

they'd still be flashing all over the country for some time, perhaps talking to the flight controllers—starting to say that the flight's getting ready for departure and to prepare for that.

Now consider a second example, from supply chain management. Twenty years ago, if you were shipping freight through Rotterdam into the center of Europe, people with clipboards would be registering arrival, checking manifests, filling out paperwork, and telephoning forward destinations to let other people know. Now such shipments go through an RFID<sup>2</sup> portal where they are scanned, digitally captured, and automatically dispatched. The RFID portal is in conversation digitally with the originating shipper, other depots, other suppliers, and destinations along the route, all keeping track, keeping control, and reconfiguring routing if necessary to optimize things along the way. What used to be done by humans is now executed as a series of conversations among remotely located servers.

In both these examples, and all across economies in the developed world, processes in the physical economy are being entered into the digital economy, where they are “speaking to” other processes in the digital economy, in a constant conversation among multiple servers and multiple semi-intelligent nodes that are updating things, querying things, checking things off, readjusting things, and eventually connecting back with processes and humans in the physical economy.

So we can say that another economy—a second economy—of all of these digitized business processes conversing, executing, and triggering further actions is silently forming alongside the physical economy.

## **Aspen root systems**

If I were to look for adjectives to describe this second economy, I'd say it is vast, silent, connected, unseen, and autonomous (meaning that human beings may design it but are not directly involved in running it). It is remotely executing and global, always on, and endlessly configurable. It is concurrent—a great computer expression—which means that everything happens in parallel. It is self-configuring, meaning it constantly reconfigures itself on the fly, and increasingly it is also self-organizing, self-architecting, and self-healing.

<sup>2</sup>Radio-frequency identification.