out. The good news is that 83 percent of organizations say they're "somewhat confident" they're going to get there -- that the organization is moving in the right direction to become data-driven.

The move to self-service analytics -- the "democratization of data," as it's often called -- is complicated by the many levels of users with different needs. The number of power users, the classic BI users in organizations, is increasing, but we're also seeing more business users with more advanced BI and data skills. They are creating visualizations, ad hoc reports, and dashboards at increasing rates. Meanwhile, data analysts need to explore the data, develop analytics models, and use specialized visualization tools to bring together different data sources. They're not satisfied with just a dashboard or the standard visualizations.

Providing all these types of users with the data resources and tools they need is an important step towards becoming data-driven.

The Role of Governance

Data governance is about the responsibility -- usually of a person or a team -- to know how the data is collected, how it's maintained, how it's being interpreted, what users are doing with it, and why the data is important and valuable. If the data is inconsistent or incomplete, what can the enterprise do to change that? For example, can you reduce duplication so there's less chance of error? Can the data be made more accurate?

Because many users are most comfortable accessing and querying data in the data warehouse, most enterprises prioritize making it a trusted, curated environment, often fairly well-governed. However, new demands on analytics are pushing the combination of corporate data sources with external sources, which tests the limits of governance as users start to look at different types of data. This may require bringing in specialists to help with data integration.

There's also the issue of mobility. Stodder says many organizations are still trying to work through how they're going to allow users to work with data on mobile platforms, whether they're secure or not, and governance is often a sticking point in the expansion of mobile.

With all these trends converging on an enterprise, are we seeing a data Wild West? Is data chaos going to increase? Will there be more silos, more disconnected data, more difficulty getting consistency in an organization? What role will increasing regulation play? "Clearly those are the dangers and that's why enterprises are talking about self-service and governance."

Bottom-Line Best Practices

Governance needs to include stewardship for better self-service. "That's really the bottom line -- to improve provisioning of trusted data so that users who are in self-service environments are using data they can trust is high quality," Stodder says. Stewardship is about "guiding users to trust the data and content."

A data steward is, essentially, a data shepherd and a data advocate. Data stewards -- whether in IT or the business -- typically administer data catalogs, glossaries, and metadata repositories and secure the resources necessary to maintain them. They promote the reuse of data, try to improve collaboration around data and analytics, and oversee how key elements such as models are promoted and productionized.

Today, stewardship can sound similar to what a chief data officer is in charge of, so these two areas could meld, Stodder points out. "Obviously some enterprises would put the chief data officer at the top of the pyramid as kind of the executive and maybe have stewards reporting into them -- or if not formally data stewards, then people in business units who are taking on stewardship responsibilities, who are working with the chief data officer."

Stodder also recommends you modernize your governance to make sure it fits self-service. Make sure it's balanced -- that you're working with users not just applying rules from the top down. Ensure you have visibility across all sources. Work with IT and users -- they can share governance responsibility. Once more users can apply trusted data to their everyday work, you'll be that much closer to being truly data-driven.

How Data Governance Supports the Data-Driven Enterprise

Enterprises need to make data governance a key part of their strategy in order to promote modern data-driven practices.

In a recent webinar, "Strategies for Aligning Governance with Self-Service Analytics," David Stodder, senior director of research for BI at TDWI, noted that many enterprises want to be data-driven, and in order to reach this goal, many types of users must have access to high-quality data.

"The big trend we see in our research is that organizations are trying to become more data-driven -- that is, to use data, analyze it, visualize it, and make the data a greater part of decision-making," Stodder explained. Data-driven decisions need to be made at all levels -- not just at executive levels but by line-of-business managers and even frontline workers. Unfortunately, he says, in many organizations decisions and actions across the enterprise are based on "uninformed, gut-feel assumptions."

By becoming data-driven, organizations hope to reduce errors and the number of bad decisions being made, and to do that they need good data quality -- they need trusted data; they need sensitive data to be protected.

At the same time, enterprises want to empower more personnel to discover and share data insights, and the cloud has accelerated the expansion of BI and analytics to more users. This increase in self-service analytics, however, means enterprises must find a good balance between giving users freedom and providing the right oversight and governance.

Becoming Data-Driven

How are organizations doing in their quest to be data-driven? Stodder says just under a third of respondents to a recent TDWI survey say they're close to being data-driven, but about 40 percent say they're not close -- "they're not really feeling good about where they are." (About a third -- about 29 percent -- are somewhere in the middle.)

"There's definitely work to be done in all organizations to become more data-driven, and I would say that a lot of the sticking points are around providing trusted data and governing the data," he pointed