



Building Technology

# SOLUTIONS

Providing innovative and affordable building technology solutions to achieve safer and better living environment



**AIT**

Asian Institute of Technology



**AIT Solutions**

**H**ousing is a basic necessity that provides shelter; security, safety, and means for storage of other essentials; and is the setting for the communal life of the neighborhood.

The increasing gap between an average person's income and housing affordability makes this basic need still unfulfilled. One solution to this challenge is not just to design and construct an affordable housing but one that is environment-friendly, disaster-resilient, and sustainable for the future.

## What is Building Technology Solutions

AIT Solutions (AITS) has been doing continuous research and development on affordable, disaster resilient, green, and innovative building solutions since its inception and catalyzing innovation in housing solutions through various activities, research, and projects.

Building Technology Solutions at AITS is a combination of Habitech's innovative building system and Ferrocement technology.

The Habitech building component consists of interlocking bricks for walls; concrete door frame and window frame; concrete joist, pans, stringer and tread; roof tiles; and sanitary unit.

These components can be locally produced using local resources like soil, stone dust, cement, and water. It uses simple technique that can be constructed by local unskilled labor with little training which make construction faster to finish.



*Key Attributes of Habitech Building System*

Ferrocement technology (Ferrotech) utilizes templates and point to point construction to fabricate the buildings frame and wire work. The material is approximately one fifth the volume and cost of the conventional materials the same square feet of construction. Ferrocement offers great economic advantage as they are strong, disaster resilient, cost-effective, and environmental friendly.



*Sample house that can be constructed using Ferrotech*



*Key Attributes of Ferrotech*

Building Technology Solutions using Habitech and Ferrotech were used for the Knowledge City Police Station located beside AIT main gate. This project was constructed in less than three months.



*Knowledge City Police Station, AIT*

## Where Can We Use Building Technology Solutions

### School Building



AIT International School, Thailand

### Residential Buildings



Residential House in Ratchaburi, Thailand

### Community Housing



Post-Tsunami Rehabilitation Project, Thailand

### Health Clinic



Malaria Center, Lao PDR

Habitech building system was one of the technologies in AIT used for the Indian Presidential Retreat. Twelve accommodation units were constructed using Habitech building technology. These dwellings were intended to accommodate officers and staff during the Presidential visits to the Ashiana Retreat at Dehradun in India.



Indian President Pranab Mukherjee inaugurating the "Ashiana Annexe."

## Key Experts



**Dr. Naveed Anwar**  
Executive Director  
AIT Solutions  
Asian Institute of  
Technology



**Engr. Gyanendra Sthapit**  
Director, Habitech  
AIT Solutions, Asian  
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**Engr. Chandani Chandra Neupane**  
Project Engineer  
Civil and Structural Unit  
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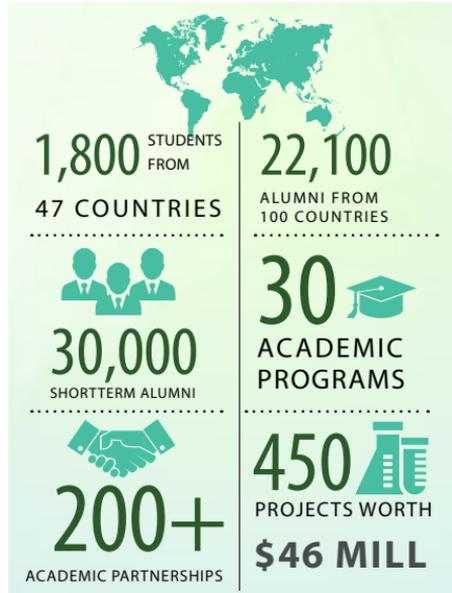
**Engr. Govinda Khanal**  
Structural Engineer  
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# Asian Institute of Technology (AIT)

Established in Bangkok in 1959, AIT is a leading regional postgraduate institution and is actively working with public and private sector partners throughout the region and with some of the top universities in the world.

AIT's academic programs are provided by the three schools, with many fields of academic study and research areas, over one hundred highly qualified faculty members and researchers, and numerous Centers of Excellence that support the various functions of the institution.



## AIT Solutions (AITS)

AIT Solutions aims to increase the spread of AIT's science and technology knowledge, establish higher science, engineering and technology standards, develop innovative technology solutions and collaborate with institutions for sharing knowledge, information, experience and expertise in order to achieve its vision of enhancing the application of science and technology for development. We provide an integrated link to meet the requirements of the client in various capacities by utilizing the resources and capabilities available within AIT, as well as its partner institutions and other linkages.



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