



2012 WASHINGTON IDEAS FORUM

WORKING SUMMIT OVERVIEW: DISRUPTIVE TECHNOLOGY

Prepared by Hallie Detrick, *The Atlantic*

DISRUPTIVE TECHNOLOGY:

Game-changing advances from apps to airplanes

THE CONVERSATION

Experts from the sectors of technology, media, government, and academia met at the Washington Ideas Forum to discuss the future of disruptive technology and how it will continue to shape our lives. The conversation focused on policy issues and on the impact of disruptive technology on education and jobs.

Participants discussed whether technology would lead to an increase or a decrease in employment. Arnold Worldwide CEO Andrew Bennett pointed out “The vast majority of Silicon Valley startups, [are] doing amazing things, disrupting huge industries, with very few people. If that’s where a lot of technology across many industries is going, the answer is clearly less people.”

Thomson Reuters’ Senior Strategic Analyst Jason Thomas disagreed, arguing that, “Some of those technologies that are disruptive actually create follow-on technologies that enable job creation.” Adding to that point, Quixey CEO and Founder Tomer Kagan argued that advances in artificial intelligence and data management actually augments human capabilities, allowing us to produce more. Julie Shah, a professor at MIT who studies robots, concurred. With the right execution, she said, integrating robots into manufacturing could increase human employment in the long run.

Participants turned their attention to the related subjects of workforce development and higher education, discussing whether college degrees are still worthwhile, how to best train today’s students for tomorrow’s jobs, and how academic institutions can leverage today’s disruptive technologies to not only survive but thrive.

Several participants asserted the importance of focusing on building foundations in math and science rather than teaching students applied skills. Kagan said that at Quixey he has seen this philosophy succeed. “Every summer we employ about ten high school students that we think are just good at math, who have never gone through any type of education around programming,” he said. “Within two to three months, most of them are outperforming people who have 10 years of experience.”

When a question arose about whether college is still a worthwhile pursuit, Jason Thomas said, “We have employees at [Thomson Reuters] who question whether they should’ve gone to college because the starting salaries that they get out of college in the position that they’re in now versus what they could’ve gotten without going to college but learning how to code are the same, if not better.”

Others argued that higher education still has value. “Universities are not job-training places, that’s not necessarily why universities exist,” said Eric Toone, who serves as Deputy Director of Advanced Research Projects at the U.S. Department of Energy. Tom Cochran, CTO of Atlantic Media, framed the question of value in terms of formal education versus knowledge acquisition.

Regardless of their stance on the value question, most participants agreed that education will look very different in the future, particularly vis-à-vis the recent emergence of online courses, which are sometimes free, and how those

online institutions might impact traditional institutions' planning and infrastructure. Ernest Moniz, Director of the MIT Energy Initiative, argued this transformation is not necessarily a bad thing. "One should not assume that developing distance-learning methods cannot accomplish the 'how to think' part."

Participants agreed that the role of Washington should be to adopt policies which nurture innovation. The role of government, as articulated by former FCC Chairman Kevin Martin, is to have clear rules and to "decide on a policy goal and be willing to prioritize around it."

Many participants stressed the importance of adopting clear rules, particularly regarding intellectual property, in order to encourage collaboration and reduce the risks associated with sharing ideas. Whitney Johnson of Rose Park Advisors cited collaboration as the best means of harnessing disruptive innovation to "drive the world forward."

Others called for a closer relationship between regulators and disruptors. More-effective government policy will result from opening a dialogue between legislators and the technology industry, many participants said, arguing that today's ineffective and out of touch technology policies are largely attributable to Washington's lack of expertise.

FIVE BIG IDEAS

1. Industries that are on the brink or in the middle of being disrupted include banking (by peer-to-peer funding and transfers), education (by alternative means of attaining education and less necessity for degrees in certain fields), and medicine (through the democratization of information that technology brings).
2. Incumbent firms should be encouraged to embrace and incorporate disruption so everyone has an interest in innovating.
3. A stronger dialogue must develop between the technology and government sectors in order to encourage collaboration and create better policy.
4. More investment should be made in long-term disruptive projects rather than ones that show immediate returns. Washington should subsidize these projects, particularly those in the field of energy given the large capital investments required.
5. The current fast pace of digital communication will eventually become counterproductive and lead to burnout; Workplaces and individuals are beginning to develop rules regarding the use of technology to combat negative outcomes.

ATTENDEES

Moderator: Scott Havens *President The Atlantic*

Host: Jamie Miller *Vice President, Director of Public Programs Aspen Institute*

Participants:

- Jonathan Adelstein *Former Commissioner FCC, Chief Executive Officer PCIA- The Wireless Infrastructure Association*
- Rebecca Arbogast *Vice President, Global Public Policy Comcast Corporation*
- James Bartis *Senior Policy Researcher RAND Corporation*
- Andrew Benett *Global Chief Strategy Officer of Havas Worldwide and Global Chief Executive Officer Arnold Worldwide*

- Tom Cochran *Chief Information Officer* **Atlantic Media Company**
- Steve Greenwood *Founder and Chief Executive Officer* **Brewster**
- Jennifer Hansen **Sony Music**
- David Hershkovits **Paper Publishing**
- Ginny Hunt *Head, Politics and Elections Team* **Google**
- Whitney Johnson *President* **Rose Park Advisors**
- Tomer Kagan *Co-founder and Chief Executive Officer* **Quixey**
- Cecilia Kang *Reporter and Columnist, Post Tech* **The Washington Post**
- Peter Kim *Vice President* **Sheikh Zayed Institute for Pediatric Surgical Innovation**
- Kevin Martin *Former Chairman, Federal Communications Commission, and Co-Chair* **Patton Boggs**
- Michael McQuade *Senior Vice President, Science and Technology* **United Technologies Corporation**
- Ernest Moniz *Director, MIT Energy Initiative* **MIT**
- Sohi Rastegar *Senior Advisor for Emerging Technologies and Interdisciplinary Research* **National Science Foundation**
- Julie Shah *Assistant Professor, Department of Aeronautics and Astronautics* **MIT**
- H. B. Siegel *Chief Technology Officer* **IMDb.com, part of Amazon Inc.**
- Jason Thomas *Senior Strategic Analyst, Legal* **Thomson Reuters**
- Eric Toone *Principal Deputy Director, Advanced Research Projects Agency – Energy* **United States Department of Energy**
- R "Ray" Wang *Principal Analyst and Chief Executive Officer* **Constellation Research, Inc.**
- Matt Weiss *Chief Marketing Officer* **Kirshenbaum and Bond**
- Ryan Zarick *Co-Founder and Chief Technology Officer* **Buzzdraft.com**