

Harmonized E.U. Vocabulary

Useful Terms & Definitions Relating to 'Fire Safety & Protection in Buildings'

The Terms and Definitions contained in this Vocabulary are generic.

This Vocabulary takes account of :

- **the realistic end condition, i.e. a 'real' fire in a 'real' building which is used by 'real' people with varying abilities in relation to self-protection, independent evacuation to a 'place of safety', and participation in the Fire Defence Plan for the building ;**
 - **environmental impact.**

Accessibility : (Building)	Ease of independent approach, entry and/or use of a building and its services and facilities, by all of the building's potential users ~ with an assurance of individual Health, Safety and Welfare during the course of those activities.
Accessibility : (Built & Virtual Environments)	Ease of independent mobility throughout the built and virtual environments, and/or use of the facilities, services and information available in those environments, by any person or group of people ~ with an assurance of individual Health, Safety and Welfare, and group Wellbeing, during the course of those activities.
Activity Limitation : (WHO, 1999)	<p>A difficulty in the performance, accomplishment or completion of an activity at the level of an individual person.</p> <p>Difficulty encompasses all of the ways in which the performance of the activity may be affected : doing something with pain or discomfort ; doing it too slowly or quickly, or not at the right time and place ; or doing it awkwardly or otherwise not in a manner expected ; or not being able to do it at all. An activity limitation may range from a slight to a severe deviation, in terms of quality or quantity, in performing the activity to the extent or in a manner which is expected.</p> <p>This term replaces 'disability' in the WHO International Classification of Impairment, Disability and Handicap (1980).</p>
Adaptability :	The extent to which a building, or a building component, is designed when new to be capable of being easily modified, at any later stage during its life cycle, to meet the changing life and living / working needs of the broad average of potential users, who may or may not have activity limitations or develop a health condition.
Aggression :	A hostile or destructive mental attitude of a person, frequently accompanied by violent behaviour.
Aggression, Altruistic :	Aggression which functions to protect others.
Aggression, Fear-Induced :	Aggression induced by extreme fear.
Aggression, Instrumental :	Aggression which is a means to another end, e.g. pushing someone aside to escape from danger.
Anosognosia :	A neurological disorder marked by the inability of a person to recognize that he/she has an activity limitation or a health condition.
Area of Rescue Assistance : (aka Refuge)	A building space directly adjoining, and visible from, a main vertical evacuation route - robustly and reliably protected from heat, smoke and flame during <u>and</u> after a fire - where people may temporarily wait with confidence for further information, instructions, and/or rescue assistance, without obstructing or interfering with the evacuation travel of other building users.

Assembly : (AFF-IRL)	An aggregation of components arranged together for a specific purpose.
Body Functions : (WHO, 2001)	The physiological and psychological functions of body systems.
Body Structures : (WHO, 2001)	Anatomical parts of the body, such as organs, limbs, and their components.
Buffer Zone :	The compartments and/or spaces immediately adjoining the fire compartment in a building.
Buildability : (CIRIA-GB)	The extent to which the design of a building facilitates ease of construction, subject to the overall requirements for the completed building.
Built Environment :	Anywhere there is, or has been, an intrusion or intervention by a human being in the natural environment.
Cognitive Impairment Disorder :	A general term covering those disorders whose primary symptoms include impaired cognitive functioning, e.g. thinking, conceiving and reasoning.
Compartmentation :	<p>The division of a building into fire-tight compartments, by fire resisting elements of construction, in order</p> <ul style="list-style-type: none"> - to contain an outbreak of fire ; - to prevent damage, within the building, to other adjoining compartments and/or spaces ; - to protect a compartment interior from external fire attack, e.g. fire spread across the building's facade or from an adjacent building ; - to minimize adverse, or harmful, environmental impacts.
Component : (ISO 1791)	<p>A building product, formed as a distinct unit, having specified sizes in three dimensions.</p> <p>The term component includes items of equipment, fixtures, fittings, and fitted furniture.</p>
Construction Works : (EU Directive 89/106/EEC)	Any building or civil engineering works.
Cool Smoke :	Smoke, remote from the scene of a fire, which has cooled and is drifting at low levels.
Co-Ordinating Dimension : (ISO 1791)	A dimension of co-ordinating space, which defines the relative positions of two or more components in an assembly, according to the characteristics of the components which are relevant to the assembly.
Cost Effectiveness : (Energy Charter Treaty, 1994)	To achieve a defined objective at the lowest cost or to achieve the greatest benefit at a given cost.

Dementia :	<p>Any degenerative loss of intellectual capacity, to the extent that normal and occupational activities can no longer be carried out.</p> <p>This term is reserved for multifunctional disorders where memory, reasoning, judgement and other 'higher mental processes' are lost.</p> <p>Intellect refers to human cognitive processes as a whole.</p> <p>Alzheimer's disease is a progressive form of dementia.</p>
Design Fire : (ISO/TR 10158)	<p>A fire with specified exposure data intended for use in connection with structural fire design calculations.</p> <p>A design fire may either be representative of the thermal exposure described by a standard time-temperature and time-pressure relationship, or some non-standard exposure intended to simulate particular fire exposure conditions.</p>
Dimensional Co-Ordination : (ISO 1791)	<p>A convention on related sizes for the co-ordinating dimensions of building components and the buildings incorporating them, for their design, manufacture, assembly and/or installation.</p>
Disorientation :	<p>Inability of a person to orient himself/herself with regard to space, time and context in the physical environment.</p> <p>Acute disorientation brought on by the use of alcohol, 'social' drugs and some medicines, or dramatic alterations in a person's circumstances, e.g. involvement in a fire incident, is not uncommon or abnormal ; long-term progressive disorientation is a symptom of a variety of psychological and/or neurological disorders.</p>
Doorset :	<p>A component consisting of a fixed part (the door frame), one or more movable parts (the door leaves), and their hardware, the function of which is to allow, or to prevent, access and egress.</p> <p>A doorset may also include a door saddle / sill / threshold.</p>
Egress : (Building)	<p>Independent emergence of user(s) from a building, under normal conditions, and removal from its immediate vicinity.</p>
Element of Construction : (ISO 1791)	<p>A functional part of a building, constructed from building materials and/or building components.</p> <p>Examples are foundation, floor, roof, wall, etc.</p>
Energy Cycle : (Energy Charter Treaty, 1994)	<p>The entire energy chain, including activities related to prospecting for, exploration, production, conversion, storage, transport, distribution and consumption of the various forms of energy, and the treatment and disposal of wastes, as well as the decommissioning, cessation or closure of these activities, minimizing harmful environmental impacts.</p>

Environmental Impact : (Energy Charter Treaty, 1994)	Any effect caused by a given activity on the environment, including human health and safety (and welfare), flora, fauna, soil, air, water, (and especially representative samples of natural ecosystems), climate, landscape and historical monuments or other physical structures or the interactions among these factors ; it also includes effects on cultural heritage or socio-economic conditions resulting from alterations to those factors.
Evacuate a Fire Building :	To withdraw, or cause to withdraw, all users from a fire building, in planned and orderly phased movements, to a place of safety .
Experimental Fire : (ISO/TR 10158)	A full or reduced scale fire with specified and controlled characteristics.
Facilitator : (WHO, 2001)	Any environmental factor which, through its presence or absence, improves activity and functioning, or reduces disability.
Fire Compartment :	The compartment of fire origin.
Fire Defence Plan :	A pre-determined and co-ordinated use of available human and material means in order to maintain an adequate level of fire safety and protection within a building and, in the event of an outbreak of fire, to ensure that it is brought speedily under control and extinguished.
Fire Defence Manual :	The elaboration, usually in the form of appropriate drawings, text, audio/visual aids and product information, of the complete fire safety strategy which has been developed for a specific building.
Fire Draught :	A current of air within a building, moving towards a fire, supplying oxygen for combustion.
Fire Extinguishment :	All measures necessary to suppress and effectively quench a fire within a building and/or its immediate vicinity. Extinction of a fire is confirmed only after a thorough visual inspection by a competent person.
Fire Prevention :	All measures necessary to prevent an outbreak of fire in a building, including such secondary activities as fire research and education of the public concerning fire hazard.
Fire Protection :	The use of spatial planning, building design, construction, services, systems, personnel and equipment in order to control and extinguish fire, and minimize its harmful environmental impacts.
Fire Resistance :	The inherent capability of a building assembly, or an element of construction, to resist the passage of heat, smoke and flame for a specified time during a fire.

Fire Resisting Doorset / Shutter Assembly :

A doorset / shutter assembly, suitably installed or mounted on site, the function of which is to resist the passage of heat, smoke and flame for a specified time during a fire.

Fire Safety Design :

The art and science of the ethical planning, design, supervision of related construction / de-construction, and maintenance of fire safety and protection in a sustainable 'built environment'.

Fire Safety Objectives :

An expression of the fire safety design intent for a building, in the form of specific subordinate purposes, towards which the production of a fire defence plan is directed.

Some **fire safety objectives** may be requirements of legislation.

Fire Safety Strategy :

A coherent and purposeful arrangement of fire protection and fire prevention measures which is developed in order to attain specified fire safety objectives.

Flashover :

The transition from a localized fire to a fully developed fire within a building compartment or space.

Flexibility :

The extent to which a building interior is designed when new to be capable of being easily varied at any later time, with minimal cost and user inconvenience, because of changing living / working needs.

Fully Developed Fire :

The stage, in the development of a fire, during which all available fuel substances are involved.

Health Condition :
(WHO, 1999)

An alteration or attribute of the health status of a person which may lead to distress, interference with daily activities, or contact with health services ; it may be a disease (acute or chronic), disorder, injury or trauma, or reflect other health related states such as pregnancy, ageing, stress, congenital anomaly or genetic predisposition.

Human Health :
(WHO)

A state of complete physical, mental and social wellbeing, and not merely the absence of disease and infirmity.

Impairment :
(WHO, 2001)

Any loss or abnormality of a body function, or body structure.

The word 'abnormality' is strictly used here to refer to a significant deviation from an established population mean, within measured statistical norms.

Impairments may be physical, mental, cognitive or psychological.

Impairment, Cognitive :

A deficiency of neuropsychological function which can be related to injury or degeneration in specific area(s) of the brain.

Impairment, Mental :	A general term describing a slower than normal rate in a person's cognitive developmental maturation, or where the cognitive processes themselves appear to be slower than normal - with an associated implication of reduced, overall mental potential.
Lesion :	An area or section of body tissue with impaired function, resulting from damage caused by disease or injury.
Life Cycle : (EN ISO 14040)	Consecutive and interlinked stages of a product (and/or service) system, from raw material acquisition or generation of natural resources to the final disposal.
Life Cycle Assessment : (EN ISO 14040)	Compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product (and/or service) system throughout its life cycle.
Life Cycle Impact Assessment : (EN ISO 14040)	Phase of life cycle assessment aimed at understanding and evaluating the magnitude and significance of the potential environmental impacts of a product (and/or service) system.
Life Cycle Interpretation : (EN ISO 14040)	Phase of life cycle assessment in which the findings of either the inventory analysis or the impact assessment, or both, are combined consistent with a defined goal and scope in order to reach conclusions and recommendations.
Life Cycle Inventory Analysis : (EN ISO 14040)	Phase of life cycle assessment involving the compilation and quantification of inputs and outputs, for a given product (and/or service) system throughout its life cycle.
Panic :	<p>A sudden overwhelming feeling of anxiety, which may be of momentary or prolonged duration.</p> <p>Anxiety is the normal response of the human body to recognised danger. Numerous reflexes are involved. The supply of blood to the muscles is greatly increased, partly because the heart beats more rapidly and strongly, and partly because the blood vessels of the muscles dilate while those of many other organs constrict, diverting the flow of blood to where it is most needed. The muscles themselves are tensed. Breathing is deeper and more rapid. The mind becomes more alert, and the pupils dilate, admitting more light to the eyes.</p>
Participation Restriction : (WHO, 1999)	<p>Some reduction in the degree or extent of participation in a community, society or culture - expected of a person without a health condition or physical / mental / cognitive / psychological impairment - which is created or increased by Contextual Factors, i.e. environmental and/or personal.</p> <p>This term replaces 'handicap' in the WHO International Classification of Impairment, Disability and Handicap (1980).</p>

Penetrating Service : Any building service, e.g. cable, conduit, trunking, pipe, flue, duct or shaft, etc., which penetrates a fire resisting building assembly or element of construction.

Penetration Sealing Assembly : An assembly consisting of one or more penetrating services and their support construction, fire resisting damper assembly, penetration barrier and/or fire sealant, etc., the function of which is to restore the original fire resistance capability of a building assembly or an element of construction.

People with Activity Limitations :

(Personnes à
Performances
Réduites)

Those people, of all ages, who are unable to perform, independently and without aid, basic human activities or tasks - because of a health condition or physical / mental / cognitive / psychological impairment of a permanent or temporary nature.

This definition is derived from the 2001 World Health Organization's International Classification of Functioning, Disability and Health (ICF).

The **term** may include

- wheelchair users ;
 - people who experience difficulty in walking, with or without aid, e.g. stick, crutch, calliper or walking frame ;
 - frail, older people ;
 - the very young (people under the age of 5 years) ;
 - people who suffer from arthritis, asthma, or a heart condition ;
 - the visually and/or hearing impaired ;
 - people who have a cognitive impairment disorder, including dementia, amnesia, brain injury, or delirium ;
 - women in the later stages of pregnancy ;
 - people impaired following the use of alcohol, other 'social' drugs, e.g. cocaine and heroin, and some medicines ;
 - people who suffer any partial or complete loss of language related abilities, i.e. aphasia ;
 - people impaired following exposure to environmental pollution and/or irresponsible human activity ;
- and
- people who panic in a fire situation or other emergency ;
 - people, including firefighters, who suffer incapacitation as a result of exposure, during a fire, to poisonous or toxic substances, and/or elevated temperatures.

Perception : Interpretation of sensory information by the brain, e.g. visual, auditory, olfactory, gustatory or tactile, with the aim of developing understanding prior to action.

While input, in the form of physical stimuli, is an essential feature of perception, other factors influence this process of interpretation, e.g. attention, constancy, motivation, organization, set, developmental maturation, illusion, distortion and hallucination.

Performance : (EU Directive 89/106/EEC)	Performance is a quantitative expression (value, grade, class or level) of the behaviour of a works, part of the works or product, for an action to which it is subject or which it generates under the intended service conditions (for the works or part of the works) or intended use conditions (for products) .
Personal Factors : (WHO, 2001)	Those factors which are internal, or intrinsic, to the context of a person's life and living situation, e.g. age, gender, level of education, socio-economic status, and life experiences, etc.
Place of Relative Safety :	Any location beyond the buffer zone surrounding a fire in a building.
Place of Safety : (Building - Fire)	Any location beyond a perimeter which is [100] metres from the fire building or a distance of [10] times the height of such building, whichever is the greater ; and where necessary medical care and attention can be provided, or organized, within one hour of injury ; and where people can be identified. If there should be any associated risk of explosion, the quantities shown in square brackets above <u>must</u> be modified.
Proprioception :	The perception by a person of stimuli relating to his/her posture, equilibrium, and internal condition, and his/her own position and movement in space.
Real Fire : (ISO/TR 10158)	A fire which develops in a building and which is influenced by such factors as the type of building and its occupancy (numbers, abilities and activities) ; the combustible content (the fire load) ; the ventilation, geometry and thermal properties of the fire compartment or space ; the suppression systems in the building and the actions of the fire services. A real fire is a complex phenomenon. In structural fire design, therefore, idealized versions of real fires are employed.
Safety : (ISO/IEC Guides 2 & 51)	Freedom from unacceptable risk of harm.
Shutter Assembly :	An assembly consisting of one movable part (a curtain of horizontal interlocking steel slats), and its hardware (a suspension system, guide rails, etc.), the function of which is to allow, or to prevent, access and egress.
Size : (AFF-IRL)	The magnitude of a dimension in terms of a defined S.I. (Système International) unit of measure, e.g. the metre.

Skill :	The ability of a person - resulting from training <u>and</u> practice - to carry out complex, well-organized patterns of behaviour smoothly and adaptively, in order to achieve some end or goal.
Smoke :	The visible suspension of solid and/or liquid particles in gases resulting from fire or pyrolysis.
Smoke Resistance :	The inherent capability of a building assembly to resist the passage of smoke for a specified time during a fire.
Social Wellbeing :	A general condition - in a community, society or culture - of health, happiness, creativity, responsible fulfilment, and sustainable development.
Space Perception :	<p>The experienced sense of space within which a person acts and behaves over time.</p> <p>This is a general term used to cover depth perception, spatial relations, real movement, apparent movement, personal space, etc.</p>
Spatial Abilities :	<p>Those perceptual and/or cognitive abilities which enable a person to deal effectively with spatial relations, visual-spatial tasks, orientation of objects and events in space, etc.</p> <p>Frequently, visual and non-visual spatial abilities are distinguished.</p>
Spatial Orientation :	The ability of a person to orient himself/herself in space relative to other objects and events.
Sterile Area (Fire) :	<p>A building space of sufficient extent, or a compartment, which is designed to retain an exceptionally low level of fire risk and hazard during a fire - in order to control the advance of heat, smoke and flame in that building.</p> <p>Examples where sterile areas (fire) might be useful</p> <ul style="list-style-type: none"> - in the main entrance lobby / spaces of a building ; - to create a positive fire separation, e.g. with the additional use of a water mist system, between different spaces in an open plan building, or to sub-divide a very large open space.
Structural Reliability : (ISO 2394)	<p>The ability of a structural system to fulfil its design purpose, for a specified time, under the actual environmental conditions encountered in a building.</p> <p>In structural fire design, the concern must be that the structure will fulfil its purpose, both during the fire - and for a minimum period afterwards, during the 'cooling phase'.</p>

Survivor Syndrome :	A pattern of reactions frequently observed in those people who have survived some catastrophe or terrible ordeal such as an earthquake, a flood, fire or war, including chronic anxiety, recurring dreams of the event, a general numbness, withdrawal from and loss of interest in the experiences of life and, often, survivor guilt.
Sustainable Engineering :	The ethical application of scientific principles to relevant aspects of sustainable design.
Tolerance : (AFF-IRL)	<p>The difference between permissible limits of size or between permissible limits of position.</p> <p>Tolerance is an absolute value, without sign.</p>
Waste Prevention :	<p>Those activities in planning, design, construction and production, and/or use and consumption, which consist of :</p> <ul style="list-style-type: none">- reducing the input of raw materials ;- substituting the input of primary or non-renewable raw materials ;- improving the cost effectiveness and energy efficiency of the existing 'built environment' ;- optimizing the design of new buildings, engineering works, products, processes and services ;- extending the life cycle of buildings, engineering works, products, processes and services, by means of adaptability, flexibility and better accessibility ; <p>and</p> <p>which also result in :</p> <ul style="list-style-type: none">- ease of re-use and recycling ;- elimination of waste ;- minimization of harmful environmental impacts, during the life cycle of those materials, products, processes and services. <p>Waste prevention begins with these vital questions " Must we build ? " and " Do we need this product ? " .</p>
Welfare :	A person's general feeling of health, happiness and fulfilment.
Workplace : (EU Directive 89/654/EEC)	A place intended to house workstations on the premises of an undertaking and/or establishment, and any other place within the area of the undertaking and/or establishment to which a worker has access in the course of his/her employment.
Work Size : (AFF-IRL)	The size, given with its permissible deviations, specified for manufacturing a component the actual size of which would lie within these deviations, under reference conditions.