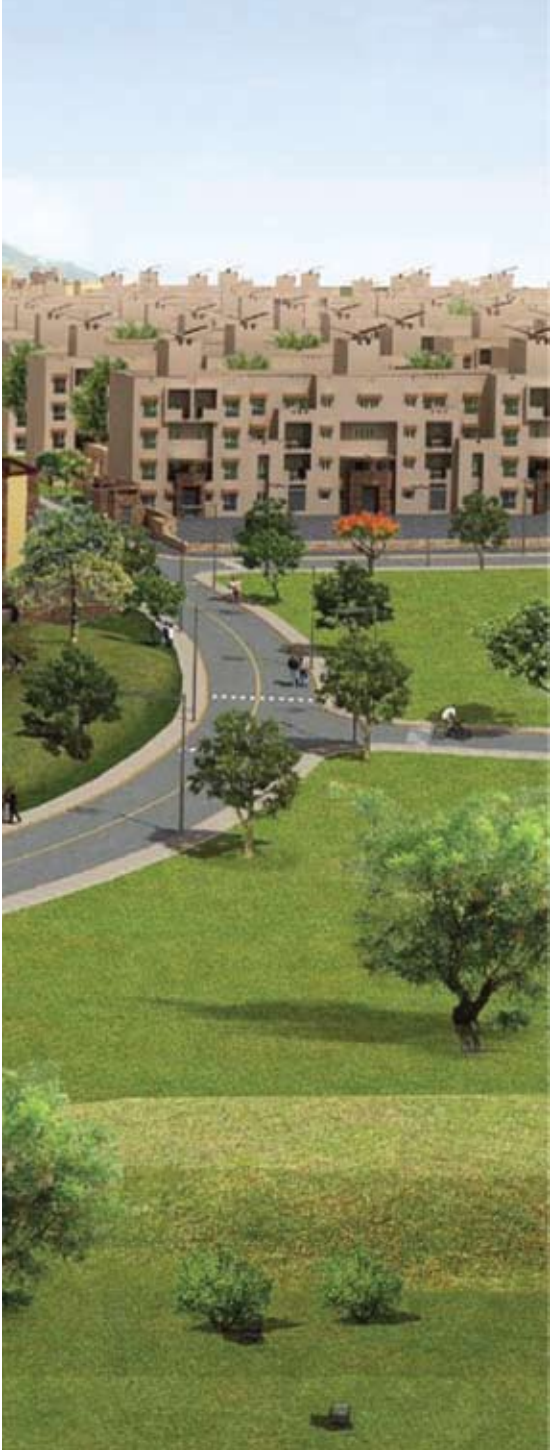




# A TASTE OF THE FUTURE in a medieval setting

NIIT University(NU) is a case study in green learning, and maximising the knowledge potential

BY CHITRA NARAYANAN



As you cross Shahajanpur on the National Highway-8 connecting Delhi to Jaipur, the landscape begins changing— the billion-year old Aravali range becomes visible on the horizon, infusing the high-way with a romantic charm. Turn into Neemrana, enter the gates of the NIIT University, and it seems like you have walked into a picture book. Ringed by hills, framed against azure blue skies broken by white wispy clouds, the campus building set in a natural bowl looks more like a resort than a university.

While it may look unbelievably picturesque now— when NIIT first got

this land, it got commiserations galore from everyone. Even the Rajasthan state government was somewhat apologetic. For this was an extremely tough, sandy terrain for construction— the land is uncultivable, deeply fissured in places, temperatures in summers can soar beyond 45 degrees plus, water is hard to come by, and on rare occasions there are occurrences of mini flash floods.

And yet, as he stood and surveyed the 100-acres of expanse that was available, the drama in the setting and the challenge of constructing here appealed to NU's founder Rajendra Pawar. "Flat land would have been boring," he says with a hint of a smile. Pawar then decided to make the tough task even more arduous by issuing a few diktats— "not a tractor load of earth should enter the campus or go out," "no tree should be cut" and "don't flatten any of the land, but try to integrate the natural contours in the building plan."

Clearly, this would need a very clever architect indeed. Professor Vinod Gupta of Space Design Consultants, who is the creator of India's first intelligent building— the CMC office in Mumbai, picked the gauntlet. But there was a rider attached— he would have to work with a Master Planner. As Pawar explains, "Most university campuses have just happened with buildings added whenever needed, leading to haphazard growth." However, since universities are self-sufficient ecosystems they need to be masterplanned just like an urban city, keeping in mind the core concepts. "The Masterplan of a university is very vital," says Vinod Gupta, the pony tailed, soft-spoken architect, a former professor at the School of Planning and Architecture. "It defines the growth of university as the student strength grows."

So, the campus has been established on a comprehensive long-term masterplan. London-based masterplanning firm YR M Consultants created a blueprint over two and half years. Together, the architects, designers, and landscapists (Shaheer Associates from Delhi), along with the Deans and project management team at NU led by Air Commodore (retired) Kamal Singh discussed, ar-

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gued and debated on how to create the zoning, indicative footprints, and phasing strategy, all the while ensuring that it stuck to the university's core principles.

The brief given was to create a Master Plan for a campus that could eventually accommodate 7,500 full time students of whom two-thirds would be resident on site, 600 academic staff and around 175 administrative staff. These estimates were based on the water availability at the campus. The first round of hydrological testing had suggested that far fewer numbers could be accommodated. But this would not have made the University financially viable. Finally, this challenge was overcome by coming up with a plan to recycle and harvest water, and green the surrounding areas. This as Professor M.P. Kapoor, the founding VC explains, would help in modifying the hydrology of the place.

A walk around the campus reveals how the principles of seamless, student centredness and sustainability underlay all aspects of the Masterplan.

## Seamlessness

From the abstract to the physical, this is the one pervading theme at the NU campus. Be it the Mobius ring emblem, the concept of *Anadi Anant*, the whole ethos of learning is woven around the notion of seamlessness. At the academic level, if the boundaries and limits of education have been removed by unifying curricula,

allowing students to pick up strands from any branch they wish, then in architectural terms, very interesting interpretations have been given to seamlessness. For instance, while the campus is a gated one, with limited access, yet there are no boundary walls visible to the naked eye if you are sitting in the classrooms. The view unrestricted and free.

The sense of enclosure has been

tel and the staff residences are apart giving each privacy. Yet they are deliberately located in such a way that students and teachers will surely run into each other several times a day in areas like the Spine. "That chance talk on the corridor or dining hall between student and teacher sometimes leads to more learning than in the class. room", says Pawar.

By adapting structures to the

this spine. This is where the ATM, the gym, the pool table, and other 'must access' points for the university residents are located. As Gupta says, this is where all the hub of activity will be, where students; will rub shoulders with each other and members of the faculty.

## Sustainability

The campus has been planned so that it will be financially, ecologically and intellectually self-sustaining. After an initial push from NIIT, it will venture forth on the voyage of educational discovery on its own steam.

Keeping in mind climate change concerns and fears, it is being constructed in a manner to minimise the use of electricity and the carbon footprint. Nothing exemplifies this feature of the campus more than its geothermal cooling system for which help was sought from experts with experience at The Energy Resource Institute(TERI). This draws upon the geological fact that 12 feet beneath the earth temperatures remain a constant 24 degrees.

So, all along the campus you will see little towers sticking out. These are where air enters the intricate network of earth tunnels (on completion there will be 16 kilometres of tunnel, perhaps the largest protect of in kind) and is cleaned and circulated. Very little electricity is thus required to cool or heat the moms within the campus.

Gupta has also used clever architectural features in his design to ensure that the dust stays out of the buildings—the large glass windows are all East-West oriented to harness maximum sun, light. Ventilation comes through from L-shaped shafts that bring in fresh air, keeping out the dust. Drawing from local traditions, there are jharokhas, verandahs, water bodies, shading fins and ventilation chimneys.

Fossil fuel consumption is also going to be minimised in this 'pedestrian only' campus, where cars will be restricted to the parking bay at the entrance. From there the campus can be comfortably explored on foot through a promenade that meanders through various building blocks, and seamlessly unifies the campus.

## TERRAIN WAS TOUGH...



...FOR CONSTRUCTION, with deep fissures. Yet, the plan was to convert the dry and barren land into a green haven of learning

cleverly removed by using landscaping innovations like 'Ha-Ha' (this is a way of concealing barrier with nature, a sort of trench, the inner side of which is vertical and faced with stone, with the outer face sloped making it like a retaining wall).

Even the building blocks are planned in a seamless fashion. Unlike other universities, at NU the academic facilities are not split into departments; rather they are run as a single entity.

Much thought has been given to the location of the buildings themselves. Since the learning is envisaged to be 24/7, architect Gupta has tried to ensure maximum access and interaction between faculty and students. For instance, the student hos-

surface contours (basements have been fitted into the deep fissures and amphitheatres planned in natural bowls), the impact of construction on local geology has been significantly reduced.

Gupta has created many interesting spaces in the outdoors where classes can be easily held. "This in Shantiniketan", says Gupta pointing to the central multi-level courtyard, where there is an interesting play of light and shade and seating zones.

## The Central Spine

Every university has one happening zone— here the Spine, so to say, is a long lane between the academic and residential blocks. Each building, even in future phases will connect to

The deep connect with nature is embodied by the two trees right at the entrance to the campus, where, the road is built around them. The 80-year-old trees are named, have a protective retaining wall built around them. Jall Pilu, as the 80-year-old trees are named, have a protective retaining wall built around them. "Anyone who cuts even a branch of a tree will have to donate a thumb!" says Pawar jokingly, but the underlying seriousness is not lost on anyone on the campus. Kapoor describes how each student has been asked to plant a tree and tend to it.

Work is also afoot to conserve water. Eight to ten bunds are being created to harvest and store the water from the neighbouring hillocks. Extensive tree planting measures are also being undertaken on the surrounding hills. NIIT University may own just 100 acres but the greening opportunity exists on the surrounding 750 acres of so-called protected areas as well. Faculty, staff and students of the future will also be involved in the conservation efforts.

## Student-Centredness

The founding batch of students who have joined the BTech course at the university say that they feel privileged and honoured to be the first batch. "The kind of special attention we are getting is unimaginable," says Yajur a BTech student from Chandigarh.

The student-centred approach is visible in small details like the way each of the hostel rooms are designed to give the students a personal view of the scenery. All the buildings are oriented towards the bordering hillocks. By careful planning and placement of the rooms at different elevations, most rooms enjoy an unobstructed view of the beautiful scenery, enjoying "the panorama of nature" as Kapoor puts it.

The design of the campus fosters closeness between teachers and students. The effort is to maximise knowledge and minimise stress—so modules on time management, preparation for life in the corporate lane are all part of the curriculum.

Every student is expected to participate in *Astacha!*, a moment of meditation, in the evening at Sunset Theatre, an open air step structure atop the first theatre in the campus, a spot where the setting sun is beautifully seen.

Created with a rare passion and vision, NU is a blend of the future and the past, and a case study in green learning.

