

# VISSER

**Versatile Instrumentation System for Science Education and Research**

*A collaborative program to enhance Philippine education and research*

Project Leader:

Giovanni Tapang, PhD (UP NIP)

Romel D. Gomez, PhD (UMD ECE)

Nelio Altoveros (UPLB IMSP)

RM Roxas-Villanueva, PhD (UPLB IMSP)

GJ Perez, PhD (UPD IESM)

Romarie Lorenzo (UPD EEE)



# **VISSER**: Enhancing Philippine Science Education and Research

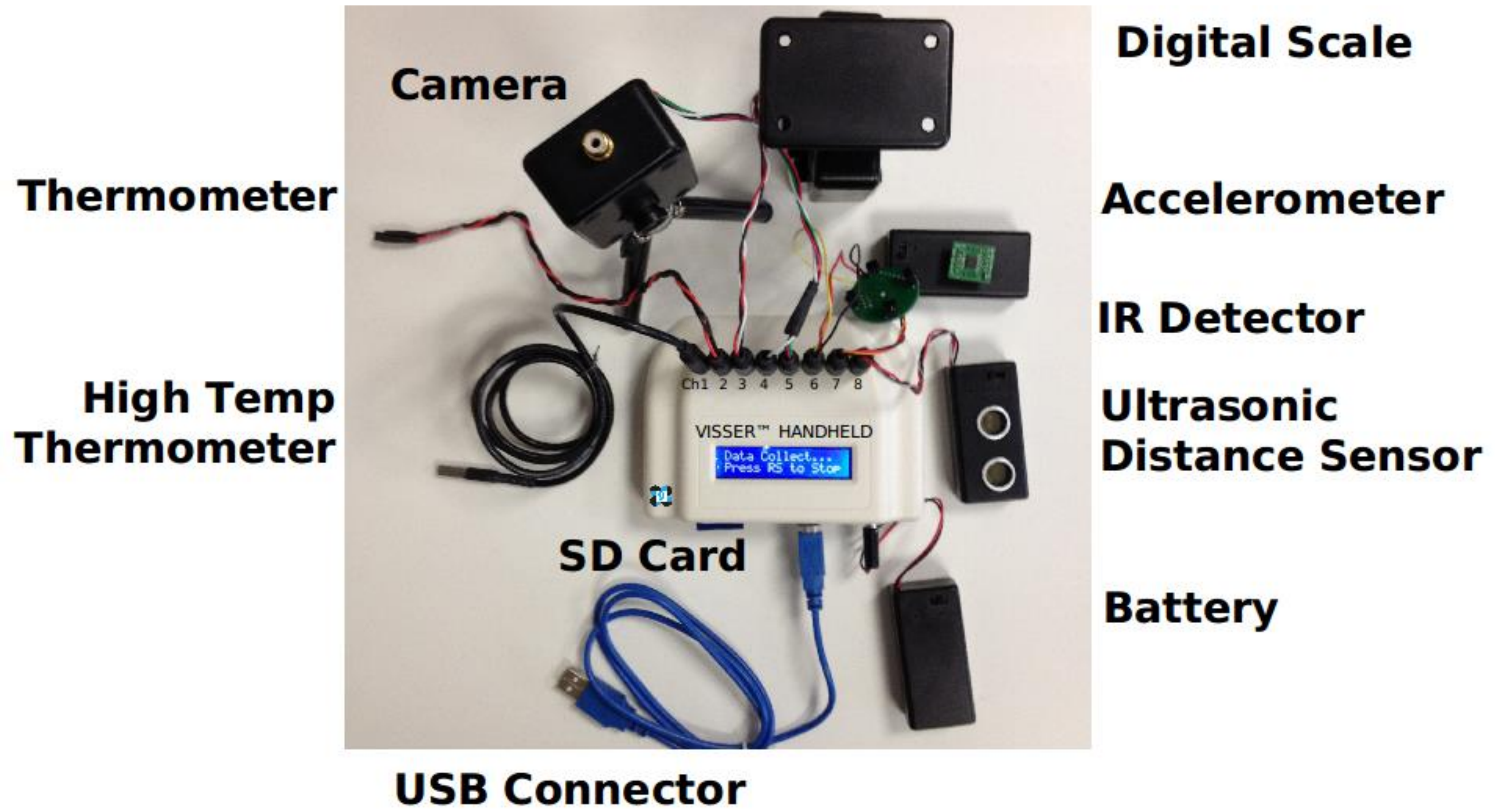


- Design, develop and test **home-grown learning modules and handhelds** for different fields of science and engineering
- Sixty (60) commercialization-ready experiments at 1/10th - 1/100th price of commercially available technologies
- Develop and produce highly-trained professionals in the area of science education, instrumentation design and information systems

**Addressing the need for high-impact and cost effective educational modernization strategies**

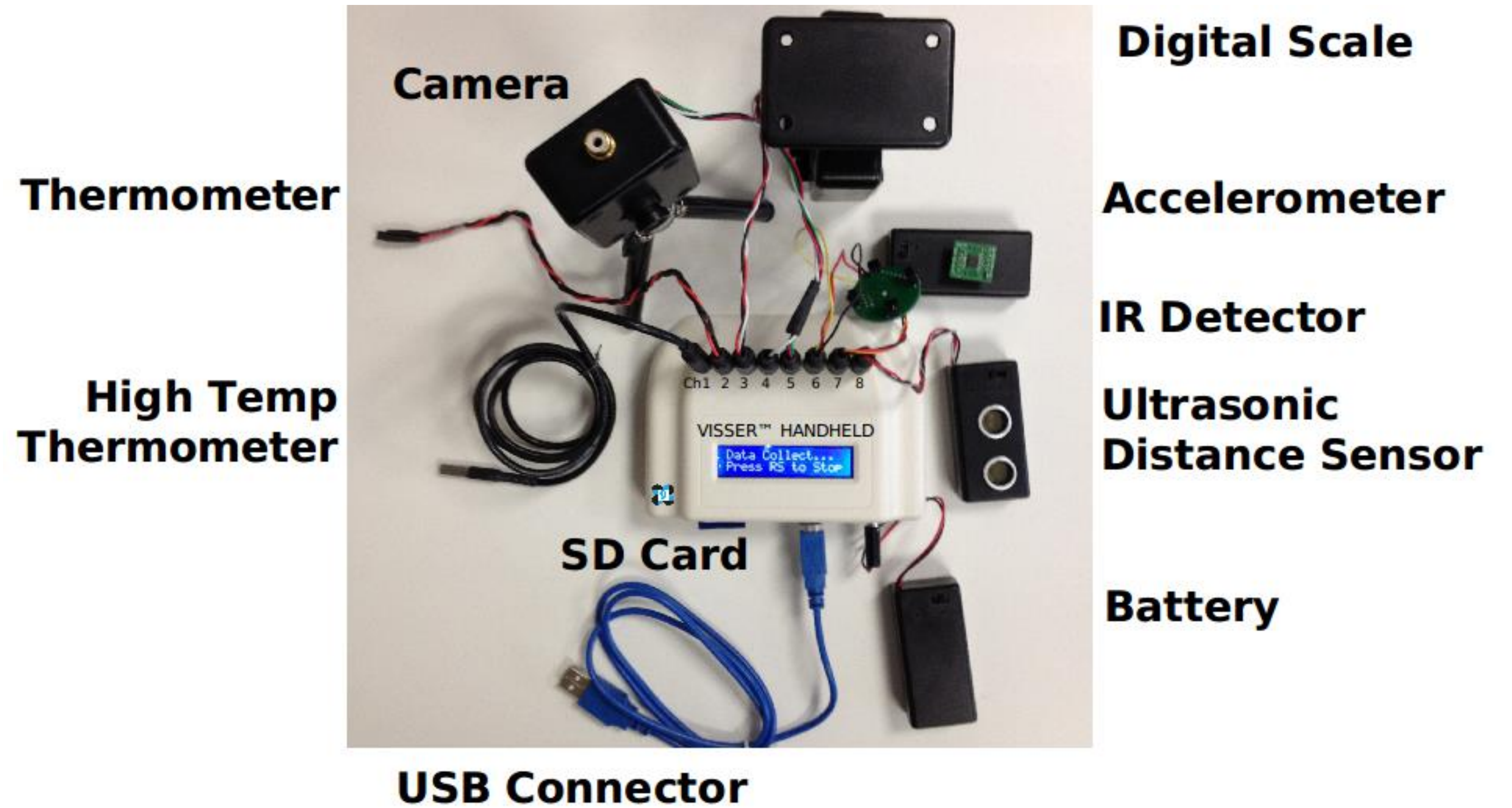
# **VISSER**: Enhancing Philippine Science Education and Research

- Uses both generic and custom probes that can be adapted for different applications
- VISSER handhelds can be used without a computer, or as a data logger, or a programmable device



# **VISSER** Universal Handheld for Experiments

- Microcontroller based interface
- Sensor input jacks for distance, light intensity, force, temperature, pressure, camera, magnetic field, voltage, current
- Built-in timer and SD card
- Fully integrated hardware and software with well-written, highly descriptive learning guides



# VISSER: Cost savings

Product	Price (USD)	w/ interface	w/ sensors	w/ software
Pasco Scientific	1,000	Yes	No	Free
Vernier	10,000	Yes	Yes	Free
NI DAQ	200	Yes	No	Proprietary

**VISSER estimated cost  
(handheld+sensors):  
USD 300-400**

- Utilize inexpensive yet sophisticated hardware components that are open source
- Utilize circuits and source codes that are freely and legally available to avoid exorbitant licensing fees
- Utilize home-grown talent and intrinsic Filipino creativity

# VISSER: Market potential

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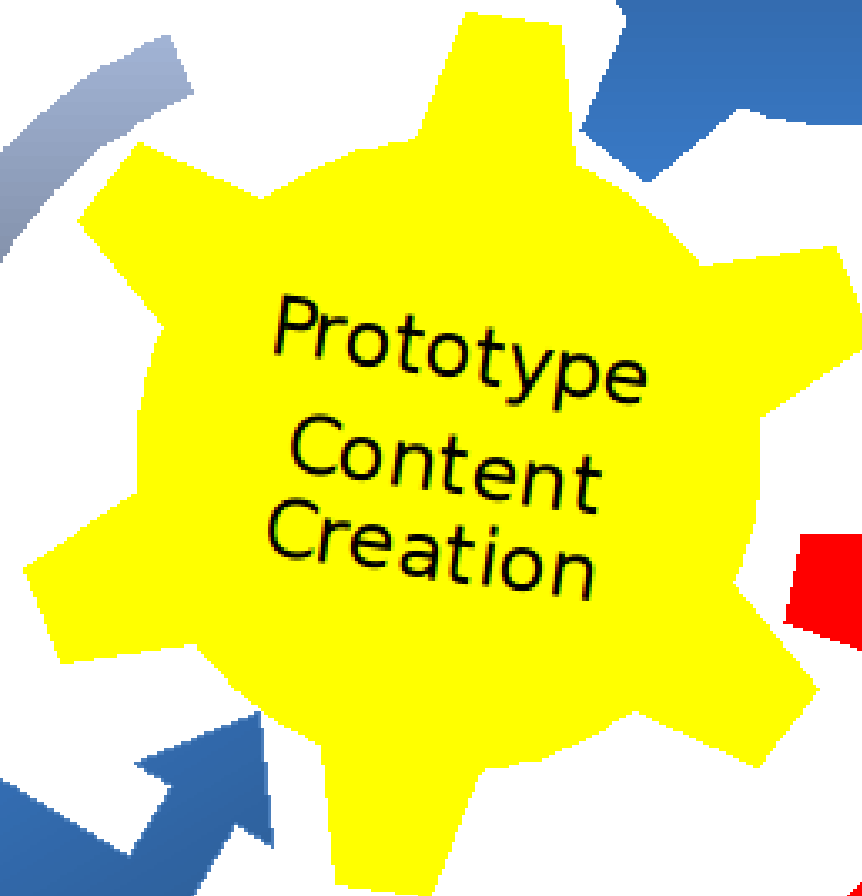
- Potential market of 12,000 high schools and around 2,300 HEIs (plus technical schools)
- Optimal 5 setups per year level
- Even at a minimum of one setup per school, potential sales of 21 M USD
- Technology in education is still not at saturation level

# VISSER: Project Development Plan

**Step 1.** Idea generation and prototype creation



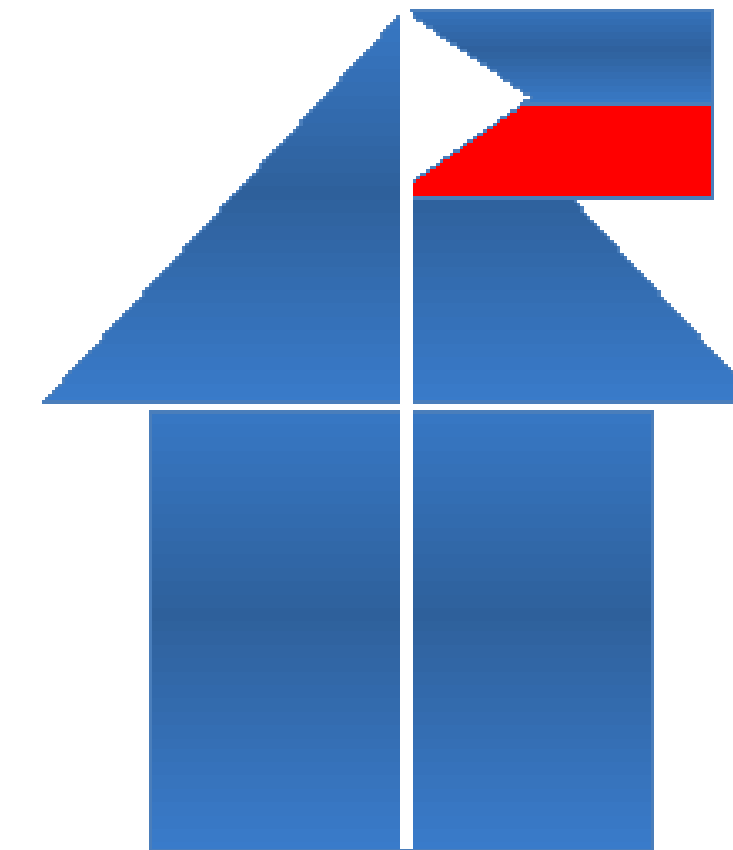
**Step 2.** Optimization of the prototypes and design modifications



Laboratory Modules  
Manufacturing  
Teacher Instructions

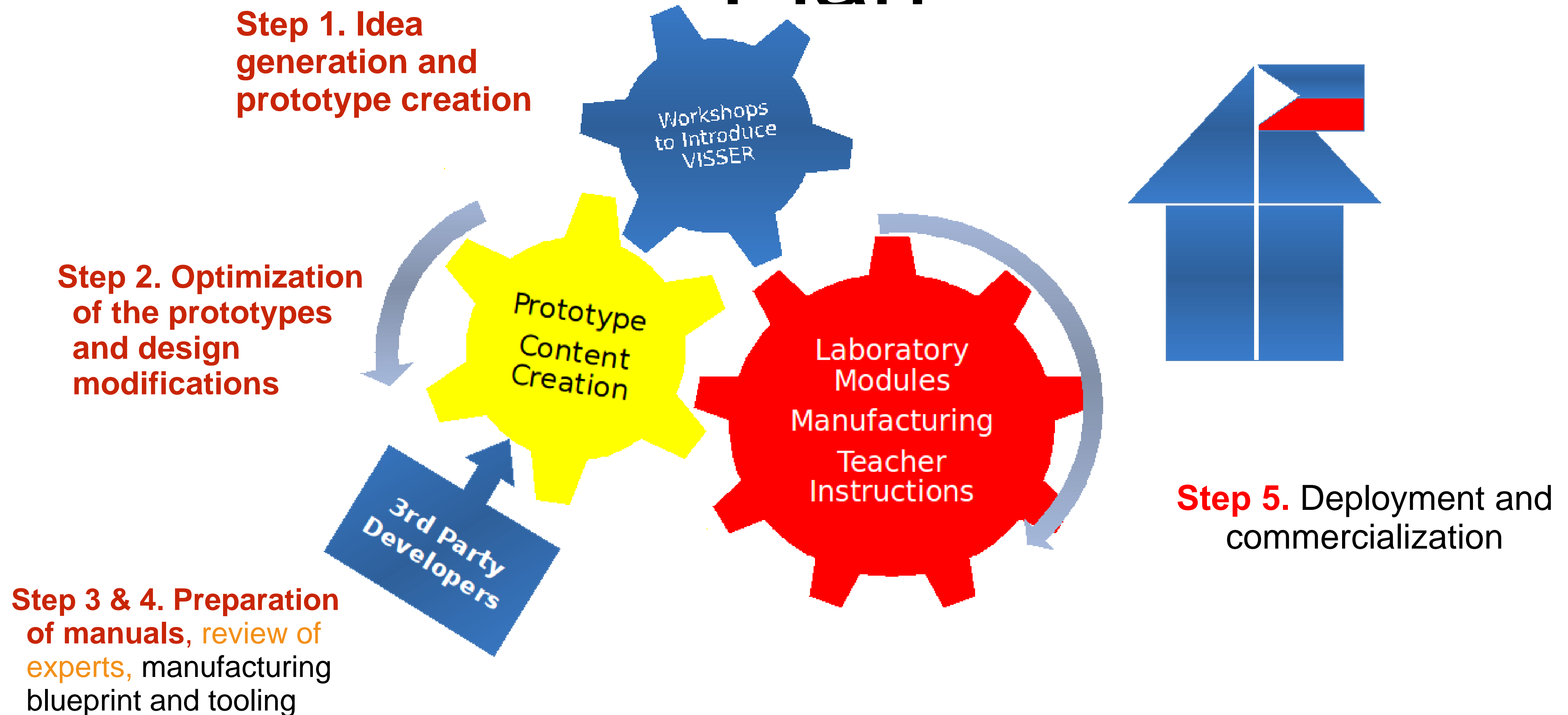


**Step 3 & 4.** Preparation of manuals, review of experts, manufacturing blueprint and tooling



**Step 5.** Deployment and commercialization

# VISSER: Project Development Plan





# VISSER Mission

## Put Modern Science Labs at Every School & College



**Addressing the need for high-impact and cost effective educational modernization strategies**

# VISSER

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[gtapang@nip.upd.edu.ph](mailto:gtapang@nip.upd.edu.ph)

*Giovanni Tapang, PhD*

+63 917 308 7832

## Juana Invest?

### Reaping the Returns of R&D

### PCIEERD 4th Anniversary

### 27 June 2014

