Economics, data protection and the cloud

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With regard to the way that implementation of the EU’s Data Protection Directive differs across Member States, EC VP Kroes stated:

“We need to clarify when this reflects an unavoidable difference of culture and legal tradition, or when it is merely an avoidable obstacle to the rules of the Single Market”

### Cloud ... a Generational Shift

<table>
<thead>
<tr>
<th>Technology</th>
<th>Economic</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centralized compute &amp; storage, thin clients</td>
<td>Optimized for efficiency due to high cost</td>
<td>High upfront costs for hardware and software</td>
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<tr>
<td>PCs and servers for distributed compute, storage, etc.</td>
<td>Optimized for agility due to low cost</td>
<td>Perpetual license for OS and application software</td>
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<tr>
<td>Large DCs, commodity HW, scale-out, devices</td>
<td>Order of magnitude better efficiency and agility</td>
<td>Pay as you go, and only for what you use</td>
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</tbody>
</table>
OVERALL ECONOMIES OF SCALE

Significant economies of scale combined from supply side, demand side, and multi-tenancy – shared use of computing resources in "public" cloud

TCO/Server (at average utilization)

$0 $1,000 $2,000 $3,000 $4,000 $5,000

100 1,000 10,000 100,000

# of Servers in Public Cloud

80% TCO Reduction
THE ECONOMICS OF THE CLOUD FOR THE EU PUBLIC SECTOR

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Computing is undergoing a seismic shift from client/server to the cloud, a shift similar in importance and impact to the transition from mainframe to client/server. Speculation abounds on how this new era will evolve in the coming years, and IT leaders have a critical need for a clear vision of where the industry is heading. We believe the best way to form this vision is to understand the underlying economics driving the long-term trend. In this paper, we will assess the economics of the cloud by using in-depth modeling. We then use this framework to better understand the long-term IT landscape.

Paper available at: www.microsoft.eu/cloudeconomics
Key Cloud Issues

- Control of data
- Clarity of rules
- Transparency of privacy policies
Possible OECD work?

- Context of data
- Measurement of benefits and risks
- Potential benefits for further harmonization