

Unlocking Infrastructure Engineering

Infrastructure - the foundations of the services and systems that help society function - is a critical and growing dimension of research, crossing the boundaries of disciplines and forming a bridge between research and real-world application.

Inspec's Subject Matter Experts, noting the growth in infrastructure-related research, also identified that traditional subject-based classifications didn't fully capture the breadth and relevance of the material and took action. The result is an entirely new and unique way for researchers to pinpoint content focused on the physical systems, structures, and facilities that enable societies to function and support their economies.

With a strong overlap with the UN Sustainable Development Goals, Inspec has launched a set of classifications, beginning with a broad, non-specific top-level classification: Infrastructure Engineering. This is then divided into more specific areas, including Transport, Public Utilities, and Public Services, together with an Other Infrastructure section for papers on additional topics such as National Security that do not fit neatly within the preceding classifications. The Transport Infrastructure classification is further divided into codes for specific modes of transport.

E4000 Infrastructure engineering

This new section covers physical systems, structures and facilities required for the operation and functioning of a society and its economy. It covers research addressing general infrastructure such as non-specific critical infrastructures or infrastructure aspects spanning multiple sectors.

E4010 Transport infrastructure

(for transport industry, see E3650, for control aspects, see C3360)

Covers general transport infrastructure aspects such as public transport where the mode is not specified. For transport industry aspects see relevant E3650 classification. For control aspects see C3360.

E4010A Aerospace transport infrastructure

(for aerospace industry see E3650C)

Covers infrastructure supporting aviation systems, including airports, runways, terminals. For aerospace industry see E3650C.

E4010D Marine transport infrastructure

(for marine industry see E3650H)

Covers marine infrastructure, including ports (sea), canals, container terminals. For marine industry see E3650H.

E4010G Rail transport infrastructure

(for railway industry see E3650E)

Covers railway infrastructure such as rails, railway engineering, railway safety, railway maintenance and railway accidents. Not to be used for railway rolling stock aspects. For mechanical engineering aspects of rails see E2110A and for railway industry see E3650E.

E4010K Road transport infrastructure

(for road transport industry see E3650A)

Covers infrastructure for roads, road transport, road safety, road building and road maintenance. Includes road transport supporting infrastructure such as road pricing (tolls), petrol refilling stations, electric vehicle charging stations, battery swapping stations, hydrogen fuel stations. For mechanical and geotechnical engineering aspects of roads see E2110D. For automobile industry aspects see E3650A.

E4010Z Other transport infrastructure

Covers pedestrian and cycling infrastructure. Includes planning, usage analysis and safety aspects. For pedestrian/cycling accessibility to train stations see also E4010G, for airports see E4010A and for ports (sea) see E4010D.

E4020 Public utilities infrastructure

(for public utility industries see E3040)

Covers public utilities infrastructure such as water supply, water treatment and water storage infrastructure. Includes waste management infrastructure such as recycling, waste disposal, wastewater treatment, sanitary engineering and waste recovery centres. For processes use relevant E1525 classification instead. Includes energy resource transport infrastructure such as gas and oil pipelines.

E4030 Public services infrastructure

(for social and political issues see E0260)

Refers to infrastructure supporting human well-being and public service delivery. Including health care and hospital infrastructure, educational institutions and public safety infrastructure such as emergency services, police and fire stations. Also covers smart cities, town and country planning. For education aspects see E0250.

E4090 Other Infrastructure

Covers infrastructure not captured elsewhere such as national security and military systems infrastructure.



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