Million by Ignite National Technology Fund, Ministry of IT & Telecom, to develop Pakistan's first Big Data and Artificial Intelligence SaaS (Software as a Service) to offer comprehensive consumer profiles i.e., '360 degrees' views of people residing in Pakistan.

PKR **70**  
million in  
Collective  
Revenues

**20** +  
SME  
Partners

**4x**  
Return on  
Investment



The forum was organized to train and engage Digital influencers and initiate a movement led by Techlets that would allow Pakistan's 100k+ digitally active SMEs and over 500k+ digital influencers to bridge the disconnect and make the matchmaking process smarter and much more efficient.

Notes:











Ministry of Information  
Technology & Telecom  
Government of Pakistan

**DigiSkills.pk**  
Sara Jahan Hamara

**Ignite**  
NATIONAL TECHNOLOGY FUND

## DigiSkills Say Free Training Pao

Ghar Bethay Paisay Kamao!



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