



It is difficult to see social technology as a vertical. And not without reason: social technology requires vision, persistence and business savvy to build. But one company, Mapunity, led by Dr Ashwin Mahesh, is pioneering the way, says **Arun Katiyar**.

CLEAN SOCIAL TECH, ANYONE?

WHAT does it take to develop technology that seriously addresses social problems and the challenges of development in India? Often, the answers lead to large global organisations such as the United Nations Children's Fund (UNICEF), the World Health Organisation (WHO) and even breakfast meetings with the likes of British Prime Minister Gordon Brown and Microsoft founder Bill Gates. And, of course, tons of money needs to follow.

But one person, with a small team of four, decided to get out of conferences,

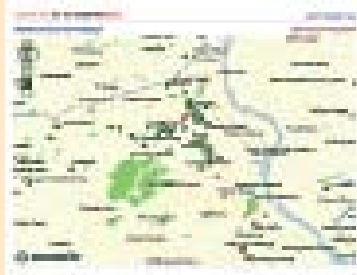
SOCIAL SYSTEMS

Mapunity has delivered on its promise through a string of successful large-scale social projects. Take a look at some of them:

National Election Watch: Democracy & Governance

<http://nationalelectionwatch.org>

The National Election Watch (NEW) is a nationwide campaign comprising more than 1,200 NGO and other citizen-led organisations working on electoral reforms and improving democracy and governance in India. The purpose of this site is several-fold: provide information on elected representatives, information about a constituency, give a chance to the general public to comment on work done by their elected representatives and rate various representatives based on peoples' comments and improvements shown in their constituency during their tenure.



Vaccidate: Public Health Informatics

<http://www.vaccidate.in>

Vaccidate is a simple information platform for promoting public health. It is a free online and mobile-based alerting service that reminds parents and guardians about the vaccination schedules for their children. The recommended vaccination schedule for any given date of birth is used to create alerts on both Web and mobile platforms. In November 2008, Mapunity entered into a memorandum of understanding with Manipal Hospital,

Bangalore, to test and deploy several health informatics products and solutions.

Mapunity: Social Networking

<http://mapunity.org>

Mapunity has developed an online GIS platform that allows communities and groups to create, organise, manage, analyse and share map-linked information. The platform combines maps showing the areas of interest to a community, the spatial data in the form of attributes of the points on the map and membership levels for those who belong to the community so that data sharing follows the function and organisational structure of the user groups.

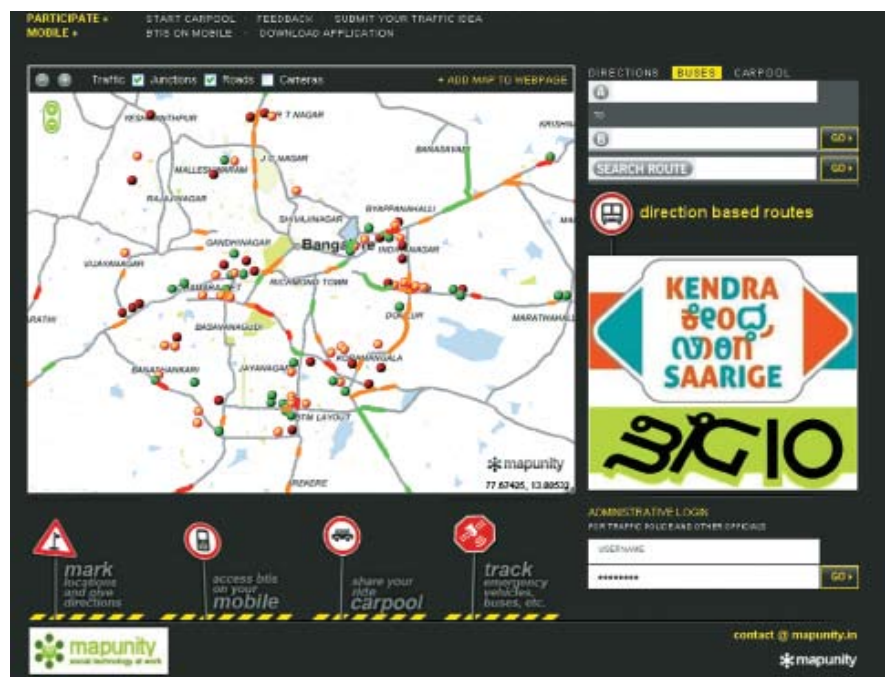
Energy Hub: Energy and Electrification

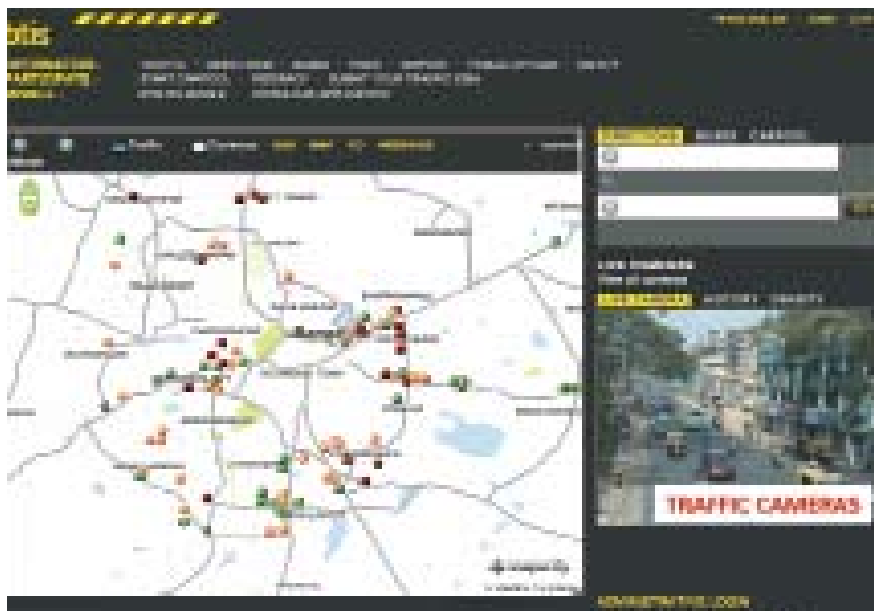
<http://www.energyhub.in>

Energy Hub is a spatial information system to map/monitor sources of non-conventional energy in remote villages that cannot be economically serviced by conventional grid power. The aim is to build capacity with officials and other stakeholders for planning and implementing remote village electrification projects using the GIS and knowledge management (KM) tools. As part of the Global Village Electrification Program (GVEP), Mapunity undertook the task of mapping census data as well as energy sources in remote villages for a few states.

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seminars and breakfast meetings and began the task of building these technologies. Dr Ashwin Mahesh, currently visiting faculty at the Centre for Public Affairs, Indian Institute of Management, Bangalore, runs Mapunity, a geographic information system (GIS-MIS) mobile technologies company that has been profitable ever since inception in 2006.

And its goal? To address large-scale social or economic challenges without asking how existing tools solve the problem. There is just one caveat: the solution should impact 50 million people or more.

While there are numerous NGOs across the country involved with understanding, managing and solving problems like AIDS, dowry deaths and famines, Mapunity has begun to develop technology to easily outline and understand trends that surround such issues.

Today, its free public mapping platform is helping provide a spatial understanding of diverse data such as organic food outlets, organic farms, ambient air pollutants such as sulphur dioxide and nitrogen dioxide, arts and crafts museums, even locations where T20 cricket is popular. The idea is to map and organise data that can help urban administration visualise the problem, watch patterns emerge, act on them and share the insights easily.

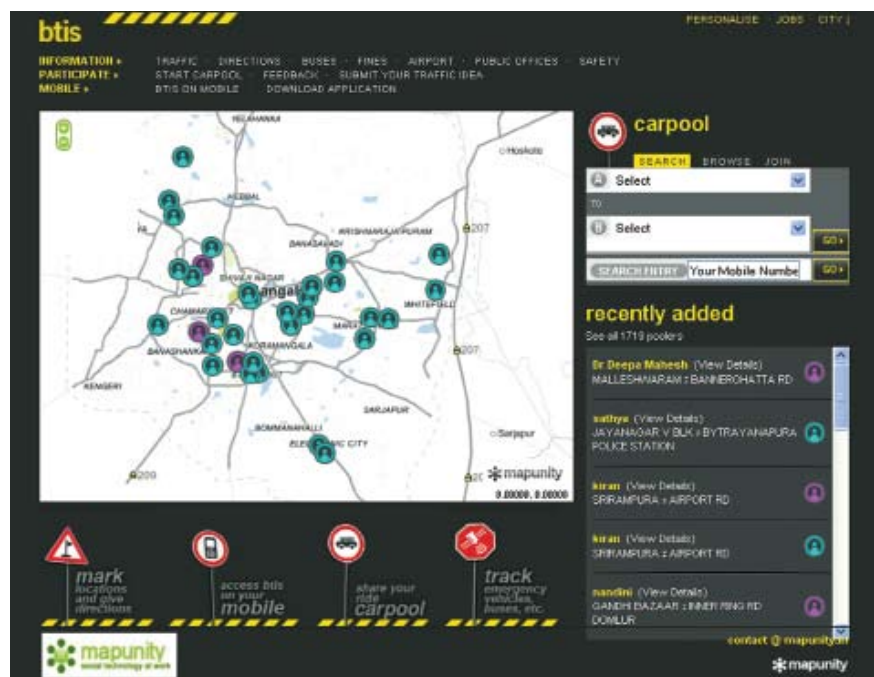
"Spatial visualisation is the key," says

Mahesh. "But our company doesn't build products. Instead we build solutions to social problems." He is quick to add that mapping is not the only way his company addresses social problems. Last year, it began developing a tech platform for microfinance institutions (MFIs) that typically lack the ability and skills to leverage technology.

Says Gokul Janga, director, Mapunity:

"Conventional IT platforms for MFI suffer from some standard problems — high deployment costs, lack of integration with data collection, not planning with the 'Web' in mind, insufficient technology in process mapping and poor business intelligence."

Mapunity conceptualised the platform keeping these issues in mind. Called COINS, it offers MFIs a platform using the



STAR PERFORMER

Dr Ashwin Mahesh wanted to be a physicist, but ended up going to business school. Nonetheless, his real passion led him to work as an astronomer at NASA. "This was a lot more fun, since the world is much more liveable at night," says Mahesh who discovered a star known as 'the companion to LkHα 234'.

Mahesh – who has a PhD in atmospheric remote sensing from the University of Washington – also worked for a decade as a climatologist, studying clouds and snow in Antarctica, using satellite-based detection technologies.

He ultimately decided to come back to India about five years ago and launched his career in public affairs and in developing social technology. Friends funded him, without expecting anything in return, and then his idea was incubated at the N S Raghavan Centre for Entrepreneurial Learning at the Indian Institute of Management, Bangalore.

Mapunity is currently housed at the International Institute of Information Technology (IIIT) in Bangalore. Mahesh says he needs about US\$120,000 a year to run his company – and most of the funding comes from friends, grants and from support offered by business partners.

Mahesh co-edits the public affairs magazine *India Together* that has 200,000 readers and is completely funded by them, bearing out his theory that people are willing to pay to see a good thing thrive. "Latent empathy, trust and a good idea," says Mahesh are all that is required to raise funding.



Dr Ashwin Mahesh
ceo, Mapunity

Mapunity's strength is in understanding the public administration space, identifying the opportunity and ensuring that everyone comes out a winner.

Deepak Malhotra
executive director, Airtel

model of Software as a Service (SaaS). COINS is intended to be a scalable, extensible and hosted service for MFIs.

No one asked Mapunity for the platform — it just built the platform because it felt there was a need. And then waited for MFIs to use it. Says Mahesh: "Building a solution to a problem may not always be justified. But since we, as an organisation, do not work with a profit motive, and operate more or less like a university department, we feel free to work on anything. This often leads to something else."

At the core of the thinking is eliminating the price at the bottom of the pyramid. For a public health project called Vaccidate that sends SMS alerts to parents regarding vaccination schedules for children, Mapunity has leading Indian telecommunications company Airtel as a partner to send free alerts. Vaccidate also sends the alert as an email.

"Tomorrow, if we need to push the

information using IPTV, we will," says Mahesh. On-time vaccinations are a problem that affects tens of millions of children and Mahesh believes that by addressing the vast number of people impacted, he is creating value.

One of the most interesting projects that Airtel has partnered with Mapunity is the Bangalore Traffic Information System (BTIS). A real-time system, BTIS brings together data from GPS devices installed in 800 public transport buses, Airtel's data from cell phone towers for tele-density, the traffic department's live camera feeds at major junctions and intelligent signalling data from public sector major Bharat Heavy Electricals Ltd (BHEL).

The system puts it together on one platform to figure out congestion hotspots in the city. Commuters can get live information on traffic conditions on their Web browsers as well as on their mobile phones via SMS and can plan their travel routes. This live traffic information system



is the first of its kind in India. It addresses the growing need of traffic administrators for centralised traffic monitoring and control infrastructure.

Today the system is available in Chennai, Hyderabad and Delhi as well. "Mapunity's focus is on capacity building using technology for the social and development sectors," says Mahesh. "We are very happy to use our expertise for this initiative, which can help alleviate Bangalore's traffic challenges."

According to him, meeting such compelling information needs in India is a thrilling effort. "The 'technology by Indians' story has been a successful one, well chronicled," explains Mahesh. "With Mapunity, we hope to write another chapter in this evolution, and build world-class 'technology for Indians' too."

Comments Deepak Malhotra, executive director, Airtel (south): "Mapunity's real strength is in understanding the public administration space, identifying the

opportunity and ensuring that everyone comes out a winner."

Having set up the traffic management system, Mahesh is confident that there cannot be a competitor in the space. This is where Mapunity acquires its strength from and, hopefully, its business model as well. Today, using its access to the vast amount of valuable demographic data from a service such as Vaccidate, Mapunity can churn out other services and create new businesses.

As an example, Mapunity has built a carpool partner-matching programme for regular commutes and a vehicle-tracking application for taxi and bus operators using data from its traffic management system.

Mapunity is also building administration platforms for transport management authorities in different functions. Could these become the money-spinners of tomorrow, built on a backbone of cutting-edge social tech?

Mahesh knows a thing or two about social problems and their solutions. During 2005-06, he worked with the eGovernments Foundation, a not-for-profit trust established in 2003 by Nandan Nilekani, co-chairman, Infosys Technologies Ltd, with the goal of creating an e-governance system to improve the functioning of city municipalities, thereby leading to better delivery of services to citizens.

But the curious part about the pioneering work that Mapunity has been doing is not how it wields technology and welds it to needs, but the overall approach brought to problem-solving and business-building by Mahesh.

"No VC will fund us because we don't have a business plan and we are giving away all that we create free," says Mahesh. But he is willing to bet that one day Mapunity would have built something big, useful and successful that it will lead to enterprise systems – paying off for all the lab research Mapunity has put in so far. 🌈