



Integrated Infrastructure Systems

An integrated regional infrastructure system is one in which the different components complement and reinforce each other. It facilitates industrial and commercial operations and enhances community lifestyles and quality of life.

However there are no widely-known measures to identify when such a system is close to full effectiveness. The current situation is to wait for the private sector to invest in a particular component, or for public agencies to identify infrastructure gaps via cost-benefit analysis etc.

The main (15) components of an infrastructure system are as follows.

Road transport

- Motorways, arterial roads, local roads
- Bridges and roundabouts
- Freight terminals
- Electric vehicles and supply points
- Kerbs, guttering, street lighting, traffic lights
- Bicycle paths, pedestrian bridges, underpasses

Rail transport

- Freight
- Passenger
- Light passenger

Aviation transport

- Terminals and freight hubs
- Runways
- Ancillary e.g. coolstores

Sea/river transport

- Ships, ferries, tender vessels
- Freight hubs and container terminals
- Marinas
- Jetties, pontoons
- Ancillary e.g. warehouses, lighthouses, nav aids

Telecommunications

- Internet and Broadband
- Mobile phone coverage
- Satellite technology

Land

- Commercial and industrial building blocks
- Industrial parks, incl. eco-industrial parks

Environment

- Foreshore development
- Walking trails, signage
- Seawalls, groynes, dune stabilisation

Energy

- Oil-based, incl. refineries
- Coal and gas
- Alternative energies – solar, wind, biomass, tidal, geothermal, biofuels, waste to energy
- Transmission lines, pipelines, transformers etc.

Water, sewerage and waste

- Water pipelines
- Storage reservoirs and ponds
- Stormwater and floodgates
- Wastewater and sewerage
- Waste management incl. collection and landfills

Health and wellbeing

- Hospitals
- Health Centres
- Nursing homes, hospices
- Mental health facilities
- Preventative health facilities e.g. parks and leisure facilities

Sports and recreation

- Parks, sports fields, golf courses
- Sports and leisure centres
- Gymnasiums
- Swimming pools

Education and training

- Universities and research hubs
- Secondary and primary schools
- Preschools and creches

Arts and culture

- Museums, art galleries, theatres, concert halls, studios
- Carnivals and fairs
- Other

Defence

- Military bases, barracks and training facilities
- Command centres
- Communication facilities

Emergency services

- Police
- Fire protection
- Ambulance services
- Terrorism control