

Mathematician designs social sustainability software

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Edgar Antonio Valdés Porrás has designed a software and service-oriented theoretical methodology supporting sustainability for cities, which if implemented, would increase economic impact points and infrastructure in Mexico and the Netherlands.

The Mexican specialist designs algorithms that solve the problems of

communication and interaction between various economic sectors to further implement a system of [software services](#).

Using the scrum methodology, he has developed a system based on knowing the specific problems of users or residents to create algorithms. "To create a network, points of impact are identified, the length is analyzed, the services that can be applied and then it monitors the effectiveness."

The network of services currently being designed by Porras Valdes, facilitates the entry of government, technology and [agriculture products](#) that are interconnected. In the Netherlands, there is a network of effective communication and transport. One example is the port of Rotterdam, which is surrounded by download centers and warehouses to facilitate its function. A product, such as the one proposed by the Mexican researcher, would help in the efficacy of various production processes.

The mathematician works in Holland developing software aimed at social sustainability, cultural and agricultural programs that help solve several problems by making various tools available to the population. The improvement of social programs, for example, helps to reduce vandalism.

To implement a sustainable service, research is required to obtain a map of the location, geographical qualities, infrastructure and population attributes and generate a base of technological and social services to support the strategy to be implemented. Each of these aspects corresponds to a network node and forms a micro-network that seeks to harness all resources efficiently to create [sustainable cities](#). The entire process takes an average of four years.

He plans to bring the system to his homeland. He states that "one of the

current problems in Mexico is the centralization of resources, which are distributed incorrectly (most are located in the capital, Mexico City). We need to organize different cities to take advantage of all remedies. We need to look at microgrids and create sustainable cities that take advantage of the topology of the country."

"We must solve the problem from the root, not with just a Band-aid. In the Netherlands, the range of possibilities is reviewed and then a decision is made. Mexico should do the same," says Valdés Porrás.

Provided by Investigación y Desarrollo

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