

Nurturing Homegrown Innovators and Developing Technology for Public Services and Economic Development

Mahabir Pun, Nepal

Chairman

National Innovation Center

Do you know why is Nepal still a least developed country despite having so many types of political systems, so many “talented” political leaders, and getting so much foreign aid since 1950?

You can write a book or do your PhD on this topic.

Nepal's Import and Export Ratio = 13:1

Import = US\$ 8,760,119,598 (US\$ 8.76 Billion)

Export = US\$ 672,089,549 (US\$0.67 Billion)

Trade Deficit = US\$ 8,088,030,039 (US\$8.08 Billion)

93% Import and 7% Export = Huge Trade Deficit

Source: Ministry of Finance (<http://mof.gov.np>)

(Fiscal year 2016 -2017)

How did that happen?

- No government, since 1950 after Nepal was opened to outside world, gave **priority for the development of science, technology and innovation.**
- No government understood **that talented human capital is the most important capitals** needed for the economic development of a country.

Result: Lost all the talented, innovative human capital.

It is still not too late.

Vision of the National Innovation Center

- To use the **most precious human resources** for the economic development of Nepal
- To **provide opportunities for** creative and talented people in Nepal to use their creativity
- To **uplift Nepal** from the list of the least developed country to a developed country through innovation

How NIC will support the innovators?

- Step 1 - Provide full financial support, space, tools and mentoring **for accelerating prototype design,**
- Step 2 - Provide full financial support, space, tools and mentoring **for product development,**
- Step 3 - Provide full support **for getting patent right, trade mark, intellectual property right,** etc.
- Step 4 - Provide support for **connecting them to investors** so that they can **commercialize** the innovative products and services aimed at impacting the economic and social development.

Goal

- To establish **an independent and financially sustained** innovation center.

Plans for Sustainability

- NIC is **ready to invest on anything** that can bring income for the center on regular basis.
- Working on **several plans** to generate financial resources in Nepal.
- One idea is to develop a 10 MW to 15 MW hydropower station.
- Other ideas: Invest on **renewable energy** such as solar, bio-gas and **manufacturing businesses**.

Current Activities – Technology Driven Projects

- Building a **medical drone** to deliver medicine in remote areas – 12 people working
- Developing **water filter** that can also treat the water using chemical – 4 people working
- Developing **battery maintenance system** for electric three wheelers – 2 people working
- Working with Nepali Food Scientists to develop some **food products** for commercialization
- Ginger processing technology and **ginger products**
- Finding ways to develop some **herbal products**
- Many **more ideas** and **requests** have been received.

Medical Drone

For Delivering Medicine in Remote Villages

- Rotor Blade – Octocopter (Range 15 KM max.)
- Fixed Wing Drone – Range 30 KM or more

Some Team Members of Drone Project



Test Flight



Water Filter and Treatment System



Main Features and Services of Drones

- It is designed, fabricated and assembled by **Nepali Engineers**.
- It will be fully **autonomous**.
- It will deliver medicine up to **3 Kg**.
- It will collect body fluid sample for **pathological** testing.
- **A hub** will be set up at nearest hospital with doctors, lab technicians, and a pharmacy to serve the rural clinics.
- Rural health posts, the hub and city hospitals will be **connected to each other** for **telemedicine**.

Major Partners: Ministry of Health and Local Governments

Village 1



Village 2



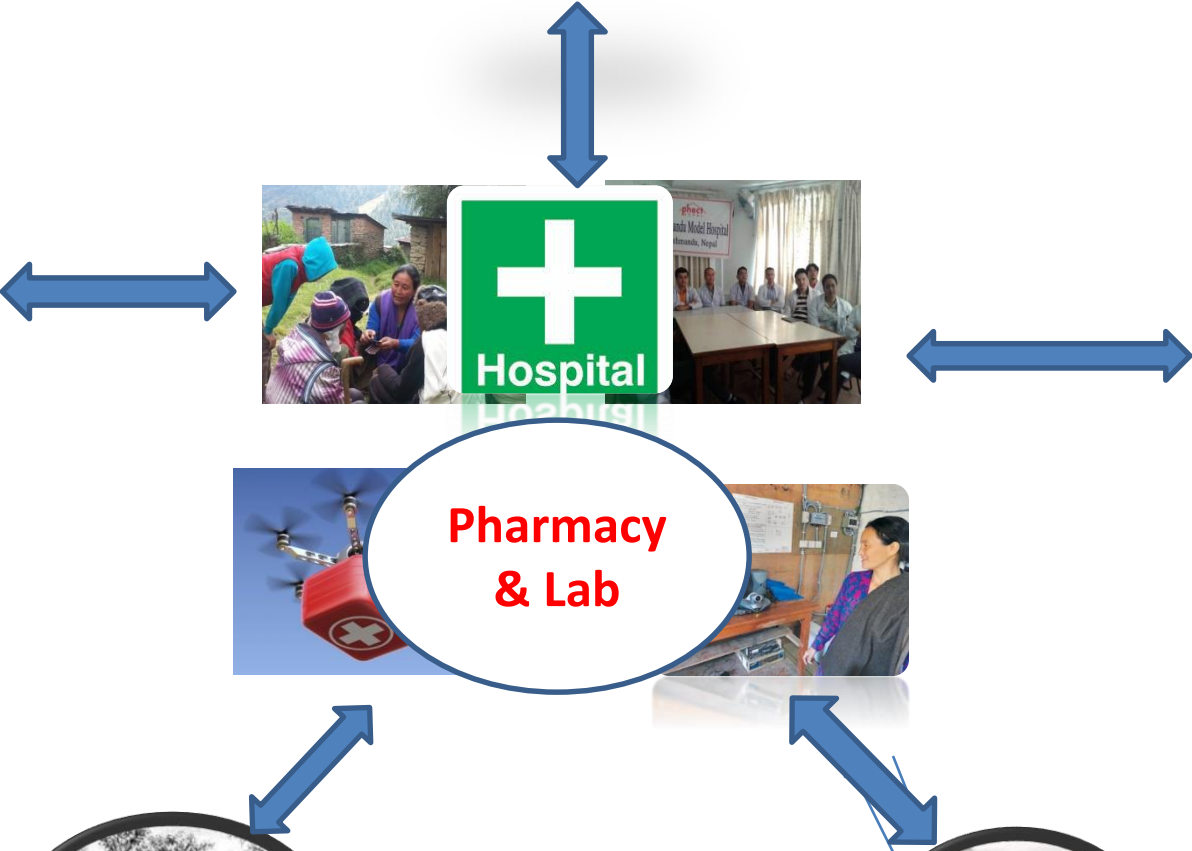
Village 3



Village 5



Village 4



Projects driven by public needs and services – Smart Village/City Program

- There are **753 units** at local level government – village, town, cities, metros
- Building a package of applications that can help to provide **health, agriculture, education services.**
- ‘Smart’ is buzzword – it implies things like sensors and big data to many, but for us – it will be **all about process improvements and information distribution** using Internet and broadband.

Chinese Proverb

“Give a Man a Fish and You Feed Him for a Day. Teach a Man to Fish, and You Feed Him for a Life time”.

Thank you

Website: <http://www.nicnepal.org/>

Email: nicnepal.mahabir@gmail.com

Mobile: +977 9841592361