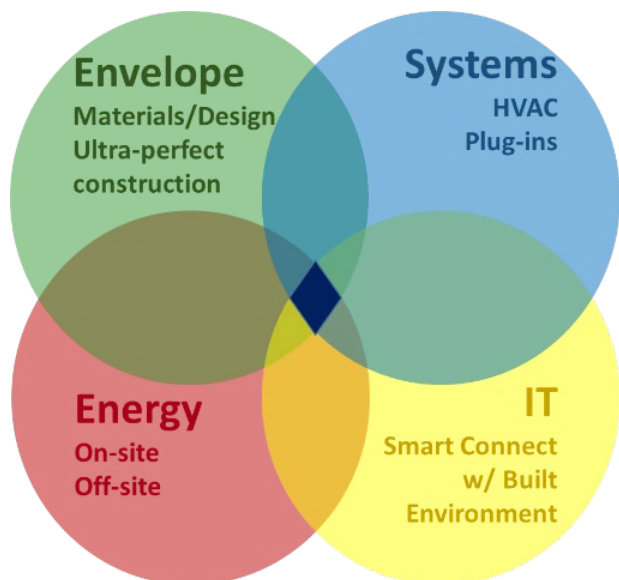


## Concept Note Training Programme on High Performance Buildings

Buildings are central to meeting the sustainability challenge. In the developed world, buildings consume over 70% of the electric power generated and 40% of primary energy and are responsible for 40% of CO<sub>2</sub> emissions from the energy services they require. World-wide 75-90% of today's buildings will be in use in 2050, and in addition developing countries will need to accommodate 2.4 billion new urban residents. High performance buildings will deliver on many of the Sustainable Development Goals of the 2030 Agenda including:

- accelerating the sustainable energy transition by improving the efficiency with which buildings' energy services are provided,
- supporting climate action by reducing the energy requirements of buildings to a point at which residual needs can be met by no or low-carbon energy sources.
- tackling poverty by reducing energy bills, and
- promoting sustainable urban development by recognizing buildings as complex systems embedded in community, city, and country-level energy networks

The energy performance of buildings must be managed, and the capability to meet the challenge exists today. UNECE has launched its high performance buildings initiative to deploy its Framework Guidelines for Energy Efficiency Standards in Buildings with the aim of accelerating the transformation of the world's building stock. The initiative targets 4 stakeholder communities: 1) architects, building contractors, and engineers who work on building envelopes – getting the materials and design right and then ensuring perfect construction techniques; 2) systems professionals deliver heating, ventilation, and air conditioning as well as plug-in loads; 3) energy suppliers meet the systems' needs; and 4) Information and communications technology connects a building to its built environment.



The 2-day programme that is proposed will train experts in the first stakeholder community on getting the building envelope right, including building design, building materials, and construction techniques. The programme will include hands-on, interactive demonstration of proper methods and approaches for insulation, thermal bridges, in-door air quality, and heat recovery. The programme will demonstrate the connection to the other three pillars of high performance buildings and the imperative of getting the envelope right first. The programme also will describe the criteria for establishing centres of excellence for deploying and disseminating the framework guidelines to encourage establishment of such training centres throughout the region.