

BECOMING A KNOWLEDGE-BASED BUSINESS:

A CONVERSATION WITH STAN DAVIS

About Stan Davis:

Stan Davis is author of several books that have helped managers envision and prepare for the future. In *Future Perfect* (1987, revised 1996), he coined the phrase "mass customization" to stress the need for tailored offerings provided cost-efficiently. In *2020 Vision* (1992), he introduced the idea of "informationalizing" a business by capturing and exploiting the "information exhaust" it generates. His next book will describe what firms must begin to think about now: becoming knowledge-based businesses. *Business Innovation's* editor, Julia Kirby, spoke with Stan about what it means to be knowledge-driven, what constitutes a "smart" product, and how managers must get smarter about the new knowledge economy.

Q: You're known for your visionary thinking about information and information technology. But in the past year, you've shifted your attention to knowledge and "knowledge-driven growth." Why?

A: I think there's a general recognition, as the information economy is moving into the mature part of its lifecycle, that the next wave is knowledge. And because of that, what we have now is an abundance of buzzwords and metaphors about the subject. One problem is that we often make the mistake, just because we've labeled something, of believing we know what it is. Phrases like "smart products" and "knowledge workers" and "intellectual capital" refer to things that are true and important. But our facility with throwing them around as buzzwords often masks how deeply they will in fact impact the way in which economic activity is conducted in the next decade. It's really worth understanding more completely what it means to say that knowledge will drive growth in the next decade. That's what my current work is focused on.

Q: You mention that we have been in the midst of an "information economy." Why is it different to talk about a "knowledge-based" one? Is this just semantics, or would the average manager be able to spot the shift?

A: Here's a simple way to understand the evolution. Information is about taking data—which consists of numbers, words, sounds, and images—and

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putting them into a meaningful pattern: a printed page, a photograph, a musical score, etc. And knowledge, quite simply, is about *using* that information. As I see it, the ability to use information is the child of the latter half of the information economy. The first half focused on the *crunching* power of computers. The second half is a shift from *crunching* to *connecting*—that is, from computing to communications. When you connect the information with the people who need it on a network, the information is what flows on the net, but the focus of knowledge is more on using it than on moving it.

Q: I think I understand what you're saying. As a manager, I would perceive a greater ability to connect people and information, and look for more ways that information could be used. How would I go about that?

A: Well, as a practical methodology, what I suggest is that every time you come across an element that you feel is about using information in some other business or environment, extract from it just what is involved and try to apply that to your own business. So, for example, when you hear something referred to as a "smart product," ask yourself: what makes it smart?

Q: Okay, I'll bite: What makes a product smart?

A: One of the things that will typically make it smart is that it is electronically connected. Not

free-standing. An example would be your computerized room key in a hotel. The chip in the doorknob may not be terribly smart, but what makes it powerful is that it's connected to the central system. To stay with the doorknob example, another aspect of many smart products is that they are customized. Each key is coded to the guest.

Q: Okay, so we have connected and customized. What else?

A: Upgradable. Let's switch examples and imagine a knowledge-based *TV Guide*. Yes, it would probably be electronically connected, so that instead of being paper-based, it will be delivered on your TV screen. Yes, customized: it would not cover 500 channels but only the ones you receive. But also, it would be constantly upgraded; you wouldn't have to buy new issues on the newsstand—updates would simply be downloaded. It would be interactive, allowing you to search for specific programs or types of program. And it would learn. Most products today, however smart they are, they're as smart as they're going to be once they're made and delivered. A knowledge-based offering, however, gets smarter with use.

Q: So, for instance, my *TV Guide* might observe that I always tune into movies from the '40s, and begin to alert me when one is on the schedule?

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A: That’s right. And to do that, it has to have memory, and it has to have filters. And that brings us to another feature of smart products: that they anticipate. So we’ve said that a knowledge-based *TV Guide* should be connected, customized, upgradable, interactive, learning, and anticipating. Well, we’ve just said quite a mouthful when you apply it to any other offering.

Q: Are you saying that many products in the future will have all these attributes?

A: It’s not that every one of them is required for something to be called a “knowledge-based” offering. But the more of them you have in your offering, the more indeed it is knowledge-based. And I would hasten to add that this applies not only to products and services. If you’re talking about building a knowledge-based business, you have to look at every aspect of the business. For example, what does it mean to talk about knowledge-based customers and markets? Knowledge-based resources? Knowledge-based models of competing? Knowledge-based processes for running the business? All of these things can involve connectedness, customization, learning, and the rest.

Q: Let’s talk about the competitive model. How is that going to change?

A: Brian Arthur’s recent article in *Harvard Business Review* notes how the competitive model is slowly, slowly changing from an industrial model in which the law of diminishing returns operated to the information era model in which the law of increasing returns operates. In a knowledge-intensive business, the critical competitive issue is to establish the standard—get everybody using your product. Once everybody’s “locked in” to your standard, you have effectively shut out competitors and your returns continue to increase rather than diminish. This turns the industrial model on its head. Instead of the conventional wisdom of “build a better mousetrap and the world will beat a path to your door,” it’s about building a better path. And forget the mousetrap, because it is a trap. The product can’t be the focus because it’s going to have a lifecycle measured in months, if not seconds, and will be constantly upgraded.

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Q: You're obviously thinking about knowledge at a highly strategic level. Most of the "knowledge initiatives" we hear about focus more on the internal organization—creating processes, tools, and structures to facilitate knowledge transfer and use. Are these focusing on the wrong goal?

A: Let me say this about "knowledge-based organizations." The only reason an organization exists is to carry out the fundamental purpose of the institution: a hospital exists to take care of people's health; a school exists to educate people; a commercial firm exists to satisfy marketplace needs for goods and services. The organization is not the end, but the means to the end. Therefore, it has to follow and not precede the business. I believe you cannot have a knowledge-based organization until you have a knowledge-based *business*. And all these people who are trying to build knowledge-based organizations without first focusing on building knowledge-based businesses are putting the cart before the horse. They are going to make a lot of gurus rich by buying books and going to speeches, but it's all going to come to naught. If they don't understand what it is they're doing it for, they're just going to build bureaucracies, and take their eye off the reason they exist—which, again, is to satisfy market needs with appropriate products and services.

Q: Why aren't more firms "knowledge-based" today? Are there still major hurdles to overcome? Does information technology have to evolve further? Do we need even cheaper MIPS?

A: No! The supporting technology is to a great degree already there. Well, one thing we need is increased bandwidth. But certainly, in terms of crunching power . . .

Q: Wait! First talk to me about increased bandwidth.

A: I mentioned that data come in basically four forms: numbers, words, sounds, and images. Actually, there are other forms, as well, such as smell, taste, touch, intuition, imagination, emotion—but we don't have very sophisticated technologies for those and therefore they haven't become major forms. And although there are those four basic forms, there have been only two "killer applications" for computing—namely, spreadsheets and word processing—and they deal only with numbers and words. One thing that is fairly safe to predict is that, as we move into the knowledge era, sound and image will become as important as numbers and words have been in the past. More bandwidth will enable sound and image to become equal partners with numbers and words. This is something that few if any companies are prepared for. But it's coming. Multimedia is simply the first shot across the bow in making that happen.

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Q: Interesting. But if technology is not what you consider the biggest obstacle . . . what is?

A: If you want it in a word, it's mindset. It takes a shift in mindset to see yourself as a knowledge-based business. It means, for example, if you are a hotel, seeing that you can probably make more money off your knowledge of how to run a hotel than off the traffic you can generate in that particular piece of real estate, brick, and mortar.

Q: So it's another way of defining your core competence?

A: Yes, if you will. It's defining yourself in terms of the knowledge you have. Which may be about your customers, or may be about a set of products, or may be about an underlying technology. It's stripping away the tangible matter and defining your business in terms of its essence—which may be intangible but is hardly immaterial to its economic value.

Q: How do you anticipate this new mindset will take hold?

A: What I believe is going to happen is that an awareness is going to burst on the scene that we have to become more knowledge-based. All of our products should be smart. And a lot of this will be just talk, throwing around jargon. But there will be firms that will bring out knowledge-based offerings, and those firms will gain a competitive advantage. The qualities that characterize knowledge-based offerings and businesses will come to be well known, and it will become routine to ask: "how could that apply to my company?" And it's just going to pick up momentum from there.