The Five Safes Framework

Pete Stokes
Head of Research Support and Data Access
The Five Safes

A set of controls and principle use to ensure safe use of data…

SAFE PEOPLE
+ SAFE PROJECTS
+ SAFE SETTINGS
+ SAFE OUTPUTS
+ SAFE DATA
= SAFE USE
Safe People

Experience conducting research

Safe attitudes towards data access

Able to use the data safely (demonstrates safe behaviours)

Safe people = users that are ‘fit and proper’ to access data
Safe project = a project that is legal, feasible, and serves the public good
Safe Settings

Secure Room

Secure Connection

Secure Servers
Safe Outputs

Statistical Disclosure Control is the **risk management process** that reduces the risk of...

1) **Finding entities in data** *(identification)*

   and/or

2) **Associating data with a entity** *(attribution)*

...to maintain the confidentiality of the data

*Safe output = non-disclosive and maintains the confidentiality of the data*
Safe Data

What level of data do you need?

More confidential, harder access

Source Data

More confidential, harder access

Secure Data

Safeguarded Data

Open Data

Less confidential, easier access

Are the data de-identified?

<table>
<thead>
<tr>
<th>Name</th>
<th>Date of Birth</th>
<th>Address</th>
<th>Car Registration, Model &amp; Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clara Boyd</td>
<td>09/06/1992</td>
<td>14 Nandos Road, SO15 7RE</td>
<td>HG13 GWV, Silver VW Golf</td>
</tr>
<tr>
<td>Amy Watts</td>
<td>04/07/1994</td>
<td>5 Sushi Crescent, SO16 9LP</td>
<td>HV58 YCD, Black Ford KA</td>
</tr>
<tr>
<td>Tony Chapple</td>
<td>01/06/1967</td>
<td>27 KFC Drive, PO16 9JB</td>
<td>HY55 YTB Blue BMW 1 Series</td>
</tr>
</tbody>
</table>

De-identified Data

<table>
<thead>
<tr>
<th>Name</th>
<th>Date of Birth</th>
<th>Address</th>
<th>Car Registration, Model &amp; Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>992</td>
<td>SO15 7</td>
<td>Silver VW Golf</td>
</tr>
<tr>
<td>Female</td>
<td>1994</td>
<td>SO16 9</td>
<td>Black Ford KA</td>
</tr>
<tr>
<td>Male</td>
<td>1967</td>
<td>PO16 9</td>
<td>Blue BMW 1 Series</td>
</tr>
</tbody>
</table>

Safe data = de-identified data that are proportional to their use
The Five Safes

Cyber Resilience Innovation of the Year 2017

The Five Safes