

Challenges in the Road: Lack of Infrastructure Coordination

How often have you seen a newly paved road being excavated for maintenance work? Excessive road cuts and limited coordination among different project owners cause problems such as degraded roads, project delays, increased paving costs, traffic congestion due to construction, and safety concerns.

Current-Day Infrastructure Coordination is Limited

Many people wonder why there seems to be so little coordination among the different types of construction and maintenance work that affects roadways by utilities, municipalities, and highway agencies. Few realize that the task, in today's complex and ever-changing world, is staggeringly difficult.

Complex Infrastructure Systems and Tight Interdependencies

Through most of the 20th century, water, sewer, storm drainage and gas utilities were placed below streets—the public right-of-way. Electric and communication utilities, on the other hand, were most often located above ground.



But in the building booms starting in the 1950s, as more utilities were placed in the same areas, streets were dug up more frequently. The “undergrounding” of electric and communication utilities started to happen more frequently for both aesthetic reasons and operational efficiency. And in recent decades, cable TV and newer communications utilities have also taken their place under streets. Given these demands, it's easy to see how coordinating construction and maintenance work among many infrastructure stakeholders is a very demanding task.

Methods Insufficient for the Task of Coordination

Utilities, municipalities, and highway agencies have had to rely on very time-consuming methods of project coordination. In many cases, project owners compile a list of planned projects and share them with one entity at a time. Often, in-person meetings and telephone calls are required to more fully share the information and to resolve issues. A city or town needs to do this with each utility; a utility company with each city or town it services; and a highway agency with any city or town in its roadway system.

New Technologies Enable Infrastructure Coordination

Until recently, there have been no automated methods to address the vast needs for infrastructure coordination. But advances in several areas have made it possible for Envista to create a breakthrough technology solution. Envista has leveraged three technologies to create this innovative solution: mapping, geospatial database capabilities, and Web 2.0 capabilities.

Advances in mapping technology make it possible for Envista to provide a visual and geographic context for infrastructure planning. Newly expanded geospatial database capabilities enable Envista to provide a scalable solution to deliver spatial information for a large numbers of users simultaneously. And finally, improved web technologies have enabled Envista to design its solution as a Software as a Service making it easy, convenient, and cost effective for organizations to implement infrastructure coordination online.

Summary

With concerns about public infrastructure at an all-time high, Envista provides the first technology solution to leverage limited budgets with better coordination and planning. Envista's map-based Software as a Service enables utilities, municipalities, and highway agencies to share construction and maintenance project information. All that is needed is Internet access for annual subscribers to see projects located on a map. For the first time, Envista provides a convenient, centralized way to exchange planning information with all stakeholders simultaneously.

With improved infrastructure planning, organizations can identify project conflicts and resolve them in a timely way. They can identify “dig once” opportunities where joint work can be planned. They can have a “dashboard” view of critical planning information to streamline operations and offer better service. Finally, infrastructure coordination online benefits not only the organizations that use it, but makes the communities these organizations serve better places to live and work.