

**The Public Voice:**  
***Privacy by Design* in a Global World**

**Ann Cavoukian, Ph.D.**  
**Information and Privacy Commissioner**  
**Ontario**

**Electronic Privacy Information Center**  
**Madrid, Spain**  
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[www.privacybydesign.ca](http://www.privacybydesign.ca)



SmartPrivacy

[www.smartprivacy.ca](http://www.smartprivacy.ca)



Privacy by Design – “The sine qua non”

LAW - REGULATION & INDEPENDENT OVERSIGHT

EDUCATION & AWARENESS

ACCOUNTABILITY & TRANSPARENCY

SOCIETAL NORMS

MARKET FORCES

Data Security

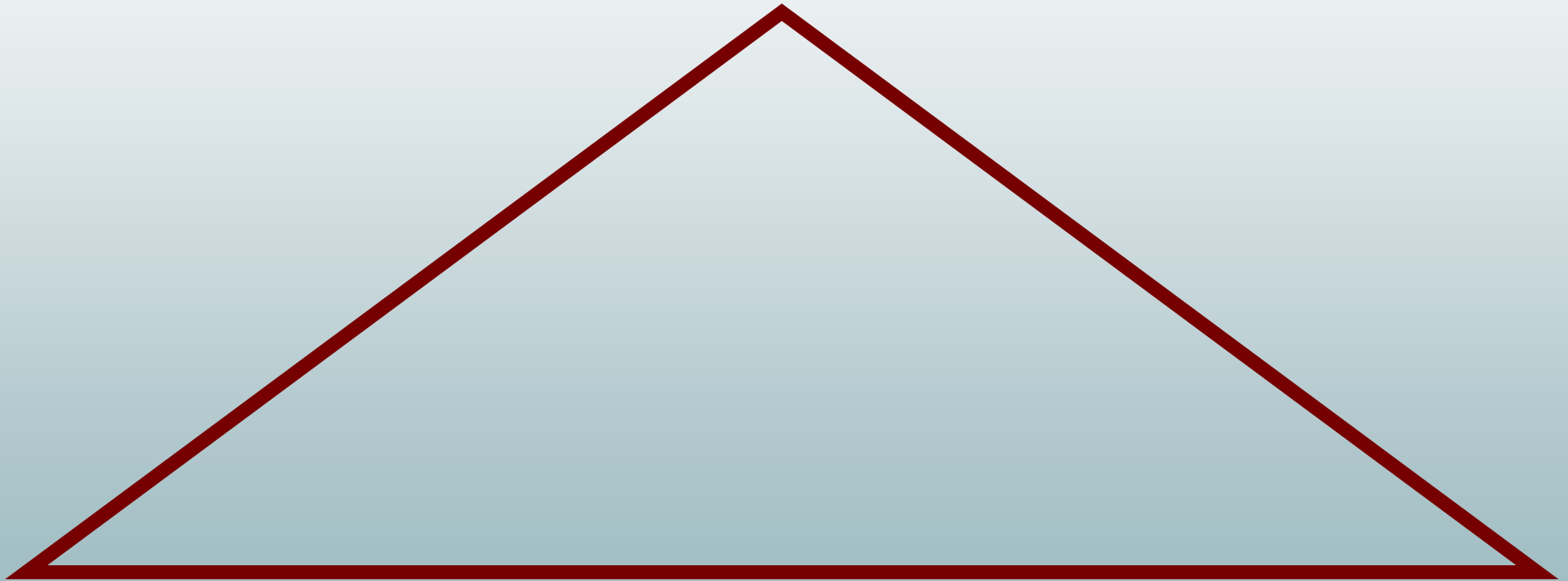
Fair Information Practices

“SmartPrivacy is the umbrella that offers the complete suite of protections to ensure data privacy. It consists of multiple measures ranging from regulatory protections to education and awareness, but one measure stands out as the sine qua non: *Privacy by Design*. Dr. Ann Cavoukian, Information & Privacy Commissioner of Ontario, Canada, August 13, 2009.



# **Privacy by Design:** *The Trilogy of Applications*

**Information Technology**




**Accountable  
Business Practices**

**Physical Design  
& Infrastructure**



# *Privacy by Design: The 7 Foundational Principles*

1. *Proactive* not Reactive;  
*Preventative* not Remedial
2. Privacy as the *Default*
3. Privacy *Embedded* into Design
4. Full Functionality: Positive-Sum, not Zero-Sum
5. End-to-End Lifecycle Protection
6. Visibility and Transparency
7. Respect for User Privacy

  
www.privacybydesign.ca

## Privacy by Design

### *The 7 Foundational Principles*

Ann Cavoukian, Ph.D.  
Information & Privacy Commissioner  
Ontario, Canada

*Privacy by Design* is a concept that I developed back in the 90's, to address the ever-growing and systemic effects of Information and Communication Technologies, and of large-scale networked data systems.

*Privacy by Design* asserts that the future of privacy cannot be assured solely by compliance with regulatory frameworks; rather, privacy assurance must ideally become an organization's default mode of operation.

Initially, deploying Privacy-Enhancing Technologies (PETs) was seen as the solution. Today, we understand that a more substantial approach is required – extending the use of PETs to taking a positive-sum, not a zero-sum, approach.

*Privacy by Design* now extends to a "Triology" of encompassing applications: 1) IT systems; 2) accountable business practices; and 3) physical design and infrastructure.

Principles of *Privacy by Design* may be applied to all types of personal information, but should be applied with special vigour to sensitive data such as medical information and financial data. The strength of privacy protection requirements tend to be commensurate with the sensitivity of the data.

The objectives of *Privacy by Design* – ensuring privacy and personal control over one's information and, for organizations, gaining a sustainable competitive advantage – may be accomplished by practicing the following principles:

1. **Proactive** not Reactive; **Preventative** not Remedial

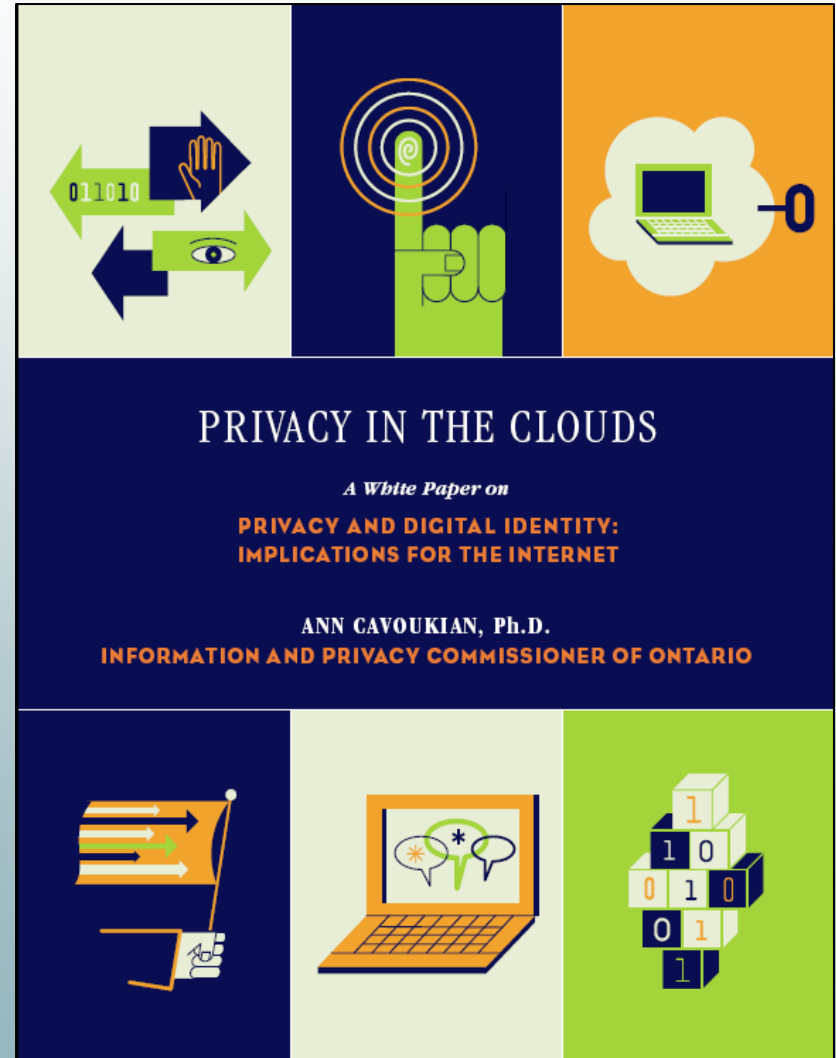
The *Privacy by Design* (PbD) approach is characterized by proactive rather than reactive measures. It anticipates and prevents privacy invasive events *before* they happen. PbD does not wait for privacy risks to materialize, nor does it offer remedies for resolving privacy infractions once they have occurred – it aims to *prevent* them from occurring. In short, *Privacy by Design* comes before-the-fact, not after.



# Privacy in the Clouds

## A White Paper on Privacy and Digital Identity: Implications for the Internet

- The 21st Century Privacy Challenge;
- Creating a User-Centric Identity Management Infrastructure;
- Technology Building Blocks;
- A Call to Action.





# Smart Grid and Ontario's Smart Meter Initiative

- The Government of Ontario has committed to install a smart electricity meter in all homes and small businesses by the end of 2010 – *Energy Conservation Responsibility Act, 2006*;
- Smart meters will record electricity consumption on an hourly basis and report that information via a wireless technology;
- Individuals will be able to access their meter data from the previous day and be able to make choices about how to take advantage of future rates;
- A 'smart metering entity' (the Independent Electricity System Operator, or IESO) will receive and process the hourly consumer consumption data transmitted daily;
- The IESO is a listed institution under Ontario's *FIPPA*.



# How to Contact Us

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**For more information on *Privacy by Design*, please visit:**

**[www.privacybydesign.ca](http://www.privacybydesign.ca)**