YOUR FACULTY

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The vast potential impact of Big Data and its associated technologies on individuals makes the ethical dimension of the response to these challenges unavoidable.

Accountability of the data controllers is essential in this respect. Big Data that deals with large volumes of personal information implies greater accountability towards the individuals whose data are being processed.
WHY IS THE BIG DATA DIFFERENT?

• Volume, velocity, diversity – blending data robustly
  • More room for processing errors
  • Diverse data sets stretch compatibility to stated purpose

• Goes beyond testing best intuition – data drives questions
  • Data correlations drives further questions and then insights

• Correlation not causation
  • Is the correlation meaningful
SO WHY BIG DATA?

• Big data sees things that go beyond intuition, and that vision improves outcomes
  • Health
  • Disaster relief
  • Improved markets

• The improvements are compelling and inevitable

• But potential discrimination and mistakes must be identified

• Governance must be in place to facilitate the compelling and prevent inappropriate results
SINGAPORE’S DIGITAL AGENDA REMINDS US

• We live in a fully observational world where data comes not from individuals but rather their interaction with the environment.

• This data is then the raw material for big data.

• The analytic processes leads to the creation of even more data in the form of insights.
HOW DO WE GOVERN

• While consent may be effective in some instances it is not fully effective in governing big data processes

• Instead we need to look for mechanisms that balance interests

• Not like a fulcrum, but more in multi-variable equilibrium equation
IAF HAS BEEN DEVELOPING A GOVERNANCE PROCESS

- Based on key concepts
  - Data protection assures the full range of individual interests, not just a narrow definition of privacy
  - Reticence risk is meaningful and real
  - A fairness assessment is necessary – what is the cost of not processing
  - This takes us beyond compliance to ethics
Big Data provides **unprecedented opportunities** to drive innovation in economies, healthcare, public safety, education, transportation, and almost every human endeavor.

Big Data also **creates risk** to both individuals and society unless effective governance is in place.

Governance must be sensitive to the full range of interests. **Ethics must form the basis of decisions** balancing the incentives that come with free enterprise and the breadth of human interests.
Essential Elements of Accountability

1. Corporate commitment to internal policies (codes of conduct) that link to external criteria – data protection law
2. Mechanisms to put those policies into effect, including identifying risk to individuals and mitigating those risks (privacy-by-design)
3. Internal monitoring to assure mechanisms work
4. Individual participation – transparency; consent (where effective)
5. Standing ready to demonstrate to a regulator on request, and remediation where necessary
# Big Data Code of Ethics – Structure

| Part A | • Description of the unified ethical framework.  
|        | • Creates a basis for the interrogation guidance. |
| Part B | • Interrogation guidance for implementing the code.  
|        | • Illuminates the key issues that must be considered in making a judgment on whether a Big Data project is fair, responsible and ethical |
| Part C | • Mechanisms for enforceability.  
|        | • Ensures compliance with code. |
| Part D | • Contextual interrogation questionnaire.  
|        | • Customized for organizations, industries, mediums. |
Big Data Code of Ethics – Part A

- Big Data requires an assessment against a variety of factors, including existing laws as well as the ethical frames of the stakeholders impacted by the processing.

- This requires an assessment of the intersection between the various ethical frames; resulting in a more united ethical frame (an approximation).

- To create that approximation, the Foundation adopted five key values that when taken as a whole assist in assessing this approximation.

- The unified ethical code makes use of the full range of fundamental rights as recognized by data protection law.
# Values for an Ethical Frame

<table>
<thead>
<tr>
<th>Beneficial</th>
<th>Progressive</th>
<th>Sustainable</th>
<th>Respectful</th>
<th>Fair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sense of purpose</td>
<td>Materiały better</td>
<td>Legal basis/permissions</td>
<td>Data origination/restrictions</td>
<td>Insights/Applications</td>
</tr>
<tr>
<td>Define the benefits</td>
<td>Measures</td>
<td>Influence of model(s)</td>
<td>Context/Purpose</td>
<td>Inferences/Discrimination</td>
</tr>
<tr>
<td>Parties who gain benefit</td>
<td>Support innovation</td>
<td>Longevity of insights</td>
<td>Interests of all parties</td>
<td>Labeling/Predestination</td>
</tr>
<tr>
<td>Risk-Benefit balance</td>
<td>Consider risks</td>
<td>Ability to refine/correct</td>
<td>Expectations/Rights</td>
<td>Compatibility/Legal Basis</td>
</tr>
</tbody>
</table>

- fair
PART B – ASSESSMENT FRAMEWORK

• Full project description with clear intents
• Questions to identify issues related to processing and accountability
• Clear description of stakeholders
• A description of intended benefits and possible risks
• A final assessment of fairness based on facts
WHEN SHOULD ASSESSMENT TAKE PLACE

- Discovery
  - Project scoping
  - Discovery processing

- Application
  - Using insights to predict behavior
  - Reviewing for effectiveness
Big data enforcement - Part C

1. Linkage to DPA's Legal Mandate

2. Make Public the Code of Conduct

3. Benefits of the Code of Conduct

4. Mechanism for DPA Receiving Attestation

5. Mechanism for Data Sub Complaints

6. Mechanism for DPA Spot Checks

7. Mechanism for Re-Attestations
INTERROGATION TOOL AND GOVERNANCE – PART D

• Based on Part B framework
• Customized to an industry or company
• Sits within a broader corporate governance structure
• Is demonstrable to a regulator
LATEST NEWS

• Madrid workshop to develop means to make codes of practice that create legitimacy are enforceable
• Included a balanced group of enforcement agencies and business
• Paper to be developed by the fall
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