Thomas W. Smith is a Program Director in the Department of Engineering Professional Development at the University of Wisconsin-Madison. Tom's research and teaching focus on engineering leadership and physical asset management. He is the founder of the UW's award-winning Master of Engineering Management degree. Tom is a member of the Faculty of the Institute of Asset Management and author and frequent presenter at asset management events around the world. Tom received his Bachelor's degree from Dartmouth College and Master's degree from the University of Wisconsin-Madison. Here he talks to Finance Monthly about the nature of asset management in 2016.

What are the unique challenges presented by operating within the asset management engineering sector, specifically for individuals assisting US clients?

When the topic of asset management comes up, many people immediately think of infrastructure and the expensive issue of long-term repair and replacement of these large scale fixed assets. This is a problem for our society, and it must be addressed. We also need to realize that every organization has assets that need to be effectively managed, and that age, rapid changes in technology, markets and the environment will make many—if not most—obsolete. The ISO Standard 55000 for Asset Management recognizes this and requires consideration of the "organizational context," in developing asset management plans.

What would you say are the main considerations that industries and economic sectors need to be mindful of in relation to asset management, given its increasingly complex nature?

The ISO Standard requires that asset management be comprehensive and integrated. Integration needs to happen across the lifecycle activities and be comprehensive from the portfolio through the individual assets.

The standard also requires that the asset register be aligned with the financial register. Past experience has proven that once engineering and finance begin to understand each other, asset management becomes much more efficient and effective.

What are the particular benefits of managing a company’s assets and asset systems, and how do they impact its organizational strategic plan?

Assets provide value to the organization. The value may be seen at the top line, where an asset such as an airplane or sports stadium touches the customer directly and enhances customer value. The value may also be seen in quality of products and services, which depend directly on asset performance. In food and beverage, for instance, the “asset contribution” to a batch of product may be explicitly measured and compared against quality measures, industry benchmarks and from facility to facility.

What are the key technical standards and legislation surrounding engineering asset management in the US?

The key standard is ISO 55001:2014, which is now also an ANSI National Standard. There are obviously thousands of individual technical standards that are addressed in the operation of any particular asset. New federal legislation, such as MAP 21 for transportation also requires asset management.

What are some of the most common social, environmental and economic issues that have affected the asset management practices in the US in the past twelve months?

In many organizations, assets are a relatively small part of the balance sheet, but a large part of the organization’s exposure to changing circumstances. Climate change endangers thousands of assets in coastal areas. Security concerns often focus on assets which support large numbers of people. Changes in consumer preferences affect food production. It is hard to imagine all the changes to our highways, roads, streets and parking lots that will come about with self-driving cars.

Given that you head the Department of Engineering Professional Development at the University of Wisconsin-Madison - can you tell us about the program and the courses that the department offers?

We offer a fundamental course on the ISO standard, showing how it can provide a framework for good asset management practice in any industry. We also provide specific courses in water and wastewater and transportation and a new and very popular course on integrating asset management across the whole city. We have more courses in development and specialized certificate in lean operations and maintenance management which support asset management.

Is there anything else you would like to add?

Asset management provides a useful view of the whole organization. Our asset management courses are located within our “Technical Leadership” curriculum, which gives a good idea of how we value this activity.