

# Innovate to SUSTAIN

**Sanjeev Gupta, Secretary IT, Himachal Pradesh, finds himself on rocky ground.** He's got the funds to take e-governance to the state's most remote valleys, but he's short on users, making project ROI hard. A cold breeze blows on him: How is he to make essential but non-earning citizen projects financially viable in the long-run, given Himachal's small population?

BY RAHUL NEEL MANI

**CIO:** Himachal Pradesh has the unique problem of creating mass services for relatively few citizens. How do you ensure ROI and the continued viability of e-governance projects?

**SANJEEV GUPTA:** Himachal Pradesh is one of the few Indian states where community service centers (CSC) have percolated down to the *tehsil* (administrative sub division) level. So, e-governance initiatives have already met success here.

The challenge that we face is the sustained viability of future projects, given that the state only has a population of 65 lakh and low per capita income.

But even now, services are available and there are many people using them. Out of 110 *tehsils*, 58 offer to register land records online. Our land record software has a pedigree table, which tracks a family's history with ownership rights. We have

both village and irrigation census register modules. New *Jamabandis* (entries in a register of tenants) are created virtually everyday, every minute.

Thirty-one centers at the sub-divisional level have generated Rs 2.5 crore in just a year. I think this is a phenomenal success given our small population.

During the days of the manual system, people were forced to wait for an eternity and bribe government officers for a license worth Rs 1,000. Citizens are much happier spending Rs 100 at the center where, at least, their work is done quickly. The flip-side is that people could ask us why the government should demand an additional fee to deliver services efficiently, when that's our job in the first place.

In our defense, we have tried to keep user charges to a bare minimum—in order to encourage citizens to keep using the CSCs. The citizens' faith in these

The challenge is in creating continued feasibility, not in creating credibility, says **Sanjeev Gupta, Secretary IT, Himachal Pradesh**, focusing on the state's unique problem.

PHOTO BY SRIVATSA SHANDILYA

services is bound to deepen—after all he's getting updated information.

The challenge is in creating continued feasibility, not in creating credibility.

**What else have you tried to sustain these projects?**

▶ The approach is important. In our case, the front-end is managed by private entrepreneurs who charge every transaction. The rest is taken care of by the government.

Soon, we're going to have integrated CSCs in three districts. The government will put up the capital and provide basic infrastructure, but the recurring costs need to be borne by a private partner. The government will determine the cost of a service and the private partner will take home a fixed share. But, honestly, I am wary of the nation's plans of sustaining 100,000 CSCs when we're struggling with the current state of affairs. Some of the *tehsils* reflect a meager five property registrations a day. Numbers like

that make me worry about the viability of these projects. How will we cope when we open more centers?

**Since the small population is a given parameter, how do you see the way ahead?**

› We have already raised this issue with Union Government, and they have agreed to share the burden of this project with us. The government has agreed to provide us with a cross-subsidy. That's how we plan to get past this problem for now. Without this support, it will be difficult to sustain these massive e-governance projects.

**How have you reached the more inaccessible tehsils?**

› Few people are aware that Himachal Pradesh, despite its difficult terrain, has deep optical-fiber penetration. The state has 24,000 km of roads (out of which 13,000 km is metalled) of which 8,500 km has optical fiber laid into it. When we ran an analysis for a State-Wide-Area-Network (SWAN), we discovered that out of 131 Points

can be an unreliable source of income. So, in some cases, warranty costs reach inordinately high levels as private partners inflate their prices to ensure they recover their any which way. We found that Supply-Operate-Manage (SOM) was a better alternative. What works for us is that since goods are procured with a certain level of warranty, operational expenses are reduced considerably.

Our specific needs demand that we resort to wireless solutions at many locations, which means that we need to watch our warranty costs. In any case, I advocate that SWAN implementation should not be vendor-driven. I've had a vendor ask me for individual leased lines for 25 horizontal offices that each POP connects. At Rs 60,000 per pair of modems, that's a good deal the vendor has cornered. A vendor shouldn't dictate how many leased lines I need to buy. So I toyed with the idea of an E3 or STM switch which can replace a number of modems. There's no point in stacking that many modems, it only adds complexity.

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of Presence (POPs), 101 have fiber connectivity. The other locations will be connected via microwave. We're in a good position compared to other states that plan to lay optical fiber only now and are going to have to pay for it. Infrastructure is already a non-issue here, it's the number of people using the services that we are short of. Strangely, it's one state where low population has become a hindrance to progress.

**In view of the difficult terrain, what innovations have you introduced during project implementation?**

› As elsewhere, our SWAN was completed on a PPP (Public-Private-Partnership) model. But our model differs slightly from the BOOT (Build-Own-Operate-Transfer.) This model demands private players to invest their money and recover it through user charges, which

Now, my total bandwidth charges for horizontal connectivity down to the *tehsil* level is Rs 40 lakh. Beyond to exchange to the POPs the cost is nearly Rs 10 crore. In my view, instead of using the leased line modem, we can physically terminate the optical fiber into the LAN switch of that office. This reduces our spend to a few thousands from millions. We have to think unconventionally and be very careful while spending taxpayer money. If not spent carefully, generations hence will curse us.

**Did other projects share this approach?**

› Our land records system has. No other state's system has come close to the functionality that the software developed by NIC Himachal Pradesh has achieved.

As I've described, every land owner in the state has a unique code assigned to him. This replaces all the

various documents that a citizen would have to carry to register land. And there are plenty: Land records, Himachal Pradesh citizenship, a caste certificate, if he or she is an agriculturalist then a certificate stating so, for instance.

We created a database, which is updated every time a registration takes place. The codification process has minimized a number of workflows. Citizens no longer have to go to a *Patwari* (an officer of the revenue department) just to know the value of a piece of land.

We've also started something rudimentary but innovative to improve tax collection. There was a need to network and computerize inter-state barriers to evaluate the value of cargo each truck carried. There have been cases of people declaring that the goods they were transporting to New Delhi were worth as little as Rs 20,000. The fact is that freight from Delhi to Shimla costs between Rs 5,000-8,000. Only someone with no financial sense would pay that much to ship goods worth Rs 20,000

But at that time we didn't have a Wide Area Network so we decided to place dial-in modems at the barriers to trap trucks declaring suspiciously low amounts.

We started with the Parwanoo barrier. We were not surprised to find that in many cases goods were undervalued up to five times. This has also kept excise and taxation inspectors on their toes because they know someone is watching. The result is a 20 to 25 percent growth in revenue.

The Reference Monitoring System (Refnet) is another unique project, which is also a personal favorite. Refnet monitors the journey of a file in a government office—online. The document is computerized at the beginning of its journey and is called a Paper under Consideration (PUC). The PUC is tracked throughout its lifecycle and this inject transparency into the system. Officials who have a tendency to hold on to files are pulled up.

**Himachal also implemented a tele-medicine project, hasn't it?**

› The project is a C-DAC and Himachal government initiative funded by the department of IT.

It brings medical expertise available in larger cities to the more remote areas of Simla, Chamba and Kinnaur. The project will have dual benefits. Doctors will soon have access to the services of world-class hospitals like



**SNAPSHOT**

**POPULATION:** 65 lakh

**TOTAL POINTS OF PRESENCE:** 131

**OPTICAL FIBER:** 8,500 km

**POINTS OF PRESENCE WITH OPTICAL FIBER:** 101

**PROJECTS UNDER IMPLEMENTATION:** SWAN, Hospital Management Information System, Integrated Community Service Centers, Tele-medicine

PGI in Chandigarh or AIIMS in Delhi. The project will also facilitate online diagnosis from remote locations.

Once we have finished with these three districts, we will replicate the project at 20 other locations over the next three months. We will use ISDN connections where optical fiber is not available. It is one of the most ambitious and beneficial projects we have undertaken so far. Its benefits to citizens who don't have access to hospitals is incalculable.

**Finally, what are your plans for the current fiscal?**

› Our biggest project, the Hospital Information Management System (HMIS), will kick off. We are starting it with the Indira Gandhi Medical College and will soon take it to hospitals across the state.

SWAN, too, is on high priority and we are determined to finish it by the year end. We also need to set up about 530 CSCs and populate them with data.

Apart from this, we already have almost all senior secondary schools computerized. The challenge we are

up against is acquiring software. I am making it a priority to get software packages from the Azim Premji Foundation and distribute them to the schools. We will also impart multimedia education and computer-aided learning to empower people. **CIO**

Bureau Head North Rahul Neel Mani can be reached at rahul\_m@cio.in