Annex A. Glossary of terms

Accessibility results from the interaction of mobility and proximity (Silva and Larsson, 2018[1]). The term implies that well-being does not ultimately depend on how often and how far people can travel but on their ability to meet their needs with ease, including by not having to travel long distances, if at all. Accessibility can be measured in a number of ways, including the number of opportunities which can be reached within a given travel time, distance or cost; or the (average) time/cost required to gain access to a fixed number of opportunities from a given location. "Connectivity" is sometimes used instead of what in this report we define as accessibility, while "accessibility" may be used to mean ease of access for those with mobility impairments.

Brownfield development is the redevelopment of previously developed areas.

Car dependency is defined as the overuse of private motorised vehicles due to a combination of "high levels of per capita automobile travel, automobile-oriented land-use patterns, and reduced transport alternatives" (Litman, 2011[2]). In this report, the term is used to refer to dependency on cars and other private motorised vehicles such as motorcycles and sport utility vehicles.

Car-independent systems are those in which the bulk of daily activities can be done without a car or motorcycle. Car and motorcycle use is reserved for trips that can create more value than the costs they impose to society; they are not systematically the most convenient, nor the only, available option in most places. In these systems, distances between people and places are short, and active and shared modes (including public transport) are the fastest and safest ways for most people (including children) to travel.

Car overuse occurs when the harmful consequences of car use are greater than its benefits.

A **causal loop diagram** depicts a system structure, showing the feedback loops within the system being analysed.

A **detached house** is a separate residential construction that shares none of its exterior walls with another house or other structure.

A **feedback loop** is a non-linear cause-effect relationship. In a linear causal relationship, one variable affects a second, and the cause-effect chain stops there. In non-linear cause-effect relationships, one variable affects a second, which in turn affects the first one again, to produce a circular rather than a linear cause-effect chain. Feedback loops can be **reinforcing** or **balancing**. A **reinforcing feedback loop** is one in which a first variable alters the second, which then affects the first variable in the same direction (e.g. more eggs, more chickens, more eggs). Reinforcing feedback loops accelerate over time, and systems dominated by reinforcing feedback loops lead to exponential growth (positive or negative). A **balancing feedback loop** is a feedback loop in a system's structure in which variables affect each other in opposite directions (e.g. more predators, fewer prey).

The **iceberg model** is an analogy used to illustrate that much of what happens in our world is hidden from view. Events and patterns of behaviour are the part of the iceberg above the surface (the tip), while the structures and mindsets that cause them are the part below.

Induced demand refers to the phenomenon in which investment in road expansion to reduce congestion ends up producing the opposite effect. This happens because the more roads there are, the more attractive the car becomes and the more people choose to drive, thus creating more congestion.

Infill development refers to construction on any under- or undeveloped land within an urbanised area, including redevelopment of previously developed areas (brownfield development).

Leverage points are places to intervene in a system's structure (Meadows, 1999[3]), based on the idea that "different types of solutions have different amounts of leverage to change the system" (Hinton, 2021[4]). Low leverage points are those where an action generates little change in the system's behaviour and results. High leverage points are those where an action triggers important changes in the system's behaviour and results. The closer to the root causes of a problem, the higher the leverage.

Mental models are the unquestioned, often implicit and unconscious assumptions through which humans understand the world. They determine what people see and fail to see, influencing the goals they set, the actions they take, and the type of systems they create. The terms mental models, mindsets and paradigms are used interchangeably throughout the report.

Mobility is used in this report to designate physical movement, which can be measured in terms of vehicle-kilometres, passenger-kilometres, tonne-kilometres or number of trips.

Multi-modal planning is planning that takes account of various modes (walking, cycling, driving, public transit, etc.) and connections among them (Litman, 2020[5]).

On-demand shared services are vehicles available for shared use and shared vehicles. Shared-use vehicles include bicycles and micro-mobility (e.g. e-bikes, cargo e-bikes and e-scooters) (OECD, 2021[6]). Shared vehicles include high-occupancy vehicles as well as ride- and vehicle-sharing (OECD, 2021[6]; ITF, 2017[7]).

Road space management strategies are alternatives to the construction of new road infrastructure. They aim at the enhanced and more efficient utilisation of existing roadways while reducing or eliminating the costs associated with building new roads (Sharma, 2017[8]).

Road space reallocation refers to the rebalancing of road and street space from cars to different transport modes and functions beyond transport, such as recreation, bus lanes and markets.

Single-use development refers to a type of urban development in which each area focuses on a specific land use: suburbs tend to be residential neighbourhoods, places of interest are often concentrated in city centres or in specific areas (e.g. shopping malls), and offices are clustered in commercial districts.

Stocks and flows are the elements of a system. Stocks (e.g. vehicle fleet, car-purposed road capacity, public transport capacity) change over time due to inflows and outflows. They are the "system memory".

Sustainable accessibility refers to the delivery of accessibility for the bulk of trips via sustainable modes – active modes and micro-mobility (including via shared services), public transport and other high-capacity services.

Sustainable transport modes include active modes of transportation and micro-mobility, including shared services, public transport and other high-capacity services. As well as having minimal carbon emissions, sustainable forms of transportation take up less space than conventional ones.

A **system** is a set of elements whose interconnections determine its structure and behaviour. Elements include people, factories, bikes, etc. Interconnections organise the elements and include rules, incentives, sanctions and information.

Systems dynamics is an approach to understanding the cause-effect relationships that lead systems to behave as they do, and thus produce the results that we observe (e.g. unsustainable levels of emissions, traffic volume increase) (Sterman, 2002[9]).

Systems thinking (also referred to as taking a **systemic approach** or **thinking in systems**) is a way of thinking that allows to see systems and focus the analyst's attention on the interrelation between parts - rather than just the properties of the parts.

Tactical urbanism introduces rapid, "soft", low-cost infrastructure changes to show what a potentially permanent change would look like.

Transformational change refers to change in the way an entire system is organised and functions (Systems Innovation, 2020[10]). The IPCC defines it as "a system-wide change that requires more than technological change through consideration of social and economic factors that, with technology, can bring about rapid change at scale" (IPCC, 2018[11]).

Transformative policies aim to shift away from unsustainable systems dynamics and mental models towards systems that encourage patterns of behaviour in line with the envisioned results.

Transit-oriented development "is commonly defined as a type of mixed-use urban development within close proximity (walking distance) to mass transit facilities. Transit-oriented development principles are based on organising new development and redevelopment along mass transit corridors that serve as main transport axes, building high-density development along these corridors and fostering mixed land use and jobs" ((OECD, 2019[12]), based on ITF's Transport Outlook 2017 (2017[13])).

Urban sprawl occurs when populations of cities or towns move away from inner-city areas, often resulting in the construction of large, detached houses and car dependency, in turn leading to high-emission residential and transport systems. The term can be defined in multiple ways. The OECD (2018[14]) defines it as follows "an urban development pattern characterised by low population density that can be manifested in multiple ways". The report argues that "an urban area may be sprawled because the population density is, on average, low", "urban areas characterised by high average density can be considered sprawled if density varies widely across their footprint, leaving a substantial portion of urban land exposed to very low density levels" and that "[u]rban sprawl can also be manifested in development that is discontinuous, strongly scattered and decentralised, where a large number of unconnected fragments are separated by large parts of non-artificial surfaces".

Well-being is a concept that incorporates health, education, security, environmental quality, and political and social rights (OECD, 2019[12]). It goes beyond economic welfare and comprises both current well-being outcomes and the resources that help sustain these over time (OECD, 2019[12]). Well-being outcomes are captured in frameworks such as the Sustainable Development Goals and the OECD Well-Being Framework (OECD, 2011[15]).

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