

## Science City of Andhra Pradesh

*'Bold Ideas to Inspire, Innovate and Lead the Future'*

### SCOPE OF THE WORK

In order to create an *'ecosystem for innovative research'*, *'science knowledge dissemination'* and *'generate science-based economic engines'* for growth and knowledgeable workforce, both Government of Andhra Pradesh (GoAP) and Government of India (GoI) has teamed up to build *'Science City of Andhra Pradesh'* under the initiative of Hon'ble Minister of State for Science & Technology and Earth Sciences, and Hon'ble Chief Minister of Andhra Pradesh.

The science city of AP will be developed as collaboration between GoAP and GoI by providing initially Rs.100 crores each, additionally, GoAP will assign land for this project.

#### Scope:

In order to have the competitive advantage in global market place, India has to focus on *'innovation and re-engineering'* the research atmosphere in research labs, and foster innovation-driven education. Therefore, our Honorable Prime Minister, Shri Narendra Modi came up with three national slogans: **1. Innovate in India; 2. Startup in India and 3. Make in India.** In order to make a product; we need to start a company for that we have to have an Innovative and proprietary technology. To accelerate this pipeline, the Government of India (GoI) has allocated about Rs. 44.7 billion (US\$ 662.63) in 2016-17 fiscal budget. The newly bifurcated Andhra Pradesh (AP) state's universities are not included in the list of top 100 in the world for their academic excellence and research accomplishments, and not even a prominent national research institute exists in the state. Although, most of the youngsters have a desire to become a scientist or science teacher but appropriate opportunities are very limited and scientific platform is lacking to support this. Very few scientific personalities exist in the society to steer them towards Science, Technology, Engineering and Mathematics (STEM) education. Therefore, now, it is the time to launch *'Science City of Andhra Pradesh'* which will serve as a *'Science Hub'* in the Navya Andhra which will motivate and inspire them to focus on science as a career.

**Science Cities:** Science cities are the building blocks to serve as catalyst to foster Innovation. The results are outstanding from science cities built in other developed nations. There are some science cities built in India (Kolkata, New Delhi, Mumbai, Bangalore, Ahmadabad and Jalandhar) for the purpose of promoting science by exhibiting displays in science museum, which are supported by National Council of Science Museum, an autonomous wing of the Ministry of Culture, GoI. The Indian science cities built so far by the Ministry of Culture are encouraging and promoting science & society activities, but do not create a platform for innovation-based education and research.

### **Origin of Science City of AP:**

In order to create an *'ecosystem for innovative research'*, *'science knowledge dissemination'* and *'generate science-based economic engines'* for growth and knowledgeable workforce, Honorable Shri. Y.S. Chowdary, Minister of State for Science & Technology and Earth Sciences, has announced to build science cities in five zones across the country in the first phase, and each and every state will have a science city on in the next phase. Our visionary Chief Minister, Shri. Nara Chandrababu Naidu welcomed first this *'science cities initiative'* and progressed fast. In a seminal meeting held with GoI Science Secretaries and Science Minister on December 09, 2015, he has appointed Dr. Krishnarao Appasani, an Indian born, American scientist, entrepreneur as Vice-Chairman & Chief Executive Officer. Dr. Appasani had several brainstorm meetings with science minister Hon'ble Shri. Y.S. Chowdary and initiated to launch **'Science City of Andhra Pradesh'** in Tirupati, which has been registered as a society under AP Societies Registration Act 2001 on August 10, 2016.

### **VISION:**

*"We plan to build the Role Model Science City in the Country which will become a hub for future Science Discoveries and Technology innovations in the Country". Most, importantly, this will become a Unique Science City in the world by 2025 to have Innovation Centers, Educational and Research Institutes and science promoting museums all at one place!*

Eventually, this science epicentre will deliver the following at the end of the project:

- To Create an Ecosystem for Innovative Research
- Science Knowledge Dissemination

- Promote Public Interest in Scientific Research and Industry
- Science-based Economic Engines for Job Creation & Talented workforce

### **SOME OF THE ACTIVITIES PROPOSED to BUILD:**

Although the proposed Science City is '*mega science project in the nation*' that involves multi-crore, multi-year and inter-ministries collaborative venture that is mapped to transform the '*green fields in to future scientific hub*', initially few listed activities are proposed to develop component-wise/individual **Detailed Project Reports (DPR)**:

1. **Science Popularization Program:** In order to create interest in Science and Technology among students from elementary to higher education:

Large unique and world-class Museum(s) will be developed in collaboration with Ministry of Culture keeping:

- Museum of Arts & Sciences;
- Air, Space & Defense Museum;
- Children's Museum;
- Planetarium with an IMAX Theater
- Media Museum;
- Museum of Transport;
- Museum of Human Evolution & Anthropology;
- Indoor Rain Forest and Bio-diversity Museum

Each and every museum will be developed in the lines of well-renowned museums in the world.

We plan to meet the vision of our CM to develop synergy of combining Tirupati pilgrim Tourism with Science Tourism.

2. To gain both national and international reputation to our Science City, Conference Halls for 5,000 people capacity (in the first phase and extendable to 20,000 as need arises) will be built to have National and International Meetings.
3. **Create a Science Ecosystem:** In order to nurture innovation and develop biomedical research, R&D incubation center will be built with all equipment needed to conduct world-

class Biomedical and Physical Sciences research. The intention here is to attract global companies and institutes to set up their facilities initially to train our work force, create jobs and establish a platform for innovation ecosystem. The overall aim is: this particular *'science city acts as a hub for inter-disciplinary science & technology and becomes epicenter'*.

4. Science city infra-structured platform will also serve to host additional Central Government sponsored Research Institutes.

**DPRs Should Focus on the Following:**

Organization Structure with Human Resources Requirement

Details of Land Requirement (Minimum)

Project Financing Required and Source of Funding

General Plan / Layout & Flow Diagram

Project Costs Associated: - Equipment - Man Power - Building Cost - Other Costs

Administrative Setup (Costs)

Checks & Balances (Monetary Evaluation)

Revenue Model for Viability and Sustainability

Expertise Consultation

Time-Line / Schedule Plan / Project Phasing