CURING INFORMATION TECHNOLOGY

IN 2005, RESEARCHERS from Rand published a report recommending the implementation of health information technology systems throughout the United States. The report estimated such an action eventually would deliver annual savings of more than $81 billion. Last month, the research group issued a follow-up report summarizing the overall disappointing results.

The poor results of medical technology offer some lessons about the challenges facing transportation. The Rand authors attributed the disappointing performance of health IT to three major causes:

- Sluggish adoption of health IT systems, selection of systems that are neither interoperable nor easy to use, and the failure of health care providers and institutions to re-engineer core processes.
- These problems are pervasive in the transportation industry. Sluggish adoption of IT is commonplace. The reasons for the delay often can be found in previous efforts that failed to achieve intended results. Senior management becomes wary of new projects. The transportation industry has seen a fair number of IT meltdowns that caused any number of crises — from severe operational disruptions (Norfolk Southern, post-Conrail, for example) to company demise (Fritz).

Companies admit to an abundance of caution with existing IT systems. They are in no rush to spend time and energy necessary to develop a new solution. This thinking seems sound, but it fails to recognize the hidden costs — actual and opportunity — that any delayed improvement of IT imposes on an organization. For example, it took more than 20 years for all the Class I railroads to implement wireless work orders throughout their intermodal terminal networks — although the financial payback was so high that it could frequently be measured in months.

Interoperability refers to the ability of diverse systems (and organizations) to work together seamlessly. This is still a challenge for our industry because many vendors feel early adoption of their solution (along with their patented technical standards) will make it impossible for competitors to subsequently enter the market. Unfortunately, many customers, fearing they might be tied to a single-source provider, refuse to adapt. The result is an industry stuck in a technological status quo. (One of the few organizations working tirelessly to solve this logjam has been the Federal Highway Administration’s Department of Operations.)

The Rand report’s criticism of a lack of business process review is closely related to its finding that medical system reporting was viewed as distinct from providing medical care. This separation of people who do the work and those who enter data into the system frequently results in new systems that are exercises in “paving the cowpath.” Rather than develop new and integrated ways to perform only work that is necessary, the focus is strictly on automating current reporting tasks, whether they add value or not.

Cowpath paving is common in our industry. Despite the widespread implementation of EDI and the Web, many workers are still assigned to providing system input. An equal number of managers view system input as clerical work beneath their station. The problem frequently originates during system design when users insist on exactly replicating current reports, rather than evaluating the entire workflow process.

Although the technology to extract information from systems has improved, to many users, the “report is the system.” Job descriptions and functions frequently are built around paper reports, so it’s almost impossible to get users to achieve an improved overall solution. When more thought and concern is devoted to report design than to data integrity and latency, workers may be using a paper report at 4 p.m. that was printed at 9 a.m., processed at 5 a.m. and based on data as of 1 a.m.

Why is this such a challenge for our industry? In the past 25 years, many transportation providers have improved productivity drastically by reducing headcount and increasing volumes through technology. However, for all industries — air, ocean, rail and truck — the annual gains are increasingly marginal.

Many technologies are still in their infancy. It’s not uncommon for years — or even decades — to elapse between innovation and widespread implementation. Cloud computing, new computational algorithms and social media all offer game-changing opportunities. Will leaders in our industry embrace them — leaving competitors to languish — or will we all postpone the inevitable to our mutual detriment? JOC

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