**Newspaper Clips**  
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**DIPP reviews Startup Action Plan progress after four months of working**  

Around four months after the Startup Action Plan was launched by Narendra Modi in January, the government is now reviewing it to assess if things are on the right path. The department of industrial policy and promotion (DIPP) is collating the progress made on the plan and will report it to NITI Aayog.

The DIPP officials have already held two meetings to understand the developments so far. After recently revising the patent rules to create a conducive environment for startups, the DIPP has put together a group of 280 experts for assisting startups in filing their patent applications. The expert panel includes lawyers and consultants.

The reformed rules now provide accelerated services for patent registration and also include the definition of ‘startup’ for passing on the special benefits. The government also mapping incubation centres across the country in order to ascertain state-wise capacities of incubation and spread the startup movement in tier-II and III cities, focusing especially on the northeastern states.

The DIPP recently launched the startup hub along with the startup portal and mobile app to provide a single-point contact for the entire startup ecosystem. The portal will help startups to avail all the tax benefits announced in the Startup Action Plan.

Some of the incentives announced in the plan include a tax holiday and ‘inspector raj free’ regime for three years, capital gains tax exemption and Rs 10,000 crore corpus for funding of startups.

The government has identified 93 research proposals, in these four months, by Indian Institutes of Technology (IITs) for their innovation potential or possible impact on industry. The proposals have been selected on how relevant they are for the current industry and businesses.

The DIPP will act as a facilitator between the IITs and the industry to take forward these research proposals. The proposals were considered under the Ucchattar Avishkar Yojana by the ministries of human resource development (HRD) and science and technology, and the DIPP as part of the Startup Action Plan.

The government has earmarked a sum of Rs 250 crore per annum towards fostering “very high quality” research among IIT students. Half of this funding will be contributed by the HRD ministry, 25% by the science and technology ministry and 25% by the DIPP.

Each project will be allocated not more than Rs 5 crore. The scheme is limited only to IITS at the moment.
IIT-K's UAVs land on defence radar

Kanpur: Three smart multi-function unmanned aerial vehicles (UAVs) developed by the IIT-Kanpur have reportedly evoked a response from the Indian defence forces as they could possibly be used in military operations and are cheaper than those currently being sourced from foreign countries.

A defence team is expected to visit the institute soon to see a demonstration of the UAVs that could be used for surveillance in insurgency-hit areas as well as in battlefields for various operations. The UAVs are fitted with gadgets of various kinds, including electro-optical and thermal cameras and are ready for mass production, claimed IIT-K sources. The first UAV has been named as SWATI or Silent Watch Aircraft For Tactical Intelligence. SWATI requires a small runway of only 50 to 80 meters to take off and can have a maximum take-off weight of 16 to 22 kgs. It could fly with either fuel or batteries. With petrol, it can stay in air for about eight hours and with batteries it has a four-hour endurance. It can keep an eye over an area of 100 kms.

"A key feature of this UAV is that it can transmit videos live to the base station. SWATI is auto pilot, follows command from the ground and is ready for production," said Prof Deepu Philip of IIT-Kanpur on Monday. Prof Philip has worked on the development on these UAVs along with Prof A K Ghosh, Prof Nischal Verma and Prof Satyaki Roy. A team of 30 students has also worked tirelessly with their professors to make these UAVs a reality. He further claimed that if a UAV with a configuration similar to SWATI is procured from outside India it will cost Rs 2 crores, whereas in bulk production its cost will slip down to Rs 20 to Rs 30 lakh only.

The second UAV is AMITA or Autonomous Man-packable Intelligent Tactical Aircraft and does not require a runway to be launched. The light-weight AMITA can be carried in three backpacks. It can be hand-launched and weighs just six to eight kgs. It can remain in the air for more than three hours.

"AMITA can be guided and navigated to reach its command post from where it is being operated (meaning that this UAV can be guided to reach its navigator's location). If the navigator changes its ground location, AMITA can reach the new location," Prof Philip informed TOI.

IIT-Gn students create technology for safer journeys

Ahmedabad: A new technological solution for safer transport, called "Safus", has been developed by a group of students from Indian Institute of Technology Gandhinagar (IIT-Gn). They claim the solution will free parents from anxiety by updating location of their children's school buses in real time. After several months of successful trial runs, Safus will now be installed, for the first time, in the school buses of Swaminarayan Dham International School.
Three IIT-Gn graduates - Akash Keshav Singh, Harsh Gupta and Sushilkumar Shisode - who run a startup called "Cretif Safety Solutions", have developed 'Safus', which uses a device that continuously transmits its location.

Singh said, "Based on available data and reports, most road accidents occur due to mistakes of drivers. Deriving inspiration from the philosophy that prevention is better than cure, we have developed a sophisticated algorithm that analyses driver's performance and helps them improve and be a safer driver." Once the device is installed in a bus or any other vehicle, parents can track the location of the bus on map through the Safus phone application. The mobile phone application also announces the arrival time of the bus. Meanwhile, in cases of unexpected delays, the transport manager can send an update to parents through messages at the touch of a button.

"We are among the pioneers of this technology in India. It is among the best known safety measures being employed as an algorithm to make fleets safer. The kind of driver analysis we are delivering is futuristic, and no one else has been giving this in market yet," said Singh.

The solution costs around Rs50 per child per month. Trials are currently on in several organizations at this point of time, and the team of young engineers believes that they will serve thousands of parents through Safus.

**IISc team works on software for crowd control at Kumbh**


Bengaluru: The Kumbh Mela that draws lakhs of devotees to the banks of the Ganges has become a subject for a team from the Indian Institute of Science (IISc). It is brainstorming to develop software that can warn of stampedes and offer efficient crowd-management solutions.

To get a real feel of the crowd at such gatherings, 180-odd scientists and professionals, including a 20-member research team from IISc, visited the month-long Simhastha Kumbh held in Ujjain, Madhya Pradesh, recently. "Living in a camp for 44 days and walking 8-10km every day amid a sea of saffron is once-in-a-lifetime experience. However, quantifying human behaviour in a mathematical algorithm is a challenge of another magnitude," said Divyakant Tahlyan, a civil engineer and research fellow in this team.

The 20-member IISc team is working with experts from the University of Amsterdam on the Kumbh Mela Experiment, an Indo-Dutch collaborative research project led by Ashish Verma, a professor of civil engineering department at the IISc and a transportation expert.
The Madhya Pradesh tourism department claims Simhastha, the month-long festival which ended on Saturday, saw 7.5 crore Hindus gather to celebrate Samudra Manthan or churning of the ocean. The celebrations were held in huge akharas on the banks of river Shipra.

"It's a three-year project. We'll build a software (an early warning system) that can take live crowd numbers and calculate disaster threats real-time and warn of the same 20-30 minutes in advance. We are creating benchmark on data collection and crowd dynamics, also because this is the single largest gathering of people, unrivalled by any other community celebrations across the globe," explained Verma, who's also the chief investigator leading the consortium.

The team working on this mega project comprises 20 research staff from Verma’s department at IISc, 20 professors and researchers from the Netherlands, Singapore and Russia and 150 students from various IITs, IIMs and several other reputed engineering and B-schools.

"To be able to work with scientists from across the globe and that too on a project that is being taken up for the first time in the world at a gathering as huge as Kumbh, is definitely giving a new direction to my career," said Divyakanth.

From civil engineers, transportation experts, big data analysts to psychologists and marketing professionals, this project has experts from all fields. The team arrived in Ujjain on April 10 and underwent a 10-day orientation programme before embarking on the project.

"The data collected from Kumbh is massive. We'll feed this data into simulators to give early warnings about a possible chaos or stampede. It will take a minimum of two years to finetune and prepare a model that will work perfectly for any programme in the world," said Verma.

IISC FINDS ‘GREEN’ WAYS TO TREAT CANCER, WITH NEGLIGIBLE SIDE EFFECTS


While most chemicals used for cancer therapy suffer from considerable side effects, the Indian Institute of Science (IISc), Bengaluru, has found 'greener' ways to treat the disease.

The World Health Organisation has estimated that cancer cases would increase by 70 per cent over the next two decades. The most common causes of cancer deaths are lung, liver, stomach, colorectal, breast and oesophageal cancer. It is normally treated using radiation, chemotherapy and surgery. All these methods of treatment, however, carry considerable side effects and thus, treating with naturally occurring compounds is the most desirable way. A research group at IISc, led by Dr SC Raghavan, has reported some natural anti-cancerous compounds in two independent studies.

In the first study, the scientists demonstrated that quercetin, which is a naturally occurring compound abundantly seen in several fruits and vegetables, kills the cancerous cells without having significant adverse effects on non-cancerous cells of the body. The researchers at the lab studied the anti-tumour potential of quercetin, both on mice models of cancer and cells in culture in the laboratory. The anti-cancerous potential of quercetin was very high in comparison to other naturally occurring compound like ellagic acid. Treatment with quercetin showed five-fold increase in the life span of Swiss albino mice having cancer.
While data suggests that quercetin can be explored for its potential to be used in cancer therapeutics, results show that Vernonia condensata holds promise for the development of a therapeutic agent against cancer.

"Quercetin induces apoptosis, a process by which cells commit suicide, in a controlled manner in high stress conditions. It also prevents multiplication of cancerous cells by blocking the process of cell division. Quercetin treatment significantly reduced the size of the cancerous tumour in experimental animals used in the study. Quercetin is so active against cancer that it can even kill the highly aggressive leukemia cell line K562, which is resistant to most anticancerous drugs. Quercetin treatment had no side effect on the experimental animals, which justifies its use as a potential anticancer drug," said the findings.

The second study was done using extract from medicinal plant Vernonia condensata. Dr Raghavan said, "For the first time, our study reveals the potential of extract from Vernonia condensata to be used as an anti-cancer agent. Most of the chemicals used for cancer therapy suffer from significant side effects. Since it is a plant extract, we expect there are limited or no side effects. Further, quercetin is a good chemotherapeutic agent and it might show even better effect when used in combination with other chemotherapeutic agent."

Vernonia condensata is a traditional medicine, which is used for treatment of cough, pneumonia, stomachache, digestive problems, muscular pain, liver problems and diarrhea. "Extract prepared from Vernonia condensata caused death of cancerous cells while sparing the normal cells," the study said. The plant extract was successful in preventing growth of cancerous cells and increased the survival of mice with cancer by 60 per cent. Treatment with Vernonia condensata extract also helped in the recovery of normal morphological features of tissues, which were damaged by tumour growth.
The HRD Ministry has asked the University Grants Commission (UGC) to direct universities to issue and award degrees to students without delay or face "punitive action." The Vice Chancellors have been asked to comply with the regulations and thus the degree award date "shall be within 180 days from the day of the date by which the students are expected to qualify and become eligible for them."

The move comes after the UGC received many complaints about the delay on the degrees. A senior UGC official said a span of 180 days from the day the results are out are more than sufficient to perform the task which constitutes perhaps one of the most fundamental and primary duties of a university.

"UGC has taken a serious view of this issue and will be constrained to take punitive actions as notified in Regulation 9 of UGC (Grievance Redressal) Regulations 2012 against the university," the UGC secretary JS Sandhu said in the letter.

He further stated it is understandable that withholding degree of a student who has successfully completed his tenure in the institution of his enrolment, for whatever reasons, amounts to constraining his opportunities. Under these regulations, the Commission can take action against universities including withholding grants, he added.
DELHI GOVT COLLECTS ₹1.18 CRORE IN DUST POLLUTION FINES

NEW DELHI: The Delhi government has issued 139 notices to construction projects and collected a fine of ₹1.18 crore for dust pollution.

“During the various drives undertaken by Environment Impact Assessment Cell of the Delhi Pollution Control Committee, 139 notices imposing the environmental compensation have been issued to 67 construction projects since December 2015 till date,” said a statement issued by the Delhi government.

According to the IIT Kanpur study on sources of air pollution in Delhi, construction dust is among the biggest sources of pollution in Delhi and NCR. In summers, its concentration is more than vehicular pollution.

AS PER THE IIT KANPUR STUDY ON SOURCES OF AIR POLLUTION IN DELHI, CONSTRUCTION DUST IS AMONG THE BIGGEST CONTRIBUTORS