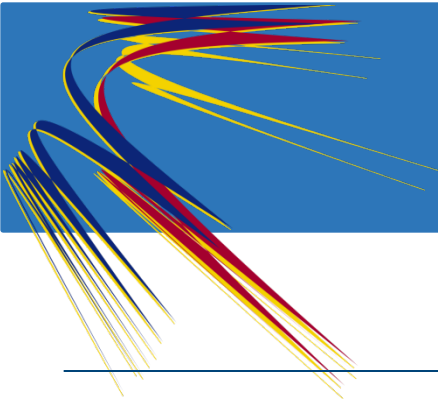
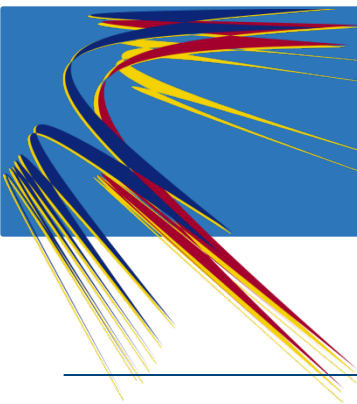




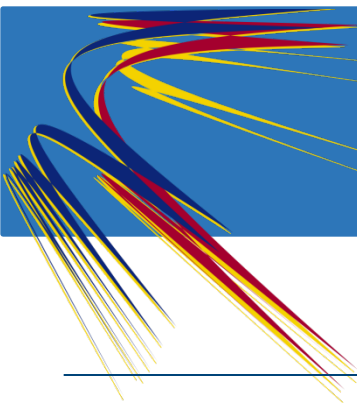
Becoming Dataware

Richard Mortier
Horizon Digital Economy Research
University of Nottingham



RCUK Digital Economy

- Digital Economy is defined by the Research Councils as:
The novel design or use of information and communication technologies to help transform the lives of individuals, society or business.
- The Digital Economy programme is:
 - Cross-Research Council (EPSRC, ESRC, AHRC)
 - Funded 2008-2011 for:
 - £80m research – including 3 x £12m hubs
 - £36m training – 8 x DTCs
 - Aimed at realising the transformational impact of ICT for all aspects of Business, Society and Government



What is Horizon?

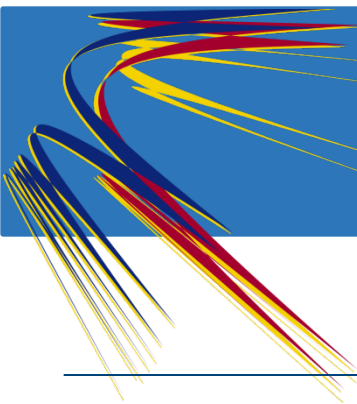
- A Digital Economy Research Centre at the University of Nottingham comprising:
 - A Digital Economy Hub
 - £20m from RCUK and university
 - Spokes at Cambridge, Reading, Exeter, Brunel
 - A Doctoral Training Centre
 - £15m from RCUK and university
 - 20 PhD students per year for 5 years
 - Now 120+ partner companies, from 40 in initial bid
 - 3 TEDDI projects
 - ... + future Digital Economy projects

Our Digital Footprints

“Every time we register for a new web service, or upload our photos and videos, we are enlarging our own digital footprints”

- Whether “informed” or not
 - Facebook, Google
- Growing digital footprint poses major societal challenges
- ...but also forms a key basis for the digital economy’s growth





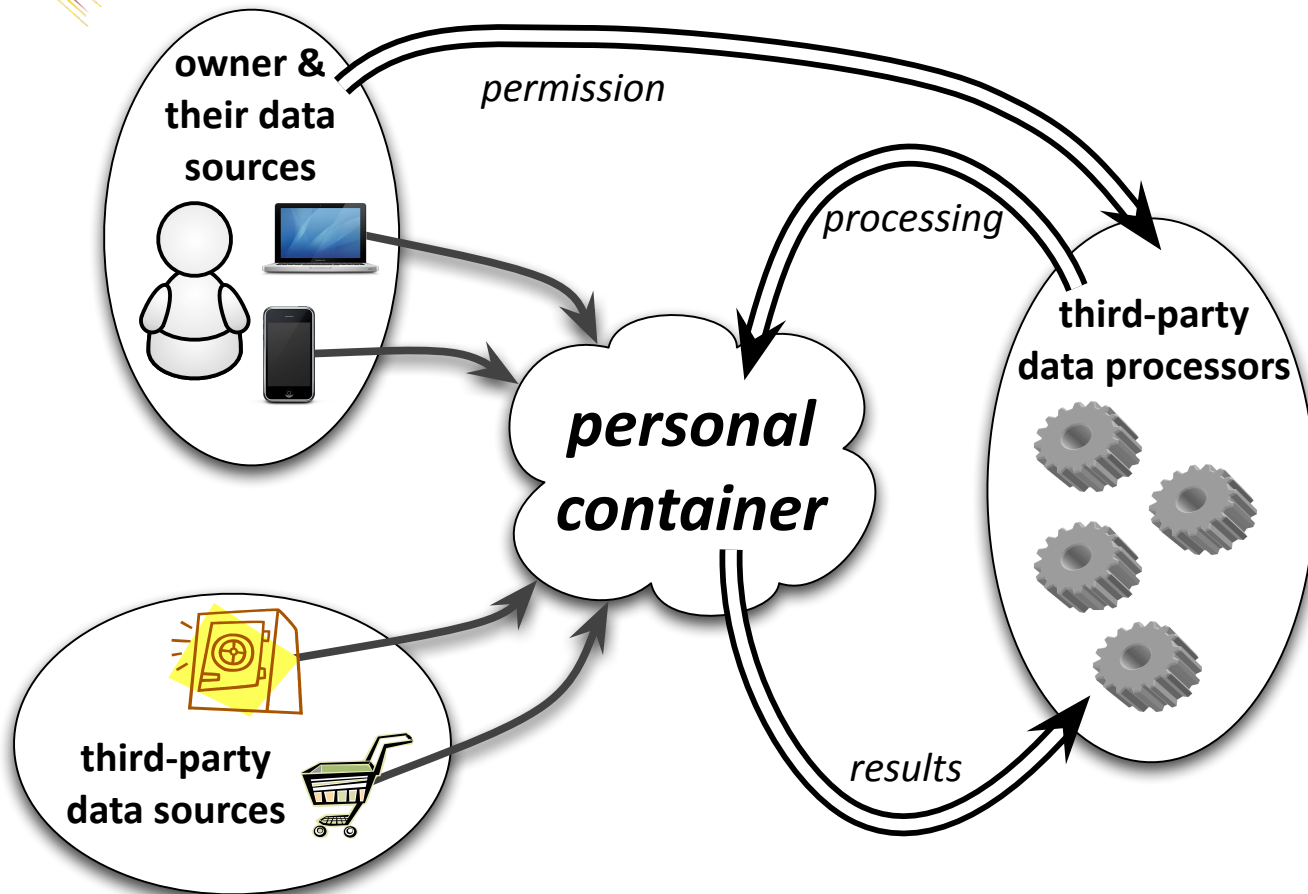
In More Detail

- We are making more and more information about our lives available, digitally
 - Whether or not we realise it
 - Often in very large, very rich data silos (e.g., Facebook)
 - “Contextual footprint”
- Simultaneously, there are more and more opportunities for mutually beneficial exploitation of digital personal data
 - E.g., Shopping basket optimizer;
Boots prescription conflict detector

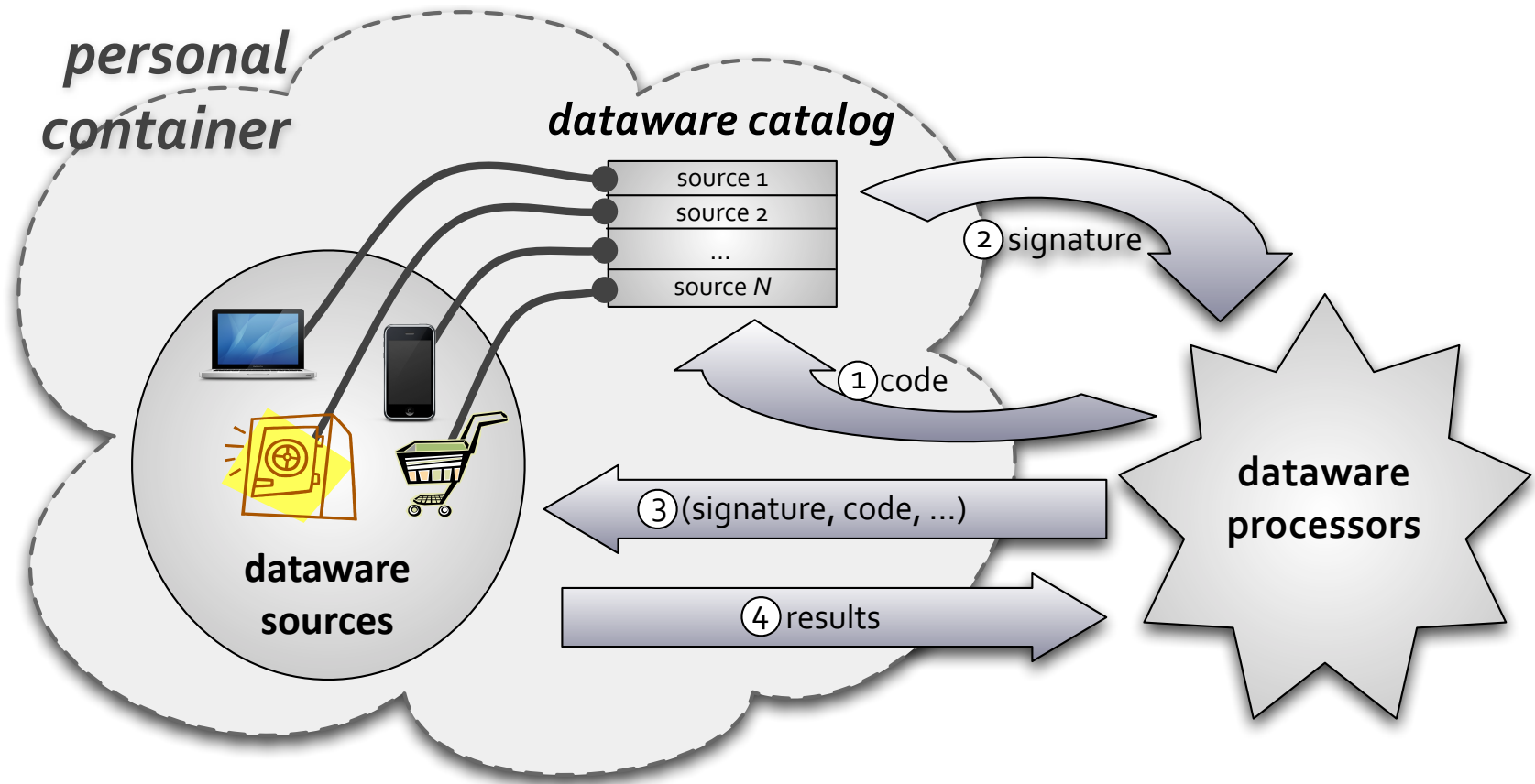
Key Challenge:

How do we enable individuals to control collection and exploitation of both their data and data about them?

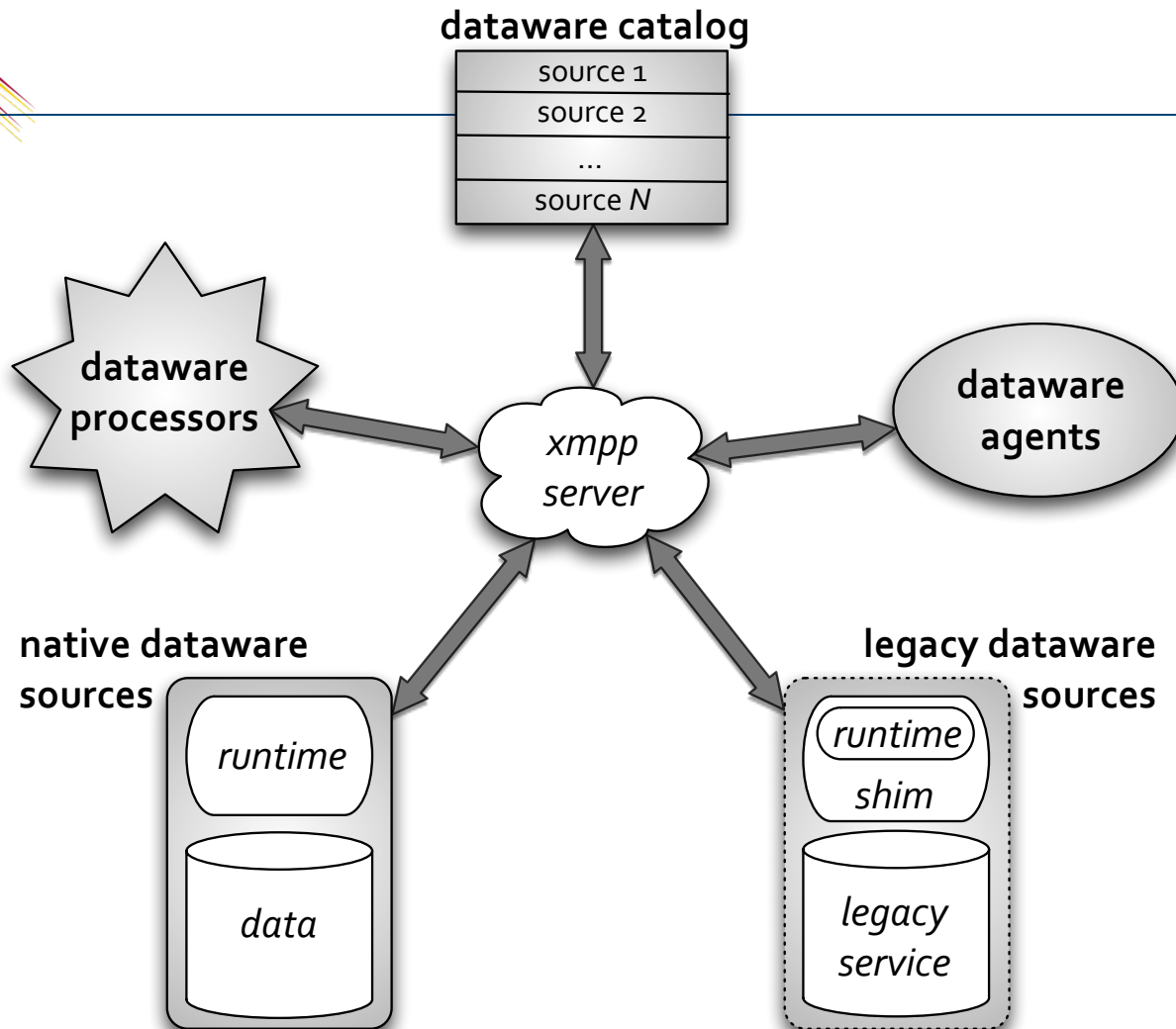
Dataware

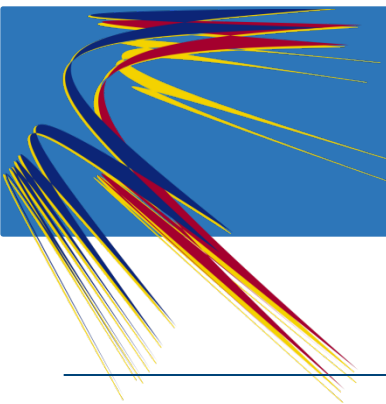


Components



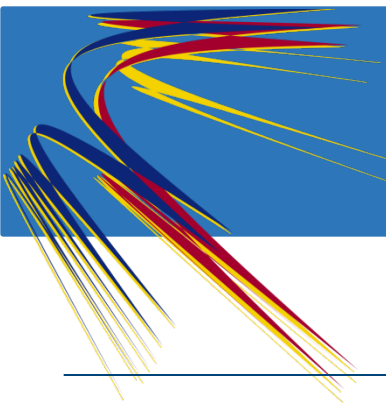
Implementation





Applications

- Each application is represented as a list of signed components:
- *Source ID*,
 - specifying the source and account to execute this computation;
- *Computation*,
 - a piece of code;
- *Destination*,
 - to which the result of the computation will be sent; and
- *Schedule*,
 - according to which the computation will be executed.



Status

- First version of catalog built
- First legacy source built
 - Facebook, using Graph API
 - Twitter, Google Gdata on their way
- Now prototyping
 - Dataware Processor and first applications, and
 - Native source