OnInnovation

Visionaries thinking out loud.™

Powered by the Henry Ford®

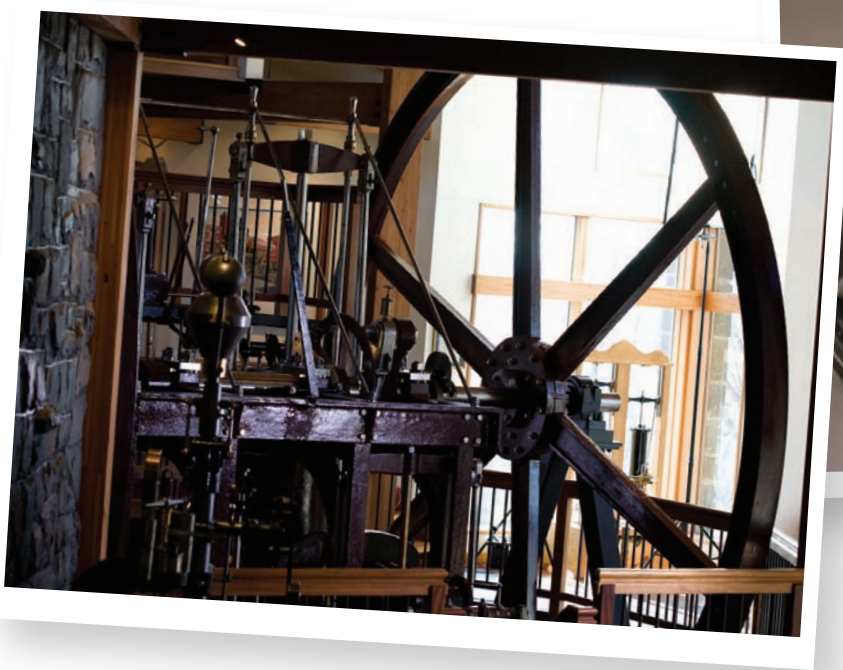
Dean Kamen

Highlight Video Transcript

Who Rules the Kingdom of North Dumpling?

Inventor and entrepreneur Dean Kamen owns a private island in Long Island Sound. This self-proclaimed lord of North Dumpling Island has created a completely self-sufficient home powered by a combination of solar and wind technology.

Dean Kamen has dedicated his life to improving humanity through technology and engineering. Inventing products since an early age, he has designed everything from medical devices to robots. Kamen is best known for his creation of the human transportation vehicle, the Segway.



Right: A Segway Personal Transporter from the collections of The Henry Ford Left: The centerpiece of Kamen's home is a 19th-century British side-lever marine steam engine that was once in the collections of The Henry Ford.

Dean Kamen, Inventor of Breakthrough Medical Products, Dedicated Agent of Change, Humanitarian

Dean Kamen

01:00:21

An innovation is something that is so important to people that they are willing to give up the way they used to do something to do it in a new, different way. It's – an innovation changes the way people live or think or work or understand the world they live in. An innovation is very, very hard, even if the invention might have been great. Because the one thing people don't like to do is change.

Having an Invention

02:00:53

. . . I never got up in the morning and said, "I'm gonna be an inventor." I've never to this day gone to work and said, "Oh, nine o'clock, review this, ten o'clock, check on that, ten-thirty, have a brilliant idea." I mean, I have never – thought that being an inventor can be an occupation. Having an invention is a rare consequence that every once in a while happens after lots and lots of work on some specific problem that – that you've been trying to solve.

"I never got up in the morning and said, "I'm gonna be an inventor.." — Dean Kamen

02:01:29

. . . and every once in a while, some of the output of what I and all my smart people do ends up being a product that people need, and it ends up in some cases being called an invention.

The Insulin Pump

An electronics workshop in Kamen's home

03:01:45

. . . My older brother, who's a brilliant guy, an M.D. PhD student at the time, later – you know, he's a pediatric hematologist-oncologist, he was workin' on nothing short of trying to cure leukemia in babies.

03:02:03

And he's come home on the weekends from medschool and from his Ph.D. program, where he was developing new drug therapies, and said, "Dean, these babies, they're preemies. They weigh two and three pounds. And I use these ridiculous pieces of hardware that are meant to put fluids into full-size adults. I need tiny, tiny, tiny drug delivery systems to treat these babies. So I'd get down in the basement and I'd try to make somethin' that he could use. And months of nights and weekends.

One of many workspaces in Kamen's home.

03:02:31

And I built them. And he started using them. And they started working.

03:02:37

So it wasn't that – I didn't do this to be a big business. . . . I was helping my brother and supplying something they needed for these really sick kids. Some time after that, my brother's – he had been at Harvard for a while as a guest resident and a student, then he's down at Yale as a professor at a medical school.

"I didn't do this to be a big business. I was helping my brother and supplying something they needed for these really sick kids. "
— Dean Kamen

03:02:57

And one of the docs there says to him, "You know, that's such a tiny little thing, I realize it's so tiny you could put it in your pocket if you're a full-size adult and walk around getting a drug instead of lying in bed. And I've got patients that need drugs around the clock for a long time, maybe for the rest of their lives. They're called diabetics."

03:03:13

So, of course, I run home and start making what later became – took me a couple of years, but later became – the first wearable insulin pump.

Life is Short. Think Big.

04:03:25

I would not pretend to you that I had a plan to start a medical products company and then later do other things. What I would tell you is I tried to stay focused on a couple of simple facts. Life is short. Don't waste any of it. Work hard every day. Be open to new ideas. . . . and stay focused on only doing things that matter.

An interior view of Dean Kamen's house shows the 1860s British steam engine with rooms and staircases arrayed around it.

04:03:57

Because life really is short – is the reason that I think I do most of what I do. You know, people say to me, "What does building water machines or Stirling engines have to do with building drug delivery systems? . . . They couldn't be more different." "Really? They couldn't be more the same to me. How are they the same? They're all important."

04:04:18

They all have the potential to give people better lives.

04:04:22

You know, I'd – if I were given the choice – failing at trying to do something really big or succeeding at something that's no big deal – I'd much rather go down in a ball of flames than die the warm death of mediocrity. . . . I mean, we're all gonna end up in the same place. So while you've got the energy, try to do the big stuff.

Dean Kamen demonstrates the stair-climbing abilities of the iBOT powered wheelchair.

The iBOT

05:04:50

I happened to see a guy struggling to get up a curb one time to go into a very modern environment that we all take for granted, a shopping mall. It's pretty much one level. It ought to be no problem for somebody in a wheelchair.

05:05:05

But getting up the curb to get in was a problem. I watched him inside. It was a problem that he couldn't reach high things. I happened to see him again at the end of my visit to the mall, where I was stopping in for a good, well-balanced dinner of an ice cream cone at the food court. And there was this guy at the same counter. But it was a counter-height ice cream stand.

05:05:28

And I left there thinking . . . "How can it be there's nothing out there that helps this guy who's pushing himself around? His eyeballs at 37 inches . . . How could it be there's nothing better than that?" And I decided we'd work on it.

05:05:48

That project was one of those "wow, looks easy, is hard" projects. . . . Understanding human balance, figuring out how to emulate human balance was really hard.

"How can it be there's nothing out there that helps this guy who's pushing himself around? His eyeballs at 37 inches . . . How could it be there's nothing better than that?" And I decided we'd work on it. "
— Dean Kamen

Solve the Right Problems

06:06:02

And I look at a lot of the stuff that I see commercially available and think, "What really smart, passionate, focused person would waste his or her time getting to this result?" And you know – I sometimes feel like, "Who am I to be judgmental about that?" But I can't help it. I feel that way when I see so much junk in the world, as opposed to the fact that there's so much need in the world. And you could make lots of people really happy and healthy if you focused on solving the right problems.

Kamen's home machine shop.

Dean Kamen demonstrates a Stirling engine prototype that has been installed in his home.