IPS-Civil Service College Forum
Enhancing Public Service Through Policy Automation

17 August 2010

Orchard Hotel

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Policy Automation in Public Service: Snake oil or sliced bread?

When IPS and the Civil Service College recently announced a seminar on Policy Automation, the first reaction from some recipients of our invitation was one of consternation, if not contempt. They wondered how policies could be automated when each policy is the outcome of deep and often new thinking and not the product of some cookie cutter process. Fortunately, many convinced themselves to come and listen to the advocates of policy automation and find out for themselves if this is some kind of snake oil or the next best thing after sliced bread or something in between.

The term "policy automation" is used by a number of international researchers and practitioners of public policy to denote "the use of computer systems to automate the interpretation and application of policies". The critical point in this formulation is not what is said but what is not: the use of computer system not to *formulate* policy but to *apply* policy. Therein lies the key to policy automation.

Public service administration has become increasingly onerous for both the administrators and the administered with an ever growing number of policies a government has to handle and with many policies seemingly bewildering in their complexity to the innocent public.

In general, policies are based on a set of legislations, regulations, case laws, or other rules to make the policies clear, consistent, comprehensible and enforceable. The public, for its part, wants policies to be interpreted correctly and applied consistently, so as to reduce cost,

time and effort. However, with the increasing number and complexity of policies, it is becoming more and more difficult to meet public expectations.

Implementing Policy

One way to overcome this problem is to employ ever more staff to cope with the load. And they need to be adequately trained and experienced to provide consistent service. However, this approach would incur a high cost for the organisation and staff turnover would make it even more prohibitive.

This is where policy automation kicks in. The proponents of policy automation like Lai Weng Yew, a Senior Director in Oracle Corporation, argue that it is possible to use computer technology to at least partially automate the service delivery process. Sophisticated computers can "read" the rules of the policy, and provide accurate, consistent and real time responses to queries based on the rules. And all this can be done without having to fall at the feet of computer geeks because the policy automation software understands natural language usage. You ask a question in simple English and you get an answer in simple English. The software has the capacity to process enormous amounts of information quicker than humans and provide accurate analysis and interpretation with a higher degree of consistency than ordinary humans.

This may sound somewhat insulting to our brains but in basic data processing, computers beat us hands down. Which is precisely why policy automation is recommended where a large amount of information needs to be processed quickly and answers found instantly.

Other speakers at the seminar shared their deployment of automation technology and its outcomes in their respective field or institution.

Policy Automation in Protecting Children

Kerry Holling from New South Wales, Australia, spoke about "Policy Automation Supporting the Protection of Children." The key setting for Holling's case study was the policy of mandatory reporting. The policy required persons in positions of responsibility towards a child – such as a social worker, school teacher or health worker – to make a report to Community Services if they suspected that the child was at-risk. Holling described the policy as a "punitive regime" because harsh penalties were meted out to those found to be

negligent in their position of responsibility through non-reporting. The fear of penalty also led to massive over-reporting. In the year 2009 alone, the department of Child Protection Services received over 300,000 "contacts" or Child Protection Reports from concerned members of the community regarding the safety of over 130,000 children. Out of these 300,000 reports, follow-ups indicated that suspicion of criminality only existed in some 3,400 cases, or 1.1 percent of the reports.

There were, of course, some guidelines for the reporters on how to assess and report on children at risk. However, the Mandatory Reporter Guidelines stretched over 108 pages and contained 18 Decision Trees from which to select. Given the challenges of implementing such a complex set of criteria and rules across 500,000 potential reporters in the state, the Department of Human Services had to think of ways to enable individual reporters to access the guidelines and to use them efficiently without spending too much time on interpretation. Further, it was not practical to print 500,000 sets of the 108-page document to distribute across the state. Thus, the Department settled on Policy Automation software that would guide reporters through the decision-making process.

Decision Making Made Simple

Rules and criteria from all 108 pages of the Mandatory Reporting Guidelines document were first entered into the Policy Automation software, which was then integrated into a web application for potential reporters to access. The main page of the guide first invites the user to choose the relevant Decision Tree based on their specific suspicions and concerns e.g. suspicion of physical abuse or neglect (see Figure 1 below).
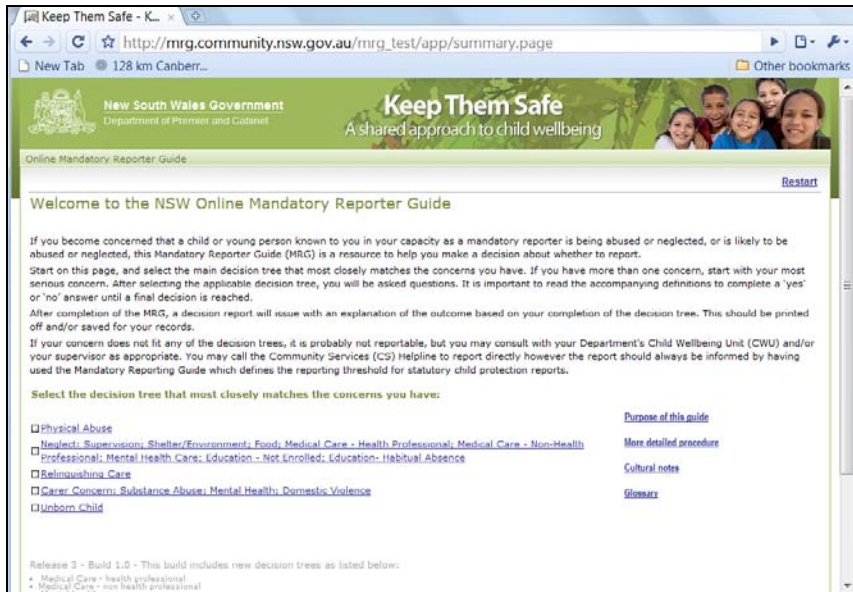
Figure 1: New South Wales web guide for potential Reporters of child abuse

Then, the Policy Automation software proceeds to generate a dynamic list of questions for the user where the inclusion or exclusion of a certain question is dependent on the information that has previously been provided by the user (Figure 2).
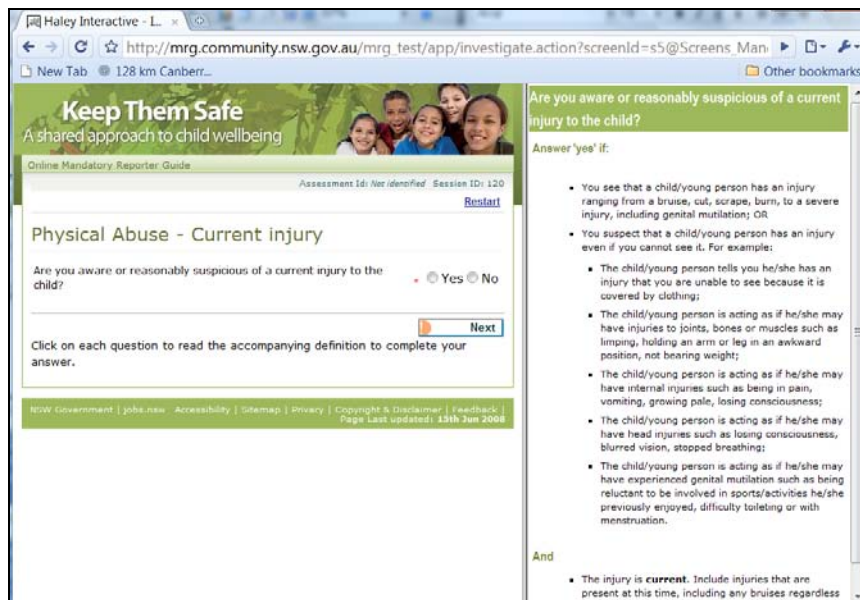

Figure 2: The Policy Automation software generates a dynamic list of questions based on information already provided by the user

At the end of the questionnaire, the system will provide a decision (Figure 3) based on the information provided, and also steps for further action. A link to criteria fulfilled is also provided for individuals who wish to know how the decision was arrived at.
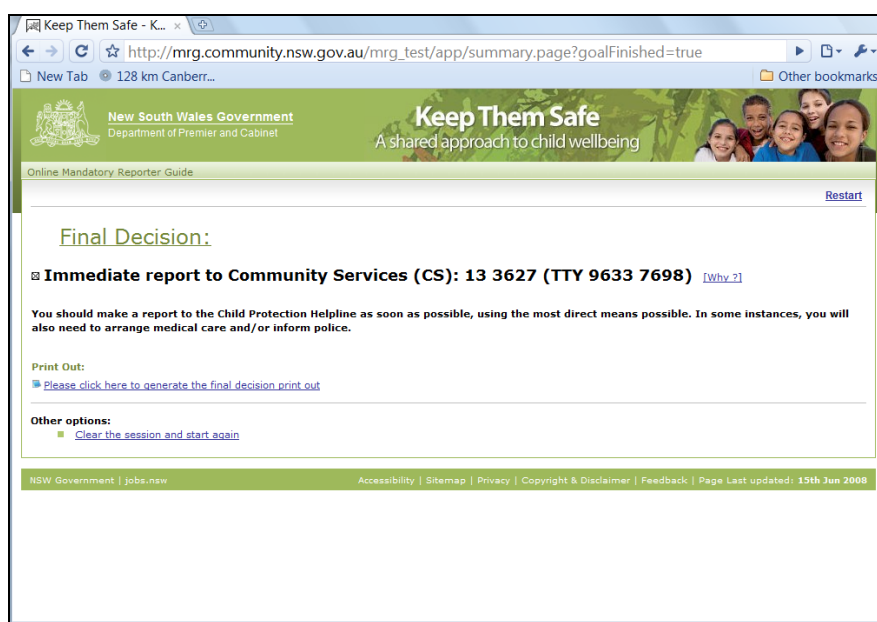

Figure 3: At the end of the process, the system provides a decision based on information provided, and also steps for further action

As can be seen here, the Policy Automation software has simplified the process of determination considerably for potential reporters who otherwise would have to wade through pages of complicated Decision Trees in order to arrive at an answer.

Policy Automation Pays

Holling spoke of the key benefits of Policy Automation from two perspectives, i.e. in terms of the solution and operations.

In the former category, he noted that the implementation had minimised the need for detailed user training for a large number of potential reporters, and subsequent policy changes could be made and implemented more quickly. The reporters found the new tool much easier to

handle compared to the conventional method and, over time, they preferred the automated system.

The impact on operations was also remarkable. Holling noted a 30 percent decrease in helpline calls (which stood at over 300,000 in 2009), and increased consistency in the way reporters interpreted the rules. Internally, helpline staff became more confident of the decisions they were making, as reports were pre-filtered and they also had their own tools to help them in decision-making. It should be emphasised, however, that helpline staff also have the flexibility to make interventions if extenuating circumstances not covered by existing guidelines came to their attention. Holling observed that across the six agencies which first helped to develop the guidelines and now employ the system, there is now a culture of shared responsibility for the welfare of children.

According to Holling, the implementation was "such a success" that the Department of Human Services is now looking into other projects that may benefit from Policy Automation technology.

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More on this seminar will be published in the next edition of IPS Newsletter.