Privacy as a Negative Externality

The Solution:

"Privacy by Design"

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Presentation Outline

1. *Negative Externalities*
2. *"Privacy by Design"*
3. *The Next Wave: From PETs to PETs Plus, … to Transformative Technologies*
4. *Taking an evolutionary perspective*
5. *Conclusions*

Negative Externalities

Privacy Vulnerabilities as a Negative Externality

- Violations of privacy can be viewed as an external cost or a “negative externality;”
- An external cost is essentially a cost produced by one entity, but borne by another.

— Ann Cavoukian, Ph.D. and Tyler Hamilton,
The Privacy Payoff: How Successful Businesses Build Customer Trust

How to Respond – Proactive or Reactive?

- How should those costs be handled?
  - **Proactive?** Privacy practices built-in up front – embedded;
  - **Reactive?** Regime of liability risk – litigation, after the fact;
- Proactive privacy practices are ultimately less expensive and more desirable; they also lead to a competitive advantage.

"The cost of a privacy PR blowout can range from tens of thousands to millions of dollars, depending on the company's size and the visibility of its brand, and this does not include lost business and damage to reputation."

— *Surviving the Privacy Revolution*, Forrester Research.

Who Should be Responsible… Companies or Consumers?

- Placing the burden on companies to prevent privacy violations may increase their operating costs;
- The cost of placing the burden on consumers, however, would be prohibitive;
- In both cases, negative externality exists, regardless of who bears the costs;
- The burden should be placed where the cost is the least.

— Nobel Laureate, Ronald Coase,
Lowest cost strategy

Don’t Blame the Victim

- Premise: violations of privacy are viewed as a negative externality;
- ***Businesses however, not consumers, create privacy externalities through their misuse or lack of sufficient protection of their customers’ personal information;***
- It would be far more costly for individuals to prevent or attempt to remedy the abuses of their personal information, if at all possible;
- **We place the responsibility for protecting customer’s PII squarely upon business.**


PbD
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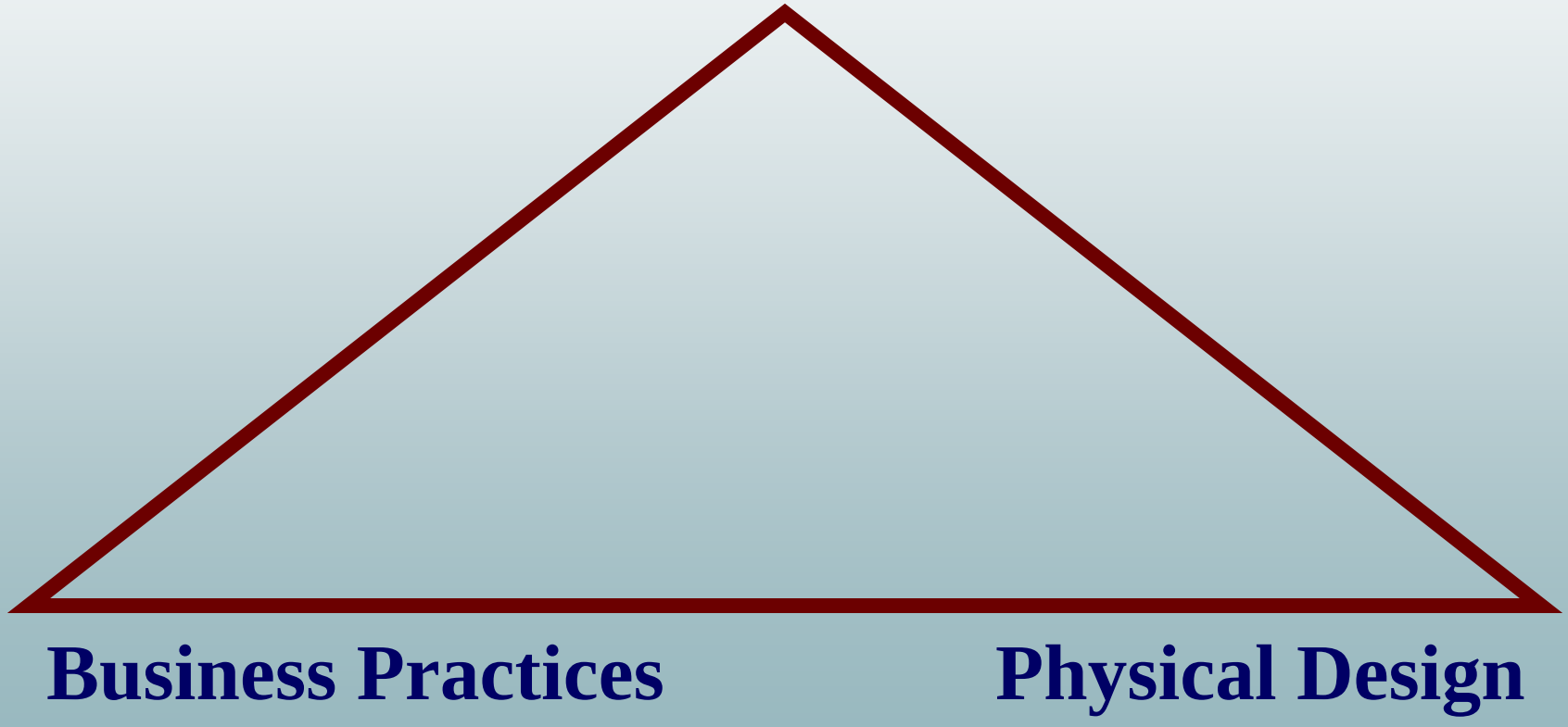
“Privacy by Design”

Privacy by Design: "Build It In"

- I first developed the term "Privacy by Design" in the '90s, as a response to the growing threats to online privacy that were beginning to emerge;
- "Privacy by Design" seeks to build in privacy – up front, right into the design specifications; into the architecture; embed privacy into the technology used – ***bake it in***;
- Data minimization is key: minimize the routine collection and use of personally identifiable information – use encrypted or coded information whenever possible;
- Use privacy-enhancing technologies (PETs) where possible: give people maximum control over their own data;
- Privacy should always be the default – the default rules!

Privacy by Design:
The Trilogy of Applications



Privacy by Design:
Focus for 2009

- **Technology –** Building privacy directly into technology, at the earliest developmental stage;
- **Business Practices –** Incorporating privacy into competitive business strategies and operations;
- **Physical Design –** Ensuring privacy in organizational and health care settings.

Why We Need *Privacy by Design*

- Most privacy breaches remain undetected – as regulators, we only see the tip of the iceberg;
- The majority of privacy breaches remain unchallenged, unregulated, and unknown;
- Compliance alone is unsustainable as a model for ensuring the future of privacy; for that, we must turn to proactive measures, ***Privacy by Design:*** embed privacy proactively into the core of all that we do – make it the default.

The Next Wave:

From PETs to PETs Plus, to Trans Tech

Background: Privacy-Enhancing Technologies *(PETs)*

- The IPC coined the concept and methodology recognized around the world today as *privacy-enhancing technologies* (PETs);
- In 1995, the IPC and the Dutch Data Protection Authority published the landmark study, *Privacy-Enhancing Technologies: The Path to Anonymity (Vols. I & II).*

  Vol. I - www.ipc.on.ca/index.asp?layid=86&fid1=329

  Vol. II - www.ipc.on.ca/images/Resources/anoni-v2.pdf

Time for a Change…

… from PETs

to

PETs Plus

PETs *Plus*

The “*Plus*” in PETs *Plus* refers to incorporating a positive-sum paradigm

Taking PETs *Plus* Further

from PETs Plus

to …

Transformative Technologies

Transformative Technologies

Privacy-Invasive Technology + Positive-Sum Paradigm + Privacy-Enhancing Technology =

Transformative Technology

Common characteristics of Transformative Technologies:

- Minimize the unnecessary collection, disclosure, use and retention of personal data;
- Empower individuals to participate in the management of their own personal data;
- Enhance the security of personal data, if collected/used;
- Promote public confidence and trust in personal data governance structures;
- Promote/facilitate the commercialization and adoption of these technologies.

Evolutionary Perspective

Taking an Evolutionary Perspective

- In nature, when a species within an eco-system is exposed to an environmental stress (or a negative externality), stakeholders within the population will attempt different test-solutions to overcome the stress;
- Nature uses the mechanism of genetic mutations to evolve new behaviours in individuals within a species as test-solutions;
- Different test solutions are explored as an attempt to counteract environmental stress, allowing for continued survival of the species;
- The different test-solutions or genetic mutations are shaped by the constraints of the rules of nature.

Evolutionary Perspective (Cont'd)

- Likewise, if we want to solve the problem of a societal negative externality, the rules should be structured so that the maximum number of stakeholders, within an environment of cooperation and competition, attempt many different test-solutions, leading to the selection of most effective solution(s);

- In an evolutionary process – solutions will be dynamic and will evolve as things change;

- If the rules are structured so that personal data is viewed as a property right under law, using an evolutionary model, the solution to the negative externality of privacy infringement will be efficient, effective and equitable enforcement mechanisms.

Personal Data as Property

"We are not debating whether to move into a world where data are collected, used, and sold. We already live in that world. Given that we are here, how can we ensure that at least some control is granted to those whom these data are about? I advocate a property regime not because of the sanctity of property as an ideal, but because of its utility in serving a different but quite important ideal."

— Lawrence Lessig,

Code and Other Laws in Cyberspace, 1999.

Conclusions

- Violations of privacy may be viewed as an external cost or negative externality, often created by business, therefore the cost of resolving the problem should be borne by business;
- "Privacy by Design" is a viable solution to the problem since it embeds privacy protection proactively into the design of IT and business practices – making privacy the default;
- Embedding privacy in a positive-sum manner enables both privacy *and* security to be delivered;
- Privacy is good for business and can lead to a sustainable competitive advantage;
- Consider taking an evolutionary perspective to the problem of privacy as a negative externality.

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