

Turas Data Intelligence

Workforce Planning in the Cloud



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Data & IT Context in the United Kingdom

- In 2017 Audit Scotland published a report on the workforce planning for NHS Scotland and the associated care sector. It indicated that a more coordinated and 'joined up approach' was necessary to make health and social care workforce planning fit for the challenges facing the services. Part of the Scottish Government response was to commission NHS Education for Scotland (NES) to develop a unified workforce planning platform where all existing, relevant and available data pertaining to workforce could be held in a single instance, linked and made available to appropriate staff and associated individuals. NES Digital were chosen because of its leadership in the development and delivery of Cloud based products and services.

Key Data & IT Challenge

- 14 Territorial Boards send workforce data from their disparate and separate, un-coordinated HR functions to a single, central repository (The Scottish Workforce Information Strategic System (SWISS)).
 - These data are not consistently coded, use non-standard job family and job roles, lack consistent quality and timeliness.
 - SWISS data is stored in a data warehouse; it is not linked or reported on in relation to any other workforce data.
 - Access to SWISS is restricted by Information Governance (IG) and Information Security (IS) policies and architecture.
 - Challenge - establish new IG relationships across NHS Scotland and move SWISS data to a secure but accessible Cloud (data lake) platform where related data could be co-hosted and linked.
 - Challenge - controlled and secure access to the complete, linked data by appropriate NHSS and care staff for national. Regional and local workforce planning.
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Promising Practice

- Scottish Government sponsorship for a new approach.
 - Availability of the NES public cloud (Azure) ready for fast development and implementation of new, data lake technology.
 - Azure experienced dev op team in NES Digital ready to support deployment.
 - Access to workforce data by the NES Dental AIMS team; limited but experienced data scientist resources able to proof of concept quickly and guide the technical developments.
 - NES on Office 365 so able to quickly deploy and support POver BI visualisation application.
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Barriers to Implementation

- Resistance in the Information Governance community to Cloud based solutions.
 - Lack of understanding of the technology and its potential.
 - Lack of 'vision' and direction in the type, scale and scope of workforce planning across health and social care leading to issues in defining and delivering the right data linkage and available datasets for workforce planning.
 - Gaining stakeholder engagement to work through the Agile development approach.
 - Enough skilled and supported 'data science' resources across the regional and local workforce planning teams.
 - Some Boards / Scottish Government not having the necessary versions of Microsoft products (Excel in particular) and local firewall/security issues.
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Enablers for Implementation

- Executive support from NES Executive Team.
 - Implementation and development of Microsoft Azure Data Services.
 - Power BI visualisation application (integrated into the Office 365 products and Azure).
 - Agile development methodology.
 - Excellent data engineering and data science resource in the NES delivery team.
 - Supporting funding from Scottish Government.
 - NES Turas platform to allow embedding of Power BI at application level.
 - A hard fought for NHS Scotland national (workforce) data sharing agreement between all 22 Boards.
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Next Steps

- Complete the Agile development of Turas Data Intelligence (TDI) version 2 with engagement from key workforce planners.
 - Engage the Boards directly to address data quality, consistency across the service, timeliness and completeness (fix at source).
 - Engage the Primary Care sector directly to increase available data sources.
 - Embed the TDI delivery Team into a new, NES Digital Data Group.
 - Commence Discovery work on how to bring activity and accuity data into the platform.
 - Complete the migration of the official NHS Workforce statistical function from National Services Scotland to NES.
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Key Messages

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Public cloud data services promote joined up data and associated democratisation of data access.

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Health & Care workforce planners will need greater data science and analytical skills as the technology removes the data engineering from the process.