

SESSION Two

Construction Technologies

FACILITATED BY: **HAMID ERFANIAN**

UN HABITAT
FOR A BETTER URBAN FUTURE

برنامه اسکان بشر ملل متحد در ایران



Government of Republic of Korea
Embassy of Republic of Korea in Tehran



Ministry of Roads & Urban Development
Islamic Republic of Iran

Subject

The Role of
Construction Technologies
in **Sustainability**
(Housing Development)

In order
To Shift the Focus from **Simply Building Houses**
To a Framework for **Housing Development**

PART “1”

Brain Warm Up

PART”2”

Games

Summary

The aim of the presentation is:

To State that **Technologies**
is one of the links of the **Development chain**

It works just as an
Instrument for Sustainable Development.

Introduction

The Meaning of Technology

TECHNOLOGY

doesn't have a **Fixed Meaning**,

Its varies from

Place to Place & Time to Time

It's **Derived off** of the **Context** of

Economy, Culture, Education *and etc.*

(Investment, Insurance, Financing ... Policies)

Technology is the branch of knowledge that deals with the creation and use of technical means and their interrelation with life, society, and the environment, drawing upon such subjects as industrial arts, engineering, applied science, and pure science.

<http://www.dictionary.com/browse/technology>

Ultimate Aim

To SETTLE

**2 billion people around the globe
till 2045**

“The World Bank said”

Objective

OECD Development Statment

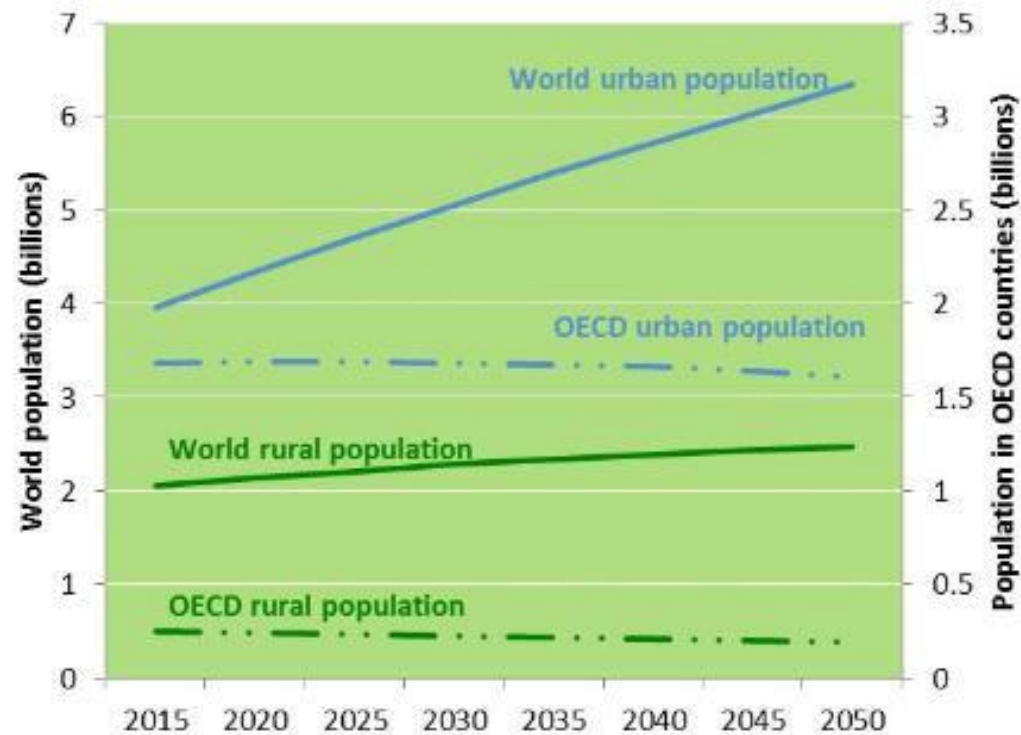
We work as **Partners**
with **Governments** and the **Private sector**
in **Developing countries**
to create a **Sustainable world**
where **Every person** has
the **Opportunity**
to **Live a Healthy and Productive life**

*(Organisation for **E**conomic **C**o-operation and **D**evelopment)*

<http://www.oecd.org/development/>

Analysis

Population Growth Diagram



Source: United Nations, Department of Economic and Social Affairs, Population Division (2014). *World Urbanization Prospects: The 2014 Revision, CD-ROM Edition*

OECD countries: Australia / Austria / Belgium / Canada / Chile / Czech Republic / Denmark / Estonia / Finland / France / Germany / Greece / Hungary / Iceland / Ireland / Israel / Italy / Japan / Korea / Latvia / Luxembourg / Mexico / Netherlands / New Zealand / Norway / Poland / Portugal / Slovak Republic / Slovenia / Spain / Sweden / Switzerland / Turkey / United Kingdom / United States

PART “1”

Brain Warm Up

PART”2”

Games

Game “1”

Sustainable Housing Development (SHD)

GOAL

To Framework Sustainable Housing Development

GAME PLAYERS

Government Provide Opportunities (Development)

Private Sector Use the Opportunities

Game “1”

Game Player 1 – Government

ROLE

Provide Business Opportunities

MISSION

Facilitate & Regulate Framework for SHD

DUTIES

Prepare a Strategic Master Plan for SHD

Facilitate Financing & Development Regulations for Developers / Buyers

Provide Attractive Incentive Opportunities for Developers & Land owners

Conduct Development Strategy to Develop Poor Urban Fabric

To Involve local people as the main partner of development

Game “1”

Game Player 2 – Private Sectors (Developers)

ROLE

Use Provided Business Opportunities

MISSION

Carry all Development Responsibility

- ✓ Development Quality (Buildings Development)
- ✓ Financing & Profit

DUTIES

Risk Management

- ✓ Business RM (Feasibility, Investment, Financing, Marketing & Sales)
- ✓ Building Implementation (Design + Construction & Operation)

Game “1”

Game Player 2 – Private Sectors (Developers)

Building Implementation

Design Phase

Software Design Technology

- ✓ Professionalism Laws
- ✓ Building Code Regulations
- ✓ Building Science Regulations
- ✓ Green Building Regulations

Construction & Operation Phase

Hardware Construction Technology

- ✓ Materials & Building Equipment
- ✓ Methods & Techniques
- ✓ Skilled Workers & technicians

To Design, Build & Operation

In an Acceptable Level of Public Health, Safety, and General Welfare in order to have the Opportunity to Live a Healthy and Productive Life

RESULT “1”

TECHNOLOGY

is the key

INSTRUMENT

to achieve

INVESTMENT GOALS

for

Sustainable Development

Game “2”

Construction Technology (CT)

GOAL

To Design & Build a Sustainable Environment

APPROCHES

Provide an Acceptable level of Public Health, Safety, and Welfare with Economical, Technical, and Green Approach

GAME PLAYERS

Government To Establish a Framework for CT

Private Sector To Do Construction in the Framework

Game “2”

Game Player 1 – Government

ROLE

To Establish a Framework for CT

MISSION

Prepare & Provide Required Provision

DUTIES

Legislate & Enforce Related Acts, Laws and Regulations

Establish Related Technical Associations and Institutes

Make Relations Between Universities, Related Building Industries, Associations, Institute, and the Governing Bodies to Share Experience

Organize & Unify Building Industry Information & Communication systems

Provide Opportunities to Develop & Improve CT by Private Sector

Game “2”

Game Player 2 – Private Sectors

ROLE

To Do Construction in the Framework

MISSION

Building Implementation

DUTIES

Use & Develop CT :

- ✓ Design Technologies
- ✓ Construction Technologies
- ✓ Operation & Maintenance Technologies

Improve & Develop CT :

- ✓ Standard Building Materials & Equipment Production
- ✓ Technologies based on Business Opportunities

RESULT “2”

We Need to have

SUSTAINABLE
TECHNOLOGY
DEVELOPMENT

to Achieve

Sustainable Development

Sustainable Housing Development

Guideline

Step 1 – Sustainable Economy Development

Facilitated Development Regulations

Facilitated Finance system

Accessible Investment Resources

Attractive Incentive for Developers, Land Owners & Buyers

Step 2 - Sustainable Technology Development

Design, Build & Operation

THANK YOU FOR YOUR ATTENTION

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