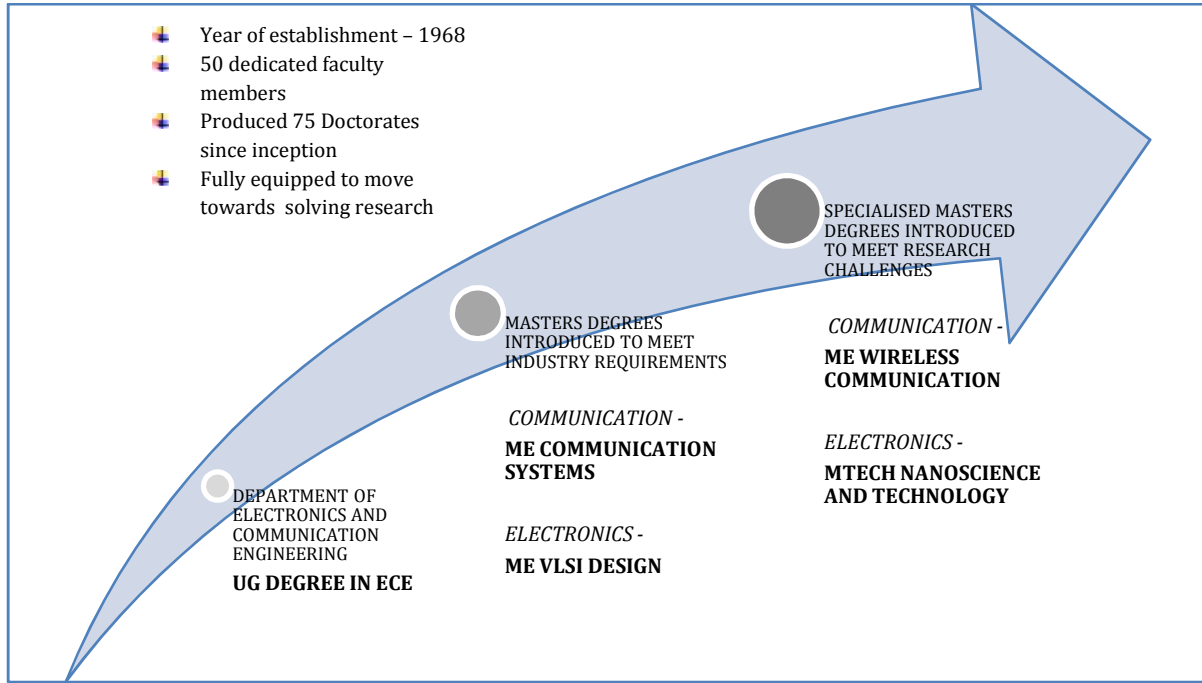


**PSG COLLEGE OF TECHNOLOGY**  
**DEPARTMENT OF**  
**ELECTRONICS AND COMMUNICATION ENGINEERING**

**STRATEGY PLAN**  
**2018 - 2023**

**PSG COLLEGE OF TECHNOLOGY, COIMBATORE**  
**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

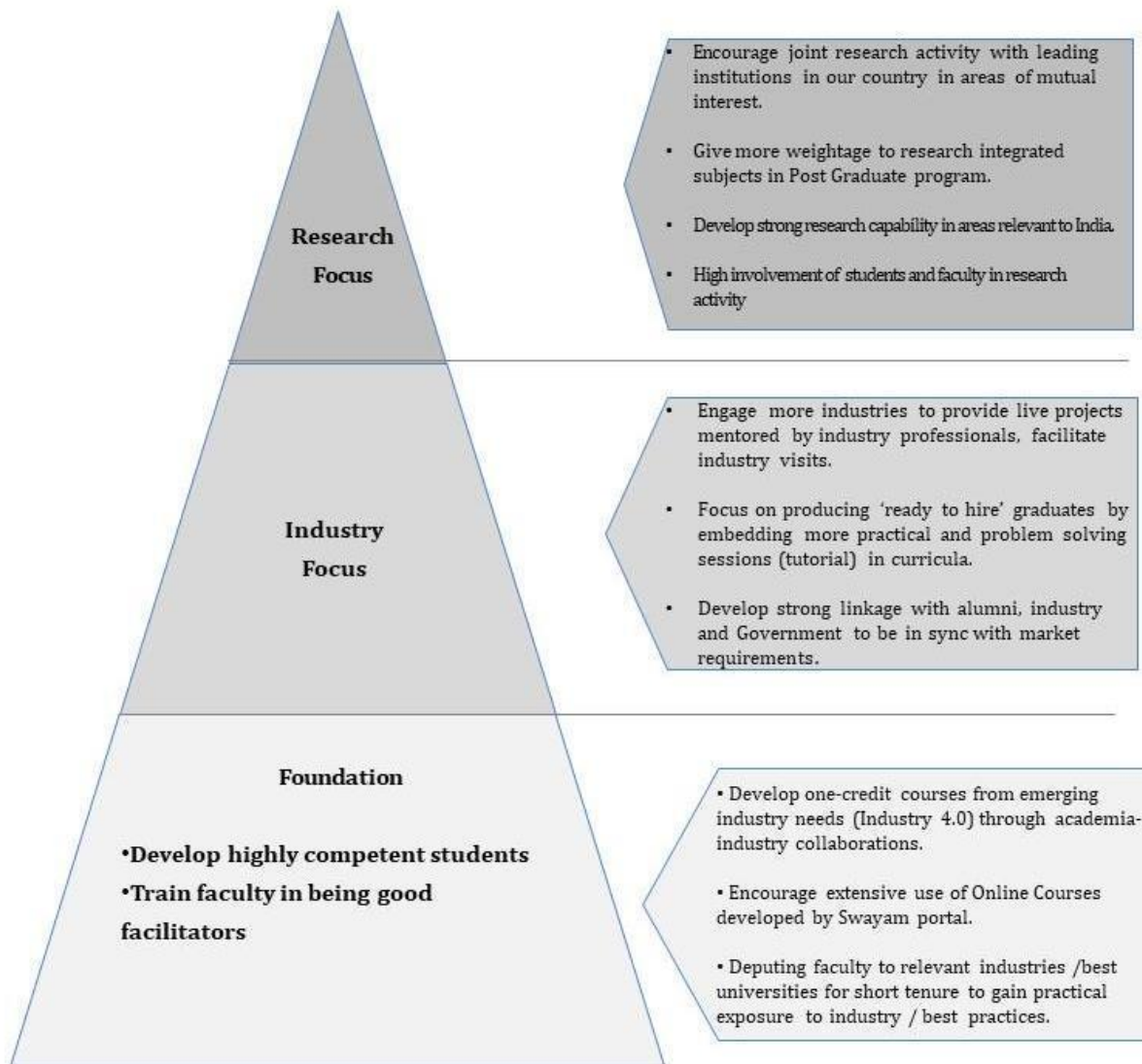
**STRATEGIC PLAN: 2018 – 2023**



**FACTORS CONSIDERED FOR FORMULATING THE STRATEGIC FIVE YEAR PLAN**

- ✓ **Global Megatrends that will drive Digital Business in the next decade -**  
According to Gartner Inc - the World's leading research and advisory company, as provided in *Annexure 1*, the emerging technologies for the next 5 years include 5G, IoT platforms, Connected Homes, Commercial UAVs.
- ✓ **Opportunities in India in Communication domain-**
  - Telecommunication and Telecommunication Infrastructure is the backbone of 'Digital India', as well as Industry 4.0
  - The ongoing Digital India program including Smart City and Make in India initiatives are likely to help telecom sector create 11 to 12 million job opportunities in the next five years, primarily in the services segment, according to the Telecom Sector Skill Council.
- ✓ **Opportunities in India in Electronics Domain -**
  - Government of India has envisioned a policy to substitute the import of electronic products by 2020. Between 2015 and 2020, automotive electronics and industrial electronics are estimated to be high growth segments.
  - Government infrastructure projects such as smart cities, modernisation of railways and increasing automation in industries as well as investments by Electronic manufacturing companies, especially in the mobile phone segment, to serve the Indian domestic market are giving impetus to growth of the Indian electronics segment.

## Overall Strategy for Inclusive Growth in the Department–

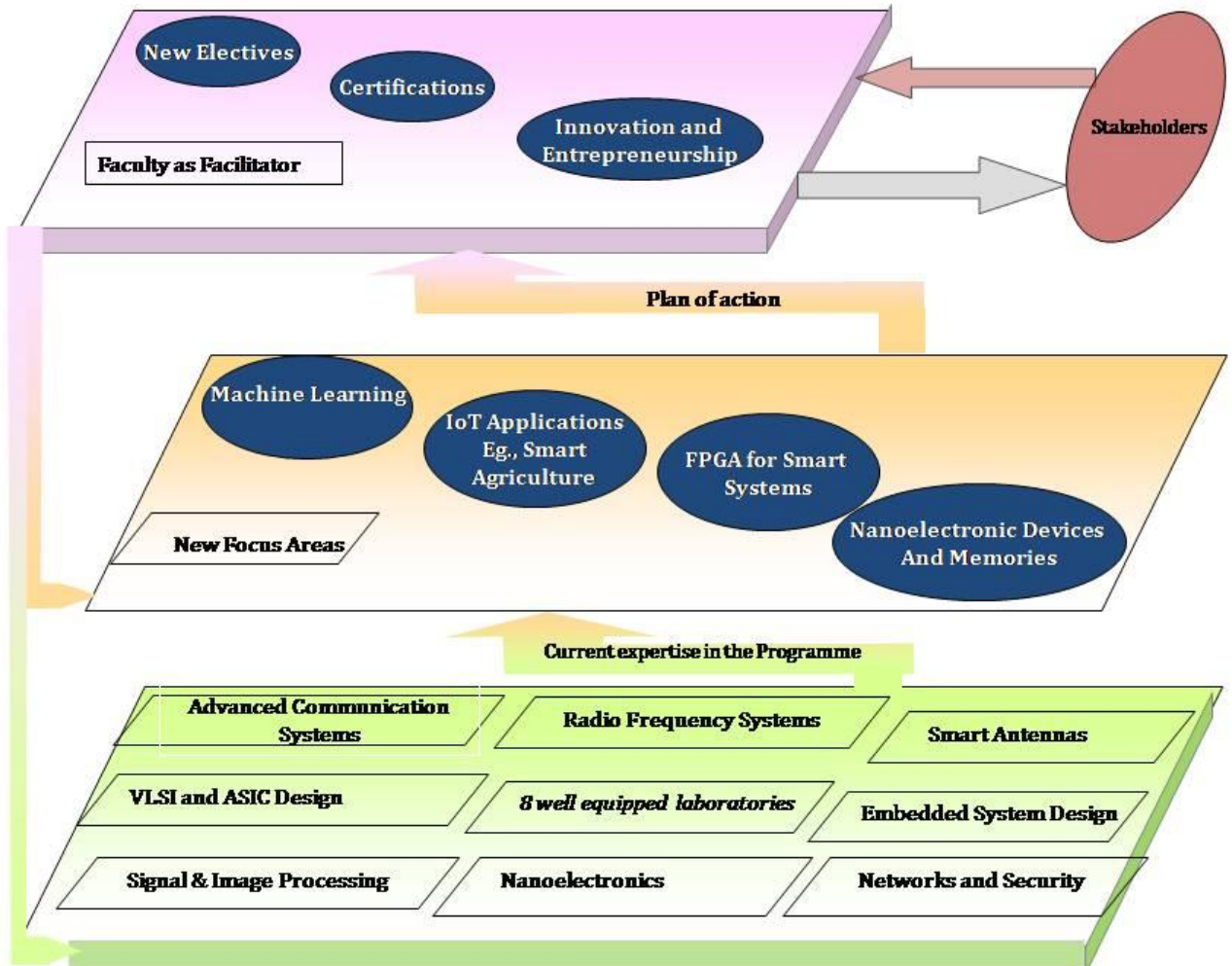


### Specific Targets –

- Collaboration with IIT Madras for research, patents, product development and curriculum development.
- To Collaborate with industry and introduce 2 to 5 One-Credit courses / advanced high impact electives in Curriculum of each programme per year and also offer advanced One Year Diploma Certificate programs for engineers.
- Engaging with the Alumni network for mentoring students and improving their placement prospects; with the average salary level of students to increase by 25% over a period of 2 years.
- To increase the number of faculty members involved in patents, publications and research funding in department from 50% to 75%
- Establish infrastructure to cater to intellectual and manpower needs of the country through corporate funding and schemes announced by Government under Smart City, Digital India and Make in India initiatives through Ministry of Electronics and Information Technology, Dept. of Telecommunications, DRDO, DST and ISRO.

## BE DEGREE PROGRAMME IN ECE

### Strategy -

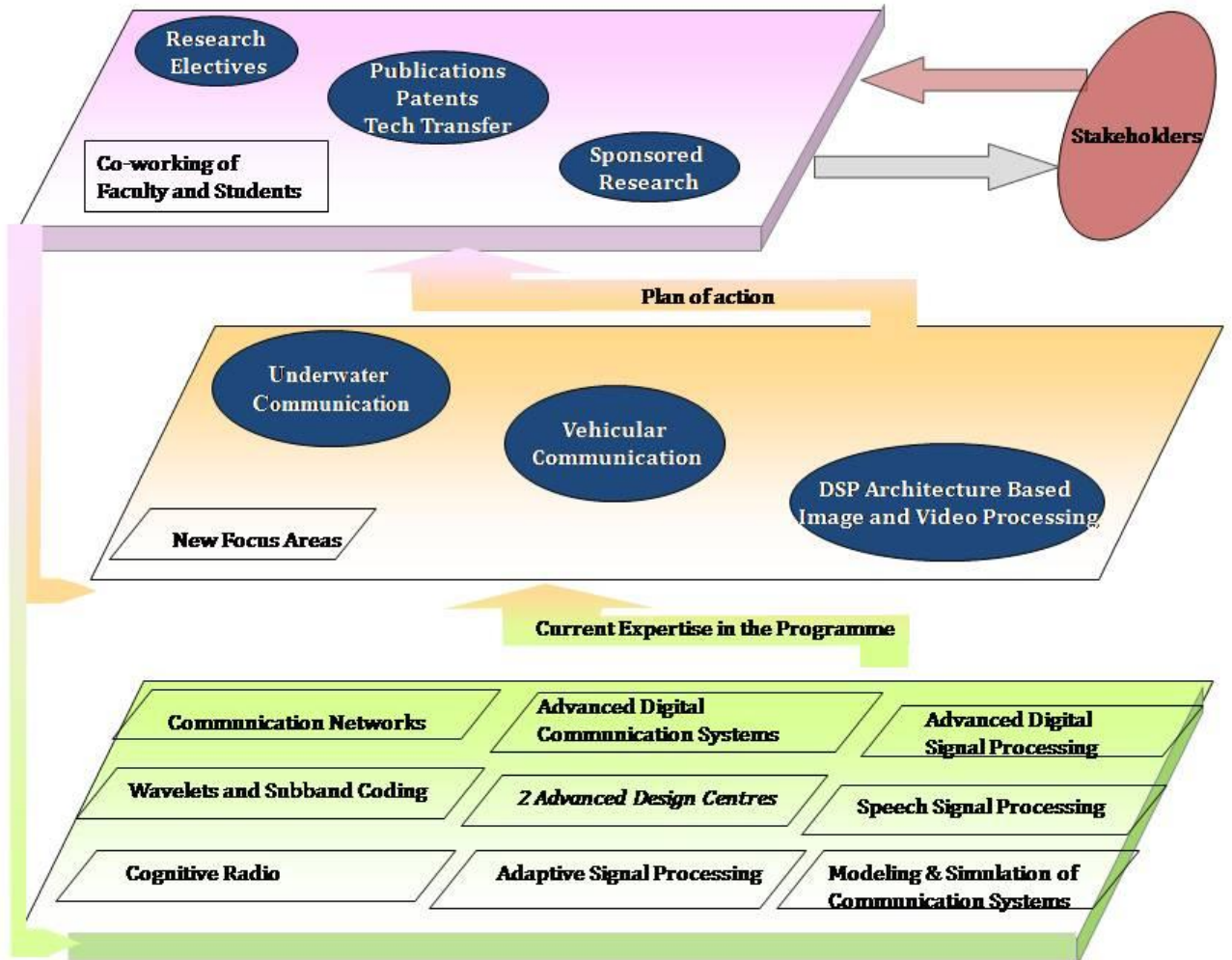


### Specific Targets -

- To discuss with stakeholders (Industry, Alumni, Government) and design curriculum and pedagogy to improve functional skills and soft skills of students as per emerging global and national megatrends.
- To increase the number of students who take up online certification courses that are recognized by the industry.
- To increase the number of industry driven student projects from 75% to 100%.
- To encourage student participation in Innovation Contests and encourage idea-to-product pre-incubation involving students and faculty.
- Every faculty member to be engaged with any one industry at any given point of time.

## ME DEGREE PROGRAMME IN COMMUNICATION SYSTEMS

### Strategy -

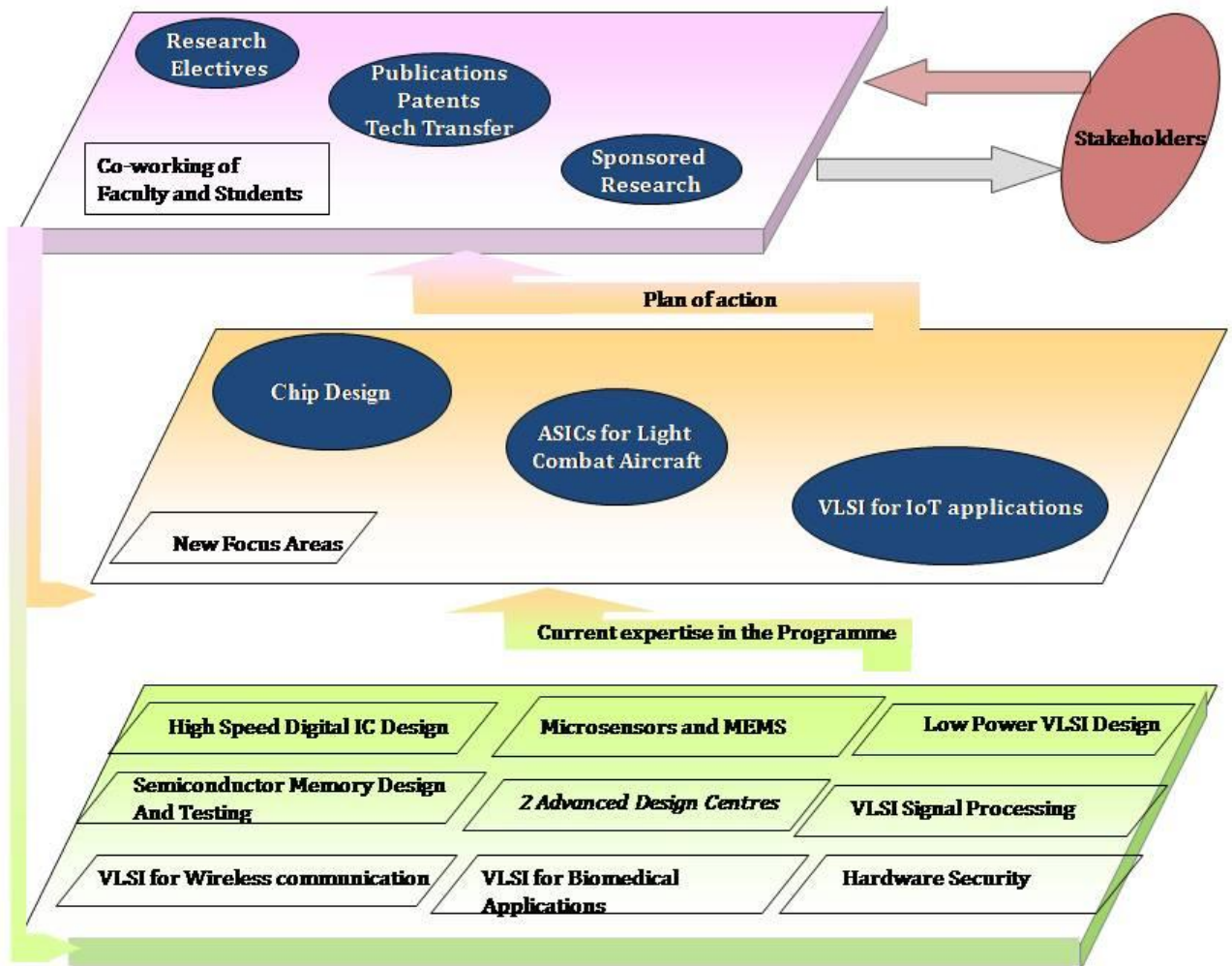


### Specific Targets –

- To leverage the strengths in Signal Processing and Communication towards product development that are of societal value and cater to industry requirements, for instance the Development of Wireless EEG (Disposable) Cap that was successfully developed and technology transferred to Industry.
- Faculty and students to be jointly involved in research activity in new focus areas of industry with IoT, Defense, Connected Vehicles, Connected Homes and Consumer Electronics being priority areas.
- To establish a Defense Incubation Centre.
- To take up sponsored research in IoT based Air Pollution Monitoring in collaboration with IIT Madras.
- To bring the number of industry sponsored projects research/live projects to 100%.
- To publish large fraction of papers in top journals where the peers in top 100 institutions publish their papers.
- To achieve a Ph.D graduation rate of 0.25% per year per faculty member.

## ME DEGREE PROGRAMME IN VLSI DESIGN

Strategy –

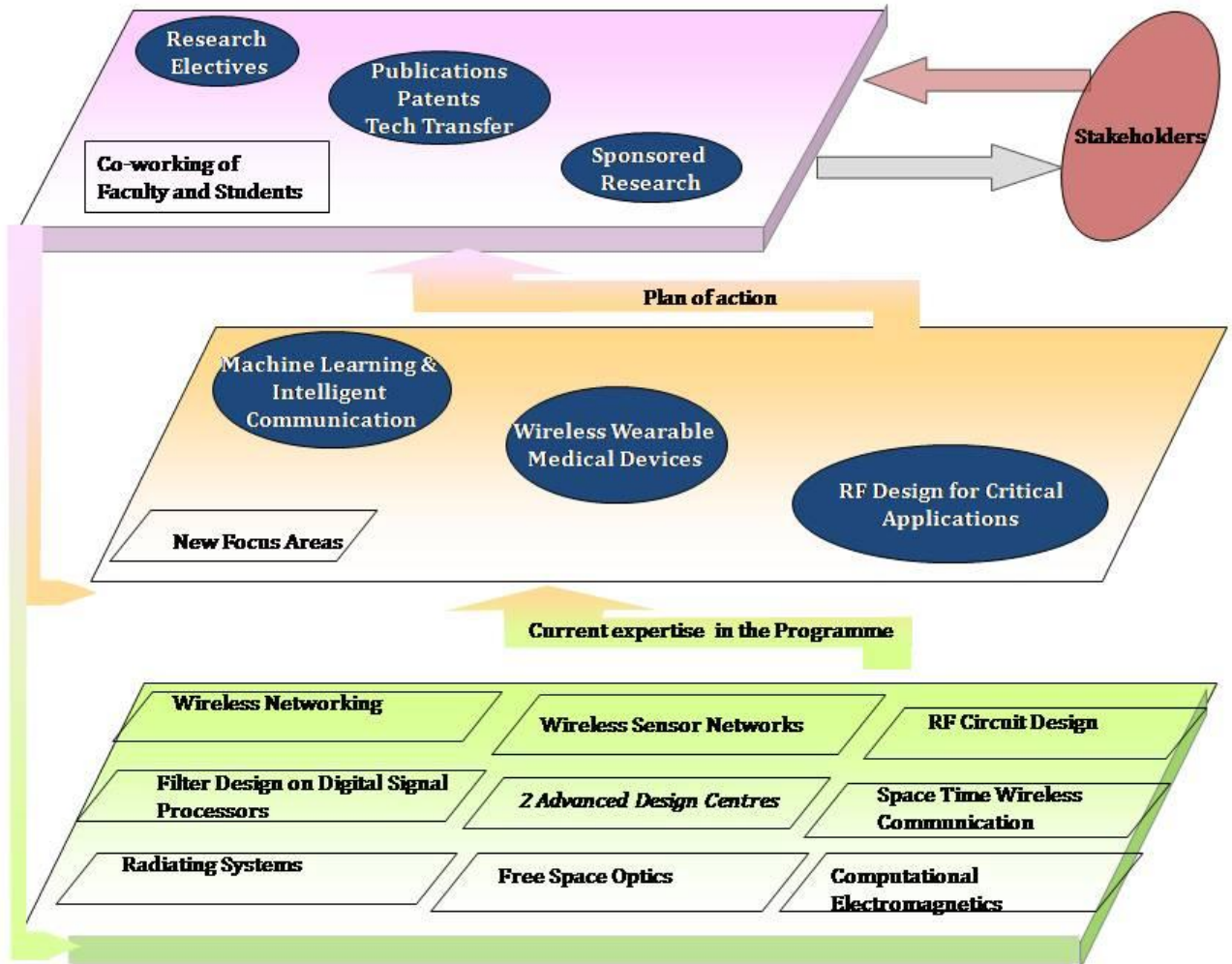


Specific Targets –

- To leverage the facilities available under the Special Manpower Development Programme for Chip to System Design, by Department of Electronics and Information Technology, GoI and assign student projects focused on societal applications and industrial electronics.
- To develop atleast 2 new elective courses by collaborating with industries including Intel, Xilinx, AMD and others based on EDA tools such as Xilinx, Cadence, Synopsys and Mentor Graphics available in department.
- To collaborate with Semiconductor Research Work Laboratory, Department of Space, GoI and IISc., Bangalore for joint research and publication.
- To establish a Defense Incubation Centre .
- To bring the number of industry sponsored projects research / live projects of students to 100%.
- To publish large fraction of papers in top journals where the peers in top 100 institutions publish their papers.
- To achieve a Ph.D graduation rate of 0.25% per year per faculty member.

## ME DEGREE PROGRAMME IN WIRELESS COMMUNICATION

Strategy –

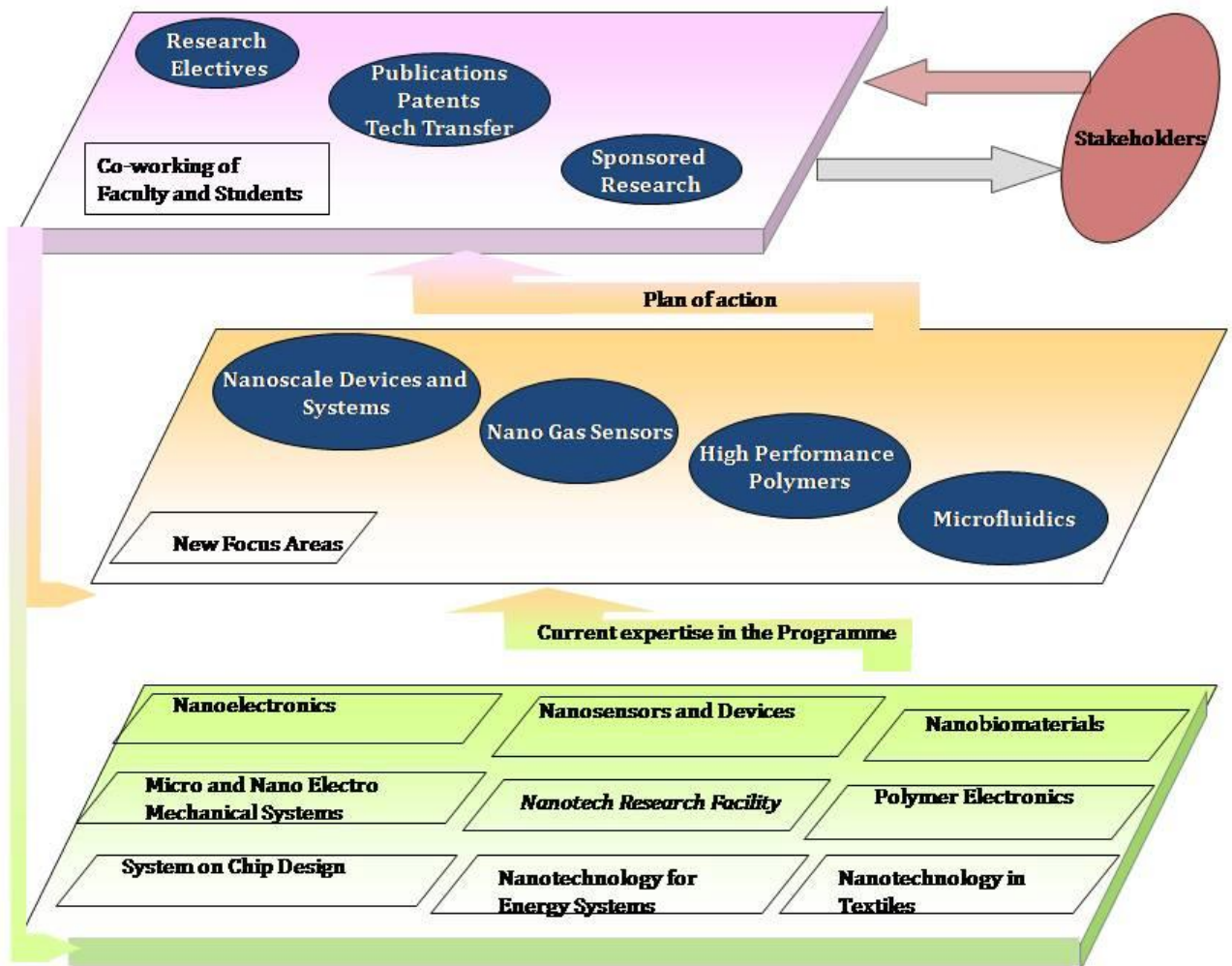


### Specific Targets -

- To leverage the facilities in Centre of Excellence in Advanced Wireless Technology and Advanced Communication Systems to take up industry driven research and joint publications.
- To develop atleast 2 new elective courses by collaborating with the industry partner Keysight Technologies.
- To focus on product development in Healthcare domain following the success of ‘Wireless EEG (Disposable) Cap Based recorder’ and ‘Development of RF Coil for 1.5 Tesla MRI’ developed with funding from DST, GoI.
- Effective utilization of the testing facilities available in PSG-Qualsys Centre for EMI/EMC and RF Testing for research, product development, consultancy and plan for atleast 2 technology transfer in next 2 years.
- To establish a Centre of Excellence in Wearable Medical Devices capable of design, development & testing.
- To bring the number of industry sponsored research / live projects of students to 100%.
- To publish large fraction of papers in top journals where the peers in top 100 institutions publish their papers.
- To achieve a Ph.D graduation rate of 0.25% per year per faculty member.

## MTech DEGREE PROGRAMME IN NANOSCIENCE AND TECHNOLOGY

### Strategy -



### Specific Targets –

- To leverage the facilities in the Nanotechnology Research and Development facility at PSG Tech for development of products that are of societal value.
- To develop new elective courses based on each faculty research areas namely Polymer Nanocomposites, Biomedical Nanotechnology, Sensors and Biosensing in Nanotechnology.
- Focus on product development in Healthcare domain and Nanosensors.
- Establish a Centre of Excellence in Wearable Medical Devices.
- To bring the number of industry sponsored projects research / live projects to 100%.
- To publish large fraction of papers in top journals where the peers in top 100 institutions publish their papers.
- To increase the funding through sponsored research from DST Nano Mission, DST and others in areas of Sensors, Nanobiomaterials, MEMS, Nanocomposites and Nanoelectronics, from 1 -2 crores to 5 crores.
- To achieve a Ph.D graduation rate of 0.25% per year per faculty member.



***WE DRAW OUR MOTIVATION TO REACH NEW HEIGHTS FROM OUR ALUMNI***

***FEW OF OUR ECE ALUMNI IN NEWS – YEAR 2016 - 2017***



Our BE ECE 2004 alumnus Dr Sharath Sriram was awarded "3M Eureka 2016 Prize for Emerging Leader in Science". He has mimicked the way the human brain processes information with the development of an electronic long-term, multi-state memory cell. He is Associate Professor in Royal Melbourne Institute of Technology, Australia.

Our BE ECE 1984 Batch Alumnus Dr Raj Rajkumar, Professor of Electrical & Computer Engg. at Carnegie Mellon University in USA. His General Motors - Carnegie Mellon Autonomous Driving Collaborative Research Lab is about to release Autonomous Car.



Our BE ECE 1994 alumnus Vanitha Kumar, Vice President - Software Engineering at Qualcomm in USA, is selected as one of the top ten powerful women in the world of technology.

Gartner Inc.

Hype Cycle for Emerging Technologies, 2017 – Guide for Investment decisions

