

# European Affairs

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## A FLAT PLAYING FIELD CAN SPREAD WESTERN INNOVATION

By Michael C. Maibach

### Transatlantic Innovation: A Historical Perspective

For centuries, American and European innovators have led the way in global technological revolutions. In the 17th and 18th centuries, British inventors Savery, Newcomen and Watt developed the steam engine, which allowed Jouffroy d'Abbans of France to build the first steam-powered ship in 1783. By 1807, Fulton (U.S.) made steamboats commercially practical. In 1860 the Gloire (France) became the world's first steel hulled warship, and the Monitor and Merrimack of the American Civil War made history in their dramatic battle of 1862. Steam powered ironclads gave way to gas turbines in the 20th century. Gas turbine technology was developed by – among others – Branca (Italy), Newton, Parson, Barber and Whittle (UK), Verbeist (Belgium), Stolze (Germany), Elling (Norway), Brayton and Moss (U.S.).

The Wright brothers (U.S.) made the first manned flights in 1903 with their wooden, gasoline powered Flyer I. They stood on the shoulders of da Vinci (Italy), Montgolfier (France), Cayley (UK), Lillenthal (Germany), Langley and Chanute (U.S.). By the 1930s, jet engines allowed man to span the globe in a matter of hours. Jets were built on decades of work by Coanda (Romania), Campini (Italy), Elling (Norway), Buckingham (U.S.), Whittle (UK), von Ohain, Hahn and Anslem (Germany) and Franz (Austria). Sturgeon (UK) and Henry (U.S.) paved the way for Morse (U.S.) to send the first telegraph in 1844. In 1876 Bell (U.S.) patented the telephone.

Solid state electronic devices – the transistor and integrated circuit – were advanced by Lilienfeld, Heil, Matarè and Welker (Germany), Dummer (UK), Edison, Lehovec, Shockley, Bardeen, Brattain, Noyce and Kilby (U.S.), among others.

Solid state electronics set the stage for modern radio and television, as well as computers. Wireless pioneers included Romagnosi and Marconi (Italy), Braun (Germany), Faraday (UK) and Tesla (Croatia). Television pioneers include Nipkow (Germany), Smith and Baird (UK), Tihanyi (Hungary), and Jenkins, Farnsworth, Zworykin and Ives (U.S.). Computer pioneers include Babbage and Newman (UK), Zuse (Germany), Hollerith, Shannon, Atanasoff, Berry, von Neumann, Eckert and Mauchly, Watson, Olsen, Jobs, Gates (U.S.).

In the U.S., the funds face pressures, notably in Congress, for closer scrutiny of their activities. A national survey in January by Public Strategies Inc. found that 55 percent of registered voters thought sovereign wealth fund investments would hurt national security, and 49 percent believed that investments would negatively affect the U.S. economy.

The marriage of computing and telecommunications became the platform for the Internet. Early internet pioneers, including Kleinrock, Roberts, Kahn, Cerf, Bina and Andreessen (U.S.) and Tim Berners-Lee (UK), have been followed by hundreds of other Western innovators responsible for Skype, Yahoo!, Amazon, eBay and, of course, Google.

Globalization has made us more conscious of the successive technological revolutions that have driven the scale, scope and speed of change and modernization. “Globalization” itself in the modern era has been led by Western inventors and entrepreneurs. Wave upon wave of transformative technology has taken root on one or both sides of the Atlantic over the last



several centuries. Globalization's first cutting-edge technology was the Transportation Revolution, exemplified by the Italian Christopher Columbus' voyages in wooden, wind-powered ships to America in the 1490s. Europeans, and later Americans, continued to lead the way in transportation technology through the 20th century, developing better and faster ways to travel by land, water, and air.

The Information Revolution, which has had an even greater impact on globalization, has also been a transatlantic enterprise since its inception. Ever since the invention of the telegraph in 1844, innovators from Hungary, Croatia, Germany, the U.K., and other European countries have joined forces with Americans on everything from the radio to cutting-edge Internet platforms.

These types of technology have two things in common. One, they connect capital, goods, services and ideas with people, companies, and institutions all over the world in the service of others. Two, they have been created and advanced largely by European and American innovators and inventors. Now there is another "technology" required to facilitate transatlantic movement of capital and resources – the technology of law and regulation. Today governments must become regulatory partners if the benefits of globalization are to be fully enjoyed by their citizens. The challenge before the EU and U.S. today is whether they will be partners in a "Regulatory Revolution" with the same creativity, dedication, and cooperation their citizens have shown in driving the Transportation and Information Revolutions across the Atlantic and around the world.

Throughout human history wealth, technology and service to others has continued to flow more and more on horizontal planes – aligned with Adam Smith's open markets, David Ricardo's comparative advantage, and Joseph Schumpeter's idea of creative destruction. In *The Mystery of Capital*, Hernando de Soto tells us that the innovation that creates wealth is found in the free association of individuals who come together to serve others through commercial enterprise. Such collaboration must be fostered across every border, in every way. Indeed, this ideal is at the heart of the EU experiment itself. Markets, technologies, and enterprises are horizontal by their nature. A key ingredient of 21st century competitiveness will be the degree to which "vertical" governments move to horizontal regulatory partnerships around the world.

Government-to-government regulatory cooperation is vital for EU and U.S. competitiveness for four reasons:

- The "virtuous cycle of standardization" has many benefits: it offers economies of scale; it improves technology connectivity and it drives capital movements toward investments with optimal returns. In other words, it helps keep prices low, innovation robust and productivity high.
- For every dollar in trade across the Atlantic, there are investments worth roughly four dollars. (To give an order of magnitude, EU imports from the U.S. have been running in the vicinity of €200 billion annually while the comparable range of EU direct investment in the U.S. would top €800 billion.) More than 70 percent of U.S. foreign investment comes from European companies, more than 50 percent of European foreign investment comes from U.S. companies. Moreover, 35 percent of transatlantic and global trade is "intra-company trade". We need friction-free avenues of commerce.
- Making both economies more productive is in our mutual interests. With 11 percent of the world's people, Europe, and the U.S. account for more than 55 percent of the world's GDP and trade. Wealthy societies enjoy success in part because their legal and regulatory systems work well – protecting property and investments, enforcing contracts... fostering the daily movement of capital, goods, and services. Fair, effective, enforced commercial rules create a successful commercial ecosystem. The EU and U.S. must now expand regulatory cooperation – giving a strong hand in standard setting to private industry standards groups. Industry-driven standards are the most successful standards in the world.

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- The trade barriers of the 21st century will not be tariffs, but disconnected standards and regulations. Transatlantic regulatory cooperation will open wider the EU and U.S. markets, and provide regulatory leadership around the world.

The growth of EU-U.S. economic ties requires a Transatlantic Regulatory Cooperation Agenda. At their April 2007 summit meeting in Washington, President George W. Bush and European Commission President José Manuel Barroso established the Transatlantic Economic Council whose aim is to conclude U.S.-EU agreements on smarter regulatory cooperation. The European-American Business Council, representing 75 U.S. and European-based global companies, is working with the TEC and recommends it focus on five key areas: Accounting, Biofuels, eAccessibility, eHealth, and RFID Technology. Here's why these are priorities:

**Accounting Convergence:** The U.S. Securities & Exchange Commission and the European Commission's Directorate-General for the Internal Market need to get agreement on mutual acceptance of the EU's International Financial Reporting Standards and the U.S. equivalent system, the Generally Accepted Accounting Practices, in both the U.S. and EU capital markets. This change would eliminate the need for firms whose stocks are listed in both exchanges to keep two sets of accounting books and thus promote transatlantic investment.

**Biofuels :** The TEC has agreed to foster development of a single U.S.-EU-Brazil standard for biofuels. This will facilitate a global bio-fuels market in a technology neutral manner, allowing a broad use of alternative feed stocks.

**eAccessibility:** eAccessibility refers to ICT tools that allow the deaf, blind, and infirm to use the Internet for world-wide access to jobs, information, commerce, and communication. The 2007 EU-U.S. Summit Declaration held a commitment to reinforce transatlantic cooperation on eAccessibility. There is a danger that divergent national policies and conformance requirements intended to assist people with disabilities may instead create closed markets that will raise costs, reduce innovation, and curtail transnational accessibility for people who need "virtual mobility" the most. U.S.-EU cooperative leadership can truly drive adoption of globally harmonized, technology neutral standards that allow innovative companies to self-declare the conformance of their ever-improving products to applicable standards.

**eHealth:** The 2007 EU-U.S. Summit Declaration promised promotion of interoperable electronic health record systems. We envision societies where citizens have their health records securely stored on cards in their purses or wallets — so wherever they are in the world, when they need health care the information required by health providers is accessible. The TEC framework provides an excellent opportunity to foster digitized, secure, and interoperable transatlantic medical records to address patient safety and disease mobility. Enhanced use of health information in interoperable formats can improve quality of care, system efficiencies, patient safety, and chronic disease management. People are on the move – and so are diseases.

**RFID Technology:** The TEC should include possible Radio Frequency Identification Technology regulations on their agenda. RFID technology will form the basis of a global supply chain that allows "track and trace" of products for inventory control, as well as consumer safety and health protection. The European Commission may issue regulatory guidance to the 27 EU member states in 2008. If so, RFID is an ideal area for regulatory EU-U.S. cooperation in light of the need for seamless global supply chains.

European and American businesses are committed to transatlantic investment and innovation. On both sides of the Atlantic, business leaders want to grow jobs and enhance wealth creation in every community. That can best be done through business-friendly regulatory environments that foster the friction-free movement of goods, services, and information. Success in this transatlantic venture will have "ripple effects" – both materially and as an example – for people around an increasingly interdependent world. To achieve this, the next global

revolution must be a “Regulatory Revolution” focused on how governments can better collaborate to spur innovative, transformative growth.

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