

Infrastructure: Serving the Needs of a Community



Infrastructure refers to structures, systems, and facilities serving the economy of a business, industry, country, city, town, or area, including the services and facilities necessary for its economy to function. It is an essential ingredient for economic growth and competition, and it makes it possible for different productive resources to come together. Producers can bring their goods to consumers, a company's cost to produce items can be reduced, and it can provide access to modern technology.

There are many different types of infrastructure, and they all play a large role in the economic development of communities and societies. These types of infrastructures are often divided into two categories: hard infrastructure, which describes all the real, tangible evidence of changes made in a community; and soft infrastructure, which includes all the ideas a community uses to function and compete.

Hard Infrastructure

Hard infrastructure is the physical network that keeps an industrialized nation operating smoothly. Examples of hard infrastructure are the capital assets like utilities, telecommunication systems, roads, and bridges, among others. In a community, hard infrastructure will always include the following.



Transportation is the movement of people, animals and goods from one location to another. It enables trade between people, which is essential for the development of civilizations. Examples of transportation in a community can include roads, bus stations, airports, waterways, highways, and bridges. Transportation also includes all the various vehicles that travel on these networks. Public transportation includes all the services that are maintained by the community for general use by the public, while private transportation are services that are maintained by for-profit groups or corporations that charge fees for using them.

Energy Management focuses on making primary energy sources and secondary energy forms available to meet the needs of society. Public or private companies use shipping, pipelines, wired energy transfers, and wireless energy transfers to make gas, electricity, and alternative energy available for consumers. In the United States, most energy is either electric or gas. Wind, solar, hydroelectric, and geothermal energy are considered alternative sources of energy that are becoming more common in everyday usage.

Communication is the transmission of signals, messages, writings, images and sounds or intelligence of any nature by wire, radio, optical or other systems. Telecommunication occurs when the exchange of information between communication participants includes the use of technology. It is transmitted either electrically over physical media,

such as cables, or wirelessly using satellite signals. Developed urban areas will get the fastest signal transmission of wireless and satellite signals, which is an advantage that most people consider when moving to a city from a rural or suburban area. In the 21st century, the use of wireless signal transmission, especially for computer and internet services, has gradually replaced physical wires.

Water Management provides local water supply through a system of engineered components. A water supply system typically includes water purification facilities, storage facilities, pipes for distribution, and drainage for waste. A sign of a developed community is considered to be a reliable water supply service that has the adequate quantity and good quality of water for its residents.



Waste Management carries away waste, either in solution or suspension, which is intended to be removed from a community. Proper collection and safe, nuisance-free disposal of the liquid wastes of a community are legally recognized as a necessity in an urbanized, industrialized society. For developed communities, this includes the transport of wastewater and solid waste to a treatment plant before it is disbursed back into open water. However, most wastewater produced globally remains untreated. This causes widespread water pollution, especially in low-income countries.

Soft Infrastructure

Soft infrastructure is the non-physical networks that a community provides its residents. This includes the software and programs, the governing rules and regulations, the financial system, and the organizational structure. In essence, the soft infrastructure embodies the system of delivery of services to the people.



Rules & Regulations includes the actual programs, computer software, satellite signals, and other systems that deliver services to the public. This will also include the rules that encourage or prohibit certain behaviors among residents who receive services from the community government.

Maintenance involves fixing any sort of mechanical, plumbing, or electrical device should it become out of order or broken. It also includes performing routine actions which keep the device in working order or prevent trouble from arising.

Financial Systems collect taxes to provide for the upkeep and implementation of community building. This includes the government revenue and government expenditure of the public authorities and the adjustment of one or the other to achieve desirable effects and avoid undesirable ones. The main goal of all public finance systems is to achieve an equal allocation of funds for all projects, needs, and wants of a community.