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

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**23rd European Social Services Conference**

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Lisbon, Portugal

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

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# 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**
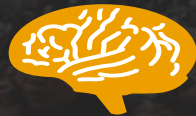
Scale the full potential and intelligence of
**your networked ecosystem**

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

SAP

# 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 <u>access to data</u>, services and content, sourced and distributed across the <u>digital ecosystem</u>, to create <u>public value</u>.*

# For the IT industry this means



Cloud Computing

Social Media

And why aren't you doing it

Predictive Analytics

Mobility

In memory computing

Big Data
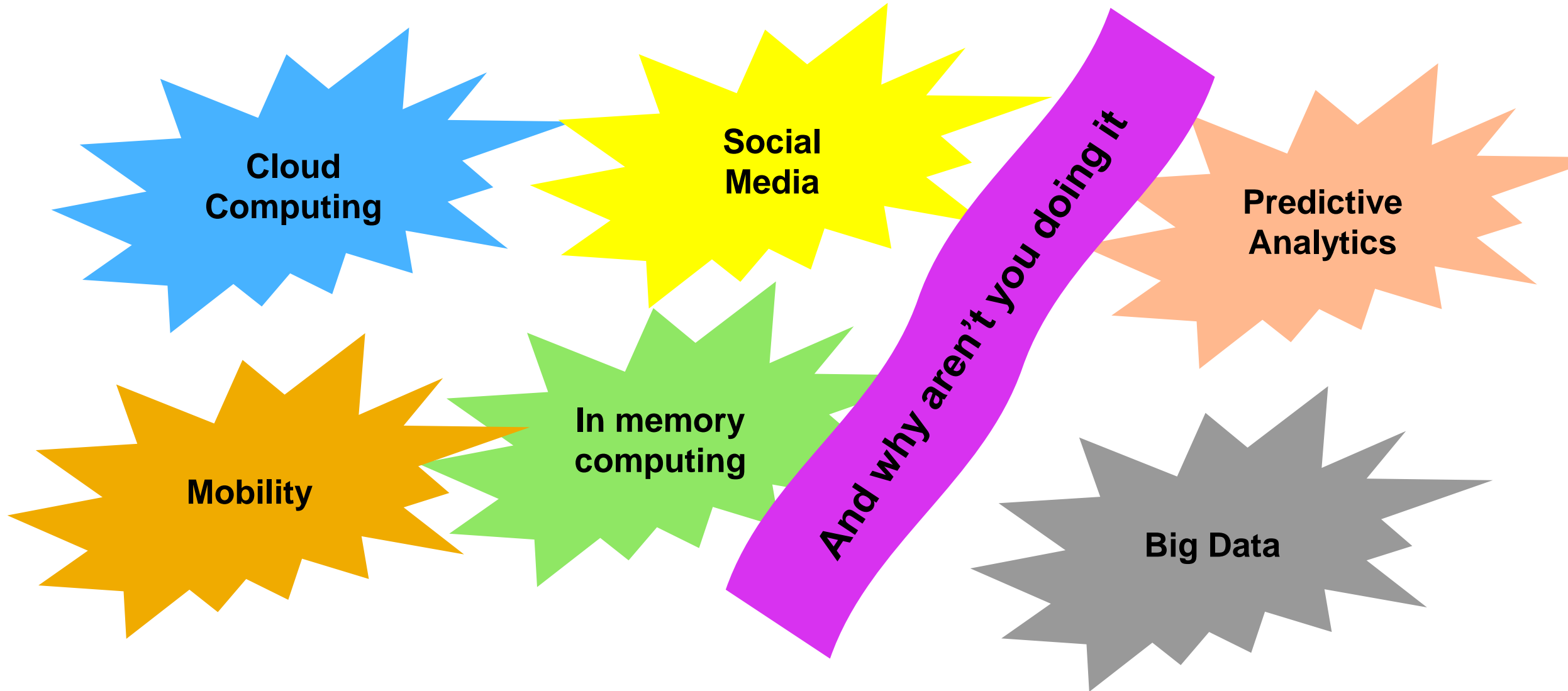
# For many on the front line of social services…………..

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

# IT is following a similar path to the manufacturing maturity cycle



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

- Mass production 1970
- Mass customization 1980
- Personalized Products
- Industrial production 1913
- Craft production 1880

Product volume (vertical axis) / Product Variety (horizontal axis)

**Automation - Efficiency**

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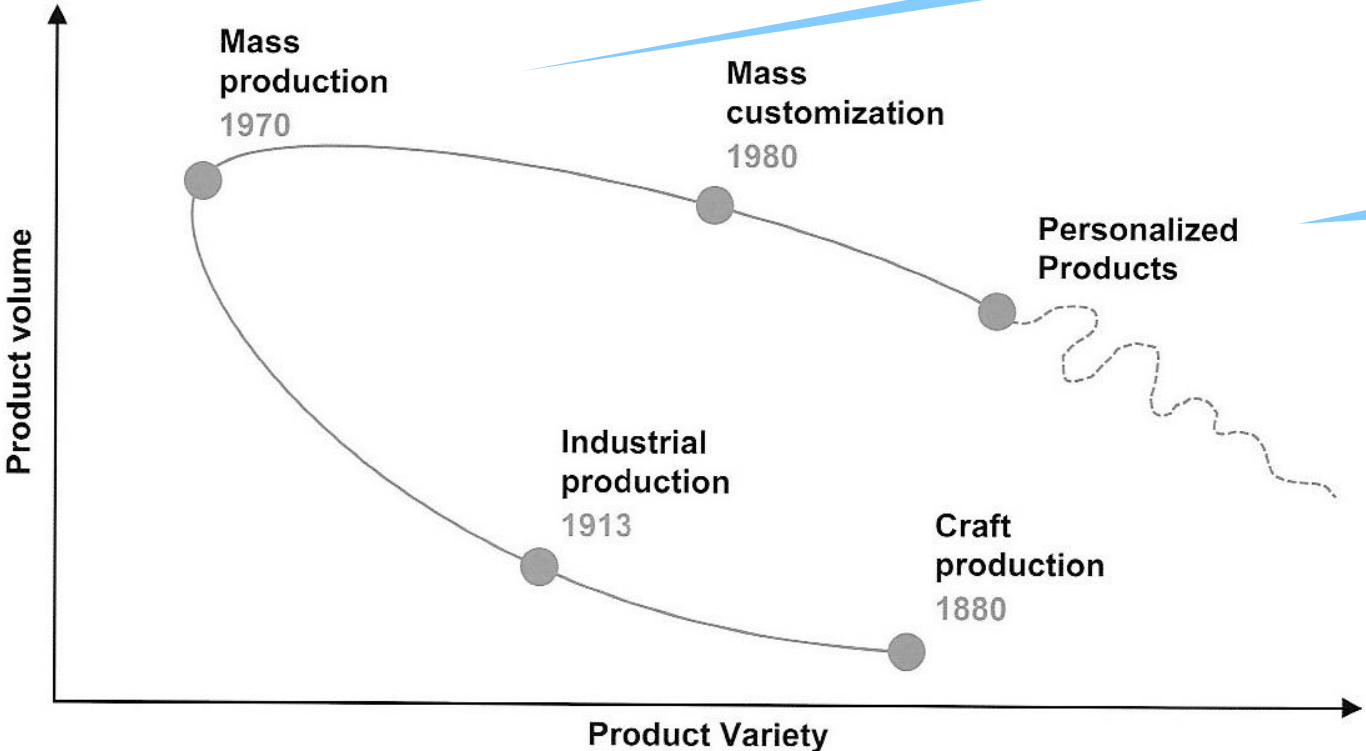
Uhl A, Steiger S - *Digital Enterprise Transformation*, 360 the business transformation journal issue 12, dec 2014

# Policy to service delivery as a Deming Circle - PDCA



This is where automation is usually targeted - service delivery efficiency
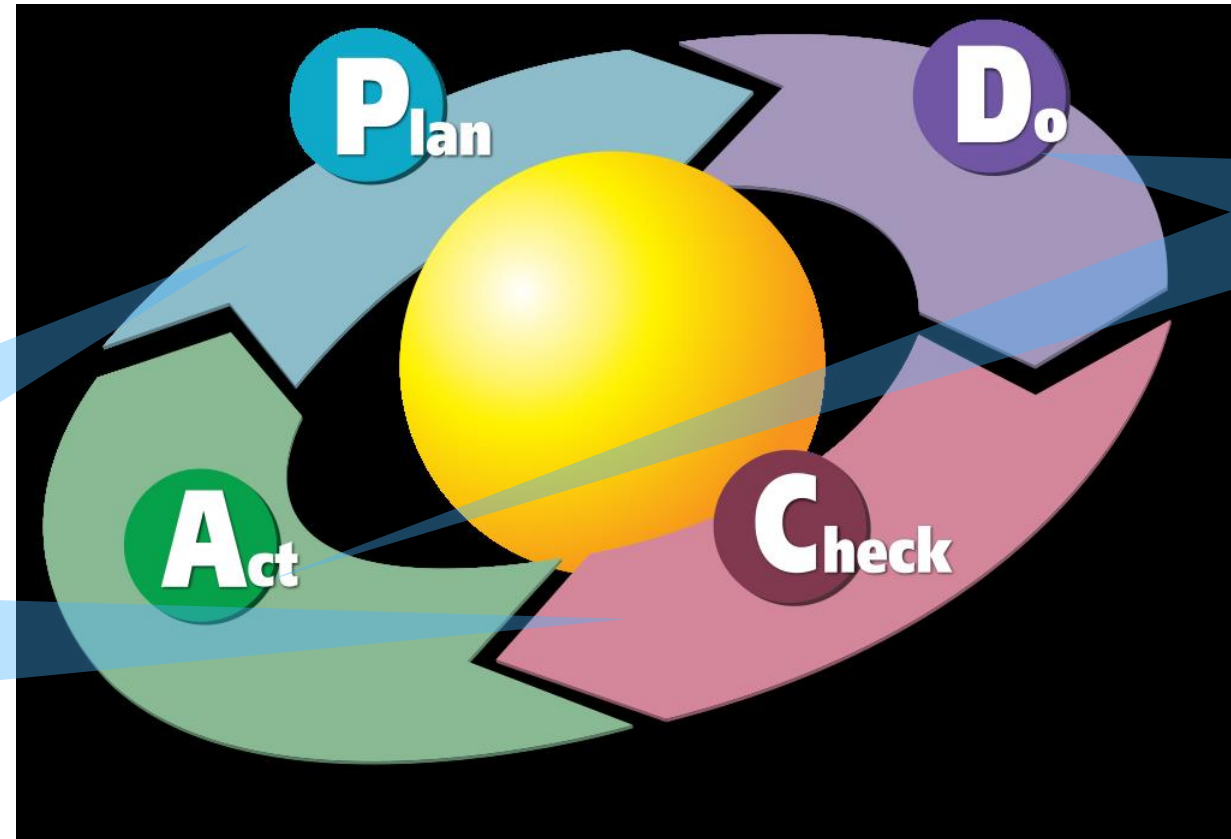
Digital Government targets the policy development and evaluation processes

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

**GOAL**

**6 : 1000**

**22%**

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|
| United States | 6.9 | 6.7 | 6.8 | 6.6 | 6.4 | 6.1 | 6.1 |
| Indiana | 8 | 7.9 | 7.5 | 6.9 | 7.8 | 7.5 | 7.7 |
| Healthy People 2020 Goal | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
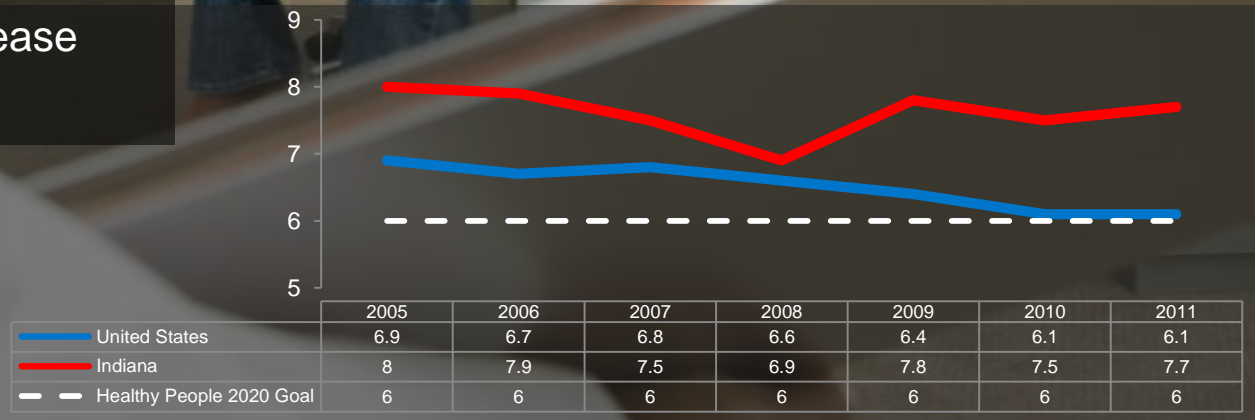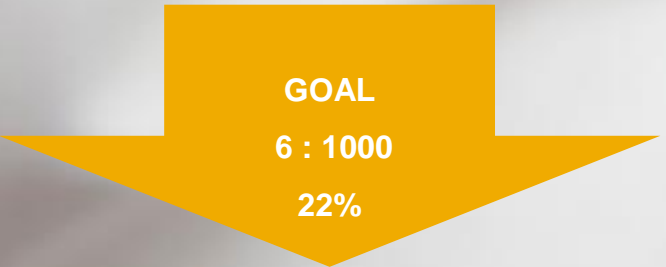
# State of Indiana Video

# For more information

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**SAP Institute for Digital Government**
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