



supporting vulnerable citizens with inter-agency collaboration

Introductions

Matthew Glass

Data Management Delivery Lead
M +44 (0) 7733313509

mathew.c.glass@atos.net

Jim White

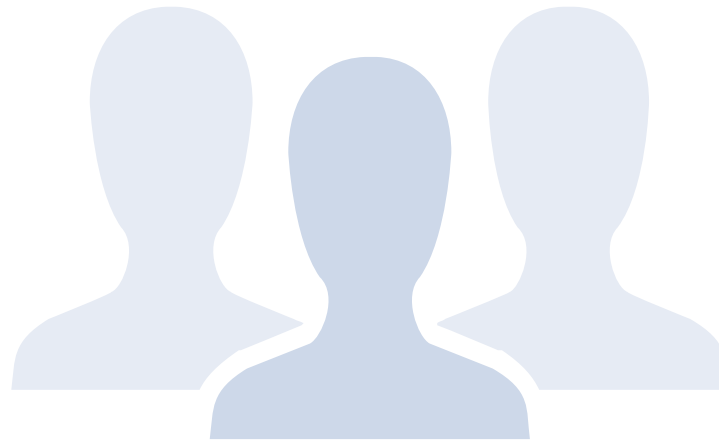
Head of Local Public Services
M +44 (0)7800 561810

jim.white@atos.net

Mark Wilson

Systems Integration Pre Sales
+44 (0)7733312504

mark.wilson@atos.net



Vulnerability Intelligence Project

Strategic Context

- ▶ The Welsh Government recognised, from a series of events:
 - Baby P
 - Daniel Pelka
 - Ruthin Floods (Margaret Hughes);
- ▶ That they needed better, real time visibility of those citizens who were at risk of vulnerability
- ▶ To achieve this, they wanted public service organisations to work together
- ▶ **Sharing of intelligence and data** was crucial to this aim – Government, Health and Police (and 3rd Sector)



Blaenau Gwent



Vulnerability Intelligence Project

Scope of the Project

- ▶ To create a sustainable 'vulnerable information sharing hub' which provides the collation and presentation of data and information about vulnerable people
- ▶ To prove that sharing data was possible and would support partner agencies
 - **An independent review showed this was not be a barrier**
- ▶ Use data and information to provide key analysis and insight for strategic decision makers
- ▶ To enable public service organisations operating across regional boundaries to become more proactive and effective
- ▶ Delivered to an accelerated programme: **18 months**
 - Managed as a co-designed, joint working initiative – across five organisations
 - It featured use of an existing software application (Infoshare - SME)
 - Agile methodologies were core



Plan on a Page

Overall timeline 18 months; Atos Programme was 10 months

February 2014

June 2014

December 2014

Covered by project partner organisations

Project Management & Governance

Workshops & Stakeholder Engagement

1: Scope & Mobilise Data Phase

2: Extract & Manage Data; Develop Solution

Stage 3: Run Vulnerability Data Matching & Analytics

Initial phase

Core Project

Sprint 1

Sprint 2

Sprint 3

Report

Independent Evaluation

Covered by third party organisation



Bwrdd Iechyd Aneurin Bevan Health Board



Five organisations extracted data from their systems

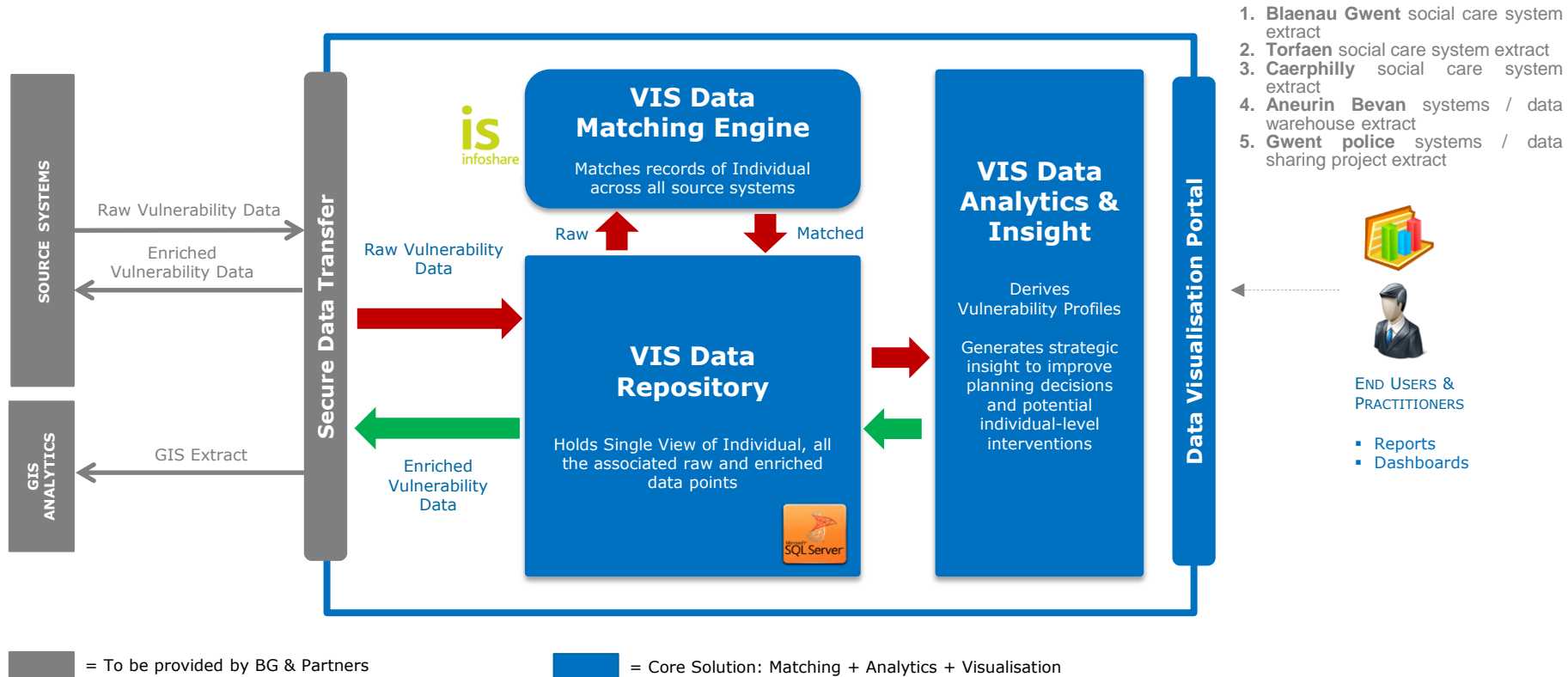
Containing demographic and contextual data considered relevant to vulnerability ~230k records

Data Provider	Data Source	Description of data	Number of Records
Blaenau Gwent CBC	Social Care system extract (case mgmt)	Adults and Children in contact with Social Care in the last five years	32,501
Caerphilly CBC			67,816
Torfaen CBC			49,646
Aneurin Bevan HB	Data warehouse extract	Adults and Children in Acute Care in the last five years	13,076
Gwent Police	Data sharing project extract	Victims of crime during previous six months	70,045



Example of Vulnerability Intelligence Service

High-Level Solution Overview



1. Blaenau Gwent social care system extract
2. Torfaen social care system extract
3. Caerphilly social care system extract
4. Aneurin Bevan systems / data warehouse extract
5. Gwent police systems / data sharing project extract



END USERS & PRACTITIONERS

- Reports
- Dashboards



Vulnerability Intelligence Project

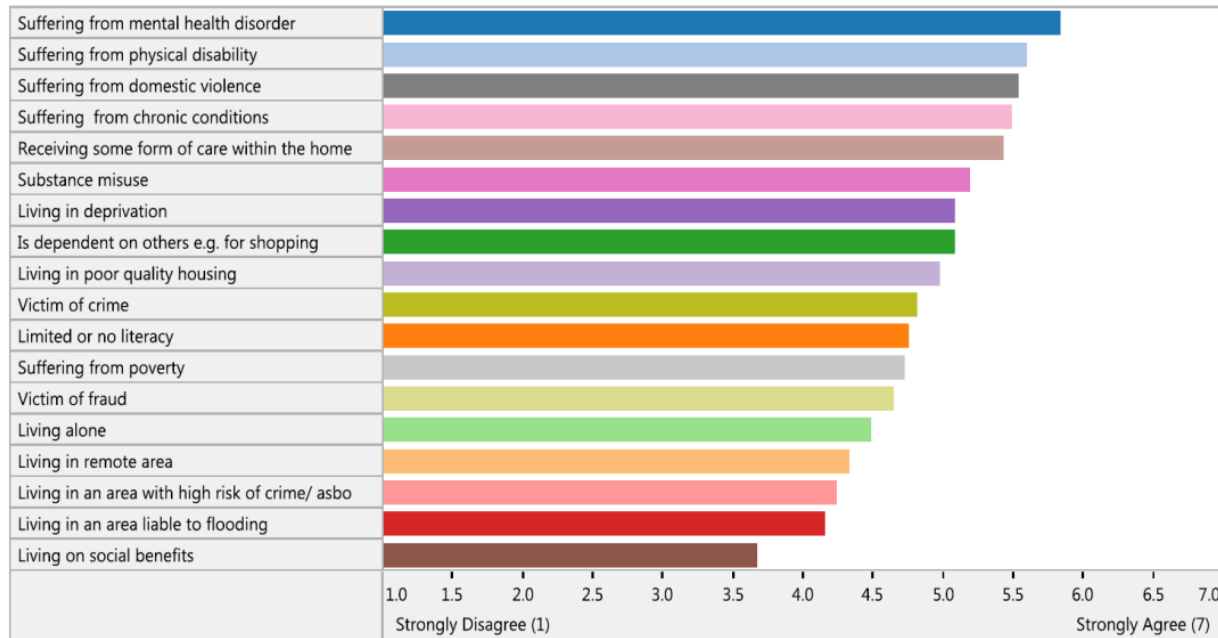
Key Aspects

- ▶ Data governance and security
- ▶ Information Sharing Protocols – yes it is possible!
- ▶ Data Processing Agreements
- ▶ Using information from legacy systems
- ▶ Merging & Matching Business Rules to provide a single view of the citizen
- ▶ Conduct analytics on the combined data sets
 - practitioners and managers actively explored use cases for effective strategic planning and early cross-agency intervention



Survey and workshops showed practitioners and managers do not share a consistent, clear view of “vulnerability”

- ▶ The wide range of indicators characterising vulnerability demonstrates the varied interpretations amongst practitioners and strategic managers
- ▶ This led to an exploratory approach to investigate how the combined dataset might inform practitioners on potential vulnerability in individuals or groups

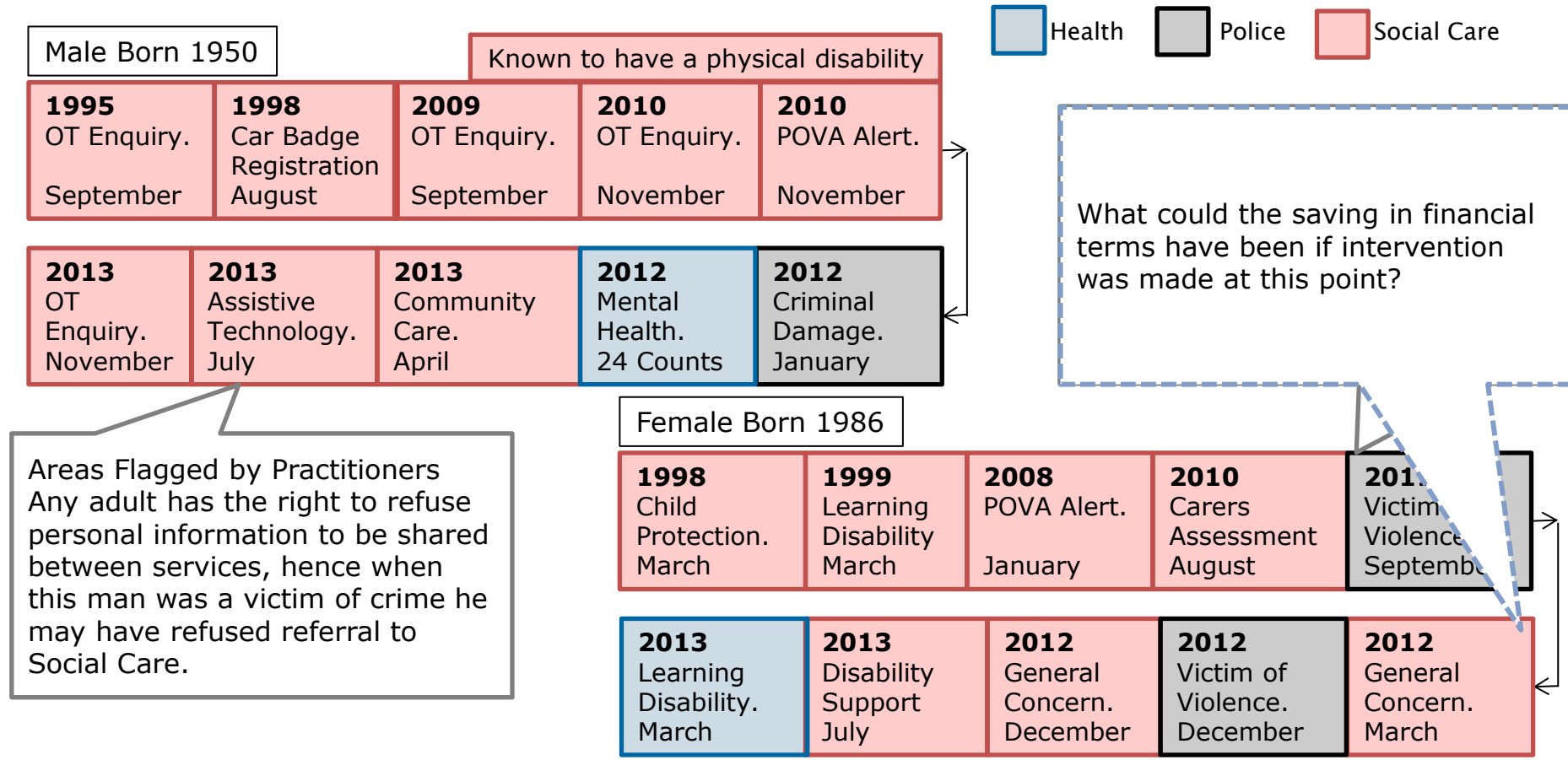


Source: Workshop/Survey participants (see separate Atos reports on Workshop and Survey Outputs)

Vulnerability Intelligence Project

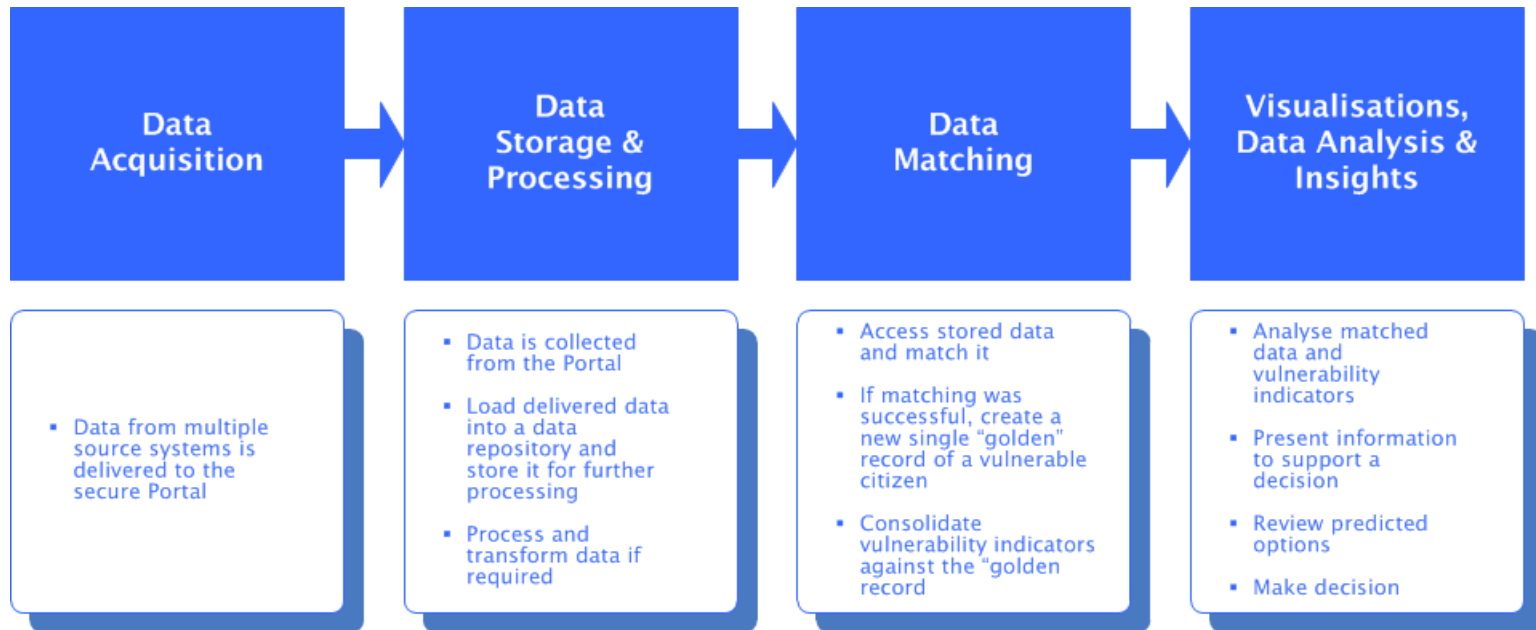
Key Insights – joined up view

Cross agency view of previous interactions can provide insight into potential areas of early intervention



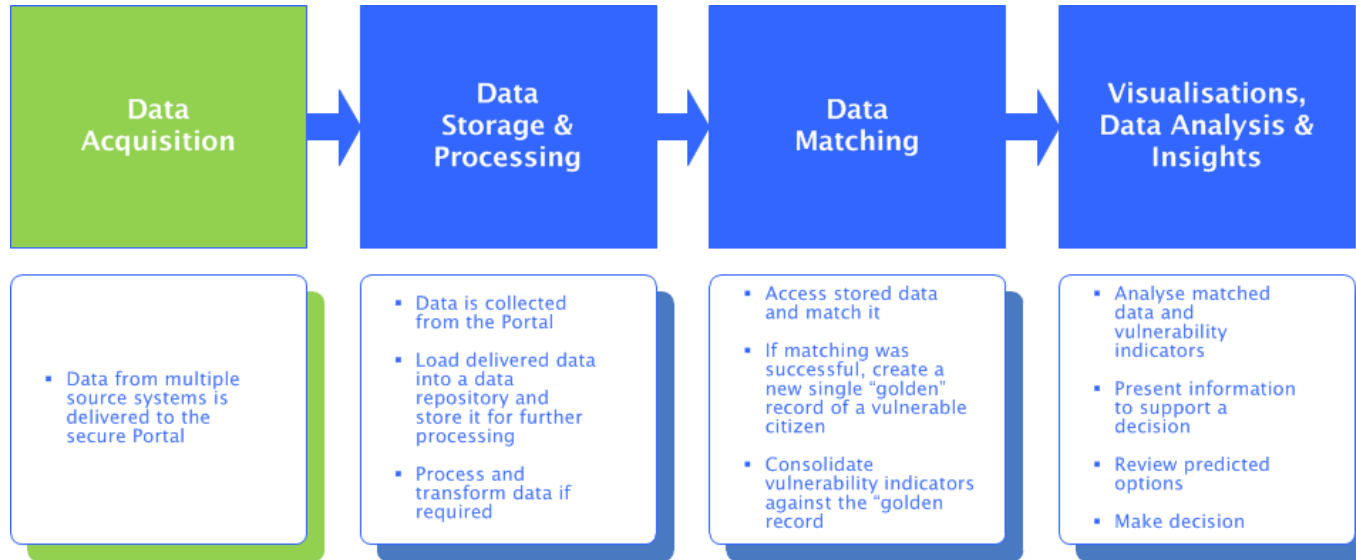
Vulnerability Intelligence Service

Solution Overview



Vulnerability Intelligence Service

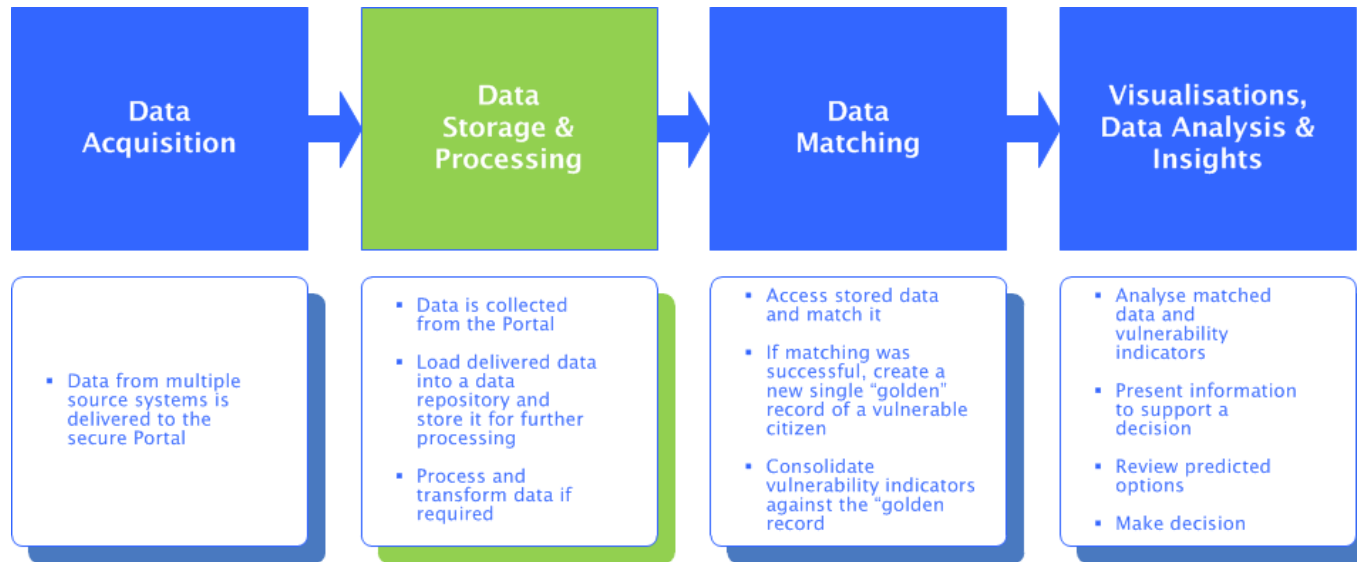
Solution Overview



- ▶ Multiple data formats including CSV, XML, Excel, Messaging
- ▶ Secure data transmission
- ▶ Secure messaging

Vulnerability Intelligence Service

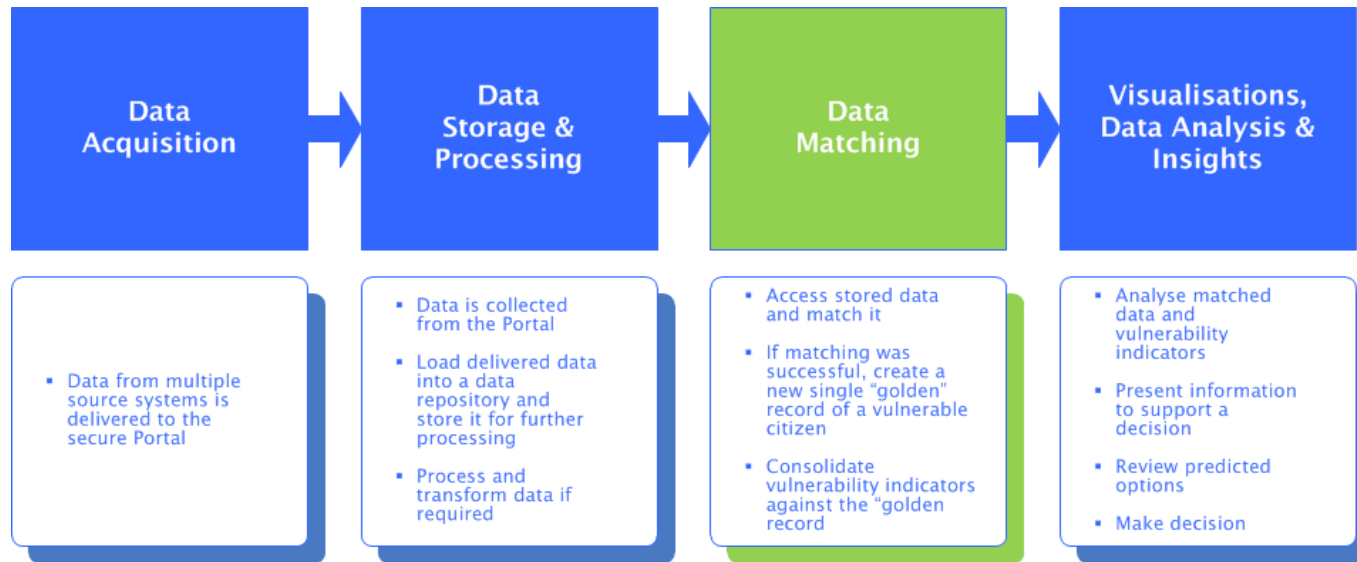
Solution Overview



- ▶ Data is collected from the data acquisition portal, and stored in a staging area
- ▶ Data is checked for validity and then, if valid, stored.
- ▶ All data loads are audited for traceability
- ▶ Data is transformed into the format required by the matching engine
- ▶ Vulnerability data from original source data records linked to the newly created matched "golden" records (a consolidated single record of a vulnerable citizen) produced by Data Matching element.

Vulnerability Intelligence Service

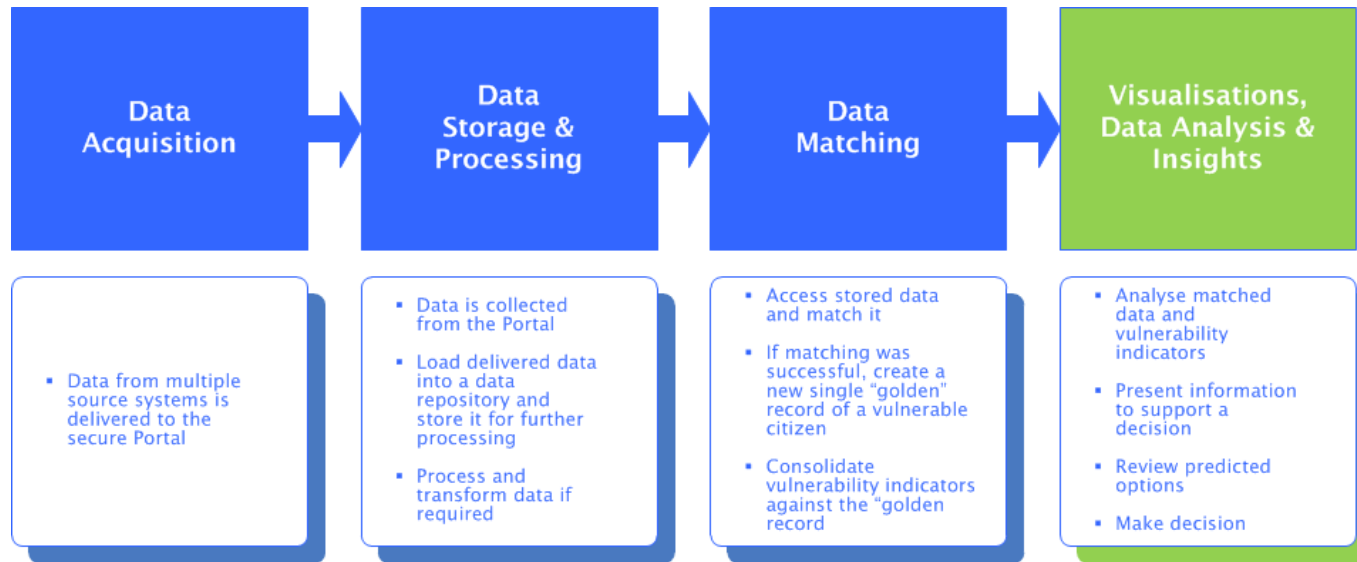
Solution Overview



- ▶ Data is matched to form the Golden (single view) Record
- ▶ Evidence based
- ▶ If successful, matched data is returned to the storage layer and linked to the original source data stored in the storage layer
- ▶ Matched data is also returned to the storage layer and linked to the vulnerability indicator data

Vulnerability Intelligence Service

Solution Overview



- ▶ Users are able to drill down on the data via a portal to support their decision making
- ▶ Insights into vulnerability gained from the matched data
- ▶ Analytics/Insights and standard Business Intelligence using reports/dashboards
- ▶ Geographical mapping of information
- ▶ The target solution can be expanded to include Predictive Analytics capabilities.

Vulnerability Intelligence Project

Learning Points

- ▶ It is possible to get agreement to share data between five different public bodies. **This was a major achievement**
- ▶ The Project has already exceeded other efforts – data was shared
- ▶ There is willingness by participants to pursue further data sharing
- ▶ Shared and derived data enhances understanding of vulnerability
- ▶ One potential vulnerability indicator, which was considered to be important by operational staff, is living alone.
 - This is not captured by any of the systems used
- ▶ **Modelling can precisely define individuals who are likely to become vulnerable**, potentially supporting more targeted service delivery
- ▶ It was possible to incorporate additional data in the predictive models, such as the Welsh Index of Multiple Deprivation.
 - This improved the accuracy of the prediction

Tangible Benefits

- ▶ Cost savings
 - resources used earlier in the cycle
 - invested where they will yield higher success rates
 - more effective outcomes
 - lower cost, long term involvement of the public sector

- ▶ Improved prevention

- ▶ Demand reduction

- ▶ More effective intervention

- ▶ Better planning/commissioning – targeted use of resources

- ▶ A range of Use Cases illustrate ROI of 20:1
 - Women experiencing domestic abuse
 - People with alcohol issues
 - People with substance misuse issues
 - Young people with support needs (16 - 24 years old)

Unforeseen Benefits

- ▶ The technical staff involved in the project highlighted a number of specific items:
 - The opportunity to see how other organisations have approached similar problems and arrived at different solutions
 - The opportunity to meet and discuss their use of data with peers in a practical operation context
 - The poor quality of some of the data in some places. The VI software solution was able to highlight duplications and other errors
 - Missing or wrong data in some cases. Date of death is particularly problematical. Health databases contain this information. Social Services tend not to
 - Exposure to state of the art data matching and analytic tools which have hitherto not been used to any great extent by any of the partner organisations

Questions?



Client Feedback

... Welsh Government agencies' ability to identify vulnerable people in the community through predictive analytics, proving the case for cross-agency co-operation to enable more effective collaboration and better resources planning at a strategic level.

The challenge

Blaenau Gwent CBC led the Vulnerability Intelligence Project, exploring how local public service organisations can join up their information on people in the community who are potentially vulnerable. Other project partners are Caerphilly CBC, Torfaen CBC, Aneurin Bevan Health Board and Gwent Police

The aim was to explore if the partner organisations can share and match their data, and if it is possible to derive intelligence on potential vulnerability. This would in turn enable services to collaborate more effectively when supporting individuals in the community, and to plan resources better at the strategic level

We proved that data sharing and predictive modelling can identify vulnerable individuals, supporting more targeted public service delivery.

Our impact

Data Matching & Analytics enabled partner organisations to:

- ▶ Identify, extract, match and cleanse data held within selected partner systems. Activities covered both technical and operational enablers
- ▶ Conduct analytics on the combined data sets, whereby practitioners and managers actively explored use cases for effective strategic planning and early cross-agency intervention (action learning through "sprint workshops" approach)

We demonstrated how shared and derived data has the potential to enhance understanding of vulnerability, form the basis to the provision through analytics of insight into potential areas of intervention



"The Atos team brought a great level of experience, insight and high level of professionalism to the project, which helped us to deliver the end result.

The team's engagement with our variety of stakeholders was excellent, and the decision to bring them on-board felt right from beginning to end."

**Client Project Manager
Welsh Government**

"The three multi-agency Local Service Boards, covering Blaenau Gwent, Caerphilly and Torfaen, have been strong advocates of this regional project. The project was funded through a national European Social Fund (ESF) programme hosted by the Welsh Government to help drive the system change and support cultural changes needed to transform public services through more effective collaborative working. The solution will provide partner organisations with the opportunity to use the intelligence to deliver targeted, preventative approaches to the most vulnerable people in our communities. This approach resonates with the key challenges facing public service providers across the UK."

Bernadette Elias
Head of Policy and Performance,
Blaenau Gwent County Borough Council

Jim White

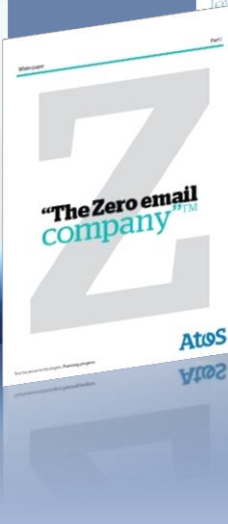
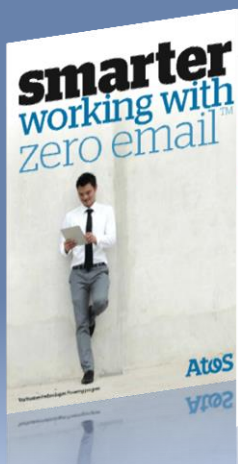


Atos
4 Triton Square
Regents Place
London NW1 3HG
M +44 (0)7800 561 810
jim.white@atos.net

**Account Partner
Head of Local Public Services**

Atos

Your business technologists.



Atos, the Atos logo, Atos Consulting, Atos Worldline, Atos Sphere, Atos Cloud and Atos Worldgrid are registered trademarks of Atos SE.

© 2014 Atos Consulting. Confidential information owned by Atos, to be used by the recipient only.

This document, or any part of it, may not be reproduced, copied, circulated and/or distributed nor quoted without prior written approval from Atos.