Interaction of RFID Technology and Public Policy

Presentation at

RFID Privacy Workshop @ MIT

15TH November 2003

RFID Privacy Workshop @ MIT

15TH November 2003

By

Rakesh Kumar

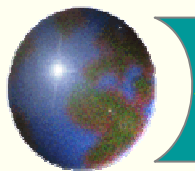Rakesh_kumar@iitiim.com

Wipro Technologies

India

Privacy

Consumer's Perspective

Privacy can be defined as customer's ability to control the terms under which their personal information is acquired and used (Westin 1967)

Business perspective

Privacy is about making consumers comfortable disclosing the personal information needed for relationship marketing
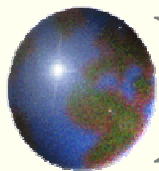
Privacy in context of RFID

Some Concerns

1. RFID tags without notice

2. Unauthorized development of detailed profiles

3. Unauthorized third party access

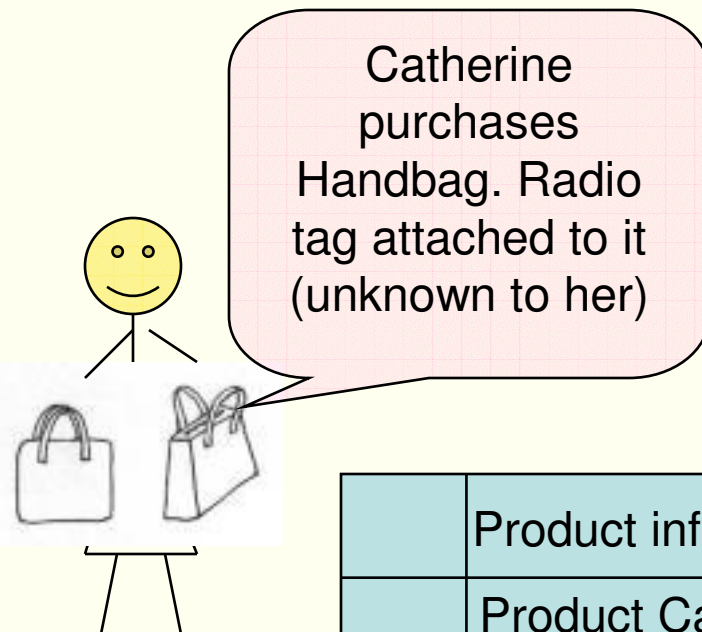4. Government's perfect hegemony

5. Redress-al mechanism

RFID World

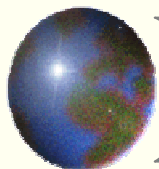Catherine purchases Handbag. Radio tag attached to it (unknown to her)
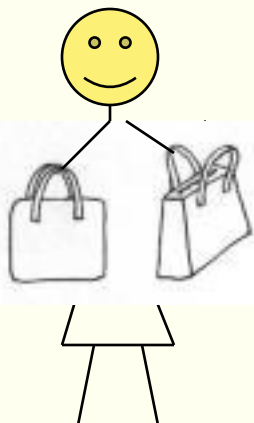
Data Collection

1) Product information

2) Credit Card number

3) Personal information

Product information
Product Category Product name Product code Unit of measurement Manufacturer's name Place of manufacture

Personal Information
Name Credit Card No. Social Security No. Address

RFID World

4

Amalgamation of Transactional and Personal Data

Third Party Repositories
Insurance details Credit history Medical history

+

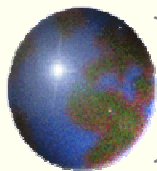| Personal Information |
|---|
| Name

Credit Card No.

Social Security No.

Address |

+

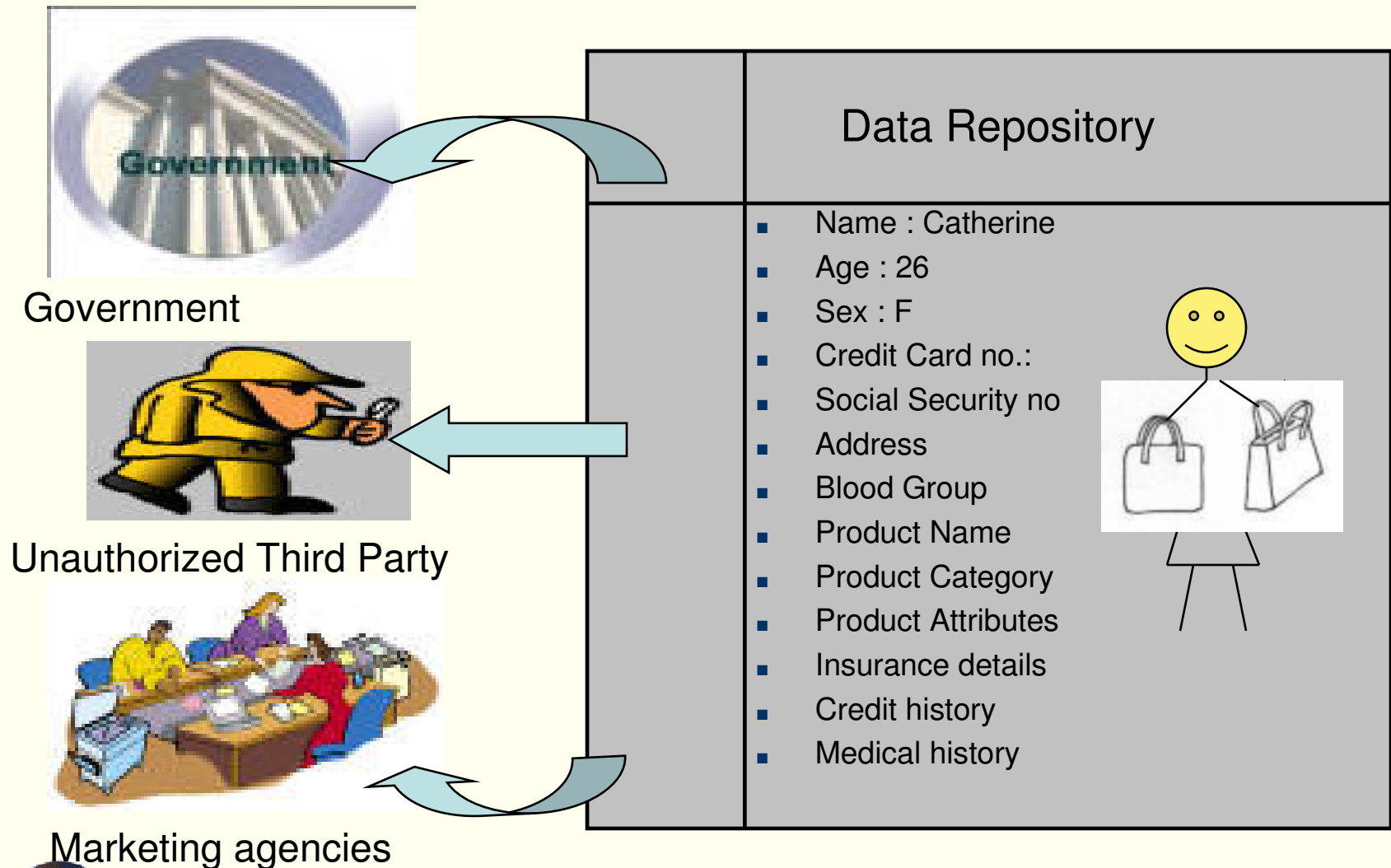| Product information |
|---|
| Product Category
Product name
Product code
Unit of measurement
Manufacturer's name
Place of manufacture |

=

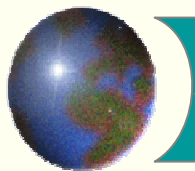| Data Repository |
|---|
| Name : Catherine
Age : 26
Sex : F
Credit Card no.:
Social Security no
Address
Blood Group
Insurance Details
Credit History
Product Category
Product Name
Product Code
Insurance Details
Credit History
Medical History |

RFID World

Government

Unauthorized Third Party

Marketing agencies

Data Repository

- Name : Catherine
- Age : 26
- Sex : F
- Credit Card no.:
- Social Security no
- Address
- Blood Group
- Product Name
- Product Category
- Product Attributes
- Insurance details
- Credit history
- Medical history

RFID World
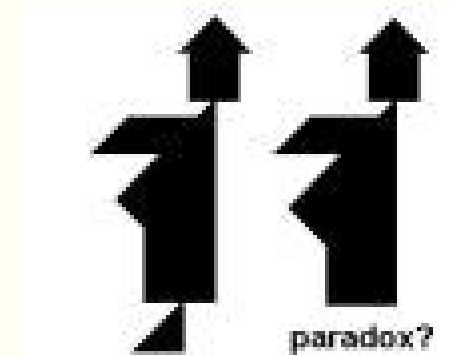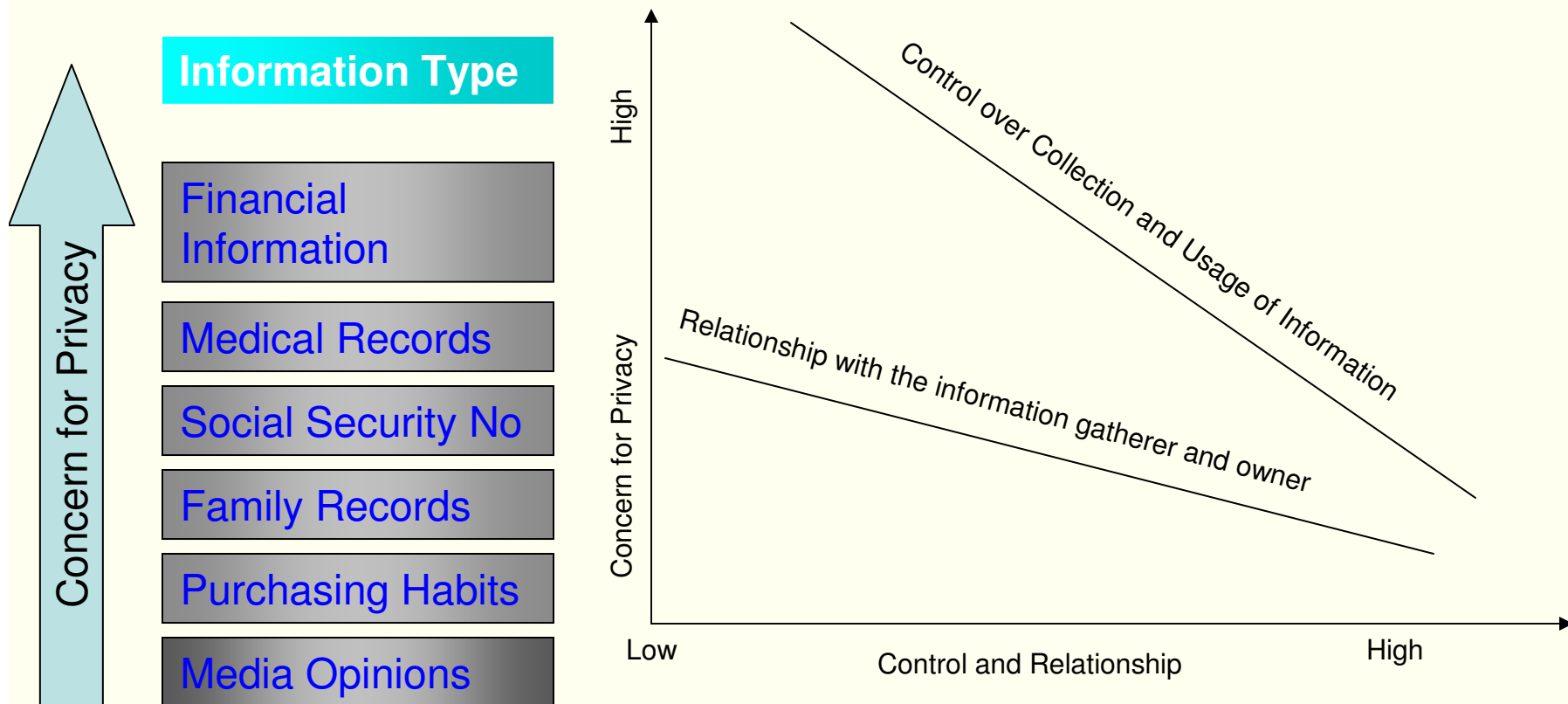
Paradox

1. To participate in today's marketplace

2. Catherine is willing to make trade-offs

    1. Reward Programmes
    2. Better Tracking
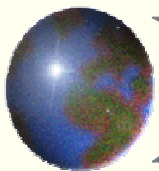   3. Guarantees
    4. Financial Incentives

paradox?

RFID World

Information Type

Concern for Privacy

Information Type
Financial Information
Medical Records
Social Security No
Family Records
Purchasing Habits
Media Opinions

Concern for Privacy (y-axis: Low to High)

Control and Relationship (x-axis: Low to High)

Control over Collection and Usage of Information

Relationship with the information gatherer and owner

Sensitivity is contextual; that is, what is considered sensitive differs by person and by situation

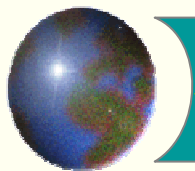**RFID World**

Why Policy is important ?

1. If RFID commerce has to realize its full potential!

2. Fundamental shift to a customer-centered world

3. Probability of reengaging customer reduced

4. Conducting business nationally and internationally

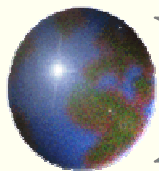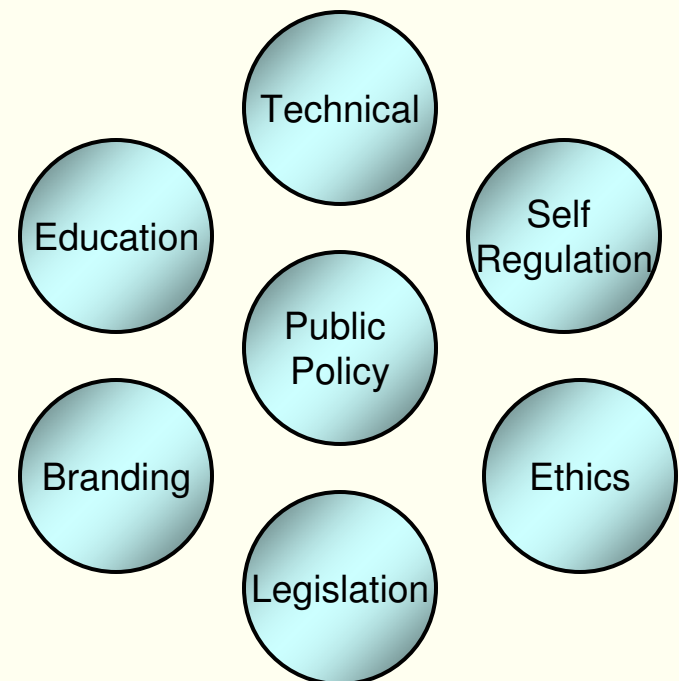5. Infuse trust in public and private institutions

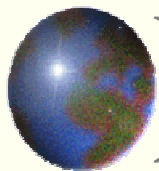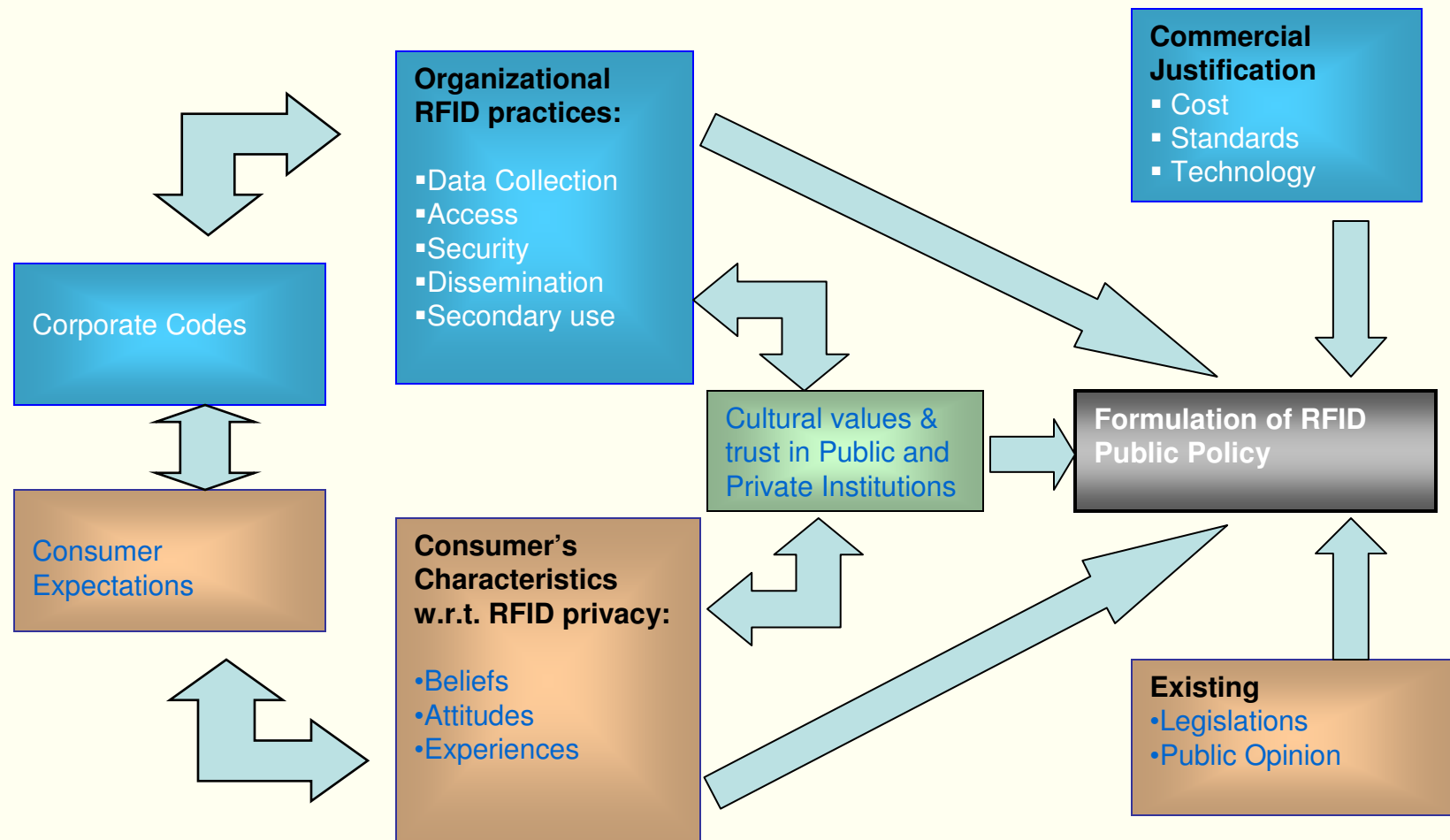RFID World

Basic Building Blocks

Integrated approach for framing RFID Public Policy :

1. Technical

2. Industry Self-Regulation (Mandatory vs. Voluntary)

3. Ethical approach

4. Legislation

5. Branding RFID and

6. Educating Consumers

Organizational RFID practices:

▪Data Collection
▪Access
▪Security
▪Dissemination
▪Secondary use

Commercial Justification
▪ Cost
▪ Standards
▪ Technology

Corporate Codes

Consumer Expectations

Cultural values & trust in Public and Private Institutions

Formulation of RFID Public Policy

Consumer's Characteristics w.r.t. RFID privacy:

•Beliefs
•Attitudes
•Experiences

Existing
•Legislations
•Public Opinion

RFID World

11

WIPRO
Applying Thought

Policy Questions

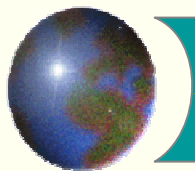1. Definition & role of stake holders

2. Operational features

3. Legal rights

4. Analogies

5. Criteria

6. Research methodology

Major Expectations

1. Data collection procedures (informed vs. un-informed)
2. Authentication
3. Major expectations (both implicit and explicit)
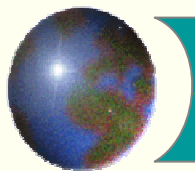4. Level of security

Major concerns

1. Collection
2. Access
3. Use
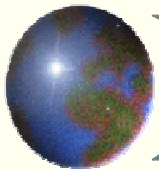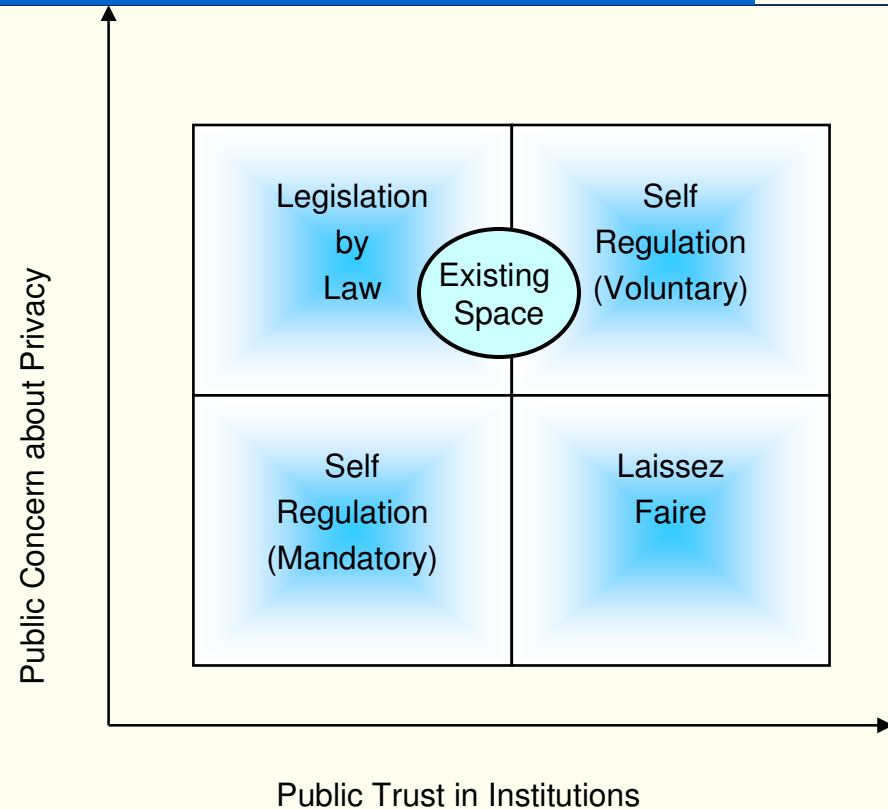4. Exchange
5. Control

Building Block - *Technical*

1. The "Kill Tag" approach

2. The Faraday Cage approach

3. The Active Jamming Approach

4. The Smart RFID Tag Approach

5. Selective disclosure of information
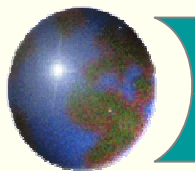
RFID World

WIPRO
Applying Thought

- **Self Regulation**
  - ♦ *Industry Legislation*
  - ♦ *Enforcement and*
  - ♦ *Adjudication*

- **A pure market approach**

- **Legislation**

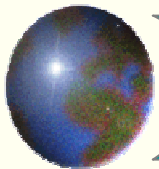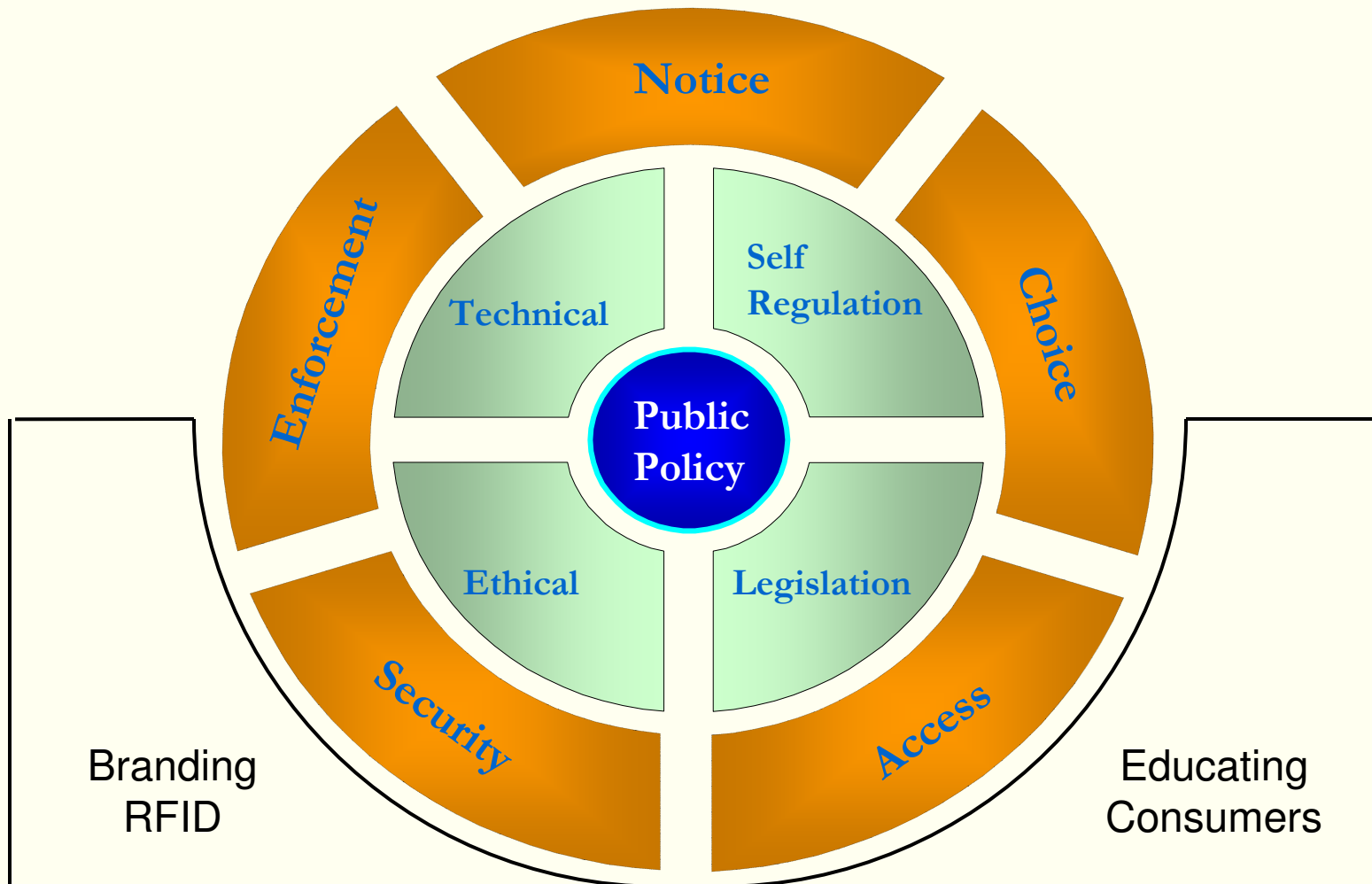

Public Concern about Privacy

| Legislation by Law | Existing Space | Self Regulation (Voluntary) |
| Self Regulation (Mandatory) | | Laissez Faire |

Public Trust in Institutions

RFID World

14

1. Respect confidentiality

2. Don't "flame"

3. Don't be anonymous

4. Don't allow third party to access other's data

5. Don't misrepresent or lie

6. Follow government's general guidelines

7. Consider presentation of message

RFID World

Thank You