

Presentation on

**Skill Oriented Mechanical Workshop cum
Automobile Workshop and Training
Center**

At

Kathmandu University

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Current state of economy in Nepal

- Nepal's gross domestic product (GDP) for 2008 was estimated at over US\$12.69 billion
- 115th-largest economy in the world
- Agriculture : 32.12%
- Industry : 7.6%
- Agriculture employs 76% of the workforce
- manufacturing/craft-based industry 6%

- The major manufacturing industries produced jute, sugar, cigarettes, beer, matches, shoes, chemicals, cement, and bricks.
- The garment and carpet industries, targeted at export production, have grown rapidly since the mid 1980s whereas jute production has declined.
- Industrial estates were located in Patan (also called Lalitpur), Balaju, Hetauda, Pokhara, Dharan, Butawal, and Nepalganj

Tenth National Plan

- National Development plan presented by National Planning Commission of Government of Nepal 2007-2012
- Duration of the Development Plan- 5 Years
- Main Contents : Vocation Educational Development of Nepal at local level for the people of Nepal

MAJOR OBJECTIVES OF SKILL ORIENTED TRAINING

- **Expansion:** To expand the training opportunities and services.
- **Inclusion and access:** To make access of training to all needy citizens and to ensure the opportunity of training to all.
- **Integration:** To integrate various training modes and training providers into one system.
- **Relevancy:** To link training contents and outcomes of the training with economic demands.
- **Funding:** To ensure sustainable funding to create such an environment where the technical education and vocational training market can take off.

**Skill Oriented Mechanical Workshop
cum Automobile Workshop and
Training Center
at Kathmandu University**

Kathmandu University

- Situated only 28km from Kathmandu-Not far from Capital city
- Situated in Kavre District
- Kavre has about 90 VDC, three Municipality.
- Situated between three municipality- Banepa, Panuti and Dhulikhel

School of Engineering

Started on August 1994

- Mission
 - Develop creative leaders equipped with the quality knowledge and skills to solve the complex Engineering problems as well as innovative technologies and intellectual properties as a contribution to the society

Departments

Mechanical Engineering

Compute science and Engineering

Electrical and Electronics
Engineering

Civil and Geomatics Engineering

Development of KU School of Engineering

1st Phase (1993-2002)

Planning of a four year Bachelor of Engineering education in Mechanical, Electrical and Electronic Engineering and Computer Engineering

Support of academic staff (equivalent to 16 professor year)

Support to acquire most necessary lab and workshop equipment

2nd Phase (2004-2007)

The project is extended until 2007 by retaining same overall objectives, this phase was more focused for development of master level program in engineering.

3rd Phase (2008-2010)

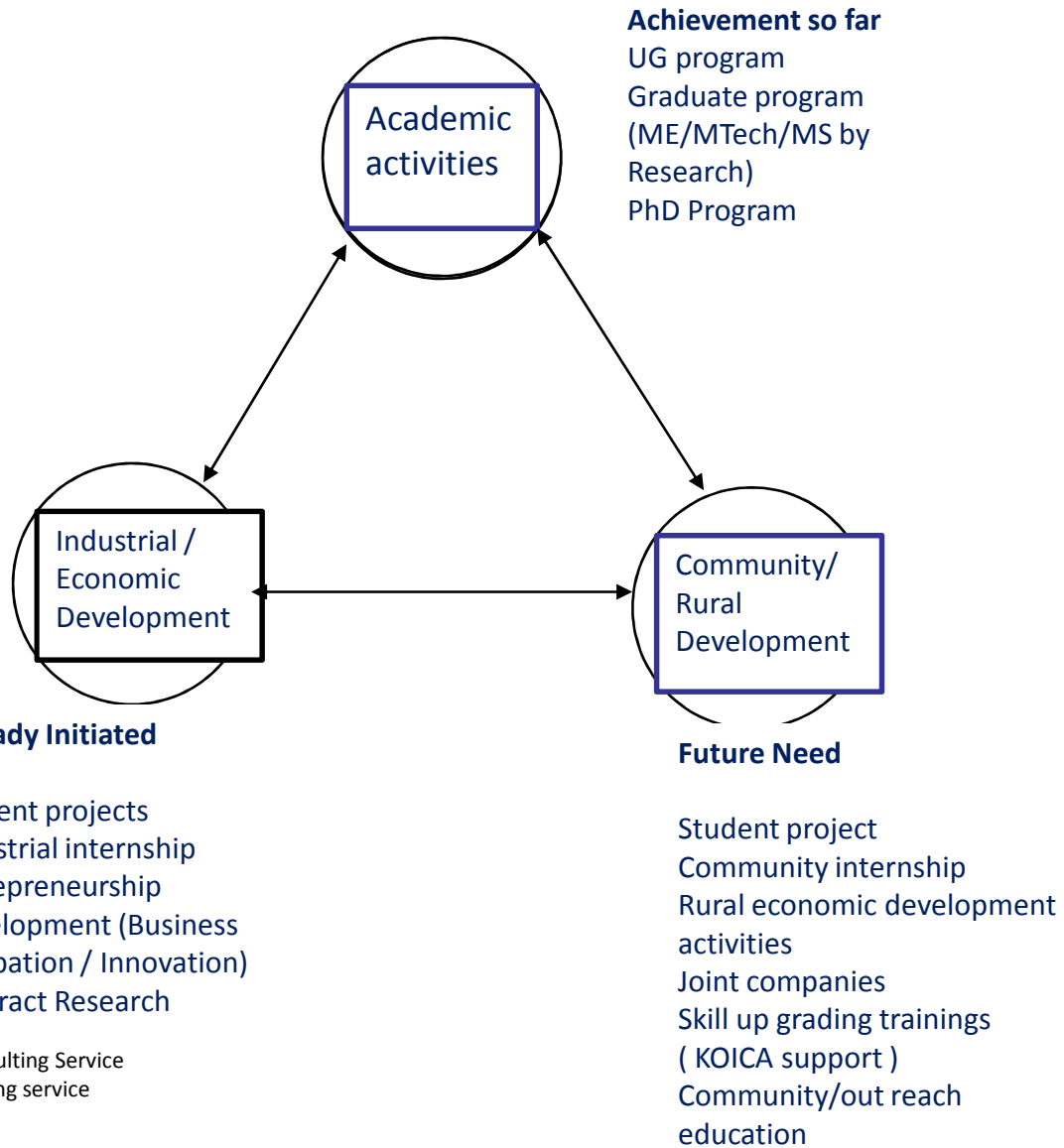
The third phase of the project is 2008-2010 with the project goal to assist School of Engineering at Kathmandu University (KU) to *“develop creative leaders equipped with the quality knowledge and skills to solve the complex engineering problems as well as innovative technologies and intellectual properties as a contribution to the society”*

Overall achievement

KUSOE has become pioneer to teach engineering education in the country. With the success of KU, several other engineering institutes has established and offering courses in different disciplines

KUSOE is running master program for developing creative leaders in engineering
KUSOE has started PhD program and this will contribute to solve the problems of local.

KUSOE has created specialized laboratory that can be used by Nepalese industry
KUSOE has initiated applied and contract research, which contribute for innovate or incubate industrial and economic development in the country





Kavre District Map

Catchment Area

Sindhupalchok

Ramecheap

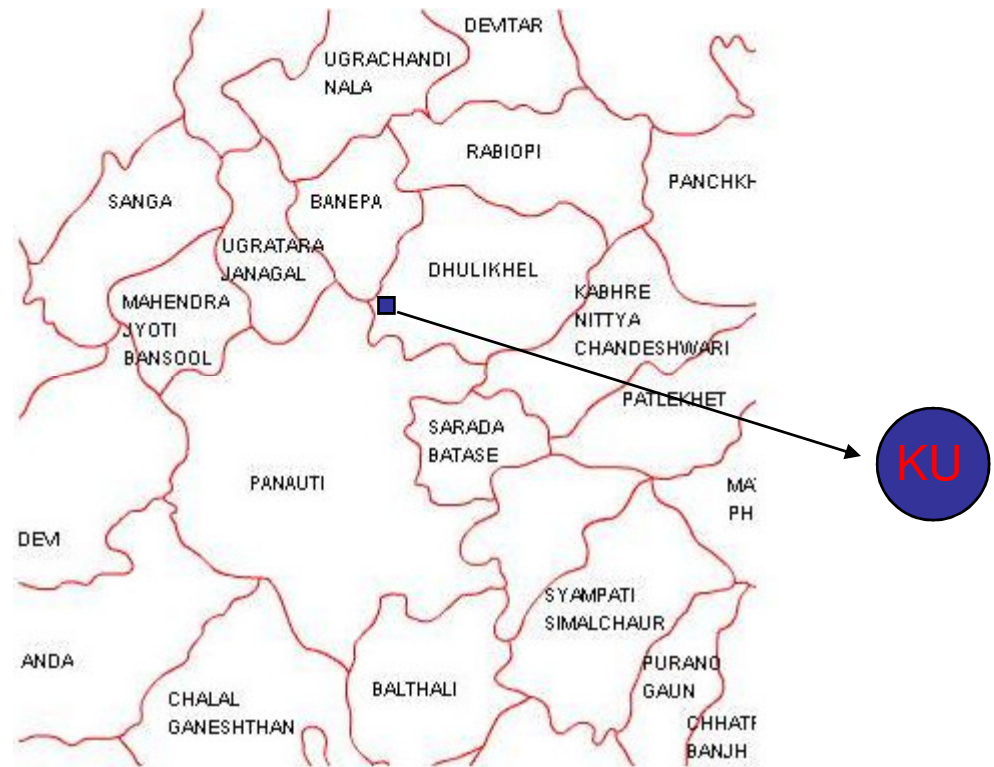
Sindhuli

Makawanpur

Kathmandu

Bhaktapur

Lalit



- KU has good infrastructure, proper and efficient manpower
- KU had organized such a skill oriented training program before
- It would be easy to manage the workshop and conduct the training program in the future.
- The project is targeted to under privilege local youth of this region.

- Very near to Arniko Highway (about 800m)
- This highway is used to join China
- Road is being constructed to join South East region of Nepal (Sindhuli, Bardibas etc)
- weather of Dhulikhel
- Learning environment for trainee at Dhulikhel is excellent.

Operation of the Training Center

- There is a separate autonomous body to operate this center
- Training center is operated, handled and maintained by this body
- This body will operate under Mechanical Engineering Department, KU

Mechanical Engineering Department



Autonomous Body

(Chief Instructor, Admin officer, Admin Assistant etc.)

General Mechanical Section

- Instructor
- Assistant Instructor
- Junior Assistant Instructor
- Helper
- Store Keeper

Automobile Section

- Instructor
- Assistant Instructor
- Junior Assistant Instructor
- Helper
- Store Keeper

Fields

1. Automobile
2. General Mechanical
 - Machine Shop
 - Welding and Sheet metal
 - Fitting and Carpentry

Automotive

- Automotive Industries are developing day by day in Nepal
- Most of the graduates from KU is working in the automotive sectors
- Lots of accident and damage of automotive parts is due to lack of simple and proper knowledge
- Provide Competent workforce to get opportunity of self employment.
- Provide advanced level technicians required for the industries, business and service
- Foreign Employment

Overall Road Network (km)

Year	Highways	Feeder Roads	Urban Roads	District Roads	Total	
2004	3,339	4,196	2,260	7,486	17,281	
2010	4529	4380	3828	14683	27,420	Estimated
% Growth	36	4	69	96	59	Estimated

Overall Vehicle Registration

Year	Bus	Minibuses	Heavy Vehicle	Car/jeep/van	Pick up	Micro bus	Tempo	Motor bike	Tractor	Others	Total
2006	14859	4919	29922	83369	1095	1766	7323	347452	33865	4000	4226018
2010	32651	8717	60362	170393	4881	14428	14940	750289	80213	8999	9548360
% Growth	120	77	102	104	346	717	104	116	137	125	126

General Mechanical

- Backbone for any development work
- Lack of competent workforce in industries
- Self employment
- Foreign employment (Korea)
- Government Services

- Machine Shop
- Welding and Sheet metal
- Fitting and Carpentry

Jute Industry

Sugar Industry

Cigarette Industry

Beer

Marble

Garment

Steel

Cement

Automobile

Food and Beverages

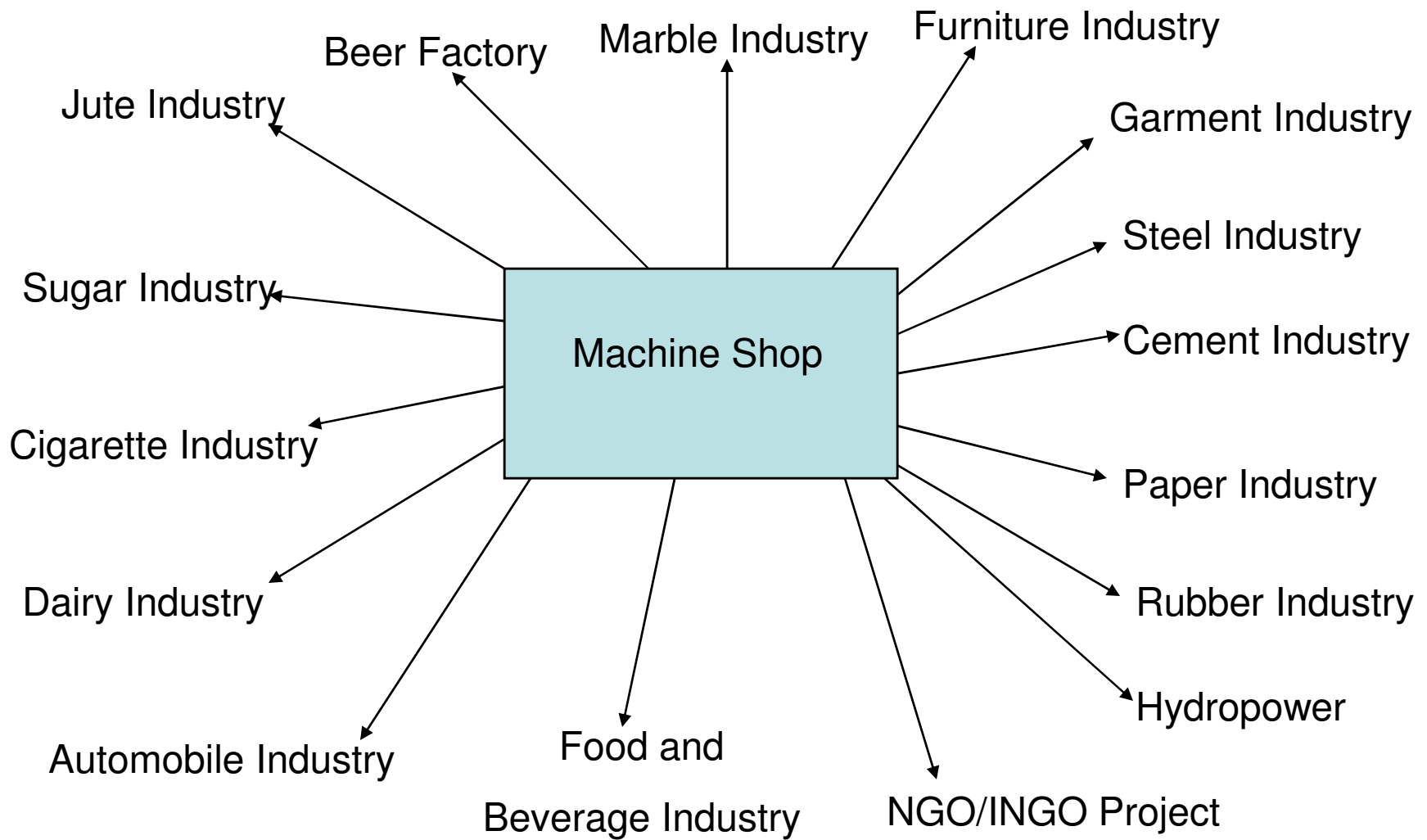
Dairy

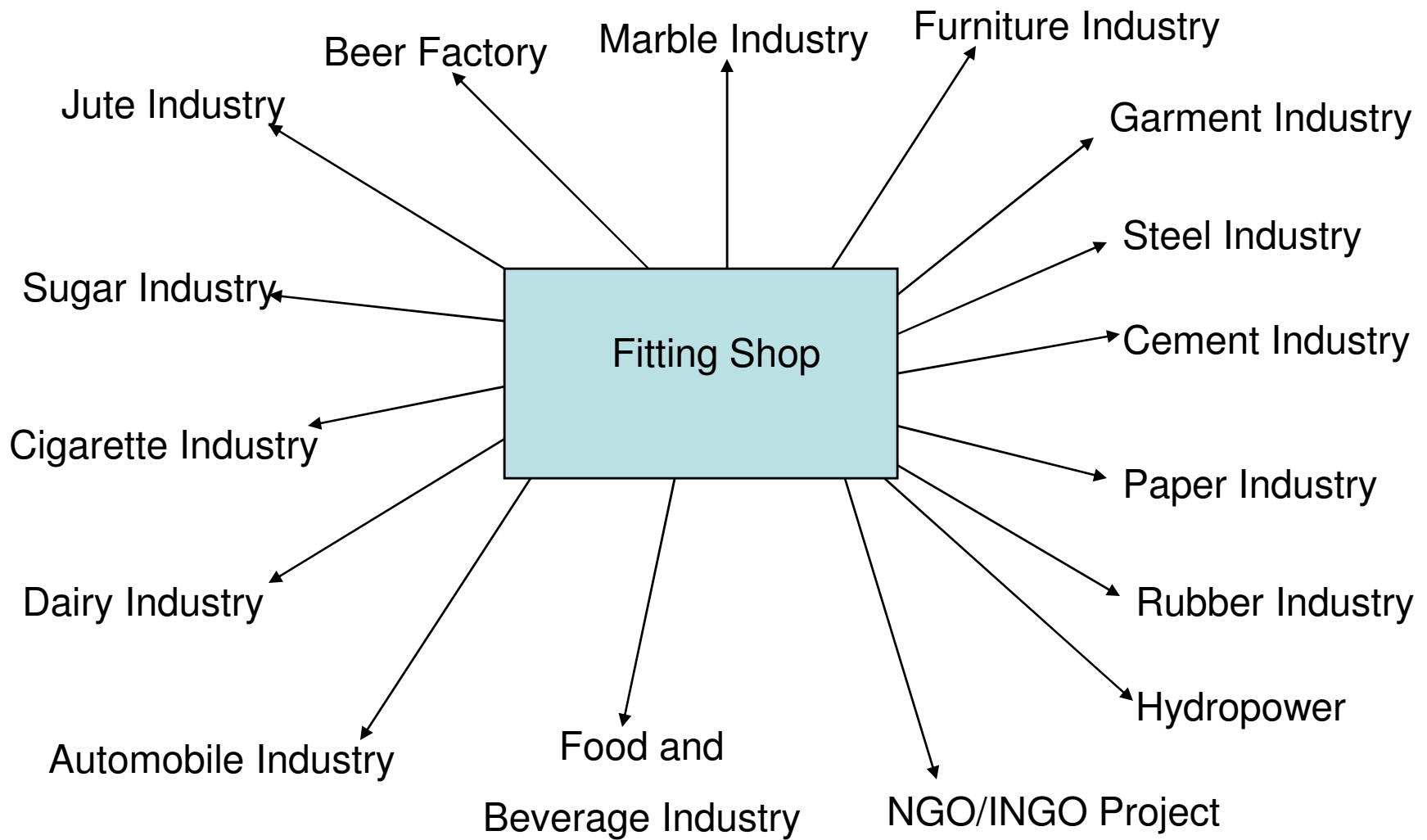
Paper

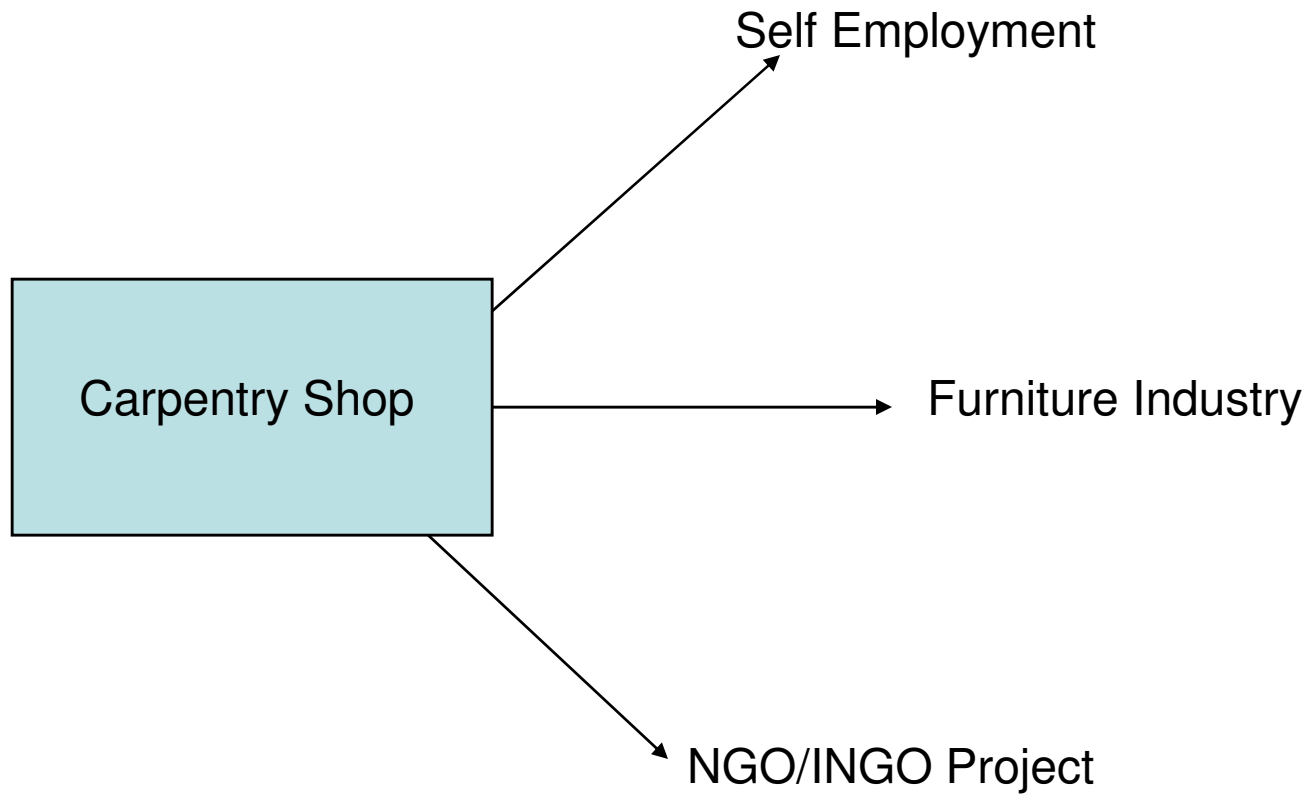
Hydropower

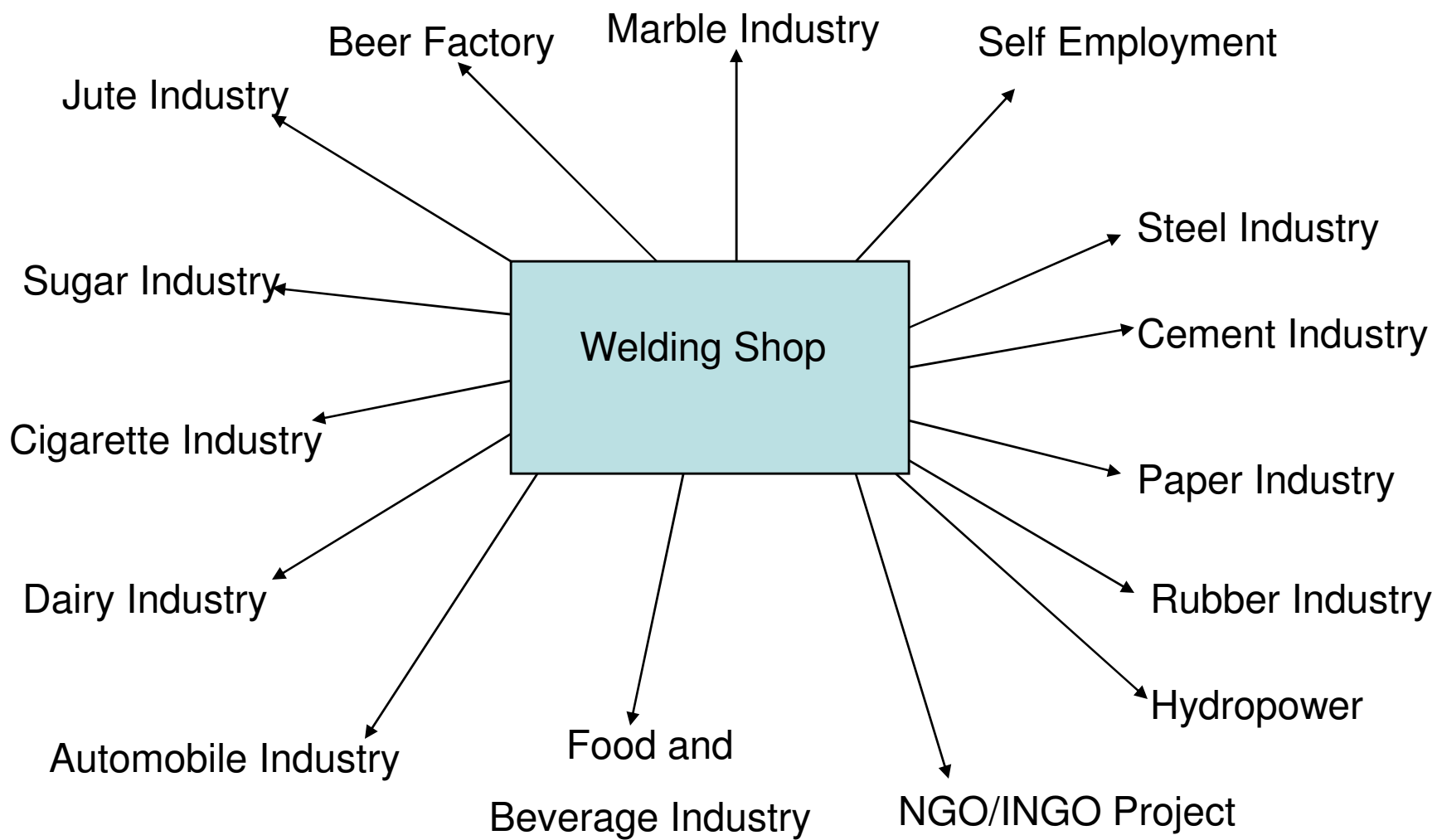
Furniture

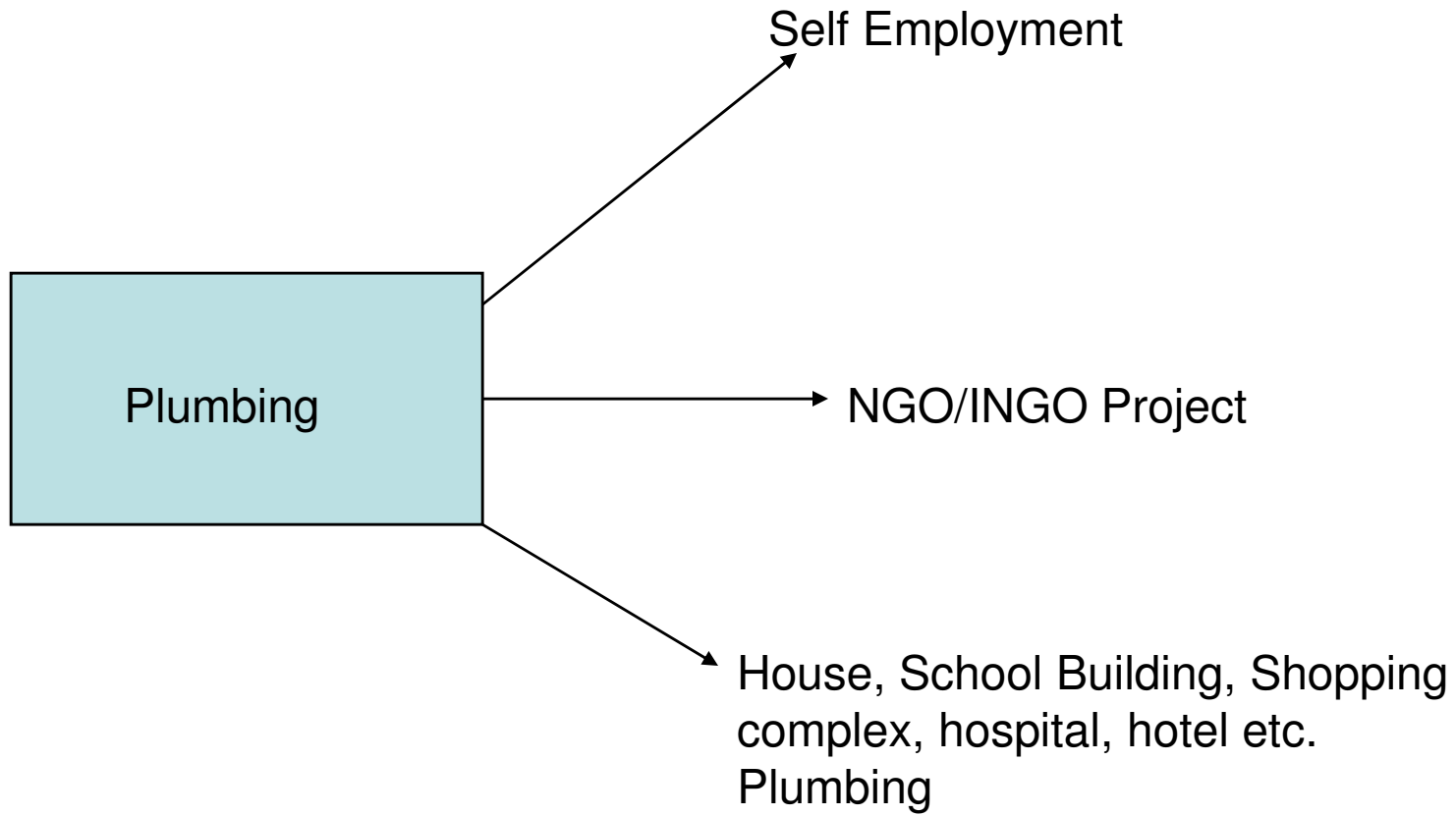
NGO/INGO Project











Skill Oriented Workshop, WHY?

- To equip the future professionals with the required practical knowledge
- To produce skilled and technical workforce
- To provide program to the local under privileged youths.
- To give regular service and maintenance of automobiles running at Araniko Highway
- To give regular training on the maintenance of different parts of automobile to the drivers
- To improve socio economic condition of the people (self employment).
- To prepare basic, middle and advanced level technicians for industries
- To produce competent workforce compatible to the domestic and international job market.

Entrance requirement (*Tentative*)

- Long term- offer to SLC pass youths
- Short term- eight standard pass
- Special- already involved in any industry or workshop
- Most be citizen of Nepal
- Underprivileged youths from Kavre District is given high priority
- Women are encouraged to apply

Instructor's Level

- **Chief Instructor** : Masters/Phd, experience in related field
- **Instructor** : Bachelors/Masters, experience in related field
- **Assistant Instructor**: Diploma/Bachelors, experience in related field
- **Junior Asst. Instructor**: Diploma/Bachelors

Workshops

- Automobile Section
- Mechanical Section
 - Machine Shop
 - Welding and Sheet metal
 - Fitting and Carpentry

Workshop space

- Automobile Section : 650 m²
- Mechanical Section
 - Machine Shop : 300 m²
 - Welding and Sheet metal : 200 m²
 - Fitting and Carpentry : 200 m²
- The total area for the workshop is available at KU, according to Ku's Master Plan