Peter Oliver
Head of Strategy, Health and Life Sciences at Leidos UK
Elected Member of the techUK Health and Social Care Council
About techUK

• Trade body representing the tech sector with 950+ members

• 380 Health & Social Care members: 70% SMEs

• Key stakeholder relationships:
  • Department of Health and Social Care
  • NHS England
  • NHS Digital
  • NHS Improvement
  • NICE
  • AHSNs
  • STP/ICSs
  • Local bodies

• techUK team & Council of 19 members
What Does techUK Do?

Support the Digitisation of Health and Social Care through:

• Lead industry partner for:
  • Paperless 2020
  • NHS England’s HSS Framework

• Activity in five key areas:
  • Digital citizens
  • Enabling clinicians
  • Integrating services
  • Infrastructure - safe and effective data sharing
  • Creating the future
Quiz!

How many hours of video are uploaded to YouTube every minute?

A) 50 hours
B) 200 hours
C) 300 hours

What is the larger of these hurdles enterprises need to overcome when embracing big data?

A) Infrastructure
B) Cyber security
C) Cloud integration
D) Lack of digital skills
Health and Social Care has a significant volume of data
Expectations are changing
Requires careful implementation!

I have looked at your tests, and posted the results on Twitter.
Key Elements of Turning Big Data into Smart Data

What’s the challenge?
Strategic planning, prevention, prediction, capacity planning, alerting, reduction in length of stay, standardisation, pathway management, evidence based treatment, efficiency, fraud reduction ...

Capture
- Automate capture
- Real-time
- Structured and unstructured

Prepare
- Automate preparation - cleansing, interpretation and analysis
- Ensure usability of data
- Ensure linkage between data sets

Manage
- At scale
- Cloud to access processing power in peaks
- Automate refresh

Protect
- Storage
- Downstream as the data is used

Utilise
- Share
- Visualise
- Insight to action
- Tools in the hands of end users
- Reduce need for specialist skills

Themes for success: Flexibility, automation, scalability, self-service and security.
### Leidos Examples of Advanced Analytics

<table>
<thead>
<tr>
<th>Customer</th>
<th>Mission</th>
<th>Results</th>
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<tbody>
<tr>
<td>CDC</td>
<td>Decision making to effectively respond to disease outbreaks</td>
<td>• Reduced time between analysis and outcome from 6 weeks to 6 hours and reduced SAS programmers required from 6 to 1</td>
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<td>• Increased collaboration between scientists and health providers</td>
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<td>• Reduced data quality issues</td>
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<td>• Finalist in the 2016 Mission Excellence Enabler Awards in US</td>
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<tr>
<td>NASA</td>
<td>Data analysis of astronauts health data to increase safety</td>
<td>• High fidelity searchable, accessible, interoperable and reusable data with improved efficiency by at least 50%</td>
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<td>• Reduced manual data preparations effort work (finding the data and cleaning data) by ~90%</td>
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<td>• Improvement in data request process by 20%</td>
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<tr>
<td>CMS</td>
<td>Optimise medical claims processing by applying big data technologies</td>
<td>• Validates 2+ million health care claims per day for 65+ million beneficiaries - in 30 mins compared to 18 hrs</td>
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<td>• Implemented source data change in less than one week compared to months for other systems</td>
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<td>• Provide viability of using big data technologies as a cost effective and scalable IT Modernization approach</td>
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<td>CMS CMMI</td>
<td>Self service analytics pilot for healthcare alternate payment models</td>
<td>• Proved ability for domain experts to self-service ingest and prepare data for analytics, perform data investigation and analysis,</td>
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<td>and generate visualisations with minimal training and IT support required</td>
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<td>THR</td>
<td>Forecast healthcare workforce needs</td>
<td>• Estimated $20 million savings annually</td>
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Getting in touch...

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