

Using predictive data in social protection A new form of moral hazard?



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Services Conference

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**Workshop : Managing risk in a predictive manner to enhance
decision making based on real-time analysis of data**

Brian Lee-Archer
7 July 2015

Workshop synopsis (not for presentation during workshop)

The social protection industry aims to reduce poverty and vulnerability by promoting efficient labour markets, diminishing people's exposure to unemployment, exclusion, sickness, disability and old age, and enhancing their capacity to manage these risks. Many social protection agencies are promoting a “digital first” service delivery model, through which citizen needs can be addressed in real-time and people can be empowered to help themselves using online and mobile technologies.

This workshop will examine the case for real-time analytics within the context of the social protection industry and will discover the balance point for ensuring technology enhances the professional judgment of case workers rather than obstructing it.

Today's Workshop

- Introduction to predictive data in social protection
- A social organisation perspective – the National Disability Insurance Agency
- Group exercise – what are the risks and issues of using data in this way
- The Indiana case study – do the benefits outweigh the risks
- Conclusion

Who are we?



SAP Institute for Digital Government – Who are we?

Researching the intersection of technology invention and public sector insight to improve:

- Policy insight and impact
- Outcomes for citizens' economic, social and safety needs
- Service delivery and fiscal excellence
- City and urban living outcomes



Des Fisher, SAP Institute for Digital Government, demonstrates the Youth Unemployment scenario to Chancellor Angela Merkel and Kathryn Campbell, Secretary of the Department of Human Services – Sydney November 2014j



Predictive Data in Social Protection

Socio-economical, behavioral & technology changes unveil new areas of opportunity for social protection organisations to innovate for better outcomes



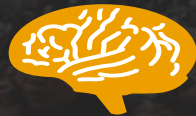
Personalized
Citizen Engagement



Engage & empower
Workforce of the Future



Plan & optimize
Resources in Real-time



Scale the full potential and intelligence of
your networked ecosystem

SAP

At the same time the fundamentals of government have not changed and are not likely to – despite what the tech industry may predict

What has changed is the world is going digital – Digital Government

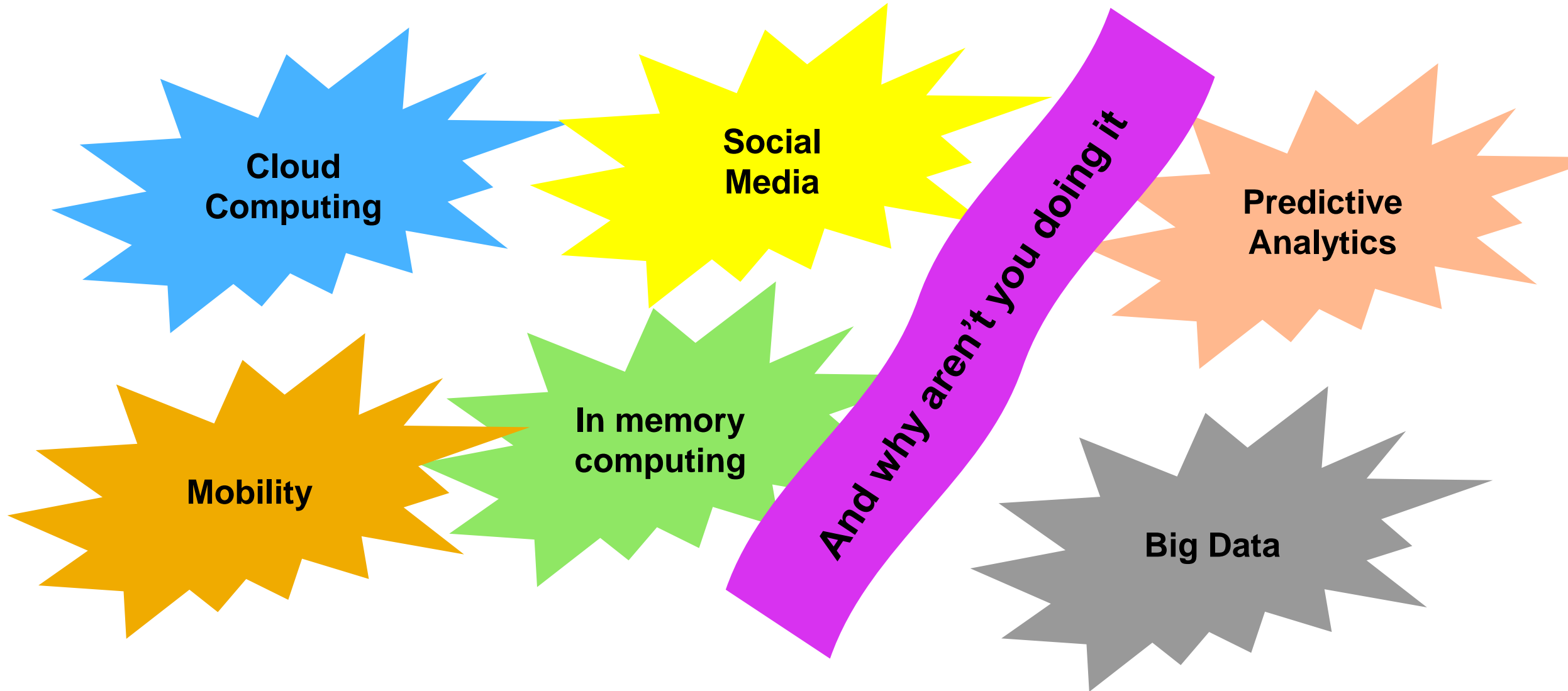
Digital Government refers to the use of digital technologies, as an integrated part of governments' modernisation strategies, to create public value. It relies on a digital government ecosystem comprising government actors, non-governmental organisations, businesses, citizens' associations and individuals which supports the production of and access to data, services and content through interactions with the government.

<http://www.oecd.org/gov/public-innovation/Recommendation-digital-government-strategies.pdf>

Or more simply

the production and access to data, services and content, sourced and distributed across the digital ecosystem, to create public value.

For the IT industry this means



For many on the front line of social services.....



Innovation in social policy using predictive data has been happening for some years in New Zealand

The image is a screenshot of a web browser displaying a Bloomberg Politics article. The browser's address bar shows the URL: <http://www.bloomberg.com/politics/articles/2015-05-10>. The page features a large, dark background image of a man in a suit, likely a social worker or official, with another man visible in the background. The article title is prominently displayed in white text: "From New Zealand to Pittsburgh, a *Moneyball* Approach to Helping Troubled Kids". Above the title, it says "Data Driven". Below the title, the date and time are listed: "May 10, 2015 12:00 AM EST". A short introductory paragraph reads: "In a program pioneered in New Zealand and arriving soon in Allegheny County, Pennsylvania, social workers use data to figure out who's most at risk." The page includes a navigation menu with "Bloomberg Politics" and "Curiosity Index" links, and a taskbar at the bottom showing various application icons and system information like "8:30 AM 12/05/2015".

http://www.bloomberg.com/politics/articles/2015-05-10

From New Zealand to Pittsburgh, a *Moneyball* Approach to Helping Troubled Kids

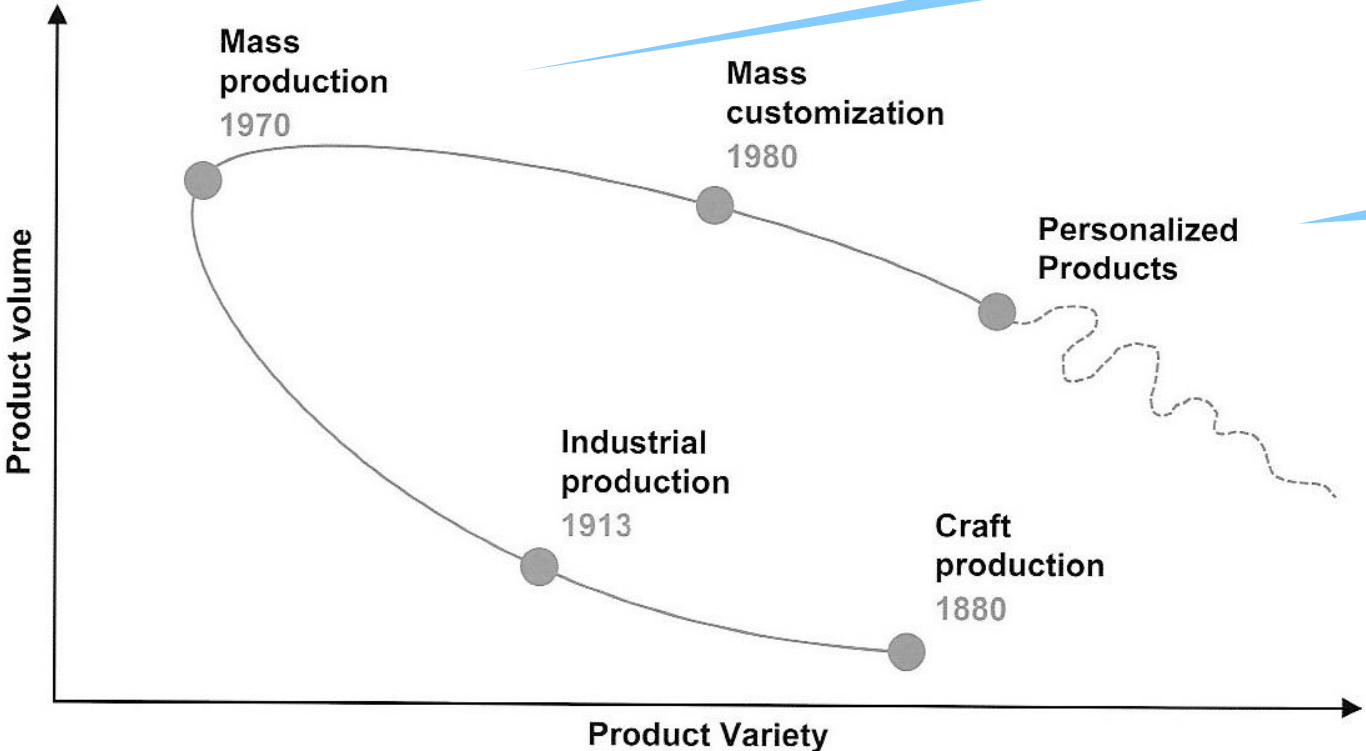
Data Driven

May 10, 2015 12:00 AM EST

In a program pioneered in New Zealand and arriving soon in Allegheny County, Pennsylvania, social workers use data to figure out who's most at risk.

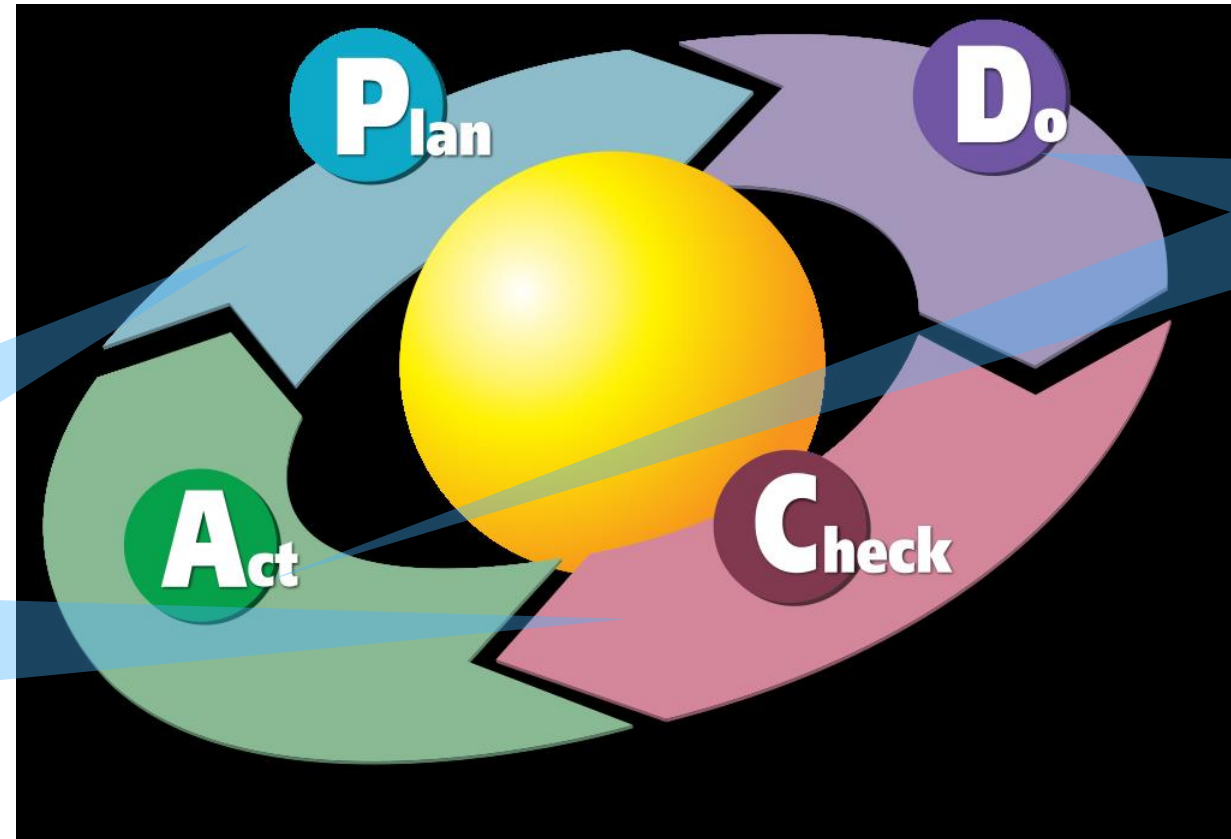
IT is following a similar path to the manufacturing maturity cycle

Manufacturing has Reached a New Level of Maturity
Combining Customer Centricity & Operational Excellence



Uhl A, Steiger S - *Digital Enterprise Transformation*, 360 the business transformation journal issue 12, dec 2014

Policy to service delivery as a Deming Circle - PDCA



Digital Government targets the policy development and evaluation processes

This is where automation is usually targeted - service delivery efficiency

Digital data provides insight for better targeted policy

Service delivery automation is providing the digital data for policy to deliver better public value

Predictive data uses cases in social protection? Lead , not lag

- **Real-time Customer Segmentation** : not all people are the same – identifying common patterns and groups of needs and wants
- **Real-time Customer Risk Profiling** : with less face-to-face contact, how do we know or can predict when people are at increased risk – vulnerability and/or compliance
- **Real-time Caseworker Decision Support** : advice to keep up with changing rules, regulations, policies, precedents and practice experience
- **Real-time Social Policy Development.** : policy impact simulation leading to new policy deployment – closing the gap from “create to evaluate”

A perspective from the National Disability Insurance Scheme from Australia

A short talk from Sarah Johnson, Scheme Actuary, the National Disability Insurance Scheme

Workshop

The moral and ethical issues of using predictive data in social protection

Workshop – At your table please discuss the following

- **There seems only upside to using data in a predictive manner - this has to be better in terms of improving efficiency and effectiveness from investing taxpayer and/or social insurance funds**
- **When something looks too good to be true, it usually isn't.**
- **Looking beyond the well known issues of data privacy and protection, what moral and ethical issues from using predictive data need to be considered?**
- **What does it mean for case workers and practitioners? Are predictive data models a new form of moral hazard with professional risk transferred from the case worker to the “machine”**

The State of Indiana

Saving Lives – addressing infant mortality

Reducing Infant Mortality in Indiana

Challenge

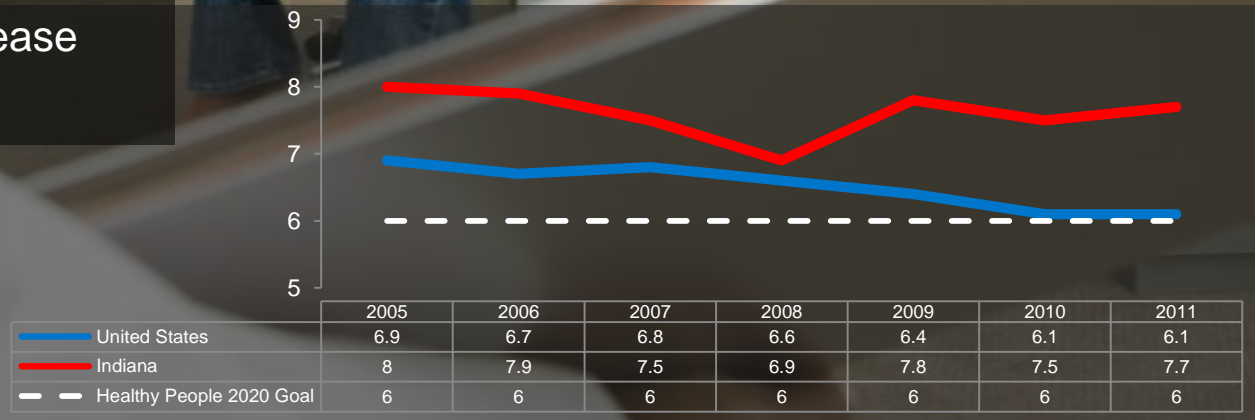
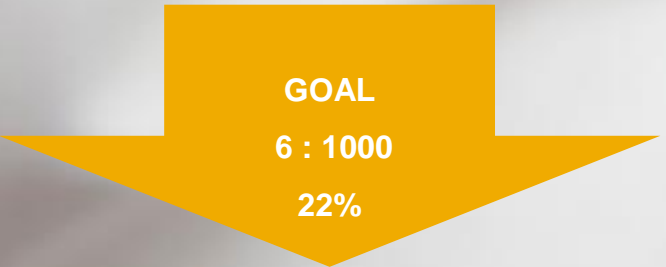
- Indiana significantly lags other states and developed countries in infant mortality rates (7.7 :1000 deaths, 47th in the nation)
- Healthy People Goal to Reduce Rate by 2020
- Underlying drivers for high infant mortality are largely unknown

Approach

- Aggregate longitudinal data from government and public sources
- Use machine learning and other advanced analytical methods to identify root causes and 'high-risk' individuals

Results


- Recommended changes to programs and services to increase efficacy and decrease Indiana's infant mortality rate



State of Indiana Video

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SAP Institute for Digital Government

<http://discover.sap.com/sap-institute-for-digital-government>

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