Sustainability and intelligent buildings

Goal of the session

To get an idea of sustainability – maybe not just right answers

Sustainable Development

Sustainable development is an ongoing and structured process where society undergoes changes with the aim of **securing desirable living conditions** for the current and **future generations**.

"We must do things so, that world is good place also for our childrens"

Sustainable Development

Ecological sustainability

preserve biodiversity and the functioning of ecosystems as well as to adapt people's economic and material actions to the nature's carrying capacity in the long term

Economic sustainability

growth that is balanced both in terms of its contents and quality and that is not based on indebtedness or destruction of resources in the long term

Social and cultural sustainability

secure the transition of the prerequisites for wellbeing from one generation to the next

Sustainable Development - buildings

Ecological sustainability

Energy, materials, recycling
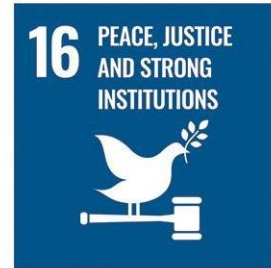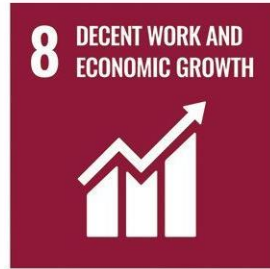
Economic sustainability

Lifecycle, efficient energy and material use, maintenance of buildings

Social and cultural sustainability

Cultural tradidions of build environment, knowing of history, wellbeing of workers

SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Group task

Which of the sustainable goal are connected to buildings?

Why?

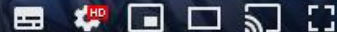WORLD GREEN BUILDING COUNCIL | SUSTAINABLE DEVELOPMENT GOALS

Green buildings can improve people's health & wellbeing

Green buildings can use renewable energy, becoming cheaper to run

Building green infrastructure creates jobs & boosts the economy

Green building design can spur innovation & contribute to climate resilient infrastructure

Green buildings are the fabric of sustainable communities & cities

Green buildings use 'circular' principles, where resources aren't wasted

Green buildings produce fewer emissions, helping to combat climate change

Green buildings can improve biodiversity, save water resources & help to protect forests

Through building green we create strong, global partnerships

3 GOOD HEALTH AND WELL-BEING

7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

15 LIFE ON LAND

17 PARTNERSHIPS FOR THE GOALS

GREEN BUILDING

VS

SMART BUILDING

GREEN BUILDING
CONSULTING & ENGINEERING

0:04 / 4:04

Group task

How intelligency of the buildings can improve the sustainable goals? Which of them?

Is your group work result connected to some sustainable goal?

Intelligent buidings and sustainability

Demand response

Cut the energy peaks

Wise use of heat pumps

Management of temperatures with low temperature heating nerworks

Utilisation rate

Efficient use of buildings

Intermittent heating

Adjustment of internal temperatures as a function of presence/no precense

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School of Electrical
Engineering**

Intelligent buidings and sustainability

Circular economy

Wise use of materials,

Redusing CO2

Building phase, use phase and demolition

Waste management

Optimizing travelling

Also save of time and organizing life

"Sustainable" terms and units

Circular economy   **CO_2**

                              Energy efficiency

Renewable energy

                                        Low carbon buildings

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