Still Many Challenges for an Electronic Europe

Europe has been through the "net economy" excitement and is weathering an uncertain economy. Policymakers and business leaders now need to focus on removing barriers to a digital society and connected economy.

In Europe, there are some areas where combined government action and business leadership attention need to be the focus to significantly advance the adoption and reap the benefits of a digital society and economy.

The priorities identified in this Spotlight and the suggested courses of action are primarily targeted to policymakers and government executives in European and member state institutions. They are also relevant to business and technology executives whose enterprises will be significantly affected by policies and initiatives that European governments will take.

Achieving a single currency — the euro — in as many as 12 countries has been just one step (albeit important) in constructing a fully operational single European market. In addition to stronger political integration, a single market must overcome differences such as employment and tax laws, national nuances of European directives, and quality of and access to infrastructure. The challenge of removing all existing barriers to the movement of goods (physical and digital) and people intermingles the transformation of Europe into a digital society and economy.

Although the "new economy" bubble has burst, the benefits of this transformation are clear: greater focus on customers and constituents, easier access to information and more-active constituent participation. Policy makers and government executives aim at an even greater adoption of the Internet by their constituents. However, this enthusiasm is counterbalanced by possible social disruptions:

- The "digital divide" (i.e., the gap in opportunities experienced by those with limited access to technology and, especially, the Internet)

- The blurring of jurisdictions and constituencies

- The new liabilities related to e-commerce transactions and e-government services

- Privacy and security of constituent information

At a time when the economy is still weak but waiting for a rebound, it is important for policy makers and business executives to reflect on the main challenges that remain to build a European digital society, and to develop a political and business agenda aimed at resolving those issues.

The European Commission's View

Gartner

The European institutions and the European Commission have been devoting significant attention to building a European information society for almost a decade by combining policymaking with R&D funding and best-practice dissemination actions. Therefore, we open this Spotlight with "Interview With the President of the European Commission" (QA-15-0771), an interview with Romano Prodi, president of the European policymaking institution since 2000. He touches on several subjects at the top of the political agenda: the delicate balance between greater security and protection of privacy and civil rights, the continued role to support R&D on relevant technologies and their applications, the development of a European legal framework for the connected economy, and ways to develop human capital by favoring training programs and supporting infrastructures and policies to enhance cross-border cooperation.

Strike a Balance Between Privacy and Security

After Sept. 11, the need for greater security and the potential impact on privacy have topped the list of concerns for European businesses and citizens. Europe has a strong tradition in privacy legislation and enforcement, with a Data Protection Directive (DPD) that dates back to 1995, but there are still areas that require attention. Although the DPD provides a common framework, the widely different national implementations make compliance difficult for enterprises operating in a variety of European Union (EU) countries. This topic is analyzed in "Making Privacy Laws Work in Practice" (TG-15-3142). However, the directive needs to evolve to cover privacy implications of new technologies. One example is the impact of electronic communication and, in particular, the use of unsolicited e-mail for advertising purposes and the use of "cookies" to support user authentication and profiling.

As suggested in "The Regulatory Future for Spam and Cookies in the EU" (TG-14-3261), the current debate among European institutions should be resolved by requiring an explicit "opt in" for unsolicited e-mail and cookies aimed at profiling and tracking user behavior, and an "opt out" for cookies used anonymously for authenticating users and maintaining the state of a transaction. However, there are other challenges for privacy protection.

"Privacy and Authentication: Is 'Big Brother' Coming?" (TG-15-2149) calls on policymakers and regulators to examine privacy laws to ensure that enterprises are able to conduct adequate authentication procedures. It also illustrates how the use of smart identity cards, the possibility of tracking a mobile device user's location and the advent of electronic tagging on all sorts of products (including bank notes) will require additional regulatory adjustments or common interpretation frameworks across Europe. In particular, the pervasiveness of wireless devices, combined with increasing mobility of citizens and workers, creates countless opportunities for privacy laws to be challenged.

As far as security is concerned, governments can definitely play a significant role in increasing physical and IT security in the public and private sectors. "What Should European Governments Do About Security?" (TG-15-1588) suggests that governments should be less concerned with restricting the use of encryption technology or imposing security requirements from the military environment that become "overkill" for the majority of uses in the private and public sectors. Instead, governments should set reasonable business security requirements and hold noncompliant vendors responsible for failures. At the same time, they should create a context for sharing best practices through cooperation with industry associations and support of standards for product accreditation. The European institutions ought to play a relevant role so that products can be usable in different countries without affecting internal market operations.

Protect the Critical Infrastructure

Sept. 11 provided a tragic opportunity to review the importance of computer and communications networks to other physical networks, and vice versa, and how physical attacks could facilitate information-based attacks. The infrastructure supporting current communication networks is critical to the operation of modern societies and is potentially vulnerable to attack and failure. "Protection of the Critical Information Infrastructure" (TG-15-1971) calls primarily on national governments to provide rules for state agencies and local governments to enhance protection of the critical information infrastructure. This requires the need to:

- Support research into the reliability and interdependence of physical and information networks

- Monitor the availability of intelligence information about the configuration and operation of physical and data networks

- Consider human assets as part of the critical infrastructure

- Perform comprehensive scenario planning, focusing on critical infrastructure concerns

It is important to ensure some coordination and best-practice exchange at the European level. This will ensure that initiatives and guidelines promoted and enforced by single member states do not have a negative impact on the seamless operation of the internal market. The resolution on e-security agreed at the EU Telecom Council in December 2001 is an important initial step. It should be followed by the rapid establishment of a cyber-security taskforce to strengthen the exchange of information and experience between member states.

Tackle Internet Taxation as a Global Issue

Another area that has generated substantial debate is taxation of online services, where EU-based suppliers are clearly at a loss vis-a-vis their non-EU competitors, which can sell services and other intangible goods without charging value-added tax (VAT). The European Commission proposed to modify the relevant directive mandating non-EU business to register for VAT in the EU territory exaggerates VAT differences inside the EU and is difficult to enact. In the near future, new challenges will arise because it will be impossible to define "value" in a digital world (e.g., What is the "value" of an XML message that implements a Web service?).

"Managing VAT in Cyberspace" (M-15-0930) suggests that, while Internet sales are still in their infancy, incompatible trans-Atlantic regimes would slow down the development of e-commerce within the EU. The best paths forward are developing joint Internet taxation technology with the United States and continuing the successful cooperation with the Organisation for Economic Cooperation and Development (OECD) on Internet taxation framework development.

Establish a Single European Patent

The European Commission stated that the EU is falling further behind the United States in terms of wealth and productivity per head because of a failure to innovate and delays in introducing cutting-edge technologies. The support for a cooperative R&D project, pilot technology applications and best-practice dissemination is not sufficient by itself to allow enterprises to fully seize the competitive advantage of innovation, without an effective plan to protect intellectual property.

As described in "European Software Patent Legislation: Don't Waste Time Debating" (COM-15-2834), attention has been devoted to the matter of whether software should be a patentable invention, as it is in

the United States. The reality is that the software innovation life cycle is becoming shorter and shorter, while the patenting process remains painfully long and expensive. "Unified European Patent Legislation: Act Now Before It's Too Late" (COM-15-2831) shows that the most-pressing issue is, indeed, to make the patenting process less complex, expensive and time-consuming by establishing a single European patent.

Continue Fighting the ICT Skill Shortage

Before the economic downturn began, the shortage of workers with adequate information and communications technology (ICT) skills was identified as one of the top concerns for enterprises. The downturn and the subsequent layoffs in the sector are not changing the fundamental trends: when the economy rebounds and demand for skills rises again, the structural shortage may prove a formidable constraint to growth. As illustrated in "ICT Skills Shortage: Five Key Areas for European Action" (SPA-14-4140), the EU should continue pursuing the objective of preparing the European workforce for the connected economy, by urgently tackling five areas: 1) improving workforce mobility; 2) contributing to the development of reliable data sources and statistics on skill availability across Europe; 3) encouraging enterprises to invest in training; 4) improving the consistency of ICT qualification across Europe; and 5) encouraging the use of remote working technologies. The last is intended to prevent excessive worker mobility from draining all skilled resources in certain areas of the EU, with particular reference to candidates for accession.

Bridge the "Digital Divide"

Developing a sustainable digital society and economy requires closing the "digital divide" (i.e., the gap between those who can exploit net technology and services and those who cannot). Ultimately, all citizens must be given an equal opportunity to access and use the Internet. Best practices are emerging in different parts of the world, but there are also several common mistakes that governments make. "Five Truths and Five Myths to Cross the Digital Divide" (TG-14-3578) illustrates those practices and mistakes. The most-successful approaches are based on solutions that marshal and complement public, private and nonprofit resources.

Mobile phones will be the most-numerous Web-access technology to close the digital divide in Europe. This may wrongly convince some governments and policymakers that Europe is at an advantage, given the wide availability of a cheap client device. "Will Mobile Phones Bridge the EU Digital Divide?" (SPA-14-5463) explains that the digital divide is caused by more than availability of hardware and bandwidth. The lack of relevant information and services is also a factor.

Turn E-Government Services Into Better Government Services

Last, but not least, e-government service delivery constitutes an important piece of the digital society puzzle, by making smoother interactions with enterprises and better service to citizens possible. E-government services also can give intermediaries new opportunities to create value-added services that bundle private- and public-sector information and services. The European Commission benchmarks e-government progress every six months as a means to stimulate developments and best practices. However, it does not provide member states with enough metrics to truly measure government transformation and service-level improvement.

"Make Sure the 'E' in E-Government Means 'Effective'" (DF-15-3269) illustrates how the current e-government assessment framework adopted by eEurope may evolve to really measure service levels and operational efficiencies achieved by e-government, rather than measuring only Web service delivery.

Features:

"Interview With the President of the European Commission" (QA-15-0771) Interview with Romano Prodi, president of the European policymaking institution, covers the most-important subjects on the Commission's political agenda. **By Andrea Di Maio**

"Making Privacy Laws Work in Practice" (TG-15-3142) Differences in privacy laws across countries are still a considerable barrier to compliance. **By Arabella Hallawell**

"The Regulatory Future for Spam and Cookies in the EU" (TG-14-3261) How to resolve the debate between European institutions on e-mail and cookies. **By Arabella Hallawell**

"Privacy and Authentication: Is 'Big Brother' Coming?" (TG-15-2149) Further possible government regulations, roles and responsibilities for electronic transactions. **By Arabella Hallawell and Andrea Di Maio**

"What Should European Governments Do About Security?" (TG-15-1588) Do's and don'ts for increasing physical and IT security in the public and private sectors. **By Conal Mannion and Joyce Graff**

"Protection of the Critical Information Infrastructure" (TG-15-1971) Suggestions for central and local governments to enhance protection of the information infrastructure. **By Conal Mannion**

"Managing VAT in Cyberspace" (M-15-0930) The European challenges for online taxation. **By French Caldwell**

"European Software Patent Legislation: Don't Waste Time Debating" (COM-15-2834) Why patenting software is a nonissue. **By Debra Logan**

"Unified European Patent Legislation: Act Now Before It's Too Late" (COM-15-2831) The need for developing a single European patent. **By Debra Logan**

"ICT Skills Shortage: Five Key Areas for European Action" (SPA-14-4140) Areas the EU should pursue to prepare the European workforce for the connected economy. **By John Mahoney and Simon Mingay**

"Five Truths and Five Myths to Cross the Digital Divide" (TG-14-3578) Best practices and common mistakes made when discussing the digital divide. **By Andrea Di Maio, Christopher Baum and Bill Keller**

"Will Mobile Phones Bridge the EU Digital Divide?" (SPA-14-5463) The digital divide is caused by more than availability of hardware. **By Nick Jones**

"Make Sure the 'E' in E-Government Means 'Effective'" (DF-15-3269) Shifting from counting online services to assessing real value. **By Andrea Di Maio, Gregg Kreizman and Massimo Pretali**