Remarks at the White House Maker Faire

June 18, 2014

Everybody, have a seat. Thank you. Thank you. Well, good morning. And welcome to the first-ever White House Maker Faire, which is pretty exciting. Now, the—let me start off by saying, the only thing that I asked my staff about is, why is there an "e" at the end of "faire"? [*Laughter*] I mean, I wasn't sure, is there jousting? Do we all have to get dressed up or what? So I'm just warning you, next year, the "e" may be gone. I don't know exactly who came up with that. This is America. We don't have "e's" at the end of "fair." [*Laughter*] All right? So I'm just saying. [*Laughter*] I'm just saying. Whoever came up with that idea, you let me know.

We've got three outstanding Members of Congress who are here: Bill Foster, Rush Holt, and Russ [Mark]* Takano. We've got National Science Foundation Director France Córdova, who's here—France. Our NIH Director, Francis Collins. My science adviser, John Holdren. We've got innovators like Dale Dougherty, who's here, who helped launch the very first Maker Faire nearly a decade ago. Dale, stand up. We have Intel's youngest intern, who I know because he's probably the only person who was ever allowed to fire a marshmallow in the White House—[*laughter*]—Joey Hudy. Where's Joey? There he is. There's still a stain—[*laughter*]—from where the marshmallow hit. It was scary. The thing just went out a little—you don't want to be at the other—receiving end of that marshmallow. He also brought, by the way, his "3x3x3 LED Shield," which is his.

And we've got some wonderful folks like our Science Guy, Bill Nye, who's here all the time, and Mr. Kamen, a great inventor. So this is a smart group right here. There are some innovative folks.

Before I begin, I have to ask: What on Earth have you done to my house? [*Laughter*] I mean, there's a mobile factory on the South Lawn. There's a robotic giraffe. There's a giant red weather balloon in the Rose Garden. There's a paper-craft dinosaur head in the hallway. Over here is a 3–D-printed sculpture of my State of the Union Address. [*Laughter*] Clearly, there could have been some edits right there in the middle. [*Laughter*] It—the sculpture clearly goes on too long. [*Laughter*] So this is not your typical day at the White House.

We invited you here because today is D.I.Y.—today's D.I.Y. is tomorrow's "Made in America." Your projects are examples of a revolution that's taking place in American manufacturing, a revolution that can help us create new jobs and industries for decades to come.

Five years after the worst economic crisis of our lifetimes, our businesses have created jobs for 51 straight months. That's 9.4 million new jobs in total. But we know we've got to create more. And one of the best ways to create more good jobs is by boosting American manufacturing.

So we've seen an auto industry that's come roaring back, and our manufacturing sector has been adding jobs for the first time since the 1990s, about 640,000 new manufacturing jobs since February of 2010. And in the absence of much action from Congress, we're doing what we can—I'm doing what I can on my own—to keep that progress going. So I've launched four

* White House correction.

new high-tech manufacturing hubs across the country, with more on the way. Yesterday I went to the TechShop in Pittsburgh, where you can use equipment like laser cutters and 3–D printers for about the cost of a gym membership. We announced new steps that we're taking to help entrepreneurs turn their ideas into products. More than 90 mayors made commitments to help entrepreneurs manufacture new things in their communities, and we're proud to have some of those mayors here today.

So we're going to do whatever we can to bring good manufacturing jobs back to our shores, because our parents and our grandparents created the world's largest economy and strongest middle class not by buying stuff, but by building stuff, by making stuff, by tinkering and inventing and building; by making and selling things first in a growing national market and then in an international market, stuff "Made in America."

And the good news is, is that new tools and technologies are making the building of things easier than ever. There is a democratization of manufacturing that is potentially available because of technology. Across our country, ordinary Americans are inventing incredible things, and then they're able to bring them to these fairs like Makers Faires. And you never know where this kind of enthusiasm and creativity and innovation could lead. So in the 1970s, Steve Wozniak designed the Apple I to show off for the members of the Homebrew Computer Club. And today, Apple is worth about $550 billion. I wish I had been there. [*Laughter*] I'd like to think that I would have said, that's a good idea. [*Laughter*] Let me—here, take my hundred dollars. [*Laughter*]

And while I don't know if the projects here today are the next Apple, I do know that by looking at some of these exhibits, it was just incredible what is being done.

So you take the team from the Workshop School in West Philadelphia, and compared to most other schools, there are a lot of advantages they don't have. This is a poor community. They do have, however, Simon Hauger, a principal who is so talented, a student once said, "He could teach algebra to a guinea pig." [*Laughter*] And with Simon's help, we've got Derrick Bell here, Taliya Carter, Joshua Pigford. Their team built a biodiesel sports car that gets around a hundred miles per gallon, which is why the Secret Service didn't let me drive it. [*Laughter*]

But what's happening is, is that the young people now are able to learn by doing. So math, science all gets incorporated into the task of actually making something, which the students tell me makes the subject matter that much more interesting.

Or you've got Jen McCabe, who is setting up a space called Factorli, in Las Vegas, to provide custom, small-scale manufacturing, kind of like a Kinko's or a copy shop, but instead of printing flyers, they're going to be able to print custom parts for American products.

There's Marc Roth from San Francisco. A few years ago, Marc found himself homeless. And at a shelter, Marc heard about a local TechShop that teaches folks how to use new tools like laser cutters and 3–D printers, and he signed up. And within 16 months, he had started SF Laser, his own laser-cutting business. He just launched a program called the Learning Shelter to teach tech and manufacturing skills to other folks who are trying to get back on their feet.

As you were going through the exhibits, you saw young people who are students at places like MIT helping to design mobile factories that bring the tools for invention to communities that might have thought that kind of stuff was out of reach for them. An incredible story of a young woman who figured out how to make a cheap incubator that's already helping 60,000 newbies around the world who can't afford the sort of expensive equipment that we have in our hospitals.

It gives you a sense that we are at the dawn of something big. And one of the professors who I had a chance to speak to as I was taking the tour described it as analogous to where we were with the Internet 25, 30 years ago. In the same way that we are at that—we were at that time reorganizing how we could use data and information, we are now at a point where we're going to be able to reorganize how we think about making things and marrying the information revolution to what's been an analogue manufacturing system. And it's incredibly exciting, and we're at the cutting edge of it, but we've got to make sure that we continue to be at the cutting edge of it.

And so as a country, we ought to be doing what Simon and Jen and Marc are doing every day, and we've got to make sure that more Americans have the skills and opportunities to land a job in a growing industry or to create entirely new industries. So that's why I'm declaring today a "National Day of Making," and it's why I'm backing those words up with action.

We're helping schools take shop class into the 21st century, because one of the things I'm really interested in is how do we redesign high schools so that young people are able to do stuff as they are learning. And that's not just true for schools in inner-city Philadelphia, that's true for schools generally, in part because it also then gives new opportunities for young people who may have different learning styles to thrive in ways that they might not if they're just sitting there listening to a lecture.

We're providing new support for startups that want to file for a patent. From the Defense Department to the SBA and from the National Science Foundation to NASA, we're doing more to help entrepreneurs start new businesses that make things in America.

And of course, this is not just a job for Government. Today, more than 150 colleges and universities are committing to giving young people more hands-on opportunities to make things. So a few minutes ago, a young man named Partha Unnava showed me the letter announcing that commitment, and of course, it was on some metal that was 3–D printed. He couldn't just give me a piece of paper. [*Laughter*] It's harder to file, by the way, but it looks cooler. [*Laughter*]

The private sector is stepping up as well. From Indiegogo and Etsy to Disney and Intel, companies have pledged to help unleash a new wave of innovation here in America. And these companies do different things, they come from different industries, but they share the belief that when we tap the potential of every American, all of us are better off.

Camille and Genevieve Beatty are here today from Asheville, North Carolina. They're 14 and 12 years old. Where are they? Raise your hands, guys. There you are. [*Applause*] See? They happen to be the cofounders of Beatty Robotics. Genevieve does the wiring, Camille machines the metal. As their website puts it, "Who needs a paper route when you can start a robotics company?" [*Laughter*] That's a pretty good motto. That's great, I love that. [*Laughter*]

But the Beattys say one of the main things they've learned over the last few years isn't about power tools or engineering or electronics. What they've learned is that, "If you can imagine it, then you can do it—whatever it is." And that's a pretty good motto for America.

This is a country that imagined a railroad connecting a continent, imagined electricity powering our cities and towns, imagined skyscrapers reaching into the heavens and an Internet that brings us closer together. So we imagined these things, then we did them. And that's in our DNA. That's who we are. We're not done yet. And I hope every company, every college, every community, every citizen joins us as we lift up makers and builders and doers across the country. If we do, I know we're going to be able to create more good jobs in the years to come.

We're going to create entire new industries that we can't yet imagine, although, I suspect Camille and Genevieve may have already figured it out. [*Laughter*]

And we're going to rebuild our economy and restore our middle class and give opportunities for people whose potential is not yet tapped. There are kids out there, there are adults out there right now who have a great idea. And they don't have access to the capital they need. They don't have the tools they need to put together a prototype. They don't know how to link up with folks who could help refine those ideas. And what the maker movement does, what technology does, what the information revolution does is it allows all those folks to suddenly be a part of this creative process. And what better place to do that than here in the United States of America?

This is a place where we know how to invent and we know how to dream and we know how to take risks. And this is a place where people who work hard have always been able to make it. We want to make sure that continues. So thanks for the great work you're all doing. It's very inspiring.

God bless you. God bless the United States of America. Thank you.

NOTE: The President spoke at 12:02 p.m. in the East Room at the White House. In his remarks, he referred to Dale Dougherty, founder and chief executive officer, Maker Media, Inc.; Joey Hudy, student participant in the 2012 White House Science Fair; William S. Nye, television personality and executive director of the Planetary Society; Dean L. Kamen, founder, DEKA Research and Development Corp.; Stephen G. Wozniak, cofounder, Apple, Inc.; Simon Hauger, principal and cofounder, and Jacques Wells, Derrick Bell, Taliya Carter, and Joshua Pigford, students, the Workshop School in Philadelphia, PA; Jane M. Chen, cofounder and chief business officer, Embrace Innovations; Partha Unnava, chief executive officer, Better Walk. He also referred to Proclamation 9143.

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