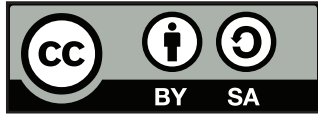


# ARDUINO



Arduino is a for-profit open-source electronics platform and computer hardware and software company. Founded in 2005 in Italy.

[www.arduino.cc](http://www.arduino.cc)

**Revenue model:** charging for physical copies (sales of boards, modules, shields, and kits), licensing a trademark (fees paid by those who want to sell Arduino products using their name)

**Interview date:** February 4, 2016

**Interviewees:** David Cuartielles and Tom Igoe, cofounders

*Profile written by Paul Stacey*

In 2005, at the Interaction Design Institute Ivrea in northern Italy, teachers and students needed an easy way to use electronics and programming to quickly prototype design ideas. As musicians, artists, and designers, they needed a platform that didn't require engineering expertise. A group of teachers and students, including Massimo Banzi, David Cuartielles, Tom Igoe, Gianluca Martino, and David Mellis, built a platform that combined different open technologies. They called it Arduino. The platform integrated software, hardware, microcontrollers, and electronics. All aspects of the platform were openly licensed: hardware designs and documentation with the Attribution-ShareAlike license (CC BY-SA), and software with the GNU General Public License.

Arduino boards are able to read inputs—light on a sensor, a finger on a button, or a Twitter message—and turn it into outputs—activating a motor, turning on an LED, publish-

ing something online. You send a set of instructions to the microcontroller on the board by using the Arduino programming language and Arduino software (based on a piece of open-source software called Processing, a programming tool used to make visual art).

"The reasons for making Arduino open source are complicated," Tom says. Partly it was about supporting flexibility. The open-source nature of Arduino empowers users to modify it and create a lot of different variations, adding on top of what the founders build. David says this "ended up strengthening the platform far beyond what we had even thought of building."

For Tom another factor was the impending closure of the Ivrea design school. He'd seen other organizations close their doors and all their work and research just disappear. Open-sourcing ensured that Arduino would outlive the Ivrea closure. Persistence is one