

With U.S. technologists retiring—and security clearances needed for many aerospace jobs—can America's youth be persuaded to take up tech?

Boeing Enlists Hollywood to Make Engineering Cool

On the TV show NCIS, actress Pauley Perrette plays quirky, über-smart forensic specialist Abby Sciuto. As part of the Naval Criminal Investigative Service, the tattooed, well-educated goth uses her expertise in hacking, ballistics, and DNA analysis to solve murders and other crimes that involve the U.S. Navy and Marine Corps.

In a public service announcement shot in July, Perrette takes on a different—and possibly more challenging—role. On behalf of the nonprofit Entertainment Industries Council, Perrette encourages students to pursue careers in the fields of science, engineering, and technology.

There's a pressing need for young people in the U.S. to consider careers in science and technology, particularly in aerospace, says Marion Blakey, chief executive officer of the Aerospace Industries Assn. A high percentage of the industry's workforce is nearing retirement and many of the jobs that will need to be filled are in engineering, she says. Because many of the jobs relate to defense contracts and require employees to be U.S. citizens, aerospace companies must find new scientists at home, rather than abroad. "Within 10 years half of our workforce will be eligible to retire," Blakey says. "We have to home-grow this workforce because of the security clearance requirements." Already, there are more than 7,000 job openings, many of them on defense projects and hard to fill, she says.

Boeing (BA), the second-biggest U.S. defense contractor, may feel the pinch acutely. Chicago-based Boeing says that by 2015, about 40 percent of its workforce, or 60,000 people, will be eligible to retire. To ensure that the open positions are filled, the company works closely with 150 colleges in the U.S. and abroad.

In aerospace, 20 percent retire soon.

Boeing is also trying to get young people interested in technology-related fields at an earlier age. Last year the company joined forces with the Entertainment Industries Council to use media to kindle greater interest in science and technology. There's no shortage of scientists and engineers on TV and the movies, says Richard Stephens,

senior vice-president of human resources and administration at Boeing. Many, however, are portrayed in an unsympathetic light. "In movies and on TV, 10 percent of characters are scientists and engineers," Stephens said in Congressional testimony on Feb. 4. "Unfortunately, of those more than 70 percent kill others, are killed, or are overcome by lay people."

In his testimony, Stephens estimated that 20 percent of the technical talent in the aerospace industry will be eligible to retire in three years.

In its effort to reshape perceptions of engineering and encourage young people to see technology-related work as more alluring, the Entertainment Industries Council in late July brought together engineers and executives from *Lie to Me*, a TV show on News Corp.'s (NWS) Fox; National Geographic Channel, a joint venture of National Geographic Television & Film and Fox Cable Networks; Discovery Communications' (DISCK) Science Channel; and Viacom's (VIA) Black Entertainment Television during the annual meeting of the National Cable & Telecommunications Assn. to explain the creative process to the engineers and foster a better understanding between the two groups.

The council is also starting an annual awards ceremony for films, TV series, newspaper, magazines, Internet, or radio content that has an impact on the public's understanding of science, engineering, technology, or math and debunks myths or stereotypes. The council is accepting award nominees through mid-September. "Engineers have been stereotyped and our industry has played a part in this," says Brian Dyak, president of the Entertainment Industries Council. "We've had mad scientists in movies going back to the '30s," he says, with scientists often portrayed as deranged and engineers as geeky. "No one realizes what a technologist does."

Disney chipped in amid the Space Race.

In past years, the council made strides to encourage film, TV, and journalists to portray mental health and substance-abuse issues more accurately. It did that in part through the Prism awards, which annually honor actors, movies, music, media, and TV shows that accurately depict and bring attention to these issues.

Can the council change perceptions of engineers? "The media has enormous power to influence people's attitudes," says John Kao, Chairman of the Institute for Large Scale Innovation and the author of

the book *Innovation Nation*. "During the Sputnik era, Walt Disney put out a series called *Men in Space* and it's hard to overstate how influential that TV series was for a generation of scientists and engineers."

Filling the gap in engineering talent will take more than hip characters on TV, Kao says. "It's a condiment to the main course."

"We are in danger of having our educational enterprise founder because of a lack of qualified math and science teachers."

Perrette, whose "Abby" boasts more than 450,000 fans on Facebook, may nevertheless do a small part to encourage viewers to consider science cool.